Glenmore Landfill
2024 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 2024 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 2024, 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 can be found on the RDCO's website. In 2024 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, with potential implementation if approved in 2026.

The OC was updated on May 30, 2023. Updates primarily addressed:

- Increase the annual volume of garbage that may be disposed.
- Allow for contaminated soils other than hydrocarbon contaminated soils to be received and used on site.
- Specifically include International Waste received at the Kelowna Airport as an approved waste for disposal.
- Correct some typographical errors.
- Update references to the Design, Operations and Closure; and
- Update some of the clauses at the request of the Province.

This 2024 Annual Report is the first report submitted to the Province based on the 2023 Operational Certificate updated reporting requirements.

On Friday August 18, 2023, the McKinley-Clifton Wildfire crossed Glenmore Road and portions of the landfill caught fire as embers were blown onto the site. The site was evacuated while BC Wildfire and the Kelowna Fire Department did an initial suppression of the fires. Site staff with contractors and Fire Services worked 24 hours a day for the next week to complete firefighting measures. Approximately one third of the landfill gas system (wellheads and sub headers) was damaged or destroyed and fire related debris will need to be relocated within the site. These remedial works and repairs were completed in 2024.

GHD Canada (GHD) completed the 5-year updates to the Design, Operations and Closure Plan (DOCP). These updates, along with some additional supporting studies, were completed and submitted to the Province in December of 2023. All requirements of the Upgrading Plan from the 2018 DOCP are either completed or are multiyear projects that are in progress so no additional updates to the Upgrading Plan will be provided. Please see the 2023 Annual report for the last summary of the Upgrading Plan.

The estimated population from the RDCO contributing to the municipal solid waste managed at the Glenmore Landfill in 2024 was 251,723 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 15, 2025). The population of Big White has not been included in this estimate.

This population disposed of 146,778 tonnes of waste, 5,492 tonnes of contaminated soil, and 5.84 tonnes of International Waste at the Glenmore Landfill in 2024. In addition to this volume of waste disposed, an additional 44,366 tonnes of organics and 30,526 tonnes of recyclables such as concrete, shingles, metal, and other materials were recycled for a diversion rate of 32.97%. Implementation of an online waste application process in 2024 has allowed for increased diversion of gypsum drywall, and the Landfill expects that more than 90% of drywall received in 2025 will be diverted.

OPERATIONS REPORT

The City of Kelowna Glenmore Landfill and Administration Building are located at 2720 John Hindle Drive, Kelowna, BC V1V 2C5. The Scale House has the civic address of 2710 John Hindle Drive. In 2024, 229,571 vehicles accessed the site through the scale house, which is a slight decrease from 2023. Green waste and other organics volumes in 2024 were similar to the 2023 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***
2020	141,575	4,129 (Estimated)	N/A
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

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 15, 2025)

Year	Population
2020	226,200
2021	232,159
2022	239,756
2023	246,737
2024	251,723

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 15, 2025)

Year	Waste Discharge Rate (no Contaminated Soil or International Waste)
2020	0.626
2021	0.656
2022	0.617
2023*	0.592
2024	0.583

* - does not include waste shipped out of region during the wildfires

In 2024, the Glenmore Landfill managed a total of 44,366 tonnes of organic materials. These included:

- 15,121 tonnes of clean wood, logs and branches which were composted and/or biomass fuel.
- 1,234 tonnes of stumps used as bio filters and biomass fuel.
- 28,011 tonnes of cart waste and grass/leaves which were composted for Glengrow production.

In 2024, the Glenmore landfill managed a total of 30,526 tonnes of recoverable materials. These included:

- 1,578 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.
- 41 tonnes (estimated 3,862) of tires were recycled by the Tire Stewardship Program.
- 20,539 tonnes of asphalt and concrete were crushed and used to construct roads and receiving pads on site.
- 6,038 tonnes drywall was sent to a recycling facility.
- 3,198 tonnes of ground shingles shipped off site for road base and asphalt production.
- 97 tonnes of IL- contaminated soil was used as cover at the site.

An estimated 70,672 tonnes of clean fill were received in 2024 and used as cover. Acceptance of clean fill will be limited in 2025 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 two leachate lift stations. 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, which has resulted in a precipitate build up that is being cleaned periodically.

Leachate system works included cleaning at lift station 2, improvements in clean out access and ports, the replacement of concrete manhole #2 with an HDPE manhole with improved clean out sweeps, and the replacement of an additional manhole and wet well with a new HDPE wet well. Leachate quality will be discussed in the Environmental Monitoring reports.

Leachate discharge volumes are reflective of the amount of leachate generated via precipitation and decreased significantly in 2024. It should be noted that leachate discharged from the site does not equal leachate generated as pumping rates are dependent on surface water levels, 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)
2020	160,310
2021	118,740
2022	135,492
2023	128,744
2024	75,340

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. 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 for landscaping uses. An estimated 28,011 tonnes of materials were composted with 31,967 and 400 yards of compost and mulch sold respectively.

The city designed and purchased an Aerated Static Pile (ASP) system for the Glengrow composting operations in 2022. Preliminary earthworks, including installation of a 10,000m2 asphalt pad was started in 2021. The 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 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.

As part of the City of Kelowna's sustainability and climate change initiatives, the landfill is in the process of converting the compost screening plant and air separator to electrical operations from diesel.

d. Remaining Site Life & Capacity

An updated Fill Plan was prepared for the City of Kelowna by CH2M Hill (now Jacobs Engineering Group) in 2014. This design volume was approximately 40,000,000m3 as of 2014. 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 an aerial survey from November 8, 2024, the remaining landfill capacity was estimated at 36,529,430 m^3.

e. Summary of 2024 DOCP Implementation & Construction

Filling operations have alternated between AREA 1 and AREA 2, which are located on the western and northern sections of the site, respectively.

While filling progresses in these two locations, earthworks and sub-grade preparation has started for the AREA 3 liner preparation. Blasting was initiated in 2022, with selected earthworks, and construction of additional lay down areas and working pads continuing through 2023. The AREA 3 liner installation final design is completed, and construction started in 2024. The liner system and access roads have been completed, and the leachate infrastructure and remaining works should be completed in Q2 of 2025. The waste recovery operations performed in AREA 3 footprint were relocated to new pads being completed at the southern end of the site. All waste excavated during the AREA 3 subgrade preparations were relocated to the Sliver Fill or existing active face of the landfill.

The Sliver Fill is an additional filling area consisting of a thin wedge between AREA 1 and AREA 2. The Sliver Fill will 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.

Additional 2024 projects related to the implementation of the DOCP include:

- Remedial works of removing waste fingers in the slough;
- Rebuild of the landfill gas systems damaged in the wildfire;
- ASP infrastructure and receiving area;
- Northern section of mid slope road constructed; and
- Initiation of additional works, studies and monitoring well installations as per HHCR.

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

- Lift Station 1 and Manhole 2, WSP, June 21, 2024
- Compost ASP Phase 1, WSP, February 14, 2025

f. Summary of 2025 Planned DOCP Implementation & Significant Works

Projects related to the implementation of the DOCP in 2025 include:

- Complete first phase of AREA 3 and begin filling;
- Complete design for the second liner installation in AREA 3;
- Complete design and RFP for the off-site component of Surface Water Bypass (pending works include provincial permitting and licenses, Real Estate negotiations, Statutory right of ways, design and tendering, with construction extending into 2026);
- ASP phase 2 design, receiving area expansion and potential leachate pump system to sewer; and
- Procurement of a flare to replace the existing end of life unit for late 2025 or 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 2024. Tipping fee rates for garbage increased from $104/tonne in 2023 to $106/tonne. Some selected wastes such as asphalt, concrete, drywall and asbestos 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. This section of landscaping was further damaged in the 2023 wildfires and were inspected in the spring of 2024 for additional wildfire damage. 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 will be planted along the east side of AREA 3 in coming years.

In 2024, clearing and mowing of the 15m vegetative buffer surrounding the landfill was completed to ensure there was a fire break to meet regulatory requirements.

i. Complaints

The landfill received 4 service requests related to landfill operations in 2024. Three complaints were related to customer service issues (i.e., waiting time at the scale house or fees charged) and one complaint was received about nuisance items, specifically noise and odours. Any additional complaints that were received by phone or in person were not tabulated. Typically, issues in the Service Request System were addressed within two business days.

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 working face. Fencing for litter control is placed around the fill area as required. In the Spring of 2024, 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 of 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 for 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 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.
- 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.

Further landscaping along the western side of the landfill along Glenmore Road 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 2024. Three non-compliances were related to fire events at the landfill, one was for the impacts of potential offsite migration as part of the HHCR, and two were related to waste receiving. The waste receiving consisted of accidental disposal of waste oil and hauler non-compliance notification required by BC Hazardous Waste Regulation for improper handling of asbestos for disposal.

Below is a list of Non-compliances reported to the BC Ministry of Environment:

- 2024-02-16 - 12218 HHCR potential migration - Non-Compliance Notification
- 2024-04-15 - 12218 landfill fire - Non-Compliance Notification
- 2024-04-26 - 12218 landfill fire - Non-Compliance Notification
- 2024-06-17 – 12218 Waste Oil Disposal - Non-Compliance Notification
- 2024-07- 16 - 12218 landfill fire - Non-Compliance Notification
- 2024-09-10 - 12218 Non-Compliance of waste hauler Notification

k. Facility Manager & Operator Certification

The landfill has 4 staff members that are SWANA Manager of Landfill Operations Certified, including the Manager, one Supervisor, one foreman and one of the senior Environmental Technicians. One Supervisor is SWANA Landfill Operations Basics Certified. Details of this are available upon request by the Ministry.

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 – *2024 Glenmore Landfill Annual Water Quality Report, Keltech Environmental Ltd., March 27, 2025*.

a) Groundwater

Based on the recommendations from the 2023 HHCR, six groundwater monitoring wells were installed in 2024. One of the wells was installed in bedrock at the southern Site boundary to monitor for potential landfill-derived impacts and one well was installed northeast of the Site to capture the background groundwater quality representative of the Clay Unit. The four other wells were installed as replacement for wells that became inaccessible: 2 wells northeast of Little Robert Lake; 2 wells North of Robert Lake. Four groundwater monitoring wells, which were damaged during the 2023 McDougal Creek Wildfire, were decommissioned in January 2024 by Keltech as per the Groundwater Protection Regulation.

Groundwater sampling events took place in the Spring (May/June) and Fall (September) as per the EMP and recommendations of the *2023 Glenmore Landfill Annual Water Quality Report (Keltech 2023).*

As noted in the Keltech report, no significant changes to water quality were noted in the results of the 2024 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 generally consistent with historical concentrations. The 2024 water levels were generally consistent with previous years.

The 95th percentile site-specific background concentrations will be calculated based on monitoring results for wells installed in 2024 which will be used to compare groundwater quality results in 2025.

b) Surface Water

Surface water samples were collected from the four on-site surface water bodies in March, May, September, and October. Additional 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. This sampling is to allow for future statistical calculation of background water quality in the region of the landfill.

The surface water quality was generally 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.

As per the HHCR recommendations, the surface water monitoring location at Roberts Lake was relocated to the north end of the lake closest to the Landfill. In 2024, both monitoring points were sampled for comparison, and in future years, only the northern sampling point will be monitored. The HHCR also recommended two additional surface water monitoring points to be added to the EMP to identify potential surface water impacts originating from the ditching along John Hindle Drive and/or from the stormwater management system that services the administration buildings. Only one sampling event occurred from one of the sampling sites during the spring snow melt event. 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 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, calculate 95th percentile background surface water concentrations and if surface water quality from the on-site ponds is less than the 95th percentile background concentrations then water could be used for irrigation as part of stormwater management.). In 2024, irrigation did not occur as concentrations of some parameters in Tutt Pond exceeded the 95th percentile background concentrations. This will be re-evaluated as part of the 2025 data review.

c) Leachate Sampling

Leachate samples are collected at four locations on the Landfill site quarterly. In 2024, the first quarterly sampling was not conducted as leachate was not being pumped during maintenance of the South wet well, and the replacement of infrastructure including manhole 2 and the Lift Station 1.

Bioxide addition at the South wet well collection point continued in 2024. Samples representative of AREA 1, AREA 2, and Phase 1 were taken upstream of Bioxide addition. Combined leachate samples and samples from the south leachate wet well were representative of leachate with added Bioxide. An updated leachate pre-treatment study is being performed in 2025 to plan for additional leachate treatment on site.

Leachate quality is quite variable across the site depending on the seasonality of the spring freshet and which location within the landfill the samples are taken from. Additional variability is expected in leachate quality due to the remedial works in the slough to remove waste that burned in the 2023 wildfires and the potential addition of leachate from the ASP composting operations.

LANDFILL GAS REPORT

The collection system operated at approximately 60% of normal capacity for much of 2024 due to damage from the 2023 McKinley Wildfire. Repairs to the damaged wells and headers were completed during the 2024 construction season. The repaired infrastructure was commissioned in a phased approach in October 2024, returning the system to full capacity by the end of October.

The 2024 highlights related to the landfill gas (LFG) management system included the installation of 6 new horizontal collector runs consisting of approximately 600m of new pipe. Along with these, 6 wells were extended to accommodate filling activities. Additional work to add wellheads on the east side of the site began in 2024 and will continue through 2025 and 2026. Wells in the AREA 2 portion of the landfill continue to undergo 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. Design and planning are underway for a flare system replacement, with construction scheduled to begin in 2025

Table 5 – 2024 Landfill Gas Volume Summary

Flare Flow volume	479,533 m^3 at 59.6% CH_4
FORTIS BC Biogas Plant Flow volume	2,471,742 m^3 at 59.6% CH_4
Total LFG Destroyed by Flare/Biogas	2,951,275 m^3 at 59.6% CH_4
Calculated methane captured (tonnes)	1,194 tonnes
Collection Efficiency (%)	59%

The FORTIS BC biogas plant was the primary method of managing recovered landfill gas for 2024 with 84% of total landfill gas captured being beneficially re-used as renewable natural gas.

The Landfill Gas Management System had 9 callouts and a total downtime of 27.62 hours for both scheduled and non-scheduled events. This downtime is approximately 0.38% of total operations time compared to 272.83 hours (3.11%) downtime in 2023 when systems were shut down due to the impacts of the wildfires. Less than 50% of the downtime in 2024 was from unscheduled events, with the majority resulting from planned maintenance 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 – 2024 Landfill gas system unscheduled outage summary

Date	Outage Time	Total Downtime	Reason
January 11, 2024	13:12 to 13:52	40m	Instrument issue due to extreme cold
	14:02 to 14:09	7m	

January 17, 2024	17:33 to 20:47	3h 14m	Controls/alarms issue
February 28, 2024	08:29 to 08:53	25m	Condensate management issue
	09:01 to 09:15	14m	
	09:25 to 10:10	45m	
March 1, 2024	03:45 to 04:47	1h 2m	Condensate management issue
	05:04 to 05:41	37m	
April 9, 2024	10:02 to 10:19	17m	Unsuccessful flare startup
April 10, 2024	15:23 to 16:16	53m	Analyzer issue
April 15, 2024	12:54 to 13:10	16m	O2 sensor issue
April 17, 2024	03:57 to 04:38	41m	O2 sensor issue
April 23, 2024	13:02 to 13:21	19m	Analyzer timeout issue
May 8, 2024	03:15 to 04:03	48m	Analyzer issue
	04:07 to 04:20	13m	
	04:24 to 04:34	10m	
May 23, 2024	22:24 to 23:17	53m	Unsuccessful flare startup
August 8, 2024	16:22 to 17:29	1h 7m	Collection lateral damage by equipment
TOTAL		12h 41m	

Table 7 -2024 Landfill Gas Management System Downtime

Total Annual hours	8784h
Total run time hours – FORTIS BC or Flare	8756h 23m
Hours of downtime	27h 37m
Percentage of Time operational	99.62%

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 *3 – 2024 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site, JACOBS, March 25, 2024.* Landfill Gas Collection Efficiency was calculated to be 59% for 2024. This 59% Collection Efficiency was a positive result considering the system operated with reduced capacity until October due to wildfire damage. The significant increase in uptime over 2023 contributed to this positive result. The city continues to make 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 three times in 2024. No results were over the regulatory limit, with only two methane results being detectable at the instrument detection limit during one sampling event. These nominal levels of methane results were not repeated in subsequent sampling events. Three of these soil vapour probes along Bredin Pond are scheduled to be removed in 2025 per the DOCP.

While preparing the 2024 Annual Report, landfill staff noted a discrepancy in the soil vapour sampling frequency between the EMP and Soil Vapour Migration Assessment prepared by GHD. In response to this discrepancy, GHD prepared a brief addendum to Section 17.1.1 of the DOCP. This

EMP addendum is attached as *Appendix 4 - 2025 Glenmore Landfill Environmental Monitoring Plan Addendum, GHD, March 24, 2025.*

As a Best Management Practice, manual surface emissions monitoring of the landfill was performed on an on-going basis with a Landtec SEM5000 Portable Methane Detector and two stations that perform real time air monitoring for nuisances such as dust and odours are installed. This program has been performed on a voluntary basis for a number of years above and beyond the requirements of the Landfill Gas Regulation and the Landfill Environmental Monitoring Programs.

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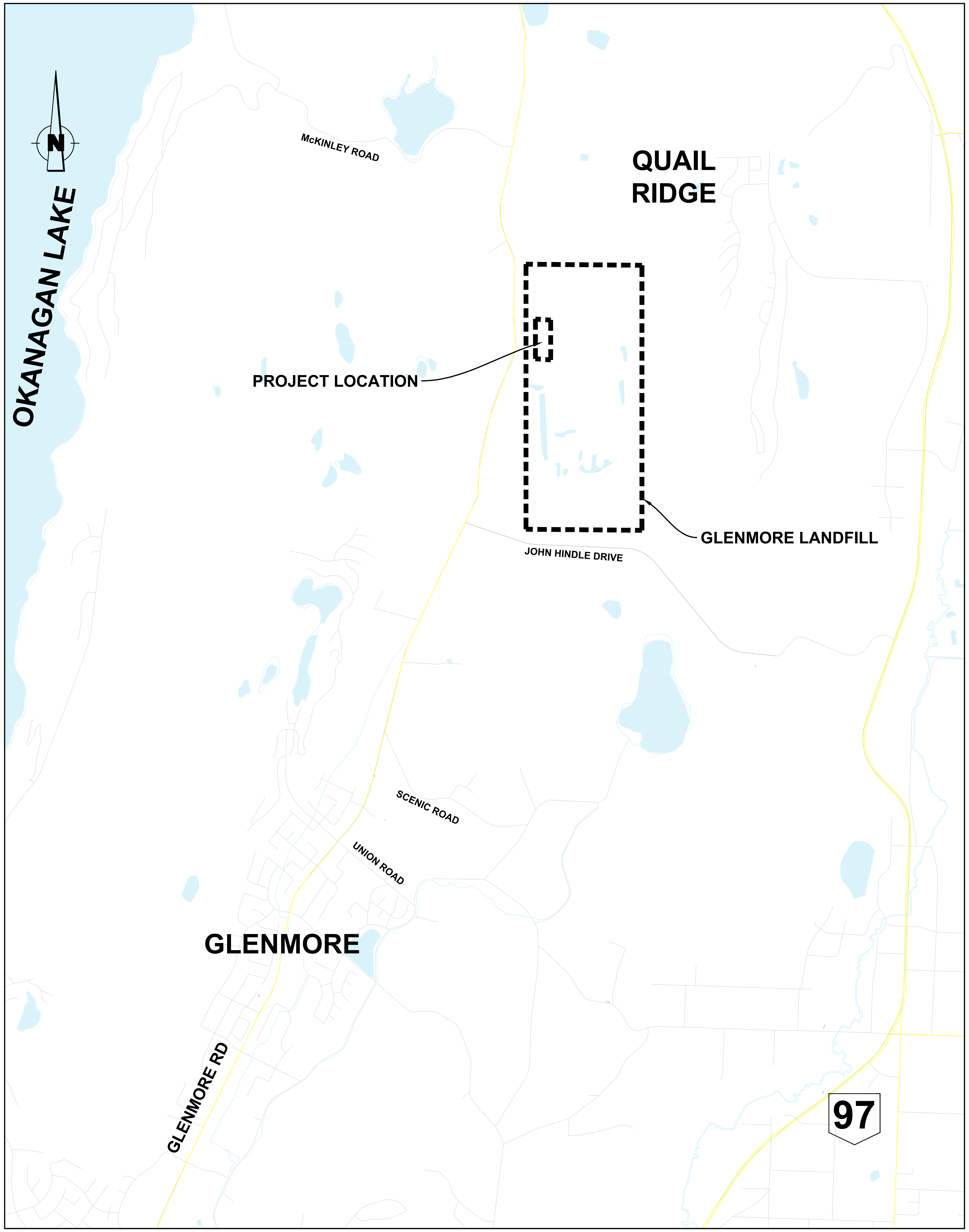
LIST OF APPENDICES

Appendix 1 – Record Drawings - Lift Station 1 and Manhole 2, WSP, June 21, 2024 and Compost ASP Phase 1 February 14, 2025

Appendix 2 – 2024 Glenmore Landfill Annual Water Quality Report, Keltech Environmental Ltd., March 27, 2025

Appendix 3 – 2024 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site, JACOBS, March 25, 2025

Appendix 4 – 2025 Glenmore Landfill Environmental Monitoring Plan Addendum, GHD, March 24, 2025



City of Kelowna

GLENMORE LANDFILL
LIFT STATION #1 & MANHOLE #2 UPGRADES

CITY FILE:

LIST OF DRAWINGS:		
NAME	DESCRIPTION	INCLUDED
C000	COVER SHEET	Y
C001	GENERAL NOTES	Y
LIFT STATION #1		
C100	SITE PLAN	Y
C110	DETAILS	Y
X100	SECTIONS	Y
MANHOLE #2		
C200	SITE PLAN	Y
C210	DETAILS	Y
X200	SECTIONS	Y

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ISSUED FOR RECORD DRAWING

JUNE 2024

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

18M-01541-05

C000

XREFS: LegalParcelsDWG.dwg 18M-01541-00-5-TLBK.dwg 18M-01541-05-REV 0.dwg
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USER: CAKG031901
LAYOUT: C000
PLOTTED: 2024-06-21 - 12:05 PM

GENERAL NOTES:

1. ELEVATIONS ARE BASED ON GEODETIC DATUM, SURVEY CONTROL MONUMENTS AND SURVEY DATA PROVIDED BY THE CITY OF KELOWNA.
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 BACKFILL OF ALL UNDERGROUND SERVICES.
15. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS.
16. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL 24 HOURS PER DAY DURING CONSTRUCTION, UNLESS DIRECTED BY THE ENGINEER OTHERWISE. ALL TRAFFIC CONTROL SHALL CONFORM TO THE BCMOT MANUAL FOR TEMPORARY TRAFFIC CONTROL.
17. THE CONTRACTOR SHALL MAINTAIN THE SAFE PASSAGE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
18. THE CONTRACTOR IS TO COMMUNICATE WITH THE LANDFILL SUPERVISOR AND THE ENGINEER ANYTIME DISRUPTION TO TRAFFIC MAY OCCUR.
19. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS AS DIRECTED BY THE ENGINEER.
20. CONTRACTOR TO NOTIFY CITY OF KELOWNA'S LANDFILL SUPERVISOR AND THE ENGINEER IF ANY LANDFILL WASTE AND/OR MEDICAL WASTE IS ENCOUNTERED AND TO REQUEST INSTRUCTIONS.
21. 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.
22. 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.
23. 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)
24. 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.
25. NOTE TYPICAL LANDFILL OPERATIONS ARE 1000 VEHICLE TRIPS PER DAY TO THE ACTIVE LANDFILL.
26. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE STANDARDS AND SPECIFICATIONS IN ORDER OF PRECEDENCE:
   - 26.3. AS PER SUPPLEMENTARY SPECIFICATIONS
   - 26.4. AS DETAILED WITHIN THIS DRAWING SET
   - 26.5. CITY OF KELOWNA SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS
   - 26.6. LATEST MMCD EDITION STANDARDS AND SPECIFICATIONS
   - 26.7. LATEST MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION
   - 26.8. CITY OF KELOWNA APPROVED PRODUCTS LIST

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. LEACHATE MANHOLES 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 LEACHATE PIPES SHALL BE HDPE DR11 PIPE.
8. LEACHATE FORCEMAIN SHALL BE HDPE DR11 PIPE.
9. ALL FITTINGS SHALL BE HDPE DR11..
10. 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.
11. LEACHATE FLOWS FROM CITY OF KELOWNA
   - 11.1. FROM LS #2 = 310 CU.M/DAY (3.6 L/s)
   - 11.2. FROM LANDFILL AREAS = 200 CU.M/ (2.3 L/s)

ELECTRICAL NOTES:

1. REFER TO CENTRIX DRAWINGS

ROADWORKS SPECIFIC NOTES:

1. THE CONTRACTOR SHALL LOAD AND HAUL WASTE ASPHALT, CONCRETE AND ROCK 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:
100mm – AC PAVEMENT SURFACE COURSE (2 LIFTS)
150mm – 25mm MINUS CRUSHED GRANULAR BASE
300mm – 150mm MINUS GRANULAR SUB-BASE

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

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 (G)	FENCE	HYDRANT
ELECTRICAL (E)	IRRIGATION (IRR)	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
5	24/06/19	LW	ISSUED FOR RECORD DRAWING	CE
4	23/10/11	KU	ISSUED FOR CONSTRUCTION	CE
3	23/09/14	CE	ISSUED FOR 100% REVIEW	DG
2	23/05/19	CE	RE-ISSUED FOR REVIEW	DG
1	23/05/09	CE	RE-ISSUED FOR REVIEW	DG
0	23/03/30	CE	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2024-06-21

BASE: CE
DESIGN: CE
APPROVED: DG
JANUARY 2023

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
GENERAL NOTES

DIVISION

DRAWING NO.: C001
REV NO: 4

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-COVER & NOTES.dwg PRINTED ON: 6/21/2024 12:05 PM

NOTES:
1. DECOMMISSIONING OF EXISTING LIFT STATION #1 TO BE COMPLETED BY OTHERS
2. REFER TO CENTRIX DRAWINGS FOR ELECTRICAL INFORMATION

OPERATION OF VALVES:

1. LEACHATE RECIRCULATION
   1.1 VALVE (A) AND (B) ARE CLOSED
   1.2 VALVE (C) IS OPEN
2. WINTERIZING LEACHATE RECIRCULATION
   2.1 VALVE (C) IS CLOSED
   2.2 VALVE (A) AND (B) ARE OPEN
   2.3 VALVE (B) MAY BE CLOSED ONCE DRAINED
3. NORMAL OPERATION (NO LEACHATE RECIRCULATION)
   3.1 VALVE (B) AND (C) ARE CLOSED, VALVE (B) MAY BE OPEN TO DRAIN
   3.2 VALVE (A) IS OPEN
4. VALVES (D) AND (E) TYPICALLY OPEN UNLESS FOR MAINTENANCE PURPOSES
5. VALVE (A) ALLOWS LIFT STATION TO GRAVITY DRAIN
6. VALVE (C) IS FOR LIFT STATION PUMPING AND LEACHATE RECIRCULATION
7. VALVE (B) IS FOR GRAVITY DRAIN OF LEACHATE RECIRCULATION

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

0 1 2 3 4 5 6 7 8 9 10m
SCALE: 1:100

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	—— G ——	FENCE	—x——x—	HYDRANT	◆
ELECTRICAL	—— E ——	IRRIGATION	— · — IRR — · —	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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PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2024-06-21

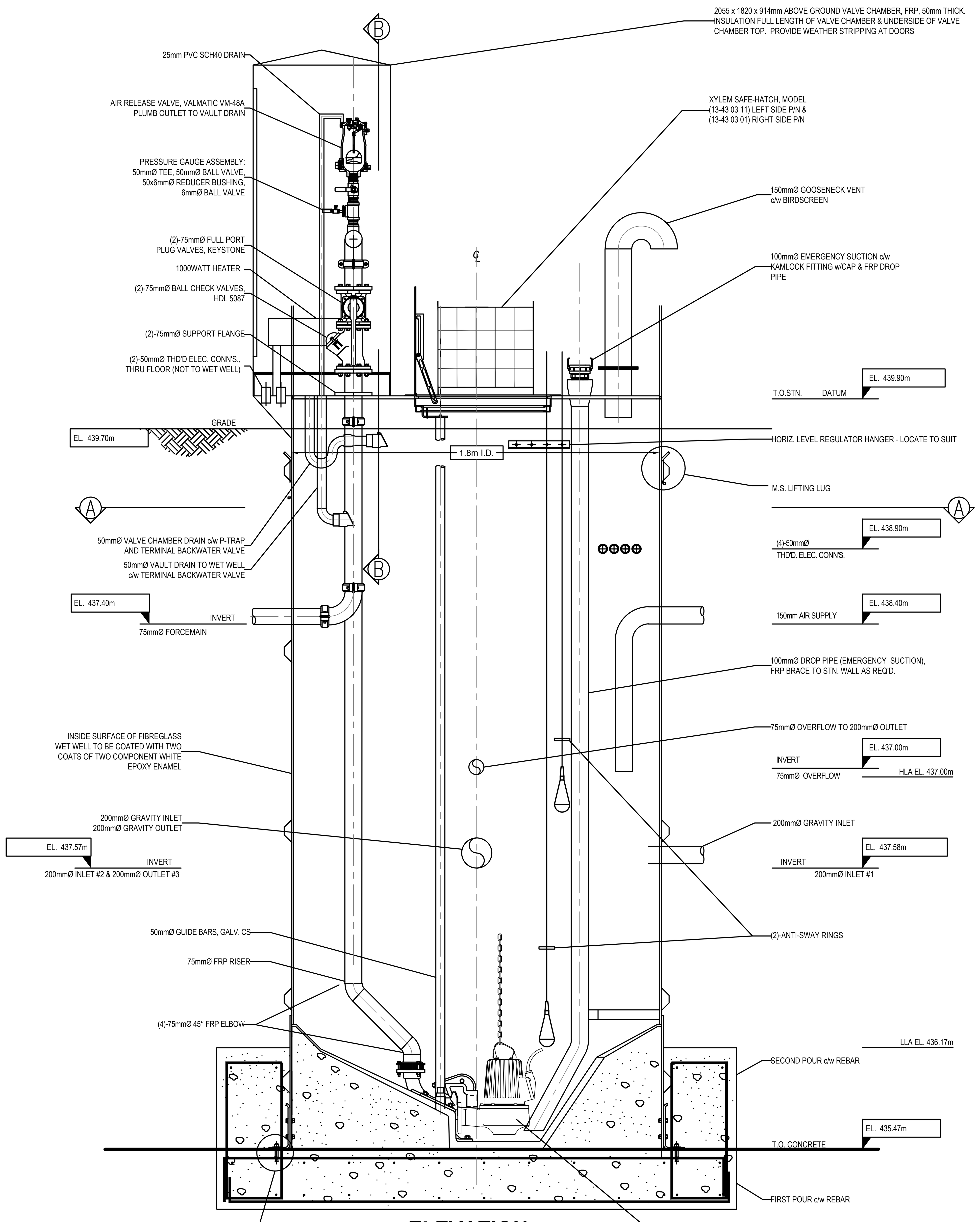
BASE CE
DESIGN CE
APPROVED DG
JANUARY 2023
SCALE 1:100
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
SITE PLAN

DIVISION
DRAWING NO. C100
REV NO 4

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-SITE PLAN.dwg PRINTED ON: 6/21/2024 12:06 PM



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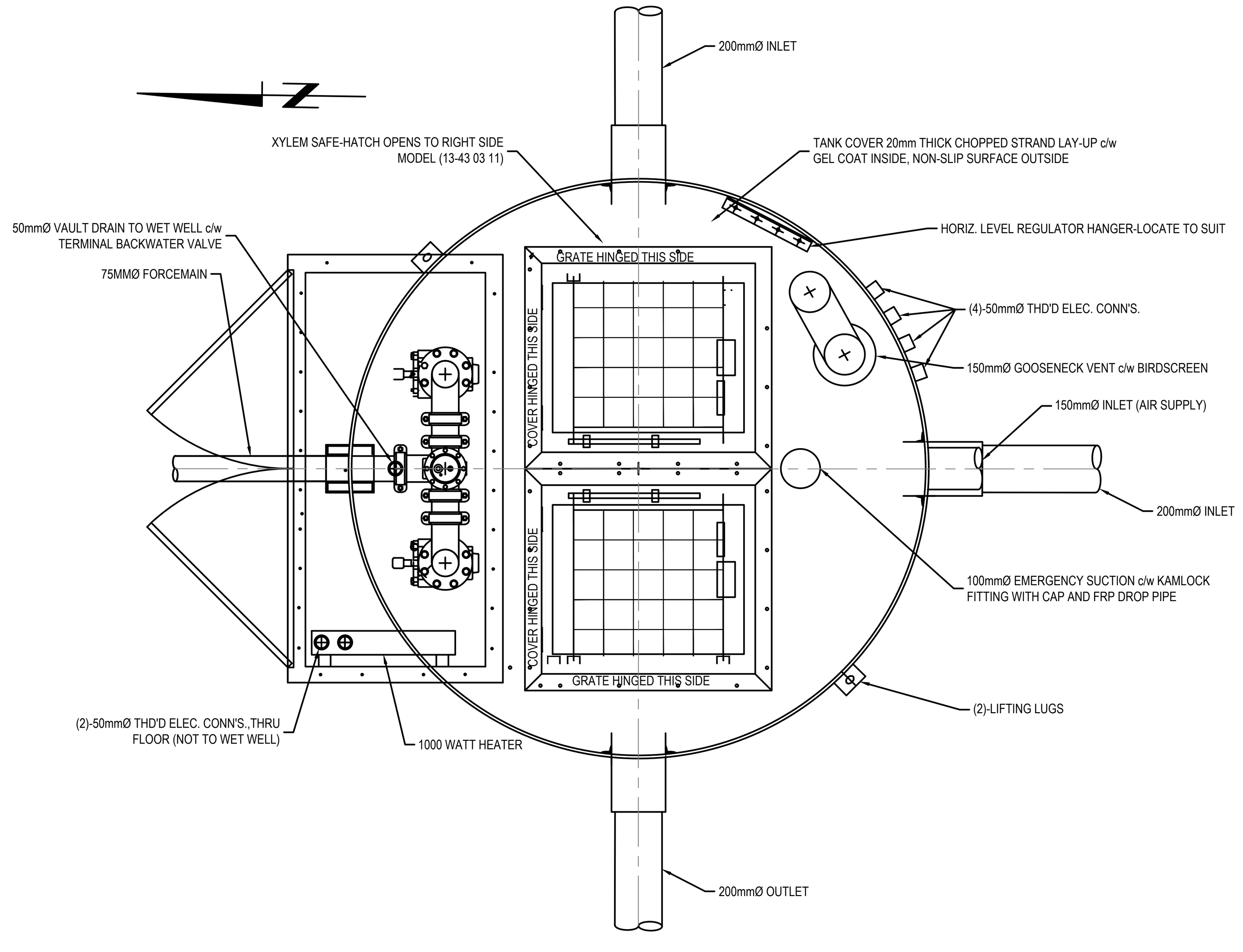
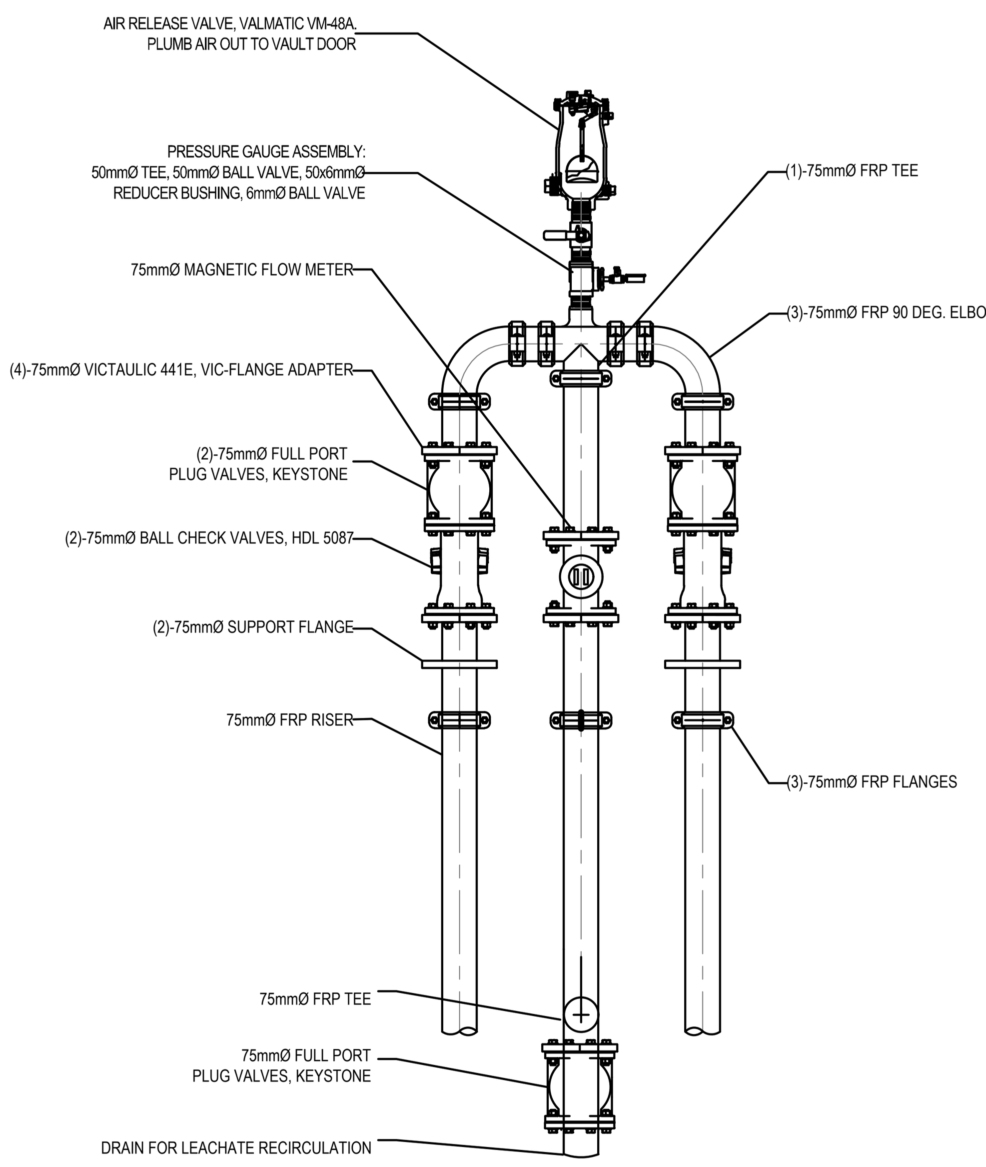
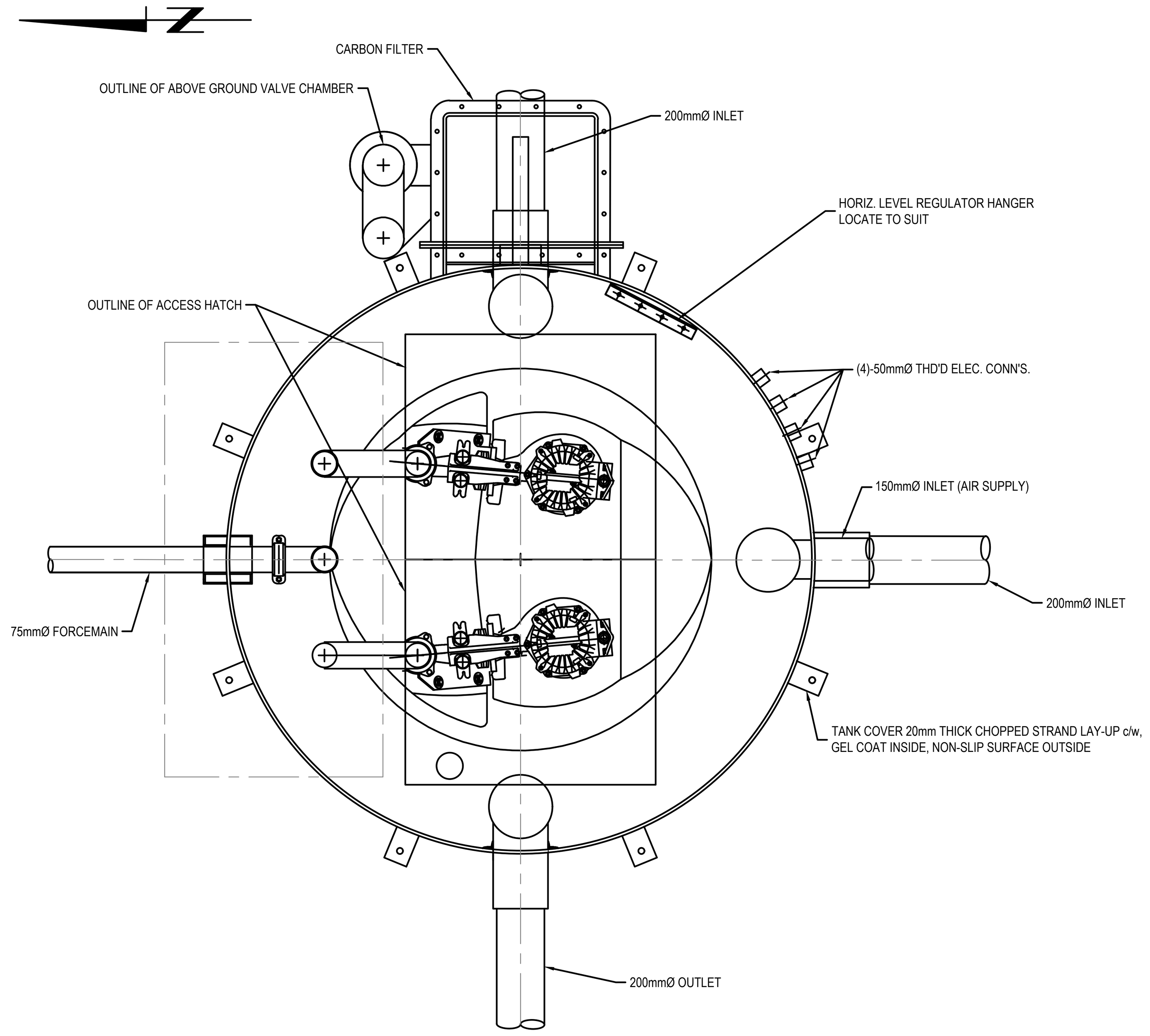


PLAN



SECTION "B-B"

SCALE 1:20 - FORCEMAIN/HEADER PIPING



SECTION "A-A"

NOTES:
1. REFER TO CITY OF KELOWNA STANDARD DETAIL SS-S60 & SS-S61
2. REFER TO CENTRIX DRAWINGS FOR ELECTRICAL
3. REFER TO C100 FOR SITE PLAN

LIFT STATION SIZING:
- FLYGT PUMP NP 3102 SH 3 ADAPTIVE 256
- PUMP DUTY POINT: 7.09 L/s @ 24.6m HEAD
- OPERATING VOLUME: 1.02m³
- OPERATING DEPTH: 0.4m
- STORAGE VOLUME TO OVERFLOW: 2.80m³
- STORAGE DEPTH TO OVERFLOW: 1.1m

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FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-DETAILS.dwg PRINTED ON: 6/21/2024 12:12 PM

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	G	FENCE		HYDRANT	
ELECTRICAL	E	IRRIGATION	IRR	WELLHEAD	
CONDUITS					
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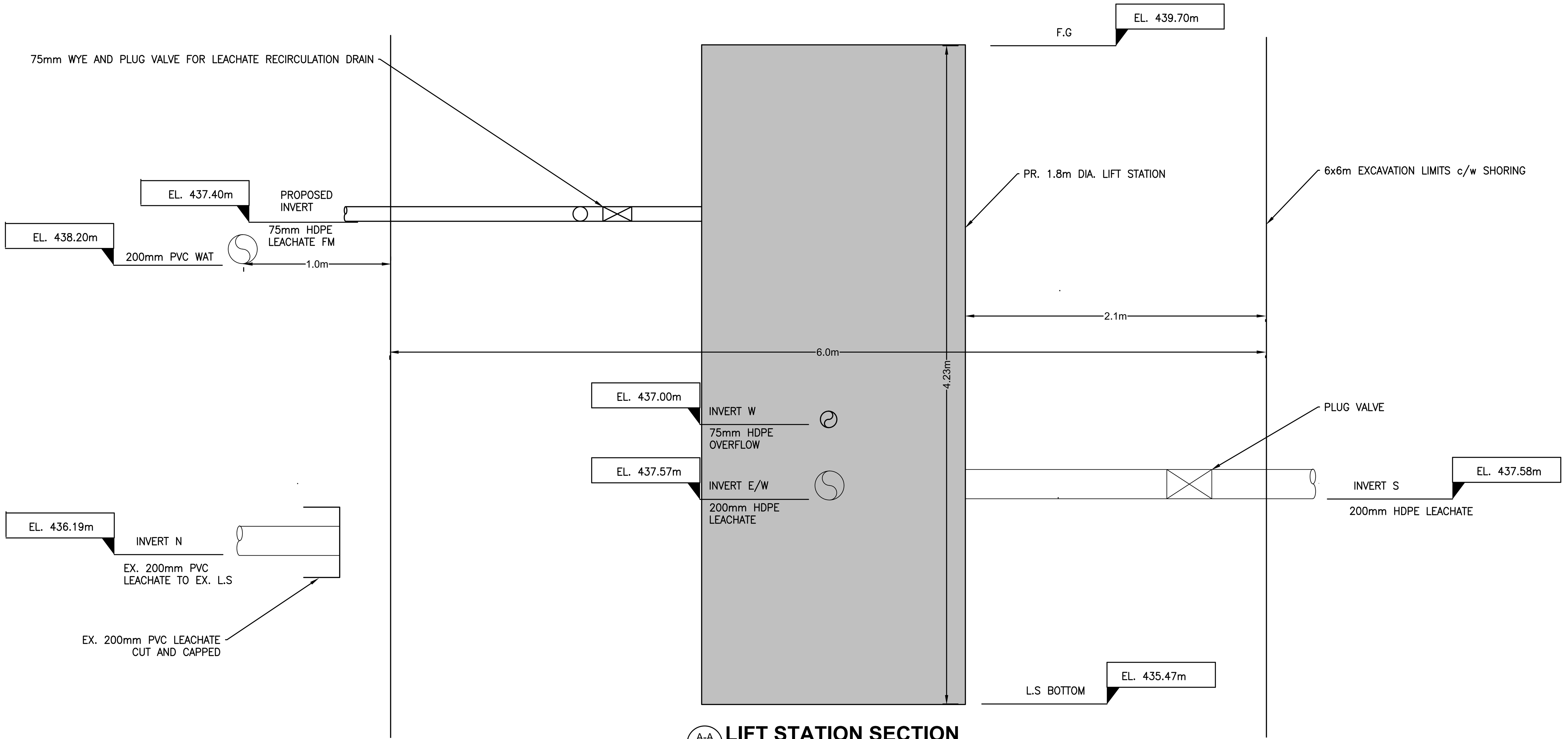
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA 2024-06-21

BASE: CE
DESIGN: CE
APPROVED: DG
JANUARY 2023
SCALE NOT ACCURATE OVER LONG DISTANCES

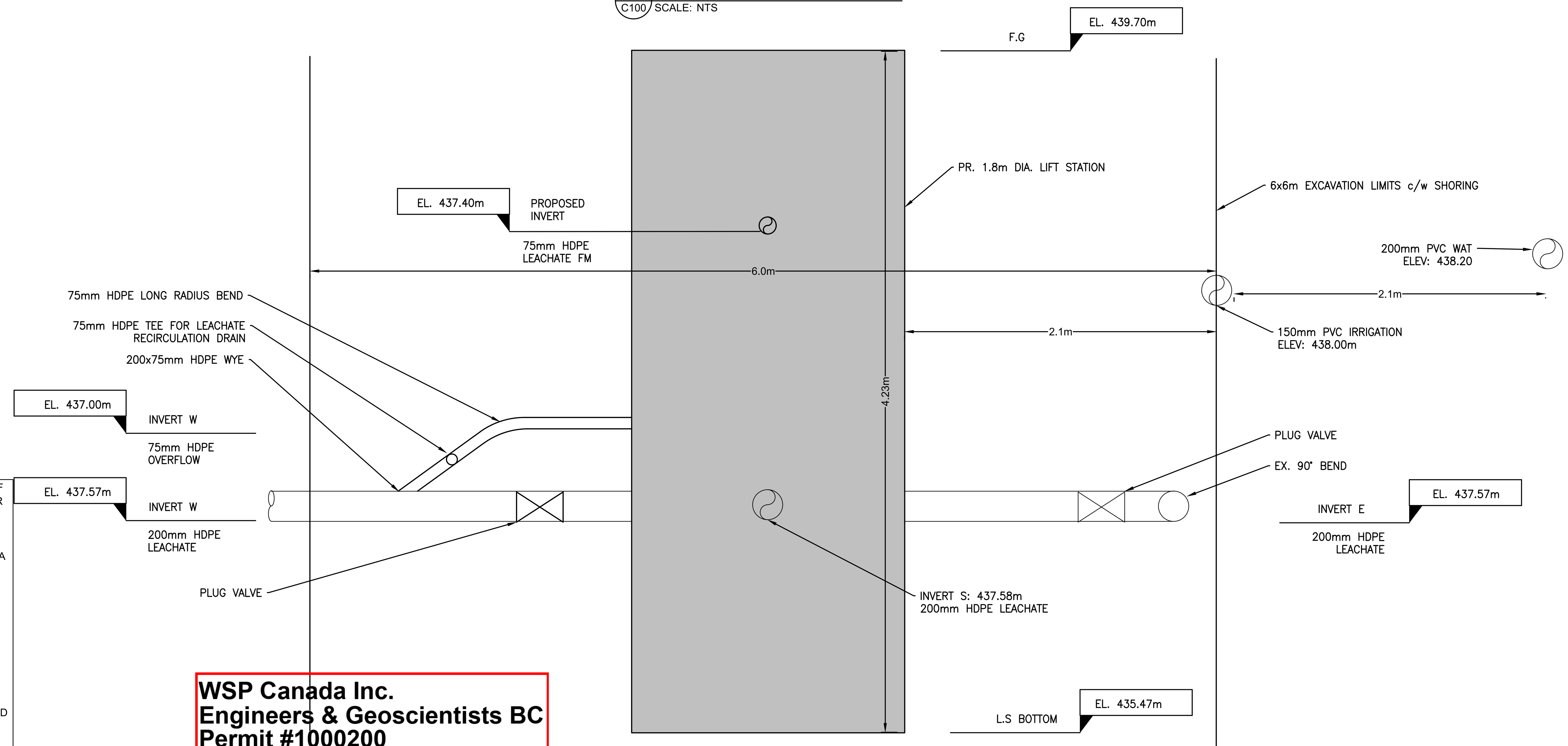
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
DETAILS

DIVISION
DRAWING NO. C110
REV NO. 4



A-A / C100 **LIFT STATION SECTION**
SCALE: NTS



WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

B-B / C100 **LIFT STATION SECTION**
SCALE: NTS

NOTES:
1. REFER TO C100 FOR SITE PLAN
2. GROUNDWATER DEPTH IS ASSUMED TO VARY FROM 437.00 TO 438.00

1. THIS RECORD DRAWING HAS BEEN PREPARED BY WSP FOR THE EXCLUSIVE USE OF 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.

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
5	24/06/19	LW	ISSUED FOR RECORD DRAWING	CE
4	23/10/11	KU	ISSUED FOR CONSTRUCTION	CE
3	23/09/14	CE	ISSUED FOR 100% REVIEW	DG
2	23/05/19	CE	RE-ISSUED FOR REVIEW	DG
1	23/05/09	CE	RE-ISSUED FOR REVIEW	DG
0	23/03/30	CE	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2024-06-21

BASE: CE
DESIGN: CE
APPROVED: DG
JANUARY 2023
SCALE: AS SHOWN
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
SECTIONS

DIVISION
DRAWING NO. X100
REV NO. 4

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-SITE PLAN.dwg PRINTED ON: 6/21/2024 12:06 PM

1. THIS RECORD DRAWING HAS BEEN PREPARED BY WSP FOR THE EXCLUSIVE USE OF 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.
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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

0 1 2 3 4 5 6 7 8 9 10m
SCALE: 1:100

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 (G)	FENCE	HYDRANT
ELECTRICAL (E)	IRRIGATION (IRR)	WELLHEAD
CONDUITS		
DITCH LINE		

700 - 1631 DICKSON AVENUE
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PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2024-06-21

BASE CE
DESIGN CE
APPROVED DG
JANUARY 2023
SCALE 1:100
SCALE NOT ACCURATE OVER LONG DISTANCES

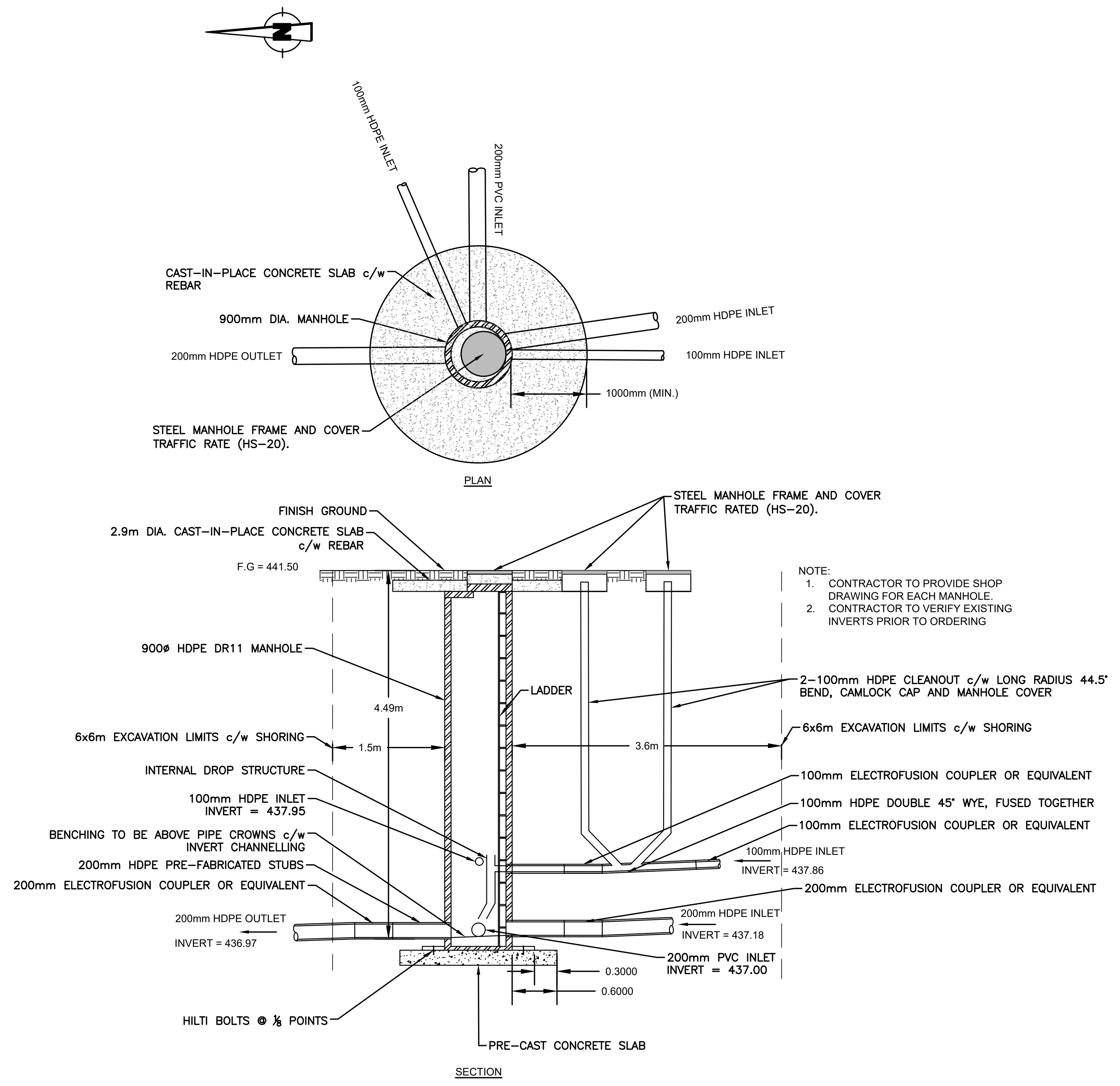
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
MANHOLE #2
SITE PLAN

DIVISION

DRAWING NO. C200
REV NO. 4

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-SITE PLAN.dwg PRINTED ON: 6/21/2024 12:06 PM



HDPE MANHOLE #2

A / C200 SCALE: 1:50

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

0 1000 2000 3000 4000 5000mm
SCALE: 1:50

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\6_Lift Station 1\3_Sheets\18M-01541-05-DETAILS.dwg PRINTED ON: 6/21/2024 12:12 PM

LEGEND

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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
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NAD 83

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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA 2024-06-21

BASE CE | DESIGN CE
APPROVED DG
JANUARY 2023
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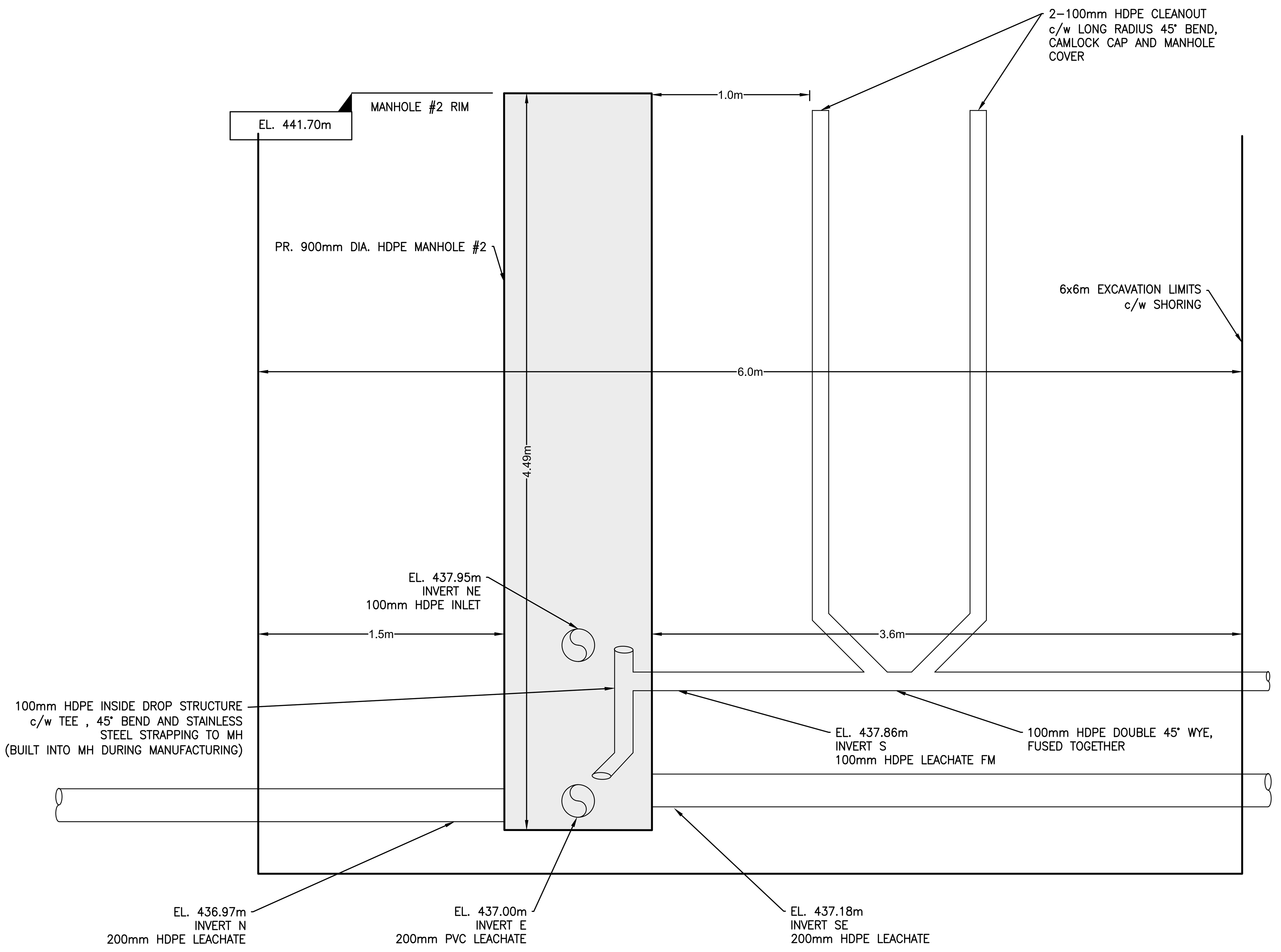
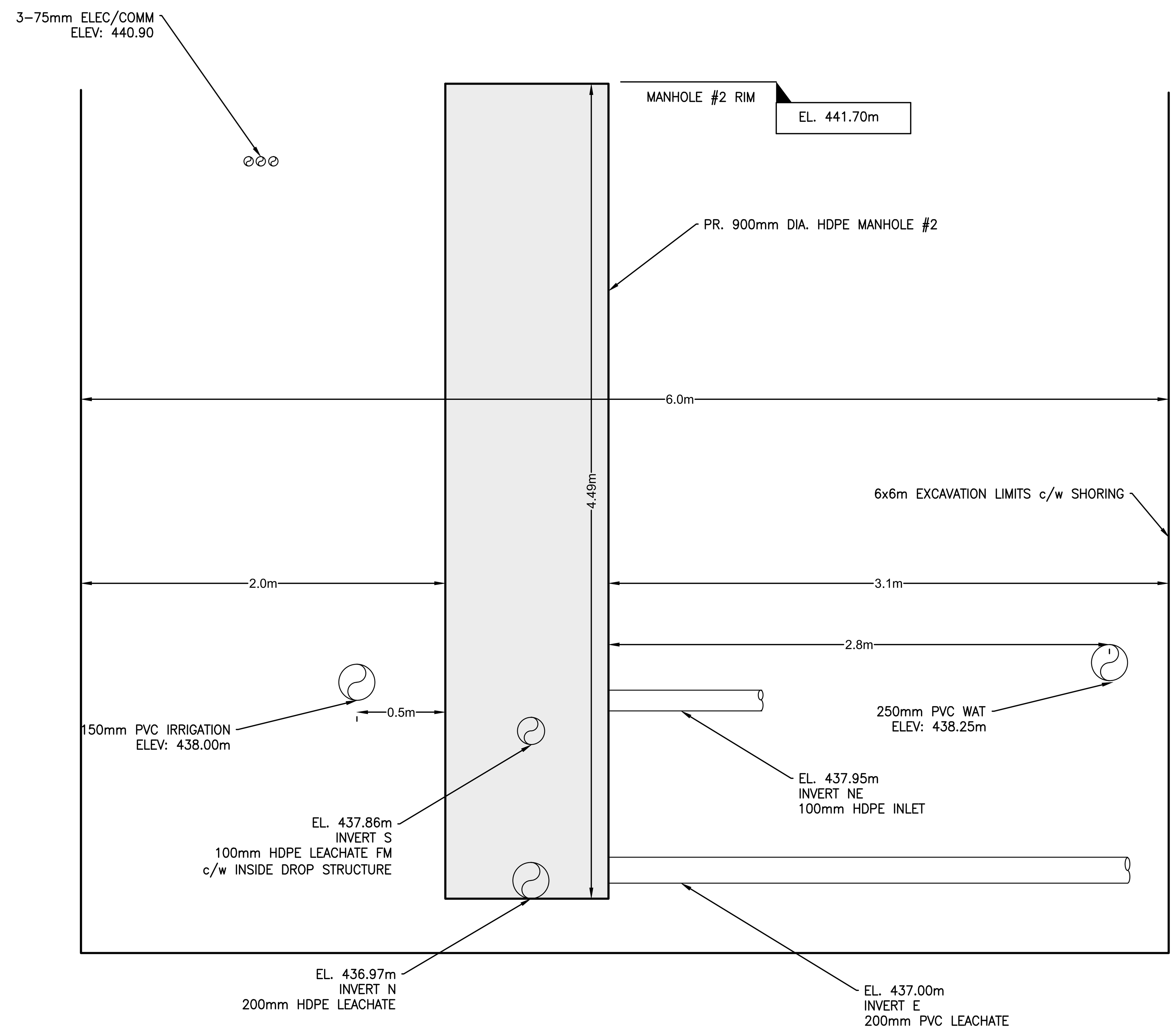
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – LIFT STATION #1
MANHOLE #2
DETAILS

DIVISION
DRAWING NO. C210
REV NO. 4



A-A
C200
MANHOLE #2 SECTION
SCALE: NTS



B-B
C200
MANHOLE #2 SECTION
SCALE: NTS

NOTES:
1. REFER TO C200 FOR SITE PLAN
2. GROUNDWATER DEPTH IS ASSUMED TO VARY FROM 437.00 TO 438.00

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

LEGEND

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STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
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THE CITY OF KELOWNA
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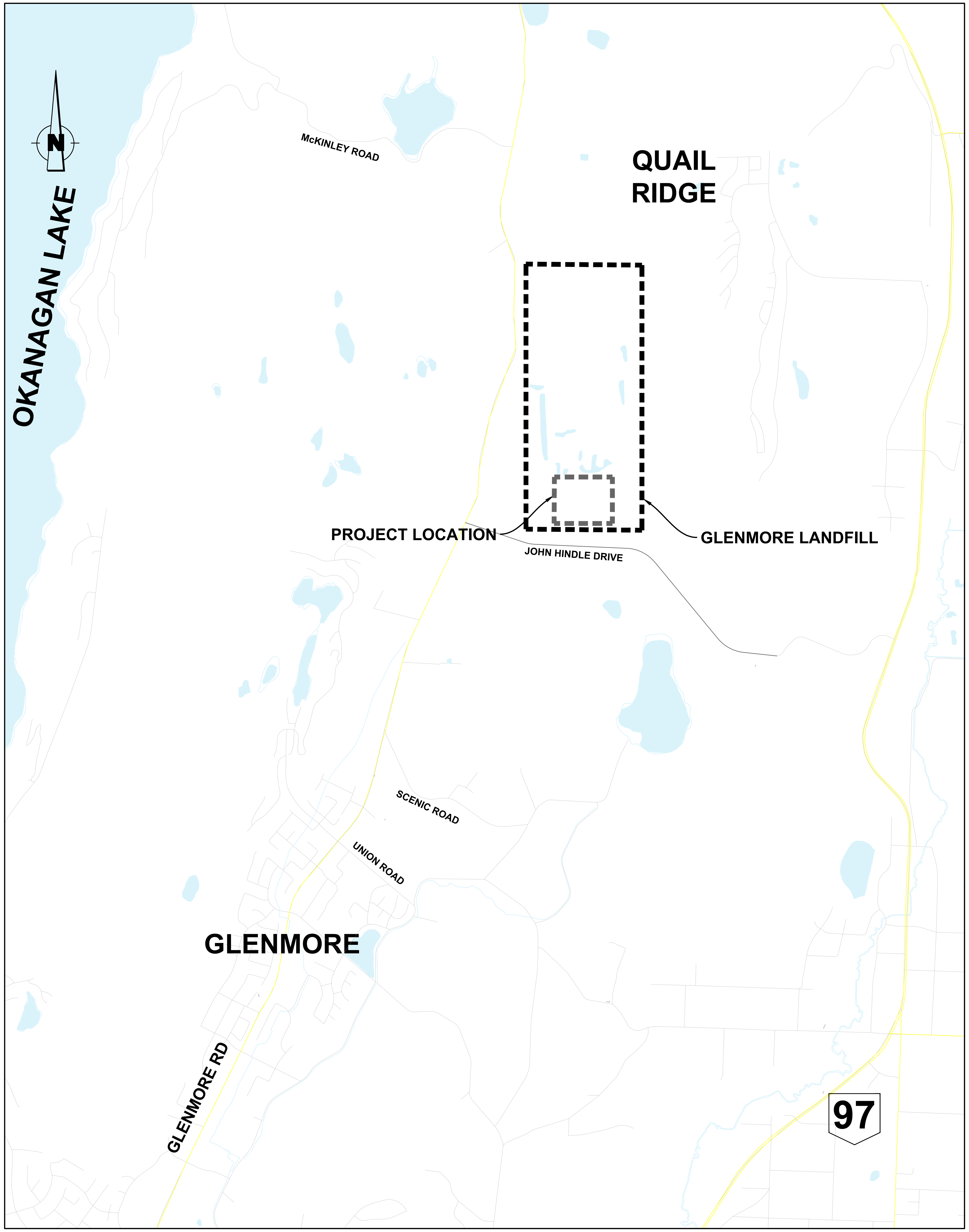
GLENMORE LANDFILL – LIFT STATION #1
MANHOLE #2
SECTIONS

DIVISION
DRAWING NO. X200
REV NO 4



City of Kelowna

GLENMORE LANDFILL
AERATED STATIC PILE COMPOSTING SYSTEM - PHASE 1

CITY FILE: 11200

LIST OF DRAWINGS:	
NAME	DESCRIPTION
CIVIL	
C000	COVER AND DRAWING LIST
C001	LEGEND AND GENERAL NOTES
C100	OVERALL SITE PLAN
C101	COMPOST AREA SITE PLAN
C102	LEACHATE COLLECTION SYSTEM OVERVIEW
C103	SUMP COLLECTION SYSTEM OVERVIEW
C200	AERATION FLOOR DRAIN PLENUM FOR LEACHATE CONNECTION
C201	LEACHATE MAIN – PLAN AND PROFILES
C202	LEACHATE MAIN – PLAN AND PROFILES
C203	LEACHATE MAIN – PLAN AND PROFILES
C204	AERATION FLOOR AND DRAIN LAYOUT
C300	STORM SYSTEM – PLAN AND PROFILES
C400	WATER SYSTEM OVERVIEW
C401	WATER SYSTEM – PLAN AND PROFILES
C402	WATER SYSTEM – PLAN AND PROFILES
C403	WATER SYSTEM – PLAN AND PROFILES
C500	COMPOST AREA SPRINKLER SYSTEM
C501	COMPOST AREA SPRINKLER SYSTEM DETAILS
C900	DETAILS – ROAD
C901	DETAILS – UTIL
C902	DETAILS – TANK
MECHANICAL	
M100	AERATION PIPE ELEVATION AT ℄
M101	BIOFILTER ZONE LAYOUT
ELECTRICAL	
E100	ELECTRICAL BUILDING DETAILS
E01	SITE PLAN
E02	SINGLE LINE DIAGRAM
E03	SINGLE LINE DIAGRAM
E04	SEACAN MCC LAYOUT
E05	DETAILS
E06	SCHEDULES
STRUCTURAL	
S001	GENERAL NOTES
S002	AERATION PAD AND PUSH WALL – PLAN VIEW
S003	AERATION PAD AND PUSH WALL – SECTION AND DETAILS
S004	BIOFILTER PAD – SECTION AND DETAILS
S005	COMPOST – SECTION AND DETAILS
S006	COMPOST – ANCHOR SCHEDULE

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

18M-01541-04

C000

ISSUED FOR RECORD DRAWING

JANUARY 2025

GENERAL NOTES:

1. ELEVATIONS ARE BASED ON GEODETIC DATUM, SURVEY CONTROL MONUMENTS AND SURVEY DATA PROVIDED BY THE CITY OF KELOWNA AND WSP GEOMATICS KELOWNA.
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 GROUP LIMITED.
5. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERTS OF ALL EXISTING UTILITIES AND PROPOSED CROSSINGS PRIOR TO CONSTRUCTION. THE CONTRACTOR TO NOTIFY THE CONTRACT ADMINISTRATOR 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 CONTRACT ADMINISTRATOR.
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 CONTRACT ADMINISTRATOR TO INSPECT PRIOR TO START OF ROAD BASE AND SUB BASE COURSES.
14. CONTRACTOR TO ADVISE THE CONTRACT ADMINISTRATOR TO INSPECT PRIOR TO BACKFILL OF ALL UNDERGROUND SERVICES.
15. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS.
16. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL 24 HOURS PER DAY DURING CONSTRUCTION, UNLESS DIRECTED BY THE CONTRACT ADMINISTRATOR. ALL TRAFFIC CONTROL SHALL CONFORM BC MOTI – TRAFFIC MANAGEMENT MANUAL (TMM).
17. THE CONTRACTOR SHALL MAINTAIN THE SAFE PASSAGE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
18. THE CONTRACTOR IS TO COMMUNICATE WITH THE LANDFILL SUPERVISOR AND THE CONTRACT ADMINISTRATOR ANYTIME DISRUPTION TO TRAFFIC MAY OCCUR AT LEAST 48 HOURS IN ADVANCE.
19. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
20. CONTRACTOR TO NOTIFY CITY OF KELOWNA'S LANDFILL SUPERVISOR AND THE CONTRACT ADMINISTRATOR IF ANY LANDFILL WASTE AND/OR MEDICAL WASTE IS ENCOUNTERED AND TO REQUEST INSTRUCTIONS.
21. 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.
22. 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.
23. WHERE EXISTING SERVICES ARE TO BE ABANDONED, THE CONTRACT ADMINISTRATOR OR HIS DESIGNATED SHALL BE PRESENT DURING THE DECOMMISSIONING WORK, AND SHALL COMPLETE A SERVICE DISCONNECT RECORD SHEET.
24. 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)
25. 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.
26. NOTE TYPICAL LANDFILL OPERATIONS ARE 1000 VEHICLE TRIPS PER DAY TO THE ACTIVE LANDFILL.
27. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE STANDARDS AND SPECIFICATIONS IN ORDER OF PRECEDENCE:
    - 27.3. AS PER SUPPLEMENTARY SPECIFICATIONS
    - 27.4. AS DETAILED WITHIN THIS DRAWING SET
    - 27.5. CITY OF KELOWNA SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS
    - 27.6. MMCD PLATINUM EDITION STANDARDS AND SPECIFICATIONS
    - 27.7. MOTI 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION
    - 27.8. CITY OF KELOWNA APPROVED WATERWORKS PRODUCTS LIST
28. FOR THE SCOPE OF SUPPLY BY ENGINEERING COMPOST SYSTEMS (ECS) AND ASSOCIATED INSTALLATION DRAWINGS, REFER TO ECS SHOP DRAWINGS.
29. ALL ITEMS LABELLED "FUTURE" ARE NOT INCLUDED AND FOR INFORMATION ONLY

WATER SYSTEM SPECIFIC NOTES:

1. UTILITY TRENCH AS PER CITY OF KELOWNA STANDARD DRAWING SS-G4 AND WORKSAFE BC STANDARDS.
2. WATER SERVICE CONNECTIONS AS PER CITY OF KELOWNA STANDARD DRAWING SS-W2.
3. GATE VALVE INSTALLATION AS PER MMCD STANDARD DRAWING W3.
4. THRUST BLOCK AS PER MMCD STANDARD DRAWING W1.
5. WATERMAIN TO BE PVC DR 18, PR 235 AWWA C900.
6. ALL BENDS ARE TO BE PVC DR18, PR 235 AWWA C900.
7. 50mm SELF DRAINING STAND PIPE AS PER TERMINAL CITY IRON WORKS LTD. DETAIL.
8. ALL PIPE DIMENSIONS ARE 2D.
9. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH MMCD PLATINUM EDITION AND THE CURRENT CITY OF KELOWNA "SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS".
10. ALL HYDRANT ASSEMBLIES ARE AS PER CITY OF KELOWNA STANDARD DRAWING SS-W4 WITH JOINT RESTRAINTS. HYDRANT DRAIN HOLE IS TO BE PLUGGED. CONTRACTOR IS RESPONSIBLE FOR DRAINING HYDRANTS.
11. ALL JOINTS FOR FITTINGS AND TEES TO BE RESTRAINED. JOINT RESTRAINTS TO BE UNI-FLANGE SERIES 1300 OR APPROVED EQUAL WITH 304SS BOLTS AND NUTS. WRAP DUCTILE IRON RESTRAINT CLAMPS WITH DENSO TAPE.
12. CONTRACTOR TO HYDRO EXCAVATE AND LOCATE ALL EXISTING UTILITIES ALONG THE PROPOSED WATERMAIN ALIGNMENT AND NOTIFY THE CONTRACT ADMINISTRATOR OF ANY CONFLICTS.
13. ALL WATERMAIN INSTALLATION AT STORM SEWER AND/OR SANITARY/LEACHATE SEWER CROSSING, TO BE SUCH THAT A 6.0m LONG WATERMAIN PIPE IS CENTERED OVER/UNDER THE CROSSING.
14. THE CONTRACTOR IS TO MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 3.0m AND MINIMUM VERTICAL SEPARATION OF 0.45m FROM EDGE OF WATERMAIN TO THE EDGE OF SANITARY/LEACHATE AND STORM MAINS.
15. THE CONTRACTOR IS RESPONSIBLE TO PRESSURE TEST ALL WATERMAINS AT 200 PSI (1380 kPa) AT THE LOWEST POINT OF MAIN AS PER MMCD, SECTION 33 11 01, 3.19.2 TESTING PROCEDURE.
16. THE CONTRACTOR IS TO COMPLETE ALL TIE-INS AND DISCONNECTS FOR CITY WATER IN THE PRESENCE OF CITY PERSONNEL. THE CONTRACTOR IS TO COORDINATE THIS WITH THE UTILITY CONSTRUCTION SERVICEMEN (250-470-0490) AT LEAST 2 FULL WORKING DAYS PRIOR TO SCHEDULING.
17. FOR WATER TIE-INS, PRIOR APPROVAL IS REQUIRED FROM THE WATER UTILITY ENGINEERING TECHNOLOGIST (250-469-0679) TO CONFIRM SUCCESSFUL PRESSURE TESTING, CHLORINATION AND FLUSHING.
18. ALL WATERMAIN FLUSHING, PRESSURE TESTING AND MICROBIOLOGICAL TESTING TO CONFORM WITH ALL MMCD AND AWWA STANDARDS.

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. LEACHATE MANHOLES SHALL BE HDPE AS PER DETAIL SHEET. ALL LEACHATE MANHOLES TO BE SEALED AIR TIGHT AS PER DWG C901, DETAIL G.
5. MANHOLE FRAME AND COVER CITY OF KELOWNA STANDARD DRAWING SS-S1c.
6. ALL LEACHATE PIPES SHALL BE HDPE DR17 PIPE.
7. ALL FITTINGS SHALL BE HDPE DR17.
8. CONTRACTOR TO VIDEO TEST PIPES AND TO ENSURE TESTING IS DONE BEFORE ACCESS IS LIMITED. FLUSH PIPE PRIOR TO VIDEO TESTING.
9. 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. CONCRETE BLOCK HEADWALL AS PER MMCD STANDARD DRAWING S14 AND CITY OF KELOWNA STANDARD DRAWING SS-S13B.

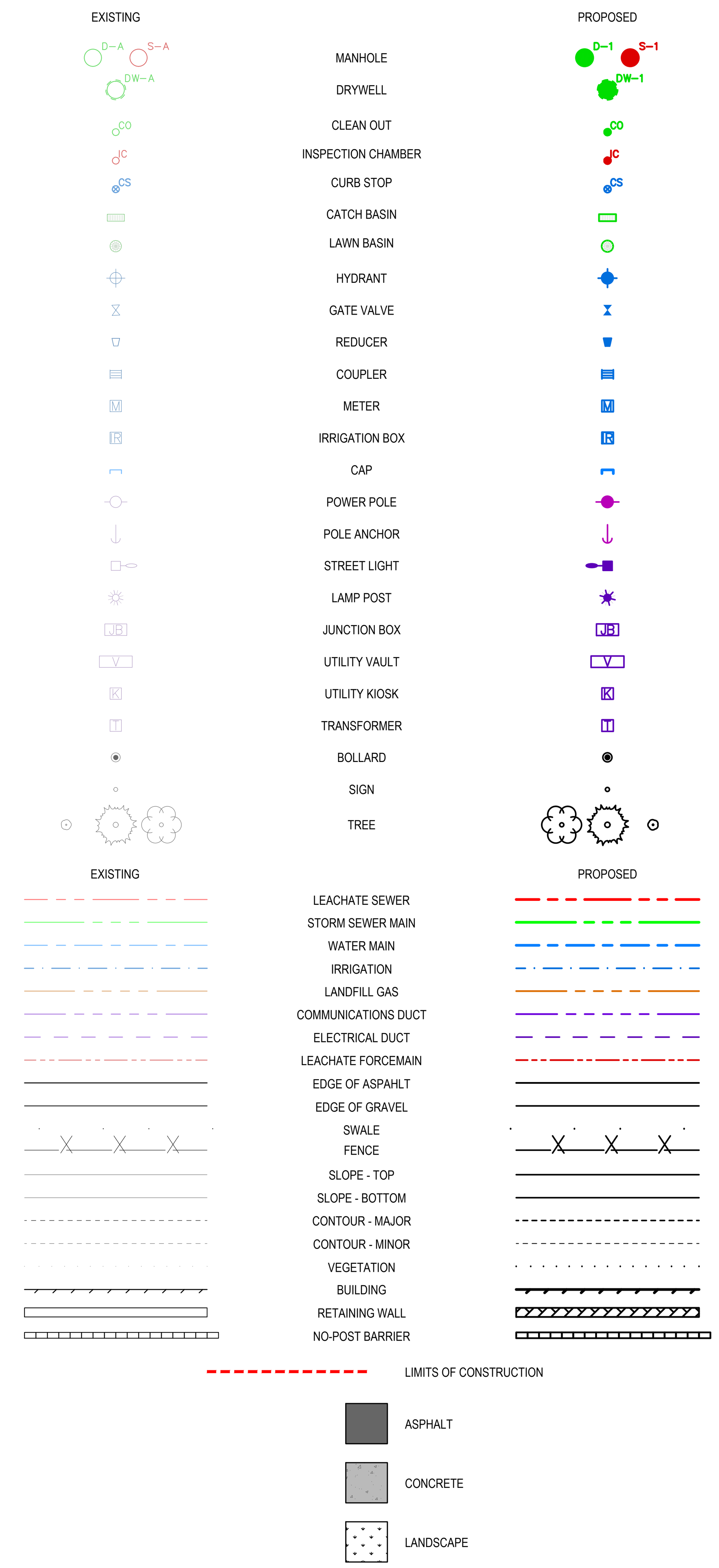
ELECTRICAL NOTES:

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.

ROADWORKS SPECIFIC NOTES:

1. THE CONTRACTOR SHALL LOAD AND HAUL WASTE ASPHALT, CONCRETE AND ROCK MATERIAL TO AN APPROVED LOCATION ONSITE.
2. THE CONTRACTOR SHALL USE STOCKPILES ONSITE FOR EMBANKMENT FILL.
3. ROAD STRUCTURE TO BE AS FOLLOWS;
   - 100mm – AC PAVEMENT SURFACE COURSE (2 LIFTS)
   - 200mm – 19mm MINUS CRUSHED GRAVEL BASE.
   - 450mm – 75mm MINUS CRUSHED GRAVEL SUB-BASE.

LEGEND:



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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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1	23/01/16	KU	ISSUED FOR RFP	DG
0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2025-02-20

BASE CE | DESIGN CE
APPROVED DG
OCTOBER 2022

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
LEGEND AND GENERAL NOTES

DIVISION

DRAWING NO. C001

REV NO. 4

FILE LOCATION: \\corp.pbwan.net\ca\data\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C0_GENERAL_R0.dwg PRINTED ON: 2/14/2025 8:32 AM

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0 30 60 90 120 150m

SCALE: 1:1500

FILE LOCATION: \\corp.pbwan.net\ca\data\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C1_SITE PLAN.dwg PRINTED ON: 2/14/2025 8:32 AM

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KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
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0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER C. EVANGIO # 53165 BRITISH COLUMBIA 2025-02-20

BASE CE DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:1500
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
OVERALL SITE PLAN

DIVISION

DRAWING NO. C100

REV NO. 4

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0 5 10 15 20 25m
SCALE: 1:250

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

NAD 83

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C. EVANGIO
2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:250
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
COMPOST AREA SITE PLAN

DIVISION
DRAWING NO. C101
REV NO. 4

FILE LOCATION: \\corp.pbwan.net\ca\data\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C1_SITE PLAN.dwg PRINTED ON: 2/14/2025 11:48 AM

NOTES

1. TOP SURFACE OF CONCRETE PEDESTALS IN BIOFILTER BASIN SHALL BE FLAT AND IN PLANE WITH CONCRETE LEDGE SURROUNDING BIOFILTER BASIN, WITHIN +/-0.25"
2. ALL CONDENSATE STUB UPS AND FAN DRAIN TAPS TO HAVE CLEANOUT WYE INSTALLED FOR MAINTENANCE PROVIDED BY INSTALLER. SEE DETAIL T ON ECS SHEET 18. 1.5" DRAIN PIPE RECOMMENDED
3. CLEANOUT SWEEPS PROVIDED BY INSTALLER OR ALL DRAIN LINE CONNECTIONS. SWEEPS ORIENTED TOWARDS SUMPS
4. SEE ECS SHEET 17 FOR BOLTED CONNECTIONS BETWEEN SIMILAR MATERIALS
5. SEE ECS SHEET 16 FOR BOLTED CONNECTIONS BETWEEN HDPE AND STAINLESS STEEL
6. SPACE TRENCH COVERS NEAR END EVENLY SO THERE IS NO AIR GAP ON EITHER END OF THE FULLY ASSEMBLED TRENCH AT STARTUP

0 2 4 6 8 10 20m
SCALE: 1:200

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
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0	22/11/07	KU	ISSUED FOR REVIEW	DG

BASE	DESIGN
CE	CE
APPROVED DG	
OCTOBER 2022	
SCALE 1:200	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
LEACHATE COLLECTION SYSTEM OVERVIEW

DIVISION

DRAWING NO. C102

REV NO. 4

PRINTED ON: 2/14/2025 11:29 AM

FILE LOCATION: \\corp.pbwan.net\ca\data\CAKML500\Projects\2018\18M-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets\PHASE 1\18M-01541-04-C1_SITE PLAN.dwg

A
C103

FAN PAD - DRAIN SUMP CONNECTION DETAIL

SCALE: 1:50

NOTES

1. TOP SURFACE OF CONCRETE PEDESTALS IN BIOFILTER BASIN SHALL BE FLAT AND IN PLANE WITH CONCRETE LEDGE SURROUNDING BIOFILTER BASIN, WITHIN +/-0.25"
2. ALL CONDENSATE STUB UPS AND FAN DRAIN TAPS TO HAVE CLEANOUT WYE INSTALLED FOR MAINTENANCE PROVIDED BY INSTALLER. SEE DETAIL T ON SHEET 16. 1.5" DRAIN PIPE RECOMMENDED
3. CLEANOUT SWEEPS PROVIDED BY INSTALLER OR ALL DRAIN LINE CONNECTIONS. SWEEPS ORIENTED TOWARDS SUMPS
4. SEE SHEET 17 FOR BOLTED CONNECTIONS BETWEEN SIMILAR MATERIALS
5. SEE SHEET 16 FOR BOLTED CONNECTIONS BETWEEN HDPE AND STAINLESS STEEL
6. SPACE TRENCH COVERS NEAR END EVENLY SO THERE IS NO AIR GAP ON EITHER END OF THE FULLY ASSEMBLED TRENCH AT STARTUP

0 1 2 3 4 5m

SCALE: 1:50

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CANADA V1Y 0B5
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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

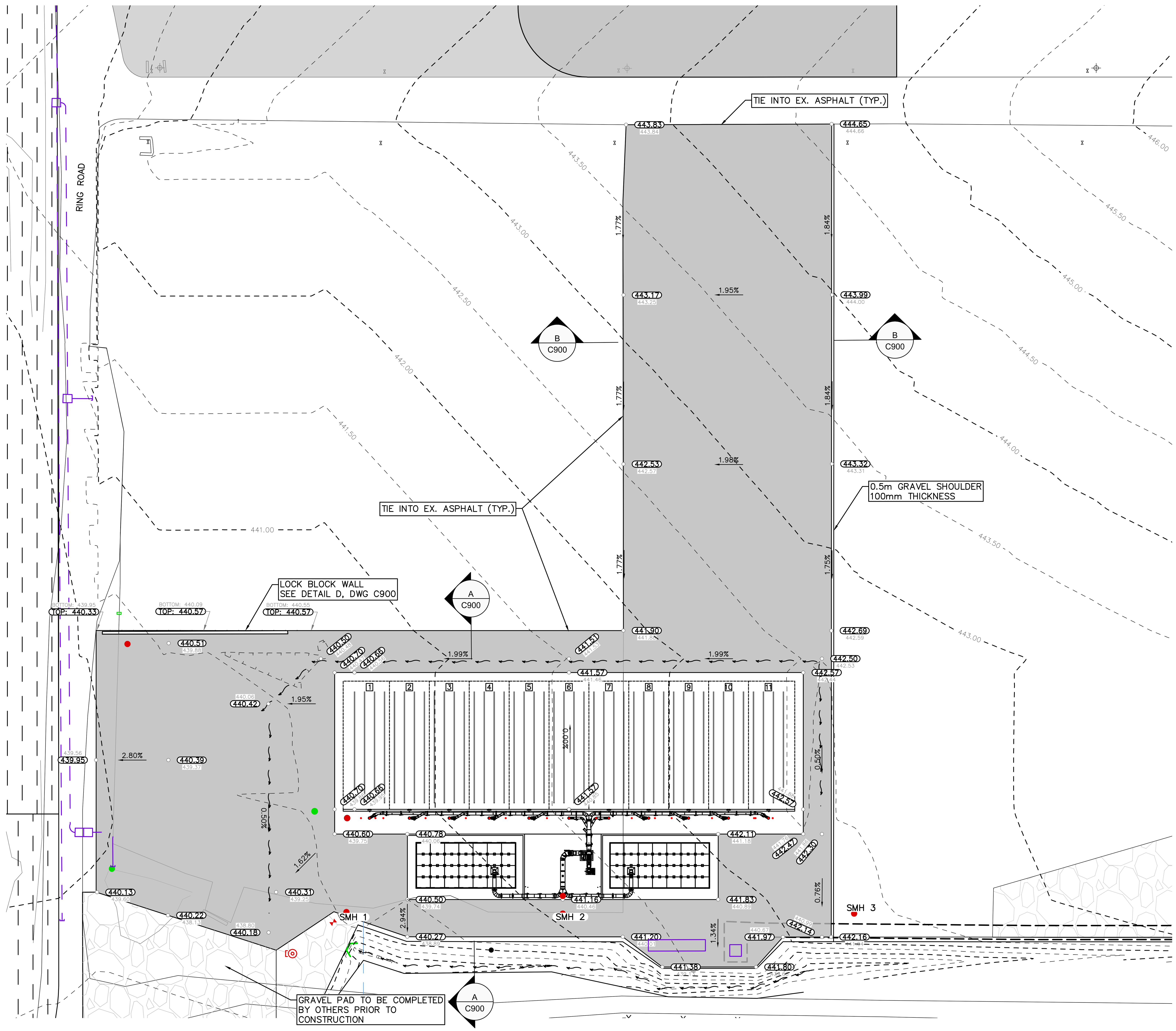
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
SUMP CONNECTION DETAILS

DIVISION

DRAWING NO. C103

REV NO. 4



COMMON EXCAVATION NOTES

1. HAUL AND STOCKPILE SEPARATELY WITHIN LANDFILL AS DIRECTED BY CONTRACT ADMINISTRATOR:
   a. REMOVED ASPHALT
   b. ORGANIC MATERIAL
   c. COMMON MATERIAL

SITE GRADING AND PAVING NOTES

1. PAVEMENT RESTORATION AS PER CITY OF KELOWNA STANDARD DRAWING G5
2. PAVEMENT STRUCTURE AS FOLLOWS:
   –100mm – AC PAVEMENT SURFACE COURSE (2 LIFTS)
   –200mm – 19mm MINUS CRUSHED GRAVEL BASE.
   –450mm – 75mm MINUS CRUSHED GRAVEL SUB–BASE.
3. AS DIRECTED BY CONTRACT ADMINISTRATOR, SUB–EXCAVATE UNSUITABLE SUBGRADE AND BACKFILL WITH APPROVED NATIVE FILL OR ONSITE MATERIAL.

AERATION PAD NOTES

1. REFER TO DRAWING C900 FOR CONCRETE BASE AND SUBGRADE REQUIREMENTS.
2. AS DIRECTED BY ENGINEER, SUB–EXCAVATED UNSUITABLE SUBGRADE WAS BACKFILLED WITH APPROVED NATIVE FILL OR ONSITE MATERIAL.

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0 10 20 30 40 50m

SCALE: 1:500

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

NAD 83

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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA 2025-02-20

BASE CE DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:500
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
SITE GRADING AND PAVING

DIVISION
DRAWING NO. C104
REV NO 4

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C2_LEACHATE.dwg PRINTED ON: 2/14/2025 8:36 AM

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wsp
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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	23/04/11	KU	ISSUED FOR CONSTRUCTION	DG
1	23/01/16	KU	ISSUED FOR RFP	DG
0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA 2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE H 1:150 V 1:30
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1

CIVIL

AERATION FLOOR DRAIN PLENUM FOR LEACHATE COLLECTION

DIVISION

DRAWING NO. C200

REV NO 4

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FILE LOCATION: \\corp.pbwan.net\ca\data\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C2_LEACHATE.dwg PRINTED ON: 2/14/2025 12:33 PM

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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0	22/11/07	KU	ISSUED FOR REVIEW	DG

C. EVANGIO
53165
ENGINEER
2025-02-20

BASE: CE
DESIGN: CE
APPROVED: DG
OCTOBER 2022
SCALE: H 1:150, V 1:30
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

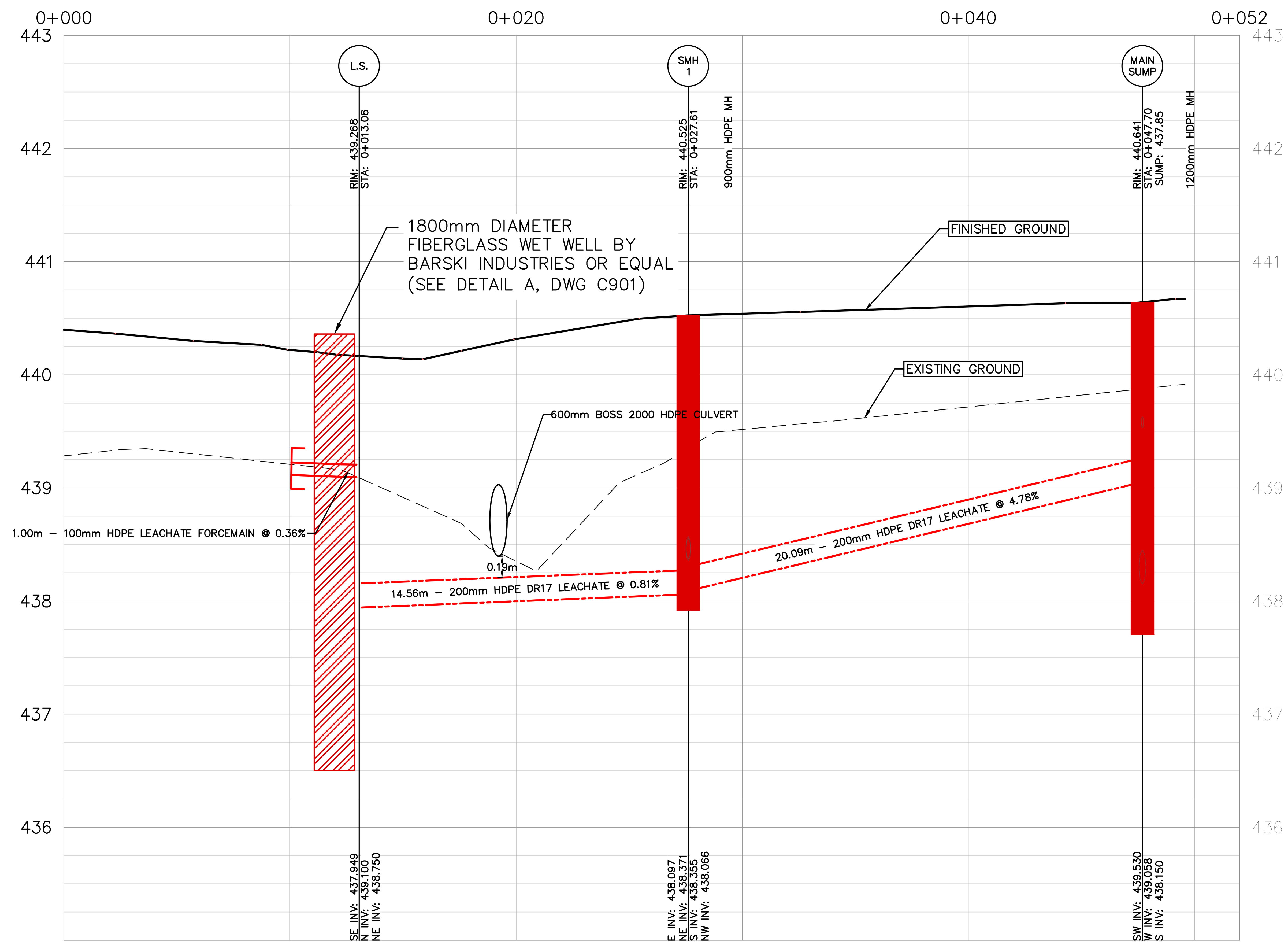
GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
LEACHATE MAIN – PLAN AND PROFILE

DIVISION

DRAWING NO. C201
REV NO 4

0 1 2 3 4 5 10 15m
SCALE: 1:150

0 0.5 1 2 3m
SCALE: 1:30



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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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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2025-02-20

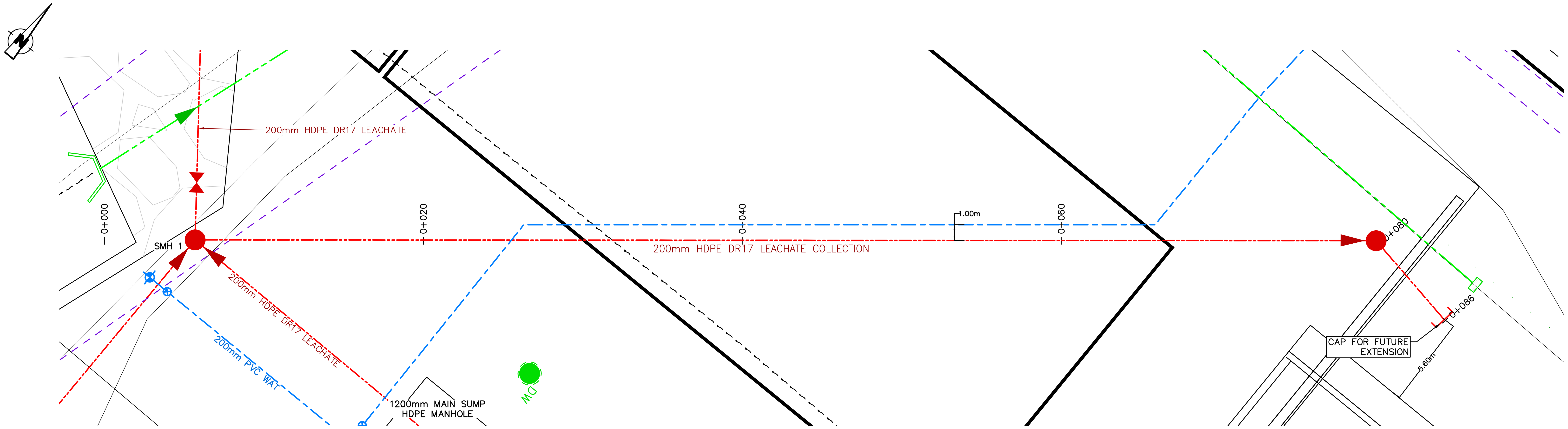
BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE H 1:150 V 1:30
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
LEACHATE MAIN – PLAN AND PROFILE

DIVISION
DRAWING NO. C202
REV NO. 4

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C2_LEACHATE.dwg PRINTED ON: 2/14/2025 11:32 AM

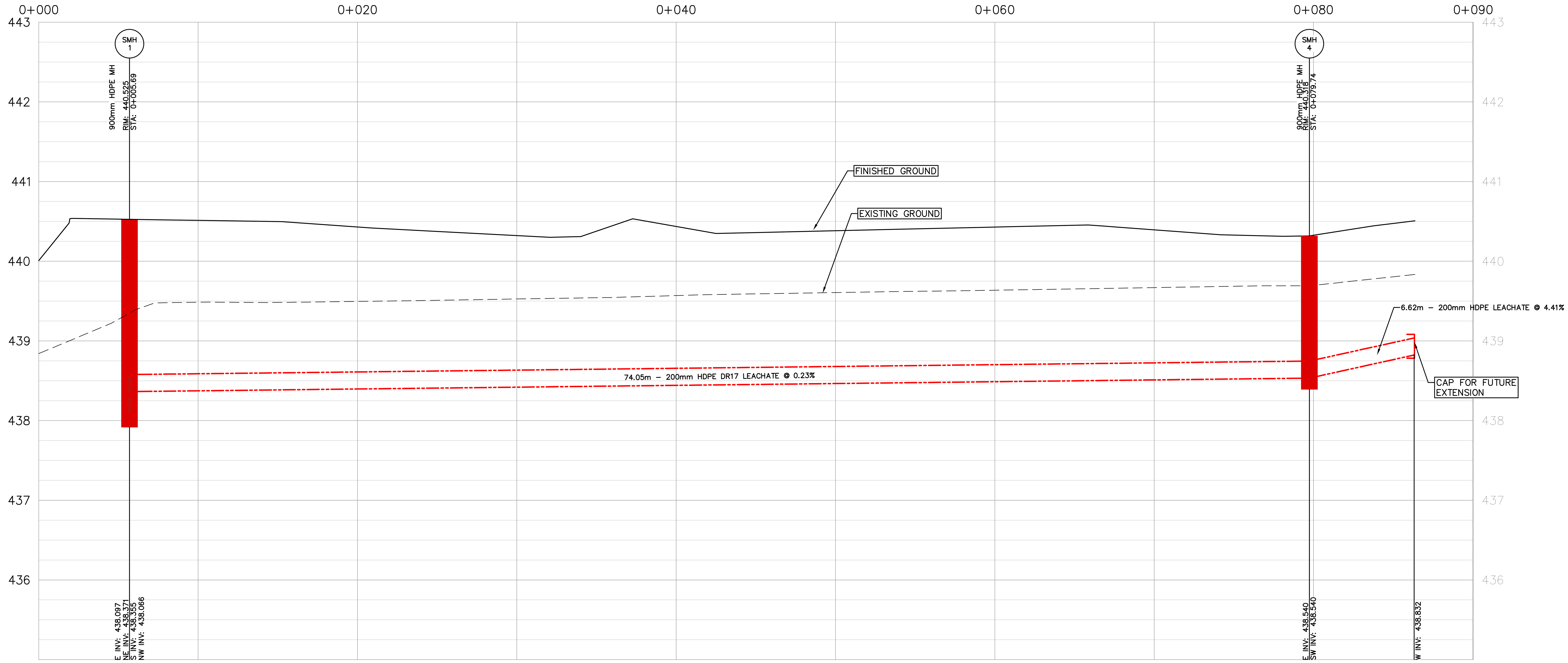


NOTES:

1. CLEANOUT COVER AND MANHOLE LID, OR REMOVABLE END PIECE ON HDPE PIPE, AIR TIGHT

SCALE: 1:150

SCALE: 1:30



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

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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA 2025-02-20

BASE: CE	DESIGN: CE
APPROVED: DG	
OCTOBER 2022	
SCALE	H 1:150 V 1:30

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1

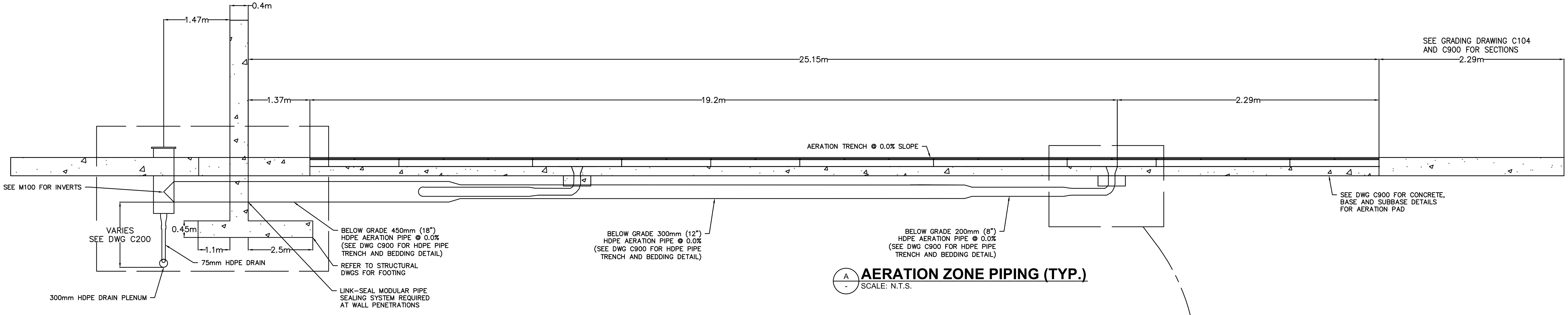
CIVIL

LEACHATE MAIN – PLAN AND PROFILE

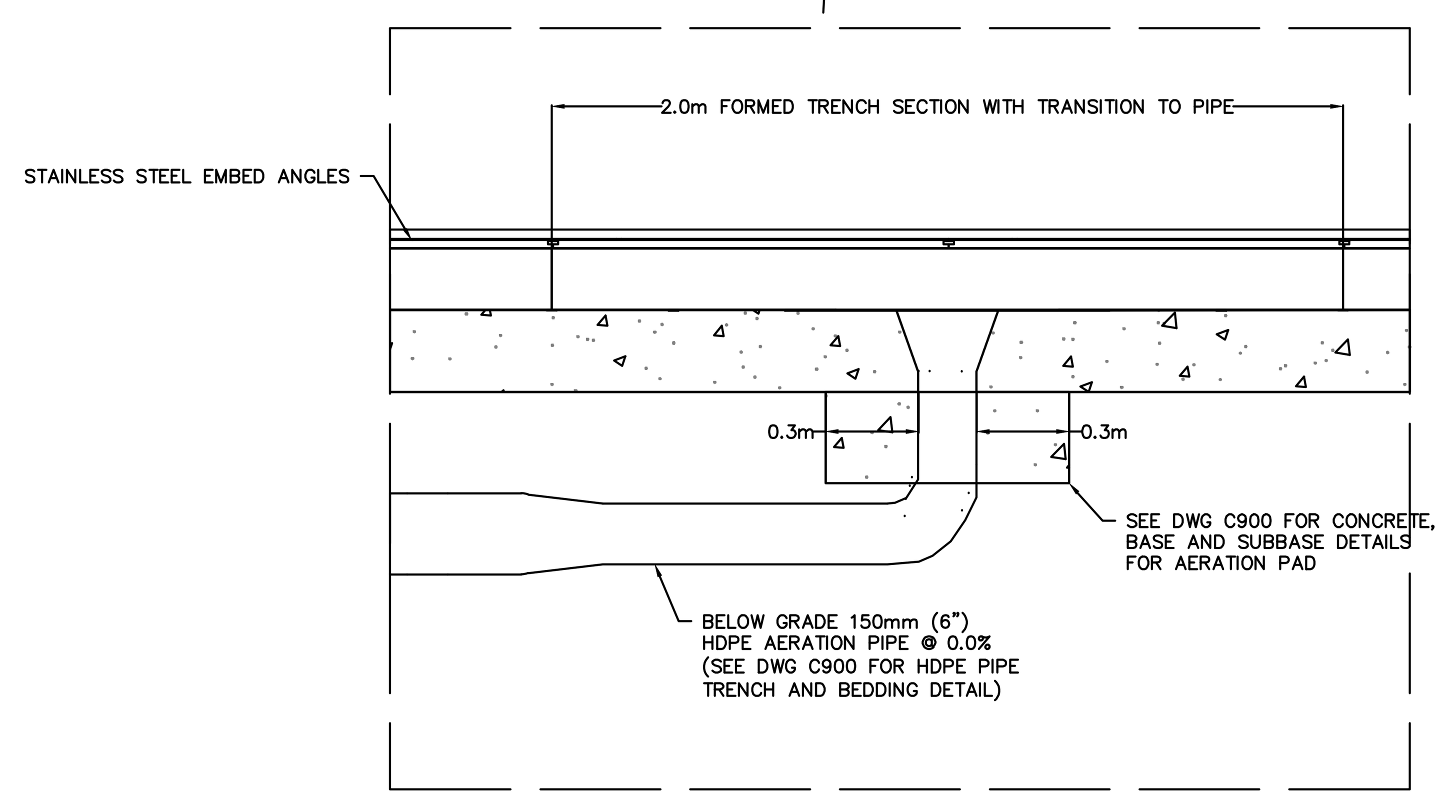
DIVISION

DRAWING NO. C203

REV NO. 4



A
-
AERATION ZONE PIPING (TYP.)
SCALE: N.T.S.



A
C204
AERATION TRENCH CONNECTION DETAIL
SCALE: N.T.S.

NOTES:

1. REFER TO ECS DRAWINGS FOR FURTHER DETAILS

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wsp
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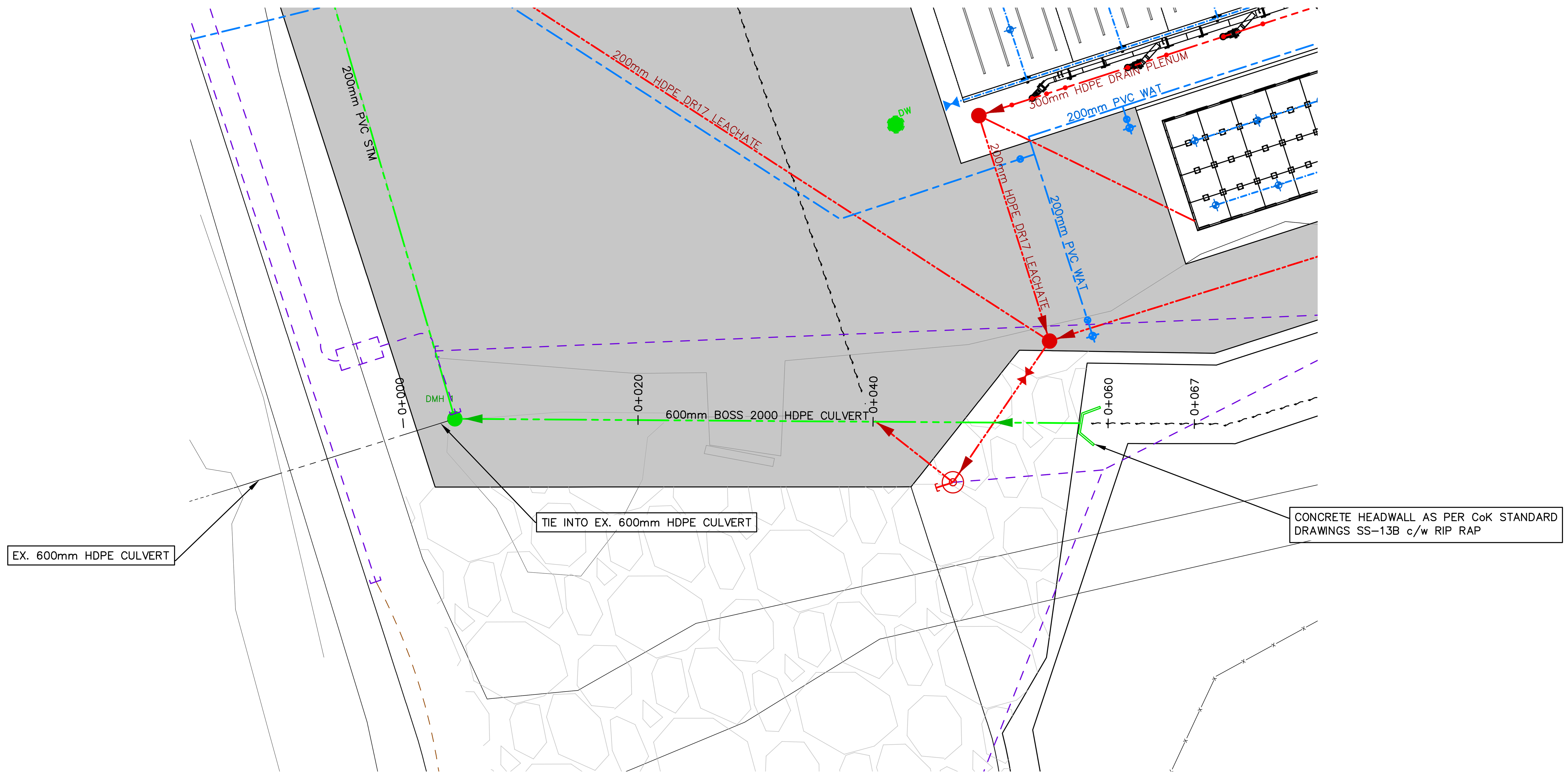
C. EVANGIO
2025-02-20

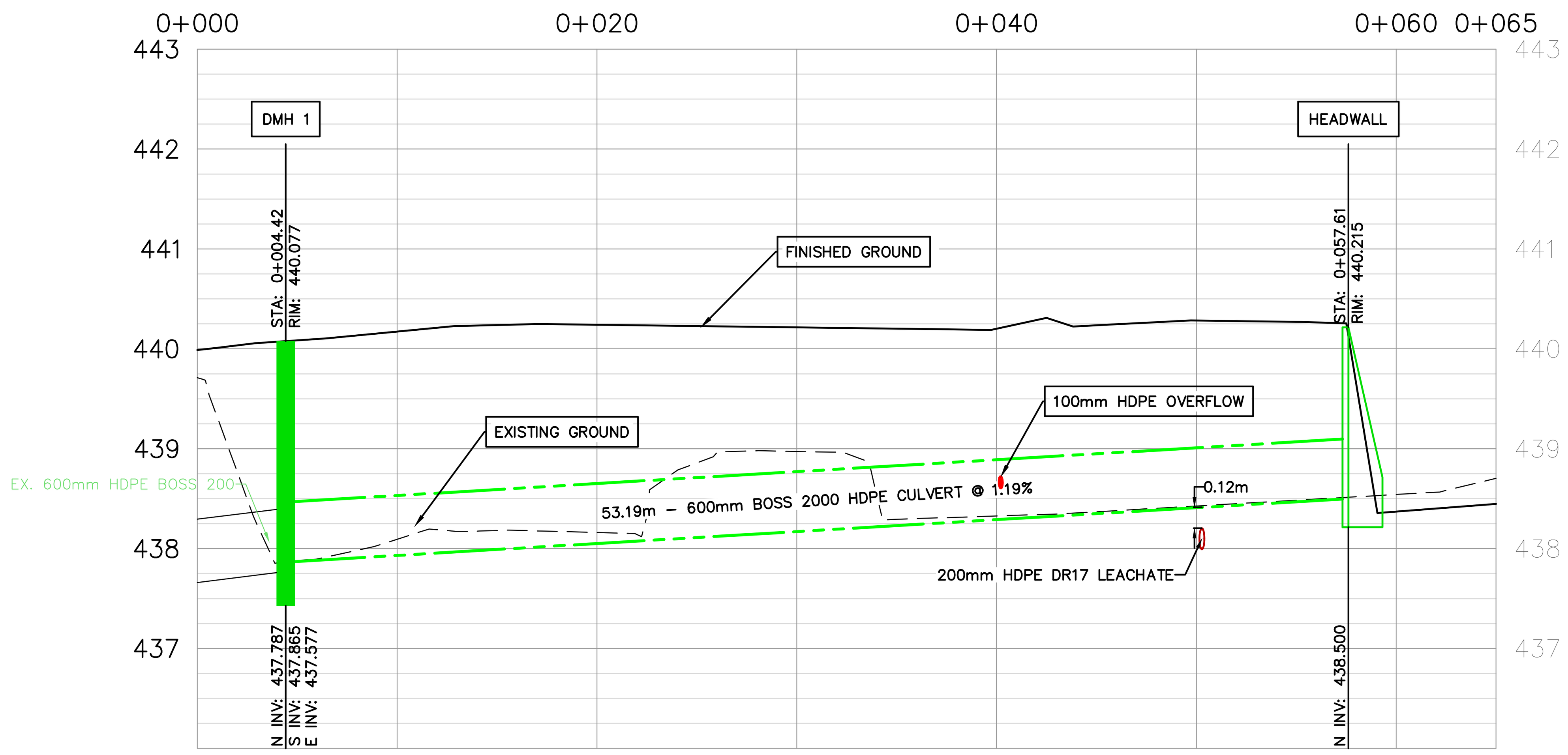
BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE AS SHOWN
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
AERATION FLOOR AND DRAIN LAYOUT

DIVISION
DRAWING NO. C204
REV NO. 4





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0 5 10 15 20 25m
SCALE: 1:250

0 1 2 3 4 5m
SCALE: 1:50

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

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0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE H 1:250 V 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
STORM SYSTEM – PLAN & PROFILE

DIVISION

DRAWING NO. C300
REV NO. 4

NOTES:

1. 50mm SELF DRAINING STAND PIPE AS PER TERMINAL CITY IRON WORKS LTD. DETAIL

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0 10 20 30 40 50m

SCALE: 1:500

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

NAD 83

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C. EVANGIO
2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:500

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1

CIVIL

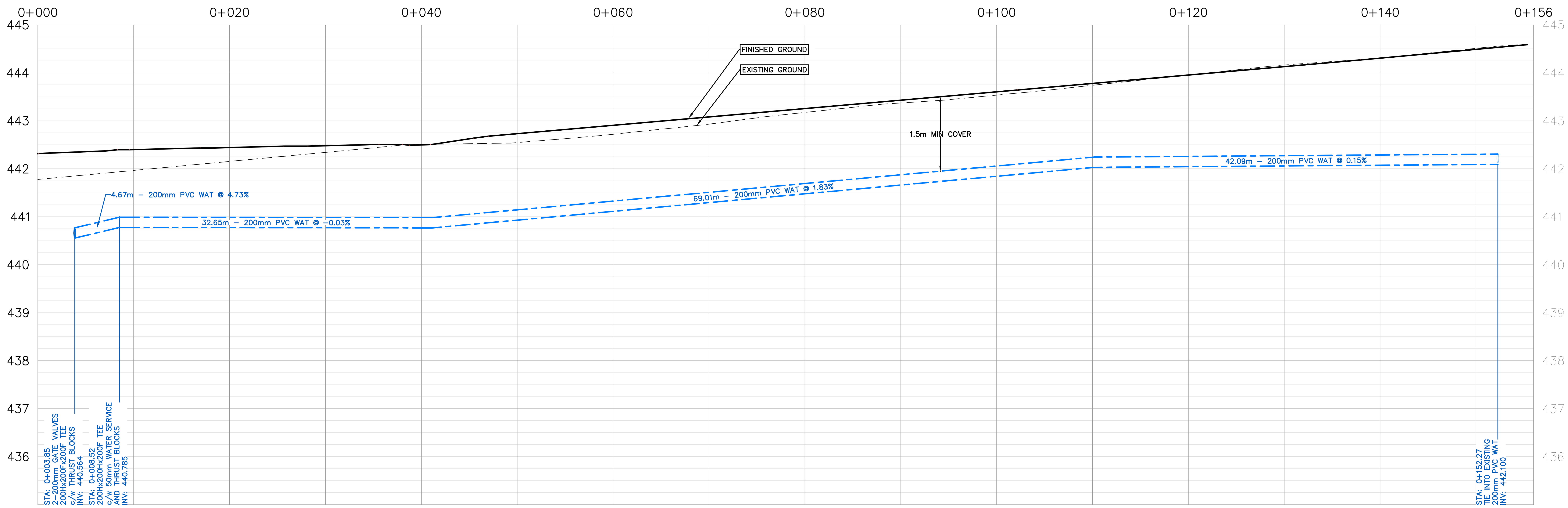
WATER SYSTEM OVERVIEW

DIVISION

DRAWING NO. C400

REV NO 4

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C4_WATER.dwg PRINTED ON: 2/14/2025 11:50 AM



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0 5 10 15 20 25m
SCALE: 1:250

0 1 2 3 4 5m
SCALE: 1:50

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
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ENGINEER
2025-02-20

BASE CE
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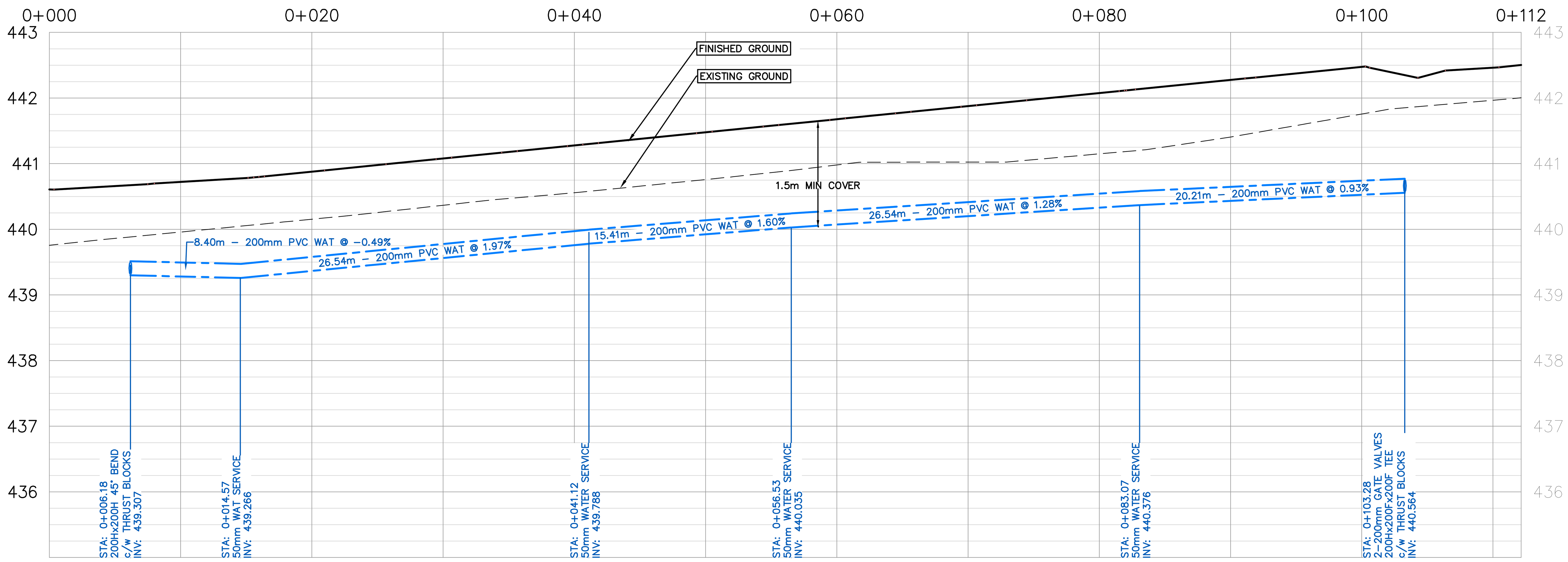
APPROVED DG
OCTOBER 2022
SCALE H 1:250 V 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
WATER SYSTEM – PLAN & PROFILE

DIVISION
DRAWING NO. C401
REV NO 4



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SCALE: 1:250 (0, 5, 10, 15, 20, 25m)

SCALE: 1:50 (0, 1, 2, 3, 4, 5m)

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
4	25/02/14	LW	ISSUED FOR RECORD DRAWING	CE
3	23/05/05	NS	RE-ISSUED FOR CONSTRUCTION	DG
2	23/04/11	KU	ISSUED FOR CONSTRUCTION	DG
1	23/01/16	KU	ISSUED FOR RFP	DG
0	22/11/07	KU	ISSUED FOR REVIEW	DG

C. EVANGIO
53165
ENGINEER
2025-02-20

BASE: CE
DESIGN: CE
APPROVED: DG
OCTOBER 2022
SCALE: H 1:250 V 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

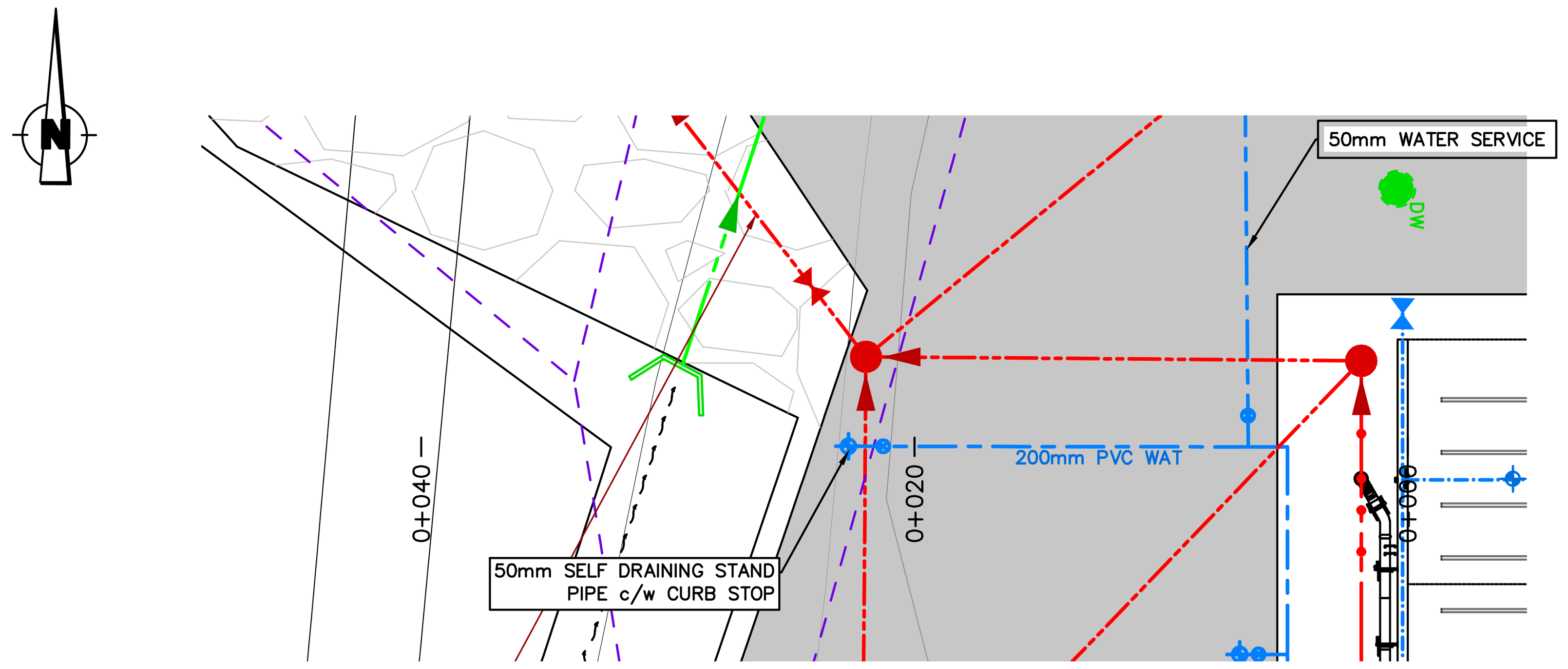
GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
WATER SYSTEM – PLAN & PROFILE

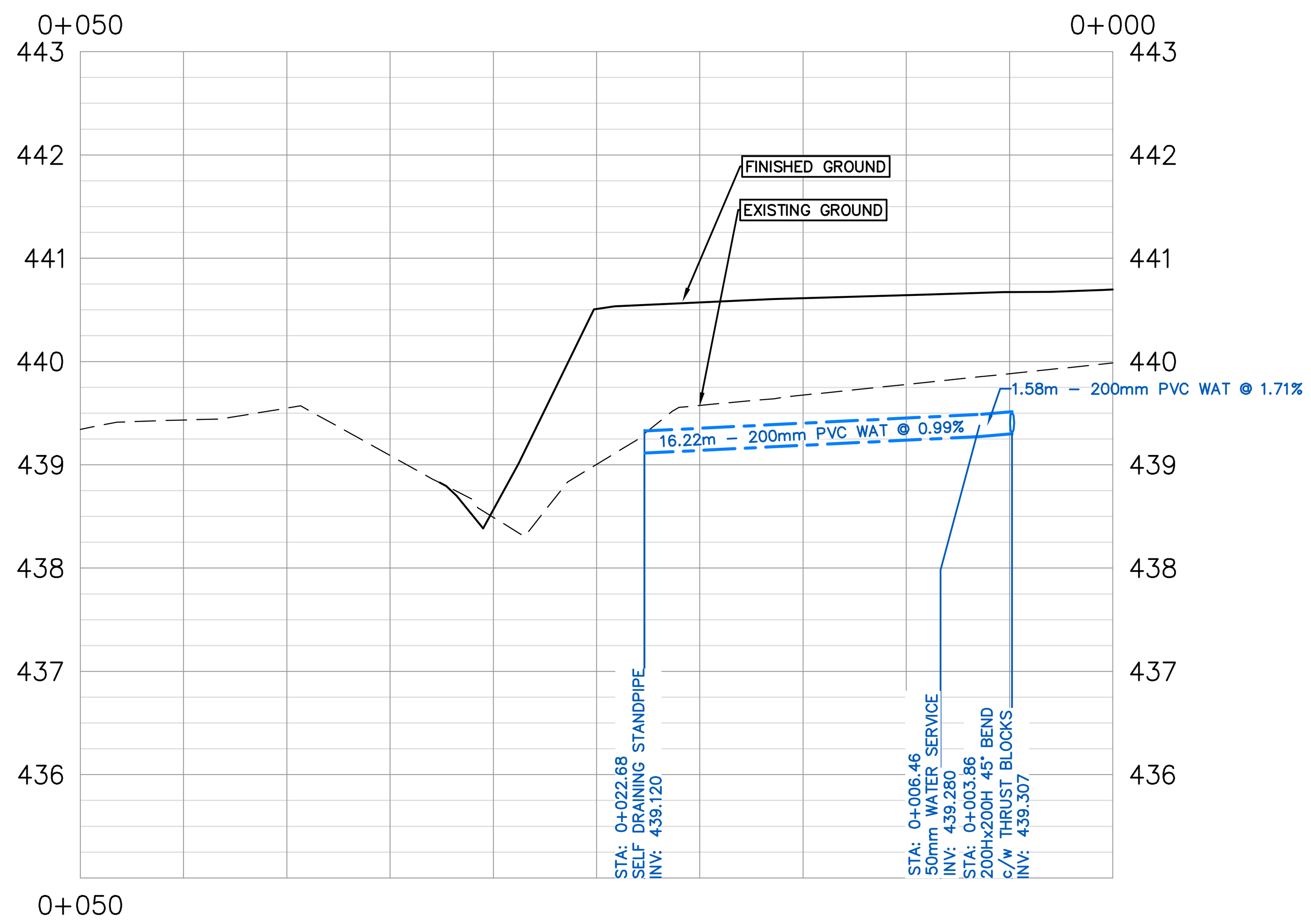
DIVISION

DRAWING NO. C402

REV NO 4

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\1BM-01541-04-C4_WATER.dwg PRINTED ON: 2/14/2025 11:51 AM





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0 5 10 15 20 25m
SCALE: 1:250

0 1 2 3 4 5m
SCALE: 1:50

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

NAD 83

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0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
2025-02-20

BASE CE	DESIGN CE
APPROVED DG	
OCTOBER 2022	
SCALE H 1:250 V 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
WATER SYSTEM – PLAN & PROFILE

DIVISION

DRAWING NO. C403

REV NO. 4

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C4_WATER.dwg PRINTED ON: 2/14/2025 11:53 AM

NOTES:

1. REFER TO ECS DRAWINGS FOR IRRIGATION PLAN AND DETAILS WITHIN ZONES AND BIOFILTERS.

0 1 2 3 4 5 10 15m

SCALE: 1:150

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

NAD 83

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0	22/11/07	KU	ISSUED FOR REVIEW	DG

PROFESSIONAL C. EVANCIO # 53165 BRITISH COLUMBIA ENGINEER
2025-02-20

BASE CE
DESIGN CE
APPROVED DG
OCTOBER 2022
SCALE 1:150

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
COMPOST AREA SPRINKLER SYSTEM

DIVISION

DRAWING NO. C500

REV NO. 4

NOTES:

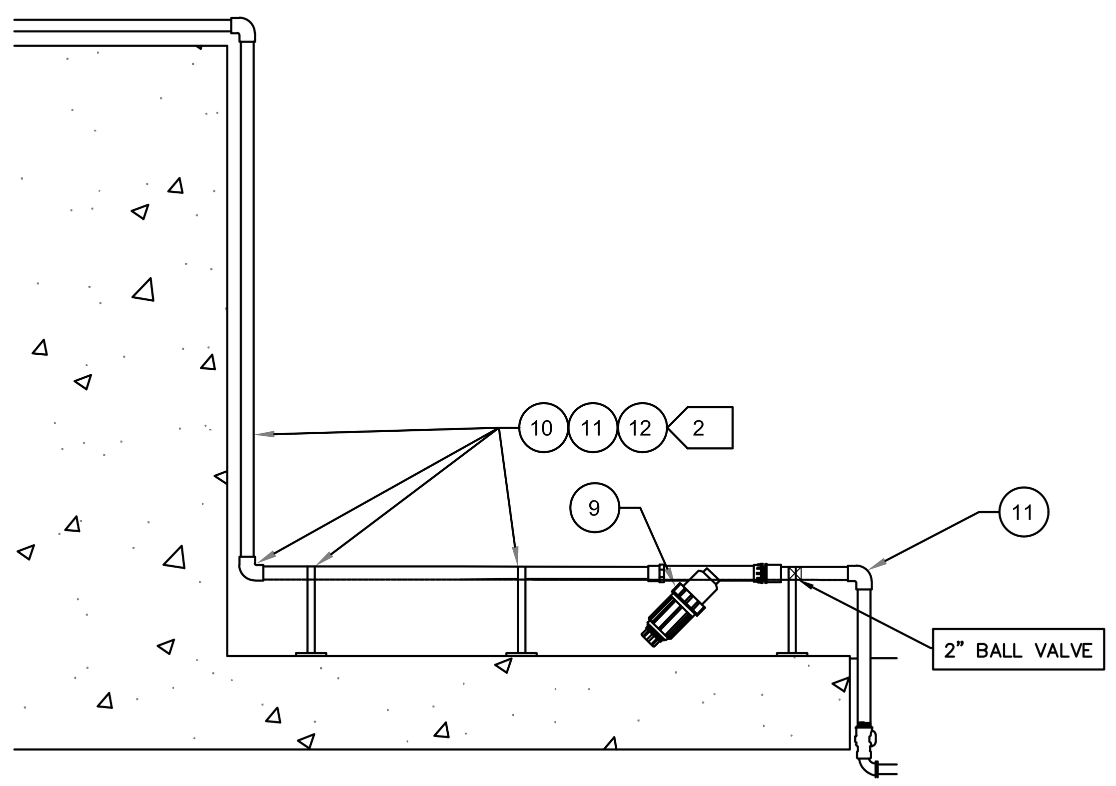
1. ZONE IRRIGATION DESIGN PER FAN GROUP REQUIRES WATER SUPPLY TO HAVE A MINIMUM OF 45 PSI AND 15 GPM, BE FILTERED AT 60 MESH, AND HAVE A MAXIMUM OF 120 PSI.
2. CONTRACTOR TO PROVIDE ALL 50mm PIPE, FITTINGS, PIPE SUPPORTS AND BRACKETS. PIPE LOCATIONS SHOWN ARE APPROXIMATE, TO BE FINALIZED AT INSTALLATION.
3. CONTRACTOR TO RETAIN IRRIGATION DESIGNER TO CONFIRM IRRIGATION SYSTEM PIPE SIZES, SUPPLY AND MAINTAIN SIZE.
4. BIOFILTER IRRIGATION DESIGN PER FAN GROUP REQUIRES WATER SUPPLY TO HAVE A MINIMUM OF 45 PSI AND 20 GPM, BE FILTERED AT 60 MESH, AND HAVE A MAXIMUM OF 120 PSI.
5. NOZZLE INSTALLATION AND REPLACEMENT IS TYPICAL FOR SPRINKLER RISERS ON LATERAL IRRIGATION ASSEMBLIES 312-M105 (ITEM 1) AND 312-M106 (ITEM 6).
6. R-VAN SERIES SPRINKLER NOZZLES SUPPLIED WITH IRRIGATION ASSEMBLIES, ITEMS 1 AND 6, HAVE ADJUSTABLE SPRAY RADII. ADJUST EACH NOZZLE AS NECESSARY TO ACHIEVE RECOMMENDED RADIUS.
7. PROVIDE ISOLATION VALVES AND CAM LOCK COUPLERS AT EACH ZONE LATERAL.

ECS SUPPLIED PARTS LIST

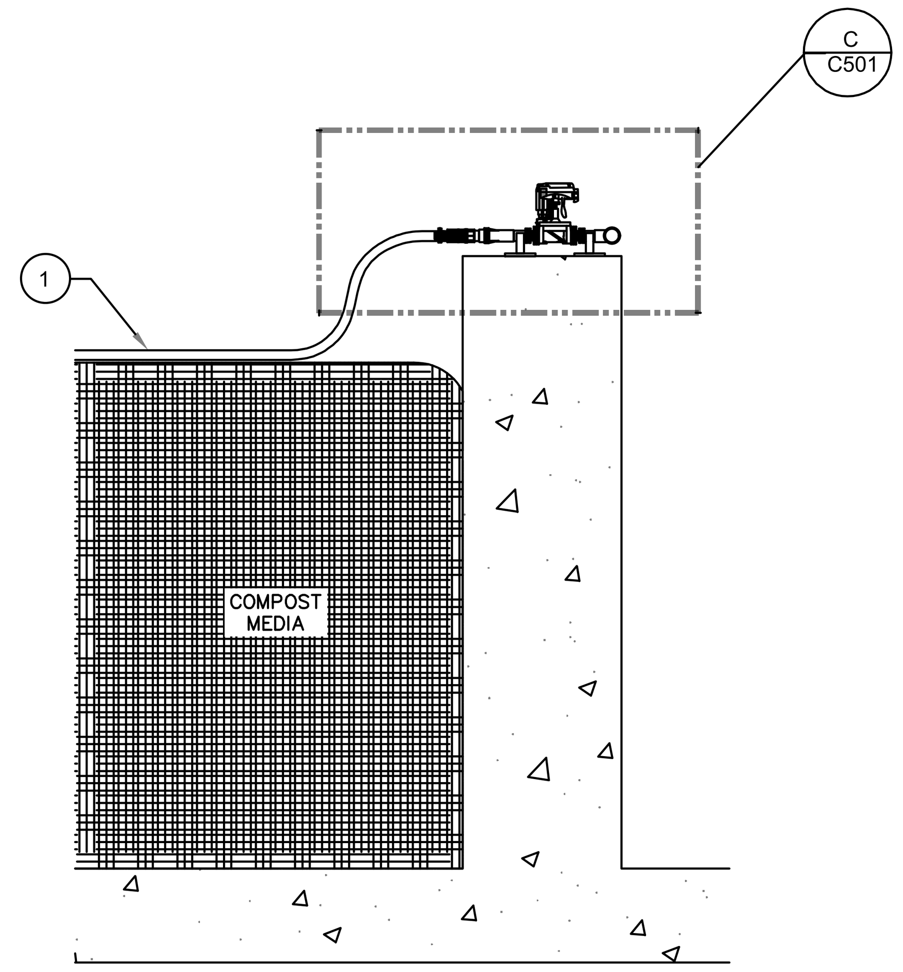
ITEM	DESCRIPTION
1	ZONE IRRIGATION LATERAL ASSEMBLY
2	1" INLINE IRRIGATION VALVE, 24VAC SOLENOID
3	40 PSI INLINE PRESSURE REGULATOR
4	1.5" FPT X MALE CAMLOCK, BLACK PP
5	1"x1.5" NPT ADAPTER, BLACK PP
6	BIOFILTER IRRIGATION LATERAL ASSEMBLY
7	0.75" FPT X MALE CAMLOCK, BLACK PP
8	0.75"X1" NPT ADAPTER, BLACK PP

CONTRACTOR SUPPLIED PARTS LIST

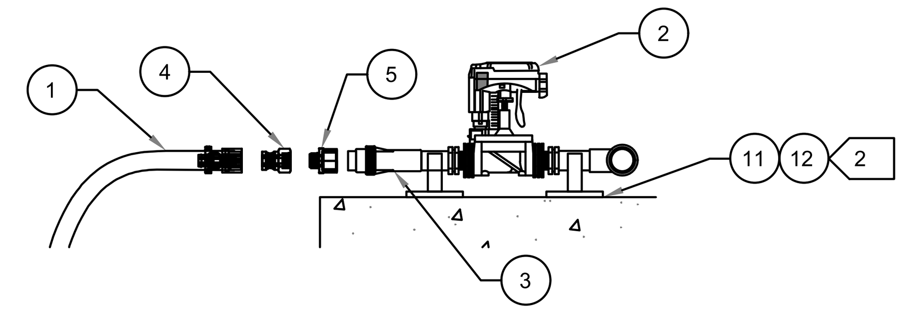
ITEM	DESCRIPTION
9	2" Y-STYLE STRAINER/FILTER WITH CARTRIDGE
10	2" PIPE, OUTDOOR RATED, 316 STAINLESS STEEL
11	2" FITTINGS AND ADAPTERS, OUTDOOR RATED
12	ALL PIPE SUPPORTS AND BRACKETS
13	UV RESISTANT FLEXIBLE HOSE AND FITTINGS BETWEEN WATER SUPPLY AND INLINE IRRIGATION VALVES



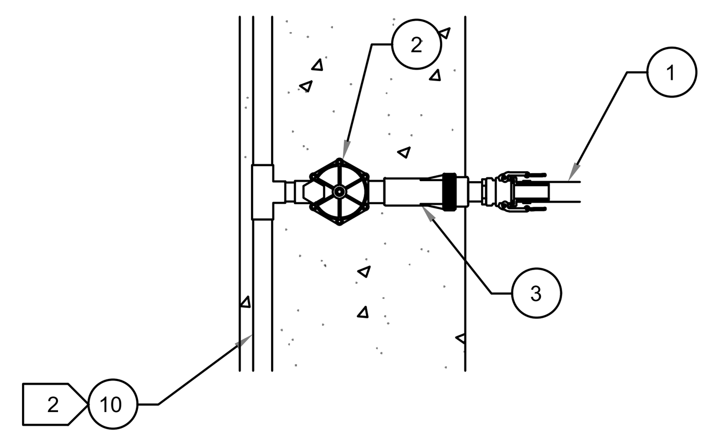
A C500 WATER SOURCE ELEVATION
SCALE: NTS



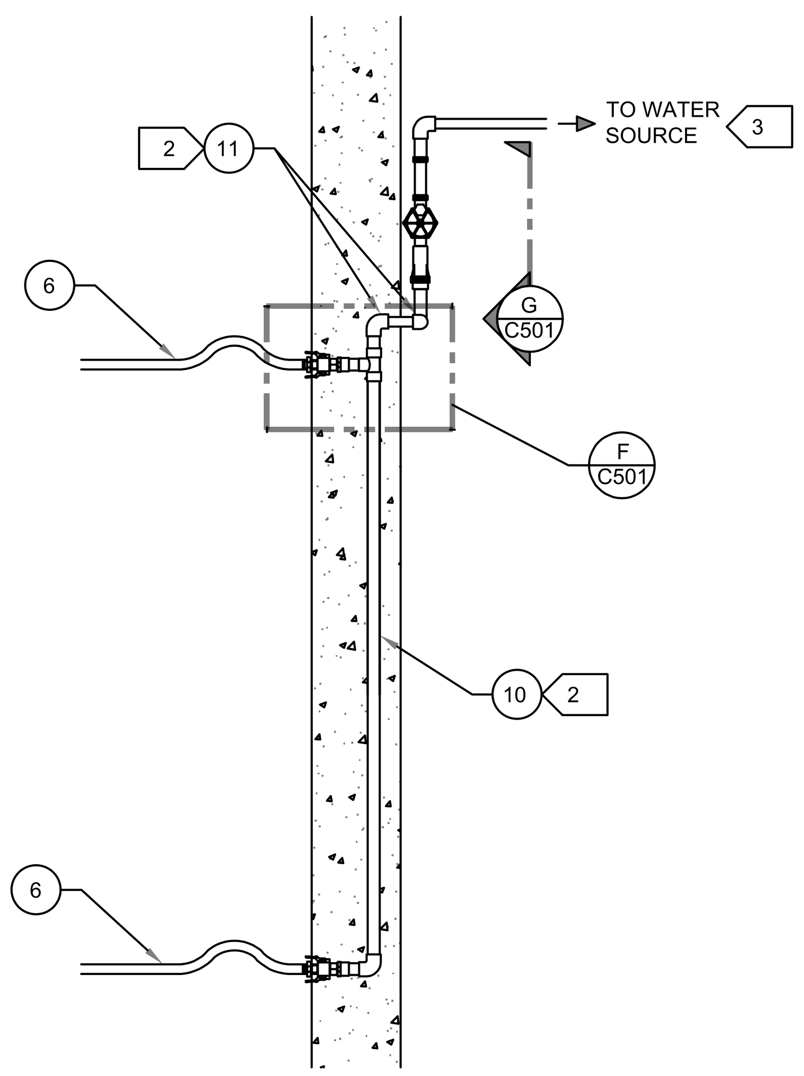
B C500 SPRINKLER LATERAL ELEVATION
SCALE: NTS



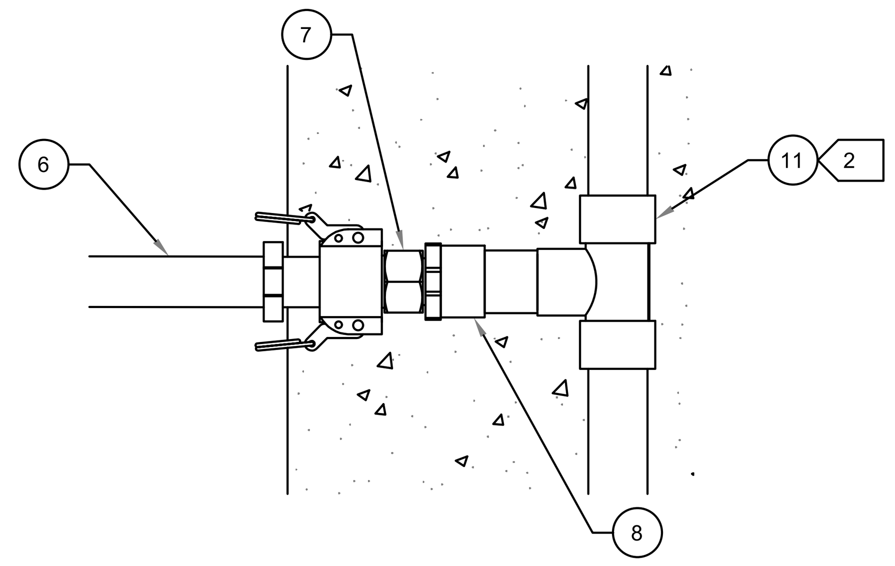
C C501 CAMLOCK CONNECTION
SCALE: NTS



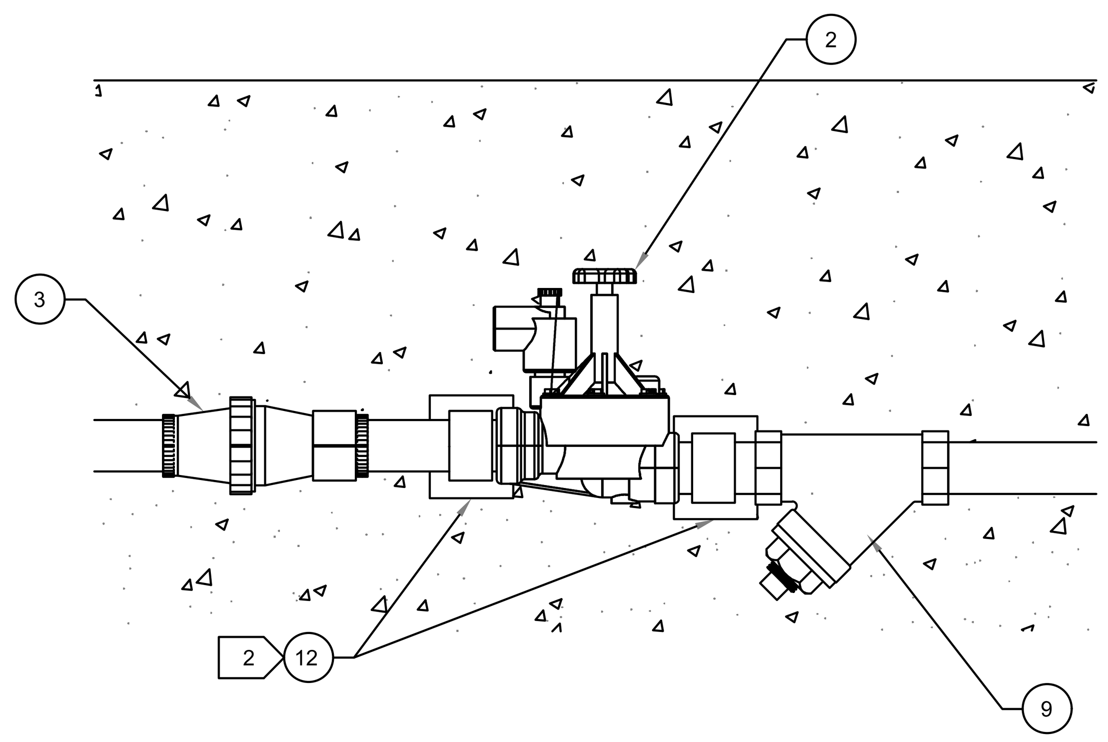
D C500 CAMLOCK CONNECTION
SCALE: NTS



E C500 BIOFILTER LATERAL CONNECTIONS
SCALE: NTS



F C501 BIOFILTER CAMLOCK CONNECTION
SCALE: NTS



G C501 PRESSURE REGULATOR AND SOLENOID VALVE
SCALE: NTS

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FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill - Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C5_SPRINKLER.dwg PRINTED ON: 2/14/2025 9:10 AM

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

NAD 83

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0	22/11/07	KU	ISSUED FOR REVIEW	DG

C. EVANGIO
53165
2025-02-20

BASE: CE
DESIGN: CE
APPROVED: DG
OCTOBER 2022
SCALE: AS SHOWN

SCALE NOT ACCURATE OVER LONG DISTANCES

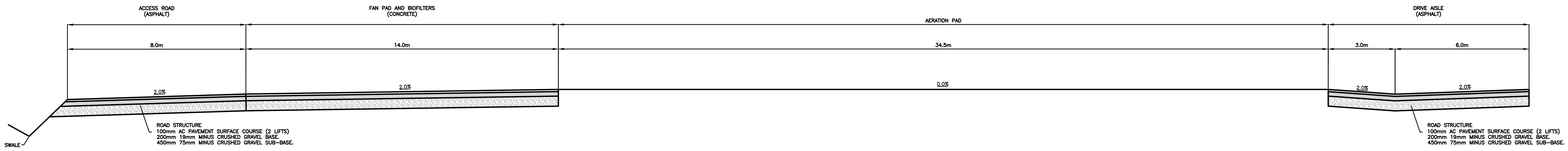
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
COMPOST AREA SPRINKLER SYSTEM DETAILS

DIVISION

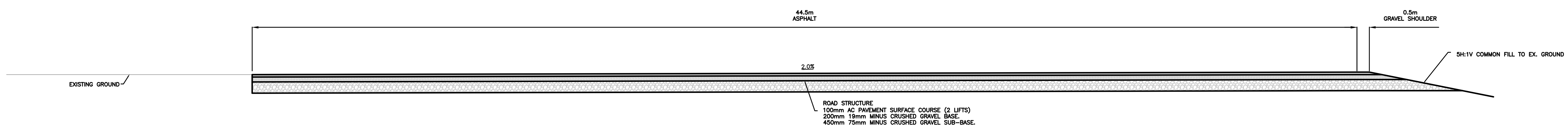
DRAWING NO.: C501

REV NO: 4



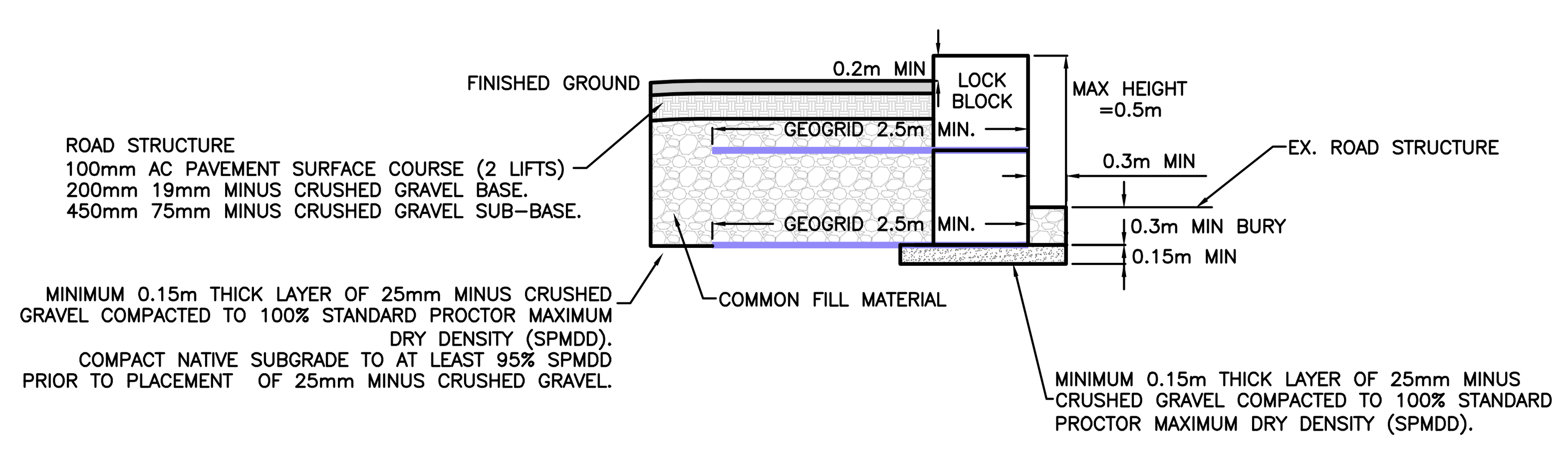
A-A C104 TYPICAL SECTION A

SCALE: 1:100



B-B C104 TYPICAL SECTION B

SCALE: 1:100



C C104 LOCK BLOCK WALL DETAIL

SCALE: 1:50

NOTES:

1. A QUALIFIED GEOTECHNICAL ENGINEER TO REVIEW THE FOUNDATION CONDITION AND BACKFILL MATERIAL PRIOR TO CONSTRUCTING THE LOCK BLOCK LOADING RAMP.
2. GEOGRID TO EXTEND A MINIMUM OF 2.5m FROM THE FACE OF LOCK BLOCK INTO SELECT GRANULAR PITRUN.
3. GOOD CONDITION LOCK BLOCKS ONLY TO BE USED.
4. GEOGRID TYPE IS TO BE UX-1100MSE OR EQUIVALENT.

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WWW.WSP.COM

NAD 83

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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2025-02-20

BASE CE | DESIGN CE
APPROVED DG
OCTOBER 2022

SCALE NOT ACCURATE OVER LONG DISTANCES

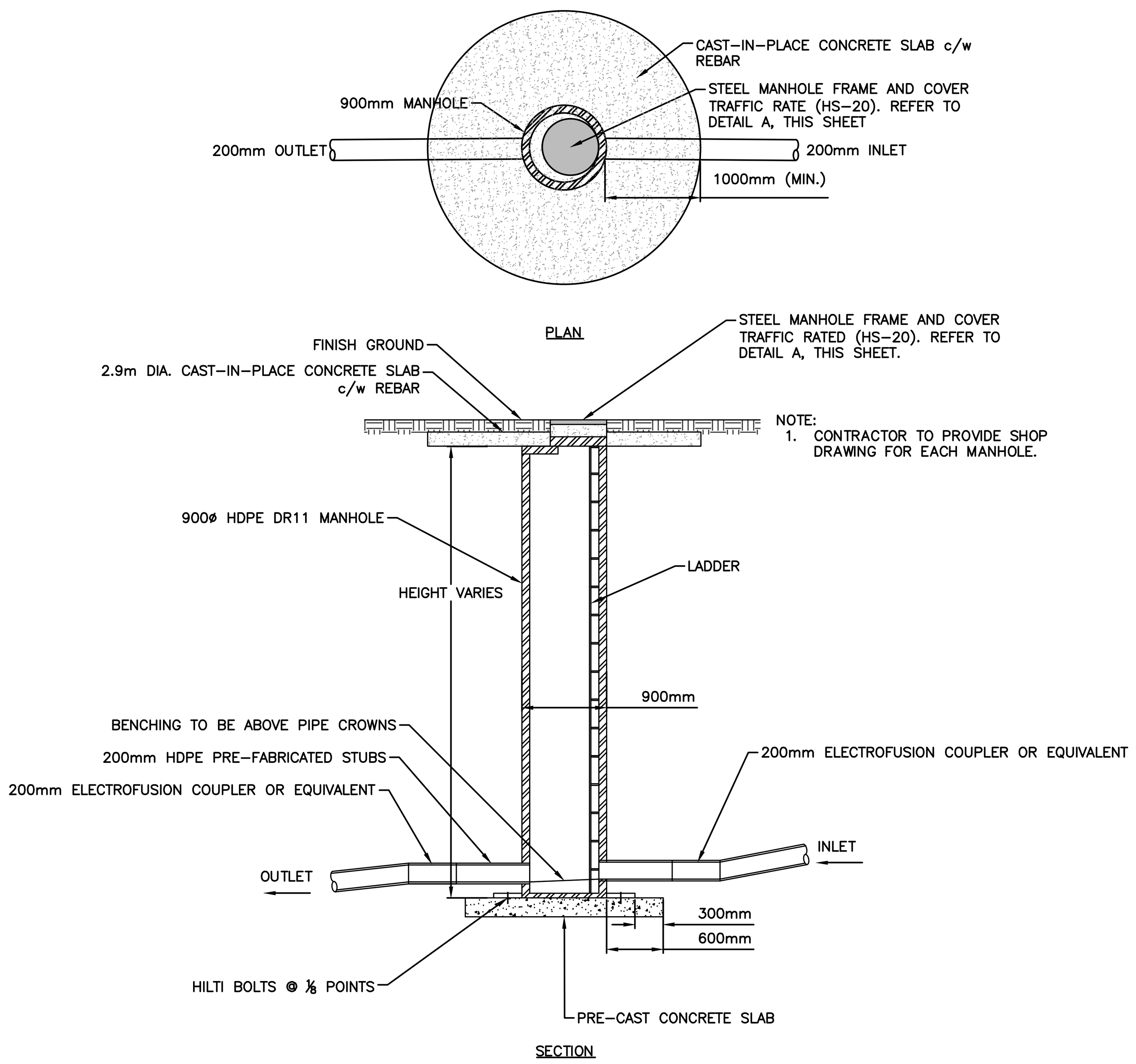
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – ASP COMPOST PH.1
CIVIL
DETAILS – ROAD

DIVISION

DRAWING NO. C900 | REV NO. 4

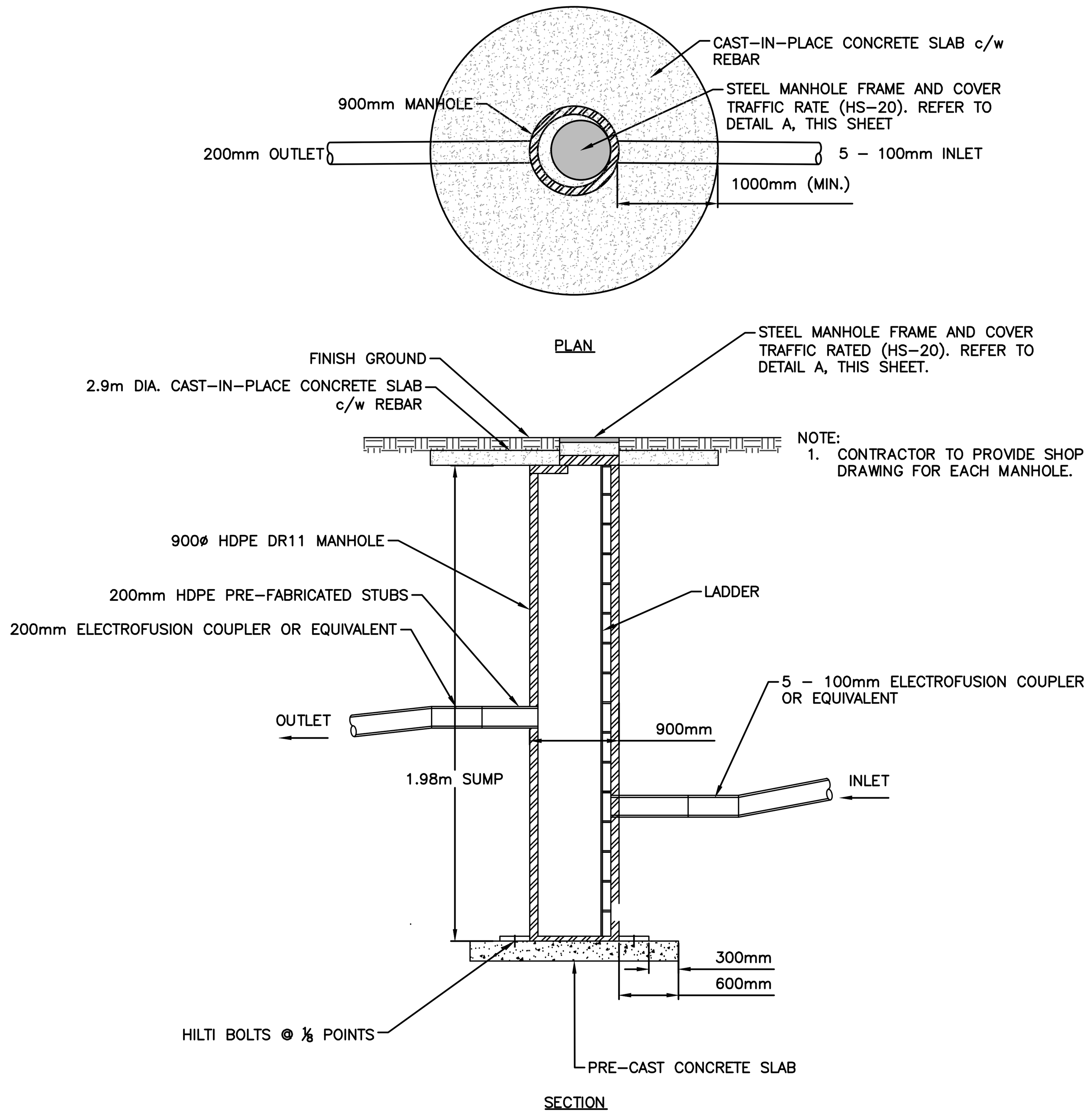
FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-04 Glenmore Landfill – Compost Area\3_TECH\3_Cadd\3_Sheets_PHASE 1\18M-01541-04-C9_DETAILS.dwg PRINTED ON: 2/14/2025 9:18 AM



B
C901

LEACHATE 900mm HDPE MANHOLE

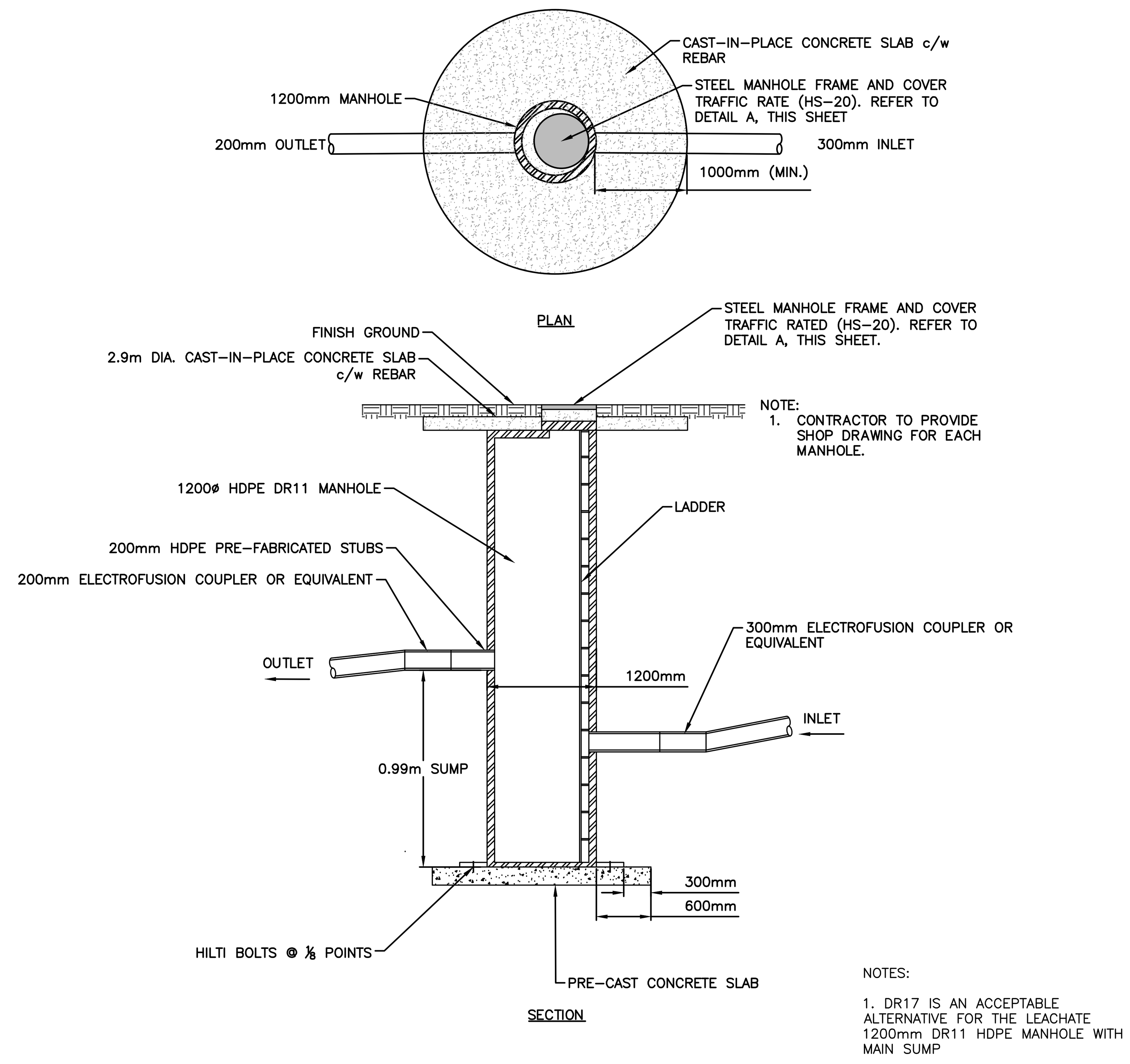
SCALE: 1:50



C
C901

LEACHATE 900mm HDPE MANHOLE w/ SUMP

SCALE: 1:50



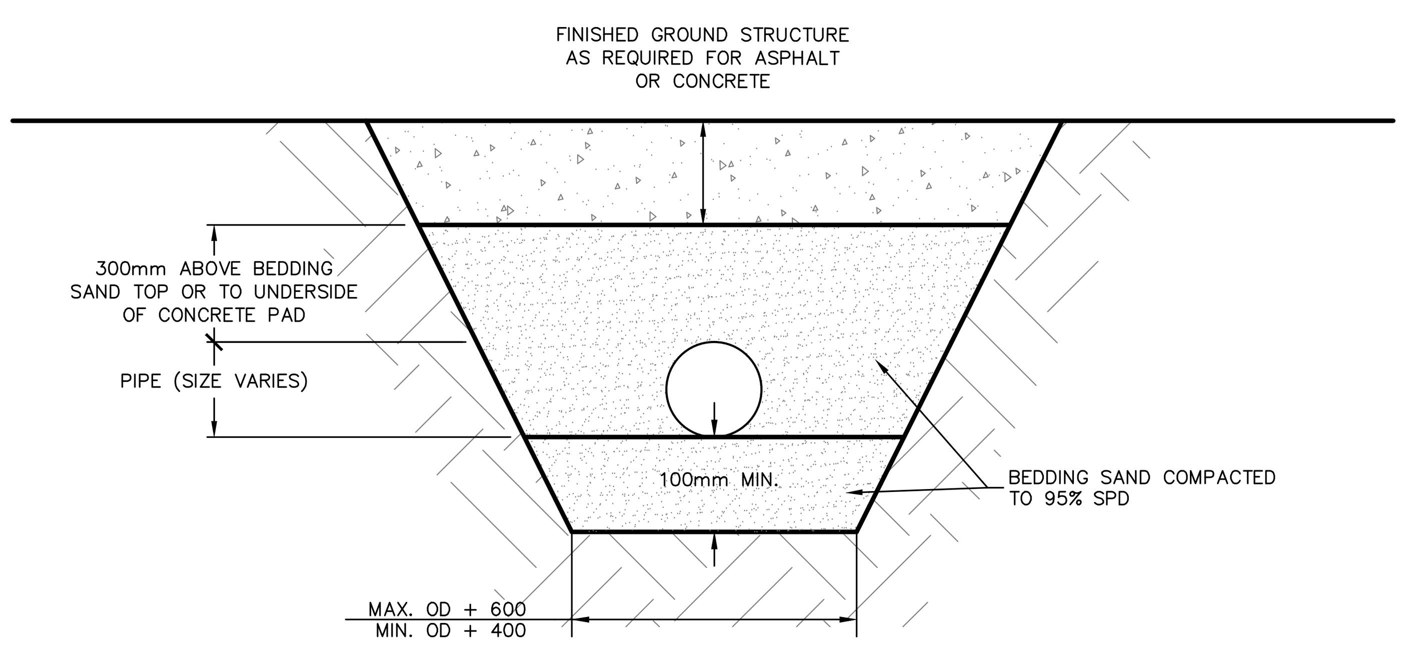
NOTES:

1. DR17 IS AN ACCEPTABLE ALTERNATIVE FOR THE LEACHATE 1200mm DR11 HDPE MANHOLE WITH MAIN SUMP

D
C901

LEACHATE 1200mm HDPE MANHOLE w/ SUMP

SCALE: 1:50



E
C901

AERATION PIPE TRENCH DETAIL (TYP.)

SCALE: NTS

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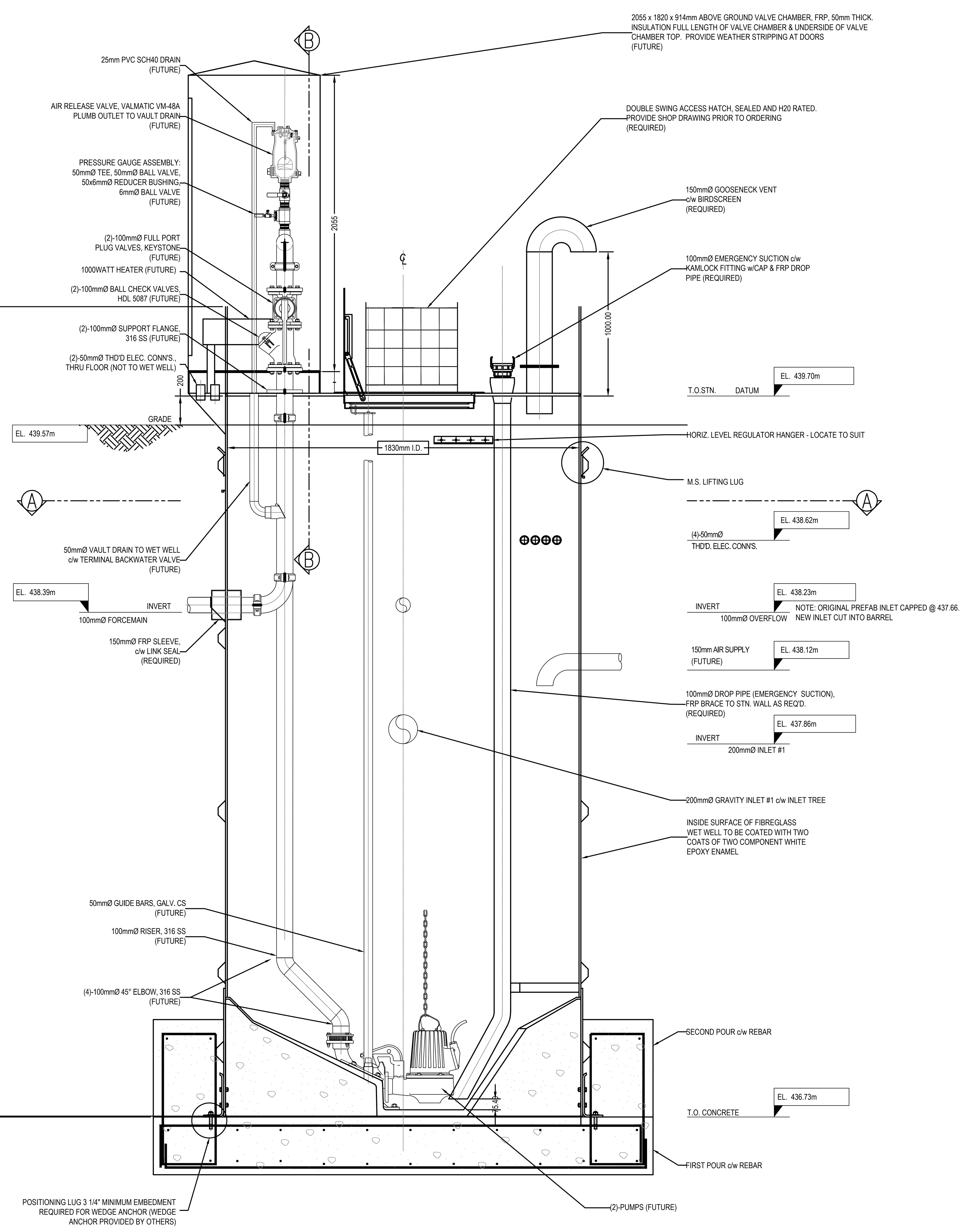

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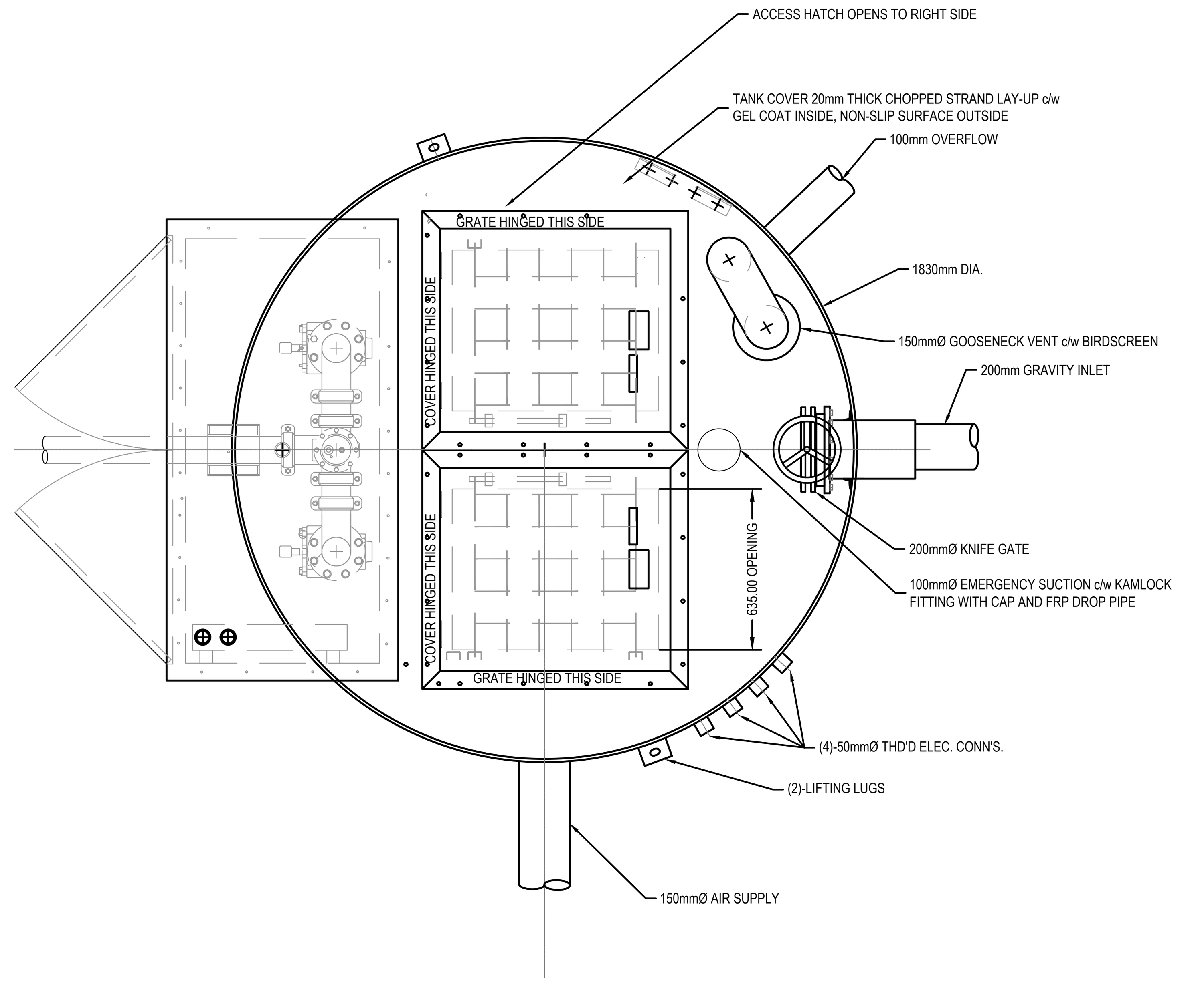

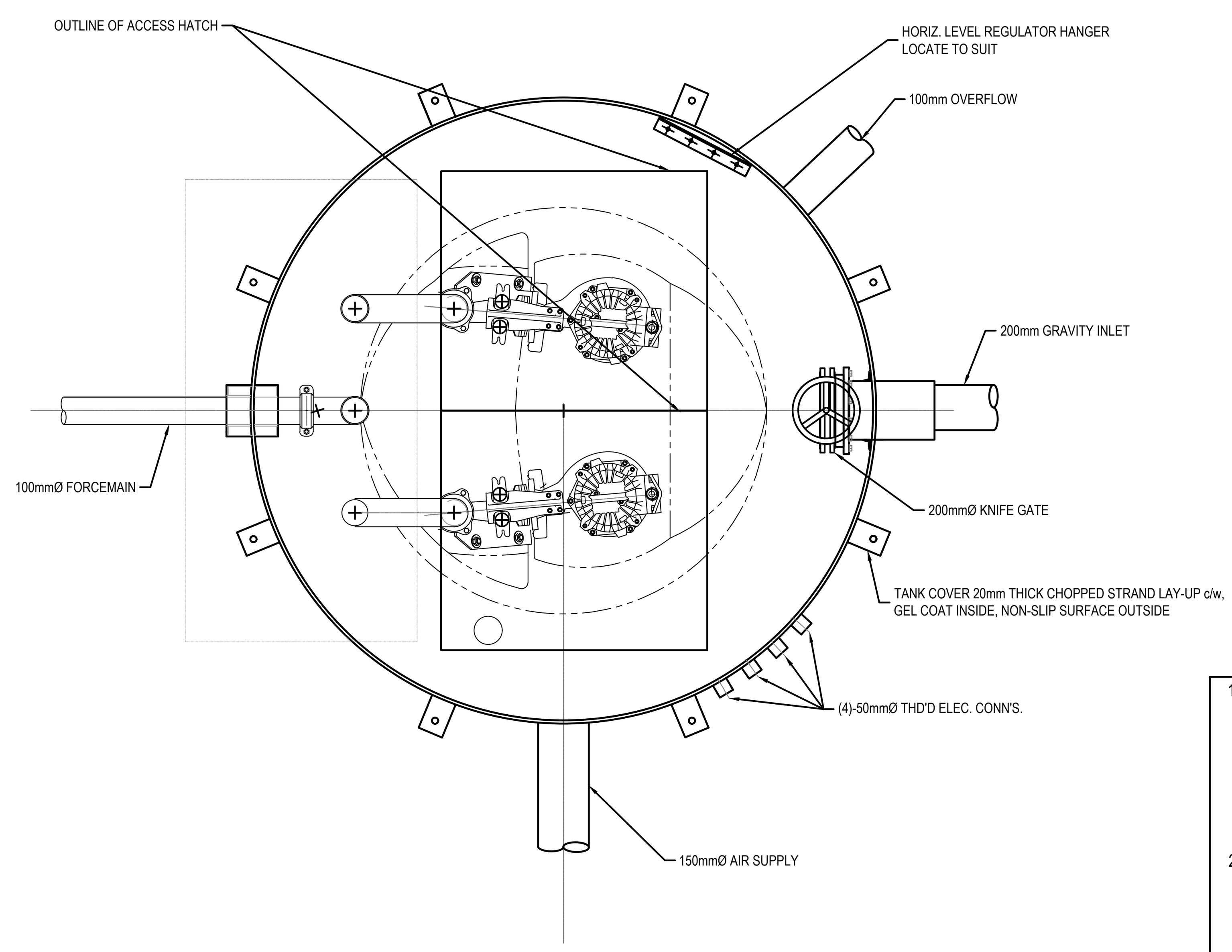

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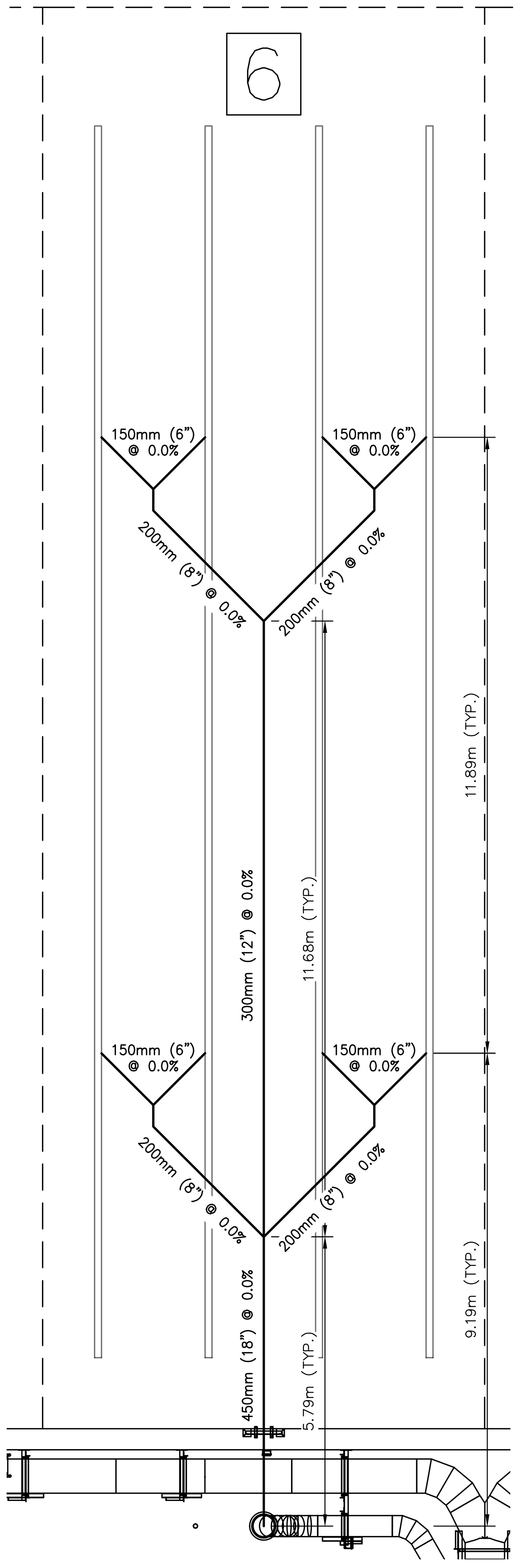

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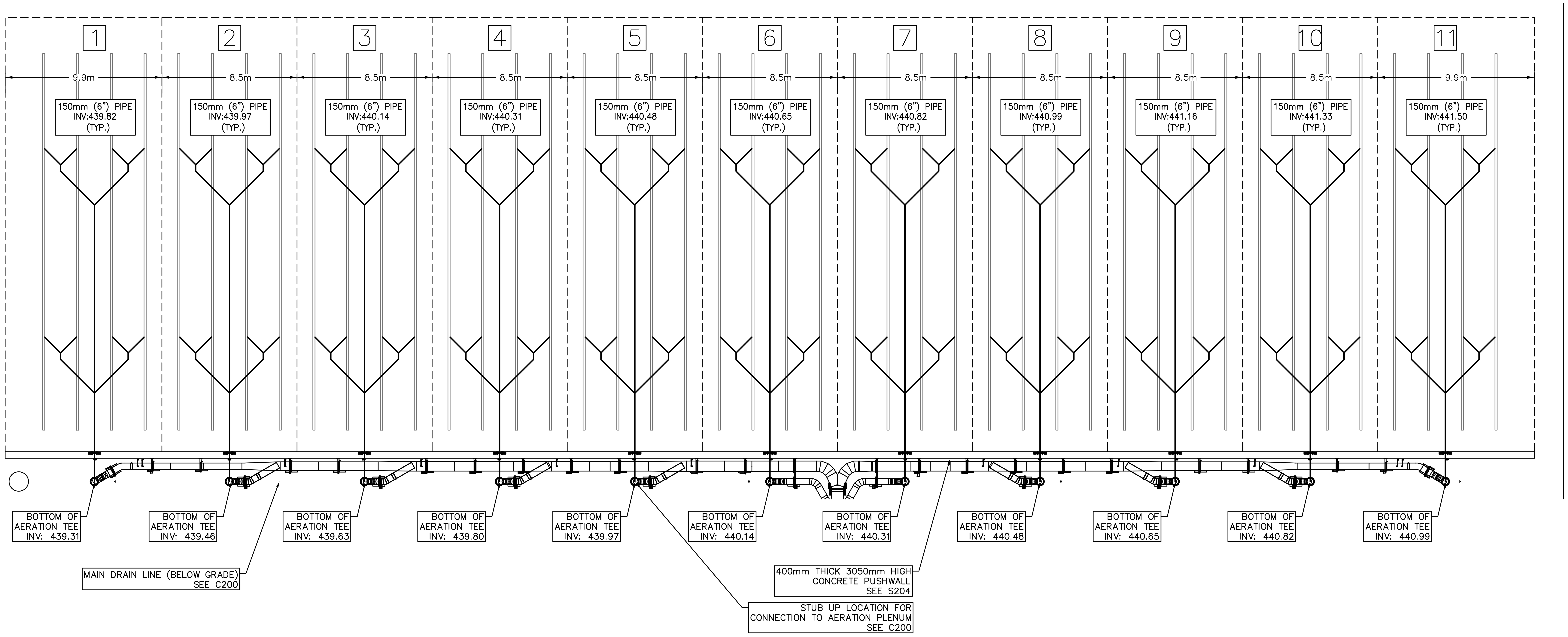

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NOTES:
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THE CITY OF KELOWNA
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GLENMORE LANDFILL – ASP COMPOST PH.1
MECHANICAL
AERATION PIPE ELEVATION AT ℄

DIVISION
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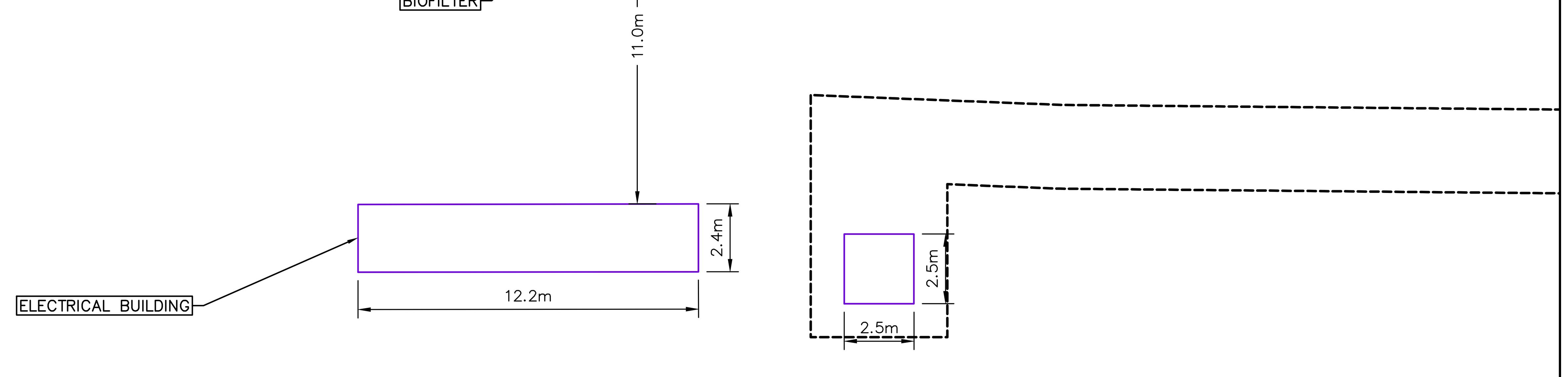

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NOTES

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2. REFER TO ECS MAIN REGARDING BIOFILTER PANEL INSTALLATION.

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THE CITY OF KELOWNA

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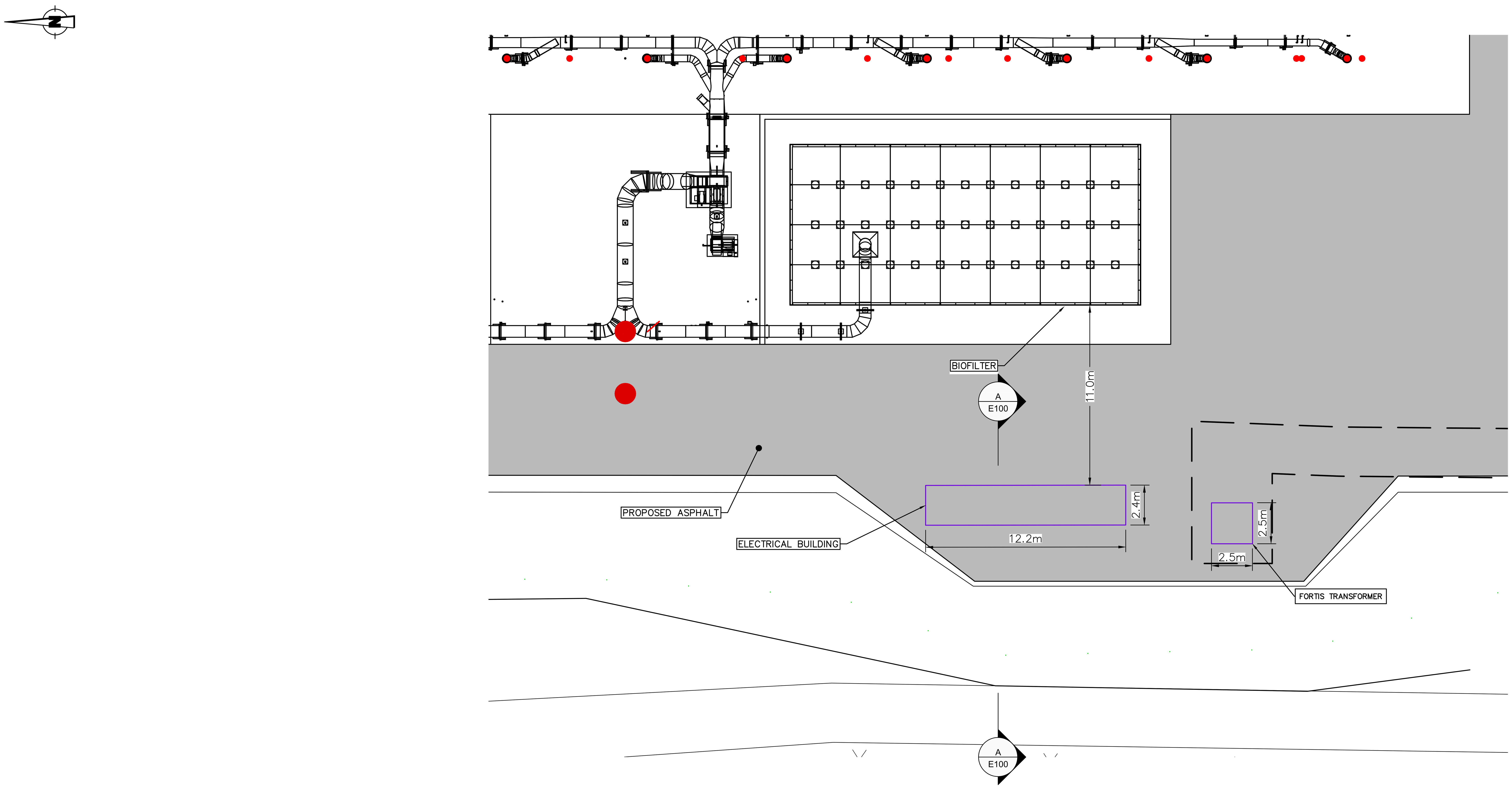

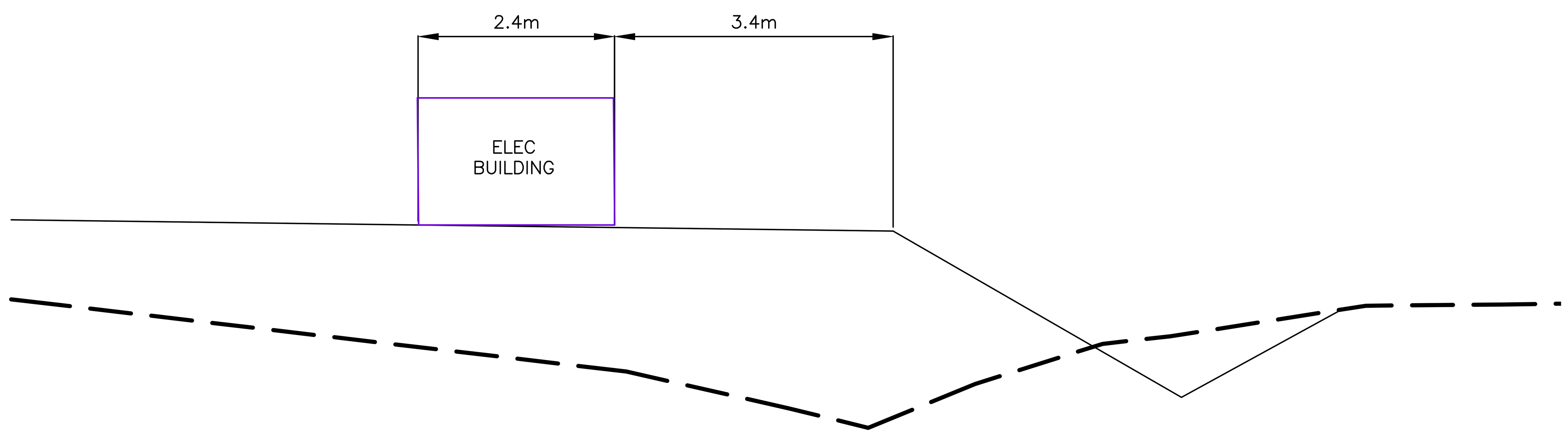

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53165
2025-02-20

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ELECTRICAL
ELECTRICAL BUILDING DETAILS

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FINAL REPORT

2024 ANNUAL WATER MONITORING REPORT FOR GLENMORE LANDFILL

Operational Certificate MR 12218 EMS Reference # E104956

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.

Report Number: 2024-029
March 27, 2025

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Appendix D 2024 Field Data Records

Appendix E Graphs and Plots

Appendix F Historical Data Tables

Appendix G Quality Assurance and Quality Control

LIST OF ACRONYMS

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 Strategy	Ministry of Environment and Parks, formerly Ministry of Environment and Climate Change
HEPHw	heavy extractable petroleum hydrocarbons in water
IW	Irrigation water use
LEPHw	light extractable petroleum hydrocarbons in water
MOE	Ministry of Environment
QA/QC	Quality Assurance/Quality Control
RDCO	Regional District of Central Okanagan
TDS	total dissolved solids
TG15	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 2024 Annual Water Monitoring Report for Glenmore Landfill. Glenmore Landfill (Landfill) is located at 2720 John Hindle Drive, Kelowna, BC (the Site). Refer to appended Figure 1 – Site Location Map.

As requested by the CoK, Keltech has prepared this report summarizing the results of the 2024 annual environmental water quality monitoring program conducted by the CoK 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.

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 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 (see Figure 2 – Site Plan):

- Four main operational areas identified as Phase 1, Phase 2, Phase 3, and Compost Facility
- One leachate collection system (see Leachate Management System in Appendix B)
- Four on-Site surface water bodies (Northeast Pond, Bredin Pond, Tutt Pond, and Slough)
- Added in 2024 were two on-Site surface water discharge points (Culvert 1002026 and S.Storm Headwall 186437)
- Four off-Site surface water bodies (Bubna Slough upgradient to the north, Slough#2 upgradient off-catchment, and Little Robert Lake and Robert Lake downgradient to the south)
- On-Site monitoring wells, surface water and leachate sample locations
- Off-Site groundwater monitoring wells identified as:
  - The GL41 well series (three wells) located at the north Site boundary
  - The GL15 well series (two wells) located to the west of the Site
  - The GL28 (three wells) and GL44 (two wells) well series located to the south of the Site
  - 06BH02 and the 09BH well series (eight wells 09BH-02, 09BH-03, 09BH-04, 09BH-05S, 09BH-05D, 09BH-06S, 09BH-06D, and BH09-07 (damaged)). located east, south and southeast of the Site. 09BH01 is decommissioned. Three of these six, wells 09BH03, 09BH04, and 09BH07 are owned by the University of British Columbia
  - The GL45 series which were installed in 2024, located to the southeast

2.1 Hydrogeology and Hydrology

According to the 2023 GHD *Hydrogeology and Hydrology Characterization Report*[1] (HHCR) a summary of the hydrogeology and hydrology of the Site 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 is present as a discontinuous deposit across the Site. The Till Unit (2 m to 25 m thick) underlies the Clay Unit or the Sand and Gravel Unit. GHD interprets the Till Unit as a variable in composition and permeability, thereby acting like a leaky aquitard.
- The HHCR concludes that generally, groundwater vertical gradient is upward in well nests near the ridge walls and within the Landfill vicinity and 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 "*allow for downward migration of leachate into the underlying subsurface.*"

2.2 Leachate Indicator Parameters

Leachate indicator parameters identified by GHD in the HHCR, as well as in previous reports, have been consistently used for 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, sulfate, total dissolved solids (TDS), and uranium.

3.0 ANNUAL WATER AND LEACHATE MONITORING PROGRAM

The 2024 annual water and leachate quality monitoring followed the recommendations of the *2023 Glenmore Landfill Annual Water Quality Report*, dated March 27, 2024, and for consistency, included information related to the 2024 HHCR, OC, and DOCP documents.

The annual water monitoring consisted of manual monitoring of fifty-five accessible/active wells (one dry and two artesian) for water levels and thirty-two wells for water quality, plus monitoring of four surface water bodies for water level elevations and eight surface water bodies for water quality.

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

Tables A, B, and C below summarize the 2024 program by general location, sample point/well ID, and field and analytical parameters. Water at selected groundwater, surface water, and leachate locations (Figure 2 - Site Plan) was monitored, sampled, and analyzed for parameters as described in the methodology section.

The 2019 inclusion of volatile fatty acids (e.g., resin and fatty acids) in the leachate list of parameters to determine leachate system efficiency (i.e., buffering capacity) continued in 2024. These compounds do not have applicable water quality standards or guidelines.

3.1 Groundwater

A list of the groundwater monitoring wells that were sampled in 2024 is presented below:

- **Upgradient Wells** – indicators of baseline or background water quality and conditions
- **Landfill Wells** – located within the footprint of the landfill
- **Downgradient Wells** – located to the south of the Site

Table A below lists the wells grouped by the above classifications.

Table A: Monitoring Well IDs by Location

Well Location	Monitoring Well ID	Lithology
Upgradient	GL41-1 (on-Site at north Site boundary)	Volcanic bedrock, brown, hard
	GL41-2 (on-Site at north Site boundary)	Gravel and silt, trace clay (till)
	GL41-3 (on-Site at north Site boundary)	Silt, some clay, followed by sand, and trace silt
	GL23-1 (on-Site northeast)	Sand, compact
	GL15-1 (off-Site west)	Bedrock
	GL15-2 (off-Site west)	Sandy silt and gravel (till)
	GL43-1 (on-Site northeast)	Trace sand, fine-grained.
Footprint	GL2-1 (landfill)	Silty clay followed by silty sand
	GL2-2 (landfill)	Silty clay
	GL4-1 (landfill)	Silty gravel and sand
	GL4-2 (landfill)	Silty clay
	GL5-2 (landfill)	Sand followed by gravelly silt (till)
	GL16-1 (landfill)	No information available
	GL35-3 (landfill)	Silty sand with gravel (till)
	GL20-1 (landfill)	Silty sand, some gravel, and traces of clay and cobbles (till)
	GL27-1 (compost)	Bedrock, some fractures
	GL27-2 (compost)	Silty clay, some sand and gravel (till)
	GL27-3 (compost)	Layered clay followed by silty clay, some sand and gravel (till)
	GL29-1 (compost)	Sand and silt followed by bedrock
	GL29-2 (compost)	Sand and silt (till)
Downgradient	GL42-1 (on-Site at south Site boundary)	Sand and gravel, trace silt (till)
	GL42-2 (on-Site at south Site boundary)	Clayey silt
	GL39-1 (on-Site at south Site boundary)	Silt, some sand, clay and gravel (till)
	GL39-2 (on-Site at south Site boundary)	Silty sand, trace gravel and clay
	GL46-1 (on-Site at south Site boundary)	Volcanic rock
	GL28-1 (off-Site south of Site boundary)	Sand, some silt followed by gravel, some sand, trace silt
	GL28-2 (off-Site south of Site boundary)	Silty sand
	GL28-3 (off-Site south of Site boundary)	Layered silty clay, some sand

Well Location	Monitoring Well ID	Lithology
Downgradient	GL44-1 (off-Site south of Site boundary)	Clay and silt, fine-grained
	GL44-2 (off-Site south of Site boundary)	Silty Clay, fine-grained
	GL45-1 (off-Site south of Site boundary)	Silty sand, fine-grained
	GL45-2 (off-Site south of Site boundary)	Clay, silty sand
	09BH06-D (off-Site south of the Site)	Silty sand

Appended Table 1 provides details on monitoring well construction specifications and the wells current status up to December 2024.

The following Table B provides the location and ID of groundwater wells sampled, along with field and analyzed parameters.

Table B: Summary of 2024 Groundwater Sampling – SEMI-ANNUALLY

Well Location	Monitoring Well ID	Field Parameters	Analytical Parameters
Spring Sampling Event – (May 2024)			
North border	GL41-1, GL41-2, GL41-3	Depth to water, pH, conductivity, redox, dissolved oxygen, and temperature	Dissolved metals, pH, alkalinity, hardness, chemical oxygen demand (COD), dissolved organic carbon (DOC), TDS, chloride, fluoride, sulfate, and nutrients (ammonia, nitrate, nitrate, nitrite, orthophosphate).
Northeast of Phase 1	GL23-1		
Phase 1	-		
Phase 2	GL4-1, GL4-2		
West of Site	GL2-1, GL2-2, GL5-2,		
Phase 3	GL20-1, GL35-3, GL16-1,		
South	GL27-1, GL27-3, GL29-1, GL29-2		
South border/Off-Site	GL28-1, GL28-2, GL28-3, GL42-1, GL42-2, GL39-1, GL39-2, 09BH06-D		
Fall Sampling Event – (September 2024)			
North border	GL41-1, GL41-2, GL41-3	Depth to water, pH, conductivity redox, dissolved oxygen, and temperature	Dissolved metals, pH, alkalinity, hardness, COD, DOC, TDS, chloride, fluoride, sulfate, and nutrients (ammonia, nitrate, nitrite, orthophosphate).
Northeast of Phase 1	GL43-1		
Phase 2	GL2-1, GL2-2, GL4-1, GL4-2,		
West of Site	GL15-1, GL15-2		
Phase 3	GL20-1		
South	GL27-1, GL27-2, GL29-1, GL29-2		
South border/Off-Site	GL28-1, GL28-2, GL28-3, GL39-1, GL39-2, GL44-1, GL44-2, GL45-1, GL45-2		

3.2 Surface Water Sampling

2024 surface water samples were collected on a quarterly basis from the eight surface water bodies (On-Site: Northeast Pond, Bredin Pond, Tutt Pond, Slough, and Off-Site: Bubna Slough, Slough #2, Little Robert Lake, Robert Lake), and are summarized in Table C below and presented on Figure 2.

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

- 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.
- The sample point within Robert Lake was moved from the south end to the north end of the lake; 2024 data reflect this change. Continued monitoring of the surface water at the south end of the lake occurred in 2024 for information and comparison purposes.
- Following GHD recommendations, quarterly updated 95th percentile site-specific background concentrations were used for comparison to surface water data.

The following Table C provides the location and ID of surface water sample points, along with field and analyzed parameters.

Table C: Summary of 2024 Surface Water Sampling – QUARTERLY

Sample Location	Sample Point	Comment	Parameters	Month Sampled
East of Phases 1 & 2	Northeast Pond	Constructed. It may be used for irrigation.	**Field parameters:** pH, conductivity, redox potential, TDS, dissolved oxygen, and temperature. **Analytical parameters:** Total metals, pH, conductivity, alkalinity, hardness, COD, dissolved organic carbon, total dissolved solids, chloride, fluoride, bromide, sulfate, and nutrients (ammonia, nitrate, nitrite, phosphate), total nitrogen, TKN, nitrogen, total phosphorus, fecal and total coliforms.	March, May, September, October
West of Phases 1	Bredin Pond	Constructed. It may be used for irrigation.		
West of Phase 3	Tutt Pond	Constructed. It may be used for irrigation.		
Phase 3	Slough	-		
Upgradient / Background	Bubna Slough	Natural.		
	Slough #2	Natural.		
Downgradient/ Compliance	Little Robert Lake	Natural alkaline lake.		
	Robert Lake	Natural alkaline lake.		
South end of Site	S. Storm Headwall 186437	Surface water runoff		January

3.3 Leachate Sampling

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 D provides the location and ID of leachate sample points and month sampled.

Table D: Summary of 2024 Leachate Sampling – QUARTERLY

Location	Sample Point	Parameters	Month Sampled*
West side of Phase 1	N Pumphouse MH	Dissolved metals, pH, alkalinity, hardness, biochemical oxygen demand (BOD), COD, DOC, TDS, chloride, fluoride, sulfate, total sulfide, nutrients (ammonia, nitrate, nitrite, orthophosphate, phosphorous), LEPHw, VOC, VPH, VFAs.	May, September, October
	P2 A2 Leachate MH		
Southwest of Phase 1	P1 Leachate MH-2		
Southwest corner of Phase 2	S Leachate Wet Well		

*The sampling in Q1 was not conducted due to maintenance at two locations
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

4.0 SITE WORKS – BY CITY OF KELOWNA

Based on information provided by CoK, the following Site works occurred in 2024.

4.1 January 2024: Well Decommissioning

Wells GL31-2, GL34-1, GL34-2, and GL34-3 were decommissioned by Keltech using Valley Wide Drilling (VWD) in accordance with the BC Groundwater Protection Regulation (GWPR,) BC Reg. 39/2016; O.C. 113/2016, including amendments up to BC Reg. 253/2022, December 1, 2022) under the *BC Water Sustainability Act*.

4.2 July – October 2024: Installing New Wells

As recommended in the GHD Technical Memo dated March 11, 2024, GHD installed six groundwater monitoring wells using VWD. This report uses the CoK naming convention for wells, which differs from the GHD naming convention on the borehole logs.

The 2024 wells were identified as follows using COK well ID(GHD borehole log ID) format: GL43-1(2024-04), GL44-1(2024-01D), GL44-2(2024-01S), GL45-1(2024-02D), GL45-2(2024-02S), and GL46-1(2024-03). These wells were added to the monitoring network for sampling in 2024. Groundwater samples were collected from all new wells except GL46-1, which will be sampled beginning in 2025.

A summary of these works is presented in Table E below.

Table E: Summary of 2024 Wells installation

Item	Concern / Recommended Solution	2024 Works	2025 – Carried Forward
09BH05-S	09BH05-S is inaccessible / Replace	GL44-1 was added to replace 09BH05-S.	None
09BH05-D	09BH05-D is inaccessible / Replace	GL44-2 added to replace 09BH05-D	None
09BH04	09BH04 inaccessible/ Install new nested well west of 09BH04	GL45-1, GL45-2. Both were added to replace 09BH04	None
Downgradient Bedrock Well	No downgradient bedrock well in well network / Install	GL46-1 added – sample data will be available in 2025	None
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.	None, but CoK to review the adequacy of the well in 2025.

CoK reported no other Site events or operational changes in 2024.

5.0 REGULATORY CRITERIA

In consultation with CoK and consistent with GHD documents, plus the OC and DOCP applicable criteria, Keltech has used the following applicable regulatory criteria for the Landfill. As directed by CoK, Keltech has removed the Canadian Drinking Water Quality Guidelines[2] previously required in the 2011 Ministry of Environment letter[3] for data comparison purposes.

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. 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[4] (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 average (LT) and short-term chronic (ST) guidelines apply to the freshwater aquatic ecosystems of Northeast Pond, Robert Lake, and Little Robert Lake. The ST WQGs are the primary criteria. Where short-term chronic criteria are not available, LT WQGs are to be used.
- *BC Ministry of Environment Fact Sheet, Water Quality Guidelines, Long-Term Average vs Short Term Maximum Water Quality Guidelines, June 2016.* According to this fact sheet, the LT WQG 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.
- *CSR Technical Guidance 15, Concentration Limits for the Protection of Aquatic Receiving Environments, Version 2.0* (TG15), dated November 1, 2017, further clarifies the application of CSR AW standards and BCWQG AW and IW guidelines as follows:
  - In upland groundwater, CSR AW standards apply to groundwater located at 10 m distance beyond the high-water mark of an aquatic receiving environment.

[2] 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

[3] 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.

[4] 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

- For maintained watercourses, 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. 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."

- Site-Specific Background Concentrations: Statistical analysis was used to develop background concentrations for surface water. 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 (Tutt Pond and Slough, as well as the downgradient locations of Little Robert Lake and Robert Lake.

5.3 Leachate

For treated leachate samples, analytical results were not compared to the groundwater and/or surface water standards or guidelines. 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[5]).

A summary of applicable standards and guidelines is shown in Table F.

Table F: Summary of Applicable Regulatory Criteria

Applicable Criteria:		CSR			BCWQG (LT, ST)	
Media	**Location**	**IW**	**AW**	**DW**	**AW**	**IW**
GW	Monitoring Wells (All, unless otherwise noted)	N	Y[a,b]	Y[a]	GL23-1, GL28 series, 09BH03-S/D, and 09BH06-S/D only[b]	Y[b]
SW	Bredin Pond	N[b]	N	N	N[b]	Y[b]
	Tutt Pond	N[b]	N	N	N[b]	Y[b]
	Northeast Pond	N[b]	N	N	Y[b]	Y[b]
	Little Robert Lake	N[b]	N	N	Y[a]	Y[b]
	Robert Lake	N[b]	N	N	Y[a]	Y[b]
	Slough	N[b]	N	N	N[b]	Y[b]
	Bubna Slough	N[b]	N	N	N[b]	Y[b]
	Slough #2	N[b]	N	N	N[b]	Y[b]

[5] *2020 Glenmore Landfill Annual Water Quality Report, Operations Certificate MR12218 EMS, Reference # E104956,* Prepared for City of Kelowna, March 25, 2021.

Applicable Criteria:		CSR			BCWQG (LT, ST)	
Media	**Location**	**IW**	**AW**	**DW**	**AW**	**IW**
Leachate[b]	Leachate manholes	N	N	N	N	N

Notes:

Y: Yes, based on criteria; **N**: No, based on criteria**;** **LT**: long-term average water quality guideline; **ST:** short-term maximum water quality guideline; **a**: GHD HHCR; **b**: GHD DCOP

6.0 FIELD METHODOLOGY

CoK staff conducted the 2024 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* 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

This report includes a summary of the 2024 field procedures and methods used at the Site (Appendix C).

7.0 ANNUAL WATER MONITORING RESULTS

7.1 Field Observations

Groundwater monitoring and sampling included recording field evidence of contamination including odours, inclusions, and oily or metallic sheen. Table G below summarizes 2024 observations, by well ID; wells without evidence are not included. A copy of the field data records is provided in Appendix D.

Table G: Field Observations by Monitoring Well ID

MW ID	Date (2024)	Odour	Sheen	Colour
GL2-1	May 14	None	None	Yellow tinge then became clear
GL2-1	Sep 13	None	None	Turbid at start, then became moderate turbidity.
GL2-2	May 14	None	None	Moderate turbidity
GL2-2	Sep 13	None	None	Slight to moderate turbidity
GL4-1	May 13	None	None	Slight turbidity
GL4-1	Sep 13	None	None	Slight to moderate turbidity
GL4-2	May 13	None	None	Clear at start, slight turbidity at end
GL4-2	Sep 15	None	None	Slight to moderate turbidity
GL5-2	May 14	None	None	Slight turbidity
GL15-1	Sep 17	None	None	Slight to moderate turbidity

MW ID	Date (2024)	Odour	Sheen	Colour
GL16-1	May 14	None	None	Clear at start, slight turbidity at end
GL20-1	May 13	Sulfur	None	Slight to moderate turbidity, yellow tinge
GL20-1	Sep 13	Earthy, slight sulfur	None	Dark yellow tinge at start. Moderate turbidity
GL23-1	May 13	None	None	Silty at start, then became clear. Slight to moderate turbidity at end.
GL27-1	May 21	None	None	Slight turbidity
GL27-1	Sep 17	None	None	Black sediment, cleared, moderate turbidity
GL27-3	May 21	None	None	Clear at start, slight to moderate turbidity at end
GL27-3	Sep 17	None	None	Some sediment at start, cleared, slight to moderate turbidity at end
GL28-1	May 28	-	-	-
GL28-1	Sep 19	None	None	Slight to moderate turbidity
GL28-2	May 28	-	-	Turbid, yellow at start, then reduced flow and became clear
GL29-1	May 21	None	None	Yellow tinge, slight to moderate turbidity
GL29-1	Sep 17	None	None	Slight to moderate turbidity
GL29-2	May 21	None	None	Clear at start/mostly small specks (compost?). Slight to moderate turbidity at end.
GL29-2	Sep 17	None	None	Slight to moderate turbidity
GL39-1	May 27	None	None	Slight to moderate turbidity
GL39-1	Sep 18	None	None	Slight to moderate turbidity
GL39-2	May 27	None	None	Slight to moderate turbidity
GL39-2	Sep 18	None	None	Slight to moderate turbidity
GL41-1	Sep 19	None	None	Slight to moderate turbidity
GL41-2	Sep 19	None	None	Slight to moderate turbidity
GL44-1	Sep 25	None	None	Slight to moderate turbidity
GL42-2	May 27	-	-	Cloudy at start, then became slight to moderate turbidity at end
GL45-1	Sep 20	None	None	Slight to moderate turbidity
GL45-2	Sep 26	None	None	Silty at start, cleared some, moderate turbidity at end.

Notes: **MW**: monitoring well

7.2 Groundwater and Surface Water Elevations

The results of 2024 groundwater and surface water elevation monitoring, along with the historical data, are summarized in attached Tables 2A and 2B, and presented in Graphs 1 – 6 (Appendix E). Based on 2024 measured elevations as presented in Figure 3 (March 2024) and Figure 4 (September 2024), the inferred groundwater flow direction for both dates was from north to south, and from west to east of Phase 3, with a localized mounding to the south of the Phase 3/Slough. The inferred groundwater flow direction is consistent with that of previous years.

Vertical groundwater flow direction was updated in the 2023 HHCR. A spatial pattern was described: upward flow of groundwater in the north part of the Site and near the east and west Site boundaries, plus downward vertical flow in the Slough and Compost areas. The HHCR noted that bedrock has an upward hydraulic gradient, thereby recharging the overlying aquifer. GHD noted the importance of this in limiting the downward migration of landfill contaminants into the bedrock. Leachate water levels in the leachate collections system are to be maintained to prevent vertical downward flow from waste material into the subsurface. Artesian conditions were present in some of the Phase 3/Slough, Compost areas, and downgradient monitoring wells.

The details on groundwater and surface water levels are provided in the appended Tables 2a and 2b.

7.3 Water Elevation Fluctuations

The 2024 fluctuations in groundwater and surface water elevations in the following areas of the Site are listed below and are illustrated in Graphs 1-6 (Appendix E). Decommissioned, dry, inaccessible, damaged, and inactive monitoring wells are not included in these graphs. Overall, 2024 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 2024 water fluctuations generally consistent with historical trends, although the fluctuations in 2024 were smaller than those of previous years, likely related to ongoing evolving local drought conditions.

Northwest of Phase 1 and Phase 2 - Graph 2 shows 2024 water fluctuations were consistent with historical trends, except for the water level in GL41-1, which was noted to have decreased significantly (1.3 m) relative to historical levels between September and November 2024.

Phase 2 - Graph 3 shows 2024 water fluctuations generally consistent with historical trends, although the fluctuations exhibit a trend of being smaller than those of earlier years (pre-2021), likely related to ongoing evolving local drought conditions.

Phase 3/Slough - Graph 4 shows 2024 water fluctuations generally consistent with historical trends, except for Tutt Pond, where the levels in 2024 were approximately 1 m to 1.5 m higher than previously measured elevations; these measurements are considered unreliable due to a gauge issue, i.e., the likely shifting of the gauge post.

Off-Site south of Phase 3 - Graph 5 shows 2024 water fluctuations generally consistent with historical trends except for 09BH06-S, which, in November 2024, exhibited a water level approximately 2 m lower than previous and subsequent measurements at this location.

Adjacent to the southwest of Phase 3 - Graph 6 shows 2024 water fluctuations 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 2024 groundwater data were tabulated, compared to applicable standards and guidelines, and assessed for general spatial and temporal concentration trends. Refer to the appended Table 3: Summary of Groundwater Analytical Results—Monitoring Wells. CARO analytical reports are on file at Keltech and available upon request.

Graphs 7 to 13 in Appendix E, show historical trends in concentrations of indicator parameters in groundwater. Appendix F provides historical tabulated groundwater analytical data for 2010 to 2023.

Table H below presents a general summary of the analyzed parameters that exceeded applicable regulatory criteria including Table 1 from P9. For CSR inorganic parameters where a P9 value exists and is greater than the CSR standard for that parameter, then the P9 value supersedes the CSR standard; otherwise, a P9 value does not apply to concentrations of analyzed parameters.

Table H: Summary of Exceedances by Location

LOCATION:	UPGRADIENT		FOOTPRINT		DOWNGRADIENT	
Parameter	**> Criteria**	**MW ID**	**> Criteria**	**MW ID**	**> Criteria**	**MW ID**
Ammonia (Total, as N)	None	None	>CSR AW	GL20-1	None	None
Arsenic	>CSR DW	GL 43-1	>CSR DW	GL16-1	>CSR DW	GL42-1
Boron	None	None	>BCWQG LT	GLs 20-1, 29-1	None	None
Chloride	>BCWQG IW ST LT	GLs 23-1, 41-1, 41-2, 41-3, 15-2, 43-1	>CSR DW, >BCWQG IW ST	GLs 2-1, 2-2, 5-2, 16-1, 20-1, 27-2, 27-3, 29-2, 35-3,	>BCWQG IW ST	GLs 28-1, 39-1, 39-2, 42-2, 44-2,
Chromium	None	None	>CSR AW	GL 20-1	None	None
Cobalt	>CSR DW	GLs 23-1, 43-1	>CSR DW	GLs 20-1, 27-2, 27-3, 29-1	>CSR DW	GLs 44-2, 45-1, 45-2
Fluoride	>CSR DW >BCWQG IW LT ST	GLs 15-1, 43-1	>CSR AW & DW >BCWQG IW LT ST	GLs 4-1, 4-2, 5-2, 27-1, 29-2, 35-3,	>CSR AW & DW >BCWQG IW LT ST	GLs 39-1, 09BH06-D, 28-1
Iron	None	None	>CSR DW	GLs 20-1 and 35-3	>CSR DW	GL 45-1,
Lithium	>CSR DW	All Upgradient wells	>CSR DW	All Footprint wells	>CSR DW	All Downgradient wells
Manganese	None	None	>CSR DW	GL 27-2	>CSR DW	GL45-1
Molybdenum	>BCWQG IW LT ST	GLs 23-1,15-2, 43-1	>BCWQG IW LT ST	GLs 2-1, 2-2, 4-1, 4-2, 5-2, 16-1, 27-1, 27-2, 27-3, 29-1, 29-2	>BCWQG IW LT	GLs 28-1, 28-3, 39-1, 39-2, 42-1, 42-2, 09BH06-D, 44-1, 44-2, 45-1, 45-2
Nickel	None	None	>CSR DW	GL 29-1	None	None
Nitrate	>CSR DW	GL43-1	None	None	>CSR DW	GL39-1, 42-2, 28-2
Selenium	>CSR DW >BCWQG IW ST LT	GL15-2	None	None	None	None
Sodium	None	None	None	None	None	None
Strontium	None	None	None	None	None	None
Sulfate	>CSR DW	GL15-2, 43-1	>CSR AW & DW	GL16-1, 35-3, 2-1, 2-2, 27-3, 29-2	>CSR AW & DW	GL42-2, 39-1, 39-2, 09BH06-D, 28-1, 28-2, 28-3, 44-1, 44-2, 45-1, 45-2
Uranium	>BCWQG IW >CSR AW & DW	GL23-1, 41-1, 41-2 ,41-3, 15-2	>BCWQG IW >CSR AW & DW	GL4-1, 4-2, 5-2, 35-3, 27-3, 29-1, 29-2	>CSR AW & DW	GL39-1, 39-2, 42-2, 0-BH06-D, 28-1, 28-2, 28-3, 44-1, 44-2, 45-1, 45-2

Notes:

MW: monitoring well **ID**: identifier **AW**: aquatic life **DW:** drinking water **ST**: short-term acute

LT: long-term chronic

- Impacts from landfill operations on downgradient groundwater quality related to elevated arsenic, chloride, cobalt, fluoride, lithium, manganese, molybdenum, sulfate, and uranium concentrations are inconclusive.
- The concentrations of ammonia, boron, chromium, and nickel only exceeded one or more applicable standards at the Footprint wells. Landfill operations appear to impact Footprint water quality but have no apparent impact on downgradient concentrations of these parameters.
- 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 concentration of selenium exceeded applicable standards at one Upgradient well. Landfill operations have no apparent impact on Downgradient concentrations of selenium.
- The concentration of iron exceeded applicable standards at Footprint and Downgradient wells only. Landfill operations may have an apparent impact on downgradient concentrations of iron.

8.1 Groundwater Quality at Upgradient Wells

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

- The concentrations of arsenic, chloride, fluoride, molybdenum, nitrate, sulfate, selenium, and uranium at Upgradient wells exceeded one or more of the applicable standards and/or guidelines.
- The concentrations of ammonia, boron, chromium, iron, manganese, nickel, sodium and strontium in all Upgradient wells were below applicable CSR AW, and DW standards.
- These results were generally 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, chromium, cobalt, fluoride, iron, lithium, manganese, molybdenum, nickel, sulfate, and uranium in Footprint wells exceeded one or more of the applicable standards and/or guidelines.
- GL20-1, located at the edge of the waste mass and downgradient of the leachate manholes, had ammonia, boron, chloride, chromium, cobalt, and lithium exceedances, which may be due to leachate impacts.
- Key leachate indicator parameters chloride and sulfate in wells GL27-3 (downgradient of Phase 3), and GL35-3 (at the west boundary of Phase 3) had concentrations consistent with results from the previous year. However, the concentration of sulfate at GL27-3 was slightly elevated above last years values.
- Concentrations of chloride, fluoride, and sulfate in GL35-3 exceeded regulatory criteria, with concentrations of all three parameters showing a declining trend over the last decade. 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 2024, concentrations of iron, lithium, manganese, strontium and uranium exceeded regulatory criteria.

A summary table of 2018 to 2024 leachate indicator parameters is below in Table I.

Table I: Summary of Analytical Results - Leachate Indicator Parameters (2018 to 2024)

Location	Year	Ammonia, Total (as N) ug/L	Chloride mg/L	Fluoride ug/L	Sulfate mg/L	COD mg/L	Boron ug/L	Iron ug/L
S Leachate Wet Well	2018 to 2023	17,800 to 103,000	487 to 980	490 to <10,000	1,200 to 2,990	502 to 988	1,160 to 2,790	19.8 to 203
	2024	148,000 to 188,000	580 to 820	<100 to <10,000	887 to 2,150	595 to 873	2,520 to 3,760	48 to 203
GL16-1	2018 to 2023	27 to 256	95.1 to 273	690 to 1,240	1,110 to 4,040	<20-24	65.3 to 76.5	78.9 to 424
	2024	293	124	<1000	1,240	<20	74.2	889
GL27-3	2018 to 2023	57 to 933	442 to 594	970 to <50,000	9,330 to 12,600	<20 to 29	30.4 to 70	2,260 to 5,480
	2024	839	569	<10,000	10,500	25	42.7	4,830
GL35-3	2018 to 2023	1,220 to 1,720	325 to 351	1,410 to 1,730	2,940 to 3,510	<20 to 26	55.4 to 87	463 to 24,800
	2024	1,510	356	1,210	3,300	<20	85.4	13,400

8.3 Groundwater Quality at Downgradient Wells

Analytical results from 2024 for downgradient monitoring wells indicate that concentrations of arsenic, chloride, cobalt, fluoride, iron, lithium, manganese, molybdenum, nitrate, sulfate, sodium, strontium, TDS, and uranium exceeded one or more applicable standard and/or guideline. These results are somewhat consistent with those of previous years.

- Fluoride concentrations exceeded the applicable standards and guidelines in GL39-1, 09BH06-D, and GL28-1 wells.
- Cobalt concentration exceeded the CSR DW standards in the fall samples from GL44-2, GL 45-1 and GL 45-2 but was less than P9 standards. Cobalt concentrations in GL28-1, GL28-2, and GL28-3 were below the applicable standards, which was consistent with 2023 groundwater results.
- Selenium concentrations do not exceed the applicable standards in Downgradient wells, which is consistent with the 2023 groundwater results.
- Uranium concentrations exceeded the applicable standards in all Downgradient wells (except GL42-1 during spring sampling). This is also consistent with 2023 groundwater results.

8.4 Groundwater Quality Across the Site

Changes in groundwater quality across the Site and in off-Site areas were evaluated using plots (appended Plots 1 to 7). The plots show the concentration of selected leachate indicator parameters (alkalinity, arsenic, chloride, COD, TDS, sulfate, and uranium), by sample location, from upgradient to downgradient locations. A review of the plots assists in determining if these parameters show evidence of migrating through and off the Site. Observations are as follows:

- Alkalinity, arsenic, chloride, and COD concentrations increased from Upgradient wells to Footprint wells and decreased in Downgradient wells. Downgradient well concentrations were lower than those of Upgradient wells; this pattern indicates an apparent natural variation of these parameter concentrations and suggests that landfill activities may be unlikely to be impacting these parameters.
- The plots for sulfate, 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 similar to the trends in 2022 and 2023.

9.0 SURFACE WATER ANALYTICAL RESULTS

Keltech tabulated the 2024 analytical results for on-Site Northeast Pond, Bredin Pond, Tutt Pond, and Slough and for off-Site Slough #2, Bubna Slough, Little Robert Lake, and Robert Lake. The results were compared to LT and ST BCWQG AW and IW criteria.

Refer to the appended Table 4: Summary of Surface Water Analytical Results—Ponds, Slough. Furthermore, the tabulated historical water quality data of surface water (2001 to 2023) is provided in Appendix F.

9.1 Surface Water Quality

The surface water quality of samples collected in 2024 from the on-Site ponds (Northeast Pond, Bredin Pond, Tutt Pond, and Slough) and off-Site ponds (Little Robert Lake and Robert Lake) was generally consistent with previous years'. In 2024, one on-Site surface water sample was collected from the new sampling location, S.Storm Headwall 186437. The other new sample point, Culvert 1002026, was not sampled.

<u>ON-SITE:</u> In 2024, the parameters that exceeded applicable BCWQG AW and/or IW LT or ST at on-Site ponds were:

- Ammonia, aluminum, chloride, copper, molybdenum, phosphorus, and zinc in all on-Site ponds
- Sulfate in Northeast Pond, Tutt Pond, and Slough
- Fluoride in Slough#2, Northeast Pond, Bredin Pond, and Tutt Pond
- Conductivity and Selenium in Slough
- Iron in the Slough throughout the year and Tutt Pond (in spring sampling only)
- Arsenic in Northeast Pond, Tutt pond, and Slough

The Slough had generally higher concentrations of analyzed parameters, which may be a result of the long-term presence of waste and/or leachate. The natural evaporation process, remedial efforts from the 2023 Kelowna wildfire, plus removal of waste fingers from the Slough in 2024 may also have contributed to these elevated concentrations.

OFF-SITE: In 2024, the parameters that exceeded applicable BCWQG AW and/or IW LT or ST guidelines in the off-Site ponds were:

- Aluminum, chloride, and phosphorus in all off-Site ponds
- Arsenic, copper, iron, molybdenum and sulfate have exceedances in all off-Site ponds except Bubna Slough
- Selenium and zinc in Robert Lake
- Off-Site to the south at Little Robert Lake: aluminum, copper, phosphorus, sulfate and zinc in spring samples, and arsenic, copper, phosphorus, sulfate and zinc in fall samples exceeded the applicable BCWQG

CULVERT / DISCHARGE POINTS: In 2024, the parameters that exceeded applicable BCWQG AW and/or IW LT or ST guidelines at one of the new discharge locations (S.Storm Headwall 186437) included aluminum, copper, molybdenum, phosphorous, and selenium.

95th PERCENTILE SITE SPECIFIC BACKGROUND CONCENTRATIONS for selected surface water quality parameters were applied to data from on-Site ponds (Tutt Pond, Slough), on-Site new discharge location (S.Storm Headwall 186437), and off-Site lakes (Little Robert Lake and Robert Lake). The following parameters in these surface water bodies/discharge points exceeded the 95th percentile site-specific background concentration during at least one quarter of 2024:

- Aluminum in Tutt Pond, Slough, S.Storm Headwall 186437, Little Robert Lake, and Robert Lake
- Arsenic in Slough, Little Robert Lake, and Robert Lake
- Chromium in Slough and Robert Lake
- Iron in Tutt Pond, Slough, S.Storm Headwall 186437, Little Robert Lake, and Robert Lake
- Molybdenum in Slough, S.Storm Headwall 186437, and Robert Lake
- Uranium in Slough, Little Robert Lake, and Robert Lake
- Chloride in Slough
- Fluoride in Tutt Pond and Robert Lake
- Sulfate in Slough, Little Robert Lake, and Robert Lake
- Total alkalinity in Slough and Robert Lake
- Total ammonia in Slough
- Total Phosphorus in all ponds
- Conductivity in Slough and Robert Lake

9.2 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, which show leachate indicator parameters of ammonia, alkalinity, arsenic, chloride, COD, phosphorous, sulfate, TDS, and uranium.

- The interconnectivity of the Upgradient, on-Site, and Downgradient ponds with subsurface hydrogeology is unconfirmed; however, surface runoff, with or without waste contamination, may still impact surface water quality.

- In 2024, concentration ranges of chloride, ammonia, and COD at Downgradient ponds (Little Robert Lake and Robert Lake) were either lower or similar to those in the Upgradient pond (Bubna Slough), which suggests that Landfill activities are unlikely to be influencing concentrations of ammonia, chloride, and COD in the ponds.
- Concentrations of molybdenum, phosphorus, sulfate, TDS, and uranium increased from the Upgradient pond (Bubna Slough) to on-Site ponds and then further increased in both Downgradient ponds (Little Robert Lake and Robert Lake). 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.
- For alkalinity, some sampling locations at the Footprint and Downgradient ponds have relatively higher concentrations compared to Upgradient ponds, indicating that increased concentrations may be attributable to evaporation cycles and Landfill activities.
- Concentrations of arsenic slightly increase from the Upstream to Downstream ponds. Some on-Site ponds have high arsenic concentrations, suggesting that Landfill activities are likely to influence the concentrations of arsenic.

10.0 LEACHATE ANALYTICAL RESULTS

Leachate quality is not regulated; no water quality standards and/or guidelines apply. This leachate quality discussion focuses on key indicator parameters for which typical concentration ranges are provided in Table 1: Typical Leachate Characteristics (SWANA, 1991) from the document *Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills*[6] (Guidelines).

Refer to the appended Table 5: Summary of Leachate Water Analytical Results—Manholes. Furthermore, Appendix E: Graphs 7 to 13 presents graphs showing historical trends in concentrations of indicator parameters in leachate. A summary of observations follows.

Concentrations of some leachate indicator parameters vary across the Site. Keltech calculated the average values from the 2024 leachate monitoring data and compared them with the typical range provided in Table 1: *Typical Leachate Characteristics*. This comparison includes general parameters (ammonia, alkalinity, BOD, chloride, COD, DOC, nitrate, pH, sulfate, and total phosphorus) as well as some dissolved metals.

- The pH was within the typical range of 5.3 to 8.5.
- BOD, COD, DOC, Hardness, and total phosphorus have lower concentrations than the typical concentrations provided in the Guidelines.
- The alkalinity, ammonia, and chloride concentrations were at low to moderate levels compared to typical concentrations provided in the Guidelines.
- Nitrate and sulfate were at moderate to high concentrations when compared to typical concentration ranges provided in the Guidelines.
- Among dissolved metals:
    - Calcium, iron, and potassium were at lower concentrations compared to the typical concentration range.

[6] *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

- Magnesium and sodium are at low to moderate concentrations compared to the typical range.

The 2024 leachate data are summarized in the appended Table 5: Summary of Leachate Analytical Results. The 2008-2023 analytical results for leachate are provided in Appendix F.

11.0 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Appendix G details the QA/QC program and includes the requirements of the amended OC. This 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, with the exception of the total coliforms result for September 12, 2024, samples collected from Robert Lake (i.e., Robert Lake South/DUP C), and the DOC result for May 9, 2024, samples collected from South Leachate Wet Well (i.e., S Leachate Wetwell/DUP B).

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 somewhat variable at the Site and surrounding area due to the local topography and the constructed facilities. The inferred groundwater flow direction was from the north towards the south and west of Phase 3 toward the east, with a localized mounding in both spring and fall to the south of the Phase 3/Slough at GL42 and GL29 series. This is consistent with previous years.
- In Upgradient wells, the concentrations of arsenic, chloride, fluoride, molybdenum, nitrate, selenium, sulfate, and uranium exceeded one or more of the applicable standards and/or guidelines.
- In Footprint wells, concentrations of ammonia, arsenic, boron, chloride, chromium, cobalt, fluoride, iron, lithium, manganese, molybdenum, nickel, sulfate, and/or uranium exceeded one or more of the applicable standards and guidelines.
- In GL35-3, concentrations of chloride, fluoride, iron, lithium, manganese, sulfate, and uranium exceeded regulatory criteria. This is consistent with historical fluctuations of these substances at this location.
- In Downgradient monitoring wells, concentrations of arsenic, chloride, fluoride, iron, lithium, manganese, molybdenum, nitrate, sodium, sulfate, and uranium exceeded one or more applicable standards and/or guidelines.
- In 2024, arsenic, chloride, and COD concentrations increased from Upgradient wells to Footprint wells and decreased in Downgradient wells, with downgradient well concentrations lower than those of Upgradient wells.
- Alkalinity concentrations increased from the Upgradient wells to the Footprint wells and decreased slightly in the Downgradient wells.
- The plots for sulfate, TDS, and uranium show gradients of increasing concentrations from Upgradient wells to Downgradient wells.
- The 2024 concentrations trends of these groundwater parameters are consistent with historical trends.

Surface water quality:

- In 2024, the parameters that exceeded applicable guidelines at on-Site ponds - Northeast Pond, Bredin Pond, Tutt Pond, and Slough were:
  - Aluminum, ammonia, chloride, copper, molybdenum, phosphorus, and zinc in all on-Site ponds
  - Sulfate in Northeast Pond, Tutt Pond, and Slough
  - Fluoride in Slough#2, Northeast Pond, Bredin Pond, and Tutt Pond
  - Conductivity in the Slough
  - Selenium in Slough and S.Storm Headwall 186437.
  - Iron in the Slough throughout the year, Tutt Pond (in spring sampling only), and S.Storm Headwall 186437
  - Arsenic in Northeast Pond, Tutt Pond, and Slough
- In 2024, the parameters that exceeded applicable guidelines at off-Site ponds were:
  - Aluminum, chloride, and phosphorus in all off-Site ponds
  - Arsenic, copper, iron, molybdenum, and sulfate in all off-Site ponds except in Bubna Slough
  - Selenium and zinc in Robert Lake
  - Off-Site to the south at Little Robert Lake: aluminum, copper, phosphorus, sulfate and zinc in spring samples, and arsenic, copper, phosphorus, sulfate and zinc in fall samples exceeded the applicable BCWQG

The surface water quality of the samples collected at on-Site ponds and off-Site ponds was generally consistent with previous years. The 95^{th} percentile site-specific background concentration was updated after each sampling round and was used to compare the concentrations of the next sampling round.

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.
- BOD, COD, DOC, Hardness, and total phosphorus had lower concentrations than the typical concentrations provided in the Guidelines.
- The alkalinity, ammonia, and chloride concentrations were at low to moderate levels compared to typical concentrations provided in the Guidelines.
- Nitrate and sulfate were at moderate to high levels compared to typical concentration ranges in the Guidelines.
- Among dissolved metals:
  - Calcium, iron, and potassium were at lower levels compared to the typical concentration range.
  - Magnesium and sodium are at low to moderate levels compared to the typical concentration range.

13.0 RECOMMENDATIONS

The Keltech recommendations for the 2025 monitoring program are as follows:

- One 2023 HHCR recommendation was to install a well in the shallow clay unit northwest of the Site in the vicinity of GL41 or north of GL0 well nests (described as a proposed well "Northwest of Site - Clay Unit Well"), This was an optional drilling location if clay was not encountered in the well installed to the northeast of the Site (GL43-1), or if there is insufficient groundwater for sampling. In 2025, the need for this proposed well location should be reassessed
- Continue quarterly updating of the 95th percentile site-specific background concentration data for surface water. Include more surface water quality parameters to establish 95th percentile site-specific background concentration
- Develop 95th percentile site-specific background concentrations for each parameter for recently installed monitoring well GL43-1 (Clay Unit), which will be used to compare groundwater analytical results
- Continue semi-annual groundwater sampling from the wells listed in appended Table 1 (2024 water quality program) in the spring when groundwater levels are highest and, in the fall, when groundwater levels are lowest. All groundwater samples should continue to be analyzed for the parameters in Table B
- Continue quarterly surface water sampling at on-Site Bredin Pond, Tutt Pond, Northeast Pond, and Slough to confirm water quality used for irrigation purposes
- Continue quarterly surface water sampling at off-Site Little Robert Lake, Robert Lake, Bubna Slough and Slough #2 to characterize baseline and 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 D
- 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 water samples from a Clay Unit well are available
- 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). 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 Client being representative of any given contaminant, handled, or otherwise managed by the Client. All liability is limited to the fee charged.

The conclusions presented in this report represent the judgement of Keltech's assessor 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.

Prepared By:

27/3/25

Haroon Rashid Mian, PhD, P.Eng.
Environmental Engineer

Reviewed By:

Nancy Fuller, B.Sc., P.Ag.
Contaminated Sites Specialist

Allan Robison, AScT, EP
Principal, Senior Environmental Consultant

Peer Reviewed by:

Gary Hamilton, P.Geo.
Contaminated Sites Approved Professional
Hamilton & D'Ambra Consulting Inc.
Permit to Practice 1001646

HM/NF/AR

https://keltechenvironmental-my.sharepoint.com/personal/arobison_keltechenvironmental_com/Documents/Keltech/Projects/Active/2024/Projects/2024-029 GLF (COK) Annual WQ RPT 2024/10 Report/FINAL/2024-029 GLF Annual WQ RPT Final Mar 27 2025 v2.docx

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FIGURES

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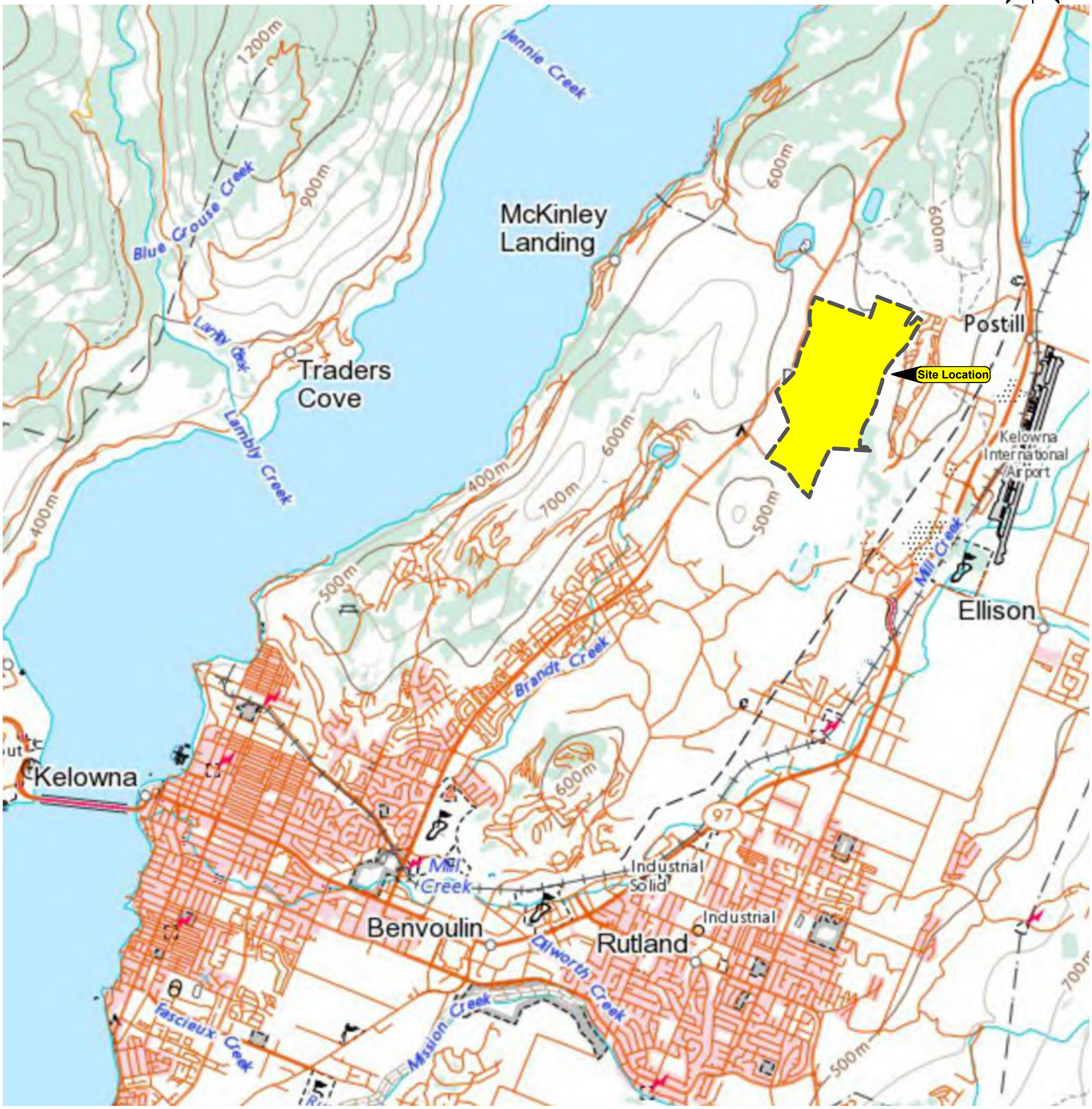

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SCALE KILOMETRES

LEGEND

SITE

REFERENCES

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

PROJECT

2024 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
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DATE	03–25–2025
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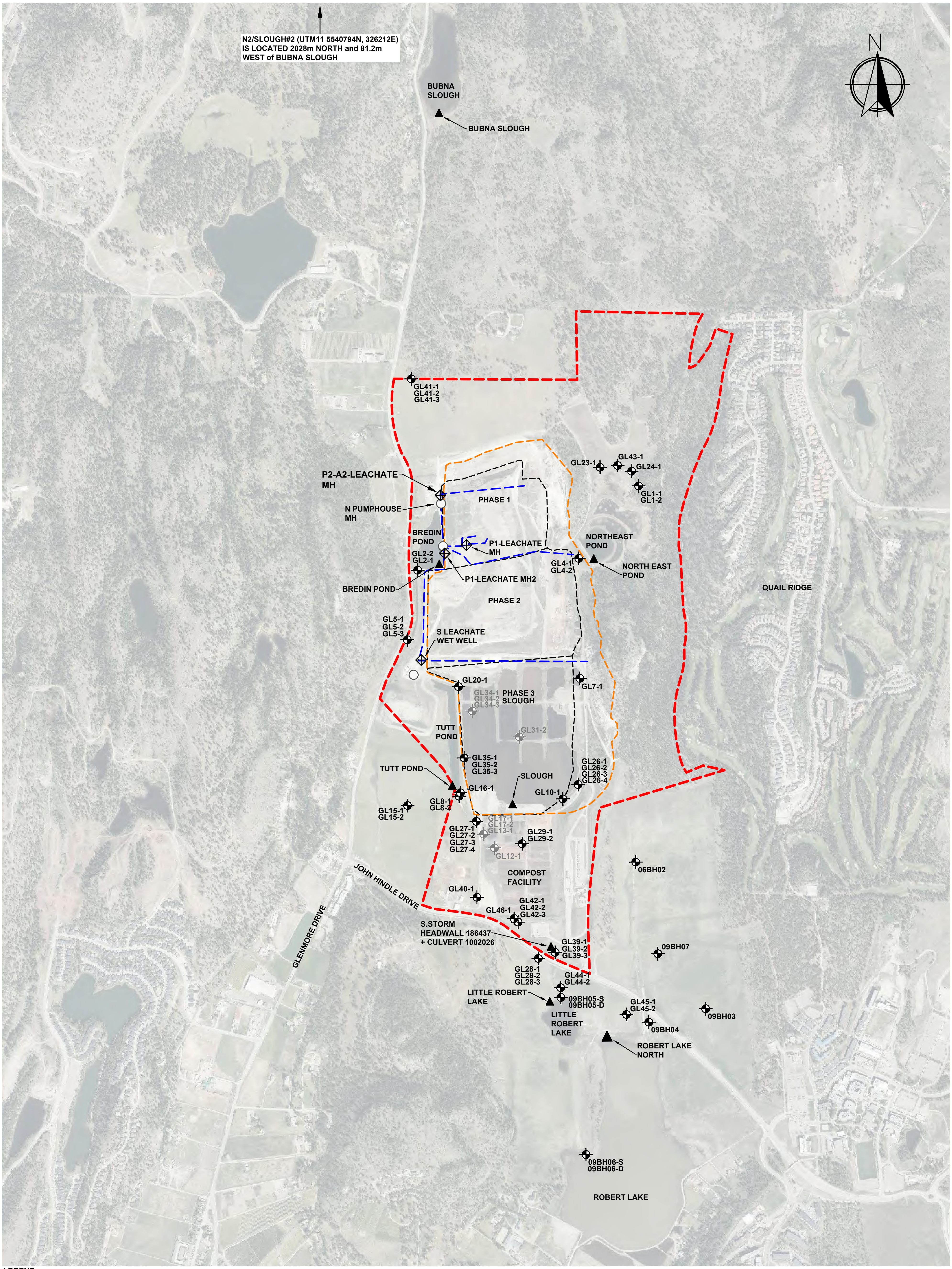

LEGEND

APPROXIMATE SITE BOUNDARY (REPORTING ONLY)

APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)

LEACHATE COLLECTION SYSTEM

LIMITS OF FOOTPRINT

BH00-01 MONITORING WELL LOCATION

GL32-1 MONITORING WELL (RECENTLY DECOMMISSIONED)

APPROXIMATE MANHOLE LOCATION

APPROXIMATE LEACHATE SAMPLING LOCATION

APPROXIMATE SURFACE WATER SAMPLING LOCATION

300 0 300

SCALE METRES

REFERENCES

1.) **COORDINATE REFERENCE:** UTM ZONE 11n, NAD83

2.) **MAP REFERENCES:** KELOWNA ONLINE MAPPING SERVICE

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	FIGURE
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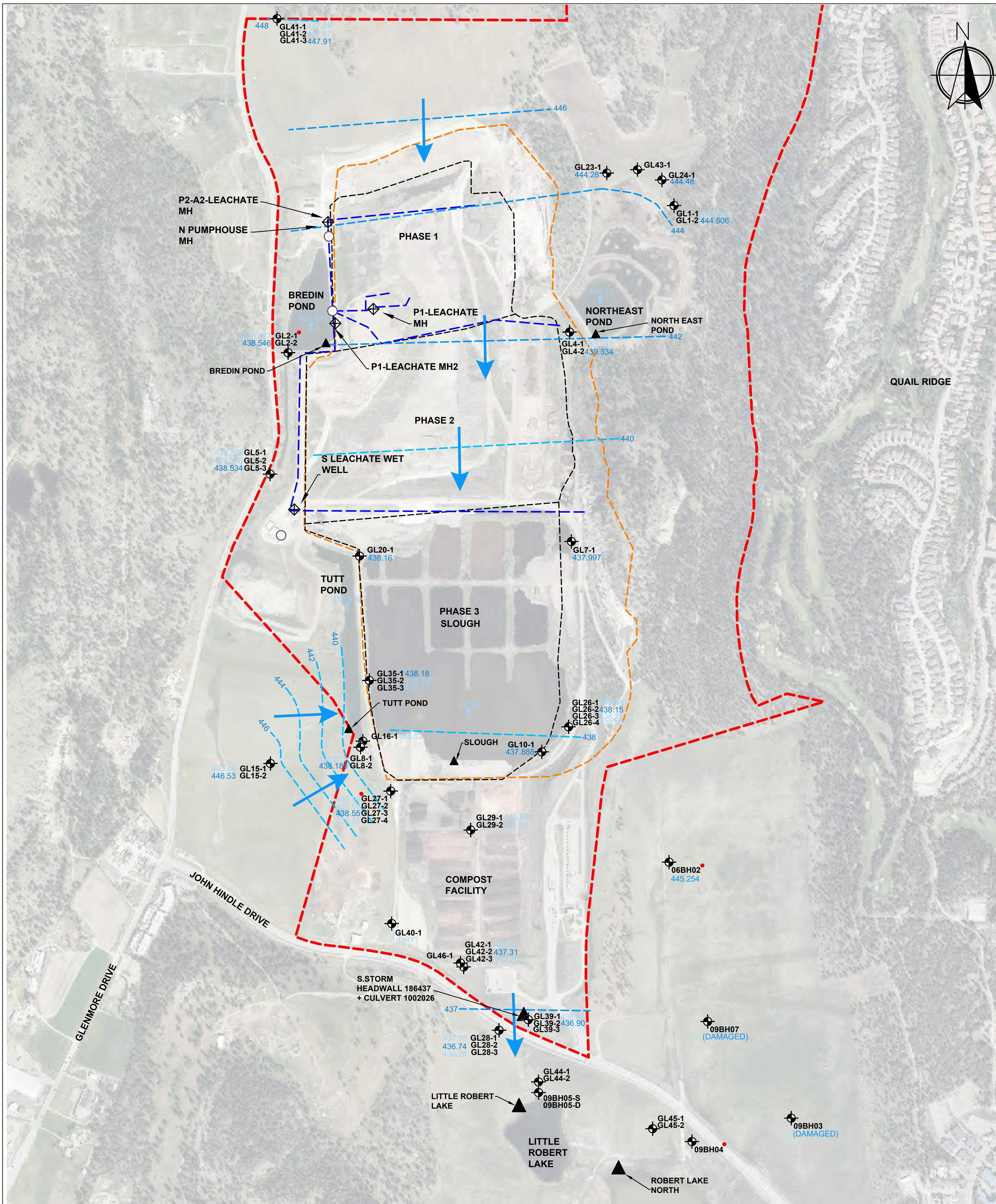

LEGEND

- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- INFERRED GROUNDWATER CONTOUR INTERVAL (m)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- 438.00 GROUNDWATER ELEVATION USED FOR FLOW DIRECTION (M) (MARCH 2024)
- 438.00 GROUNDWATER ELEVATION NOT USED FOR FLOW DIRECTION (M) (MARCH 2024)
- 438.00 SURFACE WATER ELEVATION (MARCH 13, 2024)
- 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

200 0 200

SCALE METRES

REFERENCES

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

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

TITLE
INFERRED DIRECTION OF GROUNDWATER FLOW (MARCH 2024)

CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024-029	FIGURE
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DATE	03-25-2025	
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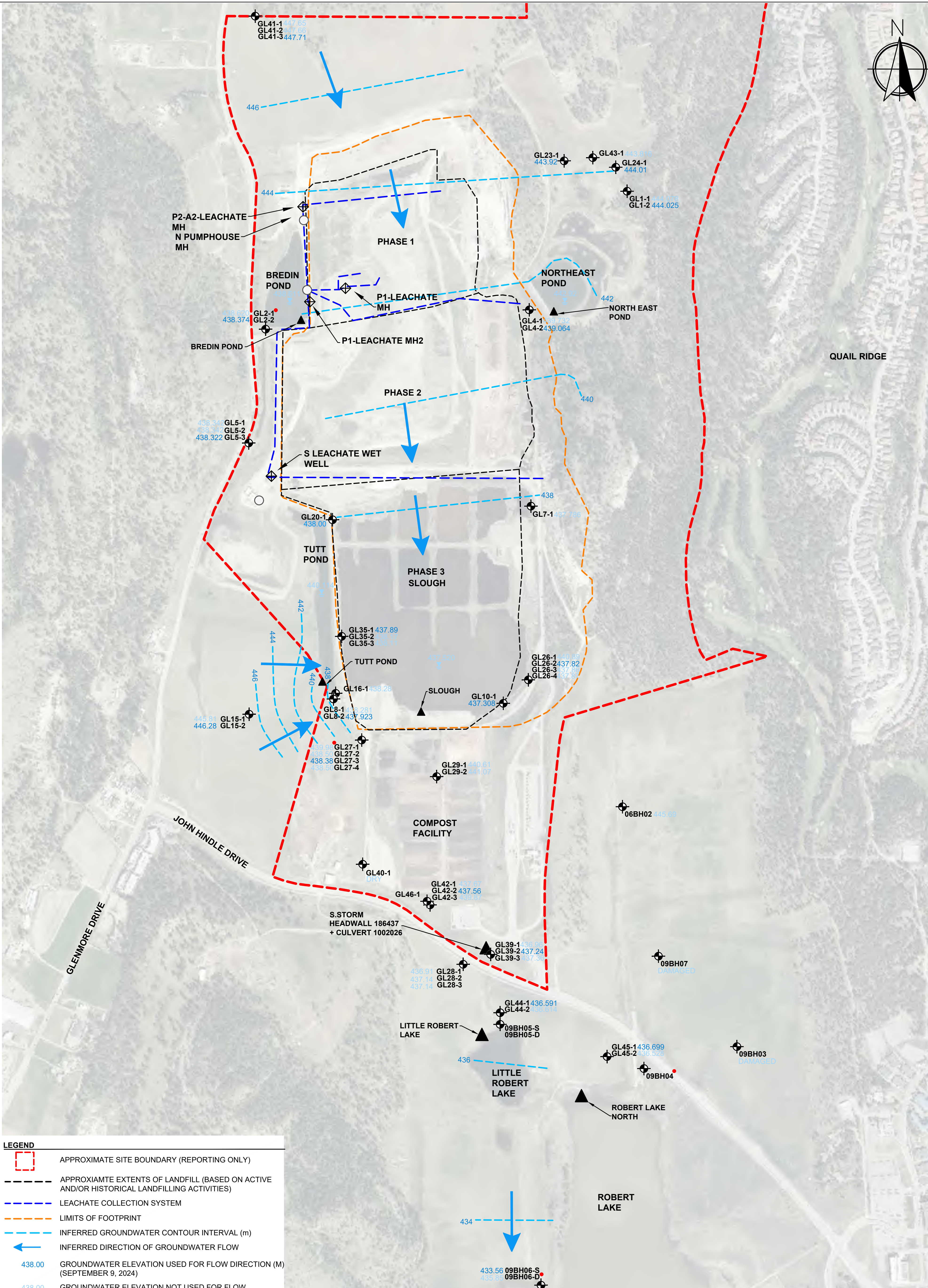


LEGEND

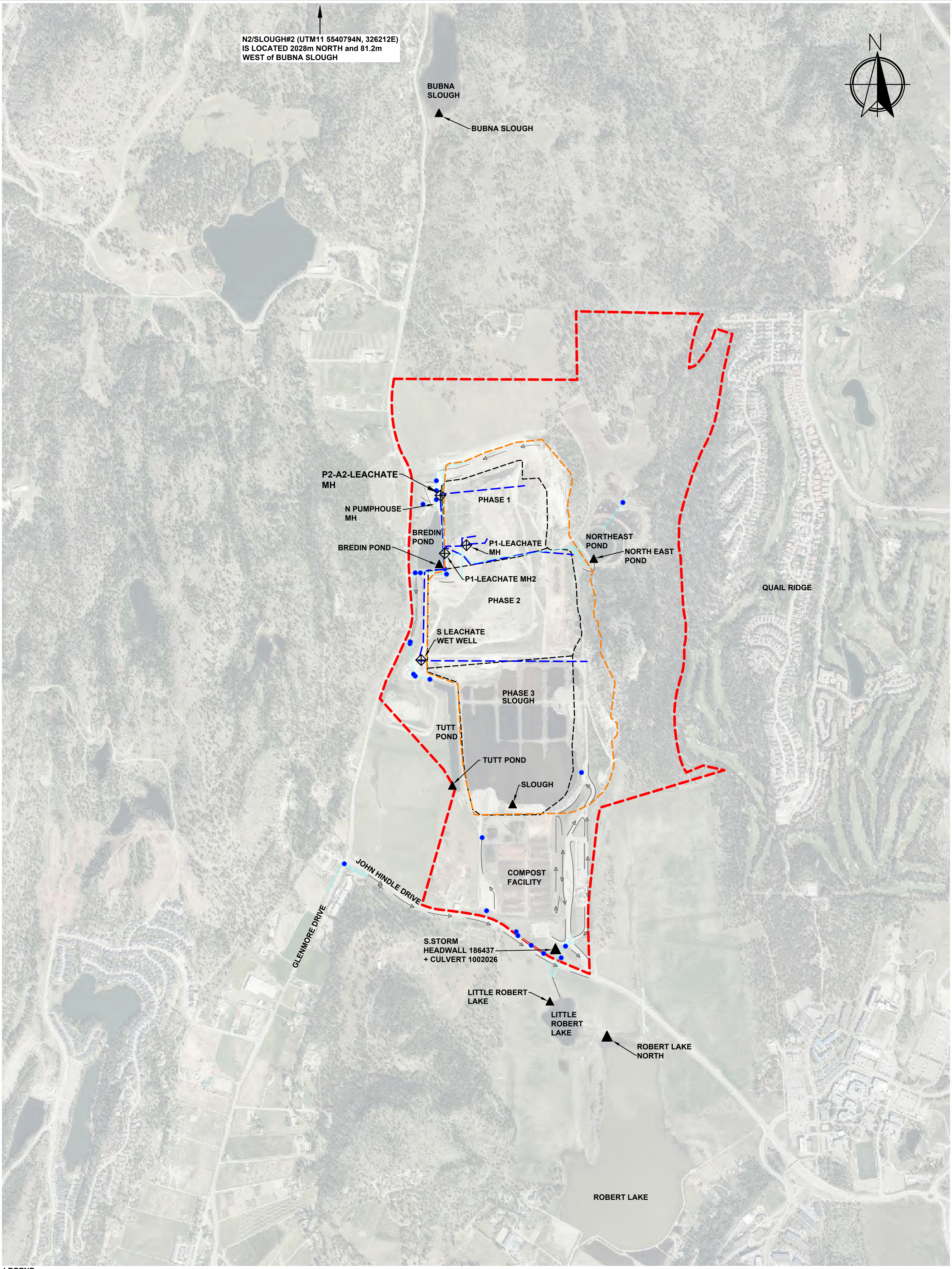
- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- INFERRED GROUNDWATER CONTOUR INTERVAL (m)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- 438.00 GROUNDWATER ELEVATION USED FOR FLOW DIRECTION (M) (SEPTEMBER 9, 2024)
- 438.00 GROUNDWATER ELEVATION NOT USED FOR FLOW DIRECTION (M) (SEPTEMBER 9, 2024)
- 438.00 SURFACE WATER ELEVATION (SEPTEMBER 24, 2024)
- 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	2024 ANNUAL WATER MONITORING REPORT FOR GLENMORE LANDFILL 2720 JOHN HINDLE DRIVE, KELOWNA, BC
TITLE	INFERRED DIRECTION OF GROUNDWATER FLOW (SEPT 2024)
CLIENT	CITY OF KELOWNA
CONSULTANT	Keltech Environmental Ltd.
PROJECT No.	2024-029
REVISION	00
DATE	3-25-2025
CADD	AB
CHECK	NF
FIGURE	4



LEGEND

APPROXIMATE SITE BOUNDARY (REPORTING ONLY)	SURFACE WATER PIPE*
APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)	SURFACE RUNOFF*
LEACHATE COLLECTION SYSTEM	APPROXIMATE MANHOLE LOCATION*
LIMITS OF FOOTPRINT	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
2024 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	FIGURE
REVISION	00	5
DATE	03-25-2025	
CADD	AB	
CHECK	AR	

TABLES

Table 1: Monitoring Well Construction Details and Current Status - 2024

City's Current Monitoring Well ID [a]	Consultant Initial Monitoring Well ID [a]	Monitoring Well UTM Coordinates Northing	Monitoring Well UTM Coordinates Easting	Geodetic Elevations Grade (m amsl)	Geodetic Elevations Piezo (m amsl)	Geodetic Elevations Top of screen (m amsl)	Geodetic Elevations Bottom of Screen (m amsl)	Screen Details Top of Screen (m bgs)	Screen Details Bottom of Screen (m bgs)	Screen Details Screen Length (m bgs)	Lithology	Drilling Method	Drilling Company	Drilling Consultant	Drilling Year	Current Status
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	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 till) followed by sand and silt, some clay, trace gravel	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	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	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	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	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	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	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019

Table 1: Monitoring Well Construction Details and Current Status - 2024

City's Current Monitoring Well ID [a]	Consultant Initial Monitoring Well ID [a]	Monitoring Well UTM Coordinates Northing	Monitoring Well UTM Coordinates Easting	Geodetic Elevations Grade (m amsl)	Geodetic Elevations Piezo (m amsl)	Geodetic Elevations Top of screen (m amsl)	Geodetic Elevations Bottom of Screen (m amsl)	Screen Details Top of Screen (m bgs)	Screen Details Bottom of Screen (m bgs)	Screen Details Screen Length (m bgs)	Lithology	Drilling Method	Drilling Company	Drilling Consultant	Drilling Year	Current Status
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	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,	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	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
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	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	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	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	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	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	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	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

[a] Reference elevation is a mark on the rim of the monitoring well standpipe surveyed with respect to geodetic datum.
HSA hollow stem auger
SSA solid stem auger

Table 2a: Monitoring Well Top of Pipe Elevations & Groundwater Elevations - 2015-2024

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
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
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
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
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
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
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
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
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
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
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
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
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
2017/08/16	445.621	441.351	441.288	444.824	444.742	438.613	438.193	Decommi sioned	440.081	439.953	438.493	438.441	438.381	438.067	438.232	438.561	437.934	Artesian	438.108
2017/09/22	445.630	441.308	441.242	444.690	444.610	438.547	438.243		440.067	439.992	438.413	438.389	438.350	437.895	438.113	438.536	437.892	Artesian	437.978
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
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
2018/05/25	446.338	441.829	441.575	445.756	445.645	438.884	438.612	Decommi sioned	440.438	439.800	438.870	438.835	438.805	438.516	NM	438.919	438.472	Artesian	438.565
2018/08/30	446.861	443.054	443.056	444.814	444.725	438.687	438.481		439.819	439.331	438.564	438.563	438.525	437.544	NM	438.843	438.115	Artesian	438.083
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
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
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
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
2019/07/12	446.297	442.160	442.137	445.100	445.000			Decommi sioned	439.881	439.322	438.545	438.493	438.445	437.839	-	438.700	438.147	439.565	438.156
2019/08/12	446.215	442.050	442.022	444.874	444.773	438.503	438.116		439.806	439.258	438.293	438.287	438.223	437.015	438.054	438.587	437.899	-	438.032
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
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
2020/06/04				445.570	445.450	438.810	438.400	Decommi sioned	440.320	439.570	438.570	438.520	438.480	438.160	438.300	438.690	438.270	439.520	438.280
2020/09/15		Decommisioned		445.040	444.950	438.690	438.520		439.900	439.260	438.590	438.570	438.550	437.860	438.000	438.860	438.050	439.520	437.950
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
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
2021/06/15				445.160	445.080	438.590	438.180	Decommi sioned	439.860	439.250	438.330	438.290	438.220	438.110	438.180	438.900	437.730	439.530	438.160
2021/09/29		Decommisioned		444.410	444.330	438.830	438.650		439.690	439.080	438.510	438.650	438.790	Decommi sioned	437.840	438.740	438.040	439.570	
2021/10/26				444.900	444.830	438.750	438.300		439.770	439.170	438.470	438.420	438.360		437.860	438.410	437.930	439.570	Decomm
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		
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		
2022/06/24		Decommisioned		445.171	445.090	438.873	438.478	Decommi sioned	440.084	439.367	438.578	438.551	438.510	Decommi sioned	438.129	438.825	438.661	Decommission	
2022/09/29				444.573	444.494	438.660	438.345		439.725	439.096	438.322	438.325	438.305		437.721	438.603	437.960		
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		
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		
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		
2023/05/26		Decommisioned		444.836	444.763	438.763	438.371	Decommi sioned	439.438	439.503	438.422	438.406	438.357	Decommi sioned	438.078	438.442	438.034	Decommission	
2023/09/26				443.067	444.003	438.715	438.461		439.588	438.998	-	438.437	438.420		-	438.466	437.933		
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		
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		
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		
2024/06/06		Decommisioned		444.457	444.414	438.937	438.543	Decommi sioned	439.893	439.177	438.537	438.541	438.518	Decommi sioned	437.979	438.495	438.146	Decommission	
2024/09/09				444.078	444.025	438.620	438.374		439.732	439.064	438.342	438.342	438.322		437.786	438.281	437.923		
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		

Table 2a: Monitoring W

Well ID:	GL9-3	GL10-1	GL12-1	GL13-1	GL15-1	GL15-2	GL16-1	GL17-1	GL17-2	GL18-2	GL18-3	GL20-1	GL23-1	GL24-1	06BH02	09BH03	09BH04	09BH06-D	09BH06-S
Water Elevation Date																			
2015 Well Elevation	439.505	439.392	441.834	439.757	452.37	452.086	439.612	440.286	439.815	442.955	442.89	441.229	446.633	447.604	445.441	441.01	436.362	435.814	435.867
2015/03/17	437.885	437.901	440.224	439.142	448.059	448.598	438.874		439.08	439.085	437.99	438.21	444.578	444.98	444.101	435.871	436.062	435.615	435.419
2015/06/04	437.900	438.150	440.159	439.102	447.402	447.997	438.783	439.938	439.067	439.504	437.93	438.261	444.481	444.817	444.273	435.758	435.937	435.593	435.432
2015/08/27	437.460	437.372	439.985	438.957	447.665	448.251	437.567	439.905	438.9	439.384	437.66	437.844	444.128	444.393	444.131	435.625	435.773	435.345	435.072
2015/11/02	437.635	437.943	439.891	438.903	447.781	448.325	437.28	439.941	438.955	439.587	437.66	437.711	444.143	444.516	444.35	435.644	435.881	435.471	435.312
2016 Well Elevation	439.435	439.414	442.248		452.317	452.04	439.571	440.243	439.775	442.899	442.828	441.16	446.602	447.614	445.351	441	436.336	435.798	435.871
2016/03/22	437.945	438.033	440.960	439.274	448.522	449.105	438.893	439.991	439.15	439.735	438.183	438.202	445.013	445.419	444.796	436.277	-	435.786	435.522
2016/05/16	437.896	437.914	440.486	439.305	448.395	448.851	438.778	439.965	439.108	439.78	438.093	438.161	444.895	445.835	445.227	436.381	436.321	435.654	435.401
2016/09/16	437.607	437.604	440.076	439.238	448.989	449.496	438.073	439.982	439.113	439.67	437.818	437.895	444.219	444.796	445.201	436.399	-	435.698	435.362
2016/11/24	437.785	438.006	439.998	439.318	448.54	449.078	438.759	-	439.193	439.66	437.888	438.028	444.645	445.025	445.331	436.245	-	435.748	435.486
2017 Well Elevation																			
2017/03/21	438.180	438.260	440.280	439.405	448.705	449.321	439.053	-	439.335	439.69	438.218	438.631	445.273	445.523	-	436.602	-	-	435.6
2017/06/05	438.367	438.422	440.560	439.507	448.224	447.76	439.031	440.163	439.365	439.743	438.598	438.552	445.187	445.782	-	436.601	-	-	435.527
2017/08/16	438.030	438.009	NM	439.505	448.027	448.419	438.583	-	439.343	439.616	438.308	438.22	444.398	444.854	445.259	-	-	435.67	435.309
2017/09/22	437.893	437.880	440.310	439.466	447.829	448.293	438.548	-	439.322	439.654	438.118	438.095	444.346	444.683	445.171	436.139	-	435.578	435.346
2017/11/14	437.960	438.191	440.095	439.318	447.409	447.998	438.765	-	439.317	439.761	438.088	438.161	444.468	444.843	445.111	436.049	436.166	435.618	435.43
2018 Well Elevation																			
2018/03/16	438.434	438.479	NM	439.608	447.799	448.705	439.008	-	439.565	440.099	438.678	438.717	445.226	445.649	-	-	-	-	-
2018/05/25	438.485	438.515	440.723	439.668	448.435	448.993	438.941	-	439.505	440.304	438.688	438.585	445.347	445.844	-	436.47	-	-	435.566
2018/08/30	438.003	437.945	440.284	439.401	448.572	448.946	438.851	439.959	439.302	440.001	437.673	438.393	444.43	444.844	-	436.385	-	435.768	435.564
2018/11/16	438.135	438.206	439.958	439.248	447.748	448.231	438.96	Artesian	439.223	440.017	438.068	438.332	444.643	446.325	-	436.318	-	-	435.569
2019 Well Elevation	439.444	439.418	442.251	439.759	452.322	452.039	439.577	440.247	439.783			441.138	446.597	447.568	445.37	440.985	436.348	435.827	435.884
2019/03/21	438.461	438.480	439.766	439.328	447.301	447.921	438.827	440.247	439.251	Decommisioned		438.476	445.146	445.637	445.37	436.336	436.348	435.827	435.694
2019/06/06	438.205	438.186	439.750	439.158	446.871	447.34	437.422	440.247	439.049			438.348	445.018	445.339	445.37	435.986	436.348	435.827	435.684
2019/07/12	438.091	438.105	439.676	439.114	448.299	448.541	437.692	440.247	439.02			438.211	444.863	445.095	-	-	-	-	-
2019/08/12	437.973	438.132	439.684	439.074	448.608	449.032	438.633	440.234	438.976			438.022	444.584	444.827	-	437.52	Artesian	Artesian	435.582
2019/08/13	-	-	-	-	-	-	-	-	-			-	-	-	445.37	-	-	-	-
2019/10/28	437.873	437.999	439.652	439.060	447.217	447.638	438.715	440.047	438.985			438.157	444.802	445.089	445.37	436.744	436.348	435.827	435.606
2020 Well Elevation																			
2020/03/21	438.260	438.250	440.060	439.330	447.45	448.01	438.93	440.21	439.72	Decommisioned		438.40	445.37	445.72	-	-	-	-	-
2020/06/04	438.210	438.220	440.060	439.350	448.93	449.43	438.74	440.23	439.21			438.28	445.36	445.59	Artesian	437.08	-	Artesian	435.71
2020/09/15	437.890	437.750	440.060	439.300	449.00	450.09	439.01	440.24	439.18			438.17	444.35	445.01	-	436.84	Artesian		435.64
2020/11/26	439.040	438.110	439.950	439.260	448.82	449.39	439.08	440.18	439.18			438.25	444.95	445.27	-	436.58			435.71
2021 Well Elevation																			
2021/03/29	438.290	438.300	439.990	439.260	448.04	448.53	439.00	440.17	439.15	Decommisioned		438.38	445.26	445.43	Artesian	436.42	Artesian	Artesian	435.76
2021/06/15	438.110	438.070	439.840	439.240	448.87	449.38	438.97	440.19	439.12			438.08	444.94	445.16	Artesian	436.97			435.71
2021/09/29	nisioned	437.710	439.690	439.080	447.25	447.71	438.79	440.19	439.01			438.19	443.80	444.37	CNL	436.97			435.638
2021/10/26		437.890	439.660	439.090	447.50	448.11	438.47	440.13	439.03			437.99	444.73	444.86	CNL	436.80			435.663
2022 Well Elevation (piezo)		439.383	442.234	440.875	452.302	452.046	439.549	440.774	440.677			441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813
2022/03/29	ed	438.118	440.193	439.401	447.66	448.33	438.77	440.17	439.19	Decommisioned		438.28	444.78	445.26	damaged	436.94	Artesian	Artesian	435.76
2022/06/24		438.097	440.201	439.420	447.97	448.60	438.93	440.15	439.27			438.33	445.00	445.13	445.869	437.12			435.73
2022/09/29		437.620	439.983	439.258	448.47	449.02	438.62	440.20	439.12			438.03	444.39	-	445.912	Damaged		435.93	435.69
2022/10/27		437.775	439.950	439.256	447.75	448.26	438.72	440.10	439.13			438.11	444.48	444.91	445.763	-		435.90	435.67
2023 Well Elevation (piezo)		439.383			452.302	452.046	439.549					441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813
2023/03/29	ed	438.069	Decommisioned		447.09	447.62	438.70	Decommisioned		Decommisioned		438.20	444.83	444.96	445.38	Damaged	Artesian	435.889	435.72
2023/05/26		437.936			448.39	450.32	438.47					438.18	444.67	444.79	445.536			435.829	435.62
2023/09/26		437.253			446.67	447.19	438.47					438.04	443.93	443.99	-			435.80	435.56
2023/11/21		437.593			443.37	446.83	438.51					438.11	443.46	444.19	445.564			435.76	435.55
2024 Well Elevation (piezo)		439.383			452.302	452.046	439.549					441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813
2024/03/13	ed	437.888	Decommisioned		446.06	446.53	438.52	Decommisioned		Decommisioned		438.16	444.28	444.48	445.254	Damaged	Artesian	435.87	435.65
2024/06/06		437.752			446.00	446.46	438.51					438.19	444.25	444.39	445.43			435.813	435.57
2024/09/09		437.308			445.81	446.28	438.28					438.00	443.92	444.01	445.69			435.85	433.56
2024/11/19		437.705			445.73	446.20	438.47					438.14	443.95	444.14	445.20			435.79	435.56

Table 2a: Monitoring W

Well ID:	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	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	437.047	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	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	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	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	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	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	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	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	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	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	438.782	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	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	438.627	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	438.351	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	-	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	-	-	438.749	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	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	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	441.011	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	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	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	-	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	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019/10/28	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	-	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	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	-	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	-	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	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	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	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	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)	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	-	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					438.10
2022/06/24	-	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		Decommissioned	438.07
2022/09/29	-	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	-	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)	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	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	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	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		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)	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		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	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					Decommission
2024/09/09		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		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					

Table 2a: Monitoring W

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
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	Decommisioned		-
2018/05/25	438.59	-	-	-	438.642	438.656	438.647	438.48	438.688	438.747				438.511	438.997	438.877			-
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
2019/03/21	438.512	-	-	-	438.455	438.461	438.471	438.38	438.723	438.726				438.398	438.829	438.813	Decommisioned		-
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			-
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	-	-	-	Decommisioned			438.22	438.29	438.57	438.37	438.84	438.83	Decommisioned			Decommisioned		437.09
2020/06/04	438.33	-	-	-				438.20	438.48	438.48	438.13	438.69	438.67						437.14
2020/09/15	-	437.93	438.04	-				438.04	438.36	438.35	438.18	438.83	438.82						437.43
2020/11/26	-	437.94	-	-				438.11	438.49	438.48	438.26	439.00	438.98						437.13
2021 Well Elevation																			
2021/03/29	Damaged	-	CNA	CNA	Decommisioned			438.27	438.60	438.60	438.36	CNA	438.91	Decommisioned			Decommisioned		437.02
2021/06/15	Damaged	CNA	CNA	CNA				438.11	438.39	438.40	437.98	438.94	438.93						437.20
2021/09/29	Damaged	Decommissioned						437.87	438.21	438.22	438.12	438.70	438.69						437.04
2021/10/26	Decommissioned							437.88	438.18	438.18	437.94	438.41	438.41						437.04
2022 Well Elevation (piezo)								440.001	439.719	440.021	438.902	438.979	439.206						440.353
2022/03/29	Decommissioned				Decommisioned			438.08	438.43	438.42	438.21	438.676	438.69	Decommisioned			Decommisioned		437.19
2022/06/24								438.08	438.38	438.38	438.17	438.84	438.84						437.15
2022/09/29								437.87	438.14	438.13	437.95	438.52	438.53						437.21
2022/10/27								437.86	438.17	438.16	438.04	438.60	438.61						437.07
2023 Well Elevation (piezo)								440.001	439.719	440.021	438.902	438.979	439.206						440.353
2023/03/29	Decommissioned				Decommisioned			437.98	438.32	438.32	438.16	438.559	438.58	Decommisioned			Decommisioned		436.89
2023/05/26								437.97	438.21	438.41	437.99	438.38	438.39						436.84
2023/09/26								-	437.99	437.98	437.90	438.33	438.34						436.95
2023/11/21								-	438.06	438.02	437.92	438.38	438.38						436.78
2024 Well Elevation (piezo)											438.902	438.979	439.206						440.353
2024/03/13	ed				Decommisioned						438.18	438.406	438.37	Decommisioned			Decommisioned		436.87
2024/06/06											438.04	438.38	438.41						436.94
2024/09/09											437.89	438.17	438.11						436.96
2024/11/19											437.95	438.32	438.33						436.94

Table 2a: Monitoring W

Well ID:	GL39-2	GL39-3	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	440.460	440.560	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	437.13	437.19	-	443.50	443.55	448.39	448.33	448.36	440.04	439.79	-	-	-	-	-	-	-
2020/06/04	437.23	437.21	-	443.27	443.29	448.13	448.15	448.16	440.05	439.79	-	-	-	-	-	-	-
2020/09/15	437.51	437.63	-	443.08	443.12	447.76	447.65	447.66	449.37	440.16	-	-	-	-	-	-	-
2020/11/26	437.20	437.28	-	441.58	441.61	447.41	447.36	447.38	440.04	439.82	-	-	-	-	-	-	-
2021 Well Elevation																	
2021/03/29	437.06	437.14		442.91	442.96	448.23	448.18	448.20	439.99	439.72	Dry	-	-	-	-	-	-
2021/06/15	437.51	437.49		440.62	440.58	447.91	447.86	447.87	439.96	439.74	Dry	-	-	-	-	-	-
2021/09/29	437.09	437.12	Dry			447.86	447.80	447.82	439.90	439.71	Dry	-	-	-	-	-	-
2021/10/26	437.08	437.05		Decommissioned		447.86	447.81	447.82	439.82	439.63	Dry	-	-	-	-	-	-
2022 Well Elevation (piezo)	440.385	440.521	450.489			450.574	450.571	450.588	448.406	448.407	448.435						
2022/03/29	437.25	437.43	445.35			448.07	448.04	448.09	438.01	437.75	438.95	-	-	-	-	-	-
2022/06/24	437.19	437.23		Decommissioned		448.18	448.15	448.20	Damaged	437.66	Dry	-	-	-	-	-	-
2022/09/29	437.24	437.15	Dry			448.06	448.04	448.09	-	437.64	-	-	-	-	-	-	-
2022/10/27	437.12	437.15				448.08	448.06	448.11	-	437.55	-	-	-	-	-	-	-
2023 Well Elevation (piezo)	440.385	440.521				450.574	450.571	450.588	448.406	448.407	448.435						
2023/03/29	436.93	437.83				448.03	448.00	448.05	437.64	437.52	439.88	-	-	-	-	-	-
2023/05/26	436.88	436.89	Dry	Decommissioned		448.01	447.98	448.03	437.59	437.40	439.57	-	-	-	-	-	-
2023/09/26	436.96	436.93				447.43	447.40	447.45	437.45	437.33	439.44	-	-	-	-	-	-
2023/11/21	436.83	436.87				446.99	446.94	446.99	437.40	437.27	439.03	Installed in 2024 by Valley Wide Drilling					
2024 Well Elevation (piezo)	440.385	440.521				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	436.90	437.37				447.89	447.87	447.91	437.41	437.31	439.26	-	-	-	-	-	-
2024/06/06	437.03	436.88	Dry	Decommissioned		447.81	447.81	447.84	437.66	437.57	439.20	-	-	-	-	-	-
2024/09/09	437.24	437.36				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	436.97	437.11				446.35	447.60	447.64	437.68	437.34	439.65	443.91	436.38	436.42	436.45	436.39	437.59

Table 2b: Surface Water Elevations

LOCATION ID	BREDIN POND	NORTHEAST POND	SLOUGH	TUTT POND
Measurement date				
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

NM not measured

Table 3: Summary of Groundwater Analytical Results - Monitoring Wells

			BC Standards CSR		BC Guidelines WQG		CSR Protocol 9	Upgradient Wells: Spring				Upgradient Wells: Fall						Footprint Wells: Spring											
SAMPLE ID			AW	DW	IW (LT)	IW(ST)		GL23-1	GL41-1	GL41-2	GL41-3	GL15-1	GL15-2	GL41-1	GL41-2	GL41-3	GL43-1	GL4-1	GL4-2	GL20-1	GL5-2	GL16-1	GL35-3	GL2-1	GL2-2	GL27-1	GL27-3	GL29-1	GL29-2
DATE SAMPLED								2024-05-13	2024-05-24	2024-05-24	2024-05-24	2024-09-17	2024-09-18	2024-09-19	2024-09-19	2024-09-19	2024-09-25	2024-05-13	2024-05-13	2024-05-13	2024-05-14	2024-05-14	2024-05-14	2024-05-14	2024-05-14	2024-05-21	2024-05-21	2024-05-21	2024-05-21
MATRIX								Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Parameter	Units	RDL	Bold	Shaded	Underline		Shadow	Analytical Results																					
Dissolved Metals																													
Aluminum	ug/L	5	-	9,500	-	5000	230	1.8	1.5	<1.0	23.0	2.2	2.6	1.4	<1.0	1.5	4.8	1.3	10.4	57.9	<1.0	<2.0	<5.0	<1.0	2.8	1.5	<5.0	6.5	2.2
Antimony	ug/L	0.2	90	6	-	-	2.7	<0.050	0.071	0.064	0.059	0.055	<0.100	0.130	0.063	0.079	1.16	<0.050	<0.050	0.286	<0.050	<0.100	<0.250	<0.050	<0.050	<0.050	<0.250	1.60	0.147
Arsenic	ug/L	0.5	50	10	100	100	13	0.511	0.983	0.912	0.959	0.349	0.542	1.15	0.930	1.03	20.9	2.65	0.510	5.84	0.540	16.5	1.17	0.978	1.56	7.15	9.80	3.62	1.07
Barium	ug/L	5	10,000	1,000	-	-	240	73.9	52.2	51.5	54.3	33.6	13.9	74.3	45.9	47.1	54.4	16.9	40.8	150	24.6	14.6	14.7	76.6	54.9	477	9.75	93.6	23.3
Beryllium	ug/L	0.1	1.5	8	-	-	1.3	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020	0.064	<0.010	<0.010	0.054	<0.050	0.049	<0.020
Bismuth	ug/L	0.1	-	-	-	-	-	<0.010	<0.010	0.074	<0.010	<0.010	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020	<0.050	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020
Boron	ug/L	50	12,000	5,000	500	-	880	24.8	20.6	21.1	20.5	12.6	13.5	19.3	23.8	25.3	117	15.0	21.7	1,790	23.8	74.2	85.4	10.4	11.2	73.5	42.7	536	55.7
Cadmium	ug/L	0.01	2.5-4(H)	5	-	-	0.33	0.136	0.0238	<0.0120	<0.0120	0.108	0.0466	0.329	<0.0080	0.0155	<0.180	<0.0080	<0.0300	<0.0100	0.0193	0.0367	<0.0100	<0.0100	<0.0100	<0.0060	<0.0200	0.0573	0.0835
Calcium	ug/L	200	-	-	-	-	-	96,000	47,400	50,000	46,400	35,200	346,000	49,900	43,900	40,000	115,000	57,500	49,500	52,500	64,300	68,900	176,000	131,000	142,000	13,000	420,000	142,000	384,000
Chromium	ug/L	0.5	10	50	-	-	-	<0.50	1.89	1.82	1.86	<0.50	3.53	1.99	1.65	1.72	<0.50	<0.50	<0.50	**14.1**	<0.50	<1.00	<2.50	<0.50	<0.50	<0.50	<2.50	1.33	<1.00
Cobalt	ug/L	0.1	40	1	-	-	16	1.36	0.0361	0.0386	0.0671	0.0750	0.109	0.0359	0.0329	0.0313	1.09	0.0369	0.0875	9.95	0.0126	0.378	<0.0250	0.0247	0.0290	<0.0050	1.83	15.7	0.145
Copper	ug/L	0.4	20-90(H)	1,500	-	200	32	2.27	0.72	0.65	0.76	0.11	1.73	0.74	0.60	0.67	10.1	<0.10	0.61	<0.50	0.38	1.78	<0.50	<0.10	<0.10	<0.10	<0.50	45.8	2.12
Iron	ug/L	10	-	6,500	-	-	12,000	<2.0	2.1	<2.0	26.8	38.6	<4.0	<2.0	<2.0	<2.0	7.2	728	10.4	8,650	<2.0	889	13,400	52.8	799	479	4,830	126	52.0
Lead	ug/L	0.2	40-160(H)	10	-	200	6.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	<0.050	<0.100	<0.250	<0.050	<0.050	<0.050	<0.250	0.086	<0.100
Lithium	ug/L	0.1	-	8	-	-	96	38.4	29.9	29.8	29.3	19.2	41.6	29.5	34.2	35.6	32.3	40.4	32.0	58.7	43.6	229	316	13.5	15.2	266	88.1	53.6	93.7
Magnesium	ug/L	10	-	-	-	-	-	232,000	82,900	83,600	81,300	71,800	524,000	80,100	78,100	75,400	265,000	126,000	171,000	77,100	102,000	107,000	337,000	73,000	81,500	14,500	1,320,000	68,600	444,000
Manganese	ug/L	0.2	-	1,500	-	-	760	363	0.302	0.062	2.75	85.6	0.208	1.95	<0.050	0.069	400	85.8	16.9	238	2.34	377	333	62.9	113	65.3	542	184	67.0
Mercury	ug/L	0.01	0.25	1	-	2	0.57	<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	ug/L	0.1	10,000	250	10	50	45	14.8	7.67	8.28	7.74	5.06	16.6	9.02	9.24	9.18	187	28.9	69.7	3.39	10.8	15.8	4.28	10.8	16.5	25.0	63.3	33.6	55.1
Nickel	ug/L	0.4	250-1500(H)	80	-	-	44	7.95	0.433	0.373	0.470	0.573	1.33	0.766	0.322	0.370	10.6	0.283	1.40	13.9	0.246	2.05	0.411	0.089	0.098	0.408	2.91	117	4.63
Phosphorus	ug/L	50	-	-	-	-	-	<10	30	34	29	20	<20	62	34	39	6,290	15	17	2,380	<10	59	180	<10	<10	83	111	98	22
Potassium	ug/L	100	-	-	-	-	-	16,200	12,900	12,900	12,800	1,750	11,800	14,100	12,700	13,200	21,200	7,320	9,050	120,000	7,460	17,500	26,200	4,560	4,910	13,700	29,500	27,700	21,000
Selenium	ug/L	0.5	20	10	10	10	120	0.31	0.60	0.64	0.61	0.10	12.5	0.63	0.56	0.57	5.26	<0.10	0.32	<0.50	0.12	<0.20	<0.50	<0.10	<0.10	0.29	0.91	1.15	0.74
Silicon	ug/L	1000	-	-	-	-	-	12,100	11,100	11,200	11,000	11,000	10,700	11,700	11,700	12,200	13,700	11,600	8,600	14,000	8,440	5,470	20,900	9,410	9,250	5,580	10,100	10,700	8,160
Silver	ug/L	0.05	0.5-15(H)	20	-	-	0.98	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.050	<0.010	<0.020	<0.050	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020
Sodium	ug/L	100	-	-	-	-	1,600,000	192,000	168,000	165,000	167,000	214,000	696,000	173,000	157,000	162,000	500,000	212,000	232,000	1,220,000	172,000	725,000	1,620,000	146,000	193,000	594,000	3,750,000	191,000	905,000
Strontium	ug/L	1	-	2,500	-	-	47,000	4,850	1,890	2,080	1,840	4,170	7,710	2,000	1,700	1,540	3,370	2,400	2,680	1,230	3,590	15,600	7,900	4,090	4,310	3,160	12,600	2,650	7,630
Sulfur	ug/L	300	-	-	-	-	-	196,000	33,600	34,300	33,600	107,000	1,260,000	36,500	31,700	30,300	423,000	198,000	178,000	11,500	98,200	406,000	1,090,000	197,000	246,000	5,100	4,680,000	110,000	1,530,000
Tellurium	ug/L	0.5	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	<0.050	<0.100	<0.250	<0.050	<0.050	<0.050	<0.250	<0.050	<0.100
Thallium	ug/L	0.02	3	-	-	-	0.68	0.0063	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	0.0176	<0.0040	<0.0040	0.0283	<0.0040	0.0117	<0.0200	<0.0040	0.0218	<0.0200	<0.0040	<0.0040	<0.0040	0.0210	0.0290	<0.0080
Thorium	ug/L	0.1	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.106	<0.010	0.090	0.394	<0.010	<0.010	<0.010	0.892	0.161	0.204
Tin	ug/L	0.2	-	2,500	-	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	0.237	<0.050	<0.050	2.56	<0.050	<0.100	<0.250	<0.050	<0.050	<0.050	<0.250	0.712	<0.100
Titanium	ug/L	5	1,000	-	-	-	330	<0.20	<0.20	<0.20	1.18	<0.20	<0.40	<0.20	<0.20	<0.20	0.47	<0.20	<0.20	46.5	<0.20	<0.40	<1.00	<0.20	<0.20	<0.20	<1.00	0.88	<0.40
Tungsten	ug/L	1	-	3	-	-	-	<0.20	<0.20	<0.20	<0.20	0.27	2.38	<0.20	<0.20	<0.20	0.36	<0.20	0.23	<1.00	<0.20	1.47	<1.00	<0.20	<0.20	1.38	<1.00	0.71	<0.40
Uranium	ug/L	0.02	85	20	10	-	87	74.2	13.9	15.7	14.0	7.00	**260**	20.3	14.4	13.9	**180**	45.2	70.2	2.89	23.1	6.59	25.3	2.10	2.43	0.235	73.9	42.9	**225**
Vanadium	ug/L	5	-	20	-	-	30	<1.00	1.73	2.08	1.80	<1.00	<2.00	2.01	2.14	1.92	18.2	<1.00	<1.00	11.2	2.54	<2.00	<5.00	<1.00	<1.00	<1.00	<5.00	3.11	<2.00
Zinc	ug/L	4	75-2400(H)	3,000	5000(P)	-	29	1.1	<1.0	1.0	<1.0	<1.0	<2.0	3.5	<1.0	<1.0	1.5	<1.0	<1.0	<5.0	<1.0	<2.0	<5.0	<1.0	<1.0	<1.0	<5.0	10.4	4.3
Zirconium	ug/L	0.1	-	-	-	-	-	0.330	0.022	0.030	0.058	0.033	0.124	0.054	<0.020	<0.020	1.09	0.084	0.321	8.35	0.030	0.353	3.13	<0.020	<0.020	1.18	1.31	3.20	0.357
Inorganics																													
Bromide	mg/L	0.1	-	-	-	-	-	0.20	0.16	0.16	0.16	<0.10	<1.00	0.16	<1.00	<1.00	<1.00	0.13	0.20	<5.00	0.14	<1.00	1.14	0.57	0.75	0.15	<10.0	<0.10	0.62
Chloride	mg/L	0.1	1,500	250	100	100	-	26.1	162	170	161	15.0	237	156	138	130	44.9	18.8	37.3	202	120	124	356	96.5	127	34.4	569	65.3	171
Fluoride	mg/L	0.1	2.3	1.5	1	2	-	0.58	0.58	0.85	0.79	2.02	<1.00	0.92	<1.00	<1.00	1.12	1.96	**2.76**	0.19	1.02	<1.00	1.21	0.51	0.47	**3.28**	<10.0	0.64	1.86
Nitrate (as N)	mg/L	0.01	400	10	-	-	-	0.314	2.40	2.74	2.74	<0.010	1.58	1.70	1.98	1.77	47.1	<0.010	<0.010	<0.500	<0.010	<0.100	<0.100	0.017	0.018	<0.010	<1.00	7.58	<0.500
Nitrite (as N)	mg/L	0.01	0.2-2(C)	1	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	0.010	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.100	<0.100	<0.010	<0.010	<0.010	<1.00	0.068	<0.010
Phosphate (as P)	mg/L	0.005	-	-	-	-	-	0.0200	-	-	-	-	-	-	-	-	-	0.261	0.226	0.192	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	1	1280-4290(H)	500	-	-	-	491	87.9	92.1	84.1	297	3,760	95.4	85.1	80.7	1,110	487	464	23.3	269	1,240	3,300	590	694	18.9	**10,500**	285	3,970
Hardness, Total (as CaCO3)	mg/L	0.125	-	-	-	-	-	1,190	460	469	451	384	3,020	455	431	410	1,380	663	827	449	579	612	1,830	627	691	92.2	6,500	639	2,790
Alkalinity, Total (as CaCO3)	mg/L	1	-	-	-	-	-	928	416	415	421	409	522	423	392	395	861	488	670	2,920	452	852	1,570	207	164	1,320	513	540	300
Alkalinity, Phenolphthalein (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
Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	-	-	-	-	-	928	416	415	421	409	522	423	392	395	861	488	670	2,920	452	852	1,570	207	164	1,320	513	540	300
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	<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	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.05	1.31-18.5(P)	-	-	-	-	<0.050	<0.050	<0.050	<0.050	0.058	<0.050	<0.050	<0.050	<0.050	0.659	0.124	<0.050	**89.8**	<0.050	0.293	1.51	0.070	0.115	0.236	0.839	0.488	<0.050
Carbon, Dissolved Organic	mg/L	0.5	-	-	-	-	-	11.4	3.35	3.08	2.78	1.64	8.90	3.74	3.89	3.52	18.6	5.01	4.00	71.8	2.58	2.82	5.86	1.86	3.61	2.00	6.53	71.2	14.0
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	42	<20	<20	<20	<20	35	<20	<20	26	66	<20	<20	278	<20	<20	<20	<20	<20	<20	25	217	40
Solids, Total Dissolved	mg/L	15	-	-	-	-	-	1,640	841	845	827	921	5,690	811	718	693	2,630	1,240	1,350	3,490	1,020	2,840	6,630	1,150	1,390	1,530	18,400	1,320	6,800
pH	pH units	0.1	-	-	5-9.5	5-9.5	-	7.80	7.90	7.80	7.84	8.04	7.77	8.06	8.04	8.06	8.06	8.08	8.07	7.70	8.05	7.81	7.50	7.69	7.69	8.14	7.84	7.98	7.79
Field conductivity	µS/cm	0.1	-	-	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Analytical Reports: CARO 24D2013, 24D2239, 24E1685, 24E2173, 24E2625, 24E3203, 24E3317, 24E3571, 24F0606, 24I1705, 24I2185, 24I2545, 24I2547, 24I3421, 24I3440, 24K0996, 24K1096, 24K1313,and 24K1820,

A. - Laboratory detection limit is greater than the regulatory standards
CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 1480/96, includes amendments up March 1, 2023 by BC Reg. 133/2022
BCWQG- BC Water Quality Guidelines (Approved or Working)
LT - Long-term chronic (i.e., "average") WQG
ST - Short-term acute (i.e., "maximum") WQG
AW-Standards/Guidelines for the protection of Aquatic Ecosystem (Freshwater)
IW- Standards/Guidelines for the protection of Irrigation water
DW - Standard for the protection of drinking water use

Bold	Concentration >CSR AW standards
Shaded	Concentration >CSR DW standards
Underline	Concentration >BCWQG IW LT &/or ST
Shadow	Concentration >CSR Protocol 9 Table 1 regional background concentration
RED	Concentration is >BCWQG; or >CSR AW/DW(if AWf/DW >P9), or >P9 standard (if AW/DW <P9)

(P): pH dependent standard/guideline
(H): Hardness dependent standard/guideline
(C): Chloride dependent standard/guideline
For CSR inorganic parameters where a P9 value exists and is greater than the CSR standard for that parameter, then the P9 value supersedes the CSR standard; otherwise, a P9 value does not apply to concentrations of analyzed parameters

Table 3: Summary of Groundwater Analytical Results - Monitoring Wells

SAMPLE ID			BC Standards CSR		BC Guidelines WQG		Footprint Wells: Fall									Downgradient Wells: Spring								Downgradient Wells: Fall								
SAMPLE ID							GL20-1	GL4-1	GL4-2	GL2-1	GL2-2	GL27-1	GL27-2	GL29-1	GL29-2	GL42-1	GL39-1	GL39-2	GL42-2	09BH06-D	GL28-1	GL28-2	GL28-3	GL39-1	GL39-2	GL28-1	GL28-2	GL28-3	GL44-1	GL44-2	GL45-1	GL45-2
DATE SAMPLED			AW	DW	IW (LT)	IW(ST)	2024-09-13	2024-09-13	2024-09-13	2024-09-13	2024-09-13	2024-09-17	2024-09-17	2024-09-17	2024-09-17	2024-05-24	2024-05-27	2024-05-27	2024-05-27	2024-05-28	2024-05-28	2024-05-28	2024-05-28	2024-09-18	2024-09-18	2024-09-19	2024-09-19	2024-09-19	2024-09-25	2024-09-25	2024-09-26	2024-09-26
MATRIX							Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Parameter	Units	RDL	Bold	Shaded	Underline		Analytical Results																									
Dissolved Metals																																
Aluminum	ug/L	5	-	9,500	-	5000	62.1	1.0	<1.0	<1.0	1.2	2.3	<5.0	6.6	<2.0	<5.0	2.5	1.1	2.8	1.0	<2.0	<2.0	<2.0	1.4	1.5	6.0	3.7	2.0	1.7	1.6	3.0	2.6
Antimony	ug/L	0.2	90	6	-	-	0.379	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	1.48	0.117	<0.250	<0.100	0.066	0.520	<0.050	<0.100	<0.100	<0.100	0.057	0.070	<0.050	<0.050	0.102	0.293	<0.050	0.082	0.060
Arsenic	ug/L	0.5	50	10	100	100	8.64	2.56	0.575	3.20	1.06	4.92	3.19	3.06	1.33	28.0	0.324	0.281	0.711	3.00	1.55	0.415	0.635	0.380	0.278	1.59	0.378	0.652	1.61	2.30	2.60	2.47
Barium	ug/L	5	10,000	1,000	-	-	151	16.7	34.2	51.3	71.2	541	20.3	101	22.4	165	10.2	15.5	18.1	49.6	9.89	13.0	14.8	10.8	16.5	9.88	12.9	15.6	77.1	22.6	39.5	41.2
Beryllium	ug/L	0.1	1.5	8	-	-	0.036	<0.010	<0.010	<0.010	<0.010	0.058	<0.050	0.053	<0.020	<0.050	<0.020	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.010	<0.010	0.012	<0.010	<0.020	<0.010	<0.010	0.034	<0.010
Bismuth	ug/L	0.1	-	-	-	-	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020	<0.050	<0.020	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	0.023	<0.010	<0.010	<0.010	<0.010
Boron	ug/L	50	12,000	5,000	500	-	1,960	15.6	20.8	12.2	11.0	81.5	71.5	507	53.6	76.3	15.4	8.7	25.1	10.9	17.6	24.1	9.0	19.6	14.0	18.7	26.5	8.7	36.5	39.9	37.8	48.3
Cadmium	ug/L	0.01	2.5-4(H)	5	-	-	0.0054	<0.0080	<0.0180	<0.0040	0.0311	<0.0040	0.127	0.0724	0.106	<0.0100	0.0695	<0.0300	0.0725	<0.0100	0.0260	0.0741	0.137	0.0652	<0.0160	0.0152	0.0678	0.207	0.125	<0.0240	<0.0040	<0.0060
Calcium	ug/L	200	-	-	-	-	47,100	52,300	43,200	141,000	125,000	13,400	285,000	140,000	429,000	71,500	244,000	67,300	172,000	72,700	222,000	423,000	369,000	254,000	55,500	246,000	424,000	386,000	300,000	255,000	289,000	141,000
Chromium	ug/L	0.5	10	50	-	-	**14.1**	<0.50	<0.50	<0.50	<0.50	<0.50	<2.50	1.06	<1.00	<2.50	<1.00	<0.50	<1.00	<0.50	<1.00	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50	0.99	<0.50
Cobalt	ug/L	0.1	40	1	-	-	9.19	0.0648	0.660	0.0266	0.0391	<0.0050	5.00	35.0	0.902	0.574	0.187	0.0878	0.140	0.182	0.718	0.265	0.170	0.182	0.100	0.711	0.272	0.163	0.137	1.87	2.99	2.29
Copper	ug/L	0.4	20-90(H)	1,500	-	200	0.26	<0.10	0.33	<0.10	0.21	<0.10	<0.50	35.7	0.76	<0.50	2.02	0.79	1.38	<0.10	<0.20	0.59	1.27	2.16	0.75	0.11	0.55	1.27	0.53	<0.10	<0.10	<0.10
Iron	ug/L	10	-	6,500	-	-	6,300	631	97.4	1,540	61.3	361	2,470	88.2	155	3,410	<4.0	<2.0	<4.0	519	1,020	<4.0	<4.0	<2.0	<2.0	1,270	<2.0	<4.0	2.4	1,810	``	975
Lead	ug/L	0.2	40-160(H)	10	-	200	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	0.279	0.087	<0.100	<0.250	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050
Lithium	ug/L	0.1	-	8	-	-	71.8	40.6	28.9	15.5	15.0	250	96.5	50.0	78.7	1,150	77.7	12.3	191	51.4	68.4	48.7	41.9	89.0	15.4	88.9	70.3	49.6	194	77.5	365	52.5
Magnesium	ug/L	10	-	-	-	-	66,100	144,000	188,000	91,000	82,700	16,200	655,000	72,000	436,000	69,400	410,000	129,000	389,000	62,700	308,000	312,000	469,000	427,000	102,000	332,000	337,000	556,000	436,000	373,000	335,000	197,000
Manganese	ug/L	0.2	-	1,500	-	-	202	80.3	242	185	120	75.2	1,700	337	750	248	17.4	10.5	54.9	203	343	23.2	54.6	17.7	10.8	355	22.5	136	275	943	2,130	904
Mercury	ug/L	0.01	0.25	1	-	2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<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	ug/L	0.1	10,000	250	10	50	3.18	24.8	60.0	18.6	11.6	14.7	76.6	27.9	64.6	11.9	23.1	33.6	14.3	18.9	13.4	5.87	13.3	26.1	41.3	13.8	5.72	15.6	18.1	30.5	16.5	25.9
Nickel	ug/L	0.4	250-1500(H)	80	-	-	16.1	0.504	1.62	0.054	0.198	<0.040	10.3	91.3	13.5	2.35	1.08	0.833	5.25	0.268	2.58	2.54	6.54	1.11	0.762	2.90	2.45	7.41	7.26	3.94	15.0	3.87
Phosphorus	ug/L	50	-	-	-	-	2,440	21	30	10	<10	66	92	81	26	151	<20	<10	<20	26	<20	<20	<20	<10	<10	14	<10	49	<10	15	34	20
Potassium	ug/L	100	-	-	-	-	109,000	6,750	9,310	4,980	4,370	14,500	34,100	24,900	20,900	17,600	14,200	5,270	11,300	5,090	10,200	14,000	12,300	15,700	4,770	10,900	14,700	13,700	24,400	15,900	23,000	12,200
Selenium	ug/L	0.5	20	10	10	10	0.54	<0.10	0.10	<0.10	<0.10	<0.10	0.65	1.08	0.36	<0.50	0.57	0.73	1.03	<0.10	<0.20	0.52	0.28	0.53	0.26	0.11	0.67	0.44	0.86	0.21	0.48	<0.10
Silicon	ug/L	1000	-	-	-	-	14,700	11,000	8,240	9,430	9,270	6,600	8,020	11,000	8,980	10,500	11,600	8,530	9,200	11,900	10,400	12,700	11,400	13,500	9,570	12,000	15,500	13,400	14,700	13,500	21,600	12,900
Silver	ug/L	0.05	0.5-15(H)	20	-	-	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.020	<0.050	<0.020	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010
Sodium	ug/L	100	-	-	-	-	1,320,000	197,000	220,000	205,000	130,000	747,000	2,480,000	200,000	999,000	1,380,000	527,000	268,000	1,300,000	168,000	387,000	804,000	1,220,000	564,000	195,000	407,000	901,000	1,410,000	792,000	809,000	917,000	491,000
Strontium	ug/L	1	-	2,500	-	-	1,120	2,620	2,700	4,670	4,640	3,340	13,600	2,850	7,480	3,450	6,430	1,560	8,310	1,730	6,200	8,670	8,610	6,320	1,120	6,180	7,980	9,050	7,880	5,670	7,100	2,770
Sulfur	ug/L	300	-	-	-	-	16,600	180,000	165,000	278,000	194,000	5,420	2,550,000	130,000	1,630,000	65,900	862,000	229,000	1,290,000	138,000	689,000	1,150,000	1,560,000	1,010,000	143,000	843,000	1,400,000	1,880,000	1,250,000	1,140,000	1,000,000	461,000
Tellurium	ug/L	0.5	-	-	-	-	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	<0.050	<0.100	<0.250	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050
Thallium	ug/L	0.02	3	-	-	-	<0.0080	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0200	0.0184	<0.0080	<0.0200	0.0246	0.0056	0.0790	0.0059	0.0118	<0.0080	0.0298	0.0278	0.0059	0.0093	0.0088	0.0351	0.0217	<0.0040	<0.0040	<0.0040
Thorium	ug/L	0.1	-	-	-	-	0.068	0.055	0.053	0.038	0.024	<0.010	<0.050	0.125	<0.020	<0.050	<0.020	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010
Tin	ug/L	0.2	-	2,500	-	-	3.33	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	0.211	<0.100	<0.250	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	0.076	<0.050	<0.100	0.272	0.248	0.078	0.187
Titanium	ug/L	5	1,000	-	-	-	58.6	<0.20	<0.20	<0.20	<0.20	<0.20	<1.00	0.72	<0.40	<1.00	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.20	<0.20	0.31	<0.20	<0.40	<0.20	<0.20	0.38	<0.20
Tungsten	ug/L	1	-	3	-	-	<0.40	<0.20	0.21	<0.20	<0.20	1.01	<1.00	1.19	<0.40	<1.00	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20
Uranium	ug/L	0.02	85	20	10	-	1.35	39.6	54.2	2.61	2.68	0.311	80.9	41.4	**209**	7.20	**250**	50.4	**180**	11.9	**133**	**260**	**264**	**268**	32.1	**145**	**234**	**285**	**130**	75.7	**98.2**	57.3
Vanadium	ug/L	5	-	20	-	-	14.6	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	2.56	<2.00	<5.00	<2.00	<1.00	<2.00	<1.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<1.00	<1.00	<1.00
Zinc	ug/L	4	75-2400(H)	3,000	5000(P)	-	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	4.8	4.8	<5.0	<2.0	<1.0	2.5	<1.0	<2.0	<2.0	<2.0	<1.0	<1.0	1.1	<1.0	<2.0	3.4	2.6	1.2	1.1
Zirconium	ug/L	0.1	-	-	-	-	12.7	0.049	0.201	<0.020	<0.020	1.24	0.567	2.39	0.078	15.4	0.053	<0.020	0.452	<0.020	0.143	0.064	0.363	0.052	<0.020	0.152	0.059	0.546	0.889	0.406	3.77	0.859
Inorganics																																
Bromide	mg/L	0.1	-	-	-	-	<0.10	0.19	0.14	0.79	0.62	<0.10	<5.00	<0.10	<1.00	<2.50	0.27	0.14	<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
Chloride	mg/L	0.1	1,500	250	100	100	335	19.5	31.5	113	84.3	37.6	519	65.1	174	72.2	139	136	115	9.61	70.5	43.0	60.4	160	150	110	48.8	70.2	43.9	112	42.9	23.9
Fluoride	mg/L	0.1	2.3	1.5	1	2	<0.10	1.81	**2.62**	0.56	0.66	**3.16**	<5.00	0.94	**2.55**	0.48	1.43	0.51	<1.00	1.98	1.15	<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	0.01	400	10	-	-	<0.010	<0.010	<0.010	0.042	<0.010	<0.010	<0.500	5.69	<0.100	<0.250	12.0	0.705	20.9	<0.100	5.12	11.4	8.74	15.3	0.106	<0.100	12.4	7.96	<0.100	<0.100	0.123	<0.100
Nitrite (as N)	mg/L	0.01	0.2-2(C)	1	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.500	0.025	<0.100	<0.010	<0.010	<0.010	<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
Phosphate (as P)	mg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	1	1280-4290(H)	500	-	-	21.2	487	431	675	535	17.7	**6,350**	351	3,990	151	2,260	715	2,950	366	**2,590**	**3,230**	**4,220**	2,490	374	**2,210**	**2,740**	**3,300**	3,250	2,850	2,660	1,160
Hardness, Total (as CaCO3)	mg/L	0.125	-	-	-	-	390	725	883	728	652	100	3,410	647	2,870	465	2,300	698	2,030	440	1,820	2,340	2,850	2,400	557	1,980	2,450	3,250	2,540	2,170	2,100	1,160
Alkalinity, Total (as CaCO3)	mg/L	1	-	-	-	-	3,120	489	662	160	204	1,320	598	538	297	2,810	569	324	788	360	488	589	756	580	282	478	569	751	655	586	1,060	811
Alkalinity, Phenolphthalein (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, Bicarbonate (as CaCO3)	mg/L	1	-	-	-	-	3,120	489	662	160	204	1,320	598	538	297	2,810	569	324	788	360	488	589	756	580	282	478	569	751	655	586	1,060	811
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	<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	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.05	1.31-18.5(P)	-	-	-	85.5	0.192	0.059	0.270	0.109	0.309	0.317	0.125	0.061	0.564	<0.050	0.103	<0.050	0.190	0.144	<0.050	<0.050	<0.050	<0.050	0.153	0.063	<0.050	0.197	0.356	0.459	0.267
Carbon, Dissolved Organic	mg/L	0.5	-	-	-	-	59.4	2.87	4.46	2.45	2.31	3.08	27.3	72.4	15.5	7.28	11.7	4.47	6.71	2.78	13.1	5.73	8.55	12.8	3.79	15.2	6.36	10.3	5.70	5.98	6.30	3.29
Chemical Oxygen Demand	mg/L	20	-	-	-	-	298	<20	<20	20	<20	<20	77	193	43	<20	28	<20	27	<20	30	<20	24	24	<20	28	20	<20	<20	36	<20	<20
Solids, Total Dissolved	mg/L	15	-	-	-	-	3,890	1,320	1,430	1,470	1,110	1,600	10,400	1,420	6,880	3,240	4,150	1,430	5,670	956	3,230	5,260	7,060	4,030	1,020	3,420	4,580	6,680	5,210	4,680	4,700	2,410
pH	pH units	0.1	-	-	5-9.5	5-9.5	7.59	8.12	8.10	7.91	7.88	8.11	7.83	7.87	7.71	7.92	7.59	7.73	7.67	8.06	7.76	7.71	7.80	7.86	8.05	7.83	7.79	7.73	7.96	7.91	7.53	7.86
Field conductivity	µS/cm	0.1	-	-	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

Analytical Reports: CARO 24D2013, 24D2239, 24E1685, 24E2173, 24E2625, 24E3203, 24E3317, 24E3571, 24F0606, 24I1705, 24I2185, 24I2545, 24I2547, 24I3421, 24I3440, 24K0996, 24K1096, 24K1313,and 24K1820,

A. - Laboratory detection limit is greater than the regulatory standards

CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 1480/96, includes amendments up March 1, 2023 by BC Reg. 133/2022

BCWQG- BC Water Quality Guidelines (Approved or Working)

LT - Long-term chronic (i.e., "average") WQG

ST - Short-term acute (i.e., "maximum") WQG

AW-Standards/Guidelines for the protection of Aquatic Ecosystem (Freshwater)

IW- Standards/Guidelines for the protection of Irrigation water

DW - Standard for the protection of drinking water use

Bold	Concentration >CSR AW standards
Shaded	Concentration >CSR DW standards
Underline	Concentration >BCWQG IW LT &/or ST
Shadow	Concentration >CSR Protocol 9 Table 1 regional background concentration
RED	Concentration is >BCWQG; or >CSR AW/DW(if AWf/DW >P9), or >P9 standard (if AW/DW <P9)

(P): pH dependent standard/guideline

(H): Hardness dependent standard/guideline

(C): Chloride dependent standard/guideline

For CSR inorganic parameters where a P9 value exists and is greater than the CSR standard for that parameter, then the P9 value supersedes the CSR standard; otherwise, a P9 value does not apply to concentrations of an

Table 4: Summary of Surface Water Analytical Results - Ponds, Sloughs

DESCRIPTION			BC Water Quality Guidelines				Site Specific Standard*	Slough#2				Bubna Slough				NE Pond				Bredin Pond			
CLIENT ID								Slough #2	Slough #2	Slough #2	Slough #2	Bubna Slough	Bubna Slough	Bubna Slough	Bubna Slough	NE Pond	NE Pond	NE Pond	NE Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond
DATE SAMPLED			AW-LT	AW-ST	IW-LT	IW-ST	95th Percentile	2024-03-21	2024-05-08	2024-09-11	2024-10-22	2024-03-21	2024-05-08	2024-09-11	2024-10-22	2024-03-21	2024-05-10	2024-09-11	2024-10-22	2024-03-21	2024-05-10	2024-09-11	2024-10-22
MATRIX	Units	RDL						Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
								Analytical Results															
Total Metals																							
Aluminum	ug/L	2	1.85	-	-	5000	91.02	87.1	43.7	95.8	876	11	7.3	3.1	3.5	81.2	124	86.9	89.3	39.1	30.7	5.5	15.2
Antimony	ug/L	0.05	74	250	-	-	-	0.306	0.407	0.688	0.516	0.146	0.157	0.203	0.167	0.156	0.215	0.339	0.338	0.073	0.107	0.081	0.071
Arsenic	ug/L	0.05	5	5	100	100	6.15	3.67	4.63	6.86	7.1	1.41	1.64	1.86	1.62	2.27	3.16	5.12	5.06	0.863	1.01	0.971	0.899
Barium	ug/L	0.1	-	-	-	-	-	32.0	6.22	31.5	39.9	13.5	6.37	7.65	6.38	102	115	128	92.8	89.2	83.5	86	83.5
Beryllium	ug/L	0.01	-	-	-	-	-	<0.050	<0.050	<0.020	0.042	<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	ug/L	0.01	-	-	-	-	-	<0.050	<0.050	<0.020	0.023	<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	ug/L	2	1,200	-	500	-	-	13.4	21.7	15.6	15.8	23.1	26.7	38.3	30.7	50.2	56.3	35.4	29.7	25.1	22.4	17.8	16
Cadmium	ug/L	0.002	0.018 - 0.457	0.038 - 2.801	-	5.1	-	<0.0100	<0.0100	<0.0080	0.0462	0.0023	0.0039	<0.0020	<0.0020	<0.0100	<0.0130	<0.0100	<0.0100	<0.0040	<0.0040	<0.0040	<0.0040
Calcium	ug/L	50	-	-	-	-	-	33,000	35,200	22,900	31,900	34,000	31,200	14,100	16,400	44,000	47,000	14,500	14,300	30,600	31,400	22,600	30,100
Chromium	ug/L	0.5	-	-	-	-	2.50	<2.50	<2.50	<1.00	1.88	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	19.8	<0.50	<0.50	<0.50	<0.50
Cobalt	ug/L	0.005	4	110	-	-	-	0.252	0.265	0.281	0.891	0.0575	0.0484	0.0361	0.041	0.368	0.370	0.266	0.469	0.113	0.121	0.0716	0.0786
Copper	ug/L	0.2	0.2	0.9	-	200	-	<1.00	<1.00	0.43	3.26	0.20	0.20	<0.20	<0.20	0.85	1.02	0.54	0.97	0.49	0.50	7.16	0.21
Iron	ug/L	2	-	1000	-	-	132	156	80.9	108	1,510	14.9	10.4	3.4	3.8	79.5	134	96.1	156	26.1	36.8	7.6	19.9
Lead	ug/L	0.05	1.5-33.6	-	-	200	-	<0.250	0.298	0.159	2	<0.050	<0.050	<0.050	0.052	0.077	0.146	0.137	0.129	<0.050	<0.050	<0.050	<0.050
Lithium	ug/L	0.05	-	-	-	-	-	128	140	155	181	73.8	85.9	109	110	39.0	41.9	54.7	51.4	31.6	29.7	35.8	28.9
Magnesium	ug/L	5	-	-	-	-	-	166,000	217,000	220,000	254,000	197,000	237,000	272,000	278,000	231,000	235,000	282,000	293,000	131,000	123,000	126,000	113,000
Manganese	ug/L	0.05	768 - 2,585	816 - 3,394	-	-	-	50.7	31.3	12.3	93.2	9.98	9.76	7.17	5.16	41.0	25.3	21	14.8	10.6	15.3	22.6	31.9
Mercury	ug/L	0.01	0.01	-	-	2	-	<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	ug/L	0.01	7,600	46,000	10	50	14.405	11.4	15.9	14	14.9	1.48	1.56	1.52	1.47	32.3	35.4	28.8	30.5	15.0	13.7	12.3	12.9
Nickel	ug/L	0.04	-	-	-	-	-	1.36	1.47	1.51	2.98	0.426	0.395	0.41	0.446	3.03	3.18	2.72	11.7	0.976	0.912	0.71	0.728
Phosphorus	ug/L	10	5-15	5-15	-	-	-	69	79	306	1,020	24	27	<30	19	154	270	179	112	35	38	89	157
Potassium	ug/L	20	-	-	-	-	-	103,000	117,000	137,000	146,000	28,500	32,000	40,600	40,000	16,500	16,300	18,700	18,900	12,200	11,200	12,100	11,500
Selenium	ug/L	0.1	1	1	10	10	-	<0.50	<0.50	0.57	0.52	0.16	0.17	0.13	0.13	0.62	0.45	0.45	0.35	0.88	0.93	0.86	0.63
Silicon	ug/L	100	-	-	-	-	-	1,510	1,470	6,320	8,370	5,610	7,050	6,090	6,620	2,100	500	3,790	560	290	380	10,100	14,200
Silver	ug/L	0.01	0.05..1.5	0.1..3	-	-	-	<0.050	<0.050	<0.020	0.024	<0.010	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	ug/L	20	-	-	-	-	-	1,220,000	1,430,000	1,570,000	1,770,000	363,000	413,000	507,000	516,000	334,000	333,000	405,000	419,000	181,000	166,000	169,000	154,000
Strontium	ug/L	0.1	-	-	-	-	-	1,290	1,380	1,370	1,460	1,260	1,180	481	589	3,920	4,070	4,430	4,190	2,980	2,880	3,060	2,840
Sulfur	ug/L	1000	-	-	-	-	-	549,000	576,000	681,000	800,000	72,600	81,900	97,300	105,000	232,000	231,000	242,000	274,000	79,000	68,800	60,300	58,300
Tellurium	ug/L	0.05	-	-	-	-	-	<0.250	<0.250	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Thallium	ug/L	0.004	-	-	-	-	-	<0.0200	<0.0200	<0.0080	<0.0080	<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	ug/L	0.01	-	-	-	-	-	0.108	0.069	0.052	0.353	<0.010	0.050	<0.010	0.011	0.016	0.030	0.032	0.041	<0.010	<0.010	0.011	0.015
Tin	ug/L	0.05	-	-	-	-	-	<0.250	<0.250	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium	ug/L	0.2	-	-	-	-	-	4.83	3.47	4.54	46.6	0.56	0.38	<0.20	<0.20	4.20	8.91	5.34	4.52	1.60	1.24	0.24	0.65
Tungsten	ug/L	0.2	-	-	-	-	-	<1.00	<1.00	0.45	0.55	<0.20	<0.20	<0.20	<0.20	0.24	0.32	0.26	0.28	<0.20	<0.20	<0.20	<0.20
Uranium	ug/L	0.001	-	-	-	-	54.49	43.5	54.8	54.6	54.4	6.20	6.81	6.22	5.67	42.6	48.3	41.5	42.4	23.3	23.6	19.4	18.2
Vanadium	ug/L	1	-	-	-	-	-	<5.00	<5.00	2.72	5.24	2.30	1.79	<1.00	<1.00	3.15	4.31	3.35	4.73	2.47	2.44	1.08	<1.00
Zinc	ug/L	1	0.829	5.6..341	1,000-5,000	-	-	<5.0	<5.0	<2.0	12	1.4	1.3	<1.0	<1.0	1.5	1.9	3.7	2.3	<1.0	<1.0	1.5	2.2
Zirconium	ug/L	0.02	-	-	-	-	-	0.901	0.981	0.916	1.17	0.039	0.109	0.038	0.036	1.19	1.17	0.302	0.494	0.147	0.085	0.027	0.053
Inorganics																							
Bromide	mg/L	0.1	-	-	-	100	-	2.13	2.43	1.25	2.48	0.26	0.32	0.26	<1.00	0.24	0.25	<0.10	0.26	0.12	0.11	<0.10	0.25
Chloride	mg/L	0.1	150	600	100	100	879.5	732	836	999	896	526	653	866	742	172	196	240	221	130	140	142	125
Fluoride	mg/L	0.1	-	1.876	1	2	1.003	1.03	1.26	<0.10	<1.00	0.41	0.48	0.55	<1.00	1.59	1.60	1.88	1.76	1.08	0.98	1.11	1.02
Nitrate (as N)	mg/L	0.01	3	-	-	-	-	<0.500	<0.250	<0.010	<0.100	<0.250	<0.250	0.023	<0.100	<0.100	<0.100	<0.010	<0.100	<0.100	<0.100	<0.010	<0.100
Nitrite (as N)	mg/L	0.01	0.2(Eq)	0.6(Eq)	-	-	-	<0.010	0.022	<0.010	<0.100	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phosphate (as P)	mg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.161	-	-	-	0.0120	-	-
Sulfate	mg/L	1	128-429(Eq)	-	-	-	1597.5	1,340	1,510	1,800	1,680	206	207	256	242	509	591	664	639	190	201	168	156
Hardness, Total (as CaCO3)	mg/L	0.125	-	-	-	-	-	767	981	962	1,130	895	1,060	1,160	1,190	1,060	1,080	1,200	1,240	616	584	575	542
Alkalinity, Total (as CaCO3)	mg/L	1	-	-	-	-	1055	868	1,010	1,080	1,130	591	716	764	797	787	843	940	971	504	500	490	511
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	-	-	-	-	-	106	<1.0	163	132	112	<1.0	123	92.1	65.4	89.0	242	200	84.4	64.0	72.8	14.7
Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	-	-	-	-	-	656	1,010	757	869	367	716	519	613	656	664	455	571	335	373	345	483
Alkalinity, Carbonate (as CaCO3)	mg/L	1	-	-	-	-	-	212	<1.0	325	265	224	<1.0	246	184	131	179	485	400	169	128	146	29.3
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
Ammonia, Total (as N)	mg/L	0.05	0.102	0.681	-	-	1.28	0.308	0.227	0.372	0.401	0.051	<0.050	<0.050	0.127	0.238	<0.050	0.094	0.069	0.061	<0.050	0.133	0.836
Carbon, Dissolved Organic	mg/L	0.5	-	-	-	-	-	48.0	55.2	53	55.1	23.2	34.7	28.8	29.7	9.89	13.7	17.1	18.5	6.17	6.81	8.06	7.24
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	126	130	215	340	81	100	206	92	39	39	57	54	<20	20	27	<20
Solids, Total Dissolved	mg/L	15	-	-	-	-	-	3,860	4,550	5,420	5,910	1,580	1,960	2,320	2,500	1,610	1,870	2,150	2,390	961	850	960	958
Nitrogen, Total Kjeldahl	mg/L	0.05	-	-	-	-	-	2.83	3.26	6.63	23.2	1.44	1.82	2.08	1.84	1.04	1.11	1.8	1.61	0.719	0.635	0.996	1.45
Phosphorus, Total (as P)	mg/L	0.005	-	-	-	-	0.32305	0.0584	0.0673	0.256	2.54	0.0292	0.0249	0.0249	0.0193	0.146	0.256	0.15	0.0967	0.0377	0.0420	0.0728	0.17
Conductivity (EC)	uS/cm	2	-	-	-	-	7152.7	5,430	5,790	7,750	7,870	2,640	3,070	4,040	4,140	2,460	2,910	3,100	3,140	1,460	1,630	1,560	1,580
Coliforms, Total (Q-Tray)	MPN/100 mL	1	-	-	-	-	-	551	862	8,840	30,800	1,410	372	32,600	658	816	65	1,450	242	204	46	1,410	770
Coliforms, Fecal (Q-Tray)	MPN/100 mL	1	-	-	-	-	-	1	14	36	30	2	4	> 2420	7	6	1	579	2	4	4	58	20
Nitrate+Nitrite (as N)	mg/L	0.01	-	-	-	-	-	<0.500	<0.250	<0.0100	<0.100	<0.250	<0.250	0.0233	<0.100	<0.100	<0.100	<0.0100	<0.100	<0.100	<0.100	<0.0100	<0.100
Nitrogen, Total	ug/L	0.05	-	-	-	-	-	2,830	3,290	6,630	23,200	1,440	1,820	2,110	1,840	1,040	1,110	1,800	1,610	719	635	996	1,450
pH	pH units	0.1	6.5-9	6.5-9	5-9.5	5-9.5	-	8.71	8.83	8.99	8.87	8.83	8.78	8.94	8.76	8.53	8.75	9.33	9.16	8.78	8.83	8.88	8.44
Field conductivity	µS/cm	0.1	-	-	700	-	-	6168	6896	5718	7831	3117	3605	3973	4376	1487	680	1519	3076	1692	1675	1540	1572

Notes:
CARO Analytical Report: 24A2651, 24C2549, 24C2753, 24E0993, 24E1456, 24I1405, 24I1604, 24J2950, 24J3163
BCWQG- BC Water Quality Guidelines (Approved or Working)
LT - Long-term chronic (i.e., "average") WQG
ST - Short-term acute (i.e., "maximum") WQG
AW-Standards/Guidelines for the protection of Aquatic Ecosystem (Freshwater)
IW- Standards/Guidelines for the protection of Irrigation water
*** Site-specific standards** reflect the 95th percentile calculated using Bubna Slough and Slough #2 data. They are used to assess only downstream ponds i.e., Tutt, Slough, Little Robert Lake and Robert Lake.

Bold	Concentration >BCWQG AW (LT) Guideline
Underline	Concentration >BCWQG AW (ST) Guideline
Shaded	Concentration >BCWQG IW (LT) Guideline
Shadow	Concentration >BCWQG IW (ST) Guideline
Italics	Concentration >Site Specific Standard
RED	Concentration >BCWQG AW &/or IW (if AW/IW <95th Percentile), **OR**

>95th Percentile (if AW/IW <95th Percentile)
(Eq): Based on given equation
(P): pH dependent standard/guideline
(T): Temperature dependent standard/guideline

Table 4: Summary of Surface Water Analytical Results - Ponds, Sloughs

DESCRIPTION			BC Water Quality Guidelines				Site Specific Standard*	Tutt Pond				Slough				S Storm Headwall 186437	Little Robert Lake				Robert Lake			
CLIENT ID								Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	Slough	Slough	Slough	Slough	S Storm Headwall 186437	Little Robert Lake	Little Robert Lake	Little Robert Lake	Little Robert Lake	Robert Lake-North	Robert Lake-North	Robert Lake-North	Robert Lake-North
DATE SAMPLED								2024-03-21	2024-05-08	2024-09-11	2024-10-22	2024-03-21	2024-05-10	2024-09-11	2024-10-22	2024-01-26	2024-03-22	2024-05-10	2024-09-12	2024-10-23	2024-03-22	2024-05-10	2024-09-12	2024-10-23
MATRIX	Units	RDL	AW-LT	AW-ST	IW-LT	IW-ST	95th Percentile	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
								Analytical Results																
Total Metals																								
Aluminum	ug/L	2	1.85	-	-	5000	91.02	168	97.3	48.2	80.6	164	2620	228	212	184	627	360	82.1	89.8	696	1480	13,800	1370
Antimony	ug/L	0.05	74	250	-	-	-	0.189	0.203	0.332	0.331	6.43	5.88	19.1	23.5	0.321	0.415	0.407	0.76	0.586	<0.500	0.672	0.403	0.588
Arsenic	ug/L	0.05	5	5	100	100	6.15	2.73	3.48	5.87	5.12	39.2	51.5	129	161	2.09	5.31	5.06	8.42	7.21	8.38	10.3	13.3	13
Barium	ug/L	0.1	-	-	-	-	-	71.7	68.7	59.2	57.5	48.5	72.5	30.6	21.6	117	73.5	74.2	67	59	51.8	66.1	197	77.9
Beryllium	ug/L	0.01	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.050	0.106	<0.100	<0.050	0.010	0.028	<0.020	<0.010	<0.010	<0.100	<0.100	0.514	0.055
Bismuth	ug/L	0.01	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.050	0.055	<0.100	<0.050	<0.010	<0.020	<0.020	<0.010	0.022	<0.100	<0.100	0.182	0.063
Boron	ug/L	2	1,200	-	500	-	-	34.6	36.8	44.7	40.4	456	720	1,890	2,070	18.6	29.9	37.1	18.7	23.1	51.2	71.8	80.7	75
Cadmium	ug/L	0.002	0.018 - 0.457	0.038 - 2.801	-	5.1	-	<0.0080	<0.0080	<0.0040	<0.0060	0.0562	0.0603	<0.0200	<0.0200	0.0302	0.0136	0.0139	<0.0040	<0.0040	<0.0400	<0.0900	0.301	<0.110
Calcium	ug/L	50	-	-	-	-	-	42,200	68,700	45,100	52,000	55,900	55,800	9,180	12,600	92,800	184,000	225,000	147,000	172,000	38,800	46,500	55,200	34,600
Chromium	ug/L	0.5	-	-	-	-	2.50	<0.50	<0.50	<0.50	<0.50	2.86	7.09	<5.00	<2.50	0.75	1.21	<1.00	<0.50	<0.50	<5.00	<5.00	21.4	<2.50
Cobalt	ug/L	0.005	4	110	-	-	-	0.494	0.481	0.307	0.35	2.53	3.65	2.89	1.43	0.262	0.928	0.686	0.293	0.343	0.943	1.87	9.18	1.23
Copper	ug/L	0.2	0.2	0.9	-	200	-	1.05	0.69	0.49	0.51	8.32	8.25	3.38	2.46	6.36	1.52	1.04	0.38	0.28	3.41	8.38	24.1	3.36
Iron	ug/L	2	-	1000	-	-	132	234	119	70.8	122	446	3,930	403	334	204	828	502	111	131	724	1,530	14,600	1,500
Lead	ug/L	0.05	1.5-33.6	-	-	200	-	0.113	0.084	0.077	0.1	1.20	2.21	<0.500	0.525	0.156	0.502	0.341	0.078	0.071	0.773	1.23	11	1.51
Lithium	ug/L	0.05	-	-	-	-	-	32.4	29.6	33.9	29.9	55.5	78.7	156	176	4.63	53.1	53.9	46.8	48.7	23.2	22.7	45.1	30.1
Magnesium	ug/L	5	-	-	-	-	-	171,000	194,000	197,000	202,000	214,000	307,000	379,000	417,000	22,100	349,000	388,000	433,000	347,000	404,000	441,000	616,000	592,000
Manganese	ug/L	0.05	768 - 2,585	816 - 3,394	-	-	-	17.4	103	94.5	49.8	105	146	41.3	38.1	4.87	2,410	2,340	384	951	137	163	781	148
Mercury	ug/L	0.01	0.01	-	-	2	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.171	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	ug/L	0.01	7,600	46,000	10	50	14.405	12.7	11.4	10.2	10.4	24.6	23.6	36.8	16.2	18.4	9.45	10.9	8.92	8.45	106	153	107	147
Nickel	ug/L	0.04	-	-	-	-	-	2.42	2.59	1.97	2.18	12.0	18.8	19.8	21.3	1.99	2.57	2.43	1.43	1.46	5.87	9.52	20.6	7.48
Phosphorus	ug/L	10	5-15	5-15	-	-	-	69	318	430	406	1,800	3,300	6,200	5,520	610	2,900	2,840	1,470	2,070	3,390	3,560	5,010	4,290
Potassium	ug/L	20	-	-	-	-	-	14,000	13,900	15,500	15,000	196,000	265,000	823,000	891,000	14,500	34,500	35,700	35,900	35,800	75,900	76,000	112,000	116,000
Selenium	ug/L	0.1	1	1	10	10	-	0.59	0.60	0.49	0.45	0.92	0.82	1.62	7.66	1.40	0.78	0.48	0.44	0.35	1.3	1.6	1.76	3.09
Silicon	ug/L	100	-	-	-	-	-	370	1,080	4,710	6,150	3,720	7,270	2,400	2,820	6,700	11,300	13,200	2,240	3,700	5,010	8,880	35,900	8,500
Silver	ug/L	0.01	0.05..1.5	0.1..3	-	-	-	0.011	0.016	<0.010	<0.010	<0.050	<0.050	<0.100	<0.050	0.015	<0.020	<0.020	<0.010	<0.010	<0.100	<0.100	0.07	<0.050
Sodium	ug/L	20	-	-	-	-	-	301,000	323,000	354,000	368,000	1,180,000	1,750,000	6,020,000	7,560,000	218,000	995,000	1,110,000	1,100,000	995,000	3,180,000	3,500,000	4,430,000	4,850,000
Strontium	ug/L	0.1	-	-	-	-	-	4,540	4,840	5,260	4,910	2,600	3,190	1,020	927	873	6,190	6,840	6,790	6,510	5,000	5,090	7,120	7,300
Sulfur	ug/L	1000	-	-	-	-	-	242,000	240,000	253,000	269,000	674,000	897,000	2,910,000	3,930,000	39,900	1,170,000	1,300,000	1,220,000	1,190,000	2,430,000	2,630,000	3,230,000	3,840,000
Tellurium	ug/L	0.05	-	-	-	-	-	<0.050	<0.050	0.056	<0.050	<0.250	<0.250	<0.500	<0.250	<0.050	<0.100	<0.100	<0.050	<0.050	<0.500	<0.500	<0.250	<0.250
Thallium	ug/L	0.004	-	-	-	-	-	<0.0040	<0.0040	<0.0040	<0.0040	<0.0200	<0.0200	<0.0400	<0.0200	0.0056	<0.0080	<0.0080	<0.0040	<0.0040	<0.0400	<0.0400	0.151	<0.0200
Thorium	ug/L	0.01	-	-	-	-	-	0.111	0.105	0.021	0.017	0.272	0.215	0.618	0.337	0.039	0.289	0.066	0.184	0.015	0.361	0.241	1.93	0.248
Tin	ug/L	0.05	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	0.745	0.878	1.37	2.61	<0.050	<0.100	<0.100	<0.050	<0.050	<0.500	<0.500	0.252	0.263
Titanium	ug/L	0.2	-	-	-	-	-	8.77	5.06	2.68	4.35	13.7	122	9.31	11.5	8.07	34.8	20.3	4.98	5.48	36.3	78.8	670	72.9
Tungsten	ug/L	0.2	-	-	-	-	-	<0.20	0.21	0.26	0.29	2.05	3.19	11.8	11.3	<0.20	<0.40	<0.40	<0.20	<0.20	<2.00	<2.00	1.98	2.76
Uranium	ug/L	0.001	-	-	-	-	54.49	26.9	33.7	27.6	29.7	42.7	49.3	124	127	4.17	53.8	60.9	34.6	34.5	137	221	164	191
Vanadium	ug/L	1	-	-	-	-	-	3.85	4.19	3.88	4.14	10.8	14.3	<10.0	8.01	2.27	3.61	2.97	1.9	1.79	<10.0	16.4	23.9	6.09
Zinc	ug/L	1	0.829	5.6..341	1,000-5,000	-	-	1.3	<1.0	<1.0	1.1	11.5	26.6	22.4	10.3	19.7	5.1	3.6	1.4	<1.0	<10.0	<10.0	68.6	8.5
Zirconium	ug/L	0.02	-	-	-	-	-	0.603	0.723	0.349	0.408	5.27	4.80	5.14	8.1	0.470	0.867	0.532	0.288	0.358	4.31	6.98	11.4	5.06
Inorganics																								
Bromide	mg/L	0.1	-	-	-	-	-	0.24	0.25	0.42	<1.00	1.46	<5.00	10.3	6.17	0.11	<1.00	<5.00	<1.00	<1.00	1.46	<5.00	1.91	<10.0
Chloride	mg/L	0.1	150	600	100	100	879.5	191	219	248	234	465	640	2,300	1,610	377	141	148	167	134	363	367	553	408
Fluoride	mg/L	0.1	-	1.876	1	2	1.003	1.01	1.03	1.15	<1.00	0.65	0.67	<1.00	<1.00	0.19	<1.00	0.61	<1.00	<1.00	<1.00	0.73	<1.00	<10.0
Nitrate (as N)	mg/L	0.01	3	-	-	-	-	<0.250	<0.010	<0.010	<0.100	<0.250	<0.500	<0.100	<0.100	0.677	0.114	<0.500	<0.100	<0.100	<0.100	<0.500	<0.100	<1.00
Nitrite (as N)	mg/L	0.01	0.2(Eq)	0.6(Eq)	-	-	-	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010	<0.100	<0.100	<0.010	<0.100	<0.010	<0.100	<0.100	<0.100	<0.010	<0.100	<1.00
Phosphate (as P)	mg/L	0.005	-	-	-	-	-	-	-	-	-	-	1.66	-	-	0.520	-	1.74	-	-	-	2.12	-	-
Sulfate	mg/L	1	128-429(Eq)	-	-	-	1597.5	527	632	702	682	1,560	2,160	7,940	6,220	106	3,260	3,290	4,030	3,450	6,720	7,250	8,400	7,950
Hardness, Total (as CaCO3)	mg/L	0.125	-	-	-	-	-	811	969	924	963	1,020	1,410	1,580	1,750	-	1,900	2,160	2,150	1,860	1,760	1,930	2,670	2,520
Alkalinity, Total (as CaCO3)	mg/L	1	-	-	-	-	1055	551	621	586	613	1,230	1,780	3,820	4,480	118	721	760	674	744	1,540	1,630	2,070	2,200
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	-	-	-	-	-	88.0	<1.0	77.6	60.6	331	143	1,050	1,170	<1.0	61.6	67.0	98.5	33.5	302	266	402	455
Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	-	-	-	-	-	375	621	430	492	566	1,500	1,730	2,150	118	598	625	476	677	935	1,100	1,270	1,290
Alkalinity, Carbonate (as CaCO3)	mg/L	1	-	-	-	-	-	176	<1.0	155	121	661	287	2,090	2,330	<1.0	123	135	197	67.1	605	531	803	909
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
Ammonia, Total (as N)	mg/L	0.05	0.102	0.681	-	-	1.28	<0.050	0.150	0.128	0.499	0.146	3.61	5.92	3.52	<0.050	0.072	0.059	0.123	0.528	0.131	0.203	0.165	0.085
Carbon, Dissolved Organic	mg/L	0.5	-	-	-	-	-	12.3	12.0	16.2	12	185	137	377	403	18.0	26.4	29.2	26.7	24.6	60.5	69.4	84.4	84.9
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	32	42	38	41	432	471	2,280	1,740	60	138	113	68	70	209	275	442	404
Solids, Total Dissolved	mg/L	15	-	-	-	-	-	1,480	1,720	1,810	1,940	4,010	6,560	20,400	21,200	932	4,880	5,510	5,420	5,550	11,100	11,000	11,800	18,000
Nitrogen, Total Kjeldahl	mg/L	0.05	-	-	-	-	-	0.908	1.22	1.55	1.61	13.5	17.6	117	66.2	1.26	3.50	3.37	2.91	2.72	4.82	8.47	14.8	11.1
Phosphorus, Total (as P)	mg/L	0.005	-	-	-	-	0.32305	0.0617	0.329	0.413	0.368	1.81	3.22	5.33	4.99	0.582	2.64	2.74	1.25	1.99	3.20	3.72	4.69	3.89
Conductivity (EC)	uS/cm	2	-	-	-	-	7152.7	2,320	2,390	2,890	2,910	5,500	8,610	23,800	25,100	1,590	5,210	5,650	6,380	6,420	11,200	13,900	17,100	18,400
Coliforms, Total (Q-Tray)	MPN/100 mL	1	-	-	-	-	-	36	> 2420	917	175	563	18	41,100	> 242000	18,600	160	1,550	> 242000	457	2,410	64,900	> 242000	19,400
Coliforms, Fecal (Q-Tray)	MPN/100 mL	1	-	-	-	-	-	10	1	13	14	563	13	<100	46	2,600	27	308	365	14	3	35	> 2420	133
Nitrate+Nitrite (as N)	mg/L	0.01	-	-	-	-	-	<0.250	<0.0100	<0.0100	<0.100	<0.250	<0.500	<0.100	<0.100	0.677	0.114	<0.500	<0.100	<0.100	<0.100	<0.500	<0.100	<1.00
Nitrogen, Total	ug/L	0.05	-	-	-	-	-	908	1,220	1,550	1,610	13,500	17,600	117,000	66,200	1,930	3,610	3,370	2,910	2,720	4,820	8,470	14,800	11,100
pH	pH units	0.1	6.5-9	6.5-9	5-9.5	5-9.5	-	8.74	8.52	8.82	8.69	9.33	8.73	9.39	9.36	7.49	8.50	8.61	8.81	8.43	9.05	9.06	9.13	9.18
Field conductivity	μS/cm	0.1	-	-	700	-	-	2380	2848	2839	2903	5992	8782	23648	28608	-	5999	4565	3294	6420	7311	13260	16111	18502

Notes:
CARO Analytical Report: 24A2651, 24C2549, 24C2753, 24E0993, 24E1456, 24I1405, 24I1604, 24J2950, 24J3163
BCWQG- BC Water Quality Guidelines (Approved or Working)
LT - Long-term chronic (i.e., "average") WQG
ST - Short-term acute (i.e., "maximum") WQG
AW-Standards/Guidelines for the protection of Aquatic Ecosystem (Freshwater)
IW- Standards/Guidelines for the protection of Irrigation water
* **Site-specific standards** reflect the 95th percentile calculated using Bubna Slough and Slough #2 data. They are used to assess only downstream ponds i.e., Tutt, Slough, Little Robert Lake and Robert Lake.

Bold	Concentration >BCWQG AW (LT) Guideline
Underline	Concentration >BCWQG AW (ST) Guideline
Shaded	Concentration >BCWQG IW (LT) Guideline
Shadow	Concentration >BCWQG IW (ST) Guideline
Italics	Concentration >Site Specific Standard
RED	Concentration >BCWQG AW &/or IW (if AW/IW <95th Percentile), **OR**

>95th Percentile (if AW/IW <95th Percentile)
(Eq): Based on given equation
(P): pH dependent standard/guideline
(T): Temperature dependent standard/guideline

Table 5: Summary of Leachate Analytical Results

Quarter			Q2				Q3				Q4			
Date			09 May 2024	09 May 2024	09 May 2024	09 May 2024	06 Sep 2024	06 Sep 2024	06 Sep 2024	06 Sep 2024	18 Oct 2024	18 Oct 2024	18 Oct 2024	18 Oct 2024
Field ID			N Pumphouse MH	P1 Leachate MH2	P2A2 Leachate MH	S Leachate Wetwell	N Pumphouse MH	P1 Leachate MH-2	P2 A2 Leachate MH	S Leachate Wet Well (LS#2)	N Pumphouse MH	P1 Leachate MH-2	P2 A2 Leachate MH	S Leachate Wet Well (LS#2)
	Unit	EQL	Analytical Results				Analytical Results				Analytical Results			
Calculations														
Hardness as CaCO3 (filtered)	mg/L	0.125	1,590	1,450	2,090	2,440	1,530	1,560	2,260	1,460	1,230	2,010	2,140	1,930
General Parameters														
Bromide	mg/L	0.1	<0.10	<5.00	<5.00	<0.10	2.40	<1.00	2.66	3.48	2.28	4.63	4.75	5.33
Chloride	mg/L	0.1	419	472	1,370	680	441	2,220	1,500	607	390	2,270	1,660	820
Fluoride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	2.59	2.04	2.21	<1.00	<1.00	<1.00	<1.00	<1.00
Nitrate (as N)	mg/L	0.01	46.2	0.525	0.950	296	<0.100	<0.100	12.6	<0.100	48.1	<0.100	1.98	125
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.100	<0.100	<0.100	<0.100	2.08	<0.100	<0.100	17.2
Phosphate	mg/L	0.005	1.86	2.39	0.0110	1.91	-	-	-	-	-	-	-	-
Sulphate	mg/L	1	1,260	515	151	2,150	965	<10.0	67.3	910	969	30.0	24.1	1,810
Alkalinity (total) as CaCO3	mg/L	1	2,820	2,410	4,050	4,530	3,390	8,920	4,040	4,880	2,480	9,070	3,880	5,400
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
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	2,820	2,410	4,050	4,530	3,390	8,920	4,040	4,880	2,480	9,070	3,880	5,400
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
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
Ammonia as N	mg/L	0.05	58.3	168	213	148	98.8	1,400	233	183	81.7	1,580	246	188
Dissolved Organic Carbon (filtered)	mg/L	0.5	193	113	356	140	173	571	193	122	101	604	237	133
Chemical Oxygen Demand	mg/L	20	231	352	840	690	415	2,090	793	702	316	2,620	879	719
Total Dissolved Solids (Lab) (filtered)	mg/L	15	5,600	3,840	6,290	10,900	5,550	9,700	6,280	7,910	4,690	9,350	6,240	9,660
pH (Lab)	-	0.1	7.90	7.75	7.85	7.75	7.89	7.70	7.85	7.84	8.02	7.78	7.86	7.84
Electrical Conductivity (Lab)	µS/cm	2	8,230	6,180	10,900	14,400	8,170	20,200	10,900	11,200	7,300	21,000	10,800	13,800
Biochemical Oxygen Demand	mg/L	5.4	<33.8	<67.6	<67.6	<67.6	62.8	167	59.0	101	17.7	136	44.2	88.4
Total sulfide	mg/L	0.02	4.62	8.91	0.039	3.47	39.6	1.74	0.024	54.0	11.3	0.449	<0.040	57.8
Phosphorus (filtered)	ug/L	5	-	-	-	-	2,520	9,800	360	3,180	1,940	10,000	580	4,370
Phosphorus (P)	mg/L	0.005	1.93	2.38	2.39	4.61	2.76	12.5	1.62	4.43	2.33	12.0	6.89	5.15
Hydrocarbons														
VH (C6-C10)	µg/L	100	<100	321	219	147	113	926	205	153	<100	537	169	102
VPH (VH C6-C10 - BTEX)	µg/L	100	<100	297	217	108	<100	837	205	127	<100	524	168	<100
EPH C10-C19	µg/L	250	293	341	805	334	1,120	2,200	1,350	944	829	1,790	1,060	1,370
EPH C19-C32	µg/L	250	<250	<250	<250	<250	304	1,170	295	453	5,000	5,220	2,230	8,080
LEPH	µg/L	250	292	340	805	329	1,120	2,200	1,350	936	824	1,790	1,060	1,360
HEPH	µg/L	250	<250	<250	<250	<250	304	1,170	295	453	5,000	5,220	2,230	8,080
Metals (Dissolved)														
Aluminium	ug/L	1	30.3	58.4	20.4	53.0	27.8	220	21.8	56.5	22.2	343	90.2	57.0
Antimony	ug/L	0.05	6.42	3.19	2.35	14.3	5.80	14.8	2.42	7.31	5.94	19.5	2.44	13.8
Arsenic	ug/L	0.05	19.6	8.58	23.4	42.2	18.3	15.1	38.6	26.1	18.4	22.6	316	41.7
Barium	ug/L	0.1	357	217	942	162	201	257	1,470	205	138	331	4,560	191
Beryllium	ug/L	0.01	<0.050	0.025	<0.050	<0.100	<0.020	<0.100	0.020	0.033	<0.020	0.121	<0.050	<0.050
Bismuth	ug/L	0.01	<0.050	<0.020	<0.050	<0.100	<0.020	<0.100	<0.020	<0.020	<0.020	<0.050	<0.050	<0.050
Boron	ug/L	2	1,630	2,630	5,590	2,670	2,000	12,100	7,120	3,760	1,290	13,900	7,460	3,240
Cadmium	ug/L	0.002	0.0101	0.006	0.0222	0.0511	<0.0080	0.0226	0.104	<0.0040	0.0209	0.0451	0.0317	0.0113
Calcium	ug/L	50	183,000	141,000	126,000	469,000	100,000	143,000	132,000	147,000	142,000	167,000	127,000	289,000
Chromium (III+VI)	ug/L	0.5	13.1	36.2	19.5	20.9	13.0	169	22.7	22.0	12.0	242	26.0	29.9
Cobalt	ug/L	0.005	8.09	8.07	22.2	11.8	7.85	35.7	20.7	12.2	6.02	48.5	18.3	14.4
Copper	ug/L	0.1	0.78	0.23	1.48	<1.00	<0.20	<1.00	4.53	<0.20	<0.20	1.67	2.77	<0.50
Iron	ug/L	2	145	1,280	1,550	203	40.5	3,450	2,260	175	108	4,640	16,100	49.5
Lead	ug/L	0.05	<0.250	<0.100	<0.250	<0.500	<0.100	<0.500	0.149	<0.100	<0.100	<0.250	<0.250	<0.250
Lithium	ug/L	0.05	48.2	71.9	35.8	57.7	73.2	198	32.9	83.0	41.2	229	31.1	66.9
Magnesium	ug/L	5	276,000	267,000	431,000	308,000	310,000	292,000	468,000	266,000	212,000	388,000	443,000	294,000
Manganese	ug/L	0.05	265	985	316	153	313	846	100	410	165	986	142	290
Mercury	ug/L	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010	<0.010
Molybdenum	ug/L	0.01	5.25	3.96	13.0	7.53	4.74	4.96	13.3	6.4	9.48	7.42	15.7	5.73
Nickel	ug/L	0.04	17.6	58.1	174	22.5	17.1	266	187	20.5	11.3	369	180	25.0
Phosphorus	ug/L	10	2,460	3,250	234	3,230	3,410	9,460	967	4,990	2,540	14,400	3,770	6,130
Potassium	ug/L	20	158,000	187,000	283,000	259,000	165,000	713,000	296,000	315,000	137,000	966,000	258,000	306,000
Selenium	ug/L	0.1	1.37	1.41	2.56	<1.00	1.12	4.36	2.81	1.21	0.87	8.18	2.61	1.17
Silicon	µg/L	100	16,000	17,600	26,900	16,400	17,100	15,900	27,100	20,400	15,200	20,200	23,700	18,800
Silver	ug/L	0.01	<0.050	<0.020	<0.050	<0.100	<0.020	<0.100	<0.020	<0.020	<0.020	<0.050	<0.050	<0.050
Sodium	ug/L	20	1,700,000	847,000	1,430,000	2,800,000	1,450,000	1,520,000	1,630,000	2,120,000	1,280,000	2,050,000	1,510,000	2,790,000
Strontium	ug/L	0.1	4,170	4,200	7,460	5,120	3,740	1,890	7,730	3,550	3,480	2,600	10,000	4,370
Sulfur (As S)	ug/L	1,000	454,000	200,000	54,400	730,000	375,000	17,800	40,600	478,000	315,000	35,600	28,500	592,000
tellurium	µg/L	0.05	<0.250	<0.100	<0.250	<0.500	<0.100	<0.500	0.137	<0.100	<0.100	<0.250	<0.250	<0.250
Thallium	ug/L	0.004	<0.0200	<0.0080	<0.0200	<0.0400	<0.0080	<0.0400	<0.0080	<0.0080	<0.0080	<0.0200	<0.0200	<0.0200
Thorium	ug/L	0.01	0.207	0.025	0.169	<0.100	0.083	0.147	<0.020	0.061	<0.020	0.255	<0.050	0.128
Tin	ug/L	0.05	10.9	3.57	1.91	39.5	6.30	18.1	2.53	18.6	11.7	32.2	2.92	20.4
Titanium	ug/L	0.2	36.2	44.0	12.3	58.7	34.9	185	22.6	56.5	31.9	265	39.2	80.0
Tungsten	ug/L	0.2	2.39	2.1	4.31	4.45	2.31	7.00	5.42	3.62	2.70	10.8	5.41	6.50
Uranium	µg/L	0.001	13.0	20.5	7.87	12.2	15.2	1.96	4.31	7.39	15.1	3.67	2.94	7.01
Vanadium	ug/L	1	11.7	22.9	19.0	13.2	9.62	96.2	30.0	13.5	8.08	132	102	17.4
Zinc	ug/L	1	<5.0	2.5	<5.0	<10.0	<2.0	13.4	6.5	<2.0	<2.0	19.3	5.4	<5.0
Zirconium	µg/L	0.02	22.9	17.8	114	29.6	20.6	81.6	138	26.5	16.9	118	89.2	36.6
PAHs														
1-Methylnaphthalene	µg/L	0.1	0.253	<0.100	<0.100	1.02	0.572	0.210	<0.100	1.52	0.708	0.167	<0.100	1.34
2-methylnaphthalene	µg/L	0.1	<0.100	<0.100	<0.100	0.104	0.136	0.227	<0.100	0.198	0.246	0.162	<0.100	0.316
2-chloronaphthalene	µg/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	0.104	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Acenaphthene	µg/L	0.05	0.187	0.514	<0.050	0.404	0.463	<0.105	<0.050	0.802	0.451	0.173	0.060	0.760
Acenaphthylene	µg/L	0.2	<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	0.05	<0.050	<0.050	<0.050	<0.050	0.065	0.207	0.088	0.095	0.247	0.337	0.106	0.099
Anthracene	µg/L	0.01	<0.010	<0.010	<0.010	0.017	<0.010	0.117	0.273	0.018	0.057	<0.023	<0.010	0.055
Benz(a)anthracene	µg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.032	<0.013	<0.010	<0.010
Benzo(a) pyrene	µg/L	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
Benzo(b+j)fluoranthene	µg/L	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
Benzo(g,h,i)perylene	µg/L	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
Benzo(k)fluoranthene	µg/L	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
Chrysene	µg/L	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
Dibenz(a,h)anthracene	µg/L	0.01	<0.010	<0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.03	0.031	0.034	<0.030	0.078	0.079	0.037	<0.030	0.107	0.185	<0.171	<0.030	<0.210
Fluorene	µg/L	0.05	0.116	0.263	<0.050	0.244	0.283	0.101	<0.050	0.487	0.343	0.214	0.110	0.501
Indeno(1,2,3-c,d)pyrene	µg/L	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
Naphthalene	µg/L	0.2	1.16	0.262	<0.200	3.90	2.67	1.77	<0.200	5.75	2.92	0.728	0.271	5.25
Phenanthrene	µg/L	0.1	<0.100	<0.100	<0.100	0.235	0.239	<0.100	<0.100	0.448	0.653	0.478	0.207	0.829
Pyrene	µg/L	0.02	0.021	0.022	<0.020	0.044	0.042	<0.020	<0.020	<0.020	0.216	0.164	0.080	0.201
Quinoline	µg/L	0.05	<0.050	<0.205	<0.750	<0.050	<0.050	<0.300	<0.465	<0.050	<0.050	<0.085	<0.086	<0.050
VFAs														
Heptanoic Acid	µg/L	2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Isobutyric Acid	µg/L	2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Isocaproic Acid	µg/L	2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Isovaleric Acid	µg/L	2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Propanoic acid	mg/L	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Acetic Acid	µg/L	3,000	<3,000	<3,000	3,000	4,100	<3,000	10,800	<3,000	4,400	<3,000	<3,000	<3,000	<3,000
Valeric Acid	µg/L	2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Butyric Acid	mg/L	2	<2.0	<2.0	<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	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
VOCs														
1,1,1-trichloroethane	µg/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
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	µg/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
1,1-dichloroethane	µg/L	1	1.7	<1.0	1.1	1.4	2.2	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	1.2
1,1-dichloroethene	µg/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
1,2-dibromoethane	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
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	<0.5	<0.5	<0.5
1,2-dichloroethane	µg/L	1	<1.0	4.0	<1.0	<1.0	<1.0	6.9	<1.0	<1.0	<1.0	9.8	<1.0	<1.0
1,2-dichloropropane	µg/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
1,3-Dichloropropene	µg/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
1,3-dichlorobenzene	µg/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
1,4-dichlorobenzene	µg/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
Benzene	µg/L	0.5	1.7	0.8	0.6	4.2	3.2	3.9	0.7	3.3	2.7	<0.5	0.9	5.6
Bromoform	µg/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
Bromodichloromethane	µg/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
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
Chlorodibromomethane	µg/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
Chlorobenzene	µg/L	1	<1.0	<1.0	<1.0	1.2	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2
Chloroform	µg/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
Chloroethane	µg/L	2	<2.0	<2.0	<2.0	<2.0	6.8	<2.0	<2.0	<2.0	2.3	<2.0	<2.0	<2.0
cis-1,2-dichloroethene	µg/L	1	<1.0	2.1	3.7	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	2.0	<1.0	<1.0
Dibromomethane	µg/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
Dichloromethane	µg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
MTBE	µg/L	1	<1.0	1.0	4.9	<1.0	<1.0	4.2	9.2	<1.0	<1.0	4.0	11.0	<1.0
Styrene	µg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	µg/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
Tetrachloroethene	µg/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
Toluene	µg/L	1	<1.0	11.8	1.2	<1.0	<1.0	44.8	<1.0	<1.0	<1.0	3.5	<1.0	<1.0
Ethylbenzene	µg/L	1	5.3	4.0	<1.0	15.6	7.2	12.0	<1.0	13.3	7.7	<1.0	<1.0	24.0
trans-1,2-dichloroethene	µg/L	1	<1.0	1.2	<1.0	<1.0	<1.0	4.5	<1.0	<1.0	<1.0	2.3	<1.0	<1.0
Trichlorofluoromethane	µg/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
Vinyl chloride	µg/L	1	<1.0	1.4	1.1	<1.0	<1.0	6.9	1.6	<1.0	<1.0	3.1	1.2	<1.0
Xylene Total	µg/L	2	3.3	7.2	<2.0	19.0	3.4	25.4	<2.0	9.2	5.5	9.3	<2.0	20.4

CARO analytical reports: 24E1419, 24I0839, 24J2668

Note: No sampling was done for Q1, due to schedule maintenance works

APPENDIX A

OPERATIONAL CERTIFICATE 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.

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;

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

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

"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

(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.

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.

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

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.

(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.

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).

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.

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.

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

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;

(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.

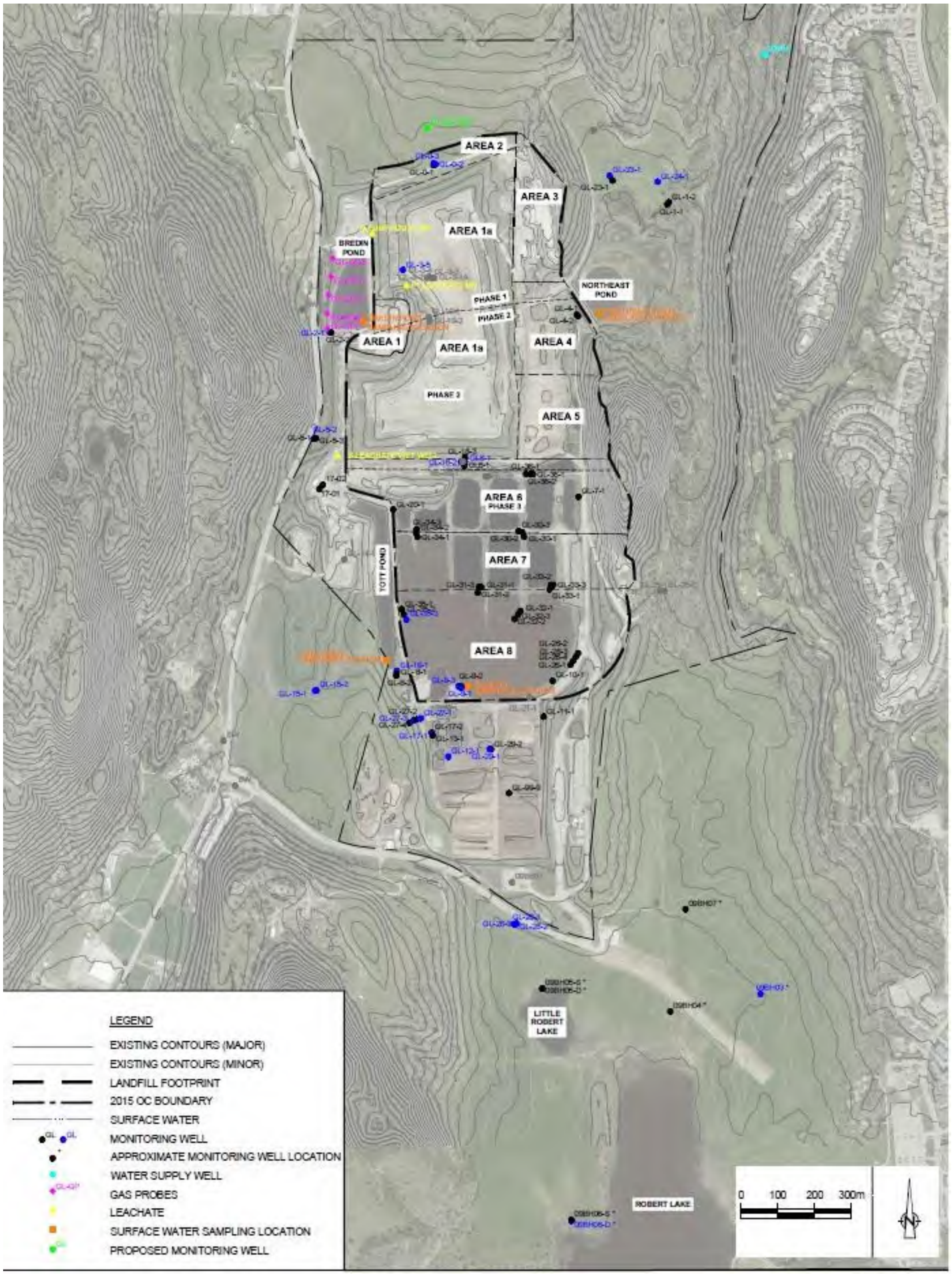
5.5 **Publication of Documents**

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.

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

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

SITE PLAN



Date issued: December 8, 2000
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(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

APPENDIX C – FIELD METHODOLOGY

2024 FIELD METHODS

In 2024, 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 2024 methods were consistent with those of previous years and are summarized below.

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.

SURFACE WATER SAMPLING

Surface water sampling was conducted by CoK staff quarterly in 2024. 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.

LEACHATE SAMPLING

Leachate sampling was conducted by CoK staff quarterly in 2024. No samples were collected in the first quarter of 2024 (March) as two of the sites were not operational. 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.

SURVEY

In 2024, CoK conducted an elevation and horizontal survey of the six new monitoring wells installed in 2024 and provided a data table of the coordinates and elevations to Keltech. These were used to determine spring and fall inferred groundwater flow direction beneath the Site.

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

2024 FIELD DATA RECORDS

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 13°
Date: SEPT 13, 2024
Tech: KR
Well No: GL 2-1
Field Dup: DUP D

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 0.333
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 ✓
Sep

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	Ø	~~NT~~					0.333	
8:52	1.2	11.35	7.62	1263	-26.8	1.11	1.026	TURBID
8:55	2.6	11.7	7.62	1303	-58.0	0.82	1.175	
8:58	3.5	11.7	7.65	1155	-75.0	0.94	1.300	CLEARING
9:01	4.4	11.7	7.62	1141	-71.3	1.36	1.376	
9:04	5.3	11.7	7.61	1145	-71.9	1.27	1.465	
9:07	6.2	11.6	7.58	1148	-76.0	1.13	1.554	
			— SAMPLE		9:10	—		

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: 14°
Date: SEPT 13 . 2024
Tech: KP
Well No: GL 2-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 0.467
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
9:28	Ø						0.467	
9:31	1.800	11.1	7.57	1456	-65.3	0.31	1.776	
9:34	3.100	11.3	7.60	1457	-63.5	0.31	2.139	
9:37	3.900	11.7	7.58	1443	-56.6	0.32	2.486	
9:40	4.600	11.7	7.52	1430	-46.8	0.47	2.834	
9:43	5.300	11.7	7.52	1427	-42.7	0.49	3.023	
			–	SAMPLE	9:45	–		

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 17°C
Date: SEPT 13, 2024
Tech:
Well No: GL 4-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 11:05
Depth of Water (A): 1.617
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
11:12	Ø						1.617	
11:15	1.050	12.0	7.85	1634	56.2	6.36	1.893	
11:18	2.100	11.9	7.80	1618	-6.9	3.92	1.907	
11:21	3.000	11.7	7.79	1619	-39.3	2.97	1.935	
11:24	4.000	11.7	7.75	1610	-72.0	1.70	1.947	
11:27	5.050	11.9	7.74	1602	-85.9	1.14	1.937	
11:30	6.000	11.7	7.79	1603	-88.2	1.10	1.950	
		—	SAMPLE		11:30	—		

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 19°
Date: SEPT 13, 2024
Tech: KR
Well No: 4-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 2.394
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
11:43	∅						2.394	
11:47	1.20	12.7	7.58	1767	-11.5	0.40	2.944	
11:50	1.80	12.9	7.58	1767	-16.1	0.84	3.085	
11:53	2.35	13.1	7.57	1770	-19.2	0.90	3.265	
11:56	2.90	13.2	7.56	1778	-20.2	0.65	3.381	
11:59	3.45	13.1	7.61	1775	-20.7	0.54	3.483	
			- SAMPLE		12 -			

Odour: ☐ Yes ☑ No If Yes, describe
Sheen: ☐ Yes ☑ No If Yes, describe
Turbidity: Clear IIII(I)IIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: SEPT 17, 2024 | Well No: 15.1
Temperature: 12°C | Tech: KR / PL | Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: | One Well Volume:
Depth of Water (A): 6.494 | Diameter of Well:
Bottom of Well (B): 18.253 | (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
8:44	∅						6.494	
8:47	1.200	10.9	7.56	1223	38.7	0.46	~~6.494~~ 7.270	
8:50	2.100	11.1	7.64	1231	40.9	0.42	7.600	
8:53	2.900	11.1	7.68	1224	44.2	0.40	7.850	
8:56	3.60	11.2	7.61	1217	43.3	0.61	8.158	
8:59	4.25	11.4	7.62	1219	44.9	0.36	8.389	
9:01	4.80	11.7	7.63	1222	45.5	0.40	8.570	
			—	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 I I Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SEPT. 17, 18 2024 Well No: 15-2
Temperature: 11°C Tech: KK / PL Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 8:20 One Well Volume:
Depth of Water (A): 5.736 Diameter of Well:
Bottom of Well (B): 6.425 (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
8:25	1.20	11.2	7.07	5434	171.4	5.87	6.100	
8:28	2.45	11.2	6.95	5449	170.4	5.75	6.200	
8:31	3.65	11.1	6.97	5272	168.8	5.63	6.425	DRY
	NEXT DAY		SEPT	18, 2024				
8:32	ϕ						5.752	
8:35	1.00	11.8	6.99	6152	156.4	7.25	5.986	
8:38	1.700	11.8	6.98	6077	154.6	7.03	6.114	
				— SAMPLE		8:40	—	

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 I I Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 21°
Date: SEPT 13, 2024
Tech: KR
Well No: GL 20-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 3.120
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
1:46	Ø						3.120	
1:49	1150	16.2	7.11	6084	-95.6	16.9	3.434	DARK YELLOW TINGE
1:52	2.30	16.9	7.06	5702	-99.3	0.98	3.552	
1:55	3.45	17.2	7.05	5434	-101.8	0.60	3.640	
1:58	4.60	17.2	7.07	5485	-100.4	0.50	3.744	
2:01	5.75	17.0	7.04	5525	-97.4	0.42	3.772	
2:04	6.90	17.0	7.03	5523	-94.9	0.35	3.804	
				– SAMPLE		14:05 –		

Odour: ☑ Yes ☐ No If Yes, describe EARTHY - SLIGHT SULFUR
Sheen: ☐ Yes ☑ No If Yes, describe
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SEPT 17, 2024 Well No: 27-1
Temperature: 16°C Tech: KK/PL Field Dup: DUP E

MONITORING WELL INFORMATION

Time of Measurement: ______ One Well Volume: ______
Depth of Water (A): 1.527 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
10:45	Ø						1.527	BLACK SEDIMENT!
10:48	0.700	13.6	7.60	2278	15.5	1.27	1.875	
10:51	1.40	13.8	7.61	2263	48.6	0.67	2.115	CLEARING
10:54	1.90	14.8	7.58	2224	-66.6	0.58	2.167	
10:57	2.30	15.1	7.55	2232	-91.2	0.52	2.209	
11:01	2.70	15.1	7.51	2250	-88.6	0.48	2.260	
11:04	3.150	15.1	7.47	2238	-91.6	0.43	2.300	
			— 11:05		SAMPLING —			

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 Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: SEPT 17, 2024 Well No: 27-3
Temperature: 18°C Tech: KR / PL Field Dup: ______

MONITORING WELL INFORMATION

Time of Measurement: ______ One Well Volume: ______
Depth of Water (A): 1.333 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
11:41	Ø					1	1.333	SOME SEDIMENT
11:44	1.00	12.9	7.41	10352	-7.1	1.03	2.785	~~e~~
11:47	1.30	14.7	7.46	10361	-19.6	0.72	2.990	CLEARING
11:50	1.70	13.7	7.37	10417	-25.7	0.65	3.190	
11:53	2.25	13.9	7.39	10371	-28.4	0.44	3.425	
11:56	2.75	14.0	7.40	10378	-30.0	0.38	3638	
				—	SAMPLING		12	—

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 20°
Date: SEPT 19, 2024
Tech: KR
Well No: 28-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 5.139
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
12:40	0						5.[illegible]	
12:43	1.00	12.7	7.17	4099	81.6	1.02	5.182	
12:46	1.55	13.6	7.18	4087	69.4	0.74	5.186	
12:49	2.15	13.2	7.17	4094	59.4	0.56	5.185	
12:52	3.30	13.2	7.21	4086	56.2	0.52	5.185	
12:55	3.90	13.2	7.18	4075	52.2	0.47	5.175	
				– SAMPLE		13:00	–	

Odour: ☐ Yes ☑ No If Yes, describe
Sheen: ☐ Yes ☑ No If Yes, describe
Turbidity: Clear IIII(I)IIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: SEPT 19 Well No: $ 28-2
Temperature: 22°C Tech: KR Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 4.643
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 ✓
NERP

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
1:44	0						4.643	
1:47	1.15	12.5	7.03	5639	81.2	0.32	4.749	
1:50	2.30	12.4	7.00	5626	80.8	0.32	4.743	
1:53	3.10	12.4	7.03	5645	80.8	0.43	4.7500	
1:56	4.00	12.4	7.04	5621	90.6	0.32	4.7500	
		—	SAMPLE		14:00 –			

Odour: □ Yes □ No If Yes, describe
Sheen: □ Yes □ No If Yes, describe
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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°C
Date: Sept 19, 2024
Tech: KR
Well No: 28-3
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 4.887
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
1:13	∅						4.587	
1:16	0.800	13.0	7.06	8069	67.3	0.41	4.956	
1:19	1.700	12.9	7.07	8075	69.0	0.5	5.069	
1:22	2.350	13.1	7.11	7992	71.7	0.37	5.171	
1:25	3.050	13.0	7.08	7978	72.0	0.3	5.222	
			— SAMPLE			13:30	—	

Odour: ☐ Yes ☐ No If Yes, describe
Sheen: ☐ Yes ☐ No If Yes, describe
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SEPT 17, 2024　Well No: 29-1
Temperature: 21°C　Tech: KK, PL　Field Dup: ______

MONITORING WELL INFORMATION

Time of Measurement: 1:40　One Well Volume: ______
Depth of Water (A): 4.327　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
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
1:56							4.327	
1:59	.900	16.4	7.44	1662	39.6	0.30	4.980	
2:02	1.550	16.5	7.46	1563	39.7	0.26	5.160	
2:05	2.150	16.6	7.44	1654	40.2	0.23	5.340	
2:08	2.750	16.5	7.44	1564	40.2	0.22	5.455	
2:11		16.4	7.42	1656	40.1	0.25	5.603	
				SAMPLE	14:15	—		

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: SEPT 17, 2024 Well No: 29-2
Temperature: 21°C Tech: KR / PL Field Dup: ______

MONITORING WELL INFORMATION

Time of Measurement: 13:08 One Well Volume: ______
Depth of Water (A): 3.719 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
13:13	Ø						3.719	
13:16	0.950	16.9	7.39	6577	27.0	0.96	4.315	
13:19	1.600	17.5	7.38	6441	36.9	0.57	4.610	
13.22	2.225	17.1	7.35	6393	28.7	0.46	4.930	
13.25	2.825	17.3	7.36	6271	27.5	0.37	5.158	
13.28	3425	17.1	7.29	6195	17.2	0.33	5.435	
13.31	4.050	171	7.28	6156	5.3	0.30	5.718	
					SAMPLE		13:35	

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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:	SEPT 18	Well No:	39-1
Temperature:	16°C	Tech:	KR	Field Dup:	DUP F

MONITORING WELL INFORMATION

Time of Measurement:	10:30	One Well Volume:	
Depth of Water (A):	3.214	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
10:31	Ø						3.214	
10:34	1.200	12.5	7.08	4749	126.5	1.24	3.278	
10:37	2.00	12.3	7.07	4795	124.1	0.85	3.281	
10:37	2.80	12.3	7.07	4807	122.0	0.66	3.278	
10:40	3.60	12.1	7.05	4833	120.6	0.58	3.278	
10:43	4.40	12.1	7.06	4859	119.2	0.54		
			— SAMPLE		10:45			

Odour: ☐ Yes ☑ No If Yes, describe ______

Sheen: ☐ Yes ☑ No If Yes, describe ______

Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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
Temperature: 18°C
Date: SEPT 18, 2024
Tech: KP
Well No: 39-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 3.214
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
11:06	Ø						3.214	
11:09	1.000	13.0	7.60	1844	103.1	0.29	3.268	
11:12	1.900	12.7	7.63	1779	102.0	0.24	3.274	
11:15	2.800	12.7	7.60	1872	101.0	0.22	3.278	
11:18	3.600	12.7	7.60	1908	100.1	0.20	3.273	
			—	SAMPLE	11:20	—		

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 14°C
Date: SEPT 19, 2024
Tech: KR/PL
Well No: 41-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 4.103
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
8:33							4.403	PURGED 2 DAYS AGO
8:36	.800	11.1	7.65	1595	114.5	2.56	4.661	
8:39	1.300	11.4	7.67	1522	112.3	2.63	4.900	
8:42	1.850	11.4	7.63	1493	110.6	2.62	5.151	
				SAMPLE		8:45	–	

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SEPT 19, 2024 Well No: 41-2
Temperature: 15°C Tech: KR/PL Field Dup: DUP G

MONITORING WELL INFORMATION

Time of Measurement: ____________ One Well Volume: ____________
Depth of Water (A): 2.836 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
9:01	Ø						2.836	~~2.836~~
9:04	0.800	11.8	7.57	1366	109.8	5.89	2.834	
9:07	1.60	11.3	7.55	~~13~~1337	108.1	3.57	2.835	
9:10	2.45	11.2	7.55	1333	107.6	2.56	2.837	
9:13	~~4~~4.00	11.4	7.55	1329	107.0	2.59	2.834	
			–	SAMPLE		9:20	–	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 15°C
Date:
Tech:
Well No: 41-3
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A):
Bottom of Well (B): 2.806
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
9:47	Ø						2.806	
9:50	.850	13	7.57	1327	103.9	2.95	2.870	
9:53	1.750	12.8	7.58	1314	101.6	2.37	2.860	
9:56	2.850	12.4	7.58	1316	99.0	2.20	2.880	
9:59	3.050	12.3	7.56	1320	98.0	2.14	2.884	
				— SAMPLE	10	—		

Odour: ☐ Yes ☐ No If Yes, describe ______
Sheen: ☐ Yes ☐ No If Yes, describe ______
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SEPT 24, 2024 Well No: 43-1
Temperature: 23° Tech: VR 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
1:50							3.478	
1:53	.300	13.4	7.62	3595	176.2	3.97	3.798	
1:56	.700	13.2	7.61	3608	171.2	4.06	3.883	
	1.800	13.5	7.67	3.600	167.6	4.03	4.04	— DRY
SEPT. 25								
8:45	.400	15.9	7.55	3.643	205.5	6.93	3.811	— SAMPLE

Odour: ☐ Yes ☐ No If Yes, describe ______
Sheen: ☐ Yes ☐ No If Yes, describe ______
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 23°
Temperature: MOSTLY CLOUDY
Date: SEPT. 25, 2024
Tech: KR
Well No: 44-1 (CLOSER L.R.
Field Dup: DUP H

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 0.608
Bottom of Well (B): 18.488
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
10:45	Ø	14.7	7.24	5598	196.8	3.68	0.608	CLEAN
10:48	0.800						0.829	
10:51	1.550	14.3	7.25	5573	188.0	1.64	0.863	
10:54	2.300	14.2	7.20	5562	184.2	1.36	0.903	
10:57	3.000	14.0	7.20	5572	180.9	1.12	0.890	
11:00	3.800	14.1	7.22	5575	178.6	1.03	0.899	
11:03	4.600	14.7	7.19	5567	176.0	0.90	0.903	
11:06	5.400	14.5	7.17	5557	172.6	0.82	0.904	
11:09	6.20	14.0	7.27	5592	170.6	0.84	0.919	
11:12	7.000	14.2	7.22	5572	187.9	0.79	0.910	
			SAMPLE	11:15				

Odour: ☐ Yes ☑ No If Yes, describe
Sheen: ☐ Yes ☑ No If Yes, describe
Turbidity: Clear IIII(I)IIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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

0.871
~~18.72.2~~

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: 24°
Temperature: MOSTLY SUNNY
Date: SEPT 25, 2024
Tech:
Well No: 44-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 0.671
Bottom of Well (B): 16.122
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
12:08	Ø						0.671	CLEAN
12:11	1.000	15.7	7.29	5409	43.2	1.03	1.100	
12:14	1.750	15.7	7.26	5378	22.0	0.59	1.322	
12:17	2.500	15.9	7.21	5317	-11.9	0.46	1.507	
12:20	3.200	15.3	7.23	5291	-4.5	0.42	1.682	
12:23	4.000	15.7	7.31	5290	-5.0	0.44	1.834	
12:26	4.700	15.9	7.34	5271	-9.1	0.45	1.968	
12:29	5.40	15.2	7.25	5288	-11.1	0.40	2.056	
12:32	6.10	15.5	7.29	5293	-16.0	0.36	2.168	
12:35	6.800	15.0	7.29	5331	-17.0	0.37	2.200	
			SAMPLE		12:40			

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 I I Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 14°
Date: SEPT 20, 2024
Tech: KR
Well No: 54 45-1
Field Dup: 45-

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): .591
Bottom of Well (B): 22.502
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
11:20	Ø						0.591	
11:23	.900	13.8	6.91	5537	-55.6	0.49	0.690	
11:26	1.700	13.6	6.87	5533	-76.1	0.35	0.681	
11:29	2.500	13.8	6.89	5535	-91.8	0.33	0.678	
11:32	3.300	13.5	6.88	5562	-100.7	0.29	0.676	
11:35	4.100	13.4	6.86	5766	-101.0	0.23	0.680	
11:38	4.900	13.5	6.87	5766	-103.6	0.22	0.689	
11:41	5.700	13.3	6.85	5564	-101.0	0.21	0.675	
11:44	6.500	13.1	6.86	5590	-100.2	0.20	0.680	
				SAMPLE -		11:45		

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

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 12°
Date: SEPT 26, 2024
Tech: LR
Well No: 45-7
Field Dup: (2024 025) (NOR

MONITORING WELL INFORMATION

Time of Measurement: ____________
Depth of Water (A): 0.812
Bottom of Well (B): 11.252
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
10:23	Ø						0.812	SILTY
10:26	~~1.1~~ 0.9	13.4	7.51	3111	147.9	1.44	1.111	
10:29	1.600	13.1	7.45	3106	131.7	1.03	1.219	
10:32	2.300	13.2	7.52	3141	95.5	0.63	1.285	- CLEARING -
10:35	3.100	13.2	7.48	3181	71.8	0.51	1.337	
10:38	3.900	13.0	7.46	3218	48.9	0.43	1.363	
10:41	4.700	13.0	7.47	3226	34.6	0.36	1.386	
10:44	5.500	12.9	7.52	3236	22.1	0.35	1.395	
10:47	6.300	12.5	7.40	3252	8.0	0.33	1.398	- STILL CLOUDY
10:50	7.000	12.8	7.52	3263	4.6	0.32	1.409	
			— 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 Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: 15°
Date: MAY 28, 2024
Tech: KR
Well No: 09BH06-D
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 8:50
Depth of Water (A): 0.429
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 240

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								
8:58	1.200	10.6	7.14	1378	98.0	0.40	0.434	
9:01	2.200	10.6	7.26	1391	48.7	0.34	0.447	
9:04	3.100	10.7	7.33	1393	16.1	0.28	0.449	
9:07	4.300	10.7	7.36	1395	-8.2	0.24	0.437	
9:10	5.400	10.6	7.40	1398	-20.5	0.24	0.444	
9:13	6.500	10.6	7.40	1400	-27.7	0.27	0.437	
9:16	7.700	10.6	7.43	1401	-34.8	0.33	0.437	
9:19	8.900	10.6	7.43	1404	-34.8	0.30		
			- SAMPLE -		9:20			

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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
Temperature: 13°

Date: MAY 14, 2024
Tech: KR

Well No: GL 2-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 8:20
Depth of Water (A): 0.488
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 240

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
8:27	~~0~~						0.488	YELLOW TINGE
8:30	1.3	10.6	7.14	1710	111.6	0.69	1.605	'
8:33	~~1.3~~ 2.6	10.4	7.35	1708	~~[illegible]~~ 85.7	0.39	2.188	CLEAR
8:36	~~1.0~~ 3.6	10.7	7.41	1703	68.7	0.30	2.382	'
8:39	~~0.6~~ 4.2	10.7	7.44	1705	43.5	0.26	2.686	
8:42	~~0.65~~ 4.85	10.7	7.47	1705	25.1	0.22	2.980	
			— 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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 14°
Date: MAY 14, 2024
Tech: KR
Well No: GL 2-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 8:55
Depth of Water (A): 0.262
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 240

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
9:00	0						0.262	TURBID
9:03	1.3	11.1	7.48	2024	-53.9	4.36	1.035	
9:06	~~1~~ 2.6	11.3	7.50	2021	-58.7	3.85	1.215	
9:09	~~10~~ 3.6	11.3	7.53	2023	-65.1	3.42	1.302	
9:12	~~10~~ 4.6	11.3	7.51	2018	-73.4	2.91	1.394	
9:15	~~10~~ 5.6	11.3	7.52	2023	-79.2	2.92	1.459	
			— 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 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 13, 2024 Well No: 4-1
Temperature: 20° Tech: KR Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 11:30
Depth of Water (A): 1.447
Bottom of Well (B): 9.276
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 240

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
11:38	~~Ø~~	~~11.2~~	~~7.81~~	~~1886~~	~~60.1~~	~~4.96~~	1.447	CLEAR
11:41	1.30	11.2	7.80	1886	60.1	4.96	1.510	
11:44	2.60	11.2	7.69	1902	-44.0	2.13	1.680	
11:47	3.250	11.5	7.57	1892	-77.0	1.65	1.699	
11:50	4.05	11.2	7.65	1891	-83.9	1.35	1.700	
11:53	5.05	11.2	7.67	1881	-105.1	0.68	1.765	
11:56	6.05	11.2	7.67	1875	-116.9	0.57	1.785	
11:59	7.05	11.2	7.71	1874	-122.5	0.47	1.792	
12:02	8.00	11.2	7.69	1874	-124.2	0.44	1.785	
12:05	9.00	11.2	7.68	1874	-127.5	0.46	1.790	
				—	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 Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: 20°
Date: MAY 13, 2024
Tech: KR
Well No: GL 4-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 2.170
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 240

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
12:20	∅						2.170	CLEAR
12:23	1.0	10.7	7.52	2115	26.1	2.49	2.914	
12:26	2.2	10.8	7.52	2113	27.7	2.24	3.264	
12:29	2.950	10.9	7.54	2112	30.0	2.09	3.504	
12:32	3.700	10.8	7.51	2112	32.1	1.99	3.700	
12:35	4.450	10.8	7.52	2121	33.0	1.94	3.870	
12:38	5.20	10.8	7.51	2124	33.1	1.95	3.972	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: MAY 14, 2024
Tech: KP
Well No: GC 5-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 1:30
Depth of Water (A): 1.584
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 240

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
1:36	Ø						1.584	
1:39	1.0	11.7	7.30	1768	69.8	1.06	1.584	
1:42	.900 1.9	11.6	7.46	1758	57.7	0.38	1.590	
1:45	.850 2.75	11.6	7.43	1757	64.1	0.31	1.590	
1:48	.900 3.65	11.6	7.44	1756	62.7	0.27	1.590	
1:51	.900 4.55	11.7	7.43	1762	61.8	0.26	1.590	
			– 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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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: MAY 14, 2024
Tech: KL
Well No: GL16-1
Field Dup: DUP B

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 1.068
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 2400

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
10:43	∅						1.068	CLEAR
10:46	1.1	11.2	7.07	4190	-16.9	1.20	1.710	
10:49	1.8	11.2	7.06	4186	-21.1	0.54	2.009	
10:52	2.4	11.4	7.05	4166	-28.6	0.42	2.210	
10:55	3.05	11.3	7.09	4150	-33.9	0.38	2.405	
10:58	3.65	11.3	7.09	4119	-40.7	0.29	2.635	
11:01	4.25	11.3	7.09	4127	-41.0	0.29	2.756	
					SAMPLE	11:10		

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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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
Temperature: 21°C

Date: MAY 13, 2024
Tech: KR

Well No: 20-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 2.950
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 240

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
2:06	Ø						2.950	YELLOW TINGE
2:09	1.1L	11.9	7.05	7032	-152.5	0.95	3.362	
2:12	~~.95~~ 2.05	11.9	7.01	6662	-165.9	0.95	3.412	
2:15	~~.9~~ 2.95	11.9	7.04	6373	-163.6	0.75	3.452	
2:18	~~.95~~ 3.9	12.0	7.01	6371	-163.3	0.66	3.510	
2:21	~~.95~~ 4.85	12.0	6.99	6443	-166.2	0.58	3.561	
2:24	~~0.95~~ 5.8	11.9	7.00	6487	-166.8	0.58	3.603	
				— SAMPLE				

Odour: ☑ Yes ☐ No If Yes, describe SULFUR / ~~MERCAPTAN~~
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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 17°C

Date: MAY 13, 2024
Tech: [illegible]

Well No: 23-1
Field Dup: DUP A

MONITORING WELL INFORMATION

Time of Measurement: 9:50
Depth of Water (A): 2.299
Bottom of Well (B): 9.915
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 220

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
10:00	Ø						2.299	SILTY
10:04	1.1	10.6	7.35	2465	253.6	11.12	2.965	↓
10.07	2.0	10.7	7.40	2435	246.4	9.30	3.151	CLEARING
10.10	2.900	10.9	7.39	2456	243.5	9.43	3.265	
10.13	3.650	10.7	7.33	2458	240.2	8.28	3.333	
10.16	4.40	10.7	7.27	2467	238.5	7.81	3.417	
10.19	5.10	10.9	7.18	2470	237.6	5.41	3.477	
10.22	5.850	11.0	7.11	2467	233.1	3.94	3.520	
10.25	6.750	10.8	7.08	2472	233.0	3.80	5.694	
10.28	7.700	10.7	7.10	2477	230	3.96	3.776	CLEAR
10.31	8.650	10.9	7.08	2474	228.8	3.64		

– SAMPLE – 10:35

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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 21, 2024 Well No: GL 27-1
Temperature: 14° Tech: KK Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 14:00 One Well Volume:
Depth of Water (A): 1.541 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 240

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
14:00	0						1.541	
14:03	1.2	10.7	7.57	2581	-174.6	0.69	2.102	
14:06	2.1	10.8	7.57	2556	-172.7	0.35	2.357	
14:09	3.1	10.8	7.51	2553	-175.9	0.24	2.594	
14:12	4.0	10.8	7.63	2554	-179.5	0.21	2.794	
14:15	5.0	10.8	7.54	2551	-182.3	0.17	2.956	
14:18	6.0	10.8	7.56	2546	-182.9	0.17	3.056	
~~14:21~~	~~7.0~~							
				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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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 21, 2024   Well No: GL 27-3
Temperature: 14   Tech: KR   Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 2.253
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 240

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
1:16	0						2.253	CLEAR
1:19	1.0	11.0	7.47	17207	-27.9	0.77	2.785	
1:22	2.1	11.0	7.50	17226	-45.1	0.41	2.956	
1:25	3.0	11.0	7.50	17225	-54.3	0.31	3.110	
1:28	4.0	11.0	7.49	17234	-64.6	0.23	3.227	
1:31	5.0	11.0	7.49	17243	-70.4	0.21	3.337	
1:34	6.1	11.0	7.50	17258	-74.7	0.18	3.426	
1:37	7.0	11.0	7.51	17261	-77.1	0.16	3.515	
1:40	8.0	11.0	7.52	17268	-78.7	0.16		
			—	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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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 28, 2024 Well No: MW28-1
Temperature: 18° Tech: KR Field Dup: ______

MONITORING WELL INFORMATION

Time of Measurement: 11:00 One Well Volume: ______
Depth of Water (A): 5.373 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 240

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						5.373	
11:04	1.200	11.8	7.04	4043	32.4	0.73	5.457	
11:07	2.400	11.7	7.07	4033	17.1	0.42	5.458	
11:10	3.500	11.7	7.08	4004	9.2	0.32	5.467	
11:13	4.700	11.7	7.10	3998	4.3	0.28	5.463	
11:16	5.900	11.7	7.11	4001	0.2	0.26	5.471	
11:19	7.200	11.7	7.11	4010	-4.7	0.22	5.474	
		—	SAMPLE		11:20 —			

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 18°
Date: MAY 28, 2024
Tech: KK
Well No: 28-2
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 ________

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
11:40	Ø	12					4.755	TURBID YELLOW
11:43	2.000	12.0	6.96	5841	83.1	0.60	4.995	REDUCED FLOW
11:46	3.100	12.0	6.94	5780	83.7	0.38	4.936	
11:49	4.100	12.0	6.93	5787	84.6	0.26	4.943	CLEAR
11:52	5.00	12.0	6.94	5778	85.1	0.24	4.929	
11:55	6.200	12.0	6.94	5768	86.6	0.21	4.936	
11:58	8.100	12.0	6.93	5759	87.2	0.18	4.913	
			—	SAMPLE		12:00	—	

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: 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 17°
Date: MAY 28, 2024
Tech: KE
Well No: GL 28-3
Field Dup: DUP'E

MONITORING WELL INFORMATION

Time of Measurement: 9:54
Depth of Water (A): 4.775
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 240

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
9:57	0	11.6	7.08	8001	106.5	3.80	4.775	?
10:00	1.200	11.5	7.07	7920	107.8	2.92	4.	
10:03	2.400						5.575	?
10:06	3.60	11.5	7.04	7830	108.7	2.43	5.674	
10:09	4.80	11.6	7.02	7692	110.2	1.78	5.822	
10:12	6.00	11.6	7.00	7619	110.8	1.40	5.893	
10:15	7.200	11.6	6.99	7594	111.7	1.21		

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 12°

Date: MAY 21, 2024
Tech: KR

Well No: GL 29-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 4.387
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 240

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?	Ø						4.387	YELLOW TINGE
10:07	.500	13.7	7.39	1772	-102.0	0.28	4.785	
10:10	1,000	13.8	7.35	1814	-78.6	0.20	4.950	
10:13	1.500	13.8	7.35	1833	-26.3	0.17	5.159?	
10:16	2.400?	13.8	7.34	1838	-8.0	0.15	5.474	
10:19	2.900?	13.6	7.34	1832	2.5	1.5	5.851?	
10:22	3.800?	13.6	7.34	1829	9.0	0.16	6.134	
10:25	4.800?	13.5	7.34	1829	13.0	~~1300~~ 0.15	6.372	
10:28	5.300?	13.6	7.34	1829	14.5	0.15		
				← SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe ________

Sheen: ☐ Yes ☑ No If Yes, describe ________

Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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 21, 2024 Well No: GL 29-2
Temperature: 12° Tech: KR Field Dup: DUPC

MONITORING WELL INFORMATION

Time of Measurement: ____ One Well Volume: ____
Depth of Water (A): 3.719 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 240

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
9:04	Ø						3.719	CLEAR MOSTLY
9:07	1.3	13.6	7.27	7557	69.0	1.03	4.675	SMALL SPECKS
9:10	2.3	13.4	7.26	7285	72.1	0.87	4.950	(COMPOST?)
9:13	2.9	13.2	7.25	7068	70.5	0.88	5.204	
9:16	3.6	13.2	7.25	7031	71.5	0.87	5.439	
9:19	4.0	13.2	7.23	7023	71.9	0.85	5.656	
9:22	4.7	13.2	7.23	7012	73.5	0.84	5.911	
			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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 18°C
Date: MAY 14, 2024
Tech: KR
Well No: GL 35-3
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 11:30
Depth of Water (A): 0.828
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 240

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
11:35	0						0.828	CLEAR
11:38	1.1	12.6	6.91	10103	-115.9	0.89	1.017	
11:41	2.1	12.5	6.97	6960.5	-114.0	0.53	1.071	
11:44	3.1	12.9	6.75	8700	-100.0	0.37	1.092	
11:47	4.1	12.4	6.91	7648.50	-100.0	0.28	1.093	
11:50	5.1	12.3	6.71	8666.0	-99.9	0.25	1.118	
11:53	6.1	12.4	6.90	5642	-100.1	0.24	1.100	
			- 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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 13°C
Date: MAY 27, 2024
Tech: KR
Well No: GL 39-1
Field Dup: DUP E

MONITORING WELL INFORMATION

Time of Measurement: ____
Depth of Water (A): 3.508
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 240

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
9:03	0						3.508	
9:06	.900	11.1	7.01	4874	381.4	1.87	3.573	
9:09	1,600	11.1	7.01	4873	373.8	1.16	3.575	
9:12	2,400	11.1	7.00	4879	361.5	0.67	3.575	
9:15	3.200	11.1	7.02	4872	354.8	0.47	3.573	
9:18	4.00	11.1	7.02	4872	349.3	0.41	3.569	
9:21	4.800	11.1	7.03	4869	342.0	0.35	3.572	
9:24	5.600	11.1	7.03	4866	334.7	0.32		
				— 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		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
			Container Size						
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 27, 20   Well No: GL 39-2
Temperature: 14°   Tech: Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: 10:00   One Well Volume:
Depth of Water (A): 3.490   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
10:00	0						3.490	
10:03	1.300	10.1	7.52	2092	270.9	0.82	3.582	
10:06	2.500	10.0	7.53	2098	268.3	0.49	3.585	
10:09	3.700	10.0	7.53	2131	265.6	0.32	3.583	
10:12	4.900	10.0	7.53	2117	262.9	0.27	3.582	
10:15	6.000	10.0	7.53	2118	261.0	0.24	3.580	
10:18	7.100	10.0	7.55	2115	258.6	0.22	3.560	
			← 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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 14°
Date: MAY 24, 2024
Tech: KR
Well No: 41-B
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 2.740
Bottom of Well (B): 3.885
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 240

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
10:19	∅						2.740	
10:22	1.400	10.0	7.36	1449	157.5	3.36	2.810	
10:25	2.500	10.1	7.35	1458	147.3	2.77	2.801	
10:28	3.500	10.0	7.37	1456	143.3	2.38	2.801	
10:31	4.500	10.1	7.36	1458	~~1409~~	2.69	2.801	
10:34	5.500	10.0	7.36	1461	138.2	2.58	2.801	
10:37	6.500	10.1	7.43	1463	137.5	2.48	2.801	
			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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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
Temperature: 14°C
Date: ~~202~~ MAY 29, 2024
Tech: KR
Well No: G41 - 2
Field Dup: DUP D

MONITORING WELL INFORMATION

Time of Measurement: ______
Depth of Water (A): 2.766
Bottom of Well (B): .419
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 240

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
9:29							~~2.769~~	
9:32	1.2	10.5	7.31	1477	158.4	2.41	2.759	
9:35	2.4	10.5					2.759	
9:38	3.000	11.4	7.29	1478	157.5	2.39	2.752	
9:41	3.800	10.9	7.29	1480	154.5	2.46	2.760	
9:44	4.20	10.9	7.29	1484	152.3	2.36	2.761	
9:48	4.800	10.9	7.28	1483	151.1	2.35	2.761	
9:51	5.700	10.9	7.29	1481	149.7	2.39	2.761	
9:54	6.200	10.8	7.26	1483	~~149~~ 147.2	2.34	2.761	
9:57	7.100	10.8	7.28	~~1466~~	146.6	2.37	2.761	
				1482	—	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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: ____ Date: MAY 24, 2024 Well No: 4-3
Temperature: ____ Tech: ____ Field Dup: ____

MONITORING WELL INFORMATION

Time of Measurement: ____
Depth of Water (A): 2.750
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 ____ = ____ 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
2:45	ø						2.750	
2:49	1.200	10.7	7.42	1468	77.3	2.96	2.824	
2:52	2400	10.7	7.42	1467	78.5	2.70	2.824	
2:55	3,350	10.7	7.40	1469	79.8	2.86	2,800	
2:58	4350	10.7	7.43	1467	80.7	2.82	2.800	
3:01		10.6	7.45	1471	81.3	2.94	2.800	
		— 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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 17°C
Date: MAY 24, 2024
Tech: KP
Well No: 42-1
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 10.829
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 240

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
11:59	Ø						10.829	
12:02	.700	12.6	7.20	5281	-70.6	1.88	11.225	
12:05	1.400	12.6	7.60	5230	-120.1	0.77	11.570	
12:08	2.100	12.6	7.27	5205	-122.2	0.47	11.570	
12:11	2.800	12.6	7.27	5207	-125.7	0.37	11.991	
12:13	3.60	12.6	7.27	5211	-128.9	0.29	12.177	
12:16	4.40	12.6	7.26	5202	-131.2	0.27	12.347	
				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 I Very Silty

Analysis	Type		40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 15°C
Date: MAY 27, 2024
Tech: KP
Well No: 42-2
Field Dup:

MONITORING WELL INFORMATION

Time of Measurement:
Depth of Water (A): 11.145
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 240

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	Ø						~~10~~ 11.145	CLOUDY
11:03	.400	12.5	7.20	6831	246.3	1.32	11.346	
11:06	1.000	12.5	7.24	6829	242.8	1.92	11.395	
11:09	1.900	12.6	7.30	6822	239.7	2.53	11.443	
11:12	3.100	12.7	7.30	6825	236.7	2.52	11.497	
11:15	4.400	12.7	7.28	6813	235.6	2.08	11.505	
11:18	5.200	12.8	7.24	6822	233.7	1.57	11.505	~~[illegible]~~ CLEAR
								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

CLEARED UP

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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

SURFACE WATER SAMPLING FORM GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY
Temperature: 6°C

Date: MARCH 22, 2024 Pond: ROBERT LAKE ~~NORTH~~ (SOURCE) DUP B
Tech: KR

POND INFORMATION

Time of Measurement: 9:15
Pond Elevation:
Location of Pond:
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
9:15	9.2	9.34	10 299	6688.5	172.9	8.15	

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	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

Notes: DUP B *

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY
Temperature: 5°C
Date: MARCH 22, 2024
Tech: KR
Pond: BRANDT'S CREEK (BONN)

POND INFORMATION

Time of Measurement: 8:45
Pond Elevation: ___
Location of Pond: ___
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
8:45	5°C	8.37	2449	1592.50	234.0	11.45	

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 Very Silty SOME SILT FROM BOTTOM

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

Notes: ___

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 10 °C

Date: MARCH 22, 2024 Pond: LITTLE ROBERT LAKE
Tech: KR

POND INFORMATION

Time of Measurement: 10:15
Pond Elevation: ______
Location of Pond: ______
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
10:15	9.4	8.72	5999	3900	185.4	7.37	

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

Notes: ______

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY
Temperature: 9°C
Date: MARCH 22, 2024
Tech: KR
Pond: ROBERT LAKE (NORTH)

POND INFORMATION

Time of Measurement: 10:40
Pond Elevation: ______
Location of Pond: ______
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______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:40	9.4	9.40	7311	4784	155.9	11.53	

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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY   Date: MARCH 21, 2024   Pond: SLOUGH #2
Temperature: 11°C   Tech: KR

POND INFORMATION

Time of Measurement: 12:30   Location of Pond: ______
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 ✓
RPO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:30	12.11	8.92	6168	4010.5	174.6	11.0	

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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MARCH 21, 2024 Pond: BRUBNA SLOUGH
Temperature: 11°C Tech: KR

POND INFORMATION

Time of Measurement: 12:00 Location of Pond: ______
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 ✓
RPO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:00	12.1	9.08	3117	2028.1	162.9	13.03	ALGEA BLOOM!

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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MARCH 21, 2024 Pond: SLOUGH
Temperature: 10°C Tech: KR

POND INFORMATION

Time of Measurement: 11:20 Location of Pond: ______
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
11:20	12.6	9.6	5992	3899	191.5	17.95	

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 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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM GLENMORE LANDFILL

Weather: MOSTLY CLOUDY
Temperature: 8°C

Date: MARCH 21, 2024
Tech: KR

Pond: TUTT POND

POND INFORMATION

Time of Measurement: 10:20
Pond Elevation: ______

Location of Pond: ______
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
10:20	10.3	8.99	2580	1677.00	215.0	13.71	EROSION OF WEST BANK FROM VEG BURNING IN 2023

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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

Notes: ______

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY
Temperature: 8°C

Date: MARCH 21, 2021
Tech: KP

Pond: BREMN POND
DUP A

POND INFORMATION

Time of Measurement: 8:40
Pond Elevation:

Location of Pond:
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
8:40	9.2	9.01	1692	1098.50	216.6	16.08	CONSTRUCTION IN THE AREA RECENTLY

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

Notes: DUP A *

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: ~~OVERCAST~~ CLOUDY
Temperature: 7°C
Date: MARCH 21, 2024
Tech: KR
Pond: NE POND

POND INFORMATION

Time of Measurement: 8:50
Pond Elevation:
Location of Pond:
Location of Elevation:

EQUIPMENT LIST

- ☑ Swing Sampler
- ☐ Hydrolift
- ☐ Bailer
- ☑ Peristaltic
- ☐ Submersible

Multi-meter Model: ☑ YSI Pro ☐ Other

☐ Field Bump ☑ Field Calibration

pH 4 ✗ pH 7 ✓ pH10 ✓

1413µs/cm ✓ 5000µs/cm

Others ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (mS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:50	10.°C	8.61	1487	968.50	251.2	8.44	CONSTRUCTION OF RING ROAD

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered		Preservatives
General	X Plastic	☐ Glass					1	☐ Yes	☐ No	Raw
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No	Nitric Acid
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No	Hydrochloric
Metals - D	X Plastic	☐ Glass		1				☐ Yes	☐ No	Nitric Acid
COD, etc	☐ Plastic	X Glass			1			☐ Yes	☐ No	Sulfuric Acid
Coliforms	X Plastic	☐ Glass			1			☐ Yes	☐ No	
DOC	☐ Plastic	X Glass	2					☐ Yes	☐ No	Hydrochloric
TOC	☐ Plastic	X Glass	2					☐ Yes	☐ No	Hydrochloric

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 16°

Date: MAY 10, 2024
Tech: KR

Pond: NE POND

POND INFORMATION

Time of Measurement: 8.20
Pond Elevation: ____

Location of Pond: ____
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 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:20	16.7	8.79	680	683	125.3	10.33	ALGEA

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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

Notes: ____

City of Kelowna

SURFACE WATER SAMPLING FORM GLENMORE LANDFILL

Weather: SUNNY
Temperature: 18°C
Date: MAY 10, 2024
Tech: KR
Pond: BALEMN POND DUP C

POND INFORMATION

Time of Measurement: ______
Location of Pond: ______
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 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:45	16.4	8.96	1875	1085	76.4	10.72	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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

Notes: ______

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY
Temperature: 21°C
Date: MAY 10, 2024
Tech: KR
Pond: SLOUGH

POND INFORMATION

Time of Measurement: ______
Location of Pond: ______
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 ✓
OKP 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
16:20	21.9	8.77	8782	5707	114.1	1.63	

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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 23°C
Date: MAY 10, 2024
Tech: KR
Pond: ROBERT LAKE ~~NORTH~~ SOUTH

POND INFORMATION

Time of Measurement: ______
Location of Pond: ______
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 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:00	24.1	9.10	14651	9522.5	66.4	6.33	

Odour: ☑ Yes ☐ No If Yes, describe SULFURIC
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

Notes: ______

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 24°C

Date: MAY 10, 2024
Tech: KR

Pond: BRANDT'S CREEK

POND INFORMATION

Time of Measurement: ____________

Pond Elevation: ____________

Location of Pond: ____________

Location of Elevation: ____________

EQUIPMENT LIST

- ☐ Swing Sampler
- ☐ Hydrolift
- ☐ Bailer
- ☒ Peristaltic
- ☐ Submersible

Multi-meter Model: ☐ YSI Pro ☐ Other ____________

☐ Field Bump ☐ Field Calibration

pH 4 ______ pH 7 ✓ pH10 ✓

1413µs/cm ______ 5000µs/cm ✓

Others ______ ORP / DO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (mS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:30	15.1	8.47	3690	2398.5	91.7	9.38	LOW FLOW

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		Preservatives
			40 mL	125 mL	250 mL	500 mL	1 L			
General	X Plastic	☐ Glass					1	☐ Yes	☐ No	Raw
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No	Nitric Acid
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No	Hydrochloric
Metals - D	X Plastic	☐ Glass		1				☐ Yes	☐ No	Nitric Acid
COD, etc	☐ Plastic	X Glass			1			☐ Yes	☐ No	Sulfuric Acid
Coliforms	X Plastic	☐ Glass			1			☐ Yes	☐ No	
DOC	☐ Plastic	X Glass	2					☐ Yes	☐ No	Hydrochloric
TOC	☐ Plastic	X Glass	2					☐ Yes	☐ No	Hydrochloric

City of Kelowna

SURFACE WATER SAMPLING FORM GLENMORE LANDFILL

Weather: OVERCAST
Temperature: 26°C
Date: MAY 10, 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
Others ______

Multi-meter Model: ☑ YSI Pro ☐ Other ______
☐ Field Bump ☐ Field Calibration
pH 4 ______ pH 7 ✓ pH10 ✓
1413µs/cm ______ 5000µs/cm ✓ DO ✓
ORP 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
14:00	24.1	8.69	4565	2970.50	111.7		

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: PARTLY CLOUDY Date: MAY 10, 2024 Pond: ROBERT LAKE NORTH
Temperature: 27°C Tech: KR

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 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
14:30	24.6	9.12	13260	8619	83.3	5.55	

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 16°C
Date: MAY 8, 2024
Tech: KR
Pond: BOUBNA SLOUGH

POND INFORMATION

Time of Measurement: 11:30
Pond Elevation:
Location of Pond:
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 240

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:30	15.7	9.10	3605	2340.	207	11.03	

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

Notes:

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 16°C

Date: MAY 8, 2024
Tech: KR

Pond: SLOUGH # 2

POND INFORMATION

Time of Measurement: 12:00
Pond Elevation: ____________

Location of Pond: ____________
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 240.0

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:05	16.6	9.15	6896	4485	188.6	10.59	

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

Notes: ____________

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 13°C

Date: MAY 8, 2024
Tech: KL

Pond: TUTT POND DUPA

POND INFORMATION

Time of Measurement: 10:00
Pond Elevation: ____

Location of Pond: ____
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 ✓

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	15.1	8.81	2848	1852.50	233.6	8.19	

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 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

Notes: ____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY / DRIZZLY
Temperature: 18°C

Date: SEPT 11, 2024
Tech: KR / PL

Pond: NE POND

POND INFORMATION

Time of Measurement: ____________

Pond Elevation: ____________

Location of Sample: ____________

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
8:50	17.5	9.61	~~1053~~ 1519	1053	180.3	15.28	

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: PARTLY CLOUDY
Temperature: 21°C
Date: SEPT 12, 2024
Tech: KR / P.L.
Pond: ROBERT LAKE NORTH

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
1:30	22.9	9.44	16111	10478	15.0	7.48	SHALLOW

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 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: PARTLY CLOUDY Date: SEPT 12, 2024 Pond: LITTLE ROBERT LAKE
Temperature: 20°C Tech: ______

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
13:15	20.6	8.99	3294	2138.5	132.5	~~20.6~~ 12.0	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 Very Silty

Analysis	Type		Container Size: 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 18°C

Date: SEPT 12, 2024
Tech: KR / R
Pond: BRANDT'S CREEK

POND INFORMATION

Time of Measurement: ______
Pond Elevation: ______
Location of Sample: ______
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
11:20	13.6	8.41	3974	2587	95.6	21.6	SILT DEPOSIT

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: CLOUDY
Temperature: 20°C

Date: SEPT. 11, 2024
Tech: KR / P.C
Pond: BUBNA SLOUGH

POND INFORMATION

Time of Measurement: ______
Pond Elevation: ______
Location of Sample: ______
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
1:20	18.2	9.28	3973	2580.50	181.3	9.92	

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: CLOUDY Date: SEPT. 12, 2024 Pond: ROBERT LAKE SOUTH DUP. C
Temperature: 17°C Tech: KR / P.L

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
10:40	17.2	9.32	18224	11849.50	126.6	9.02	SHALLOW - "PARKING" WALKABLE

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 20°C

Date: SEPT 11, 2024
Tech: KR / PL

Pond: SLOUGH #2

POND INFORMATION

Time of Measurement: ____________
Pond Elevation: ____________

Location of Sample: ____________
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
13:45	18.9	9.36	5718	4381	148.3	11.27	ALGEA

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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 DRIZZLY
Temperature: 18°C
Date: SEPT 11, 2024
Tech: KR / PL
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
11:10	15.5	9.73	23648	15372.50	-100.8	1.71	

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 Very Silty

Analysis	Type		Container Size: 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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 DRIZZLY
Temperature: 18°C
Date: SEPT 11, 2024
Tech: KR / PL
Pond: TUTI POND

POND INFORMATION

Time of Measurement: ______
Pond Elevation: ______
Location of Sample: ______
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
10:30	18.7	9.11	2839	1846	201.2	5.19	

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 15°C

Date: SEPT 11, 2024
Tech: ~~15°C~~ KR/PL

Pond: BREMIN POND DUP B

POND INFORMATION

Time of Measurement: ______
Pond Elevation: ______
Location of Sample: ______
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
9:15	18.7	9.23	1540	1001.00	191.6	12.00	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 5°C

Date: OCT 22, 2024 Pond: BREDIN POND
Tech: KR

POND INFORMATION

Time of Measurement: 9:30
Pond Elevation:
Location of Sample:
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 ✓
OK

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:30	10.2	8.10	1572	1020.50	232.1	6.62	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: PARTLY CLOUDY
Temperature: 6°

Date: OCT. 22, 2024
Tech: KE

Pond: TUJI POND

POND INFORMATION

Time of Measurement: 10:10
Pond Elevation: ______

Location of Sample: ______
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
10:10	10.3	8.62	2903	1891.50	225.6	9.10	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: PARTLY CLOUDY
Temperature: 6°C
Date: OCT 22, 2024
Tech: KR
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
10:30	8.6	9.41	25608	16646.4	-186.2	3.82	

Odour: ☑ Yes ☐ No If Yes, describe SULFUR
Sheen: ☑ Yes ☐ No If Yes, describe WHITE CHALKY SCUM, WATER MURKY REDISH
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
10

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: SHALLOW, HAD TO BE CAREFUL NOT TO SCOOP UP SEDIMENT

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY CLOUDY
Temperature: 7°C
Date: OCT. 22, 2024
Tech: KR
Pond: NE POND
DUP 2

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
11:10	10.1	9.18	3076	2002	73.6	10.75	

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: MOSTLY CLOUDY
Temperature: 11°C
Date: OCT 22, 2024
Tech: KR
Pond: BURSNA 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 ✓
0820

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:40	11.4	8.74	4376	3022.5	120.8	8.67	

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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: OCT 22, 2024   Pond: SLOUGH #2
Temperature: 11°   Tech: KL

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
1410	12.1	8.89	7831	5089.0	128.1	6.31	

Odour: ☐ Yes ☑ No If Yes, describe ______
Sheen: ☑ Yes ☐ No If Yes, describe GREEN ALGEA MAT / BLACK OILY SPOTS
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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 7°C

Date: OCT. 23, 2024
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
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
10:30	7.8	8.73	1850 2	2018	155.8	7.44	SHALLOW

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: SUNNY
Temperature: 8°C

Date: OCT. 23, 2024
Tech: KR

Pond: BRANDT'S CREEK

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 ✓

SKP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	4.8	7.27	3739	2431	188.7	11.41	SHALLOW

Odour: ☑ Yes ☐ No If Yes, describe DECAYING ORGANICS
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 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: PARTLY CLOUDY
Temperature: 9°C

Date: OCT 23, 2024
Tech: KR

Pond: LITTLE ROBERT LAKE
DUP 3 **

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	9.5	8.15	6420	4173	180.8	4.36	

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: ______

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY CLOUDY Date: OCT. 23, 2024 Pond: ROBERT LAKE NORTH
Temperature: 10° Tech: KR

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
12:20	9.8	8.93	18183	11817	157.0	7.17	VERY SHALLOW

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: ______ Temperature: ______ Date: MARCH 31, 2024
Sample Location: P1 LEACHATE MH2 Tech: KP

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ______ pH 7 ______ pH10 ______ 12880μs/cm ______
☐ Field Calibration ______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments

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, 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: NO SAMPLING YET FOR Q1
WAITING TO SCHEDULE ONCE THE
OTHER SITES ARE UP AND RUNNING

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: ______ Temperature: ______ Date: MARCH 31, 2024
Sample Location: P2AD LEACHATE Tech: VP

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______

☐ Field Bump

pH 4 ______ pH 7 ______ pH10 ______ 12880µs/cm ______

☐ Field Calibration ______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments

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, 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: NO SAMPLING YET FOR Q1
OUTLET PLUGGED FOR THE
CONSTRUCTION WORK DOWNSTREAM
COMPLETION SCHEDULED FOR END
OF APRIL

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: ______ Temperature: ______ Date: MARCH 31, 2024
Sample Location: L1 Tech: KP

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ______ pH 7 ______ pH10 ______ 12880µs/cm ______
☐ Field Calibration ______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments

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, 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: NO SAMPLING YET FOR Q1
LIFT STATION UNDER CONSTRUCTION
COMPLETION SCHEDULED FOR END OF APRIL

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: ______ Temperature: ______ Date: MARCH 31, 2024
Sample Location: L2 Tech: KR

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☐ Peristaltic
☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ______ pH 7 ______ pH10 ______ 12880µs/cm ______
☐ Field Calibration ______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments

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, 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: NO SAMPLING YET FOR Q1
L2 IS NOT PUMPING - SAMPLES NOT REPRESENTATIVE
REPAIRS SCHEDULED FOR APRIL

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Temperature: 23° C Date: MAY 9, 2024
Sample Location: PIAL 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 ✓ 12880µs/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
13:15	14.9	7.33	11193	7280	-94.2	1.15	SHALLOW / MUDDY...

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, 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: 13 Date: MAY 9, 2024
Sample Location: S LEACHATE WW Tech: KP

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ____ pH 7 ✓ pH10 ✓ 12880µs/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
8:40	15.2	7.42	14878	9672	-154.0	0.21	LOW FLOWS IN RECENT MONTHS -

Odour: ☑ Yes ☐ No If Yes, describe ROTTEN EGG H2S Ø
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: ______

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Temperature: 23°C Date: MAY 9, 2024
Sample Location: N PUMPHOUSE Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ______ pH 7 ✓ pH10 ✓ 12880µs/cm ✓
☐ Field Calibration ______ ORP 2400

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
1:50	16.1	7.59	7682	4992	155.0	1.71	

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	☐ 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: COMMISSIONED MAY 7th - EXCESS FLUSHING DONE PRIOR

LEACHATE SAMPLING FORM GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Temperature: 24 Date: MAY 9 2024
Sample Location: P1 LEACHATE MH2 Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other ______

Multi-meter Model: ☐ YSI Pro Plus Other: ______
☐ Field Bump
pH 4 ______ pH 7 ______ pH10 ______ 12880µs/cm ______
☐ Field Calibration ______

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
2:15	14.7	6.33	4713	3061	211.0	0.15	

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 I I I Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 18°C Date: SEPT 06, 2024
Sample Location: ES #2 Tech:

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other

Multi-meter Model: ☐ YSI Pro Plus Other: DOPA
☐ 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
8:40	16.8	7.39	6027	391930	-231.4	6.08	Dark

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 I I I Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 25 °C Date: SEPT 6, 2024
Sample Location: P1 LEACHATE MH2 Tech: KR/PL

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 ______

Sep10/24

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	17.3	7.41	20749	13481	58.1	2.10	DARK RUSTY

Odour: ☑ Yes ☐ No If Yes, describe HYDROCARBON ?
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 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:

LEACHATE SAMPLING FORM GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Temperature: 26° Date: SEPTEMBER 6, 2024
Sample Location: P2A2 LEACHATE MH Tech: KR / P.C

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 / DO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:00	16.3	7.62	5963	3867	-3.4	2.87	MID ROSTY / YELLOW

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: 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 22°C Date: ~~AUG~~ .6, 2024
Sample Location: N PUMP HOUSE Tech: KR / PL

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 / DO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:50	16.9	7.51	8324	5409	-185.6	3.43	

Odour: ☑ Yes ☐ No If Yes, describe LIGHT YELLOW
Sheen: ☐ Yes ☑ No If Yes, describe SULFUR
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 Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: 7°C Date: OCT. 18, 2024
Sample Location: P2A2 LEACH. MH Tech:

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
14:40	8.3	7.75	5728	4199	-15.0	4.39	

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, 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: RAINY Temperature: 8° Date: OCT 18, 2024
Sample Location: PI LEACHATE MH2 Tech: KP

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
13:50	12.2	7.50	22022	14280	35.1	2.04	

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 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: 7° Date: OCT 18, 2024
Sample Location: N PUMPHOUSE 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
11:20	12.9	7.87	7150	4560	-54.1	6.54	

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 I I I I I I Very Silty

Analysis	Type		Container Size 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: * DUP 1 *

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 6° C Date: OCT. 18, 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
10:20	14.3	7.52	13661	8898	-145.5	6.79	

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 40 mL	125 mL	250 mL	500 mL	1 L	Filtered	
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: - SUB PUMP + PEROXIDE

Tech: KR Date: MARCH 13/24

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
~~GL0-1~~	-	-	-	~~24.4~~	
~~GL0-2~~	-	-	-	~~18.4~~	~~Sub. Pump~~
~~GL0-3~~	-	-	-	~~13.8~~	~~Sub. Pump~~
GL1-1	2.663	2.361		12.7	
GL1-2	2.792	2.437		5.7	
GL2-1	0.165	0.110		10.5	
GL2-2	0.44	.430		6.4	
GL4-1	1.59	1.406		9.8	
GL4-2	2.66	2.029		5.9	
GL5-1	1.455	1.395		20.4	Sub. Pump
GL5-2	1.575	1.526		10.3	
GL5-3	1.612	1.581		5.6	
~~GL6-1 (2011)~~	-	-		5.7	decommissioned
GL7-1	2.162	1.682		6.1	Sub Pump
GL8-1	1.162	✓		10.1	
GL8-2	1.538	✓		4.3	
~~GL9-1~~	-	-		33.2	decommissioned
~~GL9-2~~	-	-		12.9	decommissioned
~~GL9-3~~	-	-		5.8	decommissioned
GL10-1	0.79	1.495		9.4	
~~GL12-1~~	-	-		9.3	decommissioned
~~GL13-1~~	-	-		8.6	decomissioned
GL15-1	8.935			18.2	
GL15-2	5.213			6.4	questionable reading - level:
GL16-1	1.042	✓		15.3	
~~GL17-1~~	-	-		23.1	decommissioned
~~GL17-2~~	-	-		9.1	decommissioned
GL20-1	3.019	2.969		5.5	
GL23-1	3.115	2.290		9.8	
GL24-1	3.348	3.061		5.4	
GL26-1	0.625	0.480		26.6	
GL26-2	3.555	3.306		7.5	
GL26-3	3.48	3.244		6.0	
GL26-4	3.567	3.299		4.2	
GL27-1	1.499	✓		26.2	
GL27-2	2.405	2.134		12.8	
GL27-3	2.482	2.190		10.7	
GL27-4	2.42	2.089		2.3	

GL28-1	5.445	√		**22.7**	
GL28-2	5.013	√		**9.5**	
GL28-3	4.976	√		**7.5**	
GL29-1	4.448	4.313		**46.2**	
GL29-2	4.177	3.657		**12.1**	
~~GL31-1~~	-	-		**9.0**	decommissioned
GL31-2	1.32			**11.5**	
~~GL31-3~~	-	-		**15.2**	decommissioned
~~GL32-1~~	-	-		**6.9**	decommissioned
~~GL32-2~~	-	-		**9.9**	decommissioned
~~GL32-3~~	-	-		**11.8**	decommissioned
GL34-1	-	-		**8.3**	destroyed by machinery
GL34-2	1.664			**12.3**	
GL34-3	1.998			**15.3**	
GL35-1	0.983	0.720		**8.4**	
GL35-2	0.602	0.573		**13.0**	
GL35-3	0.829	0.835	??	**15.4**	
GL39-1	3.575	√		**10.5**	
GL39-2	3.56	√		**6.5**	
GL39-3	3.651	√		**3.8**	
GL40-1	dry	√		**5.4**	
~~GL40-2~~	-	-		**17.4**	
~~GL40-3~~	-	-		**12.4**	
GL41-1	3.588	2.685		**11.5**	
GL41-2	3.627	2.703		**8.2**	
GL41-3	3.6	2.675		**5.2**	
GL42-1	11.003	√		**21.1**	
GL42-2	11.137	√		**12.5**	
GL42-3	9.403	√	9.481	**9.4**	
06BH02	0.7	√		**10.9**	
~~09BH03~~				**9.0**	appears to have been hit by
09BH04	artesian	artesian		**12.9**	
09BH06-S	0.26	√		**5.8**	
09BH06-D	0.475	√		**10.3**	raised in Q3 2022
~~09BH07~~	-	-		**4.9**	damaged
Bredin Pond	0.53	2.57	0.53		
NE Pond MH			0.992		
NE 1st Bench			0.747		
~~Tutt Pond MH~~				**4.3**	destroyed. Use staff gauge.
Slough MH			1.352		
Trench MH			2.757		

Tutt (Staff Gauge)			7.75		coated in algae, difficult to
Slough (Staff Gauge)			BG		
Bredin Leachate Transducer			2.57		sensor

Tech: ~~EL~~ AG Date: MARCH 13/24

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
~~GL0-1~~	-	-	-	~~24.4~~	
~~GL0-2~~	-	-	-	~~18.4~~	~~Sub. Pump~~
~~GL0-3~~	-	-	-	~~13.8~~	~~Sub. Pump~~
GL1-1	2.663			12.7	
GL1-2	2.792			5.7	
GL2-1	0.165			10.5	
GL2-2	0.44			6.4	
GL4-1	1.59			9.8	
GL4-2	2.66			5.9	
GL5-1	1.455			20.4	Sub. Pump
GL5-2	1.575			10.3	
GL5-3	1.612			5.6	
~~GL6-1 (2011)~~	-	-		5.7	decommissioned
GL7-1	2.162			6.1	Sub Pump
GL8-1	1.162	1.141		10.1	
GL8-2	1.538	1.360		4.3	
~~GL9-1~~	-	-		33.2	decommissioned
~~GL9-2~~	-	-		12.9	decommissioned
~~GL9-3~~	-	-		5.8	decommissioned
GL10-1	0.79			9.4	
~~GL12-1~~	-	-		9.3	decommissioned
~~GL13-1~~	-	-		8.6	decomissioned
GL15-1	8.935	6.2424		18.2	
GL15-2	5.213	5.512		6.4	questionable reading - level:
GL16-1	1.042	1.025		15.3	
~~GL17-1~~	-	-		23.1	decommissioned
~~GL17-2~~	-	-		9.1	decommissioned
GL20-1	3.019			5.5	
GL23-1	3.115			9.8	
GL24-1	3.348			5.4	
GL26-1	0.625			26.6	
GL26-2	3.555			7.5	
GL26-3	3.48			6.0	
GL26-4	3.567			4.2	
GL27-1	1.499	1.542		26.2	
GL27-2	2.405			12.8	
GL27-3	2.482			10.7	
GL27-4	2.42			2.3	

GL28-1	5.445	4.945		22.7	
GL28-2	5.013	4.985		9.5	
GL28-3	4.976	5.410		7.5	
GL29-1	4.448			46.2	
GL29-2	4.177			12.1	
~~GL31-1~~	-	-		9.0	decommissioned
GL31-2	1.32			11.5	
~~GL31-3~~	-	-		15.2	decommissioned
~~GL32-1~~	-	-		6.9	decommissioned
~~GL32-2~~	-	-		9.9	decommissioned
~~GL32-3~~	-	-		11.8	decommissioned
GL34-1	-	-		8.3	destroyed by machinery
GL34-2	1.664			12.3	
GL34-3	1.998			15.3	
GL35-1	0.983			8.4	
GL35-2	0.602			13.0	
GL35-3	0.829			15.4	
GL39-1	3.575	3.480		10.5	
GL39-2	3.56	3.490		6.5	
GL39-3	3.651	3.150		3.8	
GL40-1	dry	DRy 4.43		5.4	
~~GL40-2~~	-	-		17.4	
~~GL40-3~~	-	-		12.4	
GL41-1	3.588			11.5	
GL41-2	3.627			8.2	
GL41-3	3.6			5.2	
GL42-1	11.003	10.995		21.1	
GL42-2	11.137	11.095		12.5	
GL42-3	9.403	9.176	9.481	9.4	
06BH02	0.7	1.010		10.9	
~~09BH03~~				9.0	appears to have been hit by
09BH04	artesian	artesian		12.9	
09BH06-S	0.26	.168 m		5.8	
09BH06-D	0.475	.369 m		10.3	raised in Q3 2022
~~09BH07~~	-	-		4.9	damaged
Bredin Pond					
NE Pond MH					
NE 1st Bench					
~~Tutt Pond MH~~				4.3	destroyed. Use staff gauge.
Slough MH					
Trench MH					

Tutt (Staff Gauge)					coated in algae, difficult to
Slough (Staff Gauge)					
Bredin Leachate Transducer					sensor

Robert Lake Staff Gauge 27cm.

Tech: KR Date: JUNE 6, 2024

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
~~GL0-1~~	-		-	~~24.4~~	
~~GL0-2~~	-		-	~~18.4~~	~~Sub. Pump~~
~~GL0-3~~	-		-	~~13.8~~	~~Sub. Pump~~
GL1-1	2.361	2.467		12.7	
GL1-2	2.437	2.529		5.7	
GL2-1	0.11	0/full		10.5	
GL2-2	0.43	0.433		6.4	
GL4-1	1.406	1.452		9.8	
GL4-2	2.029	2.186		5.9	
GL5-1	1.395	1.418		20.4	Sub. Pump
GL5-2	1.526	1.551		10.3	
GL5-3	1.581	1.597		5.6	
~~GL6-1 (2011)~~	-			5.7	decommissioned
GL7-1	1.682	1.700		6.1	Sub Pump
GL8-1	1.141	1.157		10.1	
GL8-2	1.36	1.460		4.3	
~~GL9-1~~	-			33.2	decommissioned
~~GL9-2~~	-			12.9	decommissioned
~~GL9-3~~	-			5.8	decommissioned
GL10-1	1.495	1.631		9.4	
~~GL12-1~~	-			9.3	decommissioned
~~GL13-1~~	-			8.6	decomissioned
GL15-1	6.242	6.306		18.2	
GL15-2	5.512	5.588		6.4	questionable reading - level:
GL16-1	1.025	1.044		15.3	
~~GL17-1~~	-			23.1	decommissioned
~~GL17-2~~	-			9.1	decommissioned
GL20-1	2.969	2.937		5.5	
GL23-1	2.29	2.320		9.8	
GL24-1	3.061	3.146		5.4	
GL26-1	0.48	0.493		26.6	
GL26-2	3.306	3.354		7.5	
GL26-3	3.244	3.276		6.0	
GL26-4	3.299	3.297		4.2	
GL27-1	1.542	1.520		26.2	
GL27-2	2.134	2.20		12.8	
GL27-3	2.19	2.224		10.7	
GL27-4	2.089	1.991		2.3	

GL28-1	4.945	5.235		22.7	
GL28-2	4.985	4.610		9.5	
GL28-3	5.41	4.537		7.5	
GL29-1	4.313	4.386		46.2	
GL29-2	3.657	3.617		12.1	
~~GL31-1~~	-			9.0	decommissioned
~~GL31-2~~	-			11.5	decommissioned
~~GL31-3~~	-			15.2	decommissioned
~~GL32-1~~	-			6.9	decommissioned
~~GL32-2~~	-			9.9	decommissioned
~~GL32-3~~	-			11.8	decommissioned
~~GL34-1~~	-			8.3	destroyed by machinery
~~GL34-2~~	-			12.3	decommissioned
~~GL34-3~~	-			15.3	decommissioned
GL35-1	0.72	0.866		8.4	
GL35-2	0.573	0.680		13.0	
GL35-3	0.835	0.794		15.4	
GL39-1	3.48	3.414		10.5	
GL39-2	3.49	3.360		6.5	
GL39-3	3.15	3.840		3.8	
GL40-1	dry	Dry		5.4	
~~GL40-2~~	-			17.4	
~~GL40-3~~	-			12.4	
GL41-1	2.685	2.763		11.5	
GL41-2	2.703	2.766		8.2	
GL41-3	2.675	2.745		5.2	
GL42-1	10.995	10.747		21.1	
GL42-2	11.095	~~[illegible]~~ 10.837		12.5	
GL42-3	9.176	9.235	9.481	9.4	
06BH02	1.01	0.835		10.9	
~~09BH03~~				9.0	appears to have been hit by
09BH04	artesian			12.9	
09BH06-S	0.16	0.243		5.8	
09BH06-D	0.369	.426		10.3	raised in Q3 2022
~~09BH07~~	-			4.9	damaged

Tech: KR **Date:** Sep 09, 2024

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
~~GL0-1~~	-		-	~~24.4~~	
~~GL0-2~~	-		-	~~18.4~~	~~Sub. Pump~~
~~GL0-3~~	-		-	~~13.8~~	~~Sub. Pump~~
GL1-1	2.467	2.846		12.7	
GL1-2	2.529	2.918		5.7	
GL2-1	0.05	0.367		10.5	
GL2-2	0.433	0.602		6.4	
GL4-1	1.452	1.613		9.8	
GL4-2	2.186	2.299		5.9	
GL5-1	1.418	1.613		20.4	Sub. Pump
GL5-2	1.551	1.780		10.3	
GL5-3	1.597	1.793		5.6	
~~GL6-1 (2011)~~				5.7	decommissioned
GL7-1	1.7	1.893		6.1	Sub Pump
GL8-1	1.157	1.371		10.1	
GL8-2	1.4	1.623		4.3	
~~GL9-1~~				33.2	decommissioned
~~GL9-2~~				12.9	decommissioned
~~GL9-3~~				5.8	decommissioned
GL10-1	1.631	2.075		9.4	
~~GL12-1~~				9.3	decommissioned
~~GL13-1~~				8.6	decomissioned
GL15-1	6.306	6.494		18.2	
GL15-2	5.588	5.736		6.4	questionable reading - levels seemed to be falling
GL16-1	1.044	1.269		15.3	
~~GL17-1~~				23.1	decommissioned
~~GL17-2~~				9.1	decommissioned
GL20-1	2.937	3.125		5.5	
GL23-1	2.32	2.656		9.8	
GL24-1	3.146	3.531		5.4	
GL26-1	0.493	0.527		26.6	
GL26-2	3.354	3.638		7.5	
GL26-3	3.276	3.599		6.0	
GL26-4	3.297	3.661		4.2	
GL27-1	1.52	1.552		26.2	
GL27-2	2.2	2.319		12.8	
GL27-3	2.224	2.369		10.7	
GL27-4	1.991	2.175		2.3	
GL28-1	5.235	5.083		22.7	
GL28-2	4.61	~~4.586~~	4.585	9.5	
GL28-3	4.537	4.546		7.5	
GL29-1	4.386	4.393		46.2	
GL29-2	3.617	3.649		12.1	
~~GL31-1~~				9.0	decommissioned
~~GL31-2~~				11.5	decommissioned
~~GL31-3~~				15.2	decommissioned

~~GL32-1~~				**6.9**	decommissioned
~~GL32-2~~				**9.9**	decommissioned
~~GL32-3~~				**11.8**	decommissioned
~~GL34-1~~				**8.3**	destroyed by machinery
~~GL34-2~~				**12.3**	decommissioned
~~GL34-3~~				**15.3**	decommissioned
GL35-1	0.866	1.016		**8.4**	
GL35-2	0.6	0.807		**13.0**	
GL35-3	0.794	1.100		**15.4**	
GL39-1	3.414	3.391		**10.5**	
GL39-2	3.36	3.149		**6.5**	
GL39-3	3.64	3.161		**3.8**	
GL40-1	dry	DRY		**5.4**	
~~GL40-2~~				**17.4**	
~~GL40-3~~				**12.4**	
GL41-1	2.763	2.928		**11.5**	
GL41-2	2.766	2.909		**8.2**	
GL41-3	2.745	2.883		**5.2**	
GL42-1	10.747	10.735		**21.1**	
GL42-2	10.837	10.849		**12.5**	
GL42-3	9.235	8.569	~~9.481~~	**9.4**	
06BH02	0.835	0.511		**10.9**	
~~09BH03~~				**9.0**	appears to have been hit by tractor
09BH04	artesian	ARTESIAN		**12.9**	
09BH06-S	0.243	0.258		**5.8**	
09BH06-D	0.426	0.390		**10.3**	raised in Q3 2022
~~09BH07~~				**4.9**	damaged
NEW GWs					
GL 43-1	/	3.478		4.260	NE FIELD (CLAY)
GL44-1	/	0.608		~~18.8~~ 18.488	SOUTH - CLOSER TO L.R.L
GL 44-2	/	~~18.488~~ 0.671		16.122	NORTH
GL 45-1	/	0.591		22.502	SOUTH - CLOSER TO R.L.
GL 45-2	/	0.812		11.252	NORT

Tech: KR Date: Nov. 19, 2024

[illegible]	Previous Level (m)	[illegible]	[illegible]	[illegible]	[illegible]
~~GL0-1~~			-	~~24.4~~	
~~GL0-2~~			-	~~18.4~~	~~Sub. Pump~~
~~GL0-3~~			-	~~13.8~~	~~Sub. Pump~~
GL1-1	2.846	2.693		12.7	
GL1-2	2.918	2.759		5.7	
GL2-1	0.367	0.100		10.5	
GL2-2	0.602	0.417		6.4	
GL4-1	1.613	1.533		9.8	
GL4-2	2.299	2.173		5.9	
GL5-1	1.613	1.398		20.4	Sub. Pump
GL5-2	1.75	1.532		10.3	
GL5-3	1.793	1.565		5.6	
~~GL6-1 (2011)~~				5.7	decommissioned
GL7-1	1.893	1.931		6.1	Sub Pump
GL8-1	1.371	1.198		10.1	
GL8-2	1.623	1.490		4.3	
~~GL9-1~~				33.2	decommissioned
~~GL9-2~~				12.9	decommissioned
~~GL9-3~~				5.8	decommissioned
GL10-1	2.075	1.678		9.4	
~~GL12-1~~				9.3	decommissioned
~~GL13-1~~				8.6	decomissioned
GL15-1	6.494	6.577		18.2	
GL15-2	5.736	5.847		6.4	questionable reading - levels seemed to be falling
GL16-1	1.269	1.084		15.3	
~~GL17-1~~				23.1	decommissioned
~~GL17-2~~				9.1	decommissioned
GL20-1	3.125	2.983		5.5	
GL23-1	2.656	2.626		9.8	
GL24-1	3.531	3.399		5.4	
GL26-1	0.527	0.566		26.6	
GL26-2	3.638	3.527		7.5	
GL26-3	3.599	3.552		6.0	
GL26-4	3.661	3.678		4.2	
GL27-1	1.552	1.537		26.2	
GL27-2	2.319	2.469		12.8	
GL27-3	2.369	2.320		10.7	
GL27-4	2.175	2.245		2.3	
GL28-1	5.083	5.368		22.7	
GL28-2	4.585	4.917		9.5	
GL28-3	4.546	4.872		7.5	
GL29-1	4.393	4.423		46.2	
GL29-2	3.649	4.351		12.1	
~~GL31-1~~				9.0	decommissioned
~~GL31-2~~				11.5	decommissioned
~~GL31-3~~				15.2	decommissioned

~~GL32-1~~				6.9	decommissioned
~~GL32-2~~				9.9	decommissioned
~~GL32-3~~				11.8	decommissioned
~~GL34-1~~				8.3	destroyed by machinery
~~GL34-2~~				12.3	decommissioned
~~GL34-3~~				15.3	decommissioned
GL35-1	1.016	0.955		8.4	
GL35-2	0.807	0.658		13.0	
GL35-3	1.1	0.872		15.4	
GL39-1	3.391	3.412		10.5	
GL39-2	3.149	3.413		6.5	
GL39-3	3.161	3.414		3.8	
GL40-1	dry	DRY		5.4	
~~GL40-2~~				17.4	
~~GL40-3~~				12.4	
GL41-1	2.928	9.226		11.5	
GL41-2	2.909	2972		8.2	
GL41-3	2.883	2.948		5.2	
GL42-1	10.735	10.729		21.1	
GL42-2	10.849	11.066		12.5	
GL42-3	8.569	8.786		9.4	
06BH02	0.571	1.069		10.9	
~~09BH03~~				9.0	appears to have been hit by tractor
09BH04	artesian	ARTESIAN		12.9	
09BH06-S	2.258	0.258		5.8	
09BH06-D	0.39	0.452		10.3	raised in Q3 2022
~~09BH07~~				4.9	damaged
NEW GW (2024)					
GL 43-1	3.478	3.381		4.3	NE Field (clay)
GL 44-1	0.608	0.820		18.5	S Closer to Little Robert Lake
GL 44-2	0.671	0.882		16.1	N
GL 45-1	0.591	0.838		22.5	S Closer to Robert Lake
GL 45-2	0.812	0.949		11.3	N
GL 46-1		11.233			

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: K. RATVIC   Date: JAN. 10, 2024

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*. 205
NE Pond	MH	1.29	MH Elevation 444.165 ~~0.997~~
NE Pond - 1st Bench	MH	0.997	MH Elevation 444.165
Tutt Pond	MH	~~875~~	MH Elevation 440.694
Tutt Pond	Staff Gauge	87.5	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.997	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.486	MH Elevation 440.607
Robert Lake	Staff Gauge	7.5	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: FEB 16, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	2.19	Transducer reading. Dock Elevation 439.171*. 0.50 (FROZEN)
NE Pond	MH	1.081	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.900	MH Elevation 444.165 FROZEN ?
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	8.5	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.560	MH Elevation 439.229 FROZEN ?
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.814	MH Elevation 440.607
Robert Lake	Staff Gauge	20.3	Install on fence post at Robert Lake for quick water reference FROZEN - FENCE PARTLY IN WATER

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR, AG   Date: MARCH 13, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	2.57	Transducer reading. Dock Elevation 439.171*. 0.53
NE Pond	MH	0.992	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.747	MH Elevation 444.165
Tutt Pond	MH	N/A	MH Elevation 440.694
Tutt Pond	Staff Gauge	7.75	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.352	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.757	MH Elevation 440.607
Robert Lake	Staff Gauge	27 cm	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR   Date: April 18, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.45 2.21	Transducer reading. Dock Elevation 439.171*.
NE Pond	MH	1.613	MH Elevation 444.165
NE Pond - 1st Bench	MH	1.360	MH Elevation 444.165
Tutt Pond	MH	—	MH Elevation 440.694
Tutt Pond	Staff Gauge	28 cm	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.379	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.759	MH Elevation 440.607
Robert Lake	Staff Gauge	33 cm	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: MAY 22, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.45	Transducer reading. Dock Elevation 439.171*. 2.17 GROUND
NE Pond	MH	0.933	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.727	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	77	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.415	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.840	MH Elevation 440.607
Robert Lake	Staff Gauge	18	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: JUNE 19, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock		Transducer reading. Dock Elevation 439.171*.
NE Pond	MH	0.947	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.764	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	75	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.452	MH Elevation 439.229
Slough	Staff Gauge	86	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.856	MH Elevation 440.607
Robert Lake	Staff Gauge	15	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR　　Date: JULY 18, 2024

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.57	Transducer reading. Dock Elevation 439.171*. 2.22
NE Pond	MH	1.045	MH Elevation 444.165
NE Pond - 1st Bench	MH	1.034	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	70 ?	Installed near discharge to Slough for quick water reference HARD TO READ GAUGE RUSTED
Slough	Hydrometer MH	1.560	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.938	MH Elevation 440.607
Robert Lake	Staff Gauge	3	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: AUGUST 19, 2024 Date: KR

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*. 2.25
NE Pond	MH	1.190	MH Elevation 444.165
NE Pond - 1st Bench	MH	1.165	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	58 cm	Installed near discharge to Slough for quick water reference HARD TO READ GUAGE
Slough	Hydrometer MH	1.644	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.036	MH Elevation 440.607
Robert Lake	Staff Gauge	BG	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: Sept 24, 2024

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*. 2.22
NE Pond	MH 1.247	1.247	MH Elevation 444.165
NE Pond - 1st Bench	MH	1.192	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	55 (?)	Installed near discharge to Slough for quick water reference STAFF GAUGE CORRODED
Slough	Hydrometer MH	1.709	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.095	MH Elevation 440.607
Robert Lake	Staff Gauge	BG	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR

Date: OCT 28, 2024

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
NE Pond	MH	1.200	MH Elevation 444.165
NE Pond - 1st Bench	MH	1.087	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	66	Installed near discharge to Slough for quick water reference STAFF GAUGE CORRODED HARD TO READ
Slough	Hydrometer MH	1.728	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.148	MH Elevation 440.607
Robert Lake	Staff Gauge	BG	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR   Date: Nov. 21, 2024

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*. 2.09
NE Pond	MH	1.097	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.912	MH Elevation 444.165
Tutt Pond	MH	ND (GAUGE SUBMERGED POLE SHIFTED	MH Elevation 440.694
Tutt Pond	Staff Gauge		Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.721	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.225	MH Elevation 440.607
Robert Lake	Staff Gauge	BG	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

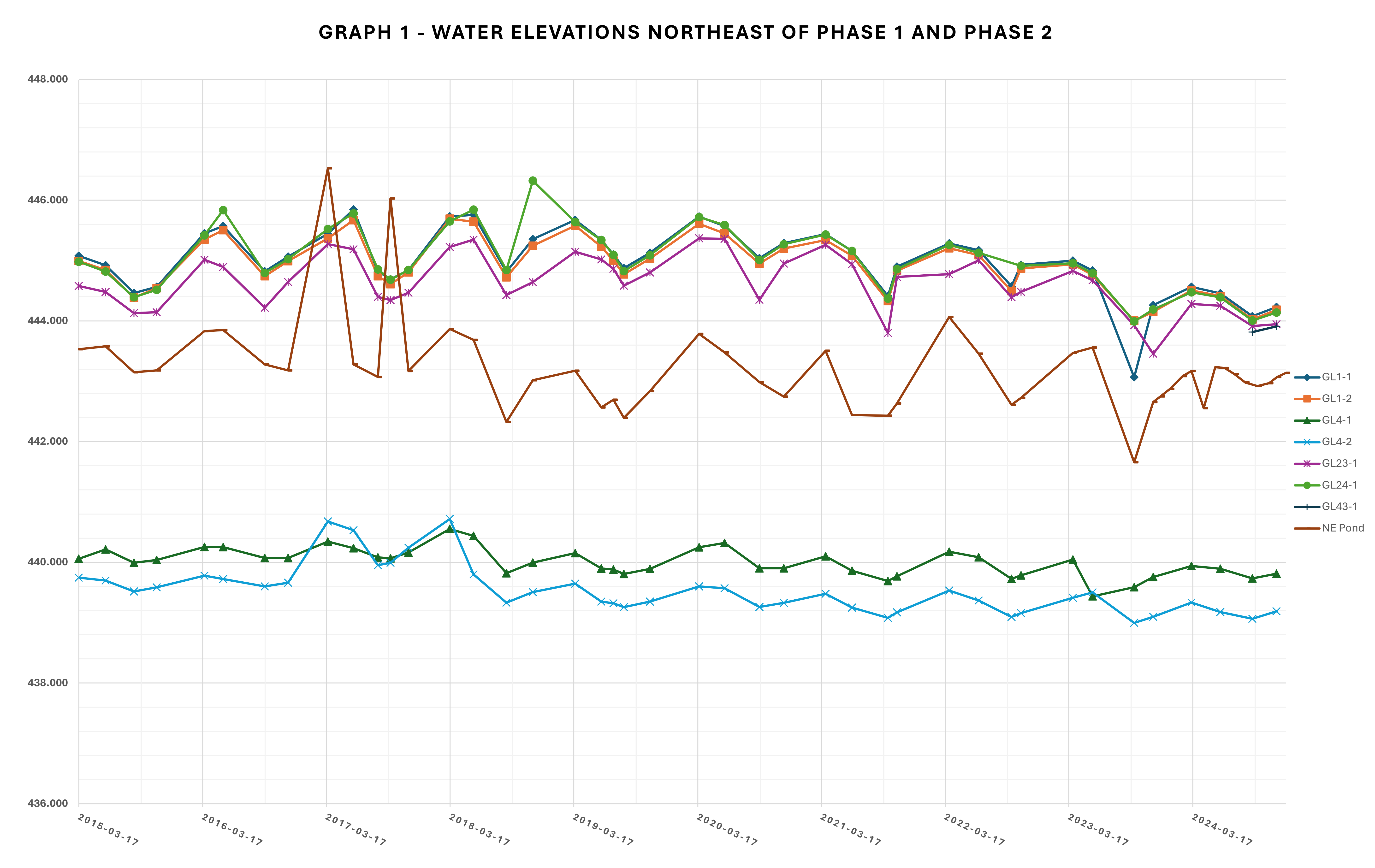
City of Kelowna

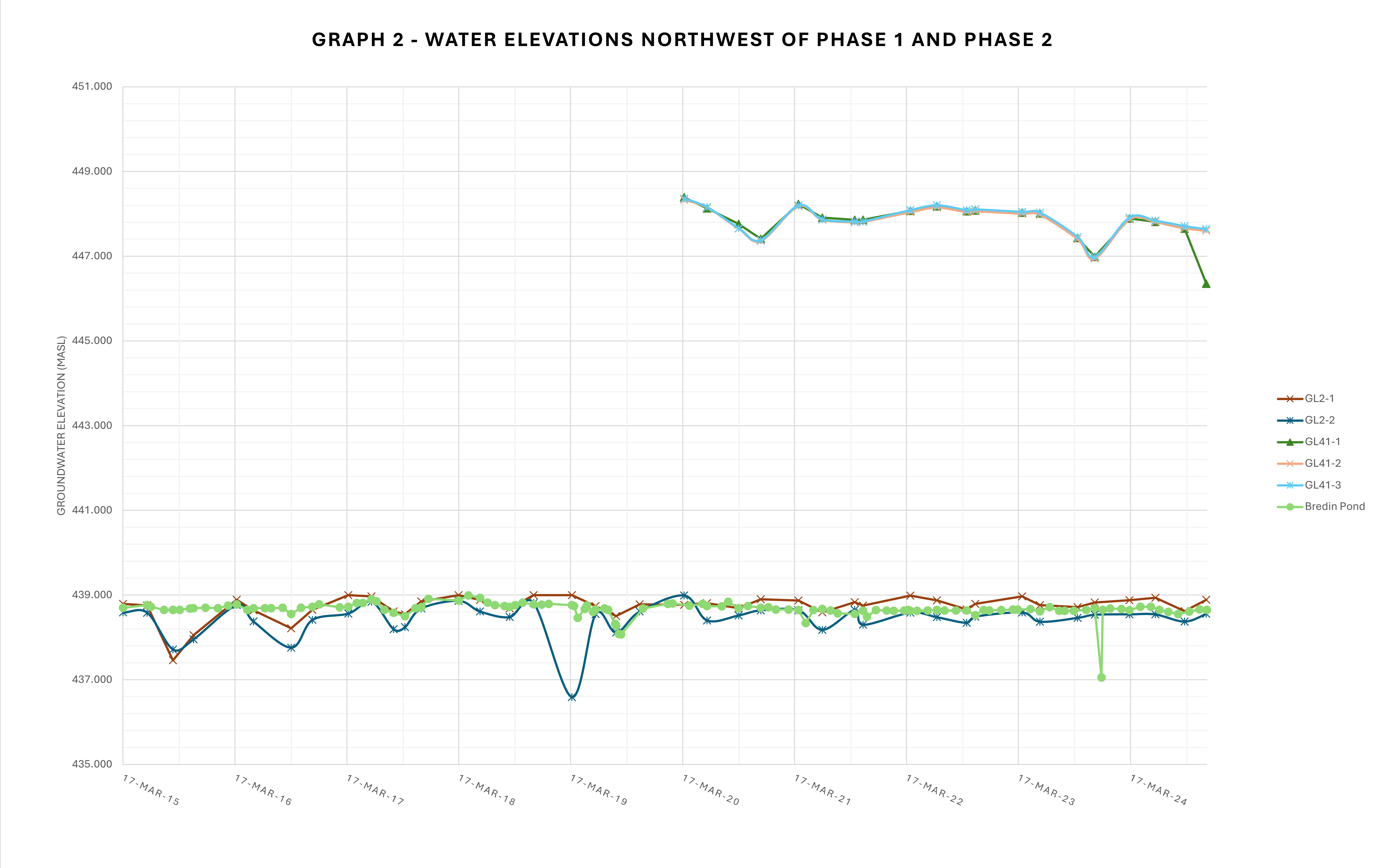
Tech: KL Date: DECEMBER 17, 2024

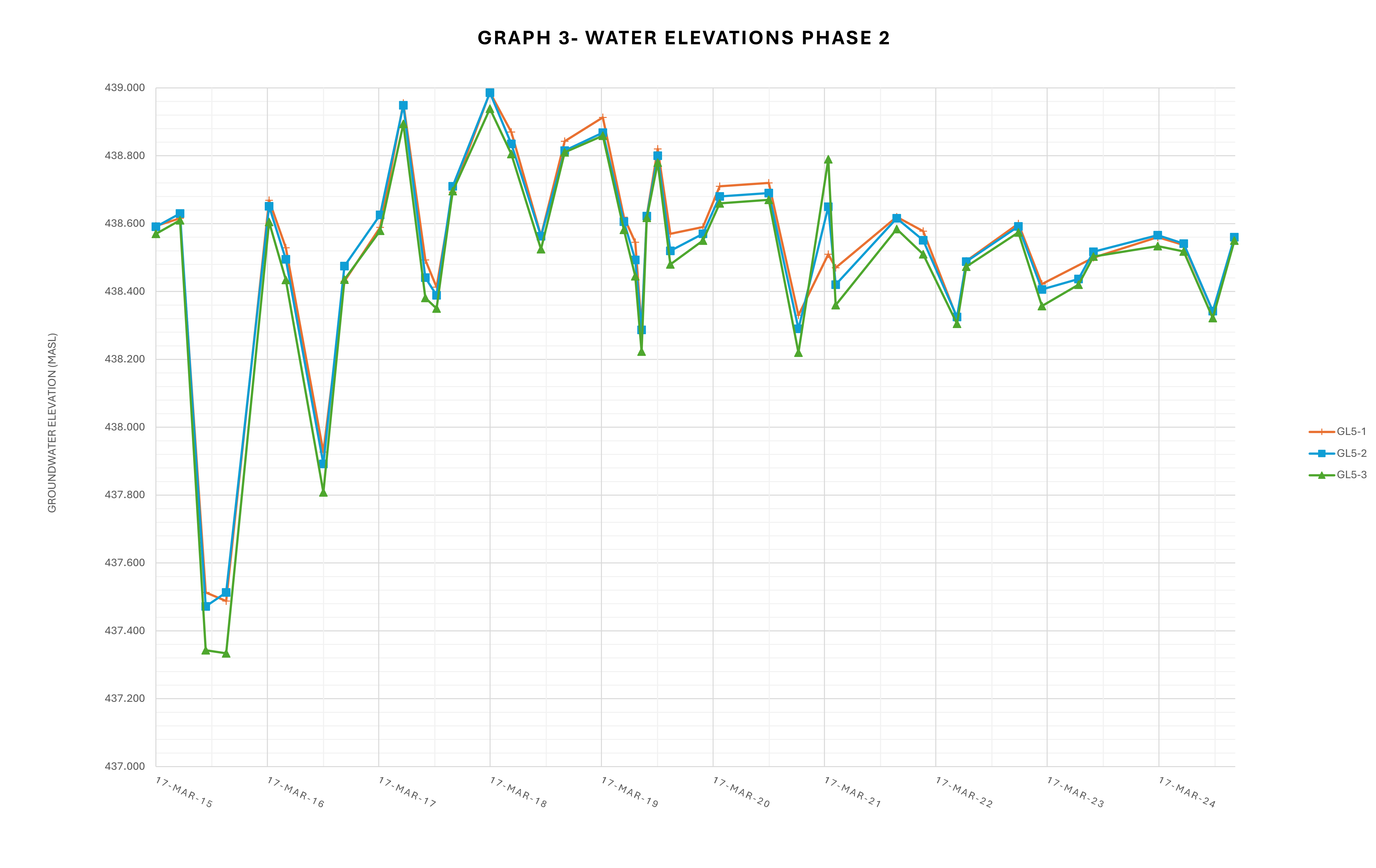
Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	9.52	Transducer reading. Dock Elevation 439.171*. 2.21
NE Pond	MH	1.027	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.827	MH Elevation 444.165
Tutt Pond	MH	ND	MH Elevation 440.694 GAUGE SUBMERGED - POLE SHIFTED
Tutt Pond	Staff Gauge	/	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.700	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.162	MH Elevation 440.607
Robert Lake	Staff Gauge	15	Install on fence post at Robert Lake for quick water reference

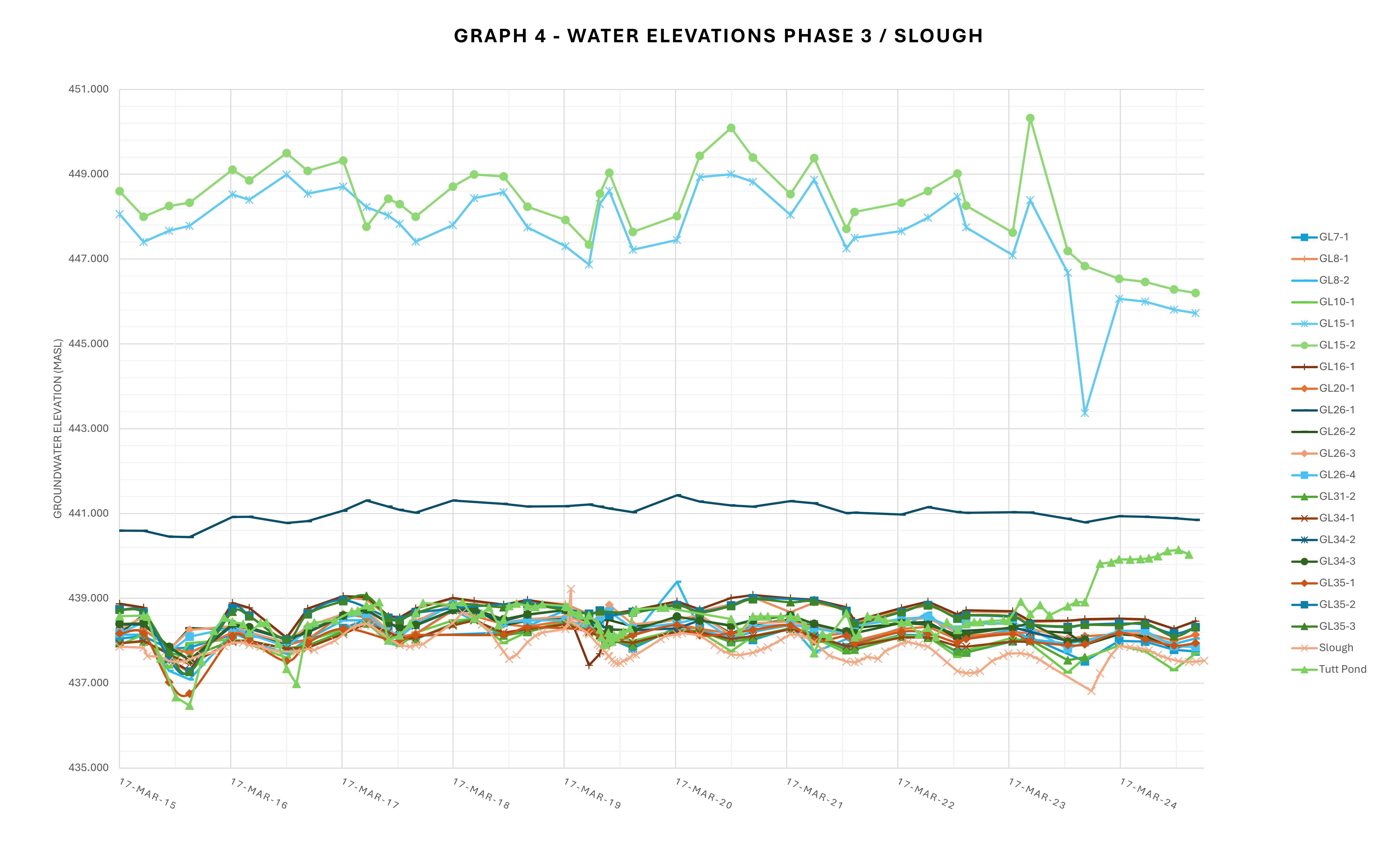
APPENDIX E

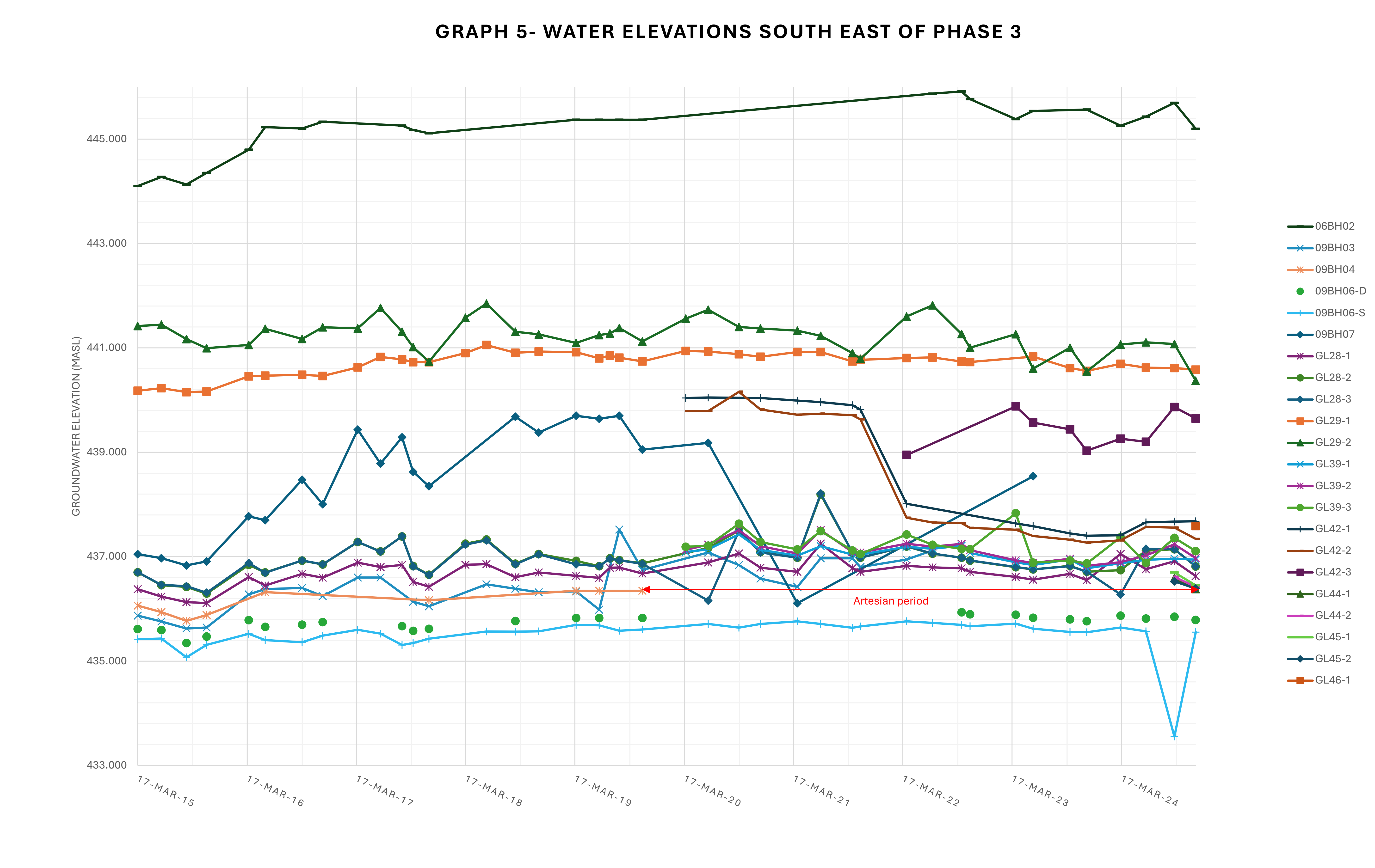
GRAPHS AND PLOTS

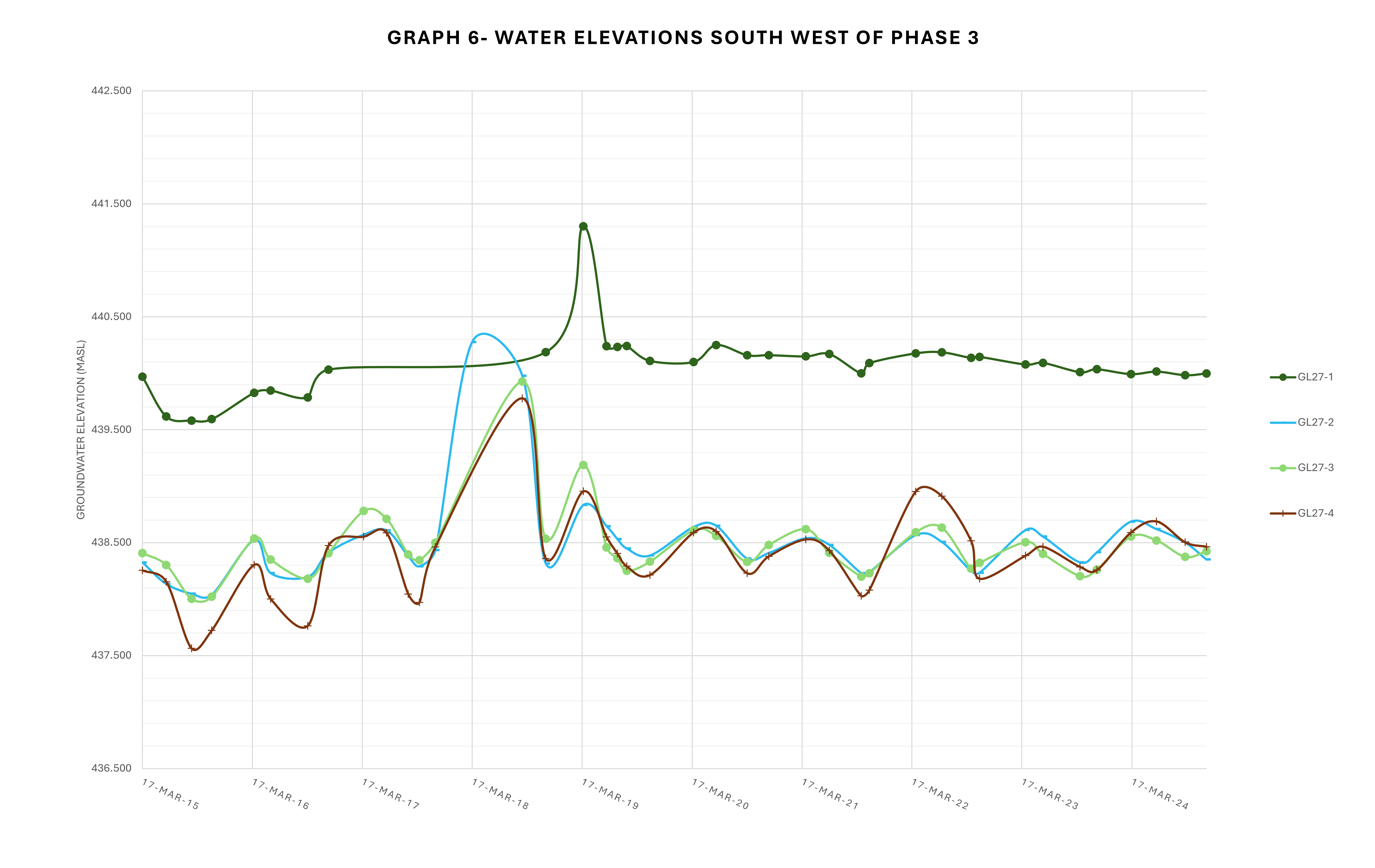

GRAPH 1 - WATER ELEVATIONS NORTHEAST OF PHASE 1 AND PHASE 2
448.000
446.000
444.000
442.000
440.000
438.000
436.000
2015-03-17
2016-03-17
2017-03-17
2018-03-17
2019-03-17
2020-03-17
2021-03-17
2022-03-17
2023-03-17
2024-03-17
GL1-1
GL1-2
GL4-1
GL4-2
GL23-1
GL24-1
GL43-1
NE Pond

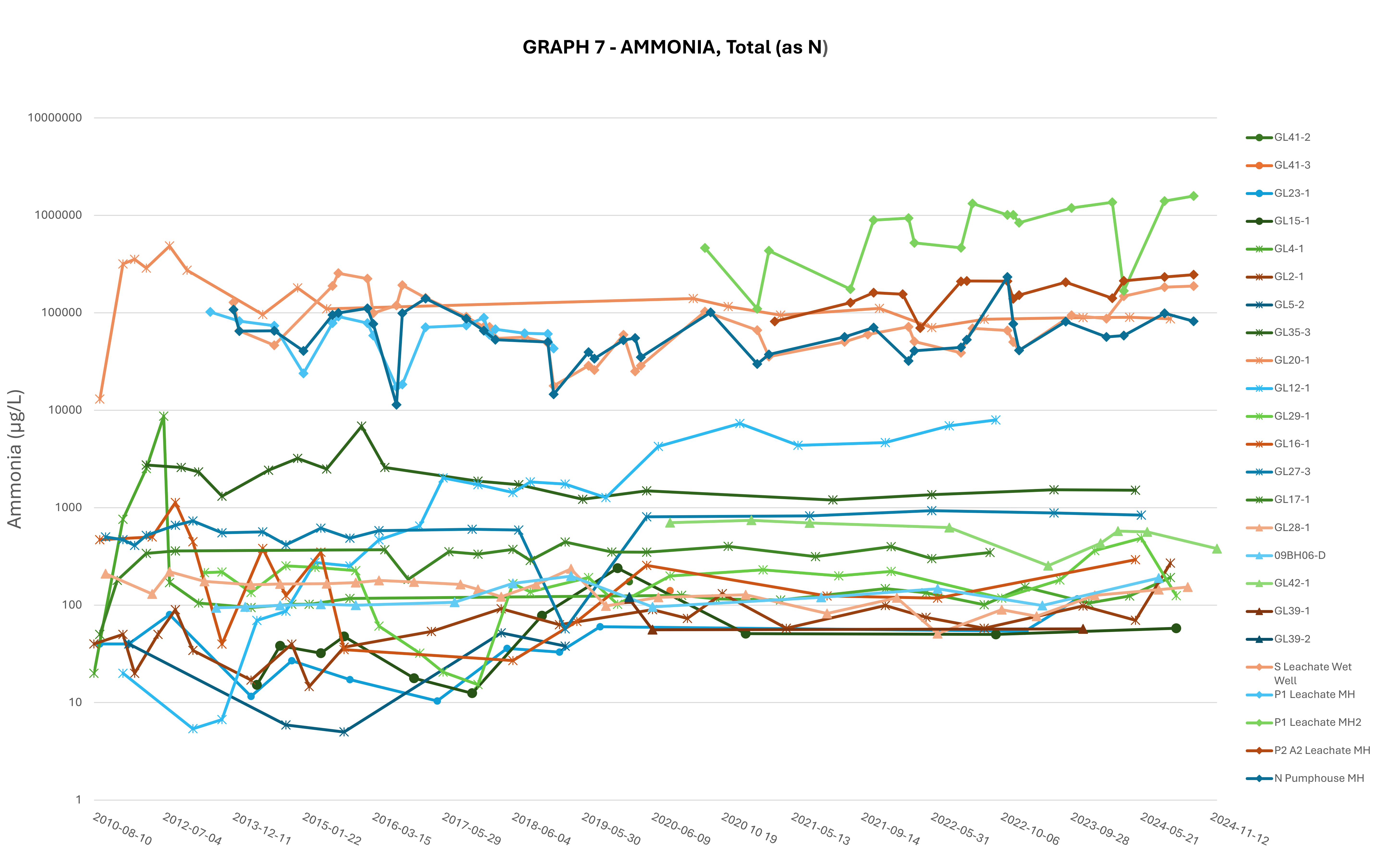

GRAPH 2 - WATER ELEVATIONS NORTHWEST OF PHASE 1 AND PHASE 2
GROUNDWATER ELEVATION (MASL)
451.000
449.000
447.000
445.000
443.000
441.000
439.000
437.000
435.000
17-MAR-15
17-MAR-16
17-MAR-17
17-MAR-18
17-MAR-19
17-MAR-20
17-MAR-21
17-MAR-22
17-MAR-23
17-MAR-24
GL2-1
GL2-2
GL41-1
GL41-2
GL41-3
Bredin Pond

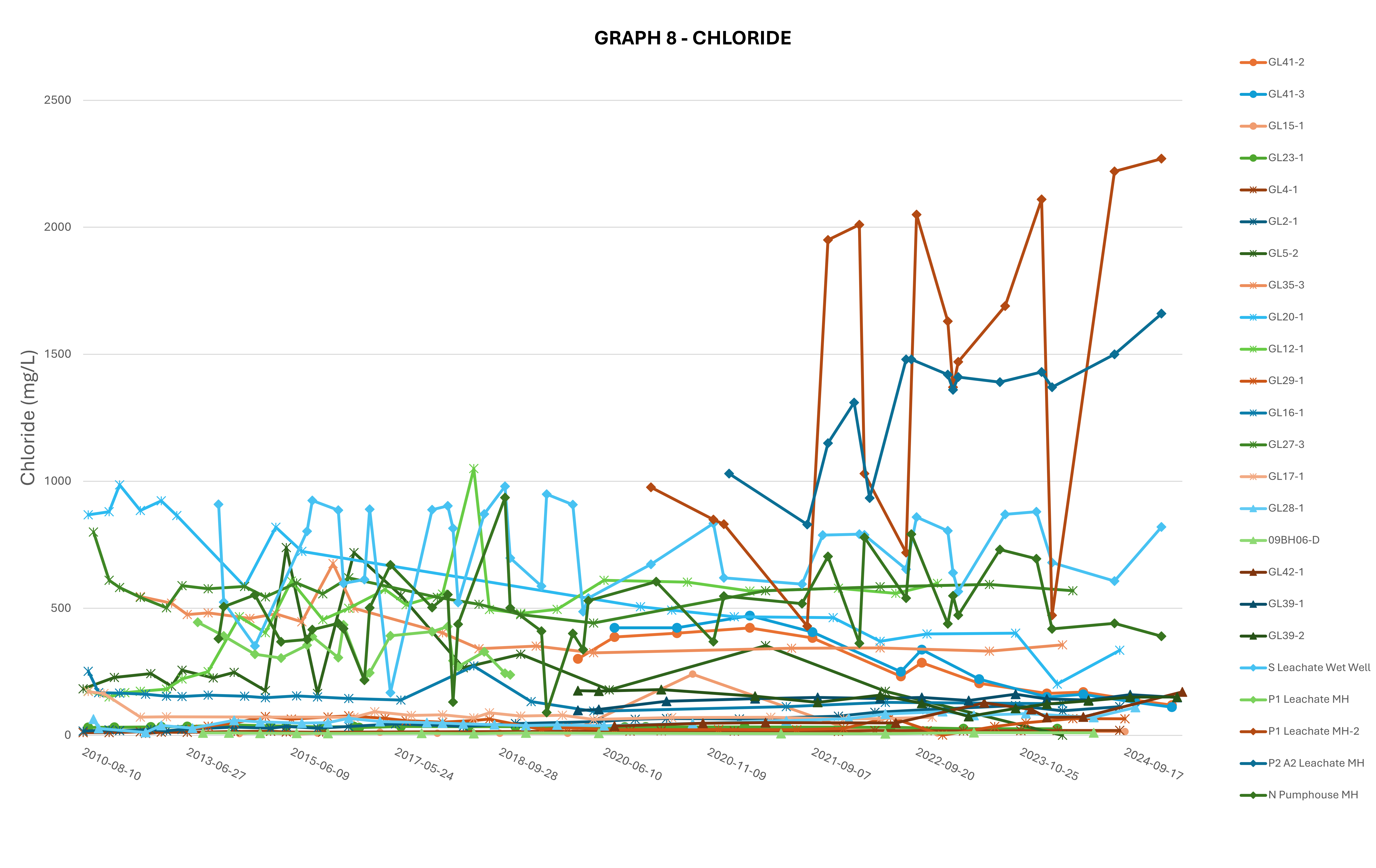

GRAPH 3- WATER ELEVATIONS PHASE 2
GROUNDWATER ELEVATION (MASL)
439.000
438.800
438.600
438.400
438.200
438.000
437.800
437.600
437.400
437.200
437.000
17-MAR-15
17-MAR-16
17-MAR-17
17-MAR-18
17-MAR-19
17-MAR-20
17-MAR-21
17-MAR-22
17-MAR-23
17-MAR-24
GL5-1
GL5-2
GL5-3

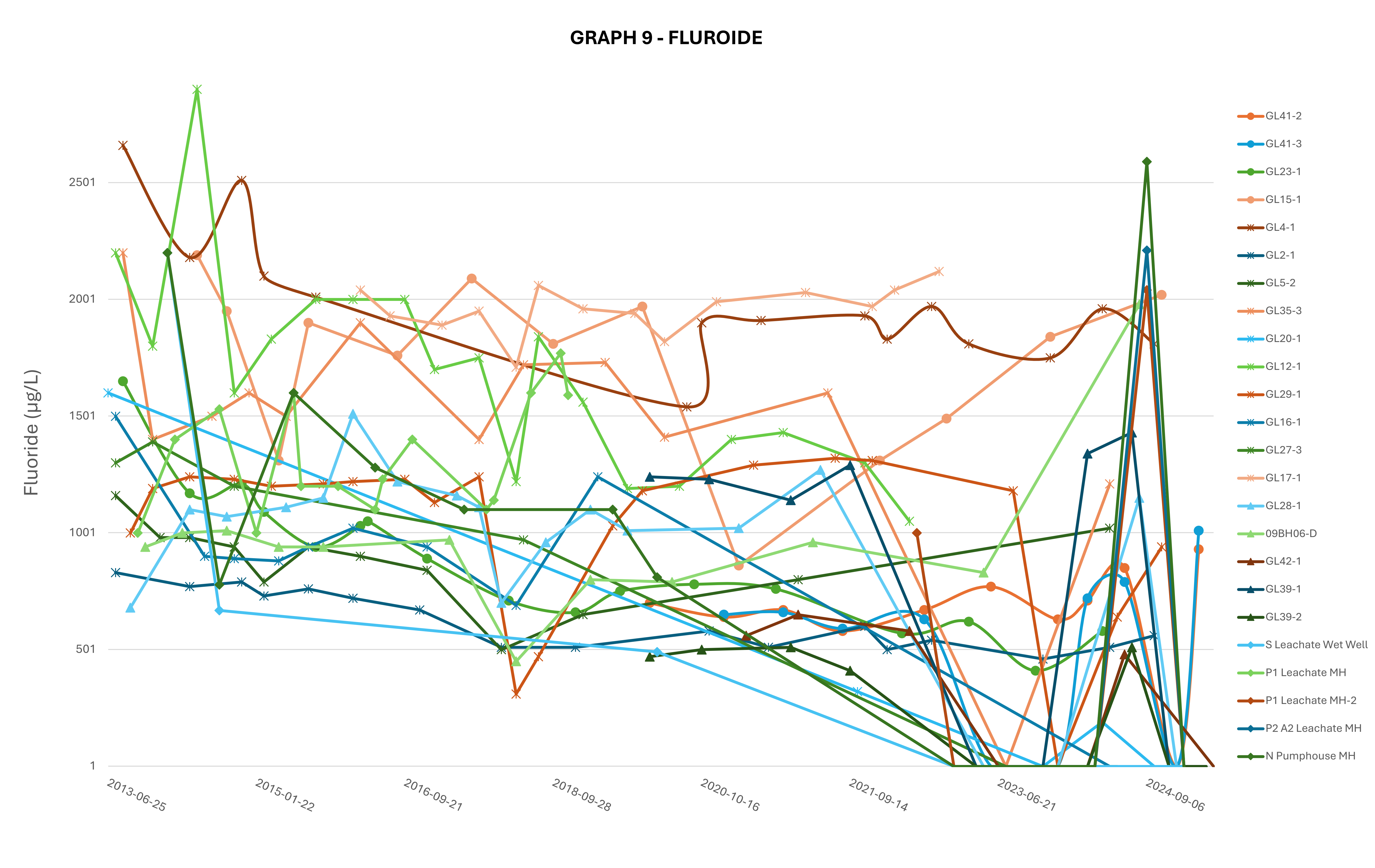

GRAPH 4 - WATER ELEVATIONS PHASE 3 / SLOUGH
GROUNDWATER ELEVATION (MASL)
451.000
449.000
447.000
445.000
443.000
441.000
439.000
437.000
435.000
17-MAR-15
17-MAR-16
17-MAR-17
17-MAR-18
17-MAR-19
17-MAR-20
17-MAR-21
17-MAR-22
17-MAR-23
17-MAR-24
GL7-1
GL8-1
GL8-2
GL10-1
GL15-1
GL15-2
GL16-1
GL20-1
GL26-1
GL26-2
GL26-3
GL26-4
GL31-2
GL34-1
GL34-2
GL34-3
GL35-1
GL35-2
GL35-3
Slough
Tutt Pond

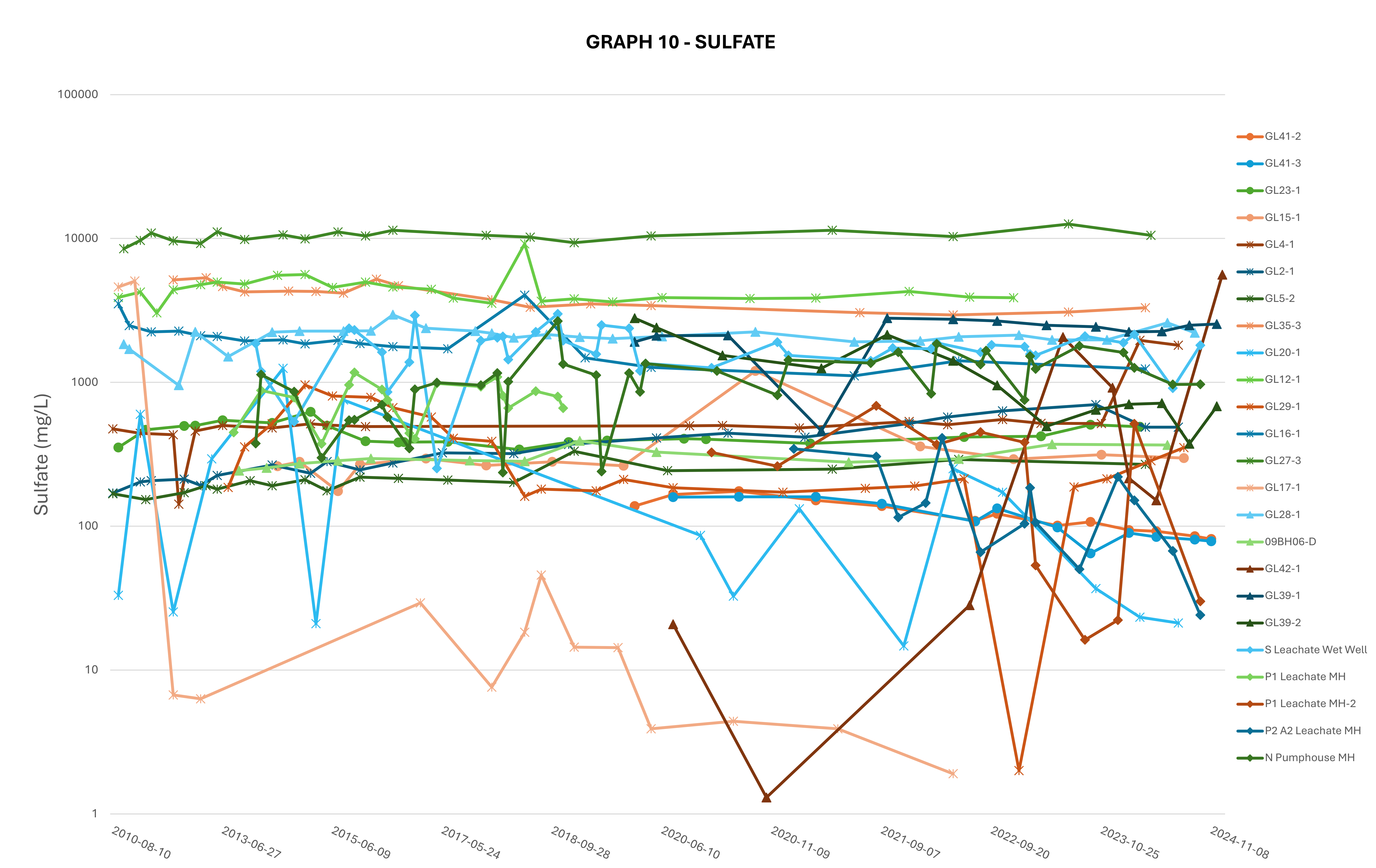

GRAPH 5- WATER ELEVATIONS SOUTH EAST OF PHASE 3
GROUNDWATER ELEVATION (MASL)
445.000
443.000
441.000
439.000
437.000
435.000
433.000
17-MAR-15
17-MAR-16
17-MAR-17
17-MAR-18
17-MAR-19
17-MAR-20
17-MAR-21
17-MAR-22
17-MAR-23
17-MAR-24
Artesian period
06BH02
09BH03
09BH04
09BH06-D
09BH06-S
09BH07
GL28-1
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

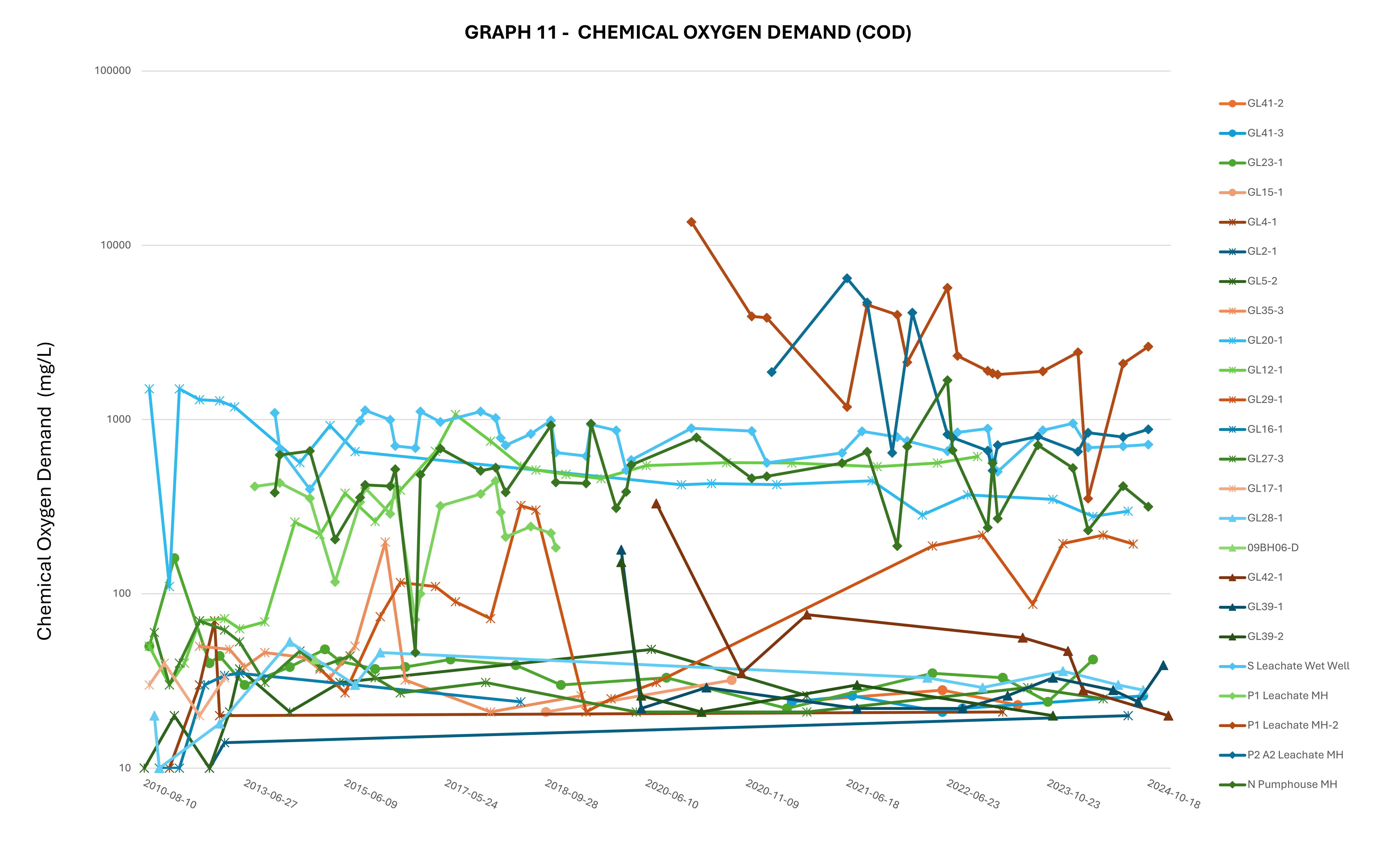

GRAPH 6- WATER ELEVATIONS SOUTH WEST OF PHASE 3
442.500
441.500
440.500
439.500
438.500
437.500
436.500
GROUNDWATER ELEVATION (MASL)
17-MAR-15
17-MAR-16
17-MAR-17
17-MAR-18
17-MAR-19
17-MAR-20
17-MAR-21
17-MAR-22
17-MAR-23
17-MAR-24
GL27-1
GL27-2
GL27-3
GL27-4

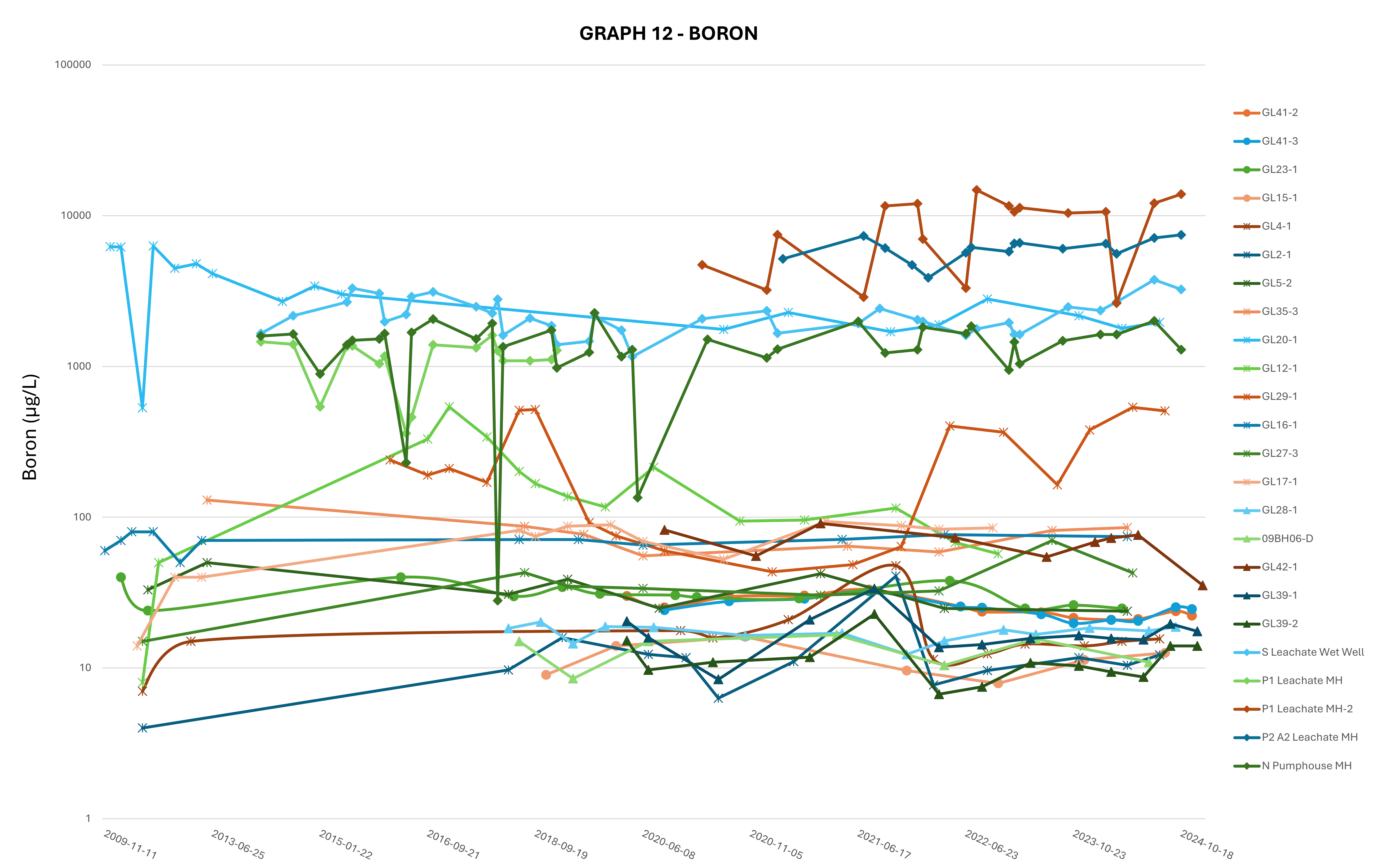

GRAPH 7 - AMMONIA, Total (as N)
Ammonia (µg/L)
10000000
1000000
100000
10000
1000
100
10
1
2010-08-10
2012-07-04
2013-12-11
2015-01-22
2016-03-15
2017-05-29
2018-06-04
2019-05-30
2020-06-09
2020 10 19
2021-05-13
2021-09-14
2022-05-31
2022-10-06
2023-09-28
2024-05-21
2024-11-12
GL41-2
GL41-3
GL23-1
GL15-1
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

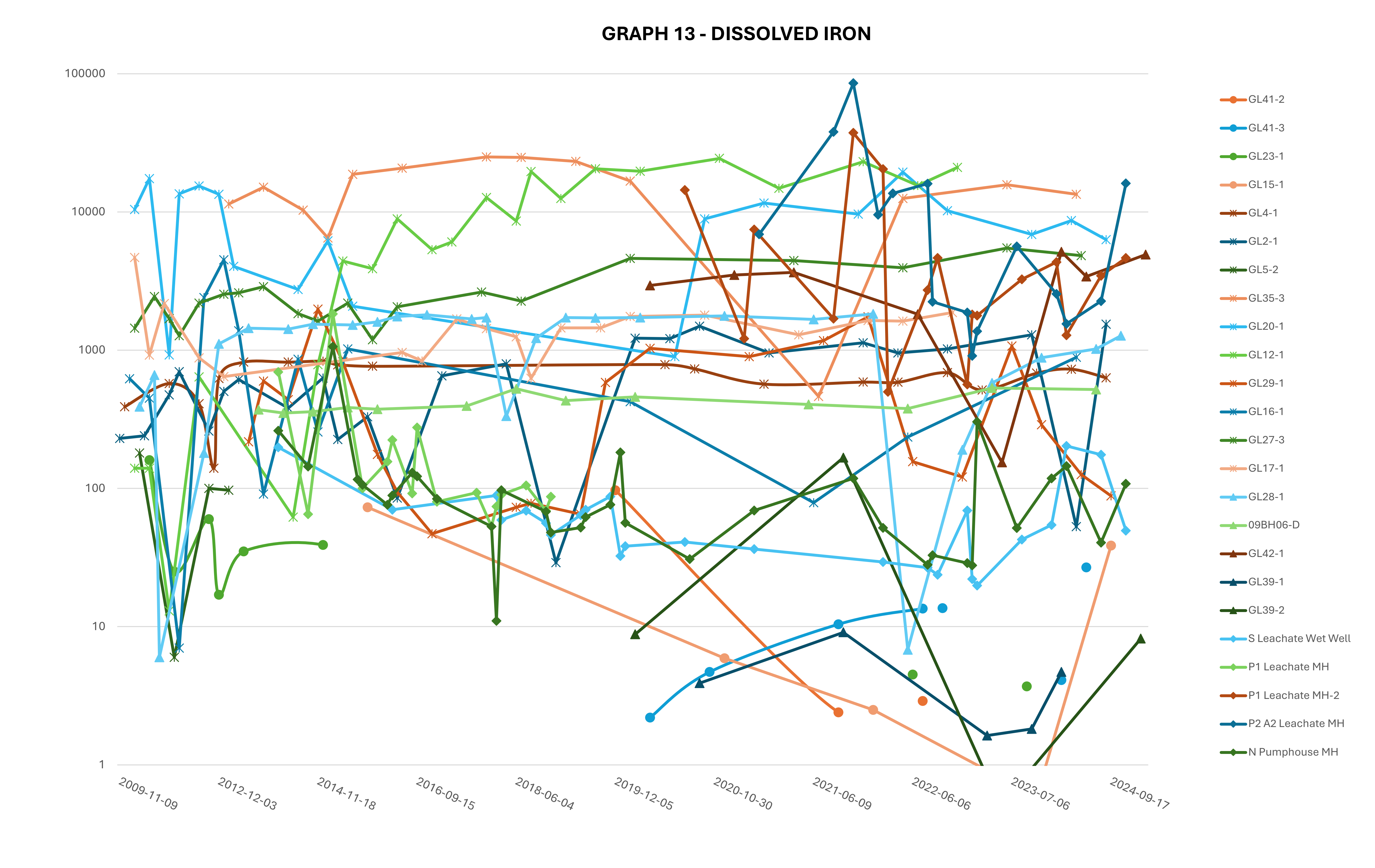

GRAPH 8 - CHLORIDE
Chloride (mg/L)
2500
2000
1500
1000
500
0
2010-08-10
2013-06-27
2015-06-09
2017-05-24
2018-09-28
2020-06-10
2020-11-09
2021-09-07
2022-09-20
2023-10-25
2024-09-17
GL41-2
GL41-3
GL15-1
GL23-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH


GRAPH 9 - FLUROIDE
Fluoride (µg/L)
2501
2001
1501
1001
501
1
2013-06-25
2015-01-22
2016-09-21
2018-09-28
2020-10-16
2021-09-14
2023-06-21
2024-09-06
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

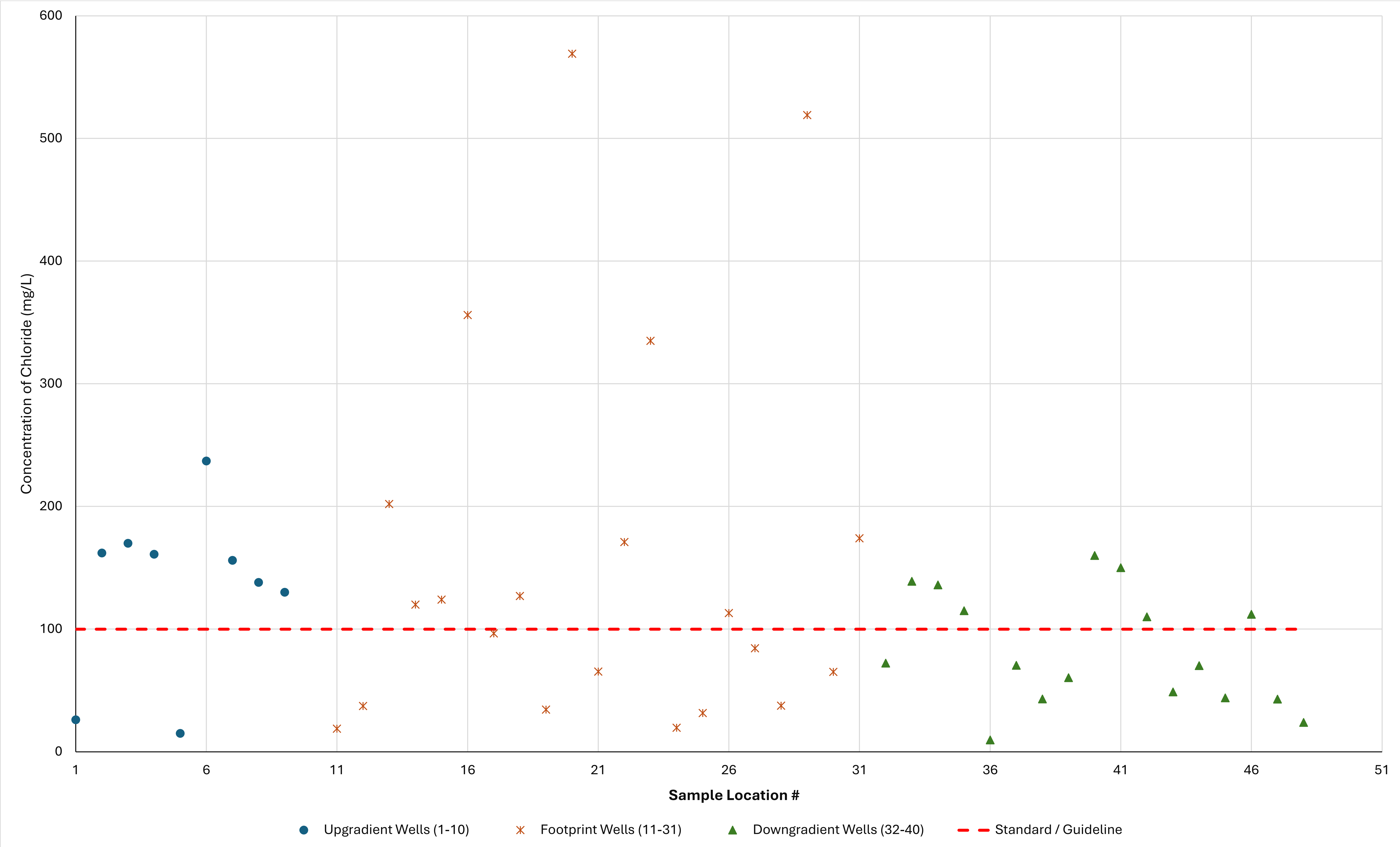

GRAPH 10 - SULFATE
Sulfate (mg/L)
100000
10000
1000
100
10
1
2010-08-10
2013-06-27
2015-06-09
2017-05-24
2018-09-28
2020-06-10
2020-11-09
2021-09-07
2022-09-20
2023-10-25
2024-11-08
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH


GRAPH 11 - CHEMICAL OXYGEN DEMAND (COD)
Chemical Oxygen Demand (mg/L)
100000
10000
1000
100
10
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
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

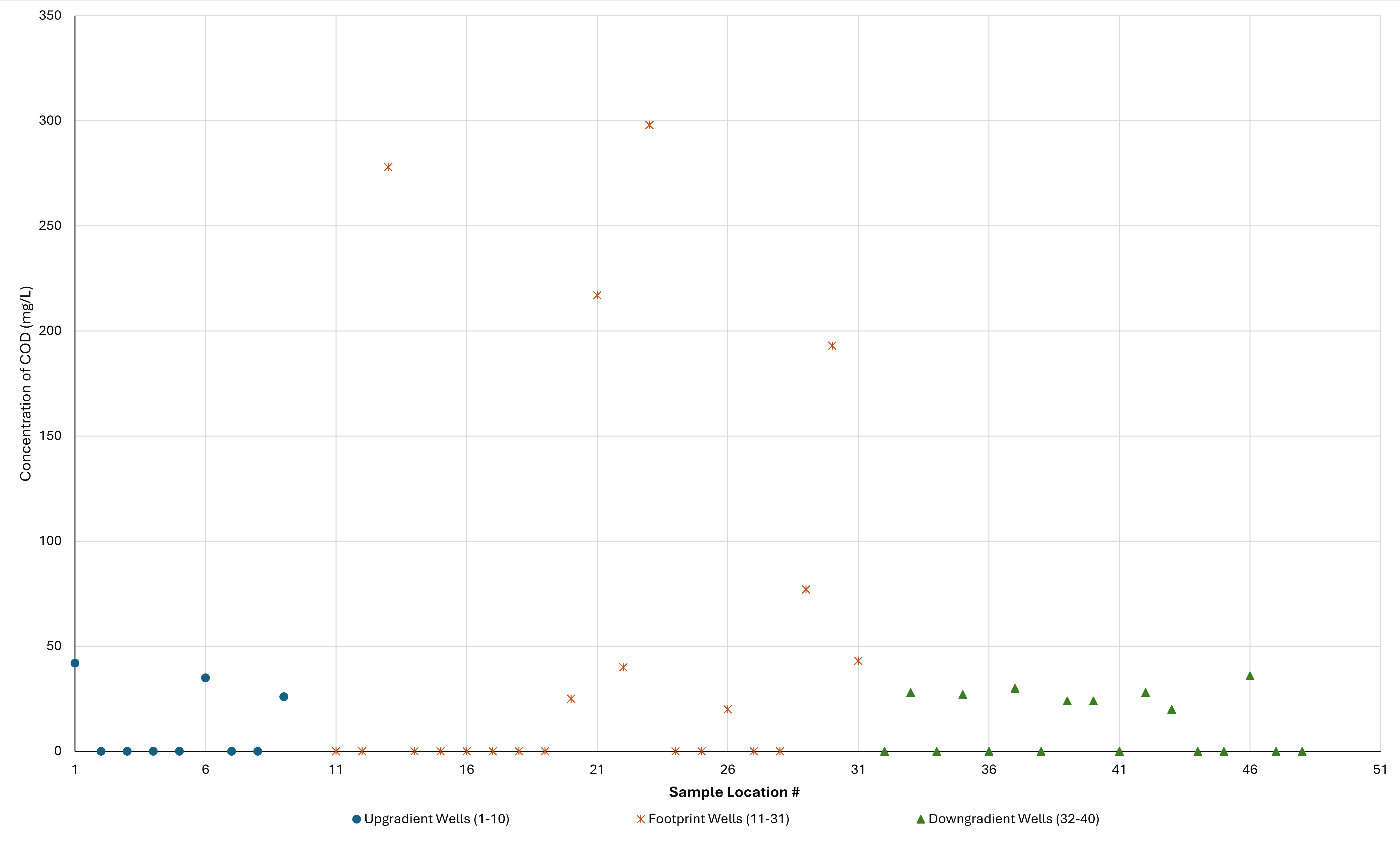

GRAPH 12 - BORON
Boron (µg/L)
100000
10000
1000
100
10
1
2009-11-11
2013-06-25
2015-01-22
2016-09-21
2018-09-19
2020-06-08
2020-11-05
2021-06-17
2022-06-23
2023-10-23
2024-10-18
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH


GRAPH 13 - DISSOLVED IRON
100000
10000
1000
100
10
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
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

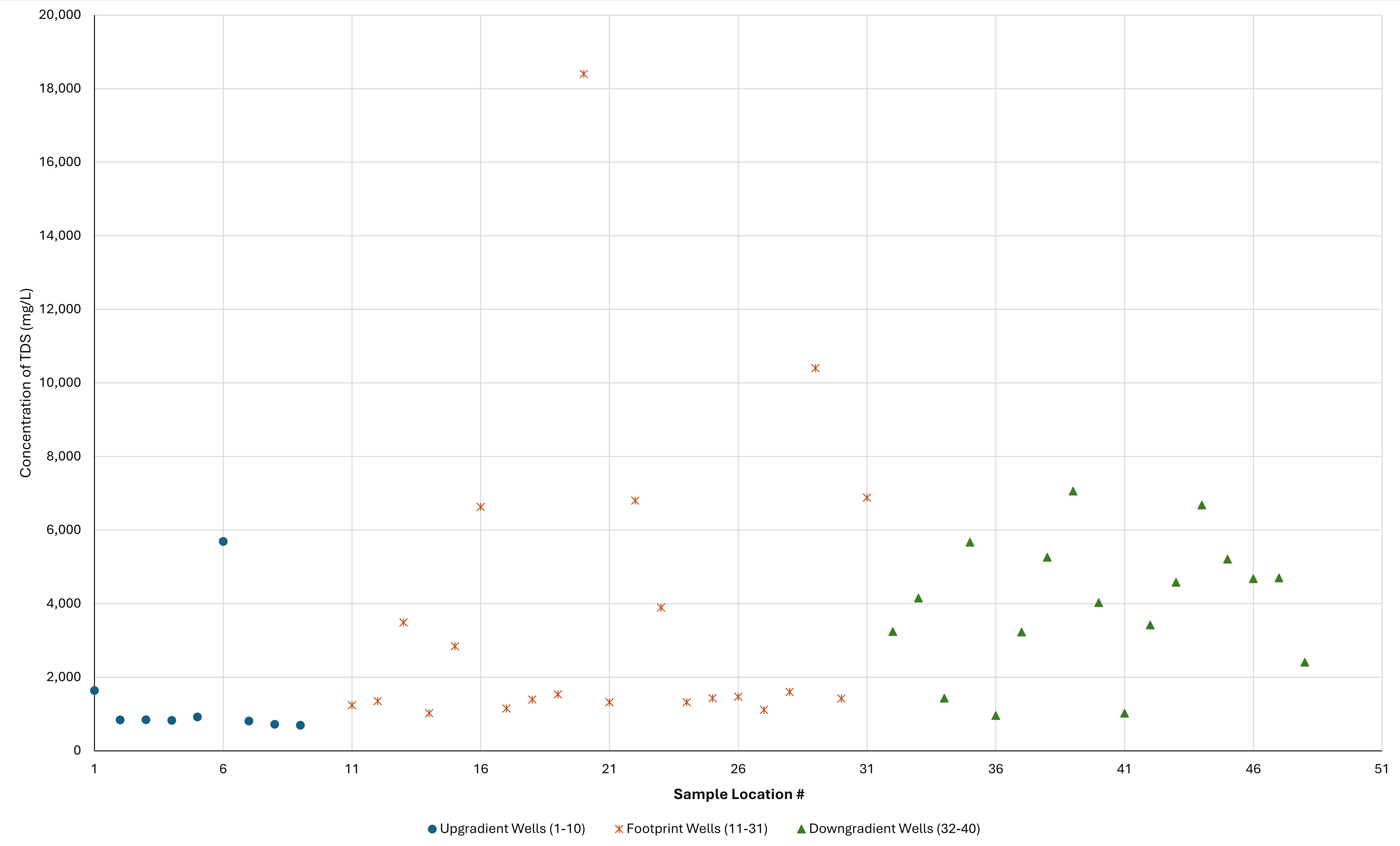
PLOT 1. CONCENTRATIONS OF CHLORIDE IN ON-SITE & OFF-SITE WELLS



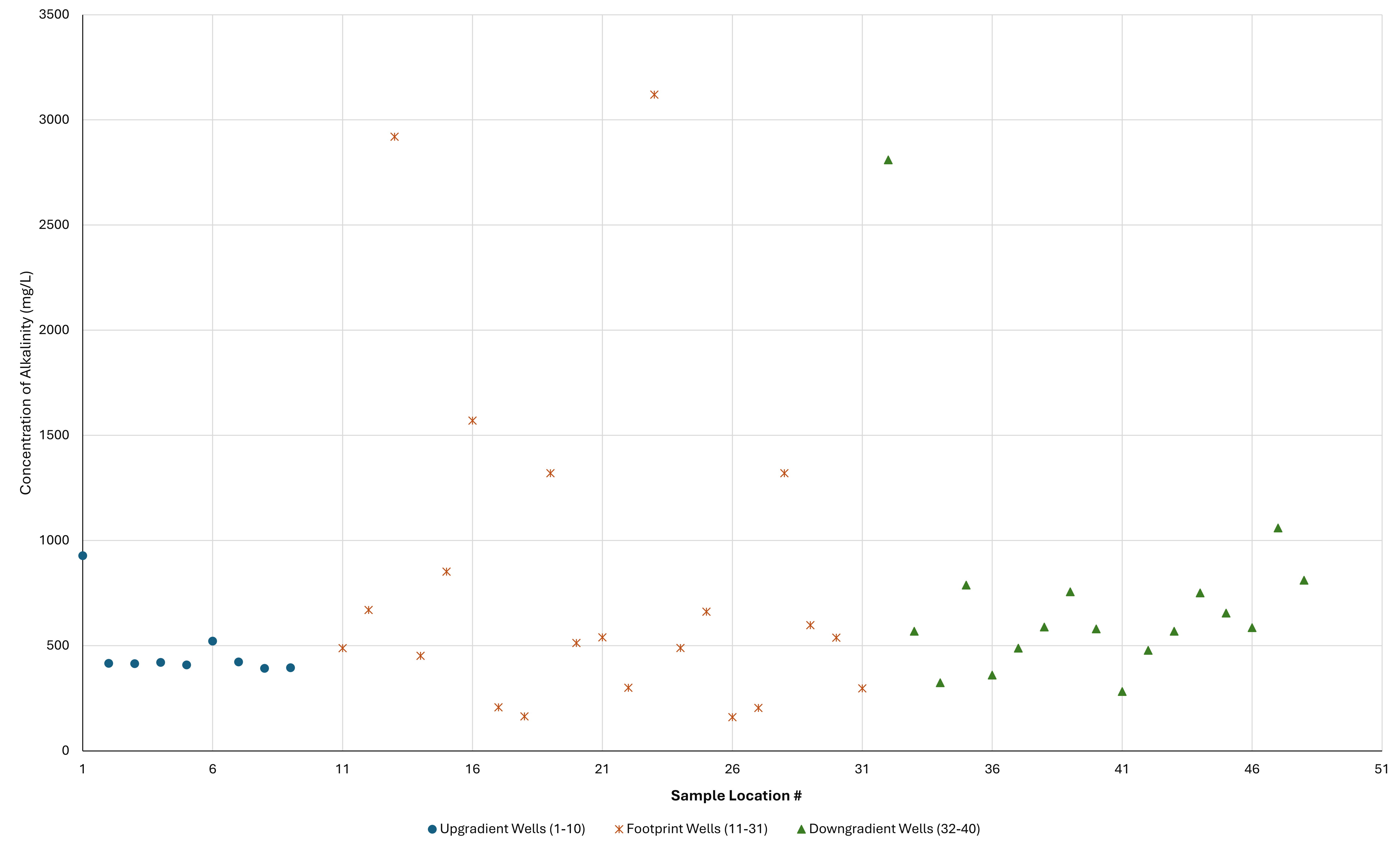
PLOT 2. CONCENTRATIONS OF COD IN ON-SITE & OFF-SITE WELLS



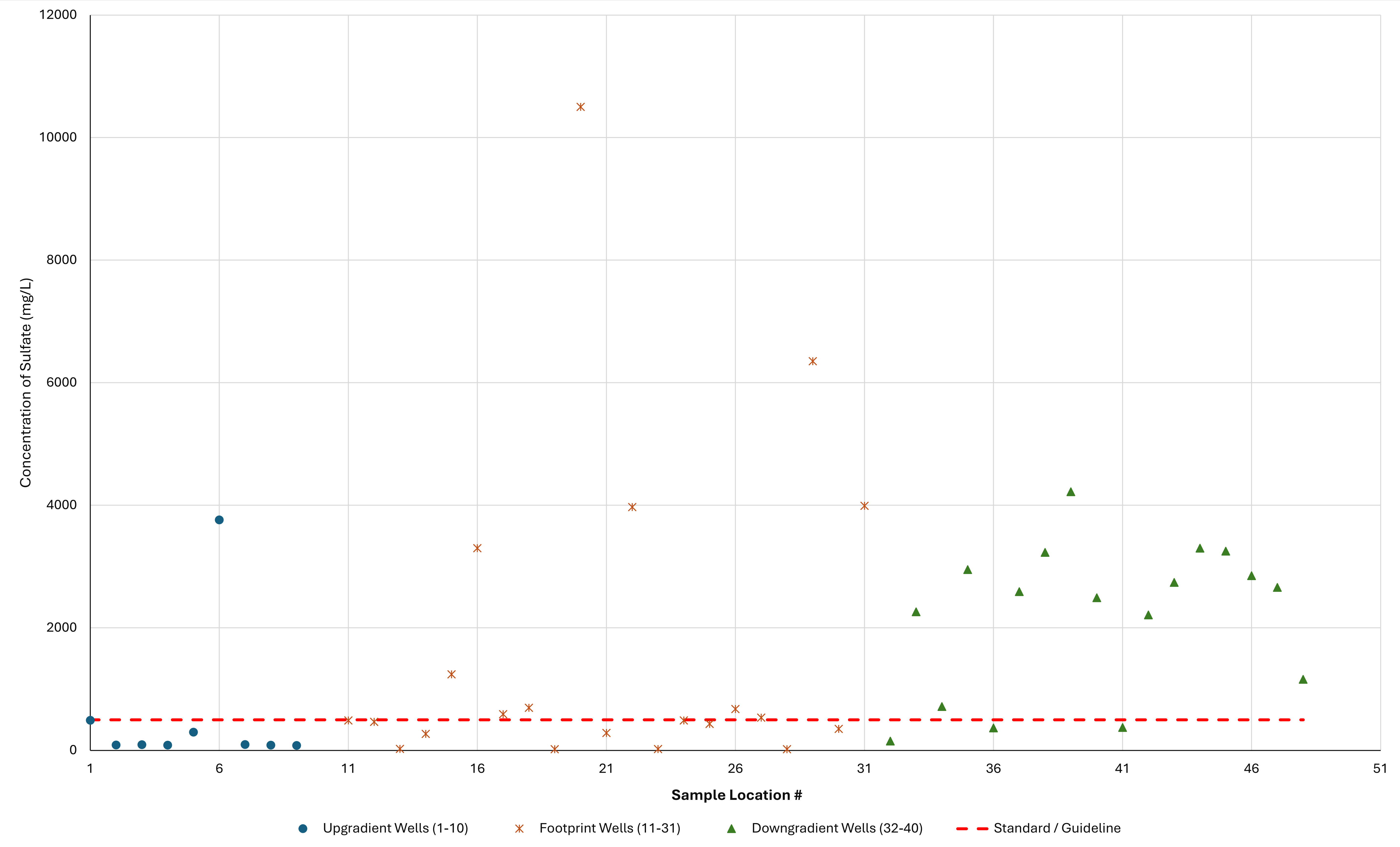
PLOT 3. CONCENTRATIONS OF TDS IN ON-SITE & OFF-SITE WELLS



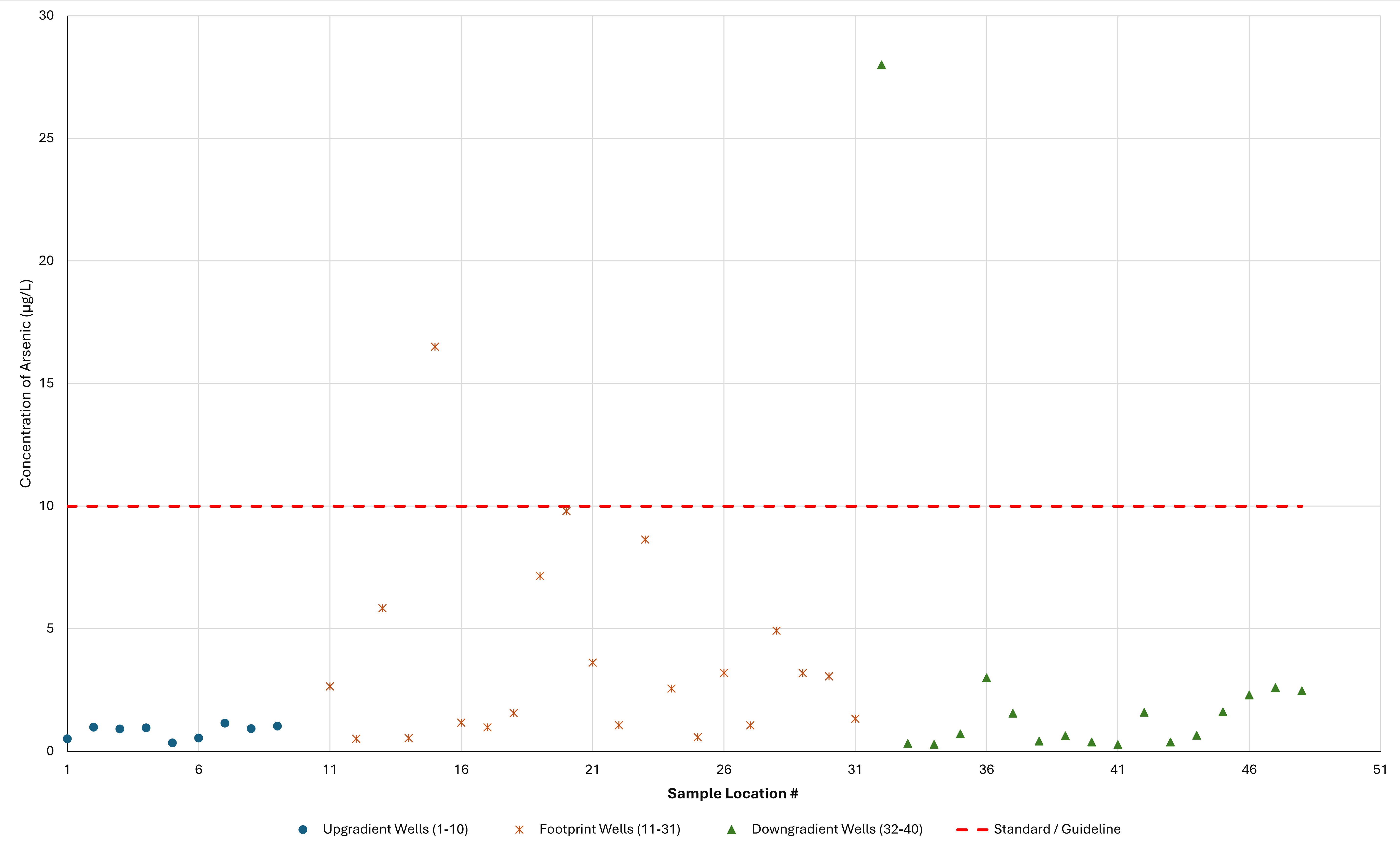
PLOT 4. CONCENTRATIONS OF ALKALINITY IN ON-SITE & OFF-SITE WELLS



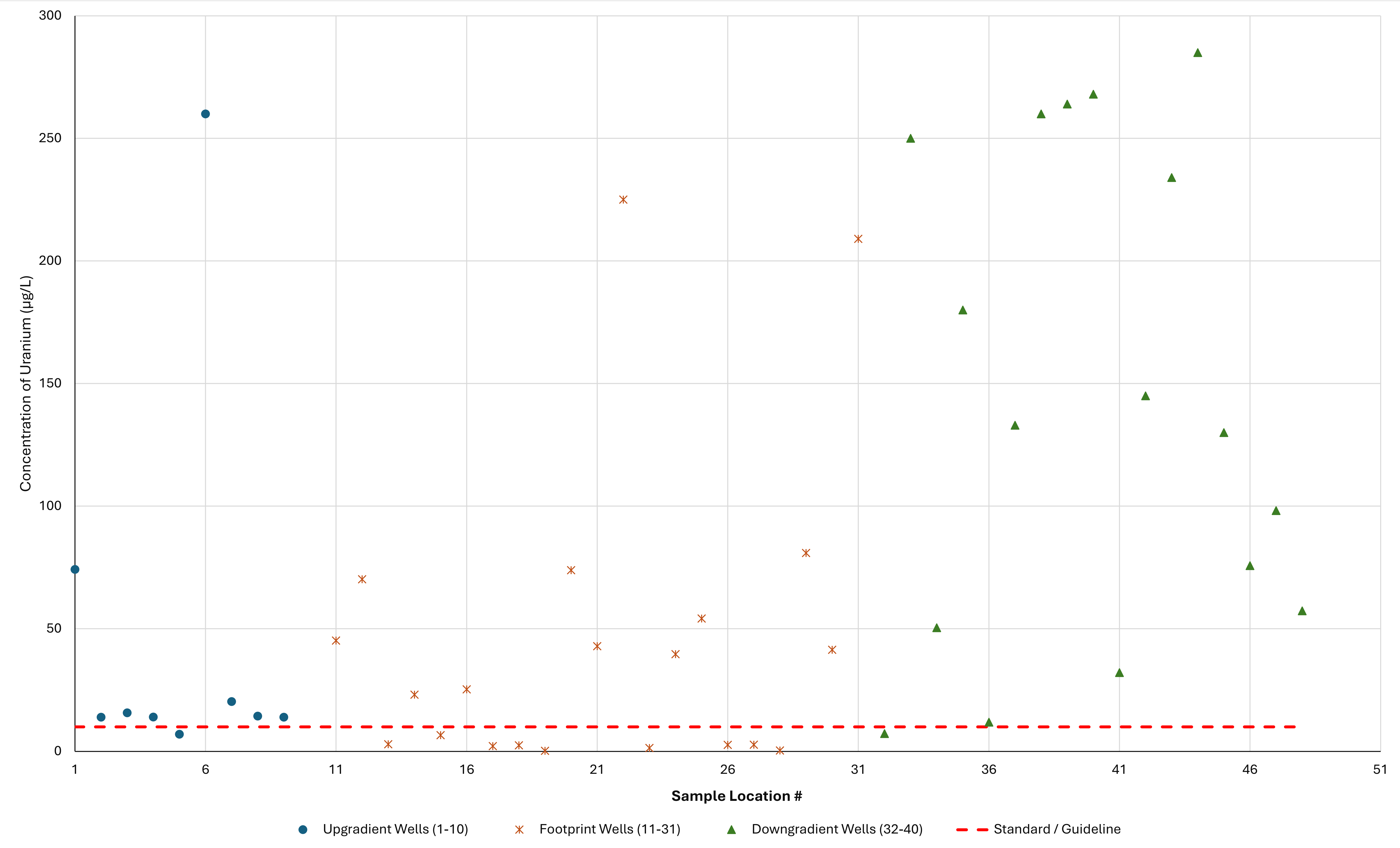
PLOT 5. CONCENTRATIONS OF SULFATE IN ON-SITE & OFF-SITE WELLS



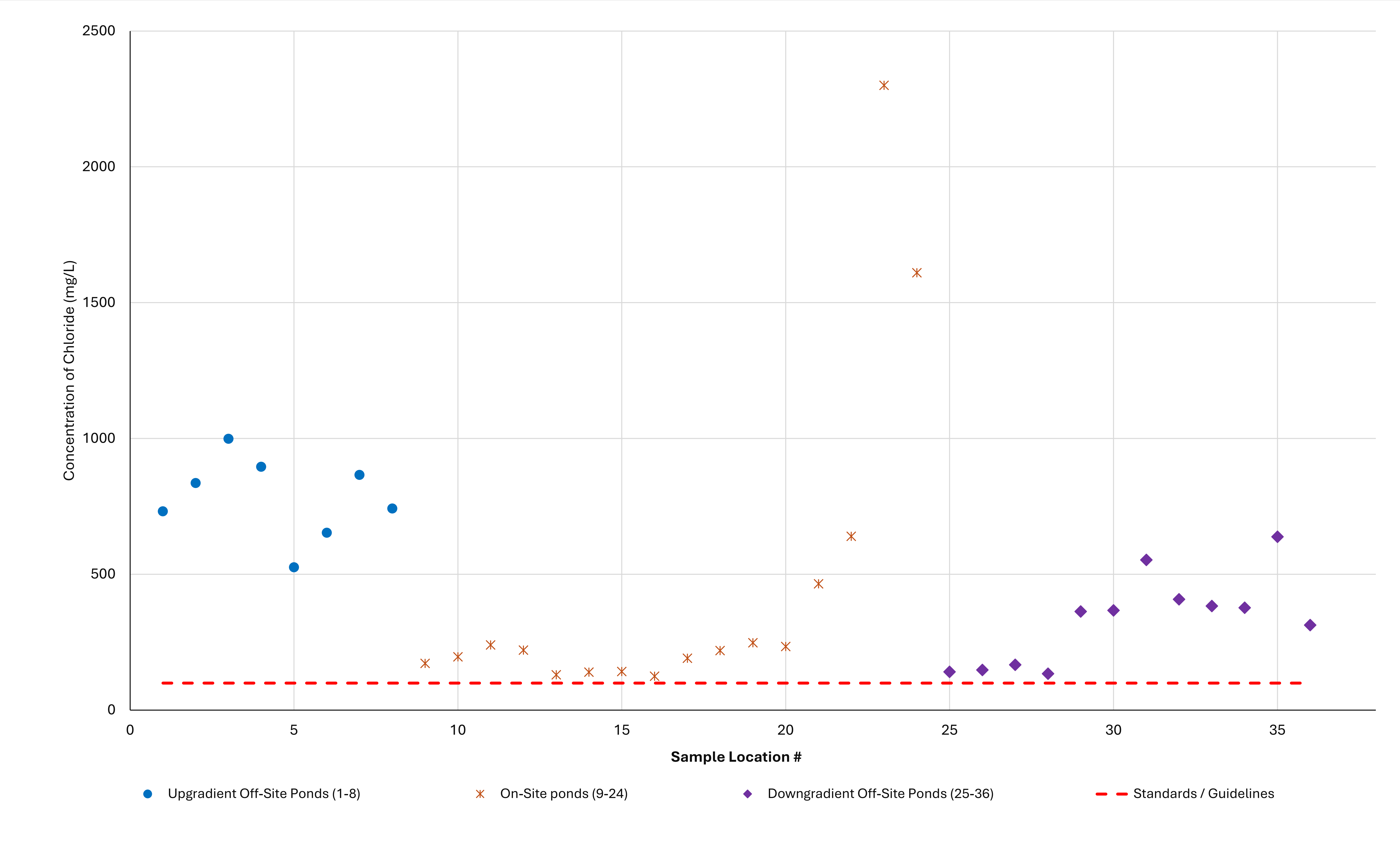
PLOT 6. CONCENTRATIONS OF ARSENIC IN ON-SITE & OFF-SITE WELLS



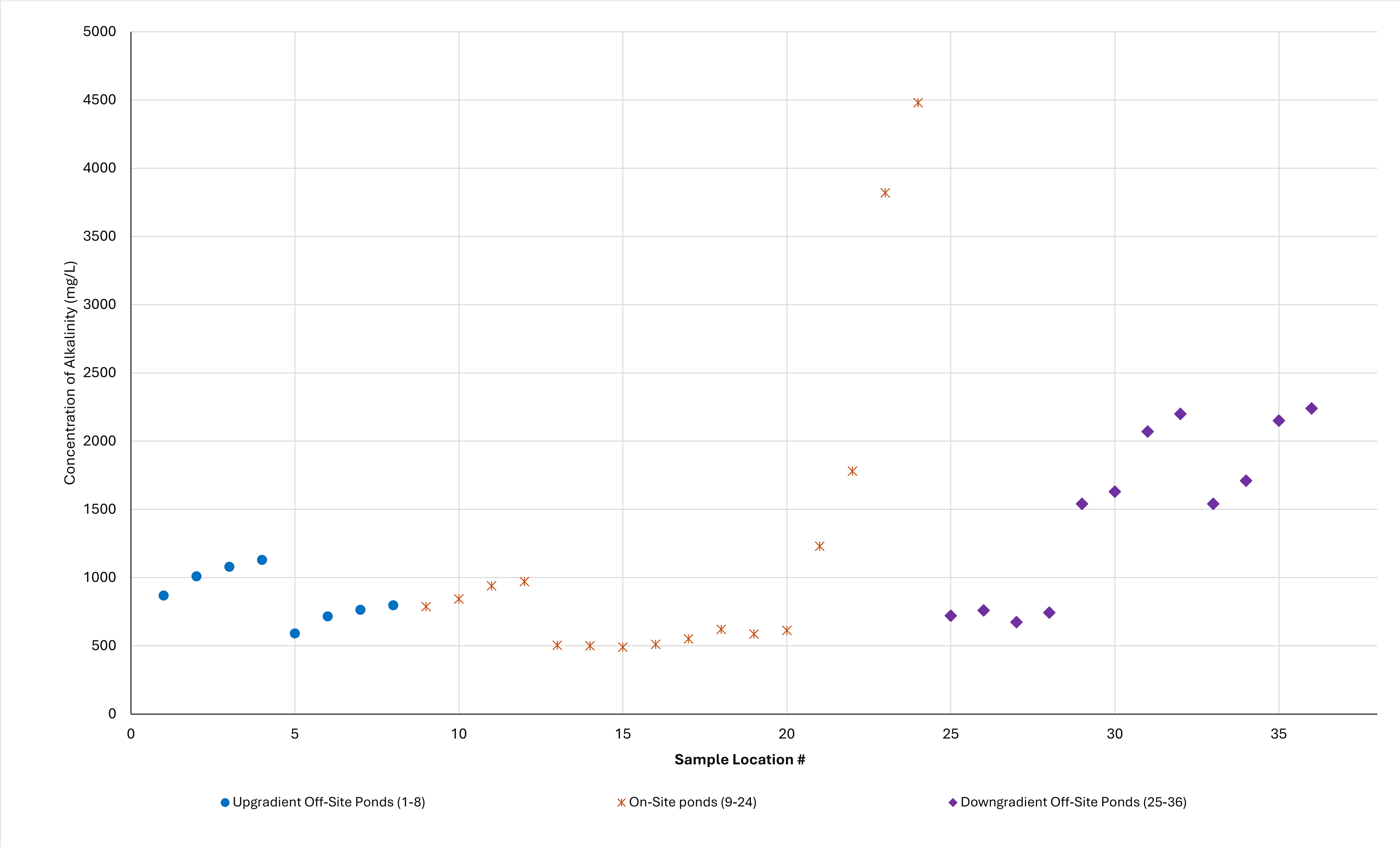
PLOT 7. CONCENTRATIONS OF URANIUM IN ON-SITE & OFF-SITE WELLS



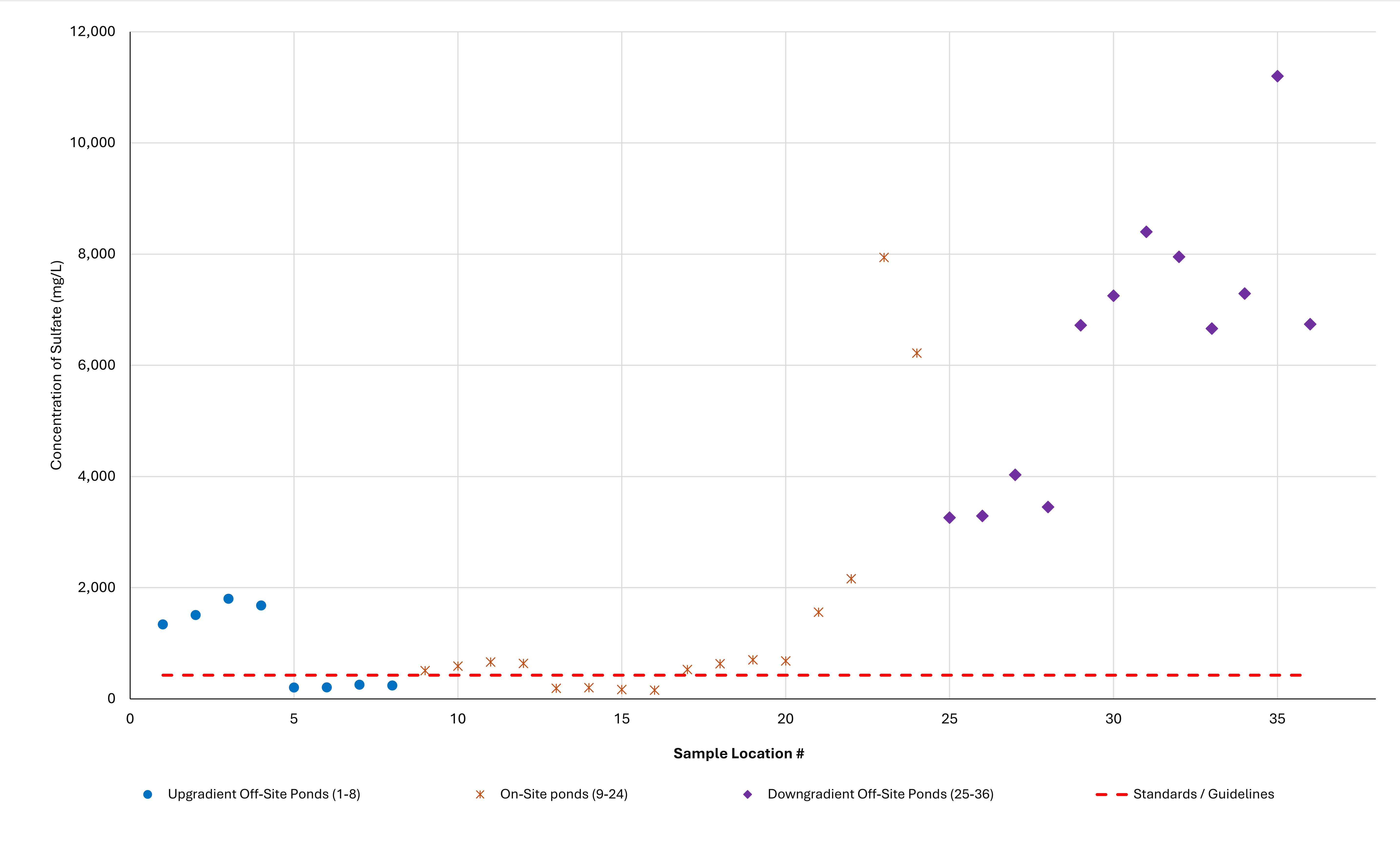
PLOT 8. CONCENTRATIONS OF CHLORIDE IN ON-SITE & OFF-SITE SURFACE WATER



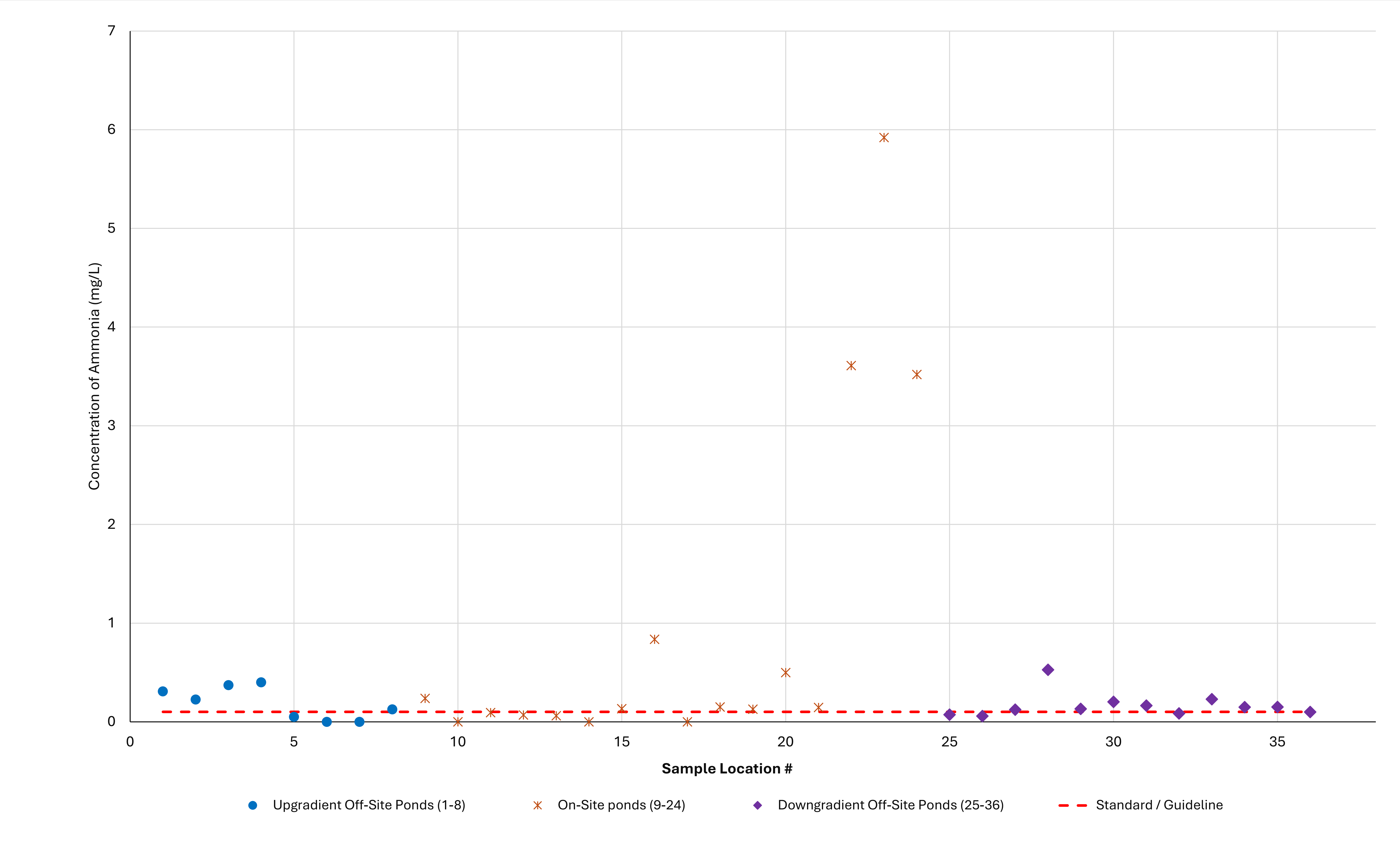
PLOT 9. CONCENTRATIONS OF ALKALINITY IN ON-SITE & OFF-SITE SURFACE WATER



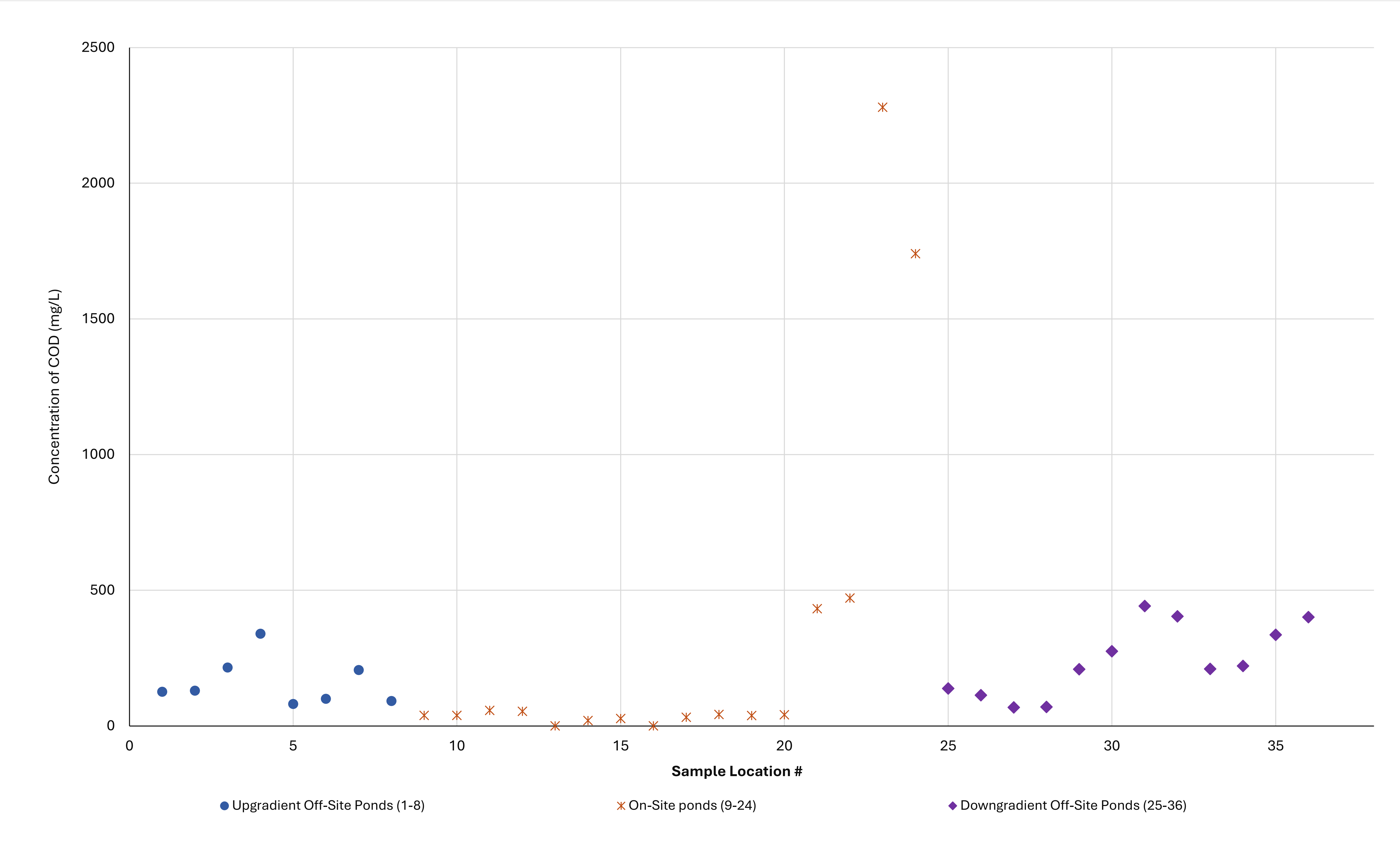
PLOT 10. CONCENTRATIONS OF SULFATE IN ON-SITE & OFF-SITE SURFACE WATER



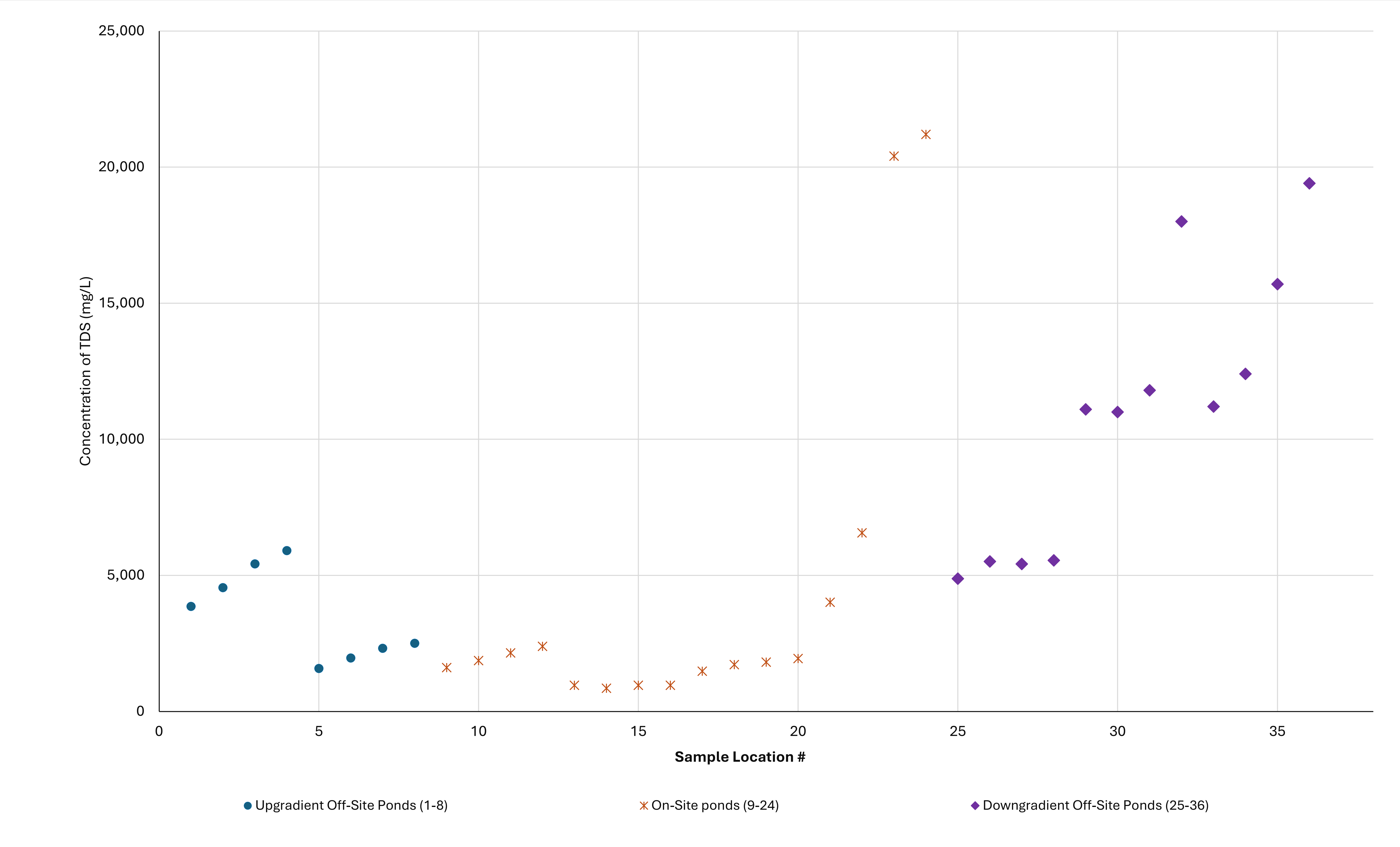
PLOT 11. CONCENTRATIONS OF AMMONIA IN ON-SITE & OFF-SITE SURFACE WATER



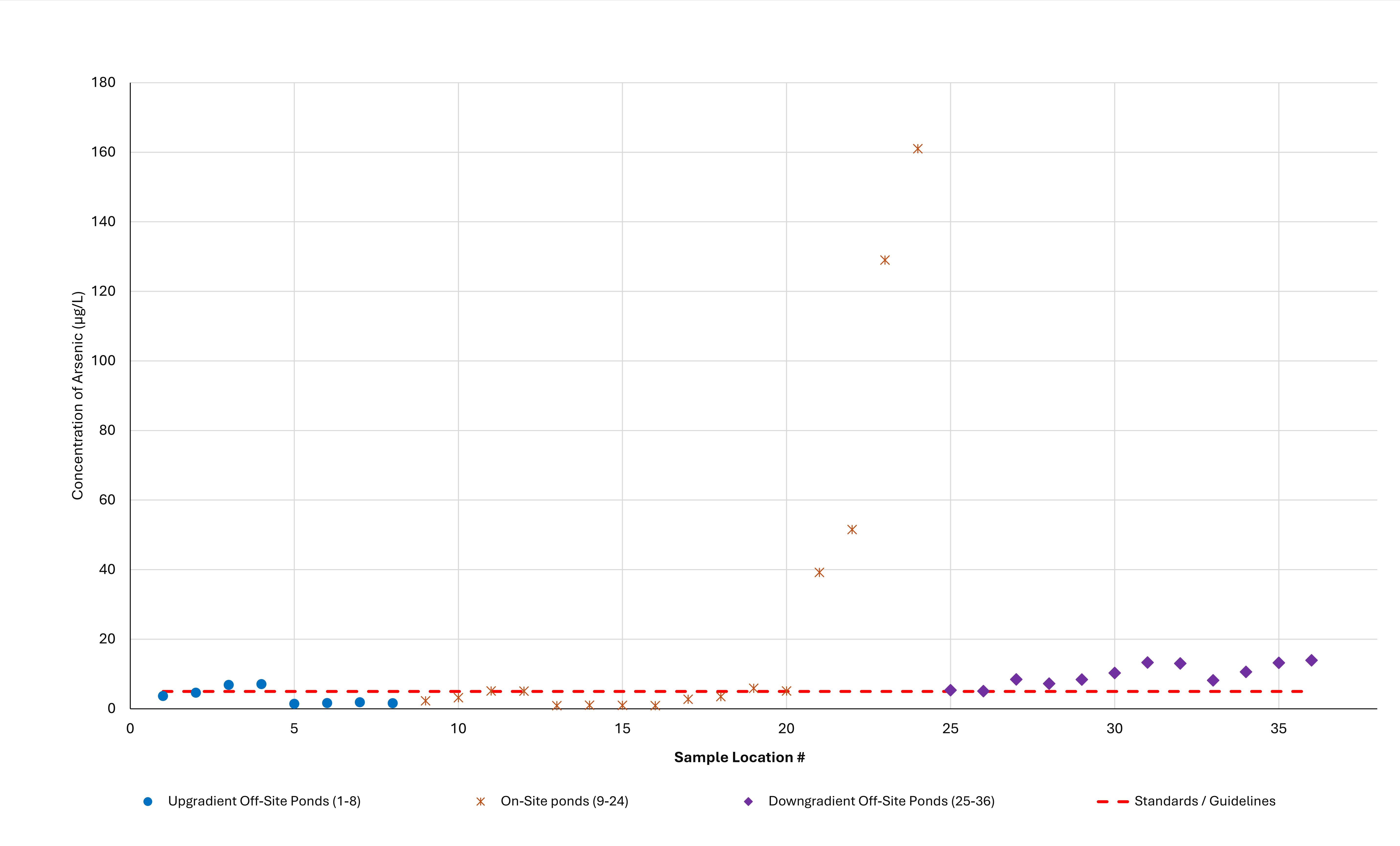
PLOT 12. CONCENTRATIONS OF COD IN ON-SITE & OFF-SITE SURFACE WATER



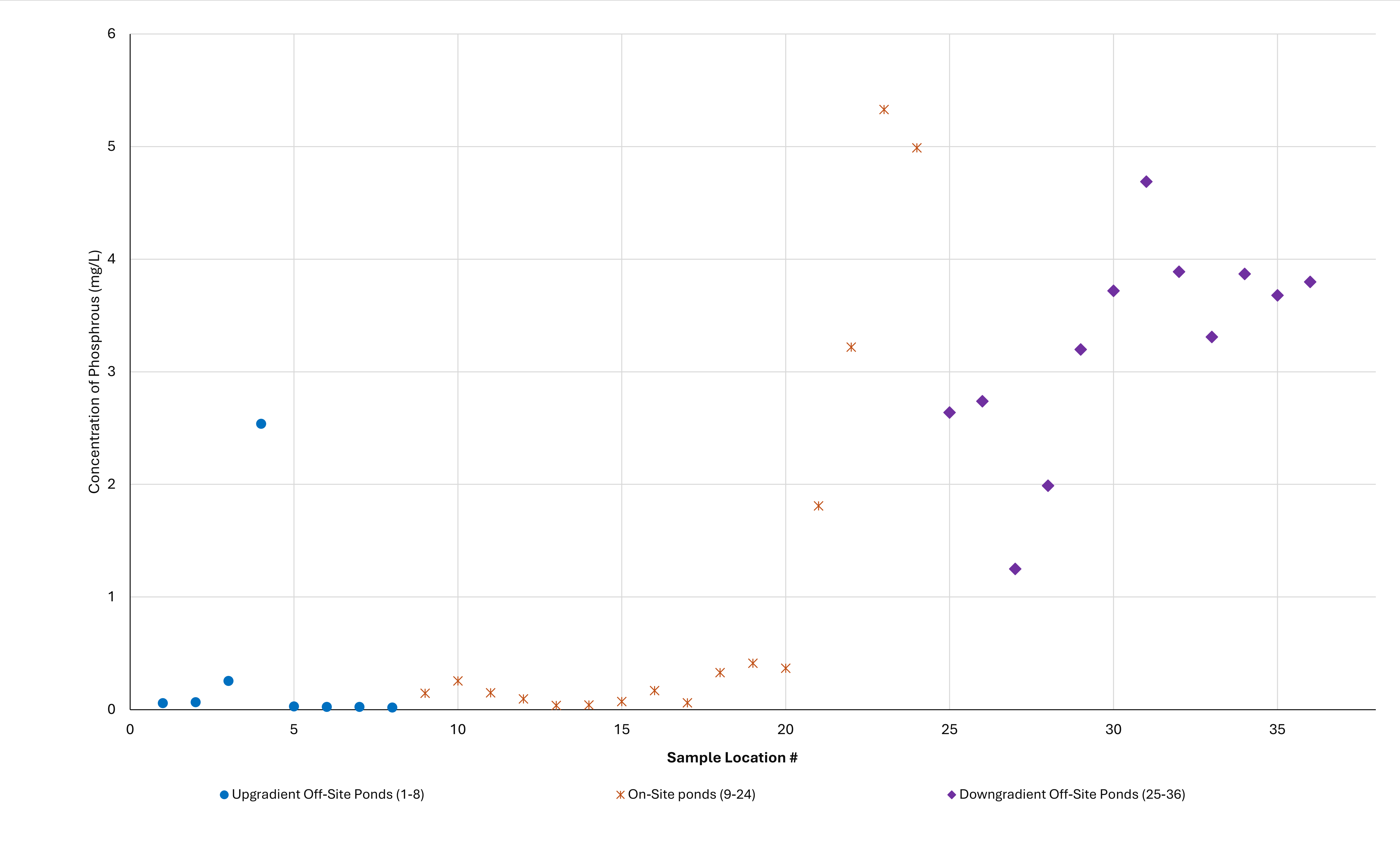
PLOT 13. CONCENTRATIONS OF TDS IN ON-SITE & OFF-SITE SURFACE WATER



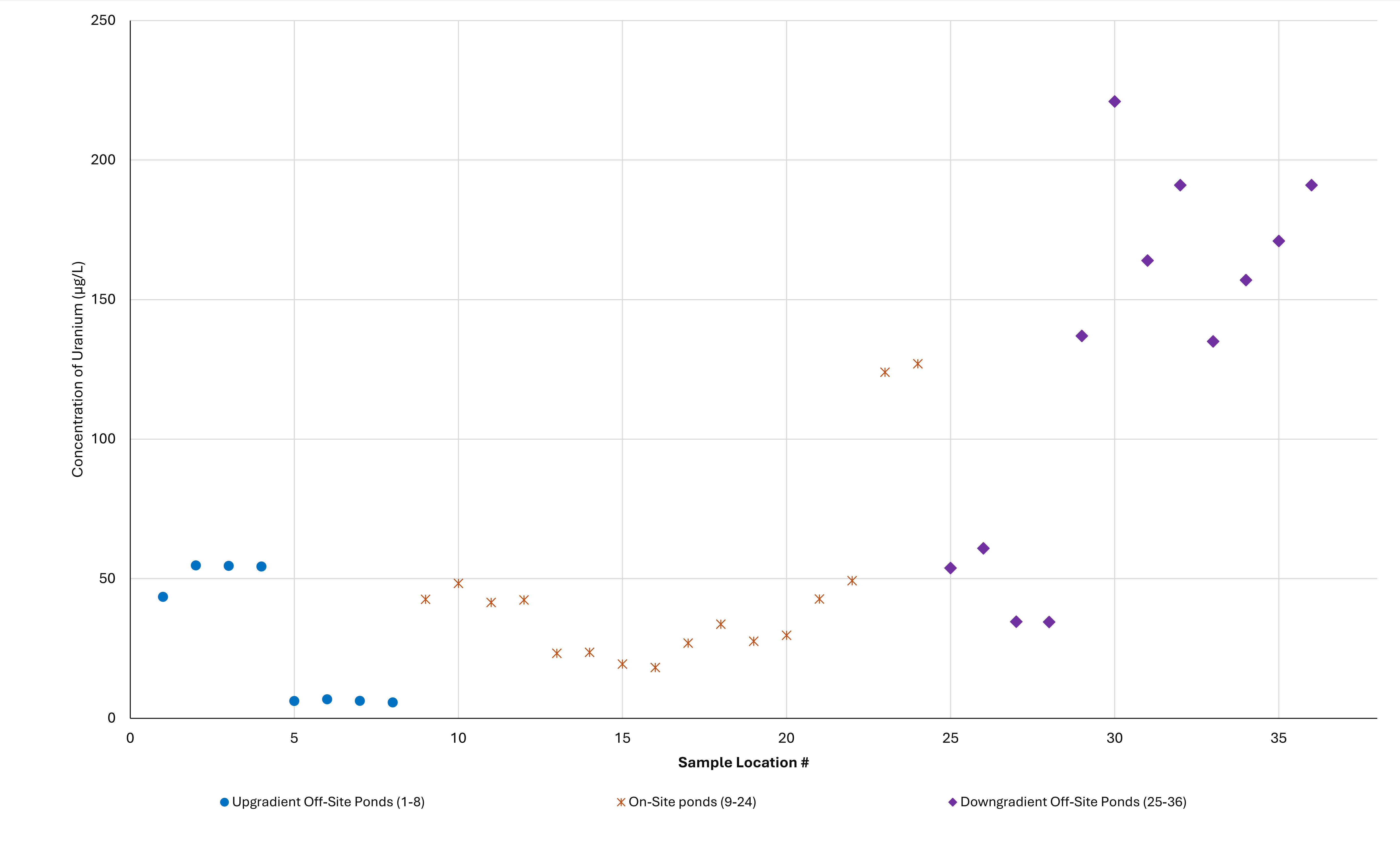
PLOT 14. CONCENTRATIONS OF ARSENIC IN ON-SITE & OFF-SITE SURFACE WATER



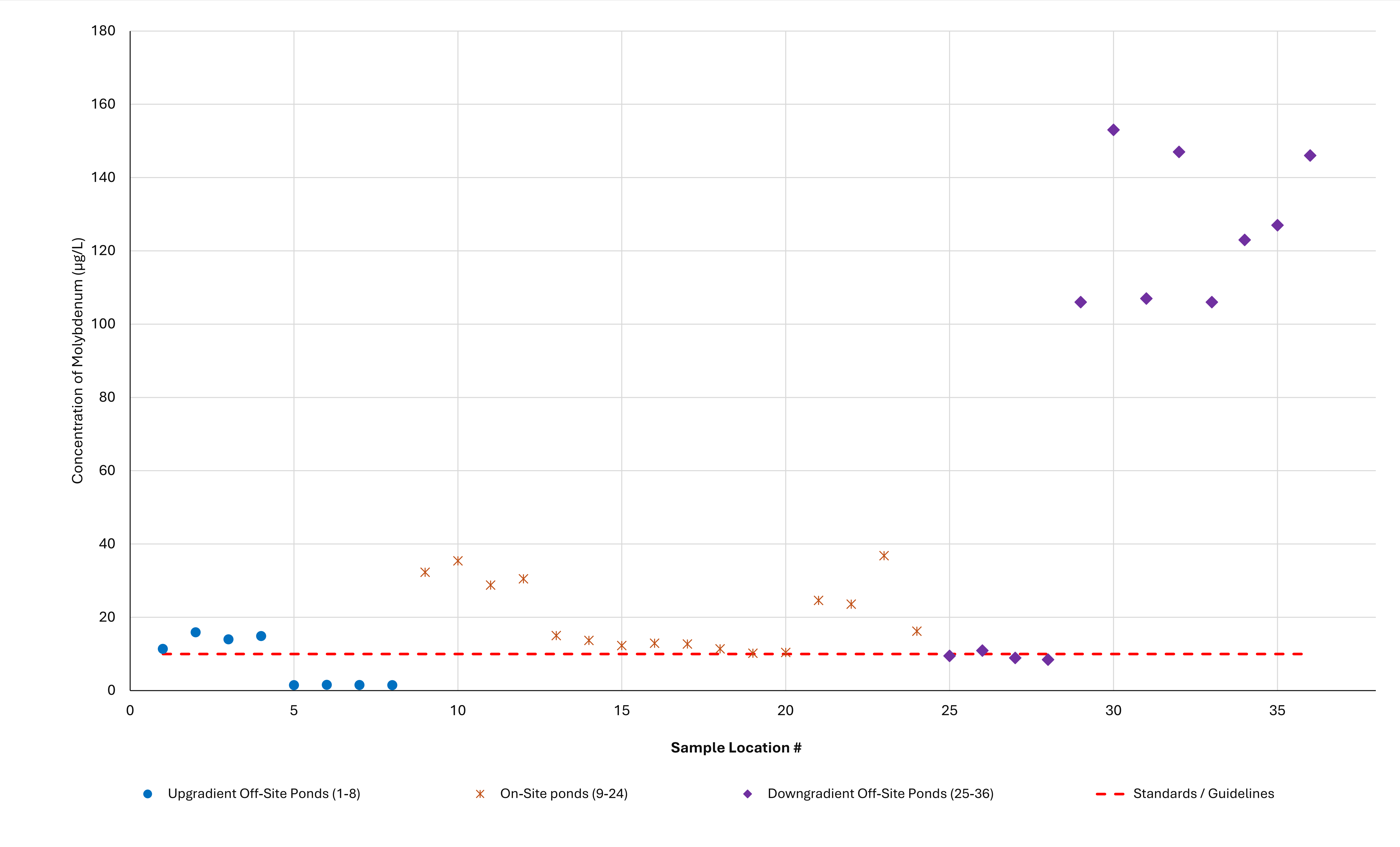
PLOT 15. CONCENTRATIONS OF PHOSPHOROUS IN ON-SITE & OFF-SITE SURFACE WATER



PLOT 16. CONCENTRATIONS OF URANIUM IN ON-SITE & OFF-SITE SURFACE WATER



PLOT 17. CONCENTRATIONS OF MOLYBDENUM IN ON-SITE & OFF-SITE SURFACE WATER



APPENDIX F

HISTORICAL DATA TABLES

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Physical Parameters														Dissolved Inorganics										
			pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
09BH03	09BH03-20151105	2015 11 05	7.65	661	-	-	-	2,040	-	-	< 5.0	1,330	-	20	1,580	990	736	736	<1.0	<1.0	-	<1.0	-	-	<20	-	0.0079
	09BH03-20170601	2017 06 01	8.13	940	-	-	-	2,270	-	-	39.8	690	-	15	1,030	1,240	698	-	-	-	-	<1.0	-	-	<20	-	0.0087
	09BH03-180604	2018 06 04	7.53	1,130	6.87	-	3,665	2,800	7.39	0.0075	<20	<10	<10	26.2	790	1,500	788	788	<1.0	<1.0	<1.0	<0.10	-	-	30	0.0075	-
	09BH03-190530	2019 05 30	7.8	929	6.81	-	3120	2,460	5.85	0.009	274	1,880	<10	27.9	1,510	1,090	780	780	<1.0	<1.0	<1.0	<0.10	-	-	26	0.009	-
	09BH03-200609	2020 06 09	7.8	1,270	7.04	-	3,178	3,020	7.88	-	< 50	1,750		25.3	950	1,540	776	776	<1.0	<1.0	<1.0	<0.10	-	-	22	-	<0.0050
	09BH03-210609	2021 06 09	7.94	812	7.08	-	2,869	1,800	7.73	-	120	1,010	<100	11.1	< 1,000	939	713	713	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	09BH03-220606	2022-06-06	7.83	896	-	-	2933	2,200	6.18	<0.05	<50	931	<100	9.43	<1,000	1070	644	644	<1.0	<1.0	<1.0	<1.00			<20	-	-
09BH04	09BH04-20151105	2015 11 05	7.19	1,120	-	-	-	2,730	-	-	346	< 100	-	31	1,350	1,130	1,400	1,400	<1.0	<1.0	-	<1.00	-	-	22	-	0.0012
09BH06-S	09BH06-S-20131112	2013 11 12	-	353	-	-	-	700	-	-	87	<50	-	8.3	940	230	392	-	-	-	-	-	-	-	<20	-	-
	09BH06-S-20140602	2014 06 02	-	358	-	-	-	700	-	-	91	<50	-	10.9	1,010	244	379	-	-	-	-	<0.50	-	-	<20	-	0.0199
	09BH06-S-20141117	2014 11 17	-	354	-	-	-	713	-	-	94	<50	-	8	1,010	256	399	-	-	-	-	<0.50	-	-	<20	-	0.0177
	09BH06-S-20150610	2015 06 10	8.22	351	-	-	-	716	-	-	95.1	<25	-	7.1	960	252	394	-	-	-	-	<0.25	-	-	<20	-	0.0205
	09BH06-S-20151105	2015 11 05	7.91	349	-	-	-	724	-	-	101	<25	-	7.6	980	282	362	362	<1.0	<1.0	-	<0.25	-	-	<20	-	0.0157
09BH06-D	09BH06-D-20131112	2013 11 12	-	372	-	-	-	706	-	-	94	<50	-	9.1	940	243	397	-	-	-	-	-	-	-	<20	-	-
	DUP4-20131112	Duplicate	-	369	-	-	-	715	-	-	92	<50	-	9	950	244	383	-	-	-	-	-	-	-	<20	-	-
	QA/QC RPD%		-	1	-	-	-	1	-	-	2	*	-	1	1	0	4	-	-	-	-	-	-	-	*	-	-
	09BH06-D-20140602	2014 06 02	-	366	-	-	-	720	-	-	96	<50	-	9.5	1,000	254	376	-	-	-	-	<0.50	-	-	<20	-	0.0125
	09BH06-D-20141117	2014 11 17	-	372	-	-	-	743	-	-	99.5	<50	-	8.3	1,010	272	407	-	-	-	-	<0.50	-	-	42	-	0.009
	09BH06-D-20150610	2015 06 10	8.21	385	-	-	-	770	-	-	102	<25	-	7.9	940	285	398	-	-	-	-	<0.25	-	-	<20	-	0.0107
	09BH06-D-20151105	2015 11 05	7.93	369	-	-	-	760	-	-	100	<25	-	7.7	940	295	365	365	<1.0	<1.0	-	<0.25	-	-	<20	-	0.008
	09BH06-D-20170606	2017 06 06	8.42	364	-	-	-	699	-	-	107	<25	-	8.2	970	286	343	-	-	-	-	<0.25	-	-	<20	-	0.0092
	09BH06-D-180604	2018 06 04	7.76	387	6.99	-	1,289	800	2.98	0.0055	167	<10	<10	7.16	450	282	355	355	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0055	-
	09BH06-D-190528	2019 05 28	8.04	435	7.08	-	1,229	968	2.88	0.0073	199	<10	<10	9.45	800	392	377	377	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0073	-
	09BH06-D-200609	2020 06 09	7.95	422	7.3	-	1,038	849	2.26	-	96	<10	<10	8.22	790	327	373	373	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	09BH06-D-210608	2021 06 08	8.08	333	7.4	-	1,142	742	2.54	-	120	<100	<10	6.95	960	278	357	357	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	09BH06-D-220602	2022 06 02	8.11	307	-	-	1156	730	2.87	-	147	<100	<100	6.5	<1000	294	308	308	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	09BH06-D-230525	2023 05 25	7.95	413	-	-	-	950	2.86	<0.0050	99	<100	<100	10.6	830	371	361	361	<1.0	<1.0	<1.0	<0.10			<20		
GL0-1	GL0-1-20130625	2013 06 25	-	427	-	-	-	771	-	-	91.9	<50	-	7.9	1,170	373	205	-	-	-	-	<0.50	-	-	<20	-	-
	GL0-1-20140603	2014 06 03	-	416	-	-	-	711	-	-	52.9	99	-	9.1	1,010	348	205	-	-	-	-	<0.50	-	-	<20	-	0.0596
	GL0-1-20141124	2014 11 24	-	436	-	-	-	711	-	-	58.4	<50	-	9.3	970	355	209	-	-	-	-	<0.50	-	-	<20	-	0.0519
	DUP1-20141124	Duplicate	-	430	-	-	-	680	-	-	62.1	<50	-	7.9	1,140	355	205	-	-	-	-	<0.50	-	-	<20	-	0.0518
	QA/QC RPD%		-	1	-	-	-	4	-	-	6	*	-	16	16	0	2	-	-	-	-	*	-	-	*	-	0
	GL0-1-20150608	2015 06 08	7.59	423	-	-	-	665	-	-	48.9	116	-	7.3	884	345	209	-	-	-	-	<0.10	-	-	<20	-	0.0637
	GL0-1-20151103	2015 11 03	7.65	423	-	-	-	682	-	-	77.4	<25	-	7.1	990	354	206	-	-	-	-	<0.25	-	-	<20	-	0.0617
	GL0-1-20160524	2016 05 24	8.19	423	-	-	-	673	-	-	38.4	65	-	7.1	980	346	198	198	<1.0	<1.0	-	<0.25	-	-	<20	-	0.0555
	GL0-1-20170524	2017 05 24	8.32	418	-	-	-	671	-	-	9.7	131	-	7.2	1,000	350	196	-	-	-	-	<0.25	-	-	<20	-	0.0614
	GL0-1-180529	2018 05 29	7.81	415	7.65	-	934	690	0.87	0.0516	43	82	<10	6.47	640	281	187	187	<1.0	<1.0	<1.0	<1.00	-	-	<20	0.0516	-
	GL0-1-190523	2019 05 23	8.09	384	7.65	-	859	691	1.69	0.0174	<20	109	<10	6.33	730	326	191	191	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0174	-
	GL0-1-200310	2020 03 10	7.94	405	-	-	-	705	1.01	-	284	49	<10	6.82	860	316	189	189	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	0.0175

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.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
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* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL0-2	GL0-2-20130627	2013 06 27	-	506	-	-	-	956	-	-	183	6,410	-	49.4	1,410	395	294	-	-	-	-	< 0.50	-	-	< 20	-	-
	GL0-2-20140603	2014 06 03	-	465	-	-	-	744	-	-	101	181	-	20.9	1,240	326	255	-	-	-	-	< 0.50	-	-	< 20	-	0.0591
	GL0-2-20141124	2014 11 24	-	496	-	-	-	814	-	-	92.6	1,820	-	26.3	1,220	341	268	-	-	-	-	< 0.50	-	-	< 20	-	0.0553
	GL0-2-20150608	2015 06 08	7.8	479	-	-	-	675	-	-	213	< 10	-	9.6	1,090	317	273	-	-	-	-	< 0.10	-	-	< 20	-	0.0399
	GL0-2-20151103	2015 11 03	7.94	500	-	-	-	726	-	-	171	< 25	-	12.1	1,190	317	268	-	-	-	-	< 0.25	-	-	< 20	-	0.0446
	DUP1-20151103	Duplicate	7.94	510	-	-	-	774	-	-	167	49	-	13.1	1,220	326	255	-	-	-	-	< 0.25	-	-	< 20	-	0.0446
	QA/QC RPD%		0	2	-	-	-	6	-	-	2	*	-	8	2	3	5	-	-	-	-	*	-	-	*	-	0
	GL0-2-20160524	2016 05 24	8.22	468	-	-	-	700	-	-	208	< 25	-	6.8	1,240	310	266	266	< 1.0	< 1.0	-	< 0.25	-	-	< 20	-	0.0423
	GL0-2-20170524	2017 05 24	8.4	482	-	-	-	696	-	-	173	< 25	-	7.1	1,320	325	258	-	-	-	-	< 0.25	-	-	< 20	-	0.0463
	GL0-2-180529	2018 05 29	7.82	473	7.43	-	931	726	1.12	0.0173	211	< 10	< 10	9.63	1,050	296	258	258	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	0.0173	-
	DUP2-180529	Duplicate	7.85	469	7.43	-	931	698	1.17	0.0093	214	< 10	< 10	9.45	1,100	294	260	260	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	0.0093	-
	QA/QC RPD%		0	1	*	-		4	*	*	1	*	*	2	5	1	1	1	*	*	*	*	-	-	*	*	-
	GL0-2-190529	2019 05 29	8.01	546	7.5	-	1406	1,050	3.7	< 0.0050	173	16,800	47	71.6	1,050	349	340	340	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	< 0.0050	-
	GL0-2-200310	2020 03 10	7.95	456	-	-	-	721	1.18	-	317	< 10	< 10	7.88	1,150	303	255	255	< 1.0	< 1.0	< 1.0	< 0.10	-	-	< 20	-	0.0134
GL0-3	GL0-3-20130627	2013 06 27	-	762	-	-	-	1,500	-	-	< 5.0	49,500	-	123	1,580	400	436	-	-	-	-	< 1.0	-	-	27	-	-
	GL0-3-20140603	2014 06 03	-	747	-	-	-	1,440	-	-	< 5.0	48,600	-	124	1,190	385	445	-	-	-	-	< 1.0	-	-	20	-	0.0096
	GL0-3-20141124	2014 11 24	-	797	-	-	-	1,440	-	-	11.8	49,300	-	127	1,160	390	457	-	-	-	-	< 1.0	-	-	< 20	-	0.0059
	GL0-3-20150608	2015 06 08	7.65	772	-	-	-	1,390	-	-	13	47,700	-	121	1,120	391	456	-	-	-	-	< 0.50	-	-	48	-	0.0069
	GL0-3-20151103	2015 11 03	7.53	751	-	-	-	1,460	-	-	7.5	47,600	-	121	1,130	382	422	-	-	-	-	< 0.50	-	-	< 20	-	0.0068
	GL0-3-20160524	2016 05 24	8.1	754	-	-	-	1,450	-	-	9.6	49,100	-	127	1,220	401	442	442	< 1.0	< 1.0	-	< 1.0	-	-	< 20	-	0.0054
	GL0-3-20170524	2017 05 24	8.05	769	-	-	-	1,420	-	-	13.3	48,700	-	131	1,110	368	396	-	-	-	-	< 1.0	-	-	< 20	-	0.0063
	GL0-3-180529	2018 05 29	7.81	799	7.28	-	1826	1,480	5.47	0.0084	38	44,700	< 10	121	990	293	481	481	< 1.0	< 1.0	< 1.0	< 1.00	-	-	22	0.0084	-
	GL0-3-190529	2019 05 29	7.77	1,110	7.12	-	2776	2,060	6.89	< 0.0050	82	67,000	12	154	920	613	525	525	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	< 0.0050	-
	GL0-3-200310	2020 03 10	7.82	1,000	-	-	-	1,970	6.19	-	56	55,800	< 10	139	930	505	491	491	< 1.0	< 1.0	< 1.0	< 1.00	-	-	31	-	< 0.0050
GL1-1	GL 1-1-20091109	2009 11 09	-	866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL1-1-20100810	2010 08 10	-	790	-	-	-	1,250	-	-	30	-	-	169	-	222	656	-	-	-	-	-	-	-	40	-	0.007
	GL30-1-20100810	Duplicate	-	780	-	-	-	1,300	-	-	40	-	-	168	-	219	660	-	-	-	-	-	-	-	10	-	0.008
	QA/QC RPD%		-	1	-	-	-	4	-	-	29	-	-	1	-	1	1	-	-	-	-	-	-	-	*	-	13
	GL1-1-20160531	2016 05 31	7.43	-	-	-	-	1,290	-	-	< 20	633	-	237	1,520	244	664	-	-	-	-	-	-	-	-	-	< 0.01
	GL1-1-20180927	2018 09 27	-	730	-	-	-	-	-	-	45	12	-	157	1,420	253	-	-	-	-	-	< 0.10	-	-	-	-	< 0.0050
	GL1-1-180612	2018 06 12	7.75	743	-	-	-	1,160	-	0.0115	62	58	< 10	173	1,250	242	627	627	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	0.0115	-
	GL1-1-190917	2019 09 17	7.94	763	-	-	-	1,200	4.15	-	76	< 10	< 10	153	1,520	269	628	628	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	-	< 0.0050
	GL1-1-200910	2020 09 10	8.12	746	-	-	-	1,200	3.45	-	52	< 10	< 10	131	1570	284	646	646	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	-	< 0.0050
	GL1-1-231023	2023 10 23	8.07	713	-	-	-	1,010	5.1	<0.050	<50	<100	<100	140	<1000	238	581	581	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-

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.
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QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH pH	Total Hardness mg/L	pH (field) pH	Conductivity µS/cm	Field Conductivity µS/cm	Total Dissolved Solids mg/L	Dissolved Organic Carbon mg/L	Phosphate mg/L	Ammonia, Total (as N) µg/L	Nitrate (as N) µg/L	Nitrite (as N) µg/L	Chloride mg/L	Fluoride µg/L	Sulfate mg/L	Total Alkalinity mg/L	Alkalinity, Bicarbonate (as CaCO3) mg/L	Alkalinity, Carbonate (as CaCO3) mg/L	Alkalinity, Hydroxide (as CaCO3) mg/L	Alkalinity, Phenolphthalein (as CaCO3) mg/L	Bromide mg/L	Hydrogen Sulfide mg/L	Sulfide mg/L	Chemical Oxygen Demand mg/L	Dissolved Phosphate mg/L	Ortho-Phosphate mg/L
GL1-2	GL 1-2-20091109	2009 11 09	-	909	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL1-2-20100810	2010 08 10	-	840	-	-	-	1,140	-	-	< 10	-	-	191	-	201	675	-	-	-	-	-	-	-	60	-	0.006
	GL1-2-20160531	2016 05 31	7.66	-	-	-	-	1,190	-	-	< 20	29	-	232	1,420	209	660	-	-	-	-	-	-	-	-	-	< 0.01
	GL1-2-180612	2018 06 12	7.84	790	-	-	-	1,230	-	0.0102	71	< 10	< 10	216	1,270	238	640	640	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	0.0102	-
	GL1-2-20180927	2018 09 27	-	759	-	-	-	-	-	-	< 20	44	-	181	1,100	228	-	-	-	-	-	< 0.10	-	-	-	-	< 0.0050
	GL1-2-190917	2019 09 17	7.98	762	-	-	-	1,240	4.46	-	32	< 10	< 10	166	1,330	256	662	662	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	-	< 0.0050
	GL1-2-200910	2020 09 10	8.14	814	-	-	-	1,300	4.98	-	< 50	< 10	< 10	117	1,430	283	676	676	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	-	< 0.0050
	GL1-2-231023	2023 10 23	8.08	732	-	-	-	1,050	5.16	<0.050	55	<100	<100	127	<1000	235	607	607	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL2-1	GL 2-1-20091109	2009 11 09	-	348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL 2-1-20120627	2012 06 27	-	380	-	-	-	670	-	-	50	-	-	22.5	-	212	306	-	-	-	-	-	-	-	10	-	0.004
	GL2-1-20100810	2010 08 10	-	360	-	-	-	604	-	-	40	-	-	16.8	-	170	317	-	-	-	-	-	-	-	< 10	-	0.004
	GL30-2-20100810	Duplicate	-	350	-	-	-	650	-	-	30	-	-	15.9	-	173	320	-	-	-	-	-	-	-	< 10	-	0.006
	QA/QC RPD%		-	3	-	-	-	7	-	-	29	-	-	6	-	2	1	-	-	-	-	-	-	-	*	-	*
	GL2-1-20110629	2011 06 29	-	359	-	-	-	638	-	-	50	-	-	21.3	-	203	302	-	-	-	-	-	-	-	< 10	-	0.09
	GL2-1-20111217	2011 12 17	-	372	-	-	-	640	-	-	20	< 10	-	18.1	-	207	332	-	-	-	-	-	-	-	< 10	-	< 0.01
	GL2-1-20121204	2012 12 04	-	348	-	-	-	642	-	-	90	< 100	-	18	-	192	326	-	-	-	-	-	-	-	14	-	< 0.002
	GL2-1-20130626	2013 06 26	-	418	-	-	-	660	-	-	34.3	< 50	-	23.2	830	225	291	-	-	-	-	< 0.50	-	-	< 20	-	-
	GL2-1-20140603	2014 06 03	-	418	-	-	-	707	-	-	17	54	-	32	770	266	292	-	-	-	-	< 0.50	-	-	< 20	-	0.0034
	DUP3-20140603	Duplicate	-	412	-	-	-	710	-	-	17.2	82	-	33	750	260	293	-	-	-	-	< 0.50	-	-	< 20	-	0.0031
	QA/QC RPD%		-	1	-	-	-	0	-	-	*	41	-	3	3	2	0	-	-	-	-	*	-	-	*	-	*
	GL2-1-20141124	2014 11 24	-	429	-	-	-	688	-	-	39.8	372	-	27.8	790	233	275	-	-	-	-	< 0.50	-	-	< 20	-	0.0044
	GL2-1-20150608	2015 06 08	7.89	444	-	-	-	713	-	-	14.6	36	-	34.5	730	281	306	-	-	-	-	0.31	-	-	< 20	-	0.0027
	GL2-1-20151103	2015 11 03	8.05	424	-	-	-	688	-	-	37.1	< 25	-	28.2	760	246	358	-	-	-	-	0.27	-	-	< 20	-	0.0028
	GL2-1-20160524	2016 05 24	8.21	445	-	-	-	730	-	-	< 5.0	97	-	34.9	720	275	289	289	< 1.0	< 1.0	-	0.31	-	-	< 20	-	0.0033
	DUP2-20160524	Duplicate	8.2	439	-	-	-	718	-	-	< 5.0	68	-	35.9	740	283	289	289	< 1.0	< 1.0	-	0.35	-	-	< 20	-	0.0027
	QA/QC RPD%		0	1	-	-	-	2	-	-	*	35	-	3	3	3	0	0	*	*	-	*	-	-	*	-	*
	GL2-1-20170524	2017 05 24	8.25	466	-	-	-	815	-	-	53.7	< 25	-	45.3	670	323	259	-	-	-	-	0.39	-	-	< 20	-	0.0016
	GL2-1-180528	2018 05 28	7.9	457	-	-	-	845	1.46	< 0.0050	92	< 250	< 250a	35.6	510	319	257	257	< 1.0	< 1.0	< 1.0	< 2.50	-	-	< 20	< 0.0050	-
	GL2-1-190523	2019 05 23	8.11	505	7.57	-	1119	903	1.77	< 0.0050	63	16	< 10	46.4	510	370	260	260	< 1.0	< 1.0	< 1.0	0.32	-	-	< 20	< 0.0050	-
	GL2-1-200609	2020 06 09	7.9	556	7.36	-	1,202	970	1.54	-	90	< 1,000	< 1,000a	54	< 10,000a	410	254	254	< 1.0	< 1.0	< 1.0	< 10.0	-	-	< 20	-	< 0.500
	GL2-1-200820	2020 08 20	8.1	473	7.46	-	1,435	1,000	1.72	-	73	-	-	63.4	-	-	237	237	< 1.0	< 1.0	< 1.0	0.44	-	-	< 20	-	< 0.0050
	DUPA-200820	Duplicate	8.1	476	7.46	-	1,435	992	2.18	-	69	-	-	63.2	-	-	240	240	< 1.0	< 1.0	< 1.0	0.44	-	-	< 20	-	< 0.0050
	QA/QC RPD%		0	1	*	-	*	1	*	-	*	-	-	0	-	-	1	1	*	*	*	*	-	-	*	-	*
	GL2-1-201019	2020 10 19	8.1	513	7.6	-	1,508	1,030	2.1	-	131	< 10	< 10	66.4	580	443	216	216	< 1.0	< 1.0	< 1.0	0.5	-	-	< 20	-	< 0.0050
	GL2-1-210512	2021 05 12	8.06	515	7.55	-	1,440	1,020	1.71	-	58	< 10	< 10	64.5	510	415	240	240	< 1.0	< 1.0	< 1.0	0.53	-	-	< 20	-	< 0.0050
	GL2-1-211005	2021 10 05	7.85	583	7.55	-	1,440	1,100	1.98	-	99	< 10	< 10	75.5	600	517	232	232	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0050
	GL2-1-220530	2022 05 30	7.54	573	-	-	1496	1,120	2.97	<0.05	75	<100	< 10	90.5	500	573	201	201	< 1.0	< 1.0	< 1.0	<0.10	-	-	< 20	-	-
	GL2-1-220927	2022 09 27	7.89	632	-	-	1689	1,220	1.93	<0.0050	58	<10	< 10	101	540	632	227	227	< 1.0	< 1.0	< 1.0	0.65	-	-	< 20	-	-
	GL2-1-231024	2023 10 24	7.6	658	-	-	-	1,320	2.61	<0.0050	0.098	<10	<10	117	0.46	700	188	188	<1.0	<1.0	<1.0	0.68	-	-	<20	-	-
GL2-2	GL 2-2-20091109	2009 11 09	-	359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL2-2-20100810	2010 08 10	-	350	-	-	-	598	-	-	< 10	-	-	16.1	-	129	352	-	-	-	-	-	20	-		-	0.016
	GL2-2-200826	2020 08 26	8.06	405	7.36	-	1,142	751	1.29	-	< 50	< 100	< 100	37.4	< 1,000	273	305	305	< 1.0	< 1.0	< 1.0	< 1.00	< 20	-		-	< 0.0500
	GL2-2-201020	2020 10 20	7.91	464	7.55	-	1,234	810	1.25	-	< 50	< 10	< 10	46.7	660	309	283	283	< 1.0	< 1.0	< 1.0	0.29	< 20	-		-	< 0.0050
	GL2-2-210513	2021 05 13	7.91	485	7.49	-	1,280	891	2.74	-	< 50	< 10	< 10	50.7	660	352	280	280	< 1.0	< 1.0	< 1.0	0.39	36	-		-	< 0.0050
	GL2-2-211005	2021 10 05	7.92	511	7.45	-	1,199	894	1.72	-	61	< 10	< 10	48.1	620	370	285	285	< 1.0	< 1.0	< 1.0	< 1.00	< 20	-		-	< 0.0050
	GL2-2-220530	2022 05 30	7.83	502	-	-	1,241	1,030	2.93	-	85	<100	< 10	68.1	550	465	233	233	< 1.0	< 1.0	< 1.0	<0.10	-	-	<20	-	-
	GL2-2-220927	2022 09 27	7.99	275	-	-	1,468	998	1.52	-	<50	<10	< 10	70.6	610	473	275	275	< 1.0	< 1.0	< 1.0	0.48	-	-	<20	-	-
	GL2-2-231025	2023 10 25	7.74	587	-	-	-	1,080	2.22	<0.0050	<50	<10	<10	78.3	500	500	224	224	<1.0	<1.0	<1.0	0.49	-	-	<20	-	-
GL3-2	GL3-2-20091116	2009 11 16	-	337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	GL3-2-20100810	2010 08 10	-	320	-	-	-	750	-	-	140	-	-	9.52	-	278	379	-	-	-	-	-	10	-		-	0.024

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.
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n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH (pH)	Total Hardness (mg/L)	pH (field) (pH)	Conductivity (µS/cm)	Field Conductivity (µS/cm)	Total Dissolved Solids (mg/L)	Dissolved Organic Carbon (mg/L)	Phosphate (mg/L)	Ammonia, Total (as N) (µg/L)	Nitrate (as N) (µg/L)	Nitrite (as N) (µg/L)	Chloride (mg/L)	Fluoride (µg/L)	Sulfate (mg/L)	Total Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Alkalinity, Hydroxide (as CaCO3) (mg/L)	Alkalinity, Phenolphthalein (as CaCO3) (mg/L)	Bromide (mg/L)	Hydrogen Sulfide (mg/L)	Sulfide (mg/L)	Chemical Oxygen Demand (mg/L)	Dissolved Phosphate (mg/L)	Ortho-Phosphate (mg/L)
GL3-5	GL3-5-20130627	2013 06 27	-	1,260	-	-	-	1,950	-	-	48,000	< 100	-	90	960	< 10	2,100	-	-	-	-	< 1.0	-	-	152	-	-
	GL3-5 (2012)-20140609	2014 06 09	-	1,230	-	-	-	1,920	-	-	53,800	100	-	94	680	< 10	2,020	-	-	-	-	< 1.0	-	-	152	-	0.0016
	GL3-5 (2012)-20141125	2014 11 25	-	1,330	-	-	-	2,030	-	-	48,600	< 100	-	98	730	< 6.0	1,990	-	-	-	-	< 1.0	-	-	148	-	0.0018
	GL3-5 (2012)-20150609	2015 06 09	7.43	1,240	-	-	-	1,850	-	-	52,700	< 50	-	93.7	640	< 3.0	2,110	-	-	-	-	0.74	-	-	139	-	0.0015
	DUP1-20150609	Duplicate	7.41	1,230	-	-	-	1,860	-	-	48,100	< 25	-	92.6	600	< 1.5	2,140	-	-	-	-	0.8	-	-	138	-	0.0017
	QA/QC RPD%		0	1	-	-	-	1	-	-	9	*	-	1	6	*	1	-	-	-	-	8	-	-	1	-	*
	GL3-5 (2012)-20151109	2015 11 09	6.8	1,280	-	-	-	1,990	-	-	49,900	< 100	-	93	940	< 6.0	1,960	-	-	-	-	< 1.0	-	-	139	-	< 0.0010
GL4-1	GL 4-1-20091110	2009 11 10	-	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL 4-1-20120626	2012 06 26	-	-	-	-	-	1,170	-	-	-	-	-	7.4	-	142	792	-	-	-	-	-	-	-	-	-	-
	GL 4-1-20120704	2012 07 04	-	580	-	-	-	-	-	-	8,700	-	-	-	-	-	-	-	-	-	-	-	-	-	70	-	1.4
	GL4-1-20100810	2010 08 10	-	600	-	-	-	1,210	-	-	20	-	-	10.4	-	474	542	-	-	-	-	-	-	-	< 10	-	0.012
	GL4-1-20110629	2011 06 29	-	613	-	-	-	1,190	-	-	760	-	-	10.6	-	442	571	-	-	-	-	-	-	-	10	-	0.148
	GL4-1-20120625	2012 06 25	-	610	-	-	-	1,230	-	-	2,520	-	-	13.7	-	432	577	-	-	-	-	-	-	-	30	-	0.16
	GL4-1-20121203	2012 12 03	-	548	-	-	-	1,210	-	-	170	< 100	-	12.1	-	458	542	-	-	-	-	-	-	-	20	-	0.008
	GL4-1-20130627	2013 06 27	-	622	-	-	-	1,140	-	-	105	< 100	-	12	2,660	501	583	-	-	-	-	< 1.0	-	-	< 20	-	-
	DUP4-20130627	Duplicate	-	638	-	-	-	1,130	-	-	102	< 100	-	13	2,520	501	560	-	-	-	-	< 1.0	-	-	< 20	-	-
	QA/QC RPD%		-	3	-	-	-	1	-	-	3	*	-	8	5	0	4	-	-	-	-	*	-	-	*	-	-
	GL4-1-20140603	2014 06 03	-	597	-	-	-	1,140	-	-	94.6	< 100	-	15	2,180	482	527	-	-	-	-	< 1.0	-	-	< 20	-	0.006
	GL4-1-20141124	2014 11 24	-	646	-	-	-	1,160	-	-	102	< 100	-	16	2,510	514	524	-	-	-	-	< 1.0	-	-	< 20	-	0.0057
	GL4-1-20150608	2015 06 08	8	625	-	-	-	1,110	-	-	102	< 50	-	12.9	2,100	505	536	-	-	-	-	< 0.50	-	-	< 20	-	0.0068
	GL4-1-20151104	2015 11 04	8.09	591	-	-	-	1,130	-	-	117	< 50	-	12.2	2,010	492	522	-	-	-	-	< 0.50	-	-	< 20	-	0.0052
	GL4-1-200814	2020 08 14	8.18	642	7.95	-	1,846	1,280	2.82	-	126	< 100	< 100	16.7	1,540	498	563	563	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0500
	GL4-1-201016	2020 10 16	8.11	616	7.69	-	1,582	1,260	3.18	-	116	< 10	< 10	17.7	1,900	501	536	536	< 1.0	< 1.0	< 1.0	< 0.10	-	-	< 20	-	< 0.0050
	GL4-1-210511	2021 05 11	8.17	618	7.62	-	1,831	1,300	5.18	-	113	11	< 10	16.6	1,910	482	562	562	< 1.0	< 1.0	< 1.0	< 0.10	-	-	< 20	-	< 0.0050
	GL4-1-211005	2021 10 05	8	632	7.55	-	1,747	1,320	3.04	-	148	< 10	< 10	15.5	1,930	534	555	555	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0050
	GL4-1-220530	2022 05 30	7.99	604	-	-	1517	1,280	3.62	<0.0050	134	<100	< 10	18.8	1,830	507	520	520	< 1.0	< 1.0	< 1.0	<0.10	-	-	< 20	-	-
	GL4-1-220927	2022 09 27	8.1	618	-	-	1830	1,300	2.23	<0.0050	101	< 10	< 10	18.2	1,970	551	575	575	< 1.0	< 1.0	< 1.0	<0.10	-	-	< 20	-	-
	GL4-1-230523	2023 05 23	8.15	659	-	-	-	1,220	3.29	0.005	153	<10	<10	17.2	1,810	518	472	472	<1.0	<1.0	<1.0	<0.10	-	-	21	-	-
	GL4-1-231025	2023 10 25	8.06	614	-	-	-	1,220	4.32	0.0111	105	<10	<10	18.5	1,750	517	483	483	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
GL4-2	GL4-2-20091116	2009 11 16	-	1,040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL4-2-20100810	2010 08 10	-	1,000	-	-	-	1,760	-	-	< 10	-	-	51.2	-	395	956	-	-	-	-	-	-	-	20	-	0.011
	GL4-2-20110629	2011 06 29	-	1,010	-	-	-	1,540	-	-	240	-	-	57	-	390	934	-	-	-	-	-	-	-	10	-	0.211
	GL4-2-20120626	2012 06 26	-	1,000	-	-	-	1,550	-	-	140	-	-	51.1	-	386	1,000	-	-	-	-	-	-	-	20	-	0.021
	GL4-2-20121203	2012 12 03	-	973	-	-	-	1,700	-	-	< 10	< 100	-	40.5	-	292	926	-	-	-	-	-	-	-	30	-	0.022
	GL4-2-200814	2020 08 14	8.04	846	7.71	-	2,259	1,610	5.89	-	< 50	< 100	< 100	61.7	2,040	480	845	845	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0500
	GL4-2-201030	2020 10 30	8.01	765	7.46	-	2,207	1,460	4.41	-	< 50	< 10	< 10	49.4	2,520	473	812	812	< 1.0	< 1.0	< 1.0	0.27	-	-	< 20	-	< 0.0050
	GL4-2-210511	2021 05 11	8.13	818	7.43	-	2,200	1,500	6.52	-	< 50	< 10	< 10	55.6	2,510	456	807	807	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0050
	GL4-2-211005	2021 10 05	7.95	829	7.4	-	2,023	1,760	4.25	-	59	< 10	< 10	46	2,670	475	843	843	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0050
	GL4-2-220530	2022 05 30	8	767	-	-	1757	1,410	5.3	<0.0050	<50	<100	< 10	36.4	2,600	440	719	719	< 1.0	< 1.0	< 1.0	<0.10	-	-	< 20	-	-
	GL4-2-220927	2022 09 27	7.99	749	-	-	2123	1,410	3.62	<0.0050	<50	<10	< 10	41.6	2,820	488	823	823	< 1.0	< 1.0	< 1.0	<0.10	-	-	< 20	-	-
	GL4-2-230523	2023 05 23	8.06	774	-	-	-	1,220	3.72	<0.0050	51	<10	<10	33.6	2,630	458	634	634	<1.0	<1.0	<1.0	<0.10	-	-	24	-	-
	GL4-2-231025	2023 10 25	8.06	761	-	-	-	1,380	5.51	<0.0050	<50	<10	<10	37.6	2,590	464	688	688	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
GL5-1	GL5-1-20091116	2009 11 16	-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL5-1-20100810	2010 08 10	-	110	-	-	-	1,690	-	-	250	-	-	42.2	-	283	1,210	-	-	-	-	-	-	-	< 10	-	0.002
	GL5-2-20180528	2018 05 28	7.83	671	-	-	-	1,370	-	-	52	6,270	-	266	500	201	472	472	< 1.0	< 1.0	-	< 5.00	-	-	< 20	-	< 0.0050

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Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL5-2	GL5-2-20091116	2009 11 16	-	602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL30-1-20091116	Duplicate	-	597	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA/QC RPD%		-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL5-2-20100810	2010 08 10	-	640	-	-	-	1,050	-	-	< 10	-	-	183	-	168	527	-	-	-	-	-	-	-	10	-	0.006
	GL30-3-20100810	Duplicate	-	640	-	-	-	1,120	-	-	< 10	-	-	181	-	167	526	-	-	-	-	-	-	-	10	-	0.007
	QA/QC RPD%		-	0	-	-	-	6	-	-	*	-	-	1	-	1	0	-	-	-	-	-	-	-	*	-	15
	GL5-2-20110704	2011 07 04	-	778	-	-	-	1,080	-	-	40	-	-	228	-	153	560	-	-	-	-	-	-	-	20	-	0.005
	GL 5-2-20120627	2012 06 27	-	710	-	-	-	1,160	-	-	< 10	-	-	243	-	171	522	-	-	-	-	-	-	-	10	-	0.005
	DUP C-20120627	Duplicate	-	730	-	-	-	1,130	-	-	30	-	-	246	-	171	520	-	-	-	-	-	-	-	40	-	0.005
	QA/QC RPD%		-	3	-	-	-	3	-	-	*	-	-	1	-	0	0	-	-	-	-	-	-	-	*	-	0
	GL5-2-20121205	2012 12 05	-	659	-	-	-	1,060	-	-	< 10	< 1,000	-	193	-	191	551	-	-	-	-	-	-	-	21	-	0.005
	GL5-2-20130626	2013 06 26	-	726	-	-	-	1,150	-	-	< 5.0	< 100	-	256	1,160	181	580	-	-	-	-	< 1.0	-	-	37	-	-
	GL5-2-20131114	2013 11 14	-	687	-	-	-	1,110	-	-	< 5.0	< 100	-	226	980	207	803	-	-	-	-	< 1.0	-	-	< 20	-	-
	GL5-2-20140603	2014 06 03	-	655	-	-	-	1,130	-	-	< 5.0	< 100	-	248	980	191	600	-	-	-	-	< 1.0	-	-	21	-	0.0046
	GL5-2-20141118	2014 11 18	-	636	-	-	-	1,000	-	-	5.9	< 100	-	176	940	210	691	-	-	-	-	< 1.0	-	-	< 20	-	0.0046
	DUP2-20141118	Duplicate	-	635	-	-	-	1,070	-	-	< 5.0	< 100	-	177	950	211	683	-	-	-	-	< 1.0	-	-	24	-	0.0047
	QA/QC RPD%		-	0	-	-	-	7	-	-	*	*	-	1	1	0	1	-	-	-	-	*	-	-	*	-	*
	GL5-2-20150608	2015 06 08	7.65	956	-	-	-	1,890	-	-	< 5.0	2,060	-	739	790	176	630	-	-	-	-	< 1.0	-	-	31	-	0.0036
	GL5-2-20151103	2015 11 03	7.94	623	-	-	-	1,060	-	-	5	< 50	-	165	940	219	539	-	-	-	-	< 0.50	-	-	< 20	-	0.0049
	GL5-2-20160526	2016 05 26	7.97	879	-	-	-	1,960	-	-	< 5.0	5,370	-	719	900	215	475	-	-	-	-	< 1.0	-	-	< 20	-	0.0031
	GL5-2-20170525	2017 05 25	8.22	782	-	-	-	1,690	-	-	< 5.0	5,720	-	550	840	209	510	-	-	-	-	< 1.0	-	-	< 20	-	0.0037
	DUP1-20170525	Duplicate	8.28	787	-	-	-	1,670	-	-	< 5.0	5,670	-	543	850	207	437	-	-	-	-	< 1.0	-	-	< 20	-	0.0038
	QA/QC RPD%		1	1	-	-	-	1	-	-	*	1	-	1	1	1	15	-	-	-	-	*	-	-	*	-	*
	GL5-2-180528	2018 05 28	7.83	671	7.08	-	2,100	1,370	4.6	< 0.0050	52	6,270	< 10	266	500	201	472	472	< 1.0	< 1.0	< 1.0	< 5.00	-	-	< 20	< 0.0050	-
	GL5-2-190527	2019 05 27	7.96	638	7.43	-	2396	1,300	4.4	0.0051	38	9,010	< 10	319	650	332	488	488	< 1.0	< 1.0	< 1.0	0.24	-	-	< 20	0.0051	-
	GL5-2-200611	2020 06 11	7.83	501	7.21	-	1,529	1,120	2.31	-	< 50	310	< 100	179	< 1,000	243	522	522	< 1.0	< 1.0	< 1.0	< 1.00	-	-	48	-	< 0.0500
	GL5-2-210603	2021 06 03	8.05	709	7.2	-	2,417	1,390	3.35	-	< 50	1,840	< 10	353	800	249	490	490	< 1.0	< 1.0	< 1.0	0.52	-	-	26	-	< 0.0050
	GL5-2-2206023	2022 06 02	8.02	515	-	-	1800	1070	2.57	<0.0500	<50	<100	< 10	173	<1000	291	425	425	< 1.0	< 1.0	< 1.0	<1.0	-	-	<20	-	-
GL5-3	GL5-3-20091116	2009 11 16	-	596	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL5-3-20100810	2010 08 10	-	600	-	-	-	974	-	-	< 10	-	-	180	-	155	474	-	-	-	-	-	-	-	20	-	0.022
GL6-1 (2011)	GL 6-1-20091110	2009 11 10	-	3,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL6-1-20110704	2011 07 04	-	1,220	-	-	-	9,120	-	-	230,000	-	-	840	-	930	6,900	-	-	-	-	-	-	-	1,120	-	5.6
	GL 6-1 (2011)-20120626	2012 06 26	-	1,510	-	-	-	10,100	-	-	275,000	-	-	809	-	1,800	6,150	-	-	-	-	-	-	-	1,300	-	-
	GL 6-1 (2011)-20120704	2012 07 04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6
	GL6-1 (2011)-20130627	2013 06 27	-	1,200	-	-	-	9,310	-	-	251,000	< 250	-	951	1,100	779	6,020	-	-	-	-	10.4	-	-	1,220	-	-
	GL6-1-20131114	2013 11 14	-	1,650	-	-	-	12,400	-	-	235,000	< 500	-	965	438	3,740	7,020	-	-	-	-	10	-	-	1,120	-	-
	GL6-1 (2011)-20140609	2014 06 09	-	1,300	-	-	-	9,450	-	-	252,000	550	-	872	< 1,000	2,030	5,810	-	-	-	-	8.7	-	-	987	-	4.94
	GL6-1 (2011)-20141127	2014 11 27	-	1,580	-	-	-	13,800	-	-	234,000	840	-	943	449	3,480	7,150	7,150	< 100	< 100	-	9.4	-	-	1,030	-	6.39
	GL6-1 (2011)-20150615	2015 06 15	7.83	1,030	-	-	-	9,280	-	-	254,000	< 500	-	936	< 2,000a	1,710	5,920	-	-	-	-	9.4	-	-	1,110	-	4.24

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.

All terms defined within the body of Keltech's report.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Physical Parameters														Dissolved Inorganics										
			pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL6-1 (2011) (cont'd)	GL6-1 (2011)-20170530	2017 05 30	7.4	1,260	-	-	-	7,540	-	-	119	< 250	-	941	< 1,000	1,210	4,370	-	-	-	-	8.4	-	-	< 20	-	2.69
	GL6-1(2011)-20121205	2012 12 05	-	1,980	-	-	-	9,940	-	-	245,000	< 10,000a	-	828	-	2,080	614	-	-	-	-	-	-	-	1,280	-	4
	GL6-1-180604	2018 06 04	7.45	1,900	6.987.0	15,700	14,230	10,800	339	0.224	334,000	< 5,000a	276	1,570	< 50,000a	12,000	3,960	3,960	< 1.0	< 1.0	< 1.0	< 50.0	0.49	1.08	881	0.224	-
	GL6-1 (2011)-190603	2019 06 03	7.8	1,270	7.42	11,200	11903	6,100	175	1.15	227,000	< 1,000	< 1,000a	527	< 10,000a	2,380	3,600	3,600	< 1.0	< 1.0	< 1.0	< 10.0	0.82	8.44	705	1.15	-
	DUP3-190603	Duplicate	7.72	1,240	7.42	-	11903	8,100	180	0.56	236,000	< 1,000	< 1,000a	559	< 10,000a	2,350	3,510	3,510	< 1.0	< 1.0	< 1.0	< 10.0	-	-	705	0.56	-
	QA/QC RPD%		1	2	*	-	*	28	3	69	4	*	*	6	*	1	3	3	*	*	*	*	-	-	0	69	-
	GL6-1-200611	2020 06 11	7.82	962	7.1	8,440	6,871	5,220	241	-	194,000	< 100	< 100	652	< 1,000	282	3,980	3,980	< 1.0	< 1.0	< 1.0	4.43	10.7	25.5	621	-	0.576
	GL6-1-210610	2021 06 10	7.07.72	1,230	6.99	8,020	7,919	4,570	211	-	210,000	< 100	< 100	659	< 1,000	25	3,990	3,990	< 1.0	< 1.0	< 1.0	5.22	0.29	6	842	-	0.413
GL7-1	GL7-1-20110704	2011 07 04	-	1,190	-	-	-	2,560	-	-	400	-	-	69.3	-	735	1,410	-	-	-	-	-	-	-	30	-	0.006
	GL7-1-20120625	2012 06 25	-	1,150	-	-	-	2,590	-	-	360	-	-	69.2	-	709	1,540	-	-	-	-	-	-	-	30	-	< 0.002
	GL7-1-20121205	2012 12 05	-	1,120	-	-	-	2,500	-	-	450	< 1,000	-	72	-	758	1,520	-	-	-	-	-	-	-	32	-	0.002
	GL7-1-20130626	2013 06 26	-	1,110	-	-	-	2,500	-	-	442	< 100	-	69	2,490	771	1,440	-	-	-	-	< 1.0	-	-	34	-	-
	GL7-1-20131114	2013 11 14	-	1,140	-	-	-	2,530	-	-	446	< 100	-	75	2,390	757	1,540	-	-	-	-	< 1.0	-	-	27	-	-
	DUP1-20131114	Duplicate	-	1,130	-	-	-	2,500	-	-	444	< 100	-	73	2,500	776	1,610	-	-	-	-	< 1.0	-	-	20	-	-
	QA/QC RPD%		-	1	-	-	-	1	-	-	0	*	-	3	4	2	4	-	-	-	-	*	-	-	*	-	-
	GL7-1-20140604	2014 06 04	-	1,190	-	-	-	2,560	-	-	435	< 100	-	57	2,420	671	1,780	-	-	-	-	< 1.0	-	-	24	-	< 0.0010
	GL7-1-20141125	2014 11 25	-	1,110	-	-	-	2,480	-	-	411	< 100	-	71	2,300	759	1,230	-	-	-	-	< 1.0	-	-	30	-	< 0.0010
	GL7-1-20150609	2015 06 09	7.32	1,090	-	-	-	2,430	-	-	408	< 25	-	58.4	1,770	669	1,800	-	-	-	-	0.54	-	-	28	-	0.0014
	GL7-1-20151109	2015 11 09	6.61	1,080	-	-	-	2,470	-	-	412	< 100	-	61	2,180	704	1,430	-	-	-	-	< 1.0	-	-	29	-	< 0.0010
GL8-1	GL 8-1-20091110	2009 11 10	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL8-1-20100810	2010 08 10	-	630	-	-	-	2,710	-	-	430	-	-	55.9	-	1,230	550	-	-	-	-	-	-	-	< 10	-	0.037
GL8-2	GL 8-2-20091110	2009 11 10	-	1,190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL8-2-20100810	2010 08 10	-	928	-	-	-	8,530	-	-	20	-	-	528	-	2,830	2,800	-	-	-	-	-	-	-	120	-	0.298
	GL8-2-20110627	2011 06 27	-	1,040	-	-	-	7,520	-	-	220	-	-	512	-	2,760	2,520	-	-	-	-	-	-	-	100	-	0.158
	GL8-2-20111217	2011 12 17	-	652	-	-	-	7,360	-	-	60	< 100	-	511	-	2,940	2,470	-	-	-	-	-	-	-	120	-	0.35
	GL 8-2-20120626	2012 06 26	-	800	-	-	-	5,610	-	-	130	-	-	390	-	1,970	2,080	-	-	-	-	-	-	-	120	-	-
	DUP B-20120626	Duplicate	-	800	-	-	-	7,250	-	-	140	-	-	467	-	2,550	2,510	-	-	-	-	-	-	-	90	-	-
	QA/QC RPD%		-	0	-	-	-	26	-	-	7	-	-	18	-	26	19	-	-	-	-	-	-	-	29	-	-
	GL 8-2-20120704	2012 07 04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05
	GL8-2-20121204	2012 12 04	-	581	-	-	-	7,350	-	-	90	220	-	478	-	2,830	2,600	-	-	-	-	-	-	-	113	-	0.324
	GL8-2-20130626	2013 06 26	-	1,180	-	-	-	7,140	-	-	64.4	350	-	459	3,200	3,260	1,930	-	-	-	-	3.6	-	-	487	-	-
	GL8-2-20131113	2013 11 13	-	800	-	-	-	7,050	-	-	25.8	< 250	-	460	3,600	2,870	2,210	-	-	-	-	-	-	-	76	-	-
	DUP2-20131113	Duplicate	-	808	-	-	-	7,070	-	-	22.6	< 250	-	459	3,600	2,870	2,130	-	-	-	-	-	-	-	80	-	-
	QA/QC RPD%		-	1	-	-	-	0	-	-	*	*	-	0	0	0	4	-	-	-	-	-	-	-	5	-	-
	GL8-2-20140605	2014 06 05	-	768	-	-	-	6,600	-	-	14	6,340	-	390	3,000	3,000	1,850	-	-	-	-	3.4	-	-	68	-	0.0704
	GL8-2-20141118	2014 11 18	-	626	-	-	-	5,580	-	-	15.6	2,770	-	389	3,700	2,840	2,040	-	-	-	-	2.5	-	-	78	-	0.166

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.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
		(yyyy mm dd)	pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL8-2 (cont'd)	GL8-2-20150610	2015 06 10	8.29	837	-	-	-	6,800	-	-	18.1	15,700	-	390	2,700	3,320	1,630	-	-	-	-	2.6	-	-	64	-	0.0773
	DUP 2-20150610	Duplicate	8.3	833	-	-	-	6,900	-	-	20.5	15,400	-	383	2,700	3,280	1,650	-	-	-	-	2.7	-	-	70	-	0.0795
	QA/QC RPD%		0	0	-	-	-	1	-	-	*	2	-	2	0	1	1	-	-	-	-	4	-	-	9	-	3
	GL8-2-20151103	2015 11 03	8.03	683	-	-	-	6,730	-	-	12.4	11,200	-	392	3,700	3,290	1,580	-	-	-	-	2.7	-	-	59	-	0.141
GL9-1	GL 9-1-20091111	2009 11 11	-	510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL9-1-20100810	2010 08 10	-	610	-	-	-	1,470	-	-	230	-	-	126	-	300	923	-	-	-	-	-	-	-	< 10	-	0.003
	GL9-1-20110628	2011 06 28	-	375	-	-	-	1,220	-	-	120	-	-	132	-	270	677	-	-	-	-	-	-	-	< 10	-	0.026
	GL 9-1-20120627	2012 06 27	-	420	-	-	-	1,320	-	-	140	-	-	153	-	263	690	-	-	-	-	-	-	-	20	-	< 0.002
	GL9-1-20121204	2012 12 04	-	392	-	-	-	1,350	-	-	160	< 100	-	152	-	299	684	-	-	-	-	-	-	-	18	-	< 0.002
	GL9-1-20130626	2013 06 26	-	418	-	-	-	1,260	-	-	167	< 100	-	153	770	279	727	-	-	-	-	< 1.0	-	-	< 20	-	-
	GL9-1-20131114	2013 11 14	-	410	-	-	-	1,230	-	-	155	< 100	-	155	580	254	872	-	-	-	-	< 1.0	-	-	< 20	-	-
	GL9-1-20140604	2014 06 04	-	374	-	-	-	1,190	-	-	106	< 100	-	156	820	244	879	-	-	-	-	< 1.0	-	-	< 20	-	< 0.0010
	DUP1-20140604	Duplicate	-	366	-	-	-	1,190	-	-	92.2	< 50	-	153	720	238	849	-	-	-	-	0.63	-	-	< 20	-	< 0.0010
	QA/QC RPD%		-	2	-	-	-	0	-	-	14	*	-	2	13	2	3	-	-	-	-	*	-	-	*	-	*
	GL9-1-20141125	2014 11 25	-	404	-	-	-	1,310	-	-	189	< 100	-	154	640	250	776	-	-	-	-	< 1.0	-	-	28	-	< 0.0010
	GL9-1-20150609	2015 06 09	8.9	332	-	-	-	1,140	-	-	76.2	< 25	-	153	590	224	833	-	-	-	-	0.72	-	-	< 20	-	< 0.0010
	GL9-1-20151109	2015 11 09	8.97	326	-	-	-	1,220	-	-	74.2	< 100	-	153	600	218	684	-	-	-	-	< 1.0	-	-	< 20	-	< 0.0010
	GL9-1-20170530	2017 05 30	8.9	363	-	-	-	1,150	-	-	314,000	< 50	-	159	660	223	693	-	-	-	-	0.71	-	-	1,150	-	< 0.0010
	GL9-1-180604	2018 06 04	8.03	480	7.21	-	2,027	1,390	2.53	< 0.0050	261	< 100	< 10	153	650	314	739	739	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	< 0.0050	-
	GL9-1-190530	2019 05 30	8.33	407	8.25	-	1961	1,330	1.44	< 0.0050	280	< 10	< 10	140	720	270	713	701	12	< 1.0	6	0.39	-	-	< 20	< 0.0050	-
	GL9-1-200611	2020 06 11	7.9	584	7.06	-	2,032	1,470	1.77	-	255	< 100	< 100	109	< 1,000	267	1,060	1,060	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0500
	DUPC-200611	Duplicate	7.86	570	-	-	-	1,450	1.26	-	255	< 100	< 100	113	< 1,000	276	1,050	1,050	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0500
	QA/QC RPD%		1	2	-	-	-	1	*	-	0	*	*	4	*	3	1	1	*	*	*	*	-	-	*	-	*
	GL9-1-210611	2021 06 11	7.75	746	6.79	-	2,568	1,630	0.74	-	239	< 100	< 100	99	< 1,000	277	1,220	1,220	< 1.0	< 1.0	< 1.0	< 1.00	-	-	35	-	< 0.0500
GL9-2	GL 9-2-20091111	2009 11 11	-	9,260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL9-2-20100810	2010 08 10	-	6,980	-	-	-	40,200	-	-	800	-	-	1,300	-	23,000	720	-	-	-	-	-	-	-	100	-	0.011
	GL9-2-20110628	2011 06 28	-	8,320	-	-	-	40,500	-	-	40	-	-	1,150	-	25,300	606	-	-	-	-	-	-	-	110	-	0.095
	GL 9-2-20120627	2012 06 27	-	8,200	-	-	-	41,400	-	-	< 10	-	-	1,130	-	26,000	588	-	-	-	-	-	-	-	190	-	0.006
	GL9-2-20121204	2012 12 04	-	8,370	-	-	-	39,400	-	-	100	< 1,000	-	1,210	-	27,000	564	-	-	-	-	-	-	-	101	-	0.009
	Dup-B-20121204	Duplicate	-	7,980	-	-	-	39,800	-	-	< 10	< 1,000	-	1,120	-	27,100	564	-	-	-	-	-	-	-	89	-	0.006
	QA/QC RPD%		-	5	-	-	-	1	-	-	*	*	-	8	-	0	0	-	-	-	-	-	-	-	13	-	40
	GL9-2-20130626	2013 06 26	-	7,670	-	-	-	40,500	-	-	140	< 500	-	1,250	3,040	26,900	898	-	-	-	-	< 5.0	-	-	78	-	-
	DUP2-20130626	Duplicate	-	7,870	-	-	-	41,900	-	-	129	< 500	-	1,240	3,300	26,800	1,000	-	-	-	-	< 5.0	-	-	82	-	-
	QA/QC RPD%		-	3	-	-	-	3	-	-	8	*	-	1	8	0	11	-	-	-	-	*	-	-	5	-	-
	GL9-2-20131113	2013 11 13	-	7,950	-	-	-	40,900	-	-	485	< 500	-	1,250	3,100	25,500	950	-	-	-	-	-	-	-	64	-	-
	GL9-2-20140605	2014 06 05	-	8,100	-	-	-	39,300	-	-	11.9	720	-	1,230	3,240	26,100	1,030	-	-	-	-	7.8	-	-	78	-	0.0054
	GL9-2-20141125	2014 11 25	-	7,700	-	-	-	40,600	-	-	54.3	730	-	1,290	3,780	27,500	502	-	-	-	-	5.6	-	-	68	-	0.0054
	GL9-2-20150609	2015 06 09	8.05	7,650	-	-	-	38,700	-	-	92.3	< 500	-	1,270	2,400	27,100	1,080	-	-	-	-	5.9	-	-	64	-	0.0052
	GL9-2-20151104	2015 11 04	7.92	7,360	-	-	-	40,400	-	-	50.4	< 500	-	1,200	3,300	26,200	547	-	-	-	-	5.6	-	-	53	-	0.0057

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Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.
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RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics											
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL9-3	GL 9-3-20091111	2009 11 11	-	217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL9-3-20100810	2010 08 10	-	10,500	-	-	-	48,500	-	-	< 10	-	-	1,610	-	29,400	944	-	-	-	-	-	-	-	100	-	0.028
	GL9-3-20110628	2011 06 28	-	12,300	-	-	-	49,600	-	-	20	-	-	1,450	-	31,400	930	-	-	-	-	-	-	-	180	-	0.033
	GL9-A-20110628	Duplicate	-	11,400	-	-	-	50,100	-	-	30	-	-	1,400	-	31,500	932	-	-	-	-	-	-	-	190	-	0.032
	QA/QC RPD%		-	8	-	-	-	1	-	-	*	-	-	4	-	0	0	-	-	-	-	-	-	-	5	-	3
	GL 9-3-20120627	2012 06 27	-	11,000	-	-	-	51,700	-	-	30	-	-	1,360	-	31,400	948	-	-	-	-	-	-	-	230	-	0.008
	GL9-3-20121204	2012 12 04	-	10,400	-	-	-	50,200	-	-	< 10	< 1,000	-	1,500	-	31,800	947	-	-	-	-	-	-	-	156	-	< 0.002
	GL9-3-20130626	2013 06 26	-	10,400	-	-	-	51,900	-	-	17.1	< 500	-	1,540	2,340	32,600	1,420	-	-	-	-	< 5.0	-	-	100	-	-
	GL9-3-20131113	2013 11 13	-	10,500	-	-	-	49,000	-	-	9.6	560	-	1,590	2,420	31,500	1,450	-	-	-	-	-	-	-	281	-	-
	GL9-3-20140605	2014 06 05	-	10,800	-	-	-	48,700	-	-	7.4	< 500	-	1,530	2,320	31,800	1,580	-	-	-	-	10.5	-	-	88	-	0.0051
	GL9-3-20141125	2014 11 25	-	10,400	-	-	-	49,300	-	-	10.5	< 500	-	1,600	3,020	32,800	989	-	-	-	-	7.2	-	-	105	-	0.0054
	DUP4-20141124	Duplicate	-	10,400	-	-	-	49,800	-	-	10.7	650	-	1,610	3,030	33,100	1,010	-	-	-	-	8	-	-	121	-	0.0074
	QA/QC RPD%		-	0	-	-	-	1	-	-	*	*	-	1	0	1	2	-	-	-	-	11	-	-	14	-	31
	GL9-3-20150609	2015 06 09	7.92	10,400	-	-	-	48,200	-	-	16.5	< 500	-	1,590	< 2,000a	33,500	1,530	-	-	-	-	8.5	-	-	91	-	0.0042
	GL9-3-20151109	2015 11 09	7.69	9,720	-	-	-	50,200	-	-	9.9	< 500	-	1,530	3,200	32,100	926	-	-	-	-	6.2	-	-	124	-	0.0043
	GL9-3-20160526	2016 05 26	7.78	10,600	-	-	-	62,800	-	-	10.4	< 500	-	1,780	3,500	37,100	915	-	-	-	-	10.8	-	-	78	-	0.0049
	GL9-3-20170529	2017 05 29	7.9	11,100	-	-	-	46,400	-	-	30.5	< 500	-	1,680	2,700	34,600	834	-	-	-	-	11.2	-	-	80	-	0.0065
	GL9-3-180528	2018 05 28	7.68	11,300	7.22	-	3,210	53,000	25.1	< 0.0050	69	6,320	< 1,000a	238	4,350	199	862	862	< 1.0	< 1.0	< 1.0	< 10.0	-	-	86	< 0.0050	-
	GL9-3-190527	2019 05 27	7.73	12,600	7.54	-	44350	52,300	24.8	< 0.500	73	< 1,000	< 1,000a	1,540	< 10,000a	31,700	859	859	< 1.0	< 1.0	< 1.0	< 10.0	-	-	83	< 0.500	-
	GL9-3-200608	2020 06 08	7.8	10,200	7.32	-	36,600	52,600	23.6	-	< 50	< 5,000a	< 5,000a	1,400	< 50,000a	34,500	921	921	< 1.0	< 1.0	< 1.0	< 50.0	-	-	79	-	< 2.50
	GL9-3-210610	2021 06 10	7.74	10,700	7.29	-	41,476	54,200	18.8	-	< 50	< 1,000	< 1,000	1,600	< 10,000a	32,300	943	943	< 1.0	< 1.0	< 1.0	< 10.0	-	-	104	-	< 0.500
GL10-1	GL10-1-20091112	2009 11 12	-	7,010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL10-1-20100810	2010 08 10	-	6,430	-	-	-	31,200	-	-	170	-	-	1,400	-	14,800	3,470	-	-	-	-	-	-	-	480	-	0.059
	GL10-1-20110704	2011 07 04	-	8,310	-	-	-	31,700	-	-	140	-	-	1,420	-	17,600	3,200	-	-	-	-	-	-	-	210	-	0.035
	GL10-1-20120626	2012 06 26	-	8,760	-	-	-	33,800	-	-	140	-	-	1,450	-	19,300	2,640	-	-	-	-	-	-	-	230	-	0.006
	GL10-1-20121204	2012 12 04	-	8,350	-	-	-	33,000	-	-	210	< 1,000	-	1,270	-	19,400	267	-	-	-	-	-	-	-	228	-	0.004
	GL10-1-20130626	2013 06 26	-	7,720	-	-	-	31,400	-	-	142	< 500	-	1,270	1,860	18,800	2,540	-	-	-	-	10.5	-	-	166	-	-
	GL10-1-20140605	2014 06 05	-	6,550	-	-	-	28,900	-	-	81.5	< 500	-	1,130	1,900	17,400	2,560	-	-	-	-	11.1	-	-	145	-	0.0044
	GL10-1-20141125	2014 11 25	-	6,570	-	-	-	28,000	-	-	129	710	-	1,250	2,250	19,100	2,180	-	-	-	-	9.5	-	-	177	-	0.0063
	GL10-1-20150610	2015 06 10	7.95	6,240	-	-	-	26,600	-	-	170	< 500	-	1,020	< 2,000a	16,300	2,300	-	-	-	-	8.7	-	-	145	-	0.0024
	GL10-1-20151109	2015 11 09	7.57	5,980	-	-	-	25,100	-	-	152	< 500	-	963	< 2,000a	15,500	1,950	-	-	-	-	7.4	-	-	210	-	0.0019
	DUP2-20151109	Duplicate	7.64	5,800	-	-	-	25,200	-	-	173	< 500	-	998	2,200	16,100	1,960	-	-	-	-	7.9	-	-	126	-	0.0028
	QA/QC RPD%		1	3	-	-	-	0	-	-	13	*	-	4	*	4	1	-	-	-	-	7	-	-	50	-	*

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.
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RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			Physical Parameters														Dissolved Inorganics										
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL12-1	GL12-1-20091112	2009 11 12	-	3,250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL12-1-20100811	2010 08 11	-	3,080	-	-	-	7,420	-	-	< 10	-	-	174	-	3,890	558	-	-	-	-	-	-	-	50	-	0.004
	GL12-1-20110629	2011 06 29	-	3,310	-	-	-	7,330	-	-	20	-	-	151	-	4,240	544	-	-	-	-	-	-	-	30	-	0.095
	GL30-1-20110629	Duplicate	-	3,400	-	-	-	7,270	-	-	30	-	-	151	-	4,190	542	-	-	-	-	-	-	-	20	-	0.092
	QA/QC RPD%		-	3	-	-	-	1	-	-	*	-	-	0	-	1	0	-	-	-	-	-	-	-	*	-	3
	GL 12-1-20111218	2011 12 18	-	3,160	-	-	-	8,050	-	-	< 10	3,660	-	168	-	3,040	571	-	-	-	-	-	-	-	40	-	0.03
	GL12-1-20120625	2012 06 25	-	3,520	-	-	-	7,750	-	-	< 10	-	-	173	-	4,400	589	-	-	-	-	-	-	-	70	-	0.003
	GL12-1-20121204	2012 12 04	-	3,610	-	-	-	7,920	-	-	< 10	5,830	-	182	-	4,770	606	-	-	-	-	-	-	-	72	-	0.007
	GL12-1-20130626	2013 06 26	-	3,720	-	-	-	8,440	-	-	5.4	8,300	-	222	2,200	4,980	767	-	-	-	-	< 2.5	-	-	63	-	-
	GL12-1-20131113	2013 11 13	-	3,900	-	-	-	8,560	-	-	6.7	5,870	-	251	1,800	4,820	860	-	-	-	-	-	-	-	69	-	-
	GL12-1-20140604	2014 06 04	-	4,090	-	-	-	9,790	-	-	69.6	2,640	-	467	2,900	5,550	1,170	-	-	-	-	< 2.5	-	-	258	-	0.357
	GL12-1-20141118	2014 11 18	-	3,910	-	-	-	9,400	-	-	86.6	< 250	-	404	1,600	5,610	1,110	-	-	-	-	< 2.5	-	-	219	-	0.0076
	GL12-1-20150609	2015 06 09	7.68	3,880	-	-	-	7,990	-	-	274	< 100	-	607	1,830	4,560	842	-	-	-	-	< 1.0	-	-	378	-	0.0016
	DUP3-20150609	Duplicate	7.64	3,900	-	-	-	8,000	-	-	279	< 50	-	603	1,650	4,430	855	-	-	-	-	0.63	-	-	372	-	0.0011
	QA/QC RPD%		1	1	-	-	-	0	-	-	2	*	-	1	10	3	2	-	-	-	-	*	-	-	2	-	*
	GL12-1-20151104	2015 11 04	7.31	3,480	-	-	-	8,290	-	-	252	< 250	-	455	2,000	4,980	744	-	-	-	-	< 2.5	-	-	260	-	< 0.0010
	GL12-1-20160524	2016 05 24	7.14	3,840	-	-	-	8,210	-	-	467	< 250	-	500	2,000	4,600	768	768	< 1.0	< 1.0	-	< 2.5	-	-	393	-	< 0.0010
	GL12-1-20160921	2016 09 21	7.34	3,590	-	-	-	8,290	-	-	648	< 250	-	574	2,000	4,430	824	-	-	-	-	< 2.5	-	-	657	-	0.0062
	GL12-1-20170529	2017 05 29	7.17	2,610	-	-	-	7,280	-	-	2,020	< 250	-	514	1,700	3,850	823	-	-	-	-	< 2.5	-	-	1,070	-	0.372
	GL12-1-20170926	2017 09 26	7.39	3,240	-	-	-	6,500	-	-	1,720	< 100	-	556	1,750	3,540	877	-	-	-	-	< 1.0	-	-	751	-	0.157
	GL12-1-180604	2018 06 04	7.31	3,390	6.73	-	58,741	6,950	382	0.0074	1,430	< 5,000a	< 10	1,050	1,220	9,180	865	865	< 1.0	< 1.0	< 1.0	< 50.0	-	-	542	0.0074	-
	GL12-1-180919	2018 09 19	7.07	3,890	6.99	-	5,880	7,730	190	< 0.0050	1,840	< 100	< 100	495	1,840	3,660	882	882	< 1.0	< 1.0	< 1.0	< 1.00	-	-	513	< 0.0050	-
	GL12-1-190527	2019 05 27	7.49	3,850	6.75	-	8360	7,860	155	0.0125	1,750	59	24	480	1,560	3,800	907	907	< 1.0	< 1.0	< 1.0	0.33	-	-	485	0.0125	-
	GL12-1-190919	2019 09 19	7.43	3,830	6.81	-	7380	7,920	175	-	1,270	< 100	< 100	496	1,190	3,620	886	886	< 1.0	< 1.0	< 1.0	< 1.00	-	-	458	-	< 0.0500
	GL12-1-200610	2020 06 10	7.39	4,490	6.78	-	6,947	8,040	203	-	4,260	< 100	< 100	610	1,200	3,880	997	997	< 1.0	< 1.0	< 1.0	< 1.00	-	-	544	-	< 0.0500
	GL12-1-201102	2020 11 02	7.51	4,720	6.64	-	8,081	8,040	179	-	7,300	< 1,000	< 10	603	1,400	3,820	948	948	< 1.0	< 1.0	< 1.0	0.84	-	-	566	-	< 0.0050
	GL12-1-210525	2021 05 25	7.69	4,090	6.69	-	7,982	7,150	156	-	4,360	< 1,000	< 10	568	1,430	3,850	915	915	< 1.0	< 1.0	< 1.0	< 10.0	-	-	563	-	< 0.0050
	GL12-1-211005	2021 10 05	7.27	4,140	6.67	-	7,452	7,940	174	-	4,660	< 100	< 100	579	1,300	4,280	928	928	< 1.0	< 1.0	< 1.0	< 1.00	-	-	536	-	< 0.0500
	GL12-1-220607	2022 06 07	6.86	3720	-	-	6887	7760	199	<0.0500	6910	<1000	<1000	559	1050	3910	685	685	<1.0	<1.0	<1.0	<1.00	-	-	563	-	-
	GL12-1-221005	2022 10 05	7.14	3420	-	-	7795	7490	182	<0.500	7960	<1000	<1000	598	<1000	3870	815	815	<1.0	<1.0	<1.0	<10.0	-	-	613	-	-
GL13-1	GL13-1-20091117	2009 11 17	-	3,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL13-1-20100811	2010 08 11	-	3,550	-	-	-	11,200	-	-	< 10	-	-	178	-	5,870	640	-	-	-	-	-	-	-	10	-	0.005
	GL13-1-20110627	2011 06 27	-	3,950	-	-	-	10,800	-	-	< 10	-	-	196	-	6,580	666	-	-	-	-	-	-	-	30	-	0.007
	GL13-1-20111217	2011 12 17	-	3,500	-	-	-	10,900	-	-	40	220	-	183	-	5,900	682	-	-	-	-	-	-	-	30	-	0.03
	DUPC-20111217	Duplicate	-	113	-	-	-	1,570	-	-	410	< 50	-	72.6	-	2.3	1,420	-	-	-	-	-	-	-	< 10	-	0.02
	QA/QC RPD%		-	187	-	-	-	150	-	-	*	*	-	86	-	200	70	-	-	-	-	-	-	-	*	-	40
	GL13-1-20120625	2012 06 25	-	3,580	-	-	-	9,930	-	-	< 10	-	-	170	-	5,900	647	-	-	-	-	-	-	-	30	-	0.007
	GL13-1-20121204	2012 12 04	-	3,440	-	-	-	9,990	-	-	< 10	< 1,000	-	174	-	5,750	672	-	-	-	-	-	-	-	41	-	0.006

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.

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Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL14-1	GL14-1-20091116	2009 11 16	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL14-1-20100811	2010 08 11	-	40	-	-	-	1,120	-	-	40	-	-	7	-	141	783	-	-	-	-	-	-	-	< 10	-	0.051
	GL14-1-20110704	2011 07 04	-	48	-	-	-	1,100	-	-	60	-	-	8.6	-	132	809	-	-	-	-	-	-	-	30	-	0.11
	GL14-1-20120627	2012 06 27	-	40	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-
	GL14-1-20120704	2012 07 04	-	-	-	-	-	1,120	-	-	-	-	-	0.11	-	141	799	-	-	-	-	-	-	-	-	-	0.125
	GL14-1-20121204	2012 12 04	-	35	-	-	-	1,190	-	-	70	< 100	-	8.66	-	145	790	-	-	-	-	-	-	-	26	-	0.137
GL15-1	GL15-1-20091117	2009 11 17	-	702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL30-3-20091117	Duplicate	-	662	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA/QC RPD%		-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL15-1-20140604	2014 06 04	-	335	-	-	-	782	-	-	15.2	233	-	6.7	2,190	261	446	-	-	-	-	< 0.50	-	-	< 20	-	0.076
	GL15-1-20141117	2014 11 17	-	340	-	-	-	793	-	-	38.3	72	-	10	1,950	280	479	-	-	-	-	< 0.50	-	-	< 20	-	0.0409
	GL15-1-20150610	2015 06 10	8.32	339	-	-	-	959	-	-	32.2	< 25	-	4.9	1,310	175	468	-	-	-	-	< 0.25	-	-	< 20	-	0.0308
	DUP4-20150610	Duplicate	8.3	326	-	-	-	804	-	-	32	< 25	-	7.2	1,960	269	469	-	-	-	-	< 0.25	-	-	< 20	-	0.0283
	QA/QC RPD%		0	4	-	-	-	18	-	-	1	*	-	38	40	42	0	-	-	-	-	*	-	-	*	-	8
	GL15-1-20151103	2015 11 03	8.12	336	-	-	-	814	-	-	47.7	< 25	-	8.5	1,900	269	457	-	-	-	-	< 0.25	-	-	< 20	-	0.155
	GL15-1-20160920	2016 09 20	8.01	385	-	-	-	874	-	-	17.8	89	-	12.3	1,760	295	446	-	-	-	-	< 0.25	-	-	< 20	-	0.0562
	GL15-1-20170925	2017 09 25	8.1	326	-	-	-	767	-	-	12.5	98	-	8.1	2,090	264	428	-	-	-	-	< 0.25	-	-	< 20	-	0.0338
	GL15-1-180928	2018 09 28	7.87	333	7.47	-	1,320	819	1.75	< 0.0050	78	23	< 10	8.32	1,810	280	441	441	< 1.0	< 1.0	< 1.0	< 0.10	-	-	21	< 0.0050	-
	GL15-1-190924	2019 09 24	8.09	327	7.35	-	1259	826	1.68	-	240	< 10	< 10	7.96	1,970	263	442	442	< 1.0	< 1.0	< 1.0	< 0.10	-	-	< 20	-	< 0.0050
	GL15-1-201104	2020 11 04	7.8	1,530	7.18	-	3,904	3,210	10.8	-	51	2,440	< 10	241	860	1,200	644	644	< 1.0	< 1.0	< 1.0	<1.00	-	-	32	-	< 0.0050
	GL15-1-211007	2021 10 07	8.08	468	7.47	-	1,528	1,030	2.11	-	< 50	< 100	< 100	24.3	1,310	358	489	489	< 1.0	< 1.0	< 1.0	<1.00	-	-	< 20	-	< 0.0500
	GL15-1-221005	2022 10 05	8.01	345	-	-	1308	811	1.03	0.068	50	<100	<100	9.27	1,490	292	414	414	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL15-1-231025	2023 10 25	8.07	380	-	-	-	908	4.86	<0.0050	<50	<10	<10	16.1	1,840	314	417	417	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
GL15-2	GL15-2-20110704	2011 07 04	-	2,090	-	-	-	3,760	-	-	< 10	-	-	52.4	-	1,900	650	-	-	-	-	-	-	-	20	-	0.024
	GL15-2-20120627	2012 06 27	-	3,300	-	-	-	6,180	-	-	40	-	-	121	-	3,230	644	-	-	-	-	-	-	-	30	-	0.017
	GL15-2-20121205	2012 12 05	-	3,580	-	-	-	6,750	-	-	< 10	< 10,000a	-	155	-	4,020	686	-	-	-	-	-	-	-	63	-	0.018
	GL15-2-20130708	2013 07 08	-	3,920	-	-	-	7,970	-	-	< 5.0	8,850	-	143	< 1,000	4,190	822	-	-	-	-	< 2.5	-	-	30	-	-
	GL15-2-20140604	2014 06 04	-	3,290	-	-	-	7,380	-	-	< 5.0	7,610	-	159	2,100	4,000	1,030	-	-	-	-	< 2.5	-	-	36	-	0.0188
	GL15-2-20141117	2014 11 17	-	3,250	-	-	-	6,750	-	-	< 5.0	8,200	-	185	< 1,000	4,040	972	-	-	-	-	< 2.5	-	-	39	-	0.0193
	GL15-2-20150610	2015 06 10	7.84	3,700	-	-	-	7,960	-	-	< 5.0	7,690	-	197	1,000	4,800	900	-	-	-	-	< 2.5	-	-	38	-	0.017
	GL15-2-20151103	2015 11 03	7.5	3,910	-	-	-	7,970	-	-	< 5.0	7,470	-	182	1,100	4,800	807	-	-	-	-	< 2.5	-	-	32	-	0.0186
	GL15-2-20160920	2016 09 20	7.4	5,010	-	-	-	10,400	`	-	< 5.0	3,700	-	259	1,400	6,740	807	-	-	-	-	< 2.5	-	-	45	-	0.0166
	GL15-2-20170925	2017 09 25	7.59	4,190	-	-	-	8,470	-	-	7.6	3,120	-	181	1,300	4,560	794	-	-	-	-	< 2.5	-	-	41	-	0.0179
	GL15-2-180928	2018 09 28	7.41	3,300	6.88	-	7,089	6,990	15.4	< 0.0050	73	2,590	< 10	214	1,030	3,730	765	765	< 1.0	< 1.0	< 1.0	<1.00	-	-	38	< 0.0050	-
	GL15-2-190924	2019 09 24	7.7	3,470	6.77	-	7047	7,220	12.2	-	< 20	3,550	< 100	246	< 1,000	4,060	748	748	< 1.0	< 1.0	< 1.0	<1.00	-	-	26	-	< 0.0500
	GL15-2-201104	2020 11 04	7.69	6,230	6.94	-	10,680	11,900	19	-	< 50	1,690	< 10	360	1,020	7,190	794	794	< 1.0	< 1.0	< 1.0	< 10.0	-	-	33	-	< 0.0050
	DUP2-201104	Duplicate	7.67	6,360	-	-	-	11,200	19.5	-	< 50	1,790	< 10	367	970	7,160	797	797	< 1.0	< 1.0	< 1.0	< 10.0	-	-	32	-	< 0.0050
	QA/QC RPD%		0	2	-	-	-	6	3	-	*	6	*	2	5	0	0	0	*	*	*	*	-	-	*	-	*
	GL15-2-211007	2021 10 07	7.67	< 10.0	6.89	-	8,617	9,270	14	-	< 50	1,300	< 100	346	<1,000	5,260	817	817	< 1.0	< 1.0	< 1.0	<1.00	-	-	26	-	< 0.0500
	GL15-2-221005	2022 10 05	7.54	3,100	-	-	7326	7,170	12.1	<0.0500	<50	874	<100	361	<1,000	4,080	650	650	<1.0	<1.0	<1.0	<1.00	-	-	38	-	-
	GL15-2-231025	2023 10 25	7.79	3,300	-	-	-	7,520	12	<0.050	<50	0.739	<100	290	<1000	4,310	613	613	<1.0	<1.0	<1.0	<1.00	-	-	44	-	-

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.
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\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
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RDL Denotes reported detection limit.

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			Physical Parameters													Dissolved Inorganics											
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL16-1	GL 16-1-20091111	2009 11 11	-	1,840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL 16-1-20111217	2011 12 17	-	987	-	-	-	4,500	-	-	< 10	220	-	166	-	2,240	985	-	-	-	-	-	-	-	10	-	0.04
	GL16-1-20100811	2010 08 11	-	1,700	-	-	-	6,750	-	-	470	-	-	252	-	3,520	1,170	-	-	-	-	-	-	-	< 10	-	0.012
	GL16-1-20110627	2011 06 27	-	1,210	-	-	-	4,780	-	-	< 10	-	-	168	-	2,480	982	-	-	-	-	-	-	-	10	-	0.024
	GL30-1-20110627	Duplicate	-	1,200	-	-	-	4,790	-	-	30	-	-	165	-	2,330	980	-	-	-	-	-	-	-	20	-	0.023
	QA/QC RPD%		-	1	-	-	-	0	-	-	*	-	-	2	-	6	0	-	-	-	-	-	-	-	*	-	4
	GL16-1-20120626	2012 06 26	-	1,260	-	-	-	4,490	-	-	500	-	-	162	-	2,270	1,170	-	-	-	-	-	-	-	30	-	0.011
	GL16-1-20121204	2012 12 04	-	1,020	-	-	-	4,170	-	-	1,130	120	-	154	-	2,110	1,190	-	-	-	-	-	-	-	34	-	0.018
	GL16-1-20130626	2013 06 26	-	1,040	-	-	-	4,200	-	-	448	< 250	-	153	1,500	2,080	1,100	-	-	-	-	< 2.5	-	-	35	-	-
	GL16-1-20131113	2013 11 13	-	949	-	-	-	4,160	-	-	39.9	590	-	158	< 1,000	1,940	1,120	-	-	-	-	-	-	-	< 20	-	-
	GL16-1-20140605	2014 06 05	-	930	-	-	-	3,880	-	-	382	< 100	-	154	900	1,970	1,200	-	-	-	-	<1.00	-	-	< 20	-	0.0033
	GL16-1-20141118	2014 11 18	-	845	-	-	-	3,830	-	-	125	150	-	148	890	1,850	1,170	-	-	-	-	<1.00	-	-	< 20	-	0.017
	GL16-1-20150610	2015 06 10	7.96	900	-	-	-	3,880	-	-	350	< 100	-	155	880	1,960	1,050	-	-	-	-	<1.00	-	-	< 20	-	0.0046
	GL16-1-20151103	2015 11 03	7.76	827	-	-	-	3,670	-	-	34.9	260	-	151	940	1,860	1,180	-	-	-	-	<1.00	-	-	< 20	-	0.0451
	DUP3-20151103	Duplicate	7.64	828	-	-	-	3,630	-	-	36.3	230	-	145	900	1,780	943	-	-	-	-	<1.00	-	-	< 20	-	0.0448
	QA/QC RPD%		2	0	-	-	-	1	-	-	4	12	-	4	4	4	22	-	-	-	-	*	-	-	*	-	1
	GL16-1-20160524	2016 05 24	7.84	803	-	-	-	3,470	-	-	< 5.0	250	-	145	1,020	1,770	938	938	< 1.0	< 1.0	-	<1.00	-	-	< 20	-	0.0526
	GL16-1-20170525	2017 05 25	8.51	833	-	-	-	3,530	-	-	< 5.0	330	-	139	940	1,710	898	-	-	-	-	<1.00	-	-	< 20	-	0.0517
	DUP2-20170525	Duplicate	8.45	847	-	-	-	3,510	-	-	< 5.0	280	-	142	990	1,750	866	-	-	-	-	<1.00	-	-	< 20	-	0.0528
	QA/QC RPD%		1	2	-	-	-	1	-	-	*	16	-	2	5	2	4	-	-	-	-	*	-	-	*	-	2
	GL16-1-180604	2018 06 04	7.67	762	7.11	-	3,660	3,180	2.93	0.0072	27	< 5,000a	< 10	273	690	4,040	944	944	< 1.0	< 1.0	< 1.0	< 50.0	-	-	24	0.0072	-
	GL16-1-190529	2019 05 29	7.83	756	7.03	-	4453	3,390	3.06	< 0.0500	68	< 100	< 100	133	1,240	1,480	965	965	< 1.0	< 1.0	< 1.0	<1.00	-	-	< 20	< 0.0500	-
	GL16-1-200608	2020 06 08	7.98	699	7.08	-	3,720	3,020	1.59	-	256	< 1,000	< 1,000a	95.1	< 10,000a	1,270	973	973	< 1.0	< 1.0	< 1.0	< 10.0	-	-	< 20	-	< 0.500
	GL16-1-210609	2021 06 09	7.98	658	7.01	-	4,173	2,670	2.15	-	124	< 100	< 100	113	< 1,000	1,110	978	978	< 1.0	< 1.0	< 1.0	<1.00	-	-	< 20	-	< 0.0500
	GL16-1-220602	2022 06 02	7.93	651	-	-	4,010	2,790	1.51	<0.0500	118	137	<0.100	130	<1,000	1,410	833	833	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL17-1	GL17-1-20091112	2009 11 12	-	3,390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL17-1-20100811	2010 08 11	-	3,280	-	-	-	9,080	-	-	50	-	-	172	-	4,600	678	-	-	-	-	-	-	-	30	-	0.003
	GL30-4-20100811	Duplicate	-	3,170	-	-	-	8,730	-	-	70	-	-	174	-	4,710	679	-	-	-	-	-	-	-	40	-	0.003
	QA/QC RPD%		-	3	-	-	-	4	-	-	33	-	-	1	-	2	0	-	-	-	-	-	-	-	*	-	*
	GL17-1-20110628	2011 06 28	-	3,580	-	-	-	8,930	-	-	180	-	-	164	-	5,060	664	-	-	-	-	-	-	-	40	-	0.088
	GL17-1-20120625	2012 06 25	-	130	-	-	-	1,610	-	-	340	-	-	71.5	-	6.7	1,480	-	-	-	-	-	-	-	20	-	0.034
	GL17-1-20121204	2012 12 04	-	98	-	-	-	1,570	-	-	360	< 100	-	72.6	-	6.3	614	-	-	-	-	-	-	-	33	-	0.031
	GL17-1-20160526	2016 05 26	8.18	118	-	-	-	1,480	-	-	371	< 100	-	71	2,040	< 6.0	1,330	-	-	-	-	< 1.0	-	-	< 20	-	0.0152
	GL17-1-20160919	2016 09 19	8.32	123	-	-	-	1,490	-	-	184	< 100	-	93	1,930	29.3	1,240	-	-	-	-	< 1.0	-	-	< 20	-	0.053
	GL17-1-20170531	2017 05 31	8.13	125	-	-	-	1,530	-	-	353	< 100	-	78	1,890	< 6.0	1,350	-	-	-	-	< 1.0	-	-	< 20	-	0.0146
	GL17-1-20170926	2017 09 26	7.95	121	-	-	-	1,480	-	-	334	< 100	-	81	1,950	7.6	1,310	-	-	-	-	< 1.0	-	-	< 20	-	0.0114
	GL17-1-180604	2018 06 04	7.83	127	7.3	-	2,044	1,480	2.54	< 0.0050	373	< 10	< 10	68.9	1,710	18.3	1,330	1,330	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	< 0.0050	-
	GL17-1-180919	2018 09 19	7.8	130	7.5	-	2,197	1,480	2.83	< 0.0050	287	< 100	< 10	88.4	2,060	45.7	1,220	1,220	< 1.0	< 1.0	< 1.0	0.4	-	-	< 20	< 0.0050	-

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			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL17-1 (cont'd)	GL17-1-190527	2019 05 27	8.11	124	7.56	-	2558	1,490	2.02	< 0.0050	445	< 10	< 10	75.7	1,960	14.4	1,380	1,380	< 1.0	< 1.0	< 1.0	0.18	-	-	< 20	< 0.0050	-
	DUP1-190527	Duplicate	8.13	120	7.56	-	2558	1,470	1.76	< 0.0050	481	< 10	< 10	75.5	1,940	13.8	1,400	1,400	< 1.0	< 1.0	< 1.0	0.2	-	-	< 20	< 0.0050	-
	QA/QC RPD%		0	3	*	-	*	1	*	*	8	*	*	0	1	4	1	1	*	*	*	*	-	-	*	*	-
	GL17-1-190923	2019 09 23	8.11	128	7.67	-	2421	1,550	1.92	-	351	< 10	< 10	78.7	1,940	14.3	1,360	1,360	< 1.0	< 1.0	< 1.0	0.42	-	-	< 20	-	0.0715
	GL17-1-200608	2020 06 08	8.2	121	7.35	-	2,138	1,590	2.32	-	349	< 10	< 10	62.6	1,820	3.9	1,400	1,400	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	0.05
	GL17-1-201020	2020 10 20	8.01	132	7.43	-	2,457	1,530	2.22	-	402	< 10	< 10	69.6	1,990	4.4	1,300	1,300	< 1.0	< 1.0	< 1.0	0.33	-	-	< 20	-	0.0103
	GL17-1-210604	2021 06 04	8.14	135	-	-	-	1,220	1.36	-	315	< 10	< 10	71	2,030	3.9	1,410	1,410	< 1.0	< 1.0	< 1.0	0.34	-	-	< 20	-	< 0.0050
	GL17-1-211006	2021 10 06	7.98	127	7.33	-	2,153	1,660	1.24	-	399	< 10	< 10	64.2	1,970	< 10.0	1,460	1,460	< 1.0	< 1.0	< 1.0	< 1.00	-	-	< 20	-	< 0.0050
	GL17-1-220531	2022 05 31	8.16	129	-	-	2,415	1,250	1.98	<0.0050	300	<10	<10	65.6	2,040	1.9	1,220	1,220	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
	GL17-1-220928	2022 09 28	8.15	118	-	-	2,184	1,520	0.98	0.0088	347	<10	<10	70.9	2,120	<1.0	1,450	1450	<1.0	<1.0	<1.0	0.35	-	-	<20	-	-
GL17-2	GL17-2-20091112	2009 11 12	-	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL30-2-20091112	Duplicate	-	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA/QC RPD%		-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL17-2-20100811	2010 08 11	-	110	-	-	-	1,630	-	-	350	-	-	65.2	-	6.2	1,480	-	-	-	-	-	-	-	10	-	0.058
	GL17-2-20110628	2011 06 28	-	109	-	-	-	1,510	-	-	220	-	-	68	-	60	135	-	-	-	-	-	-	-	10	-	0.109
	GL17-2-20120625	2012 06 25	-	3,440	-	-	-	9,700	-	-	190	-	-	204	-	5,740	606	-	-	-	-	-	-	-	40	-	< 0.002
	GL17-2-20121204	2012 12 04	-	3,920	-	-	-	10,000	-	-	110	2,500	-	180	-	6,120	652	-	-	-	-	-	-	-	33	-	< 0.002
	GL17-2-20130626	2013 06 26	-	4,000	-	-	-	10,800	-	-	< 5.0	2,610	-	191	2,300	6,330	780	-	-	-	-	< 2.5	-	-	33	-	-
	GL17-2-20131113	2013 11 13	-	4,190	-	-	-	10,800	-	-	22.6	1,840	-	262	1,700	6,380	864	-	-	-	-	-	-	-	24	-	-
	GL17-2-20140605	2014 06 05	-	3,650	-	-	-	10,500	-	-	32.4	1,490	-	226	1,300	6,290	822	-	-	-	-	< 2.5	-	-	29	-	0.0025
	GL17-2-20141118	2014 11 18	-	3,860	-	-	-	11,300	-	-	47	1,330	-	247	1,400	6,820	966	-	-	-	-	< 2.5	-	-	40	-	0.0014
	GL17-2-20150608	2015 06 08	7.5	4,010	-	-	-	10,300	-	-	33.2	1,680	-	241	1,700	6,660	870	-	-	-	-	< 2.5	-	-	32	-	0.0025
	GL17-2-20151104	2015 11 04	7.65	3,760	-	-	-	11,100	-	-	9.3	1,970	-	257	1,700	7,000	705	-	-	-	-	< 2.5	-	-	26	-	0.0033
GL18-2	GL 18-2-20091110	2009 11 10	-	1,060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL18-2-20100811	2010 08 11	-	1,380	-	-	-	6,930	-	-	1,400	-	-	568	-	3,800	154	-	-	-	-	-	-	-	40	-	0.005
	GL18-2-20110629	2011 06 29	-	1,510	-	-	-	6,440	-	-	710	-	-	572	-	3,770	260	-	-	-	-	-	-	-	40	-	0.078
	GL18-2-20120626	2012 06 26	-	1,480	-	-	-	6,820	-	-	1,020	-	-	572	-	3,620	156	-	-	-	-	-	-	-	40	-	0.004
	DUP-A-20120626	Duplicate	-	1,520	-	-	-	6,670	-	-	1,280	-	-	585	-	3,670	167	-	-	-	-	-	-	-	60	-	0.004
	QA/QC RPD%		-	3	-	-	-	2	-	-	23	-	-	2	-	1	7	-	-	-	-	-	-	-	*	-	*
	GL18-2-20121205	2012 12 05	-	1,380	-	-	-	6,600	-	-	1,450	< 10,000a	-	785	-	8,090	165	-	-	-	-	-	-	-	22	-	0.005
	GL18-2-20130627	2013 06 27	-	1,400	-	-	-	6,660	-	-	1,330	< 250	-	611	< 1,000	3,900	177	-	-	-	-	3.7	-	-	47	-	-
	GL18-2-20131114	2013 11 14	-	1,380	-	-	-	6,670	-	-	1,370	< 250	-	618	< 1,000	3,870	181	-	-	-	-	3.7	-	-	32	-	-
	GL18-2-20140609	2014 06 09	-	1,380	-	-	-	6,260	-	-	1,440	< 250	-	608	< 1,000	3,820	180	-	-	-	-	3.4	-	-	150	-	0.0043
	GL18-2-20141126	2014 11 26	-	1,380	-	-	-	6,330	-	-	1,370	760	-	613	< 1,000	3,780	680	-	-	-	-	3.5	-	-	38	-	0.0042
	DUP3-20141126	Duplicate	-	1,390	-	-	-	6,080	-	-	1,440	420	-	627	< 1,000	3,860	170	-	-	-	-	3.8	-	-	40	-	0.0033
	QA/QC RPD%		-	1	-	-	-	4	-	-	5	58	-	2	*	2	120	-	-	-	-	8	-	-	*	-	*
	GL18-2-20150615	2015 06 15	7.98	1,340	-	-	-	6,410	-	-	1,330	< 250	-	608	< 1,000	3,780	170	-	-	-	-	3.7	-	-	35	-	0.0043
	GL18-2-20170529	2017 05 29	7.95	1,370	-	-	-	6,310	-	-	1,390	< 250	-	619	< 1,000	3,820	141	-	-	-	-	3.2	-	-	< 20	-	0.0027
	GL18-2-180604	2018 06 04	7.38	1,410	7.797.8	8,140	7,172	6,140	2.92	0.0231	1,520	< 5,000a	< 10	1,130	230	8,810	138	138	< 1.0	< 1.0	< 1.0	< 50.0	< 0.01a	< 0.020	38	0.0231	-
	DUP-180604	Duplicate	7.43	1,430	7.79	-	7,172	6,310	2.91	0.0216	1,530	< 5,000a	< 10	1,130	250	8,740	139	139	< 1.0	< 1.0	< 1.0	< 50.0	-	-	36	0.0216	-
	QA/QC RPD%		1	1	*	-	*	3	0	*	1	*	*	0	*	1	1	1	*	*	*	*	-	-	*	*	-

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.
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Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL20-1	GL20-1-20091112	2009 11 12	-	998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL20-1-20100811	2010 08 11	-	997	-	-	-	6,910	-	-	13,000	-	-	868	-	33	5,940	-	-	-	-	-	-	-	1,500	-	0.36
	GL20-1-20110629	2011 06 29	-	113	-	-	-	6,900	-	-	317,000	-	-	880	-	600	582	-	-	-	-	-	-	-	110	-	3.8
	GL20-1-20111217	2011 12 17	-	997	-	-	-	7,110	-	-	354,000	< 200	-	986	-	< 3	5,820	-	-	-	-	-	-	-	1,500	-	0.49
	DUPA-20111217	Duplicate	-	988	-	-	-	7,140	-	-	364,000	< 200	-	982	-	< 3	5,810	-	-	-	-	-	-	-	1,400	-	0.64
	QA/QC RPD%		-	1	-	-	-	0	-	-	3	*	-	0	-	*	0	-	-	-	-	-	-	-	7	-	27
	GL20-1-20120625	2012 06 25	-	1,030	-	-	-	6,820	-	-	288,000	-	-	885	-	25.3	5,670	-	-	-	-	-	-	-	1,300	-	0.52
	GL20-1-20121203	2012 12 03	-	872	-	-	-	7,070	-	-	485,000	< 1,000	-	923	-	< 50	5,900	-	-	-	-	-	-	-	1,280	-	15.7
	GL20-1-20130625	2013 06 25	-	1,130	-	-	-	8,490	-	-	273,000	< 250	-	865	1,600	294	6,320	-	-	-	-	6.9	-	-	1,180	-	-
	GL20-1-20140605	2014 06 05	-	907	-	-	-	7,650	-	-	96,100	123,000	-	586	< 1,000	1,250	3,850	-	-	-	-	5.3	-	-	566	-	0.791
	DUP4-20140605	Duplicate	-	897	-	-	-	7,590	-	-	95,300	129,000	-	572	< 1,000	1,230	3,940	-	-	-	-	5.5	-	-	572	-	0.711
	QA/QC RPD%		-	1	-	-	-	1	-	-	1	5	-	2	*	2	2	-	-	-	-	4	-	-	1	-	11
	GL20-1-20141126	2014 11 26	-	945	-	-	-	7,430	-	-	180,000	< 250	-	819	< 1,000	21	6,130	-	-	-	-	6.8	-	-	923	-	6.4
	GL20-1-20150611	2015 06 11	7.84	848	-	-	-	7,590	-	-	110,000	27,200	-	724	< 1,000	754	5,200	-	-	-	-	5.7	-	-	655	-	0.66
	GL20-1-200826	2020 08 26	7.73	118	6.99	-	8,514	5,240	122	-	140,000	< 100	< 100	506	< 1,000	86.3	4,460	4,460	< 1.0	< 1.0	< 1.0	< 1.00	-	-	422	-	2.39
	GL20-1-201020	2020 10 20	7.5	565	7	-	8,684	5,230	< 0.50	-	116,000	< 100	< 100	493	< 1,000	32.6	4,240	4,240	< 1.0	< 1.0	< 1.0	< 1.00	-	-	429	-	2.48
	GL20-1-210511	2021 05 11	7.72	686	7.04	-	8,487	5,750	0.81	-	94,500	< 100	< 100	467	< 1,000	132	4,520	4,520	< 1.0	< 1.0	< 1.0	< 1.00	-	-	423	-	< 0.0500
	GL20-1-210924	2021 09 24	7.6	565	6.9	-	8,332	5,520	118	-	111,000	582	50	463	320	14.7	4,740	4,740	< 1.0	< 1.0	< 1.0	2.62	-	-	445	-	0.0835
	DUP 2-210924	Duplicate	7.63	551	6.9	-	8,332	5,660	132	-	102,000	594	45	462	350	14.9	4,790	4,790	< 1.0	< 1.0	< 1.0	2.66	-	-	432	-	0.0863
	QA/QC RPD%		0	3	0	-	0	3	11	-	8	2	*	0	*	1	1	1	*	*	*	2	-	-	3	-	3
	GL20-1-220531	2022 05 31	7.7	583	-	-	7,236	4,210	113	<0.0500	70,400	<100	<100	370	<1000	251	3,130	3,130	<1.0	<1.0	<1.0	<1.00	-	-	283	-	-
	GL20-1-220927	2022 09 27	7.63	497	-	-	7,925	4,510	89	1.46	85,700	<100	165	399	<1000	172	2,820	2,820	<1.0	<1.0	<1.0	2.11	-	-	369	-	-
	GL20-1-231024	2023 10 24	7.67	444	-	-	-	4,170	102	1.19	89,300	<100	<100	402	<1000	36.8	3,360	3,360	<1.0	<1.0	<1.0	<1.00	-	-	348	-	-
GL21-1	GL21-1-20091117	2009 11 17	-	4,230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL21-1-20110705	2011 07 05	-	520	-	-	-	14,200	-	-	-	-	-	19	-	170	1,230	-	-	-	-	-	-	-	-	-	0.07
	GL 21-1-20110707	2011 07 07	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	140	-	-
	GL21-1-20120625	2012 06 25	-	4,660	-	-	-	14,800	-	-	< 10	-	-	697	-	8,380	1,120	-	-	-	-	-	-	-	110	-	0.052
	GL21-1-20121204	2012 12 04	-	4,300	-	-	-	14,600	-	-	90	1,880	-	628	-	7,910	1,160	-	-	-	-	-	-	-	125	-	0.042
GL22-1	GL 22-1-20091110	2009 11 10	-	1,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL22-1-20100811	2010 08 11	-	970	-	-	-	1,450	-	-	70	-	-	25.6	-	338	961	-	-	-	-	-	-	-	60	-	0.01
GL23-1	GL 23-1-20091110	2009 11 10	-	1,140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL23-1-20100811	2010 08 11	-	1,000	-	-	-	1,640	-	-	40	-	-	30.9	-	352	1,220	-	-	-	-	-	-	-	50	-	0.005
	GL23-1-20110704	2011 07 04	-	1,160	-	-	-	1,720	-	-	40	-	-	31.9	-	467	1,170	-	-	-	-	-	-	-	160	-	0.008
	GL 23-1-20120627	2012 06 27	-	1,100	-	-	-	1,780	-	-	< 10	-	-	32.9	-	497	1,160	-	-	-	-	-	-	-	40	-	0.008
	GL23-1-20121203	2012 12 03	-	270	-	-	-	1,790	-	-	80	< 100	-	33.8	-	500	1,080	-	-	-	-	-	-	-	44	-	0.009
	GL23-1-20130627	2013 06 27	-	1,170	-	-	-	1,750	-	-	< 5.0	110	-	35	1,650	544	1,180	-	-	-	-	< 1.0	-	-	30	-	-
	GL23-1-20140603	2014 06 03	-	1,080	-	-	-	1,710	-	-	11.6	160	-	41	1,170	522	1,130	-	-	-	-	< 1.0	-	-	38	-	0.0065
	GL23-1-20141124	2014 11 24	-	1,210	-	-	-	1,790	-	-	26.9	< 100	-	37	1,210	624	1,100	-	-	-	-	< 1.0	-	-	48	-	0.0054
	GL23-1-20150608	2015 06 08	7.67	1,130	-	-	-	1,700	-	-	< 5.0	< 100	-	36	1,090	500	1,200	-	-	-	-	< 1.0	-	-	41	-	0.0059
	GL23-1-20151104	2015 11 04	7.68	1,050	-	-	-	1,570	-	-	17.2	< 100	-	33	940	390	1,130	-	-	-	-	< 1.0	-	-	37	-	0.0048
	GL23-1-20160526	2016 05 26	7.99	1,080	-	-	-	1,570	-	-	< 5.0	< 100	-	34	1,030	382	1,090	-	-	-	-	< 1.0	-	-	38	-	0.003
	GL23-1-20160531	2016 05 31	7.64	-	-	-	-	1,580	-	-	< 20	66	-	30.6	1,050	384	1,090	-	-	-	-	-	-	-	-	-	< 0.01
	GL23-1-20170525	2017 05 25	8.45	1,150	-	-	-	1,610	-	-	10.4	< 100	-	35	890	386	1,070	-	-	-	-	< 1.0	-	-	42	-	0.0034
	DUP3-20170525	Duplicate	8.41	1,150	-	-	-	1,580	-	-	< 5.0	< 100	-	35	900	387	1,020	-	-	-	-	< 1.0	-	-	37	-	0.0033
	QA/QC RPD%		0	0	-	-	-	2	-	-	*	*	-	0	1	0	5	-	-	-	-	*	-	-	*	-	*

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			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL23-1 (cont'd)	GL23-1-180529	2018 05 29	7.86	1,260	7.22	-	2,014	1,560	14.3	0.0062	36	< 10	66	34.2	710	341	1,090	1,090	< 1.0	< 1.0	< 1.0	0.27	-	-	39	0.0062	-
	GL23-1-190523	2019 05 23	8.01	1,170	7.7	-	2332	1,590	14.8	< 0.0050	33	72	< 10	34	660	384	1,120	1,120	< 1.0	< 1.0	< 1.0	0.27	-	-	30	< 0.0050	-
	GL23-1-190917	2019 09 17	7.78	1,130	-	-	-	1,610	16.4	-	60	< 10	< 10	35	750	394	1,090	1,090	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	-	< 0.0050
	GL23-1-200617	2020 06 17	7.97	1,000	6.95	-	2,150	1,530	14.6	-	< 50	134	< 100	32.3	< 1,000	405	964	964	< 1.0	< 1.0	< 1.0	< 1.00	-	-	33	-	< 0.0500
	GL23-1-200910	2020 09 10	7.98	1,130	-	-	-	1,660	14.8	-	< 50	28	< 10	33.1	780	402	1,110	1,110	< 1.0	< 1.0	< 1.0	0.32	-	-	-	-	< 0.0050
	GL23-1-210513	2021 05 13	7.85	1,080	7.06	-	2,319	1,370	13.9	-	< 50	10	< 10	33.2	760	376	1,180	1,180	< 1.0	< 1.0	< 1.0	0.33	-	-	22	-	< 0.0050
	DUP 1-210513	Duplicate	7.73	1,090	7.06	-	2,319	1,490	14.7	-	< 50	< 10	< 10	34.4	720	356	1,170	1,170	< 1.0	< 1.0	< 1.0	0.3	-	-	43	-	< 0.0050
	QA/QC RPD%		2	1	0	-	0	8	6	-	*	*	*	4	5	5	1	1	*	*	*	*	-	-	*	-	*
	GL23-1-220606	2022 06 06	7.78	1,170	-	-	2,306	1,610	11.2	<0.0050	<50	41	<10	31.9	570	416	962	962	<1.0	<1.0	<1.0	<0.10	-	-	35	-	-
	GL23-1-230523	2023 05 23	7.83	1,150	-	-	-	1,450	11.2	<0.0050	54	133	<10	26.5	62	422	906	906	<1.0	<1.0	<1.0	<0.10	-	-	33	-	-
	GL23-1-231023	2023 10 23	7.9	1,180	-	-	-	1,350	12.2	<0.0050	116	<100	<10	29.6	410	507	941	941	<1.0	<1.0	<1.0	<1.00	-	-	24	-	-
GL24-1	GL24-1-20100811	2010 08 11	-	1,200	-	-	-	2,110	-	-	< 10	-	-	91.4	-	762	852	-	-	-	-	-	-	-	20	-	0.034
	GL24-1-20160531	2016 05 31	7.64	-	-	-	-	1,570	-	-	< 20	11,700	-	188	1,270	349	778	-	-	-	-	-	-	-	-	-	0.1
	GL24-1-20180927	2018 09 27	-	1,760	-	-	-	-	-	-	31	61,600	-	99.1	1,140	1,450	-	-	-	-	-	< 0.10	-	-	-	-	< 0.0050
	GL24-1-180612	2018 06 12	7.63	1,300	-	-	-	2,380	-	0.0083	60	13,100	29	216	1,090	742	1,060	1,060	< 1.0	< 1.0	< 1.0	< 0.10	-	-	-	0.0083	-
	GL24-1-190917	2019 09 17	7.92	1,100	-	-	-	1,870	9.09	-	47	6,540	< 100	163	1,200	591	921	921	< 1.0	< 1.0	< 1.0	< 1.00	-	-	-	-	< 0.0500
	GL24-1-200910	2020 09 10	8.04	856	-	-	-	1,750	6.56	-	< 50	1,690	< 10	123	1,390	418	930	930	< 1.0	< 1.0	< 1.0	0.3	-	-	-	-	< 0.0050
	GL24-1-231023	2023 10 23	8.01	830	-	-	-	1,090	7.29	<0.050	<50	3,780	<100	93.4	<1000	398	758	758	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL25-1	GL25-1-20091117	2009 11 17	-	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL25-1-20100812	2010 08 12	-	1,480	-	-	-	2,630	-	-	< 10	-	-	67	-	1,350	455	-	-	-	-	-	-	-	60	-	0.016
GL26-1	GL26-1-20091112	2009 11 12	-	654	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL26-1-20100812	2010 08 12	-	527	-	-	-	1,230	-	-	30	-	-	8.9	-	309	706	-	-	-	-	-	-	-	10	-	0.005
	GL30-5-20100812	Duplicate	-	575	-	-	-	1,250	-	-	50	-	-	8.8	-	306	705	-	-	-	-	-	-	-	10	-	0.005
	QA/QC RPD%		-	9	-	-	-	2	-	-	50	-	-	1	-	1	0	-	-	-	-	-	-	-	*	-	0
GL26-2	GL26-2-20091116	2009 11 16	-	629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL26-2-20100812	2010 08 12	-	491	-	-	-	1,210	-	-	< 10	-	-	15.5	-	346	655	-	-	-	-	-	-	-	20	-	0.013
	GL26-2-20110629	2011 06 29	-	634	-	-	-	1,160	-	-	< 10	-	-	14.8	-	357	644	-	-	-	-	-	-	-	< 10	-	0.108
	GL26-2-20120625	2012 06 25	-	670	-	-	-	1,210	-	-	30	-	-	18.3	-	367	644	-	-	-	-	-	-	-	20	-	0.006
	GL26-2-20121204	2012 12 04	-	572	-	-	-	1,200	-	-	100	< 100	-	14.9	-	357	643	-	-	-	-	-	-	-	23	-	< 0.002
	GL26-2-20130626	2013 06 26	-	673	-	-	-	1,170	-	-	62.7	120	-	15	1,380	410	666	-	-	-	-	< 1.0	-	-	< 20	-	-
	GL26-2-20131114	2013 11 14	-	639	-	-	-	1,160	-	-	68.3	< 50	-	19.3	1,320	417	818	-	-	-	-	< 0.50	-	-	< 20	-	-
	GL26-2-20140605	2014 06 05	-	665	-	-	-	1,130	-	-	52	< 50	-	14.3	1,170	400	782	-	-	-	-	< 0.50	-	-	< 20	-	0.0021
	DUP2-20140605	Duplicate	-	668	-	-	-	1,130	-	-	58.7	< 50	-	14.2	1,170	396	816	-	-	-	-	< 0.50	-	-	< 20	-	0.0014
	QA/QC RPD%		-	0	-	-	-	0	-	-	12	*	-	1	0	1	4	-	-	-	-	*	-	-	*	-	*
	GL26-2-20141117	2014 11 17	-	638	-	-	-	1,120	-	-	50.8	< 100	-	20	1,160	403	830	-	-	-	-	< 1.0	-	-	< 20	-	0.0023
	GL26-2-20150608	2015 06 08	7.58	643	-	-	-	1,120	-	-	80.2	99	-	19.1	1,170	406	735	-	-	-	-	< 0.50	-	-	< 20	-	0.0096
	GL26-2-20151104	2015 11 04	7.73	617	-	-	-	1,170	-	-	62.4	< 50	-	13.6	1,170	388	613	-	-	-	-	< 0.50	-	-	< 20	-	< 0.0010
GL26-3	GL26-3-20091111	2009 11 11	-	682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL26-3-20100812	2010 08 12	-	538	-	-	-	1,500	-	-	< 10	-	-	62	-	499	604	-	-	-	-	-	-	-	20	-	0.03

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.
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n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL27-1	GL27-1-20091116	2009 11 16	-	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL27-1-20100812	2010 08 12	-	67	-	-	-	1,650	-	-	210	-	-	68	-	57	1,580	-	-	-	-	-	-	-	10	-	0.041
	GL27-1-20110629	2011 06 29	-	88	-	-	-	1,600	-	-	70	-	-	44	-	70	161	-	-	-	-	-	-	-	<10	-	0.165
	GL 27-1-20120626	2012 06 26	-	94	-	-	-	1,660	-	-	70	-	-	36.5	-	8	1,600	-	-	-	-	-	-	-	20	-	-
	GL 27-1-20120704	2012 07 04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121
	GL27-1-20121204	2012 12 04	-	73	-	-	-	1,670	-	-	100	<100	-	39.8	-	6.3	1,570	-	-	-	-	-	-	-	18	-	0.128
	GL27-1-20130626	2013 06 26	-	88.4	-	-	-	1,730	-	-	126	<100	-	37	3,540	< 10	1,550	-	-	-	-	<1.0	-	-	<20	-	-
	GL27-1-20131113	2013 11 13	-	93.5	-	-	-	1,630	-	-	107	<100	-	41	3,400	< 10	1,500	-	-	-	-	-	-	-	<20	-	-
	GL27-1-20140605	2014 06 05	-	94.4	-	-	-	1,630	-	-	126	<100	-	38	3,420	< 10	1,560	-	-	-	-	<1.0	-	-	<20	-	0.12
	GL27-1-20141118	2014 11 18	-	86.8	-	-	-	1,640	-	-	171	<100	-	39	3,280	< 10	1,640	-	-	-	-	<1.0	-	-	38	-	0.115
	GL27-1-20150610	2015 06 10	8.41	87.1	-	-	-	1,470	-	-	122	<100	-	38	3,250	< 6.0	1,590	-	-	-	-	<1.0	-	-	<20	-	0.102
	GL27-1-20151104	2015 11 04	8.18	86.6	-	-	-	1,610	-	-	180	<100	-	36	3,080	< 6.0	1,500	-	-	-	-	<1.0	-	-	<20	-	0.0954
	GL27-1-20160526	2016 05 26	8.27	91.8	-	-	-	1,620	-	-	116	<100	-	38	3,450	< 6.0	1,500	-	-	-	-	<1.0	-	-	<20	-	0.0886
	DUP-1-20160526	Duplicate	8.31	85.7	-	-	-	1,690	-	-	111	<100	-	38	3,490	< 6.0	1,480	-	-	-	-	<1.0	-	-	<20	-	0.0902
	QA/QC RPD%		0	7	-	-	-	4	-	-	4	*	-	0	1	*	1	-	-	-	-	*	-	-	*	-	2
	GL27-1-20160919	2016 09 19	8.34	90.8	-	-	-	1,630	-	-	152	<100	-	36	3,000	< 6.0	1,530	-	-	-	-	<1.0	-	-	<20	-	0.112
	GL27-1-20170525	2017 05 25	8.83	95.2	-	-	-	1,640	-	-	70.1	<100	-	38	3,310	6	1,560	-	-	-	-	<1.0	-	-	<20	-	0.0674
	GL27-1-20170925	2017 09 25	8.14	92	-	-	-	1,650	-	-	155	<100	-	32	3,260	6.6	1,450	-	-	-	-	<1.0	-	-	<20	-	0.0553
	GL27-1-180815	2018 08 15	7.98	89.6	7.63	-	1,870	1,680	2.57	0.0407	276	18	<10	33.6	3,100	27.5	1,500	1,500	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0407	-
	GL27-1-180919	2018 09 19	7.91	99.9	7.62	-	2,388	1,620	3.45	0.0445	220	<10	<10	35.1	3,210	19.2	1,450	1,450	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0445	-
	GL27-1-190527	2019 05 27	8.2	90.6	7.67	-	2620	1,430	2.89	0.0794	272	<10	<10	36.2	3,020	21.8	1,480	1,480	<1.0	<1.0	<1.0	<0.10	-	-	<20	0.0794	-
	GL27-1-190919	2019 09 19	8.22	92.8	7.48	-	2471	1,610	2.84	-	242	<10	<10	35.6	3,290	19.9	1,490	1,490	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	0.0424
	GL27-1-200608	2020 06 08	8.31	93.2	7.5	-	2,216	1,530	2.12	-	230	<10	<10	35.5	3,060	17	1,500	1,480	22.6	<1.0	11.3	<0.10	-	-	<20	-	< 0.0050
	GL27-1-201022	2020 10 22	8.1	85.2	7.63	-	2,525	1,600	2.79	-	243	<10	<10	37.7	3,330	7.8	1,420	1,420	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	0.0567
	GL27-1-210602	2021 06 02	8.16	103	7.47	-	2,633	1,260	2.04	-	186	<10	<10	36.8	3,190	11.7	1,510	1,510	<1.0	<1.0	<1.0	0.16	-	-	<20	-	0.0558
	GL27-1-210924	2021 09 24	8.21	107	7.47	-	2,544	1,810	106	-	318	<10	<10	36.7	3,320	11.8	1,550	1,550	<1.0	<1.0	<1.0	0.12	-	-	<20	-	0.0391
	GL27-1-220531	2022 05 31	8.22	95.2	-	-	2,405	1,140	2.52	<0.0050	242	<10	<10	36.8	3,330	13.2	1,270	1,270	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
	GL27-1-220927	2022 09 27	8.19	90.3	-	-	2,575	1,600	1.71	<0.0050	241	<10	<10	37.6	3,510	17.3	1,570	1,570	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
	GL27-1-230525	2023 05 25	8.1	92.8	-	-	-	1,600	1.68	0.0221	233	<10	<10	35.3	3,200	21.6	1,280	1,280	<1.0	<1.0	<1.0	0.15	-	-	<20	-	-
	GL27-1-231024	2023 10 24	8.32	97.5	-	-	-	1,460	4.58	0.0083	258	<10	<10	36.4	3,280	16.7	1330	1,310	17.1	<1.0	8.6	<1.00	-	-	<20	-	-
GL27-2	GL27-1-20111217	2011 12 17	-	83	-	-	-	1,630	-	-	80	< 50	-	40.1	-	20.4	1,500	-	-	-	-	-	-	-	10	-	0.08
	GL27-2-20091116	2009 11 16	-	3,760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL27-2-20100812	2010 08 12	-	3,540	-	-	-	14,300	-	-	290	-	-	740	-	6,590	708	-	-	-	-	-	-	-	130	-	0.057
GL27-3	GL27-3-20091112	2009 11 12	-	5,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL27-3-20100812	2010 08 12	-	4,700	-	-	-	17,800	-	-	500	-	-	800	-	8,490	645	-	-	-	-	-	-	-	60	-	0.007
	GL27-3-20110629	2011 06 29	-	5,170	-	-	-	16,700	-	-	470	-	-	610	-	9,700	639	-	-	-	-	-	-	-	30	-	0.268
	GL27-3-20111217	2011 12 17	-	4,500	-	-	-	17,100	-	-	410	<200	-	582	-	10,900	653	-	-	-	-	-	-	-	40	-	0.04
	GL27-3-20120625	2012 06 25	-	5,060	-	-	-	16,400	-	-	520	-	-	543	-	9,620	638	-	-	-	-	-	-	-	70	-	0.003
	GL27-3-20121204	2012 12 04	-	4,480	-	-	-	15,900	-	-	660	<1,000	-	502	-	9,230	626	-	-	-	-	-	-	-	62	-	0.002
	GL27-3-20130626	2013 06 26	-	5,280	-	-	-	17,200	-	-	730	<500	-	589	1,300	11,100	864	-	-	-	-	<5.0	-	-	53	-	-
	GL27-3-20131113	2013 11 13	-	4,890	-	-	-	16,200	-	-	552	<500	-	577	1,390	9,840	876	-	-	-	-	-	-	-	31	-	-
	GL27-3-20140605	2014 06 05	-	5,120	-	-	-	16,300	-	-	564	<250	-	586	< 1,000	10,600	967	-	-	-	-	4	-	-	47	-	0.0024
	GL27-3-20141118	2014 11 18	-	4,560	-	-	-	13,300	-	-	416	<500	-	545	1,200	9,930	947	-	-	-	-	<5.0	-	-	38	-	0.0055

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Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.
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			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL27-3 (cont'd)	GL27-3-20150610	2015 06 10	8.07	4,990	-	-	-	17,900	-	-	615	<500	-	600	<2,000a	11,100	840	-	-	-	-	<5.0	-	-	44	-	0.0015
	GL27-3-20151104	2015 11 04	7.88	4,380	-	-	-	16,000	-	-	487	<500	-	557	<2,000a	10,400	624	-	-	-	-	<5.0	-	-	33	-	0.0043
	GL27-3-20160524	2016 05 24	7.85	4,850	-	-	-	16,200	-	-	582	<500	-	620	<2,000a	11,400	604	604	<1.0	<1.0	-	<5.0	-	-	27	-	0.0025
	GL27-3-20170925	2017 09 25	7.82	5,080	-	-	-	15,200	-	-	600	<500	-	543	<2,000a	10,500	601	-	-	-	-	<5.0	-	-	31	-	0.0027
	GL27-3-180815	2018 08 15	7.71	5,450	7.91	-	9,589	18,000	9.12	< 0.500	589	<1,000	<1,000a	516	970	10,200	622	622	<1.0	<1.0	<1.0	<10.0	-	-	<20	<0.500	-
	GL27-3-190527	2019 05 27	7.9	5,350	7.45	-	16199	13,500	7.11	< 0.500	57	1,470	<1,000a	475	<10,000a	9,330	610	610	< 1.0	<1.0	<1.0	<10.0	-	-	<20	<0.500	-
	GL27-3-200608	2020 06 08	7.88	5,540	7.3	-	15,172	18,200	6.3	-	806	6,600	<5,000a	442	<50,000a	10,400	586	586	<1.0	<1.0	<1.0	<50.0	-	-	21	-	<2.50
	GL27-3-210603	2021 06 03	7.95	6,070	7.38	-	17,777	19,800	8.09	-	823	<2,500	<2,500a	569	<25,000a	11,400	571	571	<1.0	<1.0	<1.0	<25.0	-	-	21	-	<1.25
	GL27-3-2205331	2022 05 31	7.84	6,640	-	-	14,231	20,000	8.76	<0.0500	933	<1,000	<100	585	<1,000	10,300	479	479	<1.0	<1.0	<1.0	1.57	-	-	<20	-	-
	GL27-3-230525	2023 05 25	7.72	6,320	-	-	-	19,400	6.95	<0.0500	882	<1,000	<1,000	594	<1,000	12,600	510	510	<1.0	<1.0	<1.0	2.44	-	-	29	-	-
GL27-4	GL27-4-20100812	2010 08 12	-	4,380	-	-	-	13,400	-	-	14,000	-	-	780	-	4,900	3,370	-	-	-	-	-	-	-	360	-	4.76
GL28-1	GL28-1-20091116	2009 11 16	-	1,680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL30-5-20091116	Duplicate	-	1,720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA/QC RPD%		-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL28-1-20100812	2010 08 12	-	1,600	-	-	-	3,990	-	-	210	-	-	64	-	1,840	655	-	-	-	-	-	-	-	20	-	0.009
	GL28-1-20110627	2011 06 27	-	944	-	-	-	3,060	-	-	< 10	-	-	27	-	1,700	346	-	-	-	-	-	-	-	10	-	0.009
	GL28-1-20120626	2012 06 26	-	550	-	-	-	1,610	-	-	130	-	-	11.3	-	954	139	-	-	-	-	-	-	-	<10	-	0.003
	GL28-1-20121203	2012 12 03	-	1,680	-	-	-	3,870	-	-	220	<100	-	38.7	-	2,240	649	-	-	-	-	-	-	-	18	-	<0.002
	DUP-A-20121203	Duplicate	-	1,700	-	-	-	3,830	-	-	170	<100	-	39.4	-	2,240	647	-	-	-	-	-	-	-	33	-	<0.002
	QA/QC RPD%		-	1	-	-	-	1	-	-	26	*	-	2	-	0	0	-	-	-	-	-	-	-	*	-	*
	GL28-1-20130708	2013 07 08	-	1,740	-	-	-	3,530	-	-	175	<100	-	28	680	1,510	368	-	-	-	-	<1.0	-	-	<20	-	-
	DUP1-20130708	Duplicate	-	1,740	-	-	-	4,220	-	-	178	<100	-	34	890	1,890	619	-	-	-	-	<1.0	-	-	<20	-	-
	QA/QC RPD%		-	0	-	-	-	18	-	-	2	*	-	19	27	22	51	-	-	-	-	*	-	-	*	-	-
	GL28-1-20140603	2014 06 03	-	1,600	-	-	-	3,930	-	-	162	< 250	-	59	1,100	2,230	778	-	-	-	-	<2.5	-	-	53	-	<0.0010
	GL28-1-20141117	2014 11 17	-	1,690	-	-	-	3,970	-	-	165	130	-	53	1,070	2,270	897	-	-	-	-	<1.0	-	-	<20	-	<0.0010
	GL28-1-20150611	2015 06 11	7.93	1,630	-	-	-	3,920	-	-	166	<100	-	48	1,110	2,270	730	-	-	-	-	<1.0	-	-	30	-	<0.0010
	GL28-1-20151105	2015 11 05	7.65	1,600	-	-	-	3,930	-	-	170	<100	-	50	1,150	2,280	626	626	<1.0	<1.0	-	<1.0	-	-	46	-	<0.0010
	GL28-1-20160524	2016 05 24	7.97	1,710	-	-	-	3,950	-	-	179	<100	-	67	1,510	2,950	624	624	<1.0	<1.0	-	<1.0	-	-	<20	-	<0.0010
	GL28-1-20160920	2016 09 20	7.69	1,740	-	-	-	4,080	-	-	173	<100	-	54	1,220	2,380	612	-	-	-	-	<1.0	-	-	<20	-	0.0014
	GL28-1-20170711	2017 07 11	8.21	1,620	-	-	-	3,740	-	-	163	<100	-	50	1,160	2,270	579	-	-	-	-	<1.0	-	-	<20	-	<0.0010
	GL28-1-20170926	2017 09 26	7.67	1,620	-	-	-	3,460	-	-	145	<100	-	48	1,110	2,190	554	-	-	-	-	<1.0	-	-	<20	-	<0.0010
	GL28-1-180528	2018 05 28	7.72	1,710	6.99	-	3,741	3,730	4.85	<0.0050	122	1,480	<10	45	700	2,040	551	551	<1.0	<1.0	<1.0	<10.0	-	-	<20	<0.0050	-
	GL28-1-180925	2018 09 25	7.72	1,750	7.21	-	3,761	3,770	4.88	<0.0050	163	<1,000	<10	41.8	960	2,150	531	531	<1.0	<1.0	<1.0	<0.10	-	-	<20	<0.0050	-
	DUP1-180925	Duplicate	7.73	1,730	7.21	-	3,761	3,930	4.81	<0.0050	176	<1,000	<10	40.5	1,000	2,220	528	528	<1.0	<1.0	<1.0	<0.10	-	-	<20	<0.0050	-
	QA/QC RPD%		0	1	*	-	*	4	1	*	8	*	*	3	4	3	1	1	*	*	*	*	-	-	*	*	-
	GL28-1-190528	2019 05 28	7.81	1,690	7.12	-	3741	3,650	4.74	<0.0050	236	<100	<100	38.3	1,100	2,060	531	531	<1.0	<1.0	<1.0	<1.00	-	-	<20	<0.0050	-
	GL28-1-190919	2019 09 19	7.78	1,650	7.39	-	3802	3,470	4.47	-	98	<100	<100	40.6	1,010	2,010	521	521	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0050
	GL28-1-200610	2020 06 10	7.71	1,770	7.15	-	3,321	3,300	4.43	-	120	<100	<100	37.8	<1,000	2,080	554	554	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0050
	DUPB-200610	Duplicate	7.75	1,630	7.15	-	3,321	3,680	3.83	-	124	<100	<100	38.1	<1,000	2,140	544	544	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0050
	QA/QC RPD%		1	8	*	-	*	11	15	-	*	*	*	1	*	3	2	2	*	*	*	*	-	-	*	-	*

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.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH (pH)	Total Hardness (mg/L)	pH (field) (pH)	Conductivity (µS/cm)	Field Conductivity (µS/cm)	Total Dissolved Solids (mg/L)	Dissolved Organic Carbon (mg/L)	Phosphate (mg/L)	Ammonia, Total (as N) (µg/L)	Nitrate (as N) (µg/L)	Nitrite (as N) (µg/L)	Chloride (mg/L)	Fluoride (µg/L)	Sulfate (mg/L)	Total Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Alkalinity, Hydroxide (as CaCO3) (mg/L)	Alkalinity, Phenolphthalein (as CaCO3) (mg/L)	Bromide (mg/L)	Hydrogen Sulfide (mg/L)	Sulfide (mg/L)	Chemical Oxygen Demand (mg/L)	Dissolved Phosphate (mg/L)	Ortho-Phosphate (mg/L)
GL28-1 (cont'd)	GL28-1-201104	2020 11 04	7.82	1,850	7.14	-	4,082	3,840	6.24	-	128	<1,000	<10	46.9	1,020	2,240	516	516	<1.0	<1.0	<1.0	<10.0	-	-	<20	-	<0.0050
	DUP3-201104	Duplicate	7.8	1,850	-	-	-	3,450	6.09	-	127	<1,000	<10	46.3	1,000	2,190	515	515	<1.0	<1.0	<1.0	<10.0	-	-	<20	-	<0.0050
	QA/QC RPD%		0	0	-	-	-	11	2	-	*	*	*	1	2	2	0	0	*	*	*	*	-	-	*	-	*
	GL28-1-210609	2021 06 09	7.83	1,720	6.99	-	3,969	3,130	7.14	-	82	<100	<100	57.4	1,270	1,910	542	542	<1.0	<1.0	<1.0	<1.00	-	-	25	-	<0.0500
	GL28-1-211007	2021 10 07	7.8	1,860	7.04	-	3,843	3,550	8	-	119	<100	<100	65.4	<1,000	1,940	550	550	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	DUP 3-211007	Duplicate	7.78	1,840	7.04	-	3,843	3,620	8.06	-	124	<100	<100	63.3	<1,000	1,930	549	549	<1.0	<1.0	<1.0	<1.00	-	-	26	-	<0.0500
	QA/QC RPD%		0	1	0	-	0	2	1	-	*	*	*	3	*	1	0	0	*	*	*	*	-	-	*	-	*
	GL28-1-220602	2022 06 02	7.81	1,670	-	-	3,919	3,450	14.7	<0.0500	51	187	<100	84	<1,000	2070	469	469	<1.0	<1.0	<1.0	<1.00	-	-	33	-	-
	GL28-1-221006	2022 10 06	7.73	1,850	-	-	4,055	3,630	9.73	<0.0500	90	<100	<100	93.5	<1,000	2130	477	477	<1.0	<1.0	<1.0	<1.00	-	-	29	-	-
	GL28-1-230530	2023 05 30	7.86	1,880	-	-	-	3,430	11.2	<0.0500	77	<100	<100	78.1	<1,000	1,970	496	496	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL28-1-231026	2023 10 26	7.84	1,900	-	-	-	3,510	11.6	<0.0500	126	<100	<100	85.4	<1,000	1,970	482	482	<1.0	<1.0	<1.0	<1.00	-	-	36	-	-
GL28-2	GL28-2-20091116	2009 11 16	-	1,530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL28-2-20160524	2016 05 24	7.72	1,840	-	-	-	4,530	-	-	5.1	11,200	-	46	<1,000	2,870	696	696	<1.0	<1.0	-	<2.5	-	-	<20	-	0.0082
	GL28-2-20160920	2016 09 20	7.5	1,810	-	-	-	4,760	-	-	<5.0	12,100	-	49	<1,000	2,760	693	-	-	-	-	<2.5	-	-	<20	-	0.0097
	DUP1-20160920	Duplicate	7.51	3,610	-	-	-	4,750	-	-	<5.0	12,000	-	48	<1,000	2,740	693	-	-	-	-	<2.5	-	-	<20	-	0.0089
	QA/QC RPD%		0	66	-	-	-	0	-	-	*	1	-	2	*	1	0	-	-	-	-	*	-	-	*	-	9
	GL28-2-20170711	2017 07 11	8.03	1,680	-	-	-	4,400	-	-	< 5.0	13,100	-	47	<400	2,590	671	-	-	-	-	<1.00	-	-	<20	-	0.0093
	GL28-2-20170926	2017 09 26	7.48	1,920	-	-	-	4,640	-	-	< 5.0	12,100	-	50	<400	2,840	670	-	-	-	-	<1.00	-	-	<20	-	0.0095
	GL28-2-180528	2018 05 28	7.42	1,900	6.77	-	4,680	4,730	6.09	<0.0500	24	8,440	<10	44	110	2,690	686	686	<1.0	<1.0	<1.0	<10.0	-	-	<20	<0.0050	-
	DUP1-180528	Duplicate	7.51	1,860	6.77	-	4,680	4,960	6.55	<0.0500	27	8,560	<1,000a	44.5	100	2,690	709	709	<1.0	<1.0	<1.0	<10.0	-	-	<20	<0.0050	-
	QA/QC RPD%		1	2	*	-	*	5	7	*	*	1	*	1	*	0	3	3	*	*	*	*	-	-	*	*	-
	GL28-2-180925	2018 09 25	7.6	2,280	6.97	-	5,093	5,370	8.34	<0.0500	63	9,480	<10	44.2	140	3,160	700	700	<1.0	<1.0	<1.0	< 0.10	-	-	24	<0.0050	-
	GL28-2-190528	2019 05 28	7.7	2,170	6.97	-	5,200	5,280	6.36	<0.0500	24	11,600	<100	48.6	<1,000	2,830	723	723	<1.0	<1.0	<1.0	<1.00	-	-	<20	<0.0050	-
	GL28-2-190919	2019 09 19	7.64	2,030	7.24	-	5,225	5,380	5.96	-	48	10,600	<100	51.7	<1,000	2,790	700	700	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	GL28-2-200610	2020 06 10	7.66	1,730	6.95	-	3,882	4,250	4.99	-	<50	9,190	<100	32	<1,000	2,490	587	587	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	GL28-2-201104	2020 11 04	7.7	2,200	6.9	-	5,499	4,790	6.26	-	<50	9,400	<10	42.9	130	3,020	677	677	<1.0	<1.0	<1.0	< 0.10	-	-	<20	-	<0.0500
	GL28-2-210609	2021 06 09	7.76	1,910	6.86	-	8,381	4,610	6.84	-	<50	11,400	<100	46.3	<1,000	2,670	675	675	<1.0	<1.0	<1.0	<1.00	-	-	39	-	<0.0500
	GL28-2-211007	2021 10 07	7.66	2,460	6.84	-	5,591	5,450	6.29	-	<50	10,000	<100	53	<1,000	3,050	728	728	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	GL28-2-220602	2022 06 02	7.76	1,930	-	-	5,306	5,170	7.77	<0.0500	<50	10,800	<100	57.8	<1,000	3,160	621	621	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL28-2-221006	2022 10 06	7.65	1,960	-	-	5,599	5,040	5.72	<0.0500	<50	13,200	<100	62.1	<1,000	3,120	615	615	<1.0	<1.0	<1.0	<1.00	-	-	21	-	-
	GL28-2-230530	2023 05 30	7.75	1,810	-	-	-	4,260	5.02	<0.0500	<50	8,930	<100	36.4	<1,000	2,500	511	511	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL28-2-231026	2023 10 26	7.74	2,130	-	-	-	4,960	8.4	<0.0500	<50	10,400	<100	42.7	<1,000	2,830	538	538	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL28-3	GL28-3-20091116	2009 11 16	-	1,760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL28-3-20100812	2010 08 12	-	1,580	-	-	-	4,230	-	-	< 10	-	-	60	-	1,950	702	-	-	-	-	-	-	-	30	-	0.038
	GL28-3-20160524	2016 05 24	7.52	2,740	-	-	-	6,310	-	-	<5.0	2,380	-	48	<1,000	4,070	782	782	<1.0	<1.0	-	<2.5	-	-	<20	-	0.018
	GL28-3-20160920	2016 09 20	7.57	1,280	-	-	-	6,550	-	-	<5.0	<250	-	49	<1,000	4,140	858	-	-	-	-	<2.5	-	-	20	-	0.0332
	GL28-3-20170711	2017 07 11	8.13	2,480	-	-	-	6,160	-	-	8.4	690	-	48	<1,000	4,000	840	-	-	-	-	<2.5	-	-	<20	-	0.0373
	GL28-3-20170926	2017 09 26	7.6	2,520	-	-	-	6,150	-	-	<5.0	1,120	-	49	<400	4,100	807	-	-	-	-	<1.00	-	-	<20	-	0.0358
	GL28-3-180528	2018 05 28	7.51	2,770	6.8	-	6,392	7,280	10.3	<0.0500	29	5,640	<10	45.9	230	3,780	870	870	<1.0	<1.0	<1.0	<10.0	-	-	23	<0.0050	-
	GL28-3-180925	2018 09 25	7.6	3,080	7	-	6,777	7,490	12.1	<0.0500	76	7,780	47	49.6	280	4,350	827	827	<1.0	<1.0	<1.0	<0.10	-	-	35	<0.0050	-
	GL28-3-190528	2019 05 28	7.78	2,880	7	-	6,743	6,780	8.29	<0.0500	40	5,880	<100	49.4	<1,000	4,040	846	846	<1.0	<1.0	<1.0	<1.00	-	-	<20	<0.0050	-
	DUP2-190528	Duplicate	7.63	2,830	7	-	6,743	7,120	7.97	<0.0500	44	6,130	<100	62.1	<1,000	4,170	855	855	<1.0	<1.0	<1.0	<1.00	-	-	<20	<0.0050	-
	QA/QC RPD%		2	2	*	-		5	4	*	10	4	*	23	*	3	1	1	*	*	*	*	-	-	*	*	-
	GL28-3-190919	2019 09 19	7.65	2,790	7.19	-	6,895	7,490	8.62	-	26	4,180	<100	51.7	<1,000	4,100	865	865	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	DUP1-190919	Duplicate	7.78	2,830	7.19	-	6,895	7,330	8.84	-	37	4,000	<100	48.8	<1,000	3,900	844	844	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	QA/QC RPD%		2	1	*	-	*	2	3	-	35	4	*	6	*	5	2	2	*	*	*	*	-	-	*	-	*
	GL28-3-200610	2020 06 10	7.67	2,890	6.92	-	630.3	7,680	9.25	-	<50	5,160	<100	56.6	<1,000	4,550	864	864	<1.0	<1.0	<1.0	<1.00	-	-	26	-	<0.0500
	GL28-3-201105	2020 11 05	7.75	2,870	6.96	-	277.6	7,810	9.33	-	<50	5,150	18	49.4	280	4,500	839	839	<1.0	<1.0	<1.0	<10.0	-	-	<20	-	<0.0500
	GL28-3-210609	2021 06 09	7.8	2,820	7	-	7,674	7,260	11.2	-	<50	5,900	<100	57.1	<1,000	4,120	872	872	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	<0.0500
	GL28-3-211007	2021 10 07	7.69	3,090	6.87	-	7,571	7450	8.42	-	<50	4,890	<100	56.5	<1,000	4,210	888	888	<1.0	<1.0	<1.0	<1.00	-	-	20	-	<0.0500
	GL28-3-220602	2022 06 02	7.8	54,500	-	-	7,090	7,210	12.2	<0.0500	<50	8,240	<100	67.2	<1,000	4,510	736	736	<1.0	<1.0	<1.0	<1.00	-	-	29	-	-
	GL28-3-221006	2022 10 06	7.66	2,910	-	-	8,239	7,700	9.98	<0.0500	<50	9,300	<100	80.8	<1,000	4,640	782	782	<1.0	<1.0	<1.0	<1.00	-	-	29	-	-
	GL28-3-230530	2023 05 30	7.89	3,070	-	-	-	7,440	9.77	<0.0500	<50	7,100	<100	70.6	<1,000	4,270	757	757	<1.0	<1.0	<1.0	<1.00	-	-	22	-	-
	GL28-3-231026	2023 10 26	7.76	2,840	-	-	-	7,450	21.5	<0.0500	<50	7,490	<100	74.9	<1,000	4,120	755	755	<1.0	<1.0	<1.0	<1.00	-	-	33	-	-

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.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL29-1	GL29-1-20130708	2013 07 08	-	444	-	-	-	1,160	-	-	216	<100	-	24	1,000	186	910	-	-	-	-	<1.0	-	-	<20	-	-
	GL29-1-20131113	2013 11 13	-	493	-	-	-	1,280	-	-	219	<100	-	36	1,190	356	836	-	-	-	-	-	-	-	<20	-	-
	DUP3-20131113	Duplicate	-	495	-	-	-	1,240	-	-	206	<100	-	37	1,180	358	750	-	-	-	-	-	-	-	<20	-	-
	QA/QC RPD%		-	0	-	-	-	3	-	-	6	*	-	3	1	1	11	-	-	-	-	-	-	-	*	-	-
	GL29-1-20140603	2014 06 03	-	516	-	-	-	1,430	-	-	135	<100	-	48	1,240	514	764	-	-	-	-	<1.0	-	-	<20	-	0.0088
	GL29-1-20141118	2014 11 18	-	699	-	-	-	1,950	-	-	253	<100	-	74	1,230	958	708	-	-	-	-	<1.0	-	-	37	-	0.002
	GL29-1-20150609	2015 06 09	8.12	629	-	-	-	1,900	-	-	244	< 25	-	63.5	1,200	804	692	-	-	-	-	0.29	-	-	27	-	0.0097
	GL29-1-20151105	2015 11 05	7.85	671	-	-	-	1,780	-	-	226	<100	-	72	1,210	785	579	-	-	-	-	<1.0	-	-	74	-	0.0161
	GL29-1-20160524	2016 05 24	7.94	682	-	-	-	1,650	-	-	61	640	-	77	1,220	667	593	593	<1.0	<1.0	-	<1.0	-	-	116	-	0.0187
	GL29-1-20160921	2016 09 21	8.08	639	-	-	-	1,590	-	-	32.2	260	-	67	1,230	573	586	-	-	-	-	<1.0	-	-	110	-	0.0231
	GL29-1-20170529	2017 05 29	8.1	586	-	-	-	1,300	-	-	20.6	1,100	-	57.9	1,130	408	642	-	-	-	-	<0.50	-	-	90	-	0.0199
	GL29-1-20170926	2017 09 26	7.88	542	-	-	-	1,290	-	-	15.3	415	-	51.6	1,240	389	644	-	-	-	-	<0.50	-	-	72	-	0.0243
	DUP1-20170926	Duplicate	7.88	539	-	-	-	1,330	-	-	17.9	383	-	53.1	1,240	401	645	-	-	-	-	<0.50	-	-	72	-	0.0243
	QA/QC RPD%		0	1	-	-	-	3	-	-	*	8	-	3	0	3	0	-	-	-	-	*	-	-	0	-	0
	GL29-1-180604	2018 06 04	7.71	659	7.24	-	1,240	1,220	118	0.0343	166	26,900	<10	58.1	310	161	450	450	<1.0	<1.0	<1.0	<0.10	-	-	321	0.0343	-
	GL29-1-180919	2018 09 19	7.7	683	7.38	-	1,389	1,190	93.7	< 0.0050	137	23,800	88	63.8	470	181	463	463	<1.0	<1.0	<1.0	<0.10	-	-	302	<0.0050	-
	GL29-1-190603	2019 06 03	7.76	467	7.06	-	1,715	1,160	12.8	< 0.0500	192	<10	<10	23.3	1,030	176	885	885	<1.0	<1.0	<1.0	<0.10	-	-	21	<0.0500	-
	GL29-1-190924	2019 09 24	7.89	448	7	-	1,731	1,160	11.1	-	102	<10	<10	29.7	1,180	211	820	820	<1.0	<1.0	<1.0	<0.10	-	-	25	-	<0.0050
	GL29-1-200612	2020 06 12	7.04	421	7.01	-	1,380	1,110	6.25	-	199	<100	<100	21.8	<1,000	185	758	-	-	-	-	<1.0	-	-	31	-	<0.0500
	GL29-1-201120	2020 11 20	7.84	442	7.07	-	1,723	1,050	3.16	-	230	<10	<10	22.9	1,290	172	814	814	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	GL29-1-210611	2021 06 11	7.9	460	7	-	1,705	1,070	3.11	-	200	<100	<100	22.1	1,320	183	859	859	<1.0	<1.0	<1.0	<1.0	-	-	<20	-	<0.0500
	GL29-1-211006	2021 10 06	7.89	436	7.37	-	1,660	1,100	6.01	-	222	<10	<10	26.6	1,310	190	801	801	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	GL29-1-220606	2022 06 06	7.98	555	-	-	1,698	1,250	67	<0.0500	90	3.01	<100	71.2	<1,000	213	590	590	<1.0	<1.0	<1.0	<1.0	-	-	188	-	-
	GL29-1-221006	2022 10 06	7.88	548	-	-	1,769	1,240	85.4	<0.0050	118	<10	<10	0.62	<100	2	617	617	<1.0	<1.0	<1.0	<0.10	-	-	217	-	-
	GL29-1-230706	2023 07 06	7.99	448	-	-	-	1,130	41.6	0.0149	181	<10	<10	34.6	1,180	187	789	789	<1.0	<1.0	<1.0	<1.00	-	-	87	-	-
	GL29-1-231026	2023 10 26	7.89	557	-	-	-	1,150	76.5	<0.0500	363	5,150	227	49.4	<1,000	213	625	625	<1.0	<1.0	<1.0	<1.00	-	-	194	-	-
GL29-2	GL29-2-20130627	2013 06 27	-	2,830	-	-	-	7,910	-	-	67.9	<250	-	243	2,200	5,020	335	-	-	-	-	<2.5	-	-	69	-	-
	GL29-2-20131113	2013 11 13	-	2,910	-	-	-	7,890	-	-	99.1	<250	-	252	1,400	4,820	351	-	-	-	-	-	-	-	53	-	-
	GL29-2-210608	2021 06 08	7.82	3,020	7.14	-	8,180	8,130	12.8	-	<50	<100	<100	225	1,900	4,730	331	331	<1.0	<1.0	<1.0	<1.0	-	-	57	-	<0.0500
	GL29-2-211006	2021 10 06	7.75	3,410	7.13	-	7,842	8,200	12.1	-	<50	<100	<100	215	1,390	4,740	353	353	<1.0	<1.0	<1.0	<1.0	-	-	48	-	<0.0500
	GL29-2-220606	2022 06 06	7.82	3,090	-	-	6,515	7,590	13.7	<0.0500	<50	<100	<100	220	1,210	5,030	293	293	<1.0	<1.0	<1.0	<1.00	-	-	39	-	-
	GL29-2-221006	2022 10 06	7.72	2,920	-	-	7,809	7,680	14.8	<0.0500	<50	<100	<100	232	1,500	4,710	316	316	<1.0	<1.0	<1.0	<1.00	-	-	40	-	-
	GL29-2-230525	2023 05 25	7.68	3,050	-	-	-	7,530	12.4	<0.0500	<50	<100	<100	200	<1,000	4,530	342	342	<1.0	<1.0	<1.0	<1.00	-	-	48	-	-
	GL29-2-231026	2023 10 26	7.77	2,930	-	-	-	7,100	21.7	<0.0500	139	<100	<100	209	1,360	4,430	321	321	<1.0	<1.0	<1.0	<1.00	-	-	50	-	-
GL31-1	GL31-3-20130627	2013 06 27	-	4,240	-	-	-	15,300	-	-	2,300	<500	-	863	600	8,470	2,810	-	-	-	-	<5.0	-	-	85	-	-
	GL31-3-20141126	2014 11 26	-	4,280	-	-	-	14,700	-	-	2,500	1,210	-	866	416	8,360	2,620	-	-	-	-	<5.0	-	-	63	-	0.0085
GL31-3	BH 11-18C-20120627	2012 06 27	-	4,600	-	-	-	15,500	-	-	2,300	-	-	821	-	7,800	2,580	-	-	-	-	-	-	-	80	-	0.013
	GL31-3-20121205	2012 12 05	-	4,470	-	-	-	15,400	-	-	2,450	< 10,000a	-	569	-	3,820	2,560	-	-	-	-	-	-	-	39	-	0.004
	GL31-3-20131114	2013 11 14	-	4,310	-	-	-	15,800	-	-	2,240	<500	-	875	393	8,510	2,700	-	-	-	-	<5.0	-	-	58	-	-
	GL31-3-20140609	2014 06 09	-	4,420	-	-	-	14,900	-	-	2,460	<250	-	833	<1,000	8,070	2,780	-	-	-	-	4	-	-	60	-	0.0049
	GL31-3-20150611	2015 06 11	7.83	4,460	-	-	-	13,400	-	-	2,490	<500	-	839	<2,000a	8,140	2,920	-	-	-	-	<5.0	-	-	62	-	0.0046
	GL31-3-20151109	2015 11 09	7.55	4,060	-	-	-	15,200	-	-	2,640	<500	-	857	<2,000a	8,440	2,590	-	-	-	-	<5.0	-	-	34	-	0.0076
	DUP4-20151109	Duplicate	7.5	4,060	-	-	-	15,200	-	-	2,380	<500	-	861	<2,000a	8,460	2,600	-	-	-	-	<5.0	-	-	33	-	0.0094
	QA/QC RPD%		1	0	-	-	-	0	-	-	10	*	-	0	*	0	0	-	-	-	-	*	-	-	*	-	21

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.
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RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

			Physical Parameters														Dissolved Inorganics										
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL35-3	BH11-31C-20111217	2011 12 17	-	1,100	-	-	-	37,000	-	-	57,300	<500	-	4,000	-	10,800	17,000	-	-	-	-	-	-	-	2,400	-	0.16
	DUPB-20111217	Duplicate	-	1,090	-	-	-	37,900	-	-	56,600	<500	-	4,110	-	10,900	15,600	-	-	-	-	-	-	-	2,500	-	0.17
	QA/QC RPD%		-	1	-	-	-	2	-	-	1	*	-	3	-	1	9	-	-	-	-	-	-	-	4	-	6
	BH11-31C-20120625	2012 06 25	-	2,740	-	-	-	10,900	-	-	2,740	-	-	546	-	5,150	2,620	-	-	-	-	-	-	-	50	-	0.008
	GL35-3-20121205	2012 12 05	-	2,680	-	-	-	10,900	-	-	2,590	<10,000a	-	520	-	5,330	2,290	-	-	-	-	-	-	-	48	-	0.004
	DUP-C-20121205	Duplicate	-	2,720	-	-	-	10,800	-	-	2,720	<10,000a	-	503	-	5,150	2,300	-	-	-	-	-	-	-	41	-	0.004
	QA/QC RPD%		-	1	-	-	-	1	-	-	5	*	-	3	-	3	0	-	-	-	-	-	-	-	*	-	*
	GL35-3-20130627	2013 06 27	-	2,220	-	-	-	8,910	-	-	2,330	<250	-	475	2,200	4,630	2,400	-	-	-	-	2.6	-	-	38	-	-
	DUP3-20130627	Duplicate	-	2,240	-	-	-	8,910	-	-	2,350	270	-	483	2,400	4,650	2,380	-	-	-	-	2.5	-	-	36	-	-
	QA/QC RPD%		-	1	-	-	-	0	-	-	1	*	-	2	9	0	1	-	-	-	-	4	-	-	*	-	-
	GL35-3-20131113	2013 11 13	-	2,280	-	-	-	9,430	-	-	1,310	<250	-	482	1,400	4,250	2,380	-	-	-	-	-	-	-	46	-	-
	GL35-3-20140609	2014 06 09	-	2,220	-	-	-	8,650	-	-	2,420	<250	-	460	1,500	4,300	2,270	-	-	-	-	<2.5	-	-	43	-	<0.0010
	GL35-3-20141126	2014 11 26	-	2,060	-	-	-	8,860	-	-	3,210	270	-	478	1,600	4,280	2,680	-	-	-	-	2.8	-	-	33	-	0.0076
	GL35-3-20150611	2015 06 11	7.63	2,170	-	-	-	8,690	-	-	2,490	<250	-	447	1,500	4,170	2,340	-	-	-	-	<2.5	-	-	50	-	0.0037
	GL35-3-20151109	2015 11 09	7.67	2,030	-	-	-	12,000	-	-	6,870	<500	-	676	<2,000a	5,210	3,610	-	-	-	-	<5.0	-	-	198	-	1.36
	GL35-3-20160526	2016 05 26	7.59	2,200	-	-	-	8,300	-	-	2,590	<250	-	500	1,900	4,690	2,050	-	-	-	-	2.6	-	-	32	-	0.0291
	GL35-3-20170926	2017 09 26	7.45	2,010	-	-	-	7,480	-	-	1,870	<250	-	403	1,400	3,750	1,990	-	-	-	-	2.6	-	-	21	-	<0.0010
	GL35-3-180815	2018 08 15	7.29	2,070	6.98	-	6,480	8,230	7.93	<0.0050	1,720	<10	279	341	1,720	3,320	2,070	2,070	<1.0	<1.0	<1.0	<10.0	-	-	<20	<0.0050	-
	GL35-3-190530	2019 05 30	7.58	2,000	6.85	-	9,132	7,760	4.72	<0.0500	1,220	<100	<100	351	1,730	3,510	2,000	2,000	<1.0	<1.0	<1.0	<1.00	-	-	26	<0.0500	-
	GL35-3-200608	2020 06 08	7.73	2,180	6.73	-	7,916	7,520	3.66	-	1,490	<1,000	<1,000a	325	1,410	3,410	1,920	1,920	<1.0	<1.0	<1.0	<10.0	-	-	<20	-	<0.500
	DUPA-200608	Duplicate	7.73	2,080	6.73	-	7,916	7,520	4.14	-	1,470	<100	<100	365	1,130	3,280	1,910	1,910	<1.0	<1.0	<1.0	1.78	-	-	<20	-	<0.0500
	QA/QC RPD%		0	5	*	-	*	0	12	-	1	*	*	12	22	4	1	1	*	*	*	*	-	-	*	-	*
	GL35-3-210610	2021 06 10	7.49	1,860	6.67	-	8,182	6,380	3.6	-	1,200	<100	<100	343	1,600	3,050	1,810	1,810	<1.0	<1.0	<1.0	1.4	-	-	<20	-	<0.0500
	DUP3-210610	Duplicate	7.47	1,870	6.67	-	8,182	6,440	3.54	-	1,210	<100	<100	337	1,630	3,050	1,790	1,790	<1.0	<1.0	<1.0	1.48	-	-	<20	-	<0.0500
	GL35-3-220531	2022 05 31	7.62	1,940	-	-	8,148	6,730	5.42	<0.0500	1,360	<100	<100	344	<1,000	2,940	1,530	1,530	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	QA/QC RPD%		0	1	0	-	0	1	2	-	1	*	*	2	2	0	1	1	*	*	*	6	-	-	*	-	*
	GL35-3-230525	2023 05 25	7.48	1,910	-	-	-	6,670	5.22	<0.0500	1,530	<100	<100	331	<1,000	3,080	1,530	1,530	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL37	GL37-20130708	2013 07 08	-	5,860	-	-	-	35,900	-	-	1,660	<500	-	783	410	14,500	1,590	-	-	-	-	<5.0	-	-	109	-	-
	GL37-20131114	2013 11 14	-	5,970	-	-	-	28,600	-	-	1,370	<500	-	1,030	343	18,600	1,580	-	-	-	-	6.3	-	-	44	-	-
GL39-1	GL39-1-191205	2019 12 05	7.86	1,790	-	-	-	3,610	8.17	-	116	1,640	25	98.1	1,240	1,910	576	576	<1.0	<1.0	<1.0	<0.10	-	-	179	-	<0.0050
	GL39-1-200609	2020 06 09	7.81	2,120	7.02	-	3,724	3,710	6.4	-	56	4,470	<1,000a	102	<10,000a	2,110	598	598	<1.0	<1.0	<1.0	<10.0	-	-	22	-	<0.500
	GL39-1-201019	2020 10 19	7.85	1,970	7.03	-	4,547	4,140	8.1	-	< 50	5,840	<10	134	1,230	2,120	574	574	<1.0	<1.0	<1.0	<0.10	-	-	29	-	<0.0050
	GL39-1-210526	2021 05 26	7.71	3,300	6.92	-	5,480	4,660	8.82	-	< 50	6,500	<10	144	1,140	460	659	659	<1.0	<1.0	<1.0	<2.50	-	-	<20	-	<0.0050
	GL39-1-210914	2021 09 14	-	2,630	6.96	-	5,187	5,370	9.04	-	< 50	5,300	<10	149	1,290	2,790	677	677	<1.0	<1.0	<1.0	<1.00	-	-	22	-	<0.0050
	GL39-1-220531	2022 05 31	7.82	2,620	-	-	4,888	4,720	12.7	<0.0500	<50	4,880	<100	145	<1,000	2,740	546	546	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL39-1-220923	2022 09 23	7.87	2,230	-	-	4,961	4,700	8.02	<0.0500	<50	5,880	<100	149	<1,000	2,670	637	637	<1.0	<1.0	<1.0	<1.00	-	-	22	-	-
	GL39-1-230525	2023 05 25	7.64	2,450	-	-	-	4,410	9.84	<0.0500	<50	7,520	<100	137	<1,000	2,490	576	576	<1.0	<1.0	<1.0	<1.00	-	-	26	-	-
	GL39-1-231024	2023 10 24	7.73	2,200	-	-	-	3,930	14.8	<0.0500	57	9,910	<100	162	<1,000	2,430	588	588	<1.0	<1.0	<1.0	<1.00	-	-	33	-	-
GL39-2	GL39-2-191205	2019 12 05	7.93	1,940	-	-	-	5,110	7.99	-	121	1,140	12	176	470	2,790	407	407	<1.0	<1.0	<1.0	< 0.10	-	-	152	-	<0.0050
	GL39-2-200609	2020 06 09	7.85	1,910	7.29	-	4,140	4,110	6.23	-	<50	1,820	<1,000a	174	<10,000a	2,400	401	401	<1.0	<1.0	<1.0	< 10.0	-	-	26	-	<0.500
	GL39-2-201016	2020 10 16	7.88	1,240	7.35	-	3,324	2,990	6.14	-	<50	1,400	<10	180	500	1,540	374	374	<1.0	<1.0	<1.0	<1.00	-	-	21	-	<0.0050
	DUP1-201016	Duplicate	7.9	1,260	7.69	-	1,582	3,090	5.89	-	<50	1,440	<10	181	<2,500a	1,570	397	397	<1.0	<1.0	<1.0	<1.00	-	-	23	-	<0.0050
	QA/QC RPD%		0	2	*	-	*	3	4	-	*	3	*	1	*	2	6	6	*	*	*	*	-	-	*	-	*
	GL39-2-210526	2021 05 26	7.98	1,090	7.31	-	3,323	2,350	5.28	-	<50	588	<10	154	510	1,250	436	436	<1.0	<1.0	<1.0	<2.50	-	-	<20	-	<0.0050
	DUP 2-210526	Duplicate	7.98	1,100	7.31	-	3,323	2,090	5.32	-	<50	700	<10	159	500	1,240	435	435	<1.0	<1.0	<1.0	<2.50	-	-	<20	-	<0.0050
	QA/QC RPD%		0	1	0	-	0	12	1	-	*	17	*	3	2	1	0	0	*	*	*	*	-	-	*	-	*
	GL39-2-210914	2021 09 14	-	1,800	7.27	-	4,281	3,820	5.79	-	<50	1,940	<10	130	410	2,140	472	472	<1.0	<1.0	<1.0	<2.50	-	-	30	-	<0.0050
	GL39-2-220531	2022 05 31	7.99	1,060	-	-	3,033	1,820	5.72	<0.0500	<50	<100	<100	158	<1,000	1,410	351	351	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL39-2-220923	2022 09 23	8.09	721	-	-	2,728	1,960	4.32	<0.0500	<50	<100	115	126	<1,000	951	394	394	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL39-2-230525	2023 05 25	7.91	570	-	-	-	1,270	3.52	<0.0500	<50	<100	<100	74.2	<1,000	495	349	349	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL39-2-231024	2023 10 24	7.94	611	-	-	-	1,160	6.58	<0.0500	<0.050	516	<100	106	<1.00	643	353	353	<1.0	<1.0	<1.0	<1.00	-	-	20	-	-
GL40-3	GL40-3-201117	2020 11 17	8.09	311	7.31	-	4,621	3,000	66.4	-	11,400	<100	<100	201	<1,000	375	2,190	2,190	<1.0	<1.0	<1.0	<1.00	-	-	2,430	-	<0.0500
	GL40-3-210610	2021 06 10	7.95	323	7.31	-	4,453	2,710	3.79	-	5,950	<100	<100	162	<1,000	518	2,040	2,040	<1.0	<1.0	<1.0	<1.00	-	-	1,050	-	<0.0500
GL41-1	GL41-1-200616	2020 06 16	8.03	661	7.43	-	2,257	1,400	6.7	-	54	<100	<100	399	<1,000	185	497	497	<1.0	<1.0	<1.0	<1.00	-	-	28	-	<0.0500
	GL41-1-201102	2020 11 02	8.03	735	7.56	-	248	1,530	5.81	-	<50	1570	<10	371	720	138	592	592	<1.0	<1.0	<1.0	<0.10	-	-	23	-	0.0142
	GL41-1-210525	2021 05 25	8.09	755	7.27	-	2,558	2,000	6.5	-	<50	1300	<10	399	660	163	596	596	<1.0	<1.0	<1.0	<1.00	-	-	26	-	<0.0050
	GL41-1-220615	2022 06 15	8.04	589	-	-	2,146	1,160	5.2	<0.0500	<50	894	<10	297	<1,000	183	623	623	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL41-1-220923	2022 09 23	8.15	595	-	-	2,166	1,240	4.98	<0.0050	<50	421	0.012	279	860	204	611	611	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
	GL41-1-230531	2023 05 31	8.05	574	-	-	-	1,140	4.55	<0.0050	<50	622	<10	219	770	181	523	523	<1.0	<1.0	<1.0	<0.10	-	-	42	-	-
	GL41-1-231026	2023 10 26	8.24	342	-	-	-	807	4.63	<0.050	<50	488	<100	140	<1000	90.5	432	432	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-

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.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H1: Historical Summary of Analytical Results For Groundwater - Inorganics

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Physical Parameters														Dissolved Inorganics										
			pH	Total Hardness	pH (field)	Conductivity	Field Conductivity	Total Dissolved Solids	Dissolved Organic Carbon	Phosphate	Ammonia, Total (as N)	Nitrate (as N)	Nitrite (as N)	Chloride	Fluoride	Sulfate	Total Alkalinity	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Carbonate (as CaCO3)	Alkalinity, Hydroxide (as CaCO3)	Alkalinity, Phenolphthalein (as CaCO3)	Bromide	Hydrogen Sulfide	Sulfide	Chemical Oxygen Demand	Dissolved Phosphate	Ortho-Phosphate
			pH	mg/L	pH	µS/cm	µS/cm	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GL41-2	GL41-2-191205	2019 12 05	8.05	530	-	-	-	1,230	6.32	-	174	1,560	50	301	700	138	558	558	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	GL41-2-200612	2020 06 12	7.44	726	7.24	-	2,073	1,390	6.13	-	<50	1,500	<100	387	<1,000	166	563	-	-	-	-	<1.0	-	-	<20	-	<0.0500
	DUPD-200612	Duplicate	7.5	743	7.24	-	2,073	1,370	6.38	-	<50	1,460	<100	404	<1,000	164	559	-	-	-	-	<1.0	-	-	<20	-	< 0.0500
	QA/QC RPD%		1	2	*	-	*	1	4	-	*	3	*	4	*	1	1	-	-	-	-	*	-	-	*	-	*
	GL41-2-201022	2020 10 22	7.83	684	7.31	-	2,562	1,410	6.58	-	<50	1,960	<10	402	640	175	559	559	<1.0	<1.0	<1.0	<1.0	-	-	<20	-	<0.0050
	GL41-2-210525	2021 05 25	8.05	753	7.17	-	2,498	1,400	6.37	-	<50	1780	<10	423	670	151	595	595	<1.0	<1.0	<1.0	<2.50	-	-	24	-	<0.0050
	GL41-2-210907	2021 09 07	7.91	711	7.21	-	2,442	1,320	5.28	-	<50	2140	<10	383	580	138	608	608	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	<0.0050
	GL41-2-220615	2022 06 15	7.89	474	-	-	1,663	986	3.38	<0.0500	<50	1,540	<100	232	<1,000	109	533	533	<1.0	<1.0	<1.0	<1.00	-	-	28	-	-
	GL41-2-220923	2022 09 23	8.11	556	-	-	1,928	1,080	6.17	<0.0050	<50	2,020	17	286	670	122	554	554	<1.0	<1.0	<1.0	0.18	-	-	<20	-	-
	GL41-2-230531	2023 05 31	7.91	510	-	-	-	938	3.45	<0.0050	<50	2,520	<10	205	640	101	464	464	<1.0	<1.0	<1.0	<0.10	-	-	23	-	-
	GL41-2-231023	2023 05 23	8.0	475	-	-	-	936	4.37	<0.0050	<50	2,500	<10	197	630	107	440	440	<1.0	<1.0	<1.0	<0.10	-	-	<20	-	-
GL41-3	GL41-3-200612	2020 06 12	7.4	755	7.26	-	2,133	1,580	6.68	-	141	1180	<100	423	<1,000	159	575	-	-	-	-	<1.0	-	-	<200	-	<0.0500
	GL41-3-201022	2020 10 22	7.86	696	7.31	-	2,621	1,400	6.93	-	<50	1380	<10	423	650	160	570	570	<1.0	<1.0	<1.0	<1.0	-	-	<20	-	<0.0050
	GL41-3-210525	2021 05 25	8.05	792	7.2	-	2,646	1,340	6.71	-	<50	1510	<10	471	660	160	618	618	<1.0	<1.0	<1.0	<2.50	-	-	24	-	<0.0050
	GL41-3-210907	2021 09 07	7.87	723	7.22	-	2,545	1,400	5.94	-	<50	1780	<10	406	590	143	622	622	<1.0	<1.0	<1.0	<0.10	-	-	26	-	<0.0050
	DUP 1-210907	Duplicate	7.88	715	7.22	-	2,545	1,390	5.91	-	<50	1,780	<10	412	600	145	610	610	<1.0	<1.0	<1.0	<0.10	-	-	30	-	<0.0050
	QA/QC RPD%		0	1	0	-	0	1	1	-	*	0	*	1	2	1	2	2	*	*	*	*	-	-	*	-	*
	GL41-3-220615	2022 06 15	7.88	474	-	-	1,695	1,010	3.52	<0.0500	<50	1,320	<100	250	<1000	108	533	533	<1.0	<1.0	<1.0	<1.00	-	-	21	-	-
	GL41-3-220923	2022 09 23	8.02	618	-	-	2,142	1,230	4.2	<0.0050	<50	1,750	17	337	630	133	587	587	<1.0	<1.0	<1.0	0.2	-	-	22	-	-
	GL41-3-230531	2023 05 31	8.0	499	-	-	-	856	4.81	<0.050	<50	1,320	<100	221	<1000	98	471	471	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL41-3-231023	2023 10 23	8.04	291	-	-	-	650	4.76	<0.050	<50	1,290	<100	116	<1000	64.7	352	352	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
GL42-1	GL42-1-200612	2020 06 12	7.12	184	7.28	-	2,332	2,360	2.39	-	703	<100	<100	36.7	<1,000	20.8	2,050	-	-	-	-	<1.0	-	-	330	-	0.058
	GL42-1-201106	2020 11 06	7.8	171	7.27	-	5,266	3,620	2.95	-	743	<10	<10	47.6	560	1.3	3,030	3,030	<1.0	<1.0	<1.0	0.34	-	-	35	-	<0.0050
	GL42-1-210603	2021 06 03	8.05	187	7.35	-	5,277	3,170	2.14	-	698	<10	<10	49.7	650	<10.0	3,560	3,560	<1.0	<1.0	<1.0	0.28	-	-	76	-	<0.0050
	GL42-1-220607	2022 06 07	7.55	143	-	-	4,808	3,380	3.1	<0.0050	624	<10	<10	48.6	580	28.2	900	900	<1.0	<1.0	<1.0	0.33	-	-	<20	-	-
	GL42-1-230621	2023 06 21	7.82	1,630	-	-	-	4,670	21.7	<0.0500	254	<100	<100	128	<1,000	2,060	1,560	1,560	<1.0	<1.0	<1.0	<1.00	-	-	56	-	-
	GL42-1-231030	2023 10 30	7.9	984	-	-	-	4,030	17.9	<0.0500	432	235	<100	102	<1,000	918	2,100	2,100	<1.0	<1.0	<1.0	<1.00	-	-	47	-	-
GL42-2	GL42-2-200616	2020 06 16	8.08	855	7.45	-	4,649	3,910	6.51	-	461	1,760	232	64.3	<1,000	2,050	928	928	<1.0	<1.0	<1.0	<1.0	-	-	519	-	<0.0500
	GL42-2-201109	2020 11 09	7.76	1,270	7.34	-	5,360	4,220	7.7	-	83	883	153	63.6	590	2,250	918	918	<1.0	<1.0	<1.0	<10.0	-	-	89	-	<0.0050
	GL42-2-210607	2021 06 07	8.02	1,230	7.34	-	5,808	4,340	7.36	-	<50	8,820	<250	70.9	<2,500a	2,220	1,020	1,020	<1.0	<1.0	<1.0	<2.50	-	-	<20	-	< 0.125
	GL42-2-220617	2022 06 17	8.01	1390	-	-	5031	5080	5.4	<0.0500	<50	9080	<100	81.5	<1,000	2,790	1040	1040	<1.0	<1.0	<1.0	<1.00	-	-	<20	-	-
	GL42-2-230621	2023 06 21	7.8	3430	-	-	-	7,930	8.35	<0.0500	<50	10,700	<100	138	<1,000	5,090	676	676	<1.0	<1.0	<1.0	<1.00	-	-	53	-	-
	GL42-2-231031	2023 10 31	7.86	2650	-	-	-	7,060	8.3	<0.0500	<50	13,000	<100	116	<1,000	4,180	748	748	<1.0	<1.0	<1.0	<1.00	-	-	59	-	-

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.
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QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
09BH03	09BH03-20151105	2015 11 05	< 10	87.9	< 30	107	< 10	5	458	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.050	11.1	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	25.2	< 5.0	15.3	< 0.050	1,960	< 0.020	< 30	< 50	-	130	< 30	< 5.0
	09BH03-20170601	2017 06 01	< 10	132	< 30	149	< 10	6.4	494	< 0.50	< 1.0	23	< 5.0a	< 100	< 0.050	11.5	< 0.50	1.7	< 1.0	< 50	< 0.20	21.5	< 5.0	45.8	< 0.050	2,570	< 0.020	< 30	< 50	-	124	< 30	< 5.0
	09BH03-180604	2018 06 04	< 5.0	156	153	179	< 0.20	6.95	604	< 0.20	0.63	17.4	< 0.10	14.4	0.045	21	0.17	8.16	< 0.20	29.9	< 0.010	26.4	3.25	44.8	< 0.050	3,300	< 0.020	< 0.20	< 5.0	< 1.0	168	1.5	< 4.0
	09BH03-190530	2019 05 30	< 5.0	129	< 10	147	3.51	5.53	449	< 0.20	< 0.50	15.8	< 0.10	13	0.039	18.8	0.12	1.24	< 0.20	33.3	< 0.010	20.8	0.75	26	< 0.050	3,040	< 0.020	< 0.20	< 5.0	< 1.0	161	< 1.0	< 4.0
	09BH03-200609	2020 06 09	1.2	184	< 2.0	197	0.089	7.9	92.3	0.064	0.5	24.1	< 0.010	13.3	0.0278	34.1	0.145	1.96	< 0.050	31	< 0.010	26.3	1.26	52.4	< 0.010	1,390	< 0.0040	< 0.050	< 0.20	< 0.20	207	1.91	1.1
	09BH03-220606	2022 06 06	<2.0	116	<4.0	147	<0.100	6.08	460	<0.100	0.373	17.7	<0.020	10.1	<0.0120	10.9	0.093	2.06	<0.100	20.2	< 0.010	23.4	0.78	46.1	0.028	2560	<0.0080	<0.100	<0.40	<0.40	140	<2.00	<2.0
09BH04	09BH04-20151105	2015 11 05	< 10	147	10,100	183	681	14	617	< 0.50	5	30	< 5.0a	< 100	< 0.050	< 0.50	1.12	< 1.0a	< 1.0	252	< 0.20	14.9	< 5.0	< 1.0	< 0.050	3,080	< 0.020	< 30	< 50	-	48.5	< 30	< 5.0
09BH06-S	09BH06-S-20131112	2013 11 12	< 10a	56.5	131	51.4	146	4.3	125	< 0.50	2.2	32	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	15	< 5.0	< 1.0	< 0.050	1,290	< 0.20	< 30	< 50	-	8.48	< 30	< 5.0
	09BH06-S-20140602	2014 06 02	< 10a	56.6	152	52.5	159	4.2	130	< 0.50	2.2	34	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.8	< 5.0	< 1.0	< 0.050	1,270	< 0.20	< 30	< 50	-	8.2	< 30	< 5.0
	09BH06-S-20141117	2014 11 17	< 10a	56.5	195	51.7	158	4.2	127	< 0.50	2.5	35	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.6	< 5.0	< 1.0	< 0.050	1,280	< 0.20	< 30	< 50	-	7.83	< 30	< 5.0
	09BH06-S-20150610	2015 06 10	16	56.9	485	50.7	162	4.2	127	< 0.50	3.3	35	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.6	< 5.0	< 1.0	< 0.050	1,270	< 0.010	< 30	< 50	-	7.26	< 30	< 5.0
	09BH06-S-20151105	2015 11 05	< 10	57.8	220	49.7	161	4.3	130	< 0.50	2.5	35	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.4	< 5.0	< 1.0	< 0.050	1,320	< 0.010	< 30	< 50	-	7.72	< 30	< 5.0
09BH06-D	09BH06-D-20131112	2013 11 12	< 10a	60.5	371	53.6	164	4.3	129	< 0.50	2.7	40	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.4	< 5.0	< 1.0	< 0.050	1,390	< 0.20	< 30	< 50	-	9.62	< 30	< 5.0
	DUP4-20131112	Duplicate	< 10a	59.9	360	53.3	160	4.2	127	< 0.50	2.7	39	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.4	< 5.0	< 1.0	< 0.050	1,370	< 0.20	< 30	< 50	-	9.36	< 30	< 5.0
	QA/QC RPD%		*	1	3	1	2	*	2	*	0	3	*	*	*	*	*	*	*	*	*	0	*	*	*	1	*	*	*	-	3	*	*
	09BH06-D-20140602	2014 06 02	< 10a	58.9	351	53.2	158	4.2	127	< 0.50	2.6	40	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.2	< 5.0	< 1.0	< 0.050	1,330	< 0.20	< 30	< 50	-	9.13	< 30	< 5.0
	09BH06-D-20141117	2014 11 17	< 10a	60.4	359	53.6	165	4.1	128	< 0.50	2.6	41	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.1	< 5.0	< 1.0	< 0.050	1,360	< 0.20	< 30	< 50	-	8.87	< 30	< 5.0
	09BH06-D-20150610	2015 06 10	< 10	64	385	54.7	168	4.3	131	< 0.50	2.6	42	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	14.1	< 5.0	< 1.0	< 0.050	1,430	< 0.010	< 30	< 50	-	9	< 30	< 5.0
	09BH06-D-20151105	2015 11 05	< 10	62	374	51.9	167	4.2	131	< 0.50	2.5	42	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	15.9	< 5.0	< 1.0	< 0.050	1,420	< 0.010	< 30	< 50	-	9.32	< 30	< 5.0
	09BH06-D-20170606	2017 06 06	< 10	60.1	395	51.9	182	4.3	142	< 0.50	2.9	41	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	15.6	< 5.0	< 1.0	< 0.050	1,440	< 0.010	< 30	< 50	-	6.31	< 30	< 5.0
	09BH06-D-180604	2018 06 04	< 5.0	62.2	526	56.1	190	4.52	142	< 0.20	3.06	41.9	< 0.10	15	0.016	0.55	0.13	1.63	< 0.20	48.5	< 0.010	15.9	1.24	1.07	< 0.050	1,480	< 0.020	< 0.20	< 5.0	< 1.0	8.62	< 1.0	< 4.0
	09BH06-D-190528	2019 05 28	< 5.0	69.2	431	63.5	199	4.69	151	< 0.20	2.8	52.5	< 0.10	8.5	0.011	0.91	0.22	0.63	< 0.20	60.3	< 0.010	17	< 0.40	< 0.50	< 0.050	1,740	< 0.020	< 0.20	< 5.0	< 1.0	11.6	< 1.0	< 4.0
	09BH06-D-200609	2020 06 09	< 1.0	70.1	459	60	199	4.73	156	< 0.050	2.85	48.2	< 0.010	15	0.0048	< 0.10	0.19	< 0.10	< 0.050	59.9	< 0.010	18	0.377	< 0.10	< 0.010	1,650	0.0045	< 0.050	< 0.20	< 0.20	10.2	< 0.20	< 1.0
	09BH06-D-210608	2021 06 08	< 1.0	57.4	405	46	165	4.08	129	< 0.050	3.73	37.4	< 0.010	16.6	0.0048	< 0.10	0.143	0.11	< 0.050	46.9	< 0.010	18.6	0.287	< 0.10	< 0.010	1,150	< 0.0040	< 0.050	< 0.20	< 0.20	6.03	< 0.20	< 1.0
	09BH06-D-220602	2022 06 02	1.4	44.9	378	47.3	162	3.79	128	<0.050	3	39.2	<0.010	10.4	0.0041	0.1	0.136	0.63	<0.050	42.6	< 0.010	18.9	0.292	<0.10	<0.010	1300	<0.0040	<0.050	<0.20	<0.20	5.81	<1.00	<1.0
	09BH06-D-230530	2023 05 30	3.7	59.3	533	64.4	214	4.64	175	<0.050	3.14	49.3	<0.010	15.6	<0.0080	<0.50	0.182	0.25	0.056	54.4	<0.010	17.2	0.339	<0.10	<0.010	1800	0.0061	<0.050	<0.20	<0.20	10.3	<1.00	<1.0
GL0-1	GL0-1-20130625	2013 06 25	38	71.2	99	60.6	763	11.4	83.7	1	4.8	92	< 5.0a	< 100	0.059	< 0.50	1.82	< 1.0a	< 1.0	< 50	< 0.20	29.8	23.2	1.7	< 0.050	1,210	< 0.20	< 30	< 50	-	11.2	< 30	< 5.0
	GL0-1-20140603	2014 06 03	< 10a	63.9	< 30	62.3	135	10.2	69.8	< 0.50	3.2	66	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	24.1	< 5.0	< 1.0	< 0.050	1,370	< 0.20	< 30	< 50	-	4.93	< 30	< 5.0
	GL0-1-20141124	2014 11 24	< 10a	66.8	< 30	65.3	160	10.7	69.2	< 0.50	3.3	60	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	22.7	< 5.0	< 1.0	< 0.050	1,300	< 0.20	< 30	< 50	-	4.18	< 30	< 5.0
	DUP1-20141124	Duplicate	< 10a	66.6	< 30	64.1	159	10.7	68.5	< 0.50	3.3	60	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	23.2	< 5.0	< 1.0	< 0.050	1,300	< 0.20	< 30	< 50	-	4.39	< 30	< 5.0
	QA/QC RPD%		*	0	*	2	1	0	1	*	0	0	*	*	*	*	*	*	*	*	*	2	*	*	*	0	*	*	*	-	5	*	*
	GL0-1-20150608	2015 06 08	< 10	64.6	< 30	63.5	108	10.5	66.4	< 0.50	3.2	58	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	25.3	< 5.0	< 1.0	< 0.050	1,460	< 0.010	< 30	< 50	-	4.16	< 30	< 5.0
	GL0-1-20151103	2015 11 03	< 10	66.2	32	62.6	160	10.4	67.2	< 0.50	3.3	54	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	24.6	< 5.0	< 1.0	< 0.050	1,490	< 0.010	< 30	< 50	-	3.87	< 30	< 5.0
	GL0-1-20160524	2016 05 24	< 10	63.6	< 30	64.2	100	10.4	66.9	< 0.50	3.3	50	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	24.6	< 5.0	< 1.0	< 0.050	1,450	< 0.010	< 30	< 50	-	3.93	< 30	< 5.0
	GL0-1-20170524	2017 05 24	< 10	64	< 30	62.7	29	10.6	69.4	< 0.50	3.1	47	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	27.1	< 5.0	< 1.0	< 0.050	1,640	< 0.010	< 30	< 50	-	4.26	< 30	< 5.0
	GL0-1-180529	2018 05 29	< 5.0	58.1	< 10	65.5	19.5	10.3	69.8	< 0.20	2.87	37.1	< 0.10	36.8	0.038	< 0.50	< 0.10	< 0.40a	< 0.20	16.6	< 0.010	27.2	0.82	< 0.50	< 0.050	1,370	< 0.020	< 0.20	< 5.0	< 1.0	4.53	< 1.0	< 4.0
	GL0-1-190523	2019 05 23	< 5.0	54.9	< 10	59.8	13.9	9.85	63.1	< 0.20	3.23	39.9	< 0.10	42.3	0.118	0.77	< 0.10	0.58	< 0.20	15.7	< 0.010	30.5	0.69	< 0.50	< 0.050	1,560	< 0.020	< 0.20	< 5.0	< 1.0	4.31	< 1.0	< 4.0
	GL0-1-200310	2020 03 10	< 5.0	58.4	13	62.9	25.7	9.93	65.6	< 0.20	3.44	39.9	< 0.10	58.4	0.019	< 0.50	< 0.10	0.12	< 0.20	15.6	< 0.010	29.9	0.41	< 0.50	< 0.050	1,500	< 0.020	< 0.20	< 5.0	< 1.0	4.8	< 1.0	< 4.0
GL0-2	GL0-2-20130627	2013 06 27	< 10a	83.9	< 30	71.9	432	10.6	136	0.53	1.6	93	< 5.0a	< 100	< 0.050	< 0.50	1.14	< 1.0a	< 1.0	< 50	< 0.20	26.7	6.4	< 1.0	< 0.050	1,460	< 0.20	< 30	< 50	-	37.5	< 30	< 5.0
	GL0-2-20140603	2014 06 03	< 10a	75.3	< 30	67.4	169	10.1	72.6	< 0.50	3.4	61	< 5.0a	< 100	< 0.050	< 0.50	0.54	< 1.0a	< 1.0	< 50	< 0.20	23	< 5.0	< 1.0	< 0.050	1,400	< 0.20	< 30	< 50	-	7.73	< 30	< 5.0
	GL0-2-20141124	2014 11 24	< 10a	80.2	< 30	71.9	146	10.8	78.2	< 0.50	2.9	58	< 5.0a	< 100	0.067	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	22.3	< 5.0	< 1.0	< 0.050	1,360	< 0.20	< 30	< 50	-	11	< 30	< 5.0
	GL0-2-20150608	2015 06 08	< 10	78	276	68.9	228	10.8	63.3	< 0.50	4.6	56	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	22.5	< 5.0	< 1.0	< 0.050	1,460	< 0.010	< 30	< 50	-	3.27	< 30	< 5.0
	GL0-2-20151103	2015 11 03	< 10	83.8	143	70.7	234	10.3	92.7	< 0.50	3	61	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	25.8	< 5.0	< 1.0	< 0.050	1,650	< 0.010	< 30	< 50	-	19.5	< 30	< 5.0
	DUP1-20151103	Duplicate	< 10	86.4	142	71.4	238	11	90.9	< 0.50	2.8	62	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	25.1	< 5.0	< 1.0	< 0.050	1,590	0.013	< 30	< 50	-	18.9	< 30	< 5.0
	QA/QC RPD%		*	3	1	1	2	7	2	*	7	2	*	*	*	*	*	*	*	*	*	3	*	*	*	4	*	*	*	-	3	*	*
	GL0-2-20160524	2016 05 24	< 10	76	205	67.5	183	10.6	56.7	< 0.50	3.9	53	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	21.3	< 5.0	< 1.0	< 0.050	1,420	< 0.010	< 30	< 50	-	1.92	< 30	< 5.0
	GL0-2-20170524	2017 05 24	< 10	79.9	121	68.6	126	11.2	60.4	< 0.50	3.8	54	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	24.9	< 5.0	< 1.0	< 0.050	1,670	< 0.010	< 30	< 50	-	2.05	< 30	6.6
	GL0-2-180529	2018 05 29	< 5.0	76.2	202	68.7	156	10.4	63.2	< 0.20	3.45	46.5	< 0.10	41.1	< 0.010	< 0.50	0.26	< 0.40a	< 0.20	32	< 0.010	22.8	1.07	< 0.50	< 0.050	1,360	< 0.020	< 0.20	< 5.0	< 1.0	3.1	< 1.0	5.1
	DUP2-180529	Duplicate	< 5.0	74.8	199	68.6	152	10.5	63.2	< 0.20	3.41	45.5	< 0.10	40.7	0.01	< 0.50	0.23	< 0.40a	< 0.20	31.5	< 0.010	22.8	1.05	< 0.50	< 0.050	1,310	< 0.020	< 0.20	< 5.0	< 1.0	3.09	< 1.0	< 4.0
	QA/QC RPD%		*	2	1	0	3	1	0	*	1	2	*	1	*	*	*	*	*	2	*	0	*	*	*	4	*	*	*	*	0	*	*
	GL0-2-190529	2019 05 29	11.6	86.4	225	80.2	177	9.99	116	< 0.20	1.6	64.3	< 0.10	33.5	0.037	0.87	0.43	0.95	< 0.20	27	< 0.010	28.1	1.98	< 0.50	0.07	2,020	< 0.020	< 0.20	< 5.0	< 1.0	55.3	< 1.0	< 4.0
	GL0-2-200310	2020 03 10	< 5.0	73.1	113	66.4	179	10.4	58.3	< 0.20	3.78	51.5	< 0.10	56.8	0.021	< 0.50	0.24	< 0.10	< 0.20	32	< 0.010	25.8	1.03	< 0.50	< 0.050	1,500	< 0.020	< 0.20	< 5.0	< 1.0	3.01	< 1.0	< 4.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL0-3	GL0-3-20130627	2013 06 27	< 10a	117	< 30	114	29	11	191	< 0.50	< 1.0	33	< 5.0a	< 100	0.096	< 0.50	1.79	< 1.0a	< 1.0	< 50	< 0.20	14.6	< 5.0	2.3	< 0.050	1,930	< 0.20	< 30	< 50	-	123	< 30	< 5.0
	GL0-3-20140603	2014 06 03	< 10a	114	< 30	112	< 10	10.2	180	< 0.50	< 1.0	27	< 5.0a	< 100	0.185	< 0.50	2.32	< 1.0a	< 1.0	< 50	< 0.20	15.1	< 5.0	2.4	< 0.050	1,960	< 0.20	< 30	< 50	-	120	< 30	< 5.0
	GL0-3-20141124	2014 11 24	< 10a	123	< 30	119	13	11.3	192	< 0.50	< 1.0	27	< 5.0a	< 100	0.087	< 0.50	3.55	44.9	< 1.0	< 50	< 0.20	14.8	< 5.0	2.5	< 0.050	1,930	< 0.20	< 30	< 50	-	119	< 30	26.9
	GL0-3-20150608	2015 06 08	< 10	120	< 30	115	< 10	10.7	179	< 0.50	< 1.0	26	< 5.0a	< 100	0.149	< 0.50	1.67	3.4	< 1.0	< 50	< 0.20	15.4	< 5.0	2.2	< 0.050	2,050	< 0.010	< 30	< 50	-	119	< 30	18.7
	GL0-3-20151103	2015 11 03	< 10	118	< 30	111	< 10	10.2	188	< 0.50	< 1.0	24	< 5.0a	< 100	0.132	< 0.50	1.71	2.2	< 1.0	< 50	< 0.20	15.2	< 5.0	1.8	< 0.050	2,100	< 0.010	< 30	< 50	-	122	< 30	12.3
	GL0-3-20160524	2016 05 24	< 10	117	< 30	112	< 10	10.2	179	< 0.50	< 1.0	23	< 5.0a	< 100	0.216	< 0.50	1.26	1.7	< 1.0	< 50	< 0.20	14.1	< 5.0	2.2	< 0.050	1,930	< 0.010	< 30	< 50	-	111	< 30	10.7
	GL0-3-20170524	2017 05 24	< 10	120	< 30	114	< 10	10.4	180	< 0.50	< 1.0	24	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	15.9	< 5.0	1.3	< 0.050	2,160	< 0.010	< 30	< 50	-	124	< 30	7.1
	GL0-3-180529	2018 05 29	< 5.0	123	< 10	120	1.88	10.4	187	< 0.20	< 0.50	21.7	0.26	23.8	0.028	< 0.50	0.32	1.79	< 0.20	41.1	< 0.010	14.4	1.86	1.14	< 0.050	1,910	< 0.020	0.4	< 5.0	< 1.0	130	< 1.0	10.8
	GL0-3-190529	2019 05 29	< 5.0	176	< 10	163	1.91	12.4	239	< 0.20	< 0.50	30.4	0.26	29.3	0.059	1.6	0.59	3.11	< 0.20	52.3	< 0.010	13.8	2.67	10.8	< 0.050	2,980	< 0.020	0.57	< 5.0	< 1.0	198	< 1.0	26.2
	GL0-3-200310	2020 03 10	< 5.0	154	64	150	1.85	11.9	230	< 0.20	< 0.50	28.3	0.17	37.7	0.046	1.12	0.49	2.43	< 0.20	50.1	< 0.010	14.4	2.6	6.33	< 0.050	2,800	< 0.020	< 0.20	< 5.0	< 1.0	178	< 1.0	9.3
GL1-1	GL 1-1-20091109	2009 11 09	78	67.1	< 100	170	23	10.2	147	< 2	< 2	40	< 0.4	60	< 0.1	< 4	0.4	< 10a	< 1	40	-	21	< 10	< 6	< 0.10	3,120	< 0.1	< 1	< 10	-	36	1	< 10
	GL1-1-20100810	2010 08 10	< 50a	62	< 100	155	9	10	140	< 2	< 2	40	< 0.4	70	< 0.10	< 4	0.3	< 10a	< 1	40	-	23	< 10	< 6	< 0.1	3,010	< 0.1	< 1	< 100	-	48	< 1	< 10
	GL30-1-20100810	Duplicate	85	61	160	152	35	14	154	< 2	6	40	< 0.4	50	< 0.10	< 4	0.4	< 10a	< 1	40	-	24	< 10	< 6	< 0.1	3,130	< 0.1	< 1	< 100	-	51	2	< 10
	QA/QC RPD%		*	2	*	2	118	33	10	*	*	0	*	33	*	*	*	*	*	0	-	4	*	*	*	4	*	*	*	-	6	*	*
	GL1-1-20160531	2016 05 31	< 50	71.2	< 100	182	27	-	174	< 1	< 5	50	< 1	60	< 0.1a	< 5	< 0.5	< 2a	< 1	49	-	24	< 2	< 5	< 0.5	3,410	< 0.2	-	< 50	-	56.3	< 10	-
	GL1-1-20180927	2018 09 27	< 5.0	58.9	< 10	142	53	9.78	154	< 0.20	0.51	41	< 0.10	63.7	0.142	< 0.50	0.2	1.06	< 0.20	38.9	< 0.010	27.3	1.77	1.02	< 0.050	2,830	< 0.020	< 0.20	< 5.0	-	48.9	< 1.0	< 4.0
	GL1-1-180612	2018 06 12	< 5.0	58.3	< 10	145	36.5	9.94	155	< 0.20	< 0.50	42.6	< 0.10	44.7	0.118	< 0.50	0.17	1.01	< 0.20	41.8	< 0.010	26.8	1.78	1.71	< 0.050	2,890	< 0.020	< 0.20	< 5.0	< 1.0	49.6	< 1.0	< 4.0
	GL1-1-190917	2019 09 17	< 5.0	60	< 10	149	33.2	9.61	164	< 0.20	0.61	45.7	< 0.10	55.3	0.154	1.14	0.17	0.95	< 0.20	43.7	-	33.2	1.96	< 0.50	< 0.050	3,160	< 0.020	< 0.20	< 5.0	< 1.0	55.1	< 1.0	< 4.0
	GL1-1-200910	2020 09 10	2.4	63.4	3.4	143	29.4	9.46	153	0.095	0.624	43	< 0.010	45.8	0.123	0.19	0.156	1.28	0.078	39.7	-	29.6	1.85	0.41	< 0.010	3,120	0.0073	< 0.050	0.2	0.42	54.6	0.21	2.9
	GL1-1-231023	2023 10 23	<1.0	56.9	<2.0	139	11.2	10.3	143	0.066	0.407	43.2	<0.010	30.9	<0.0540	<0.50	0.0899	0.75	<0.050	39.8	<0.010	20.8	0.945	2.51	<0.010	2770	0.0072	<0.050	<0.20	<0.20	47.6	<1.00	<1.0
GL1-2	GL 1-2-20091109	2009 11 09	66	65.4	< 100	181	2	10.2	144	< 2	< 2	40	< 0.4	60	< 0.1	< 4	0.3	< 10a	< 1	50	-	20	< 10	< 6	< 0.10	3,160	< 0.1	< 1	< 10	-	36	2	< 10
	GL1-2-20100810	2010 08 10	< 50a	65	< 100	164	< 2	10	132	< 2	< 2	40	< 0.4	70	< 0.1	< 4	0.4	< 10a	< 1	40	-	20	< 10	< 6	< 0.1	3,220	< 0.1	< 1	< 100	-	46	2	< 10
	GL1-2-20160531	2016 05 31	< 50	69.3	< 100	174	< 2	-	161	< 1	< 5	< 50	< 1	60	< 0.1a	< 5	< 0.5	< 2a	< 1	49	-	21	< 2	< 5	< 0.5	3,310	< 0.2	-	< 50	-	49	< 10	< 40
	GL1-2-180612	2018 06 12	< 5.0	61.7	< 10	154	0.34	10.8	169	< 0.20	0.99	64.4	< 0.10	49.8	0.022	< 0.50	< 0.10	1.83	< 0.20	38.1	< 0.010	28	1.34	0.78	< 0.050	3,040	< 0.020	< 0.20	< 5.0	< 1.0	61.6	4.2	< 4.0
	GL1-2-20180927	2018 09 27	< 5.0	59.2	< 10	148	14.7	10.6	149	< 0.20	0.7	47.1	< 0.10	45.4	0.029	< 0.50	0.1	0.95	< 0.20	38.5	< 0.010	18.5	1.18	1.59	< 0.050	2,910	< 0.020	< 0.20	< 5.0	-	49.8	3.2	< 4.0
	GL1-2-190917	2019 09 17	< 5.0	60.7	< 10	148	4.15	9.95	147	< 0.20	0.56	47	< 0.10	43.6	0.036	1.03	< 0.10	0.88	< 0.20	42.7	-	23	1.24	0.75	< 0.050	3,160	< 0.020	< 0.20	< 5.0	< 1.0	58.1	2.5	< 4.0
	GL1-2-200910	2020 09 10	2.2	68.1	< 2.0	156	3.48	10.8	157	0.087	0.752	49.8	< 0.010	39.2	0.0328	0.13	0.143	1.24	< 0.050	40	-	23.5	1.24	0.26	< 0.010	3,510	< 0.0040	< 0.050	0.26	< 0.20	59.8	2.34	< 1.0
	GL1-2-231023	2023 10 23	3.1	59.5	6.4	142	1.94	11.5	139	0.068	0.508	43.6	<0.010	33.8	<0.0260	<0.50	0.111	0.75	<0.050	41.2	<0.010	20.5	0.99	1.79	<0.010	2860	<0.0040	<0.050	<0.20	<0.20	49.8	2.61	<1.0
GL2-1	GL 2-1-20091109	2009 11 09	64	75.8	230	38.6	124	3.6	75.2	< 2	2	120	< 0.4	< 40	< 0.1	< 4	0.5	< 10a	< 1	10	-	7	< 10	< 6	< 0.10	2,470	< 0.1	< 1	< 10	-	6	< 1	< 10
	GL2-1-20100810	2010 08 10	76	77	240	41	144	3	74	< 2	2	100	< 0.4	< 40	< 0.10	< 4	0.3	< 10a	< 1	10	-	7	< 10	< 6	< 0.1	2,710	< 0.1	< 1	< 100	-	8	< 1	< 10
	GL30-2-20100810	Duplicate	95	76	220	40	161	6	76	< 2	4	120	< 0.4	< 40	< 0.10	< 4	0.6	< 10a	< 1	10	-	7	< 10	< 6	< 0.1	2,670	< 0.1	< 1	< 100	-	8	1	10
	QA/QC RPD%		22	1	9	2	11	*	3	*	67	18	*	*	*	*	*	*	*	0	-	0	*	*	*	1	*	*	*	-	0	*	*
	GL2-1-20110629	2011 06 29	< 5	77.6	474	40.2	145	3.2	75.7	< 0.2	2.4	118	< 0.04	4	0.02	1.1	1.39	< 1a	< 0.1	12	-	9.2	2	< 0.6	< 0.01	3,410	< 0.01	< 0.1	< 10	-	6.3	0.5	< 1
	GL2-1-20111217	2011 12 17	< 50a	81.6	698	41	111	3.2	73.8	< 2	2	110	< 0.4	< 40	< 0.1	5	< 0.2	10	< 1	10	-	9	< 10	< 6	< 0.10	3,100	0.11	< 1	< 10	-	7	2	< 10
	GL 2-1-20120627	2012 06 27	< 50a	81	260	42	< 10	2	76	< 2	< 2	100	< 0.4	< 40	< 0.1	< 4	< 0.2	< 10a	< 1	10	-	5	< 10	< 6	< 0.10	2,900	< 0.1	< 1	< 100	-	7	< 1	< 10
	GL2-1-20121204	2012 12 04	< 50a	74.8	503	39.2	160	3.3	74.1	< 2.0	< 2.0	110	< 0.40	< 40	< 0.10	< 4.0	10.7	< 10a	< 1	< 10	-	7.64	< 10	< 6.0	< 0.10	2,950	< 0.10	< 1.0	< 10	-	8.8	1.02	< 10
	GL2-1-20130626	2013 06 26	< 10a	91	613	46.3	117	3.6	82.8	< 0.50	1.8	113	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	9.6	< 5.0	< 1.0	< 0.050	2,730	< 0.20	< 30	< 50	-	6.78	< 30	< 5.0
	GL2-1-20140603	2014 06 03	< 10a	89.4	381	47.2	91	3.6	85	< 0.50	1.4	119	< 5.0a	< 100	0.059	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	9.8	< 5.0	< 1.0	< 0.050	2,870	< 0.20	< 30	< 50	-	6.15	< 30	< 5.0
	DUP3-20140603	Duplicate	< 10a	89.3	402	46	96	3.5	84.3	< 0.50	1.4	118	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	9.5	< 5.0	< 1.0	< 0.050	2,830	< 0.20	< 30	< 50	-	6.12	< 30	< 5.0
	QA/QC RPD%		*	0	5	3	5	*	1	*	0	1	*	*	*	*	*	*	*	*	*	3	*	*	*	1	*	*	*	-	0	*	*
	GL2-1-20141124	2014 11 24	< 10a	92.4	629	48.2	157	3.7	82.4	< 0.50	1.6	120	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	8.7	< 5.0	< 1.0	< 0.050	3,040	< 0.20	< 30	< 50	-	6.28	< 30	< 5.0
	GL2-1-20150608	2015 06 08	< 10	97	226	49.1	54	3.7	85.8	< 0.50	1	127	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	9.5	< 5.0	< 1.0	< 0.050	3,170	< 0.010	< 30	< 50	-	6.16	< 30	< 5.0
	GL2-1-20151103	2015 11 03	< 10	95	330	45.4	186	3.7	83	< 0.50	< 1.0	119	< 5.0a	< 100	0.052	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	8.8	< 5.0	< 1.0	< 0.050	3,070	< 0.010	< 30	< 50	-	6.09	< 30	< 5.0
	GL2-1-20160524	2016 05 24	< 10	98.9	85	48.2	17	3.7	90.8	< 0.50	< 1.0	117	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	8.7	< 5.0	< 1.0	< 0.050	3,240	< 0.010	< 30	< 50	-	5.48	< 30	< 5.0
	DUP2-20160524	Duplicate	< 10	95.7	62	48.5	13	3.7	86.1	< 0.50	< 1.0	116	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	9	< 5.0	< 1.0	< 0.050	3,110	< 0.010	< 30	< 50	-	5.72	< 30	< 5.0
	QA/QC RPD%		*	3	31	1	27	*	5	*	*	1	*	*	*	*	*	*	*	*	*	3	*	*	*	4	*	*	*	-	4	*	*
	GL2-1-20170524	2017 05 24	< 10	103	651	50.6	158	3.7	95.5	< 0.50	1.3	112	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	11.4	< 5.0	< 1.0	< 0.050	3,480	< 0.010	< 30	< 50	-	5.58	< 30	< 5.0
	GL2-1-180528	2018 05 28	< 5.0	83.5	796	60.3	151	4.12	116	< 0.20	1.34	103	< 0.10	9.7	0.039	< 0.50	< 0.10	< 0.40a	< 0.20	11.5	< 0.010	11.1	< 0.40	< 0.50	< 0.050	3,470	< 0.020	< 0.20	< 5.0	< 1.0	5.11	< 1.0	< 4.0
	GL2-1-190523	2019 05 23	< 5.0	109	29	56.6	231	4.2	106	< 0.20	0.59	103	< 0.10	15.9	0.071	< 0.50	< 0.10	< 0.40a	< 0.20	15.6	< 0.010	12.9	< 0.40	< 0.50	< 0.050	4,100	< 0.020	< 0.20	< 5.0	< 1.0	5.3	< 1.0	< 4.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals: Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL2-1	GL2-1-200609	2020 06 09	< 1.0	124	1,220	60	157	4.45	122	< 0.050	2.46	92.7	< 0.010	12.3	0.0075	< 0.10	0.0524	0.23	< 0.050	14.1	< 0.010	14.3	0.127	< 0.10	< 0.010	29	< 0.0040	< 0.050	< 0.20	< 0.20	5.07	< 0.20	< 1.0
(Cont'd)	GL2-1-200820	2020 08 20	1.6	106	1,210	50.8	129	3.92	98.7	< 0.050	2.82	88.1	< 0.010	11.7	0.0068	0.15	0.0583	< 0.10	< 0.050	12.8	< 0.010	13.8	0.077	< 0.10	< 0.010	39	< 0.0040	< 0.050	< 0.20	< 0.20	4.13	< 0.20	< 1.0
	DUPA-200820	Duplicate	3	107	1,200	51	130	3.98	99.4	< 0.050	2.81	87.3	< 0.010	11.4	0.0057	0.12	0.0449	< 0.10	< 0.050	12.9	< 0.010	13.7	0.079	< 0.10	< 0.010	39.5	< 0.0040	0.113	< 0.20	< 0.20	4.13	< 0.20	< 1.0
	QA/QC RPD%		*	1	1	0	1	2	1	*	0	1	*	3	*	*	26	*	*	1	*	1	*	*	*	*	*	*	*	*	0	*	*
	GL2-1-201019	2020 10 19	< 1.0	125	1,490	48.8	129	4.18	101	< 0.050	3.25	76.5	< 0.010	6.3	< 0.0020	< 0.10	0.0526	< 0.10	< 0.050	11.2	< 0.010	14.9	0.087	< 0.10	< 0.010	3,840	< 0.0040	< 0.050	< 0.20	< 0.20	4.03	< 0.20	< 1.0
	GL2-1-210512	2021 05 12	< 1.0	119	954	53	126	4.24	117	< 0.050	2.37	72.9	< 0.010	11	0.005	0.17	0.0343	< 0.10	< 0.050	13.6	< 0.010	14.1	0.093	< 0.10	< 0.010	3,840	< 0.0040	0.052	< 0.20	< 0.20	4.14	< 0.20	< 1.0
	GL2-1-211005	2021 10 05	7.5	134	1,130	60.3	126	4.4	127	< 0.050	2.12	73.5	< 0.010	40.7	0.0095	0.15	0.0426	0.56	< 0.050	13.8	< 0.010	15.4	0.084	< 0.10	< 0.010	3,620	< 0.0040	< 0.050	0.63	< 0.20	3.82	< 0.20	< 1.0
	GL2-1-220530	2022 05 30	1.5	115	954	64	112	4.22	143	<0.050	2.07	60.6	<0.010	7.7	<0.0050	0.14	0.0241	<0.10	<0.050	14.8	< 0.010	15.3	0.066	<0.10	0.011	3,830	<0.0040	<0.050	<0.20	<0.20	3.33	<1.00	<1.0
	GL2-1-220927	2022 09 27	<1.0	136	1020	64.4	119	4.49	146	<0.050	1.92	70	<0.010	9.6	<0.0050	0.14	0.0275	0.64	<0.050	14.8	< 0.010	15.9	0.073	<0.10	<0.010	4,180	<0.0040	<0.050	<0.20	<0.20	3.61	<1.00	<1.0
	GL2-1-231024	2023 10 24	1.3	143	1290	72.9	200	4.94	179	<0.050	2.34	60.7	<0.010	11.7	<0.0200	<0.50	0.0367	5.17	0.11	14.1	<0.010	18.4	2.88	<0.10	<0.010	4220	<0.0040	<0.050	<0.20	<0.20	3.23	<1.00	2.8
GL2-2	GL 2-2-20091109	2009 11 09	417	70.2	380	44.7	68	3.8	72.7	< 2	< 2	70	< 0.4	< 40	< 0.1	< 4	0.6	< 10a	< 1	10	-	5	< 10	< 6	< 0.10	2,430	< 0.1	< 1	< 10	-	< 4	1	< 10
	GL2-2-20100810	2010 08 10	< 50a	70	< 100	43	20	3	67	< 2	< 2	60	< 0.4	< 40	< 0.10	< 4	< 0.2	< 10a	< 1	10	-	5	< 10	< 6	< 0.1	2,480	< 0.1	< 1	< 100	-	8	< 1	< 10
	GL2-2-200826	2020 08 26	16.9	81.7	42.9	48.8	128	3.59	74.7	< 0.050	1.17	90.3	< 0.010	9.4	0.0636	0.18		0.38	< 0.050	9.73	< 0.010	9.21	0.396	< 0.10	< 0.010	3,280	< 0.0040	0.062	1.15	< 0.20	4.38	0.61	< 1.0
	GL2-2-201020	2020 10 20	< 1.0	108	23.7	47.2	98.6	3.96	74.5	< 0.050	1.21	109	< 0.010	6.6	0.232	0.27		0.27	< 0.050	10.2	< 0.010	10.4	0.268	< 0.10	< 0.010	4,010	< 0.0040	< 0.050	< 0.20	< 0.20	4.14	< 0.20	1.8
	GL2-2-210513	2021 05 13	< 1.0	102	49.2	55.9	76.4	4.43	97.6	0.055	1.15	108	< 0.010	13.6	0.0297	0.12		0.62	< 0.050	12.6	< 0.010	9.93	0.113	< 0.10	< 0.010	3,370	< 0.0040	< 0.050	< 0.20	< 0.20	3.57	< 0.20	< 1.0
	GL2-2-211005	2021 10 05	< 1.0	109	125	58.1	202	4.3	99.8	< 0.050	1.36	104	< 0.010	52.2	0.0544	0.21		0.59	< 0.050	12.4	< 0.010	14	0.354	< 0.10	< 0.010	3,450	< 0.0040	< 0.050	< 0.20	< 0.20	3.63	< 0.20	< 1.0
	GL2-2-220530	2022 05 30	<1.0	108	56.2	56.1	135	4.05	111	<0.050	1.01	97.9	<0.010	6.5	0.0326	0.1	0.0236	3.99	<0.050	13.5	< 0.010	11.4	0.131	<0.10	<0.010	3,680	<0.0040	0.06	<0.20	<0.20	2.8	<1.00	<1.0
	GL2-2-220927	2022 09 27	<1.0	119	126	57.5	311	4.25	111	<0.050	1.4	96.8	<0.010	8.4	0.0699	0.17	0.0471	0.7	<0.050	12.7	< 0.010	15.6	0.601	<0.10	<0.010	3,840	<0.0040	<0.050	<0.20	<0.20	3.05	<1.00	<1.0
	GL2-2-231025	2023 10 25	2.5	132	241	62.8	299	3.96	123	<0.050	1.58	90.3	<0.010	11.1	0.0408	<0.50	0.0657	0.67	<0.050	13.8	<0.010	15.7	0.521	<0.10	<0.010	4100	<0.0040	<0.050	<0.20	<0.20	2.61	<1.00	<4.0
GL3-2	GL3-2-20080529	2008 05 29	370	35.6	630	56.1	175	6.8	161	< 2	6	50	< 1	< 20	7	< 5		< 10a	2	< 10	-	30	< 5	2	< 0.10	1,210	< 0.5	< 10	31	-	9	2	< 10
	GL3-2-20081104	2008 11 04	177	36	460	55.6	124	6.4	156	< 0.2	5.1	42	< 0.1	18	0.4	0.8		1	0.2	11	-	37	1.8	< 0.2	< 0.01	1,280	< 0.05	< 1	17.2	-	6.7	0.7	5
	GL3-2-20091116	2009 11 16	74	40.7	270	57.3	115	6.7	171	< 2	6	40	< 0.4	< 40	0.2	< 4		< 10a	< 1	< 10	-	34	< 10	< 6	< 0.10	1,200	< 0.1	< 1	< 10	-	6	< 1	< 10
	GL3-2-20100810	2010 08 10	88	34	< 100	57	135	6	162	< 2	4	40	< 0.4	< 40	0.2	< 4		< 10a	< 1	10	-	31	< 10	< 6	< 0.1	1,180	< 0.1	< 1	< 100	-	8	< 1	< 10
GL3-3	GL3-3-19990505	1999 05 05	67	104	1,620	258	664	53.9	335	< 5	< 10	241	< 0.5	825	4.8	< 0.8		2	< 2	33	-	< 1	2	< 4	< 1a	2,480	< 4a	13	< 0.4	-	-	< 0.1	< 0.6
	GL3-3-19990928	1999 09 28	73	110	1,060	261	585	59.4	321	< 5	< 10	242	< 0.5	944	7	< 0.8		1	7	37	-	< 1	5	< 4	< 1a	2,380	< 4a	17	< 0.4	-	-	3	0.6
	GL3-3-19991202	1999 12 02	44	109	2,530	268	584	67.8	330	< 5	< 10	244	< 0.5	992	< 0.5a	< 0.8	5.5	2	3	40	-	< 1	3	< 4	< 1a	2,510	< 4a	11	< 0.4	-	-	1	2.1
	GL3-3-20080529	2008 05 29	< 50a	32.5	6,180	52.2	131	6	151	< 2	< 2	20	< 1	< 20	< 0.1a	< 5	< 1	< 10a	2	< 10	-	20	< 5	< 2	< 0.10	1,160	< 0.5	< 10	10	-	8	< 1	< 10
	GL3-3-20081104	2008 11 04	25	37.1	1,160	61.8	178	7.1	158	< 0.2	1.7	24	< 0.1	29	< 0.01	0.6	0.2	< 1a	< 0.1	12	-	30	1.7	< 0.2	< 0.01	1,350	< 0.05	< 1	8.4	-	8.8	0.6	3
GL3-5	GL3-5-20130627	2013 06 27	< 10a	179	13,700	199	677	61.9	237	< 0.50	< 1.0	485	< 5.0a	1,810	< 0.050	0.68	3.12	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	2,950	< 0.20	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL3-5 (2012)-20140609	2014 06 09	< 10a	165	5,700	200	487	59.7	229	< 0.50	< 1.0	441	< 5.0a	1,760	< 0.050	0.55	3.86	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	2,830	< 0.20	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL3-5 (2012)-20141125	2014 11 25	< 10a	168	19,500	222	569	56.5	232	< 0.50	1.7	490	< 5.0a	1,790	< 0.050	0.7	3.36	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,270	< 0.20	< 30	< 50	-	0.31	< 30	< 5.0
	GL3-5 (2012)-20150609	2015 06 09	11	170	27,800	199	414	67.5	243	< 0.50	2.4	470	< 5.0a	1,800	< 0.050	1.03	7.3	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,080	< 0.010	< 30	< 50	-	< 0.20	< 30	< 5.0
	DUP1-20150609	Duplicate	10	163	27,200	201	412	66	238	< 0.50	2.3	469	< 5.0a	1,790	< 0.050	0.96	7.08	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,040	< 0.020	< 30	< 50	-	< 0.20	< 30	< 5.0
	QA/QC RPD%		*	4	2	1	0	2	2	*	4	0	*	1	*	*	3	*	*	*	*	*	*	*	*	1	*	*	*	-	*	*	*
	GL3-5 (2012)-20151109	2015 11 09	< 10	172	14,000	205	416	61.6	229	< 0.50	1.3	481	< 5.0a	1,780	< 0.050	0.73	3.82	< 1.0a	< 1.0	< 50	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,130	< 0.010	< 30	< 50	-	0.21	< 30	< 5.0
GL4-1	GL 4-1-20091110	2009 11 10	< 50a	51	390	122	82	6.6	205	< 2	4	10	< 0.4	< 40	< 0.1	< 4	0.3	< 10a	< 1	40	-	30	< 10	< 6	< 0.10	2,010	< 0.1	< 1	< 10	-	33	< 1	10
	GL4-1-20100810	2010 08 10	< 50a	48	< 100	117	90	6	206	< 2	< 2	20	< 0.4	< 40	< 0.10	< 4	0.3	< 10a	< 1	40	-	31	< 10	< 6	< 0.1	2,180	< 0.1	< 1	< 100	-	49	< 1	< 10
	GL4-1-20110629	2011 06 29	< 5	50.8	574	118	90	6.2	186	< 0.2	5.9	16	< 0.04	7	0.02	3.1	0.44	3	< 0.1	34	-	19.2	< 1	9.8	< 0.01	2,560	< 0.01	< 0.1	< 10	-	35.9	1	3
	GL4-1-20120625	2012 06 25	< 50a	51	410	117	50	7	188	< 2	< 2	10	< 0.4	< 40	< 0.1	< 4	0.7	< 10a	< 1	30	-	20	< 10	< 6	< 0.10	2,070	< 0.1	< 1	< 100	-	38	< 1	< 10
	GL 4-1-20120626	2012 06 26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL 4-1-20120704	2012 07 04	< 5	49	140	112	50	7	186	< 0.2	2.2	14	< 0.04	15	< 0.01	7.2	0.14	< 1a	< 0.1	34	-	7.4	< 1	16.5	< 0.01	2,440	< 0.01	< 0.1	< 100	-	37	2	1
	GL4-1-20121203	2012 12 03	< 50a	44.2	624	106	78	6.3	192	< 2	2.4	10	< 0.40	< 40	< 0.10	5.7	< 0.20	< 10a	< 1.0	20	-	37.6	< 10	< 6.0	< 0.10	2,190	< 0.10	< 1.0	< 10	-	47.4	1.44	< 10
	GL4-1-20130627	2013 06 27	< 10a	50.4	820	121	92	6.8	206	< 0.50	2.8	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	38.1	< 5.0	< 1.0	< 0.050	2,070	< 0.20	< 30	< 50	-	45.4	< 30	< 5.0
	DUP4-20130627	Duplicate	< 10a	52	840	123	95	7.2	210	< 0.50	2.6	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	36.9	< 5.0	< 1.0	< 0.050	2,050	< 0.20	< 30	< 50	-	46.1	< 30	< 5.0
	QA/QC RPD%		*	3	2	2	3	6	2	*	7	*	*	*	*	*	*	*	*	*	*	3	*	*	*	1	*	*	*	-	2	*	*
	GL4-1-20140603	2014 06 03	< 10a	50.5	820	114	89	6.4	199	< 0.50	2.7	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	38.3	< 5.0	< 1.0	< 0.050	2,040	< 0.20	< 30	< 50	-	42.3	< 30	< 5.0
	GL4-1-20141124	2014 11 24	< 10a	52.1	833	125	93	7.1	209	< 0.50	2.7	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	35.9	< 5.0	< 1.0	< 0.050	1,960	< 0.20	< 30	< 50	-	41.9	< 30	< 5.0
	GL4-1-20150608	2015 06 08	< 10	51.4	784	121	90	6.8	200	< 0.50	2.7	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	35.6	< 5.0	< 1.0	< 0.050	2,190	< 0.010	< 30	< 50	-	41.4	< 30	< 5.0
	GL4-1-20151104	2015 11 04	< 10	49.3	765	114	85	6.4	192	< 0.50	2.6	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	35.1	< 5.0	< 1.0	< 0.050	2,000	< 0.010	< 30	< 50	-	41.2	< 30	< 5.0
	GL4-1-200814	2020 08 14	< 1.0	54.1	786	123	85.7	7.03	207	< 0.050	2.9	16.5	< 0.010	17.7	0.0079	0.66	0.0329	< 0.10	< 0.050	40.2	< 0.010	35.6	0.387	< 0.10	< 0.010	2,470	< 0.0040	< 0.050	< 0.20	< 0.20	45.9	< 0.20	< 1.0
	GL4-1-201016	2020 10 16	1.9	51.8	732	118	81	6.73	198	< 0.050	2.58	16	< 0.010	15.8	0.0244	< 0.10	0.036	0.11	< 0.050	37.8	< 0.010	33.6	0.356	< 0.10	< 0.010	2,380	< 0.0040	0.116	< 0.20	< 0.20	44	< 0.20	1.2
	GL4-1-210511	2021 05 11	< 1.0	52.3	568	118	77	7.57	202	< 0.050	2.93	14.9	< 0.010	20.9	0.0316	0.16	0.0701	0.14	< 0.050	38.8	< 0.010	30.6	0.327	< 0.10	< 0.010	2,210	< 0.0040	< 0.050	< 0.20	< 0.20	41.8	< 0.20	1.6
	GL4-1-211005	2021 10 05	< 1.0	57.1	588	119	75.7	7.1	205	< 0.050	2.33	15.7	0.02	47.7	0.022	0.14	0.037	0.86	< 0.050	36.5	< 0.010	30.1	0.31	< 0.10	< 0.010	2,400	< 0.0040	< 0.050	< 0.20	< 0.20	39.8	< 0.20	< 1.0
	GL4-1-220530	2022 05 30	1.6	48.5	586	117	75.5	6.41	195	<0.050	2.42	14.2	<0.010	11.4	<0.0140	0.12	0.045	0.13	<0.050	40.3	< 0.010	30	0.292	<0.10	<0.010	2,170	<0.0040	<0.050	<0.20	<0.20	40.1	<1.00	<1.0
	GL4-1-220927	2022 09 27	<1.0	55.3	687	116	72.7	6.66	196	<0.050	2.44	16.2	<0.010	12.4	<0.0100	0.17	0.0253	<0.10	<0.050	36.3	< 0.010	29.2	0.255	<0.10	<0.010	2420	<0.0040	<0.050	<0.20	<0.20	45.6	<1.00	<1.0
	GL4-1-230523	2023 05 23	3.2	54	515	127	68.5	7.34	214	<0.050	2.22	17.4	<0.010	14.4	<0.0220	<0.50	0.0547	0.32	<0.050	39.9	<0.010	27.8	0.335	<0.10	<0.010	2400	<0.0040	<0.050	<0.20	<0.20	44.4	<1.00	<1.0
	GL4-1-231025	2023 10 25	<1.0	52.5	682	117	72.4	6.21	201	<0.050	2.26	18.9	<0.010	14	<0.0080	<0.50	0.0302	0.14	<0.050	38.2	<0.010	27.4	0.285	0.11	<0.010	2430	<0.0040	<0.050	<0.20	<0.20	39.3	<1.00	<2.0
GL4-2	GL4-2-20091116	2009 11 16	< 50a	54.2	< 100	220	44	9	194	< 2	< 2	40	< 0.4	< 40	< 0.1	< 4	1.4	< 10a	< 1	30	-	80	< 10	< 6	< 0.10	3,060	< 0.1	< 1	< 10	-	101	2	10
	GL4-2-20100810	2010 08 10	< 50a	52	< 100	216	42	8	202	< 2	< 2	40	< 0.4	< 40	< 0.10	< 4	< 0.2	< 10a	< 1	30	-	72	< 10	< 6	< 0.1	3,140	< 0.1	< 1	< 100	-	103	2	< 10
	GL4-2-20110629	2011 06 29	5	51.5	62	213	170	7.8	183	< 0.2	2	35	< 0.04	6	0.12	6.8	0.97	3	< 0.1	30	-	72.6	4	9.6	< 0.01	3,980	< 0.01	< 0.1	< 10	-	86.8	3.4	4
	GL4-2-20120626	2012 06 26	< 50a	53	360	210	230	8	191	< 2	< 2	40	< 0.4	< 40	< 0.1	< 4	1.1	< 10a	< 1	20	-	61	< 10	< 6	< 0.10	3,030	< 0.1	< 1	< 100	-	69	2	< 10
	GL4-2-20121203	2012 12 03	< 50a	43	131	210	208	7.7	181	< 2	< 2.0	40	< 0.40	< 40	< 0.10	9.1	1.55	< 10a	< 1.0	20	-	69.2	< 10	< 6.0	< 0.10	3,020	< 0.10	< 1.0	< 10	-	84.8	3.3	< 10
	GL4-2-200814	2020 08 14	11.6	51.9	168	174	197	9.14	258	< 0.050	0.729	44.9	< 0.010	29.3	0.143	0.57	0.842	2.95	0.214	32.8	< 0.010	72.2	3.68	0.22	< 0.010	3,410	0.0071	< 0.050	0.79	0.26	78	1.3	4.1
	GL4-2-201030	2020 10 30	< 1.0	47.5	11	157	47.9	8.63	231	0.129	0.833	38.3	< 0.010	23.1	0.0457	< 0.10	0.211	0.9	< 0.050	29.6	< 0.010	98.3	2.1	0.86	< 0.010	2,910	< 0.0040	< 0.050	0.25	< 0.20	86.2	1.4	1.5
	GL4-2-210511	2021 05 11	< 1.0	49.3	5	169	21.5	8.96	247	< 0.050	0.747	36.4	< 0.010	30.1	0.0228	0.19	0.116	0.93	< 0.050	30.6	< 0.010	76.1	2.06	0.3	< 0.010	2,490	0.0057	< 0.050	< 0.20	< 0.20	73.6	0.99	1.4
	GL4-2-211005	2021 10 05	< 1.0	53.3	94.6	169	193	9.26	248	< 0.050	0.604	39.1	< 0.010	55.7	0.0292	0.19	0.674	0.63	< 0.050	28.2	< 0.010	81.8	2.3	0.12	< 0.010	2,600	0.0058	< 0.050	0.24	0.25	78.3	0.92	< 1.0
	GL4-2-220530	2022 05 30	1.2	41.7	6.3	161	19.6	7.86	225	<0.050	0.489	29.7	<0.010	19.2	<0.0340	0.15	0.0721	1.09	<0.050	29.4	< 0.010	74.3	1.52	0.14	<0.010	2400	0.0065	<0.050	<0.20	<0.20	69.6	<1.00	1.3
	GL4-2-220927	2022 09 27	<1.0	48.2	57.1	153	228	8.2	220	<0.050	0.55	36.8	<0.010	21.7	<0.0200	0.18	0.583	0.57	<0.050	28	< 0.010	76.5	1.88	0.11	<0.010	2670	<0.0040	<0.050	<0.20	0.26	83.1	<1.00	1.1
	GL4-2-230523	2023 05 23	1.2	46.8	6.8	160	31.9	8.56	231	<0.050	0.504	33.1	<0.010	19.4	<0.0420	<0.50	0.108	0.91	0.057	27.7	<0.010	74.4	1.38	0.19	<0.010	2540	0.0089	<0.050	<0.20	<0.20	74.7	<1.00	1.3
	GL4-2-231025	2023 10 25	<1.0	45.5	155	157	270	7.36	225	<0.050	0.644	36.8	<0.010	22	<0.0160	<0.50	0.926	1.35	0.082	28.2	<0.010	74.2	1.87	0.12	<0.010	2600	0.0057	<0.050	<0.20	0.3	65.2	<1.00	<2.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

			Dissolved Metals																															
Sample Location	Sample ID	Sample Date (yyyy mm dd)	Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL5-1	GL5-1-20091116	2009 11 16	< 50a	3.4	< 100	16.6	4	10.6	539	< 2	< 2	< 10	< 0.4	< 40	< 0.1	< 4	< 0.2	< 10a	< 1	580	-	7	< 10	< 6	< 0.10	1,050	< 0.1	< 1	< 10	-	< 4	< 1	< 10
	GL5-1-20100810	2010 08 10	71	13	840	20	34	9	604	< 2	< 2	10	< 0.4	40	< 0.1	< 4	< 0.2	< 10a	1	750	-	7	< 10	< 6	< 0.1	2,030	< 0.1	< 1	< 100	-	< 4	< 1	50
	GL5-2-20180528	2018 05 28	< 5.0	79.8	< 10	115	0.44	7.77	268	< 0.20	< 0.50	60.6	< 0.10	30.8	0.02	3.92	< 0.10	1.03	< 0.20	39.3	< 0.010	9.37	< 0.40	4.95	< 0.050	4,900	< 0.020	< 0.20	< 5.0	-	20	3.7	< 4.0
GL5-2	GL5-2-20091116	2009 11 16	132	68	180	105	12	7.6	128	< 2	< 2	30	< 0.4	< 40	< 0.1	< 4	0.2	< 10a	< 1	40	-	16	< 10	< 6	< 0.10	3,680	< 0.1	< 1	20	-	26	5	< 10
	GL30-1-20091116	Duplicate	< 50a	67.5	< 100	104	10	7.7	124	< 2	< 2	30	< 0.4	< 40	< 0.1	< 4	< 0.2	< 10a	< 1	40	-	17	< 10	< 6	< 0.10	3,590	< 0.1	< 1	< 10	-	25	4	< 10
	QA/QC RPD%		*	1	*	1	18	1	3	*	*	0	*	*	*	*	*	*	*	0	-	6	*	*	*	2	*	*	*	-	4	22	*
	GL5-2-20100810	2010 08 10	134	68	< 100	113	10	8	129	< 2	< 2	30	< 0.4	< 40	< 0.10	< 4	0.4	< 10a	< 1	40	-	15	< 10	< 6	< 0.1	3,750	< 0.1	< 1	< 100	-	27	4	< 10
	GL30-3-20100810	Duplicate	147	69	150	113	11	10	134	< 2	< 2	40	< 0.4	< 40	< 0.10	< 4	0.2	< 10a	< 1	40	-	14	< 10	< 6	< 0.1	3,870	< 0.1	< 1	< 100	-	28	5	10
	QA/QC RPD%		9	1	*	0	10	22	4	*	*	29	*	*	*	*	*	*	*	0	-	7	*	*	*	3	*	*	*	-	4	22	*
	GL5-2-20110704	2011 07 04	< 5	84.4	6	138	4	8.6	152	< 0.2	0.5	34	< 0.04	33	0.02	0.9	0.45	< 1a	< 0.1	45	-	17.1	1	1.8	< 0.01	4,300	< 0.01	< 0.1	< 10	-	24.3	7.4	< 1
	GL 5-2-20120627	2012 06 27	< 50a	78	100	126	< 10	8	150	< 2	< 2	30	< 0.4	< 40	< 0.1	7	< 0.2	< 10a	< 1	40	-	14	< 10	< 6	< 0.10	4,160	< 0.1	< 1	< 100	-	23	5	< 10
	DUP C-20120627	Duplicate	< 50a	79	140	129	< 10	7	158	< 2	< 2	40	< 0.4	< 40	< 0.1	4	< 0.2	< 10a	< 1	40	-	15	< 10	< 6	< 0.10	4,100	< 0.1	< 1	< 100	-	26	5	< 10
	QA/QC RPD%		*	1	33	2	*	13	5	*	*	29	*	*	*	55	*	*	*	0	-	7	*	*	*	1	*	*	*	-	12	0	*
	GL5-2-20121205	2012 12 05	52	72.3	97	116	< 10	7.7	145	< 2.0	< 2.0	30	< 0.40	50	< 0.10	5.1	< 0.20	< 10a	< 1	50	-	17.4	< 10	< 6.0	< 0.10	3,980	< 0.10	< 1.0	< 100	-	27.7	5.28	< 10
	GL5-2-20130626	2013 06 26	< 10a	80.9	< 30	127	10	8.9	163	< 0.50	< 1.0	35	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	18.6	< 5.0	< 1.0	< 0.050	3,770	< 0.20	< 30	< 50	-	28.1	< 30	< 5.0
	GL5-2-20131114	2013 11 14	< 10a	77.6	< 30	120	11	8.8	187	< 0.50	< 1.0	34	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	19.3	< 5.0	< 1.0	< 0.050	3,870	< 0.20	< 30	< 50	-	27.9	< 30	< 5.0
	GL5-2-20140603	2014 06 03	< 10a	73.7	< 30	114	< 10	8.1	174	< 0.50	< 1.0	37	< 5.0a	< 100	0.06	< 0.50	< 0.50	< 1.0a	< 1.0	51	< 0.20	19.2	< 5.0	< 1.0	< 0.050	3,660	< 0.20	< 30	< 50	-	26.7	< 30	< 5.0
	GL5-2-20141118	2014 11 18	< 10a	71.1	< 30	111	12	8.1	160	< 0.50	< 1.0	33	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	19.1	< 5.0	< 1.0	< 0.050	3,750	< 0.20	< 30	< 50	-	27.2	< 30	< 5.0
	DUP2-20141118	Duplicate	< 10a	70.2	< 30	112	12	8.2	161	< 0.50	< 1.0	33	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	17.4	< 5.0	< 1.0	< 0.050	3,730	< 0.20	< 30	< 50	-	24	< 30	< 5.0
	QA/QC RPD%		*	1	*	1	0	1	1	*	*	0	*	*	*	*	*	*	*	*	*	9	*	*	*	1	*	*	*	-	12	*	*
	GL5-2-20150608	2015 06 08	< 10	121	< 30	159	< 10	10.4	315	< 0.50	< 1.0	64	< 5.0a	< 100	< 0.050	1.7	< 0.50	< 1.0a	< 1.0	68	< 0.20	12.1	< 5.0	< 1.0	< 0.050	6,010	< 0.010	< 30	< 50	-	24.1	< 30	< 5.0
	GL5-2-20151103	2015 11 03	< 10	74.8	< 30	106	< 10	8.1	183	< 0.50	< 1.0	34	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	17.4	< 5.0	< 1.0	< 0.050	3,980	< 0.010	< 30	< 50	-	26.9	< 30	< 5.0
	GL5-2-20160526	2016 05 26	< 10	116	< 30	143	< 10	10	384	< 0.50	< 1.0	69	< 5.0a	< 100	2.39	4.26	< 0.50	< 1.0a	< 1.0	74	< 0.20	11.6	< 5.0	2.9	< 0.050	5,680	< 0.020	< 30	< 50	-	20.7	< 30	< 5.0
	GL5-2-20170525	2017 05 25	< 10	102	< 30	128	< 10	9.1	331	< 0.50	< 1.0	63	< 5.0a	< 100	< 0.050	3.64	< 0.50	< 1.0a	< 1.0	65	< 0.20	11.3	< 5.0	3.6	< 0.050	5,330	< 0.020	< 30	< 50	-	20.7	< 30	< 5.0
	DUP1-20170525	Duplicate	< 10	102	< 30	129	< 10	9.3	336	< 0.50	< 1.0	64	< 5.0a	< 100	< 0.050	3.59	< 0.50	< 1.0a	< 1.0	65	< 0.20	11.5	< 5.0	3.5	< 0.050	5,370	< 0.020	< 30	< 50	-	20.4	< 30	< 5.0
	QA/QC RPD%		*	0	*	1	*	2	1	*	*	2	*	*	*	1	*	*	*	0	*	2	*	3	*	1	*	*	*	-	1	*	*
	GL5-2-180528	2018 05 28	< 5.0	79.8	< 10	115	0.44	7.77	268	< 0.20	< 0.50	60.6	< 0.10	30.8	0.02	3.92	< 0.10	1.03	< 0.20	39.3	< 0.010	9.37	< 0.40	4.95	< 0.050	4,900	< 0.020	< 0.20	< 5.0	< 1.0	20	3.7	< 4.0
	GL5-2-190527	2019 05 27	5.9	87.3	< 10	102	0.75	7.33	249	< 0.20	< 0.50	66.8	< 0.10	38.8	0.057	2.09	< 0.10	3.18	< 0.20	50.3	< 0.010	12.2	0.52	6.8	< 0.050	5,240	< 0.020	< 0.20	< 5.0	< 1.0	23.1	3.6	< 4.0
	GL5-2-200611	2020 06 11	4.2	65.3	< 2.0	82.1	0.187	6.98	195	< 0.050	0.339	48.2	< 0.010	24.9	0.023	0.37	0.0245	0.47	< 0.050	36.8	< 0.010	12.5	0.325	0.36	< 0.010	3,720	< 0.0040	< 0.050	< 0.20	< 0.20	28.8	3.95	< 1.0
	GL5-2-210603	2021 06 03	< 1.0	103	< 2.0	110	0.061	8.27	258	< 0.050	0.339	59.8	< 0.010	42.2	0.0228	1.42	0.029	0.99	< 0.050	54.8	< 0.010	11.9	0.31	1.58	< 0.010	4,970	< 0.0040	< 0.050	< 0.20	< 0.20	31.1	3.56	< 1.0
	GL5-2-220602	2022 06 02	1.2	59.3	<2.0	89	0.23	6.57	189	<0.050	0.276	45	<0.010	24.8	0.0183	0.32	0.0178	0.61	<0.050	41.7	< 0.010	13	0.232	0.38	<0.010	3,870	<0.0040	<0.050	<0.20	<0.20	28.5	3.65	<1.0
GL5-3	GL5-3-20091116	2009 11 16	74	108	150	79.5	9	5.8	125	< 2	< 2	120	< 0.4	< 40	< 0.1	< 4	0.5	< 10a	< 1	30	-	8	10	< 6	< 0.10	5,190	< 0.1	< 1	< 10	-	19	2	< 10
	GL5-3-20100810	2010 08 10	61	105	< 100	81	97	6	116	< 2	< 2	120	< 0.4	< 40	< 0.10	< 4	0.4	< 10a	< 1	30	-	6	< 10	< 6	< 0.1	5,320	< 0.1	< 1	< 100	-	20	2	< 10
GL6-1 (2011)	GL6-1-19990505	1999 05 05	60	226	228	812	740	182	6,740	25	50	37	< 0.5	470	< 0.5a	13.8	5.3	< 1a	< 2	30	-	45	6	< 4	< 1a	4,890	< 4a	17	26.2	-	-	< 0.1	< 0.6
	GL6-1-19990928	1999 09 28	< 8a	226	110	829	675	194	7,270	13	20	21.3	< 0.5	230	< 0.5a	3.5	4.3	< 1a	4	35	-	20	6	< 4	< 1a	4,940	< 4a	11	2.8	-	-	1	< 0.6
	GL6-1-19991202	1999 12 02	26	223	58	738	580	222	7,470	36	40	28.3	< 0.5	377	< 0.5a	8.7	4.3	< 1a	2	42	-	25	8	< 4	< 1a	5,110	< 4a	8	13	-	-	4	2.9
	GL6-1-20080529	2008 05 29	80	172	120	485	567	225	6,980	10	65	90	< 1	1,410	< 0.1a	47	6	30	2	40	< 0.1	30	20	22	0.1	5,010	< 0.5	20	500	-	29	13	20
	GL6-1-20081104	2008 11 04	60	207	< 100	594	470	306	5,940	30	131	120	< 1	2,100	< 0.10a	167	11	20	< 1	40	< 0.1	80	45	10	0.22	4,650	< 0.5	40	335	-	33	258	20
	GL30-2-20081104	Duplicate	130	220	< 500a	656	660	290	6,480	28	125	120	< 1	1,990	< 0.10a	171	11	20	< 1	40	-	50	55	7	0.27	4,160	< 0.5	40	387	-	31	285	10
	QA/QC RPD%		74	6	*	10	34	5	9	7	5	0	*	5	*	2	0	0	*	0	-	46	20	35	20	11	*	0	14	-	6	10	67
	GL 6-1-20091110	2009 11 10	< 50a	249	< 100	706	1,130	200	6,270	7	55	30	< 0.4	630	< 0.1	20	2.5	< 10a	< 1	40	-	31	20	17	< 0.10	6,880	< 0.1	10	< 10	-	34	7	< 10
	GL6-1-20110704	2011 07 04	123	107	118	232	218	540	2,270	2.3	35.1	329	< 0.04	3,430	0.01	418	26.7	3	< 0.1	46	-	3.4	42	29.5	0.02	3,340	< 0.01	2.9	59	-	1.3	116	3
	GL 6-1 (2011)-20120626	2012 06 26	214	127	2,890	290	500	500	3,030	5	12	290	< 0.4	2,850	< 0.1	53	26.1	20	< 1	170	-	< 1	40	11	< 0.10	3,480	< 0.1	8	110	-	53	15	< 10
	GL6-1 (2011)-20130627	2013 06 27	107	80.7	1,320	243	293	504	2,600	1.2	10.3	356	< 25a	3,090	< 0.50a	24.3	28.8	< 5.0a	< 1.0	53	< 0.20	2.9	36	< 10	< 0.10	3,690	< 1.0	< 150	77	-	9.94	< 150a	< 25
	GL6-1-20131114	2013 11 14	85	100	1,380	339	495	465	3,450	< 2.0	8.4	337	< 25a	2,810	< 1.0a	23	23	< 10a	< 1.0	54	< 0.20	6.2	30	< 20	< 0.20	4,110	< 2.0	< 150	86	-	87.5	< 150a	< 25
	GL6-1 (2011)-20140609	2014 06 09	86	79.4	640	268	299	410	2,750	1.5	6.9	309	< 25a	2,600	< 0.50a	19.9	19.4	< 5.0a	< 1.0	54	< 0.20	2.3	27.8	< 10	< 0.10	3,740	< 1.0	< 150	56	-	12.1	< 150a	< 25
	GL6-1 (2011)-20141127	2014 11 27	< 60a	76.2	1,240	337	319	413	3,560	< 2.0	4.7	290	< 50a	2,600	< 1.0a	18	10.1	< 10a	< 1.0	< 100	< 0.20	1.9	23	< 20	< 0.20	4,920	< 2.0	< 300	< 100	-	15.1	< 300a	< 50
	GL6-1 (2011)-20150615	2015 06 15	104	74.2	242	206	243	382	2,250	< 1.0	6.6	312	< 15a	2,460	< 0.050	22	27.3	< 2.0a	< 1.0	< 50	< 0.20	2	28.7	< 1.0	< 0.10	3,410	< 0.10	< 90	51	-	3.43	< 90	< 15
	GL6-1 (2011)-20170530	2017 05 30	124	136	374	223	334	498	2,110	< 1.0	5.8	449	< 15a	3,110	< 0.050	22.3	30.2	< 2.0a	< 1.0	< 50	< 0.20	1.4	35.1	1.6	< 0.10	3,670	< 0.10	< 90	< 50	-	0.92	< 90	< 15
	GL6-1(2011)-20121205	2012 12 05	700	143	561	394	690	510	4,060	< 20.0	< 20.0	200	< 4.0a	3,400	< 1.00a	61.9	< 2.0	< 100a	< 10	< 100	-	37.5	< 100	< 60a	< 1.00	3,770	< 1.00	< 10	< 1,000	-	257	23.5	< 100
	GL6-1-180604	2018 06 04	78.7	183	3,150	351	618	476	2,680	0.91	4.95	376	< 0.10	2,660	< 0.010	15.4	25.7	0.47	< 0.20	61	< 0.010	5.86	23.6	0.92	< 0.050	3,880	< 0.020	4.94	18.1	2.4	122	4.2	< 4.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL6-1 (2011)	GL6-1 (2011)-190603	2019 06 03	86.8	190	507	192	412	421	1,490	1.1	5.96	321	< 0.10	2,660	< 0.010	16.7	21.7	11.9	< 0.20	41.5	< 0.010	1.44	19.3	0.5	< 0.050	3,160	< 0.020	4.82	11.2	1.9	19.2	3.1	< 4.0
	DUP3-190603	Duplicate	87.1	191	467	185	402	427	1,420	1.09	5.93	320	< 0.10	2,710	< 0.010	16.8	21.6	< 0.40a	< 0.20	39.3	< 0.010	1.27	19.1	0.6	< 0.050	3,140	< 0.020	4.8	11.3	1.9	11.6	3.1	< 4.0
	QA/QC RPD%		0	1	8	4	2	1	5	1	1	0	*	2	*	1	0	*	*	5	*	13	1	*	*	1	*	0	1	*	49	0	*
	GL6-1-200611	2020 06 11	79.8	151	191	142	295	382	1,200	1.7	6.48	367	0.025	2,180	0.0081	18.1	22.2	0.88	0.151	28.1	< 0.010	1.31	23.7	0.86	< 0.010	2,850	< 0.0040	4.82	15.7	2.04	1.95	3.61	1.8
	GL6-1-210610	2021 06 10	79	229	1,180	160	439	356	988	0.81	4.88	398	0.029	3,510	0.0069	14.2	20.3	0.5	0.237	41.4	< 0.010	1.02	17	1.22	< 0.010	2,850	< 0.0040	3.19	11.2	1.67	0.228	2.69	2.3
GL7-1	GL7-1-20110704	2011 07 04	< 5	176	5,590	182	1,060	21.4	492	< 0.2	36.4	15	2.2	148	0.02	62.9	1.75	1	0.4	266	-	56.3	9	19.8	< 0.01	4,680	< 0.01	< 0.1	< 10	-	80.8	17.8	11
	GL7-1-20120625	2012 06 25	< 50a	164	12,600	180	1,260	20	509	< 2	13	10	1.6	160	< 0.1	7	1.9	< 10a	< 1	260	-	42	< 10	< 6	< 0.10	4,580	< 0.1	< 1	< 100	-	74	2	20
	GL7-1-20121205	2012 12 05	54	159	5,360	176	971	18.7	496	< 2.0	22.5	20	2.64	160	< 0.10	12.2	4.81	< 10a	< 1.0	300	-	60.2	< 10	< 6.0	< 0.10	4,440	< 0.10	< 1	< 100	-	85.6	3.27	10
	GL7-1-20130626	2013 06 26	< 10a	162	4,850	172	1,350	21	526	< 0.50	19.8	< 20	< 5.0a	120	< 0.10	< 1.0	1.88	< 1.0a	3.5	292	< 0.20	56.7	7.5	< 2.0	< 0.050	3,860	< 0.20	< 30	< 50	-	79.4	< 30	33.3
	GL7-1-20131114	2013 11 14	< 10a	160	5,290	179	922	20	509	< 0.50	22.3	< 20	< 5.0a	110	< 0.10	< 1.0	1.38	< 1.0a	< 1.0	263	< 0.20	60.6	7	< 2.0	< 0.050	4,150	< 0.20	< 30	< 50	-	79.5	< 30	89.8
	DUP1-20131114	Duplicate	< 10a	159	5,200	179	918	19.8	503	< 0.50	22.6	< 20	< 5.0a	120	< 0.10	< 1.0	1.4	< 1.0a	< 1.0	260	< 0.20	61.3	6.9	< 2.0	< 0.050	4,080	< 0.20	< 30	< 50	-	79.1	< 30	86.7
	QA/QC RPD%		*	1	2	0	0	1	1	*	1	*	*	9	*	*	1	*	*	1	*	1	1	*	*	2	*	*	*	-	1	*	4
	GL7-1-20140604	2014 06 04	< 10a	164	7,030	190	1,130	20.6	502	< 0.50	21.7	< 20	< 5.0a	120	< 0.10	< 1.0	1.83	< 1.0a	< 1.0	342	< 0.20	38.6	7.6	< 2.0	< 0.050	4,190	< 0.20	< 30	< 50	-	62.4	< 30	55.8
	GL7-1-20141125	2014 11 25	< 10a	144	5,600	183	861	18.8	471	< 0.50	22.8	< 20	< 5.0a	110	< 0.10	< 1.0	1.44	< 1.0a	< 1.0	273	< 0.20	50.4	6.6	< 2.0	< 0.050	4,030	< 0.20	< 30	< 50	-	69.8	< 30	36.1
	GL7-1-20150609	2015 06 09	< 10	151	7,710	173	963	19.5	478	< 0.50	26.7	< 20	< 5.0a	110	< 0.050	< 0.50	1.72	< 1.0a	1	284	< 0.20	40.7	7.3	< 1.0	< 0.050	4,050	< 0.020	< 30	< 50	-	65.4	< 30	61.6
	GL7-1-20151109	2015 11 09	< 10	155	3,030	169	904	19.7	464	< 0.50	13	< 20	< 5.0a	< 100	< 0.050	< 0.50	1.33	< 1.0a	< 1.0	291	< 0.20	44.6	7.3	< 1.0	< 0.050	3,840	< 0.020	< 30	< 50	-	65.1	< 30	45.4
GL8-1	GL8-1-20080529	2008 05 29	70	93	200	144	625	15.2	832	< 2	6	10	< 1	40	0.7	< 5	< 1	< 10a	2	150	-	40	< 5	< 2	< 0.1	12,300	< 0.5	< 10	52	-	12	3	10
	GL8-1-20081104	2008 11 04	210	86.9	180	139	494	14.9	746	< 2	5	20	< 1	70	0.1	< 5	1	< 10a	< 1	160	-	40	6	< 2	< 0.1	11,900	< 0.5	< 10	43	-	10	2	10
	GL 8-1-20091110	2009 11 10	86	20.4	< 100	2.2	421	2.4	19.6	< 2	8	10	< 0.4	40	0.32	< 4	0.8	< 10a	< 1	140	-	40	< 10	< 6	< 0.10	10,800	< 0.1	< 1	92	-	7	< 1	10
	GL8-1-20100810	2010 08 10	158	74	120	109	536	14	622	< 2	3	10	< 0.4	40	< 0.1	< 4	0.4	< 10a	< 1	140	-	44	< 10	< 6	< 0.1	11,200	< 0.1	< 1	< 100	-	11	< 1	< 10
GL8-2	GL8-2-20080529	2008 05 29	< 50a	63.5	660	316	525	32.2	3,100	< 2	23	20	< 1	130	0.4	9	3	10	2	180	-	160	27	14	< 0.1	7,890	< 0.5	< 10	127	-	172	25	10
	GL30-1-20080529	Duplicate	< 50a	63.4	620	316	518	32.1	3,120	< 2	23	20	< 1	130	0.4	10	2	10	2	180	-	160	27	15	< 0.1	7,680	< 0.5	< 10	122	-	166	22	< 10
	QA/QC RPD%		*	0	6	0	1	0	1	*	0	0	*	0	0	11	40	0	0	0	-	0	0	7	*	3	*	*	4	-	4	13	*
	GL8-2-20081104	2008 11 04	< 50a	40.6	160	309	291	34.6	3,410	< 2	23	30	< 1	200	< 0.10a	63	14	10	< 1	180	-	280	34	9	0.19	7,210	< 0.5	< 10	98	-	152	152	< 10
	GL 8-2-20091110	2009 11 10	< 50a	32.5	190	270	280	34	150	< 2	16	20	< 0.4	170	0.39	26	1.2	< 10a	< 1	140	-	294	30	< 6	< 0.10	5,390	< 0.1	< 1	< 10	-	119	26	110
	GL8-2-20100810	2010 08 10	< 50a	33	340	205	86	30	2,340	< 2	13	20	< 0.4	160	< 0.1	5	0.8	20	< 1	120	-	227	20	10	< 0.1	5,360	< 0.1	< 1	< 100	-	131	28	< 10
	GL8-2-20110627	2011 06 27	< 50a	40.9	322	228	406	23	2,320	< 2	7	20	< 0.4	140	0.51	6	2	< 10a	< 1	140	-	191	20	< 6	< 0.1	5,310	< 0.1	< 1	< 10	-	111	10	< 10
	GL8-2-20111217	2011 12 17	< 50a	26.4	74	142	110	19.8	2,120	< 2	13	20	< 0.4	150	0.58	18	0.4	20	< 1	130	-	300	20	< 6	< 0.10	4,460	0.43	< 1	< 10	-	134	20	< 10
	GL 8-2-20120626	2012 06 26	< 50a	42	2,420	169	400	38	1,330	< 2	6	30	< 0.4	200	0.27	10	1	10	< 1	70	-	104	20	7	0.71	3,930	< 0.1	< 1	< 100	-	74	18	< 10
	DUP B-20120626	Duplicate	< 50a	41	2,540	169	390	38	1,340	< 2	5	30	< 0.4	180	0.23	10	0.9	< 10a	< 1	70	-	94	20	< 6	< 0.1	3,900	< 0.1	< 1	< 100	-	73	16	< 10
	QA/QC RPD%		*	2	5	0	3	0	1	*	18	0	*	11	16	0	11	*	*	0	-	10	0	*	*	1	*	*	*	-	1	12	*
	GL8-2-20121204	2012 12 04	< 50a	22.4	86	128	96	19.6	2,170	< 2.0	8.3	30	< 0.40	150	0.18	22.5	2.37	< 10a	< 1.0	100	-	228	20	8.2	< 0.10	4,870	< 0.10	< 1.0	19	-	126	22	< 10
	GL8-2-20130626	2013 06 26	< 30a	76.5	< 90	240	613	25.7	2,160	< 1.0	2.3	< 30	< 15a	< 300	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	159	< 0.20	146	13.2	< 10	< 0.10	5,800	< 1.0	< 90	< 50	-	147	< 90	< 15
	GL8-2-20131113	2013 11 13	< 30a	36.4	150	172	198	24	2,150	< 1.0	4.2	< 50	< 25a	< 500	< 0.50a	< 5.0	< 1.0	5.1	< 1.0	121	< 0.20	225	15.4	< 10	< 0.10	4,150	< 1.0	< 150	< 50	-	125	< 150a	< 25
	DUP2-20131113	Duplicate	< 30a	36.9	< 150	174	200	24	2,190	< 1.0	4.6	< 50	< 25a	< 500	< 0.50a	< 5.0	< 1.0	5.8	< 1.0	125	< 0.20	229	16.4	< 10	< 0.10	4,250	< 1.0	< 150	< 50	-	137	< 150a	< 25
	QA/QC RPD%		*	1	*	1	1	0	2	*	9	*	*	*	*	*	*	13	*	3	*	2	6	*	*	2	*	*	*	-	9	*	*
	GL8-2-20140605	2014 06 05	< 30a	41.7	< 150	161	419	21	2,050	< 1.0	2.2	< 50	< 25a	< 500	< 0.50a	< 5.0	< 1.0	6	< 1.0	109	< 0.20	132	20.4	< 10	< 0.10	4,280	< 1.0	< 150	< 50	-	92.2	< 150a	< 25
	GL8-2-20141118	2014 11 18	< 30a	25.5	< 90	136	119	22.4	2,070	< 1.0	4.6	< 30	< 15a	< 300	< 0.50a	< 5.0	< 1.0	6.4	< 1.0	101	< 0.20	211	13.7	< 10	< 0.10	3,390	< 1.0	< 90	< 50	-	107	< 90	< 15
	GL8-2-20150610	2015 06 10	< 10	35.8	< 150	182	309	22	2,030	< 1.0	2.5	< 50	< 25a	< 500	0.124	< 1.0	< 1.0	6.6	< 1.0	106	< 0.20	121	16.3	< 1.0	< 0.10	4,310	< 0.10	< 150	< 50	-	87.9	< 150a	< 25
	DUP 2-20150610	Duplicate	< 10	34.8	< 150	181	305	21	1,950	< 1.0	2.4	< 50	< 25a	< 500	0.135	< 1.0	< 1.0	7.2	< 1.0	101	< 0.20	125	16.3	1.1	< 0.10	4,160	< 0.10	< 150	< 50	-	93.5	< 150a	< 25
	QA/QC RPD%		*	3	*	1	1	5	4	*	4	*	*	*	8	*	*	9	*	5	*	3	0	*	*	4	*	*	*	-	6	*	*
	GL8-2-20151103	2015 11 03	< 10	26.3	< 90	150	184	23.1	2,230	< 1.0	3.1	< 30	< 15a	< 300	< 0.050	< 1.0	< 1.0	6.8	< 1.0	98	< 0.20	170	14.4	1.3	< 0.10	3,530	< 0.10	< 90	< 50	-	92.2	< 90	< 15
GL9-1	GL 9-1-20091111	2009 11 11	< 50a	57	< 100	89.2	203	14.2	370	< 2	6	10	< 0.4	< 40	< 0.1	7	< 0.2	< 10a	< 1	110	-	7	< 10	< 6	< 0.10	3,760	< 0.1	< 1	< 10	-	6	2	40
	GL 9-1-20120627	2012 06 27	138	26	440	87	40	13	336	< 2	< 2	10	< 0.4	40	< 0.1	5	< 0.2	< 10a	< 1	120	-	< 1	< 10	< 6	< 0.10	970	< 0.1	18	< 100	-	< 4	1	< 10
	GL9-1-20100810	2010 08 10	< 50a	101	7,680	88	366	15	334	< 2	2	20	< 0.4	40	< 0.10	< 4	< 0.2	< 10a	< 1	160	-	2	< 10	< 6	< 0.1	4,830	< 0.1	< 1	< 100	-	5	< 1	150
	GL9-1-20110628	2011 06 28	< 5	20.4	657	78.6	48	11.4	286	< 0.2	0.9	4	< 0.04	38	< 0.01	1.1	0.12	< 1a	< 0.1	138	-	0.9	< 1	< 0.6	< 0.01	820	< 0.01	< 0.1	< 10	-	0.7	0.4	3
	GL9-1-20121204	2012 12 04	56	22.8	1,080	81.3	66	12	319	< 2.0	< 2.0	< 10	< 0.40	50	< 0.10	6.8	8.59	< 10a	< 1	120	-	< 1.0	< 10	< 6.0	< 0.10	854	< 0.10	< 1.0	< 10	-	< 4.0	1.91	< 10

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

			Dissolved Metals																														
Sample Location	Sample ID	Sample Date (yyyy mm dd)	Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL9-1 (Cont'd)	GL9-1-20130626	2013 06 26	< 10a	19.7	1,380	89.5	70	14.1	346	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	129	< 0.20	< 1.0	< 5.0	< 2.0	< 0.050	730	< 0.20	< 30	< 50	-	0.65	< 30	< 5.0
	GL9-1-20131114	2013 11 14	< 10a	12.5	471	91.9	32	14.1	353	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	127	< 0.20	< 1.0	< 5.0	< 2.0	< 0.050	464	< 0.20	< 30	< 50	-	0.31	< 30	< 5.0
	GL9-1-20140604	2014 06 04	< 10a	9.15	191	85.3	25	13.9	348	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	117	< 0.20	< 1.0	< 5.0	< 2.0	< 0.050	356	< 0.20	< 30	< 50	-	0.76	< 30	< 5.0
	DUP1-20140604	Duplicate	< 10a	9.21	184	83.4	24	13.5	342	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	117	< 0.20	< 1.0	< 5.0	< 2.0	< 0.050	356	< 0.20	< 30	< 50	-	0.25	< 30	< 5.0
	QA/QC RPD%		*	1	4	2	4	3	2	*	*	*	*	*	*	*	*	*	*	0	*	*	*	*	*	0	*	*	*	-	101	*	*
	GL9-1-20141125	2014 11 25	< 10a	12.8	60	90.3	15	13.8	348	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	126	< 0.20	< 1.0	< 5.0	< 2.0	< 0.050	572	< 0.20	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL9-1-20150609	2015 06 09	< 10	7.76	80	75.9	19	12.9	332	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	101	< 0.20	1.2	< 5.0	< 1.0	< 0.050	316	< 0.020	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL9-1-20151109	2015 11 09	< 10	8.97	103	73.7	25	12.9	313	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	98	< 0.20	1.7	< 5.0	< 1.0	< 0.050	372	< 0.020	< 30	< 50	-	0.41	< 30	< 5.0
	GL9-1-20170530	2017 05 30	< 10	9.1	127	82.7	27	13.7	359	< 0.50	< 1.0	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	112	< 0.20	2	< 5.0	< 1.0	< 0.050	357	< 0.020	< 30	< 50	-	0.3	< 30	< 5.0
	GL9-1-180604	2018 06 04	< 5.0	49.8	253	86.3	104	13.8	340	< 0.20	0.8	7.7	< 0.10	44.3	< 0.010	< 0.50	< 0.10	< 0.40a	< 0.20	114	< 0.010	2.04	< 0.40	< 0.50	< 0.050	2,090	< 0.020	< 0.20	< 5.0	< 1.0	1.38	< 1.0	17.6
	GL9-1-190530	2019 05 30	9	28.2	54	81.8	20.5	13.4	336	< 0.20	< 0.50	7.8	< 0.10	38.8	< 0.010	0.77	< 0.10	< 0.40a	< 0.20	130	< 0.010	0.37	< 0.40	< 0.50	< 0.050	1,430	< 0.020	< 0.20	< 5.0	< 1.0	0.225	< 1.0	< 4.0
	GL9-1-200611	2020 06 11	< 1.0	100	19,300	80.9	411	14.8	320	< 0.050	0.238	28.6	0.07	36.3	0.0022	0.11	0.116	< 0.10	< 0.050	126	< 0.010	0.743	0.166	< 0.10	< 0.010	5,030	< 0.0040	< 0.050	< 0.20	< 0.20	1.96	0.23	< 1.0
	DUPC-200611	Duplicate	< 1.0	98.1	18,800	78.8	400	14.4	313	< 0.050	0.187	27.9	0.068	34.8	0.0131	0.12	0.12	< 0.10	< 0.050	128	< 0.010	0.726	0.152	< 0.10	< 0.010	5,110	< 0.0040	< 0.050	< 0.20	< 0.20	1.97	0.21	1.2
	QA/QC RPD%		*	2	3	3	3	3	2	*	*	2	3	4	*	*	3	*	*	2	*	2	*	*	*	2	*	*	*	*	1	*	*
	GL9-1-210611	2021 06 11	1	128	814	103	303	17.7	418	< 0.050	0.16	27.3	0.25	51.1	< 0.0020	< 0.10	0.0096	< 0.10	< 0.050	219	< 0.010	0.621	0.063	< 0.10	< 0.010	5,350	< 0.0040	< 0.050	0.28	< 0.20	2.63	< 0.20	< 1.0
GL9-2	GL9-2-20080529	2008 05 29	< 50a	294	< 10	1,760	313	84.2	9,840	< 2	17	< 10	< 1	< 20	0.3	< 5	4	50	2	90	-	80	< 5	11	< 0.10	11,200	< 0.5	< 10	814	-	987	4	30
	GL9-2-20081104	2008 11 04	60	290	1,480	1,740	289	79.3	9,950	< 2	21	< 10	< 1	< 20	< 0.1a	10	2	30	< 1	80	-	90	23	5	< 0.1	11,000	< 0.5	< 10	603	-	950	4	40
	GL 9-2-20091111	2009 11 11	659	79.5	2,670	2,200	473	110	12,400	< 2	16	< 10	< 0.4	< 40	0.14	4	2.3	< 10a	< 1	80	-	88	20	8	< 0.10	12,000	< 0.1	< 1	< 10	-	1,100	2	30
	GL 9-2-20120627	2012 06 27	960	408	140	1,800	370	91	9,800	< 2	6	10	< 0.4	< 40	0.2	6	1.2	20	< 1	60	-	100	10	20	< 0.10	12,200	< 0.1	< 1	< 100	-	542	2	10
	GL9-2-20100810	2010 08 10	144	345	2,170	1,490	500	104	9,940	< 2	18	< 10	< 0.4	< 40	< 0.1	4	2.8	10	< 1	60	-	93	20	11	< 0.1	12,000	< 0.1	< 1	< 100	-	874	3	20
	GL9-2-20110628	2011 06 28	< 5	398	296	1,780	296	85	9,780	< 0.2	4.1	12	< 0.04	< 4	0.3	1.3	2.57	18	< 0.1	50	-	101	14	24.4	< 0.01	11,300	0.01	< 0.1	< 10	-	794	1.2	13
	GL9-2-20121204	2012 12 04	< 50a	394	365	1,800	407	66.3	10,400	< 2.0	6.2	10	< 0.40	< 40	0.34	9	2.95	10	< 1.0	80	-	108	10	18.5	< 0.10	12,600	< 0.10	< 1.0	< 100	-	621	3.37	< 10
	Dup-B-20121204	Duplicate	< 50a	399	318	1,700	416	64.6	9,660	< 2.0	5.3	10	< 0.40	< 40	0.36	8.3	1.16	20	< 1.0	60	-	108	10	15.6	< 0.10	12,300	< 0.10	< 1.0	< 100	-	644	2.78	10
	QA/QC RPD%		*	1	14	6	2	3	7	*	16	0	*	*	6	8	87	67	*	29	-	0	0	17	*	2	*	*	*	-	4	19	*
	GL9-2-20130626	2013 06 26	< 150a	378	860	1,630	440	79	9,650	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	104	< 25	< 50a	< 0.50	9,840	< 5.0a	< 600	< 200	-	578	< 600a	< 100
	DUP2-20130626	Duplicate	< 150a	387	880	1,680	450	81	9,960	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	93.8	< 25	< 50a	< 0.50	10,100	< 5.0a	< 600	< 200	-	507	< 600a	< 100
	QA/QC RPD%		*	2	2	3	2	2	3	*	*	*	*	*	*	*	*	*	*	*	*	10	*	*	*	3	*	*	*	-	13	*	*
	GL9-2-20131113	2013 11 13	< 150a	406	980	1,680	590	82	9,970	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	130	< 0.20	99.5	< 25	< 50a	< 0.50	10,000	< 5.0a	< 300	< 100	-	598	< 300a	< 50
	GL9-2-20140605	2014 06 05	< 150a	412	< 600a	1,720	380	84	10,300	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	89.6	< 25	< 50a	< 0.50	11,200	< 5.0a	< 600	< 200	-	536	< 600a	< 100
	GL9-2-20141125	2014 11 25	< 150a	396	450	1,630	381	80	9,660	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	4.2	< 100	< 0.20	92.1	< 25	< 50a	< 0.50	10,200	< 5.0a	< 300	< 100	-	478	< 300a	< 50
	GL9-2-20150609	2015 06 09	< 50	404	570	1,610	134	75	9,660	< 5.0	< 5.0	< 100	< 50a	< 1,000a	1.07	< 5.0	< 5.0	< 10a	< 2.5	< 100	< 0.20	96.7	< 25	< 2.5	< 0.50	10,300	< 0.50	< 300	< 100	-	483	< 300a	< 50
	GL9-2-20151104	2015 11 04	< 50	380	480	1,560	211	74	9,170	< 5.0	< 5.0	< 100	< 50a	< 1,000a	1.05	< 5.0	< 5.0	< 10a	< 2.5	< 100	< 0.20	98.7	< 25	< 2.5	< 0.50	9,750	< 0.50	< 300	< 100	-	496	< 300a	< 50
GL9-3	GL9-3-20080529	2008 05 29	60	280	40	2,440	66	108	12,600	< 2	27	10	< 1	< 20	0.3	6	< 1	60	2	130	-	70	< 5	19	< 0.10	13,100	< 0.5	< 10	1,040	-	1,760	6	50
	GL9-3-20081104	2008 11 04	< 50a	269	20	2,530	116	98.9	12,800	< 2	23	20	< 1	< 20	< 0.10a	10	2	40	< 1	110	-	80	30	15	< 0.1	11,200	0.5	< 10	809	-	1,370	3	60
	GL 9-3-20091111	2009 11 11	723	87	380	< 0.1	378	148	14,000	< 2	19	20	< 0.4	< 40	0.35	9	2.2	10	< 1	120	-	96	20	10	< 0.10	11,700	0.52	< 1	< 10	-	1,480	6	20
	GL9-3-20100810	2010 08 10	80	344	580	2,330	377	130	12,700	< 2	18	10	< 0.4	< 40	< 0.1	5	1.8	20	< 1	90	-	82	20	20	< 0.1	13,400	0.24	< 1	< 100	-	1,550	4	20
	GL9-3-20110628	2011 06 28	< 5	393	< 5	2,760	68	103	12,900	< 0.2	2.9	12	< 0.04	< 4	0.21	2.1	1.41	22	< 0.1	57	-	75.1	11	32.1	< 0.01	12,900	0.34	< 0.1	< 10	-	1,510	1.8	15
	GL9-A-20110628	Duplicate	< 5	407	5	2,520	52	108	11,800	< 0.2	1.5	12	< 0.04	< 4	0.23	2.3	1.65	27	< 0.1	60	-	77.3	12	42.2	0.02	12,700	0.32	< 0.1	< 10	-	1,440	2.1	19
	QA/QC RPD%		*	4	*	9	27	5	9	*	64	0	*	*	9	*	16	20	*	5	-	3	9	27	*	2	6	*	*	-	5	15	24
	GL 9-3-20120627	2012 06 27	< 50a	400	150	2,500	110	114	11,900	< 2	5	10	< 0.4	< 40	0.1	11	1.1	20	< 1	80	-	74	10	16	< 0.1	12,800	0.24	< 1	< 100	-	1,190	5	20
	GL9-3-20121204	2012 12 04	< 50a	370	< 50	2,300	35	97.2	12,000	< 2	7	< 10	< 0.40	< 40	< 0.10	11.7	2.91	20	< 1	90	-	86.2	10	22.1	< 0.10	13,700	0.47	< 1.0	< 100	-	1,680	5.11	10
	GL9-3-20130626	2013 06 26	< 150a	382	< 600a	2,280	< 100	110	11,500	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	72	< 25	< 50a	< 0.50	10,800	< 5.0a	< 600	< 200	-	1,450	< 600a	< 100
	GL9-3-20131113	2013 11 13	< 150a	383	< 600a	2,310	110	116	11,300	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	78.7	< 25	< 50a	< 0.50	11,000	< 5.0a	< 600	< 200	-	1,470	< 600a	< 100
	GL9-3-20140605	2014 06 05	< 150a	398	< 600a	2,380	110	114	11,800	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	75.7	< 25	< 50a	< 0.50	11,700	< 5.0a	< 600	< 200	-	1,510	< 600a	< 100
	GL9-3-20141125	2014 11 25	< 150a	390	< 600a	2,300	< 100	121	11,600	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	74.4	< 25	< 50a	< 0.50	11,400	< 5.0a	< 600	< 200	-	1,400	< 600a	< 100
	DUP4-20141124	Duplicate	< 150a	395	< 600a	2,300	< 100	123	11,700	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 200	< 0.20	75.5	< 25	< 50a	< 0.50	11,500	< 5.0a	< 600	< 200	-	1,410	< 600a	< 100
	QA/QC RPD%		*	1	*	0	*	2	1	*	*	*	*	*	*	*	*	*	*	*	*	1	*	*	*	1	*	*	*	-	1	*	*
	GL9-3-20150609	2015 06 09	< 50	392	< 600a	2,280	< 100	113	11,300	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 0.25	< 5.0	< 5.0	< 10a	< 2.5	< 200	< 0.20	75.4	< 25	< 2.5	< 0.50	11,400	< 0.50	< 600	< 200	-	1,380	< 600a	< 100
	GL9-3-20151109	2015 11 09	< 50	369	< 600a	2,140	< 100	112	10,800	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 0.25	< 5.0	< 5.0	< 10a	< 2.5	< 200	< 0.20	83.5	< 25	< 2.5	< 0.50	10,600	< 0.50	< 600	< 200	-	1,440	< 600a	< 100

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

All terms defined within the body of Keltech's report.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

\- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals: Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL9-3 (Cont'd)	GL9-3-20160526	2016 05 26	< 50	385	< 600a	2,350	< 100	118	11,900	< 5.0	< 5.0	< 200	< 100a	< 2,000a	< 0.25	< 5.0	< 5.0	< 10a	< 2.5	< 200	< 0.20	75.9	< 25	< 2.5	< 0.50	11,200	< 0.50	< 600	< 200	-	1,410	< 600a	< 100
	GL9-3-20170529	2017 05 29	< 50	377	< 600a	2,470	140	121	12,800	< 5.0	5.1	< 200	< 100a	< 2,000a	< 0.25	< 5.0	< 5.0	16	< 2.5	< 200	< 0.20	116	< 25	< 2.5	< 0.50	10,700	< 0.50	< 600	< 200	-	1,430	< 600a	< 100
	GL9-3-180528	2018 05 28	< 5.0	445	12	2,480	271	165	12,600	< 0.20	0.89	14.8	< 0.10	8.8	0.302	< 0.50	0.9	2.87	< 0.20	89.6	< 0.010	98.4	5.9	1.39	< 0.050	15,300	0.44	< 0.20	< 5.0	1	1,680	< 1.0	< 4.0
	GL9-3-190527	2019 05 27	13.7	516	16	2,760	153	167	13,900	< 0.20	1.16	14.9	< 0.10	8.7	0.212	1.37	0.64	4.83	< 0.20	139	< 0.010	112	5.29	1.24	< 0.050	12,900	0.429	< 0.20	< 5.0	< 1.0	1,620	< 1.0	< 4.0
	GL9-3-200608	2020 06 08	159	430	19.3	2,230	217	238	12,900	0.15	1.19	15.8	0.021	11.2	0.145	1.31	1.07	3.44	< 0.050	135	< 0.010	110	6.26	1.94	0.016	13,000	0.409	< 0.050	0.83	0.5	1,780	1.05	1.5
	GL9-3-210610	2021 06 10	3.3	427	2	2,350	137	132	12,100	0.145	0.746	10.7	< 0.010	10.2	0.133	0.21	0.75	2.3	< 0.050	116	< 0.010	91.3	4.96	0.49	0.012	11,800	0.37	< 0.050	< 0.20	0.39	1,430	< 0.20	1.4
GL10-1	GL10-1-20091112	2009 11 12	< 50a	190	460	1,590	1,820	46	7,710	< 2	17	20	< 0.4	< 40	0.23	< 4	4.2	< 10a	< 1	400	-	98	50	7	< 0.1	17,400	0.6	< 1	< 10	-	2,540	3	10
	GL10-1-20100810	2010 08 10	< 50a	198	480	1,440	2,120	57	7,660	< 2	32	20	< 0.4	< 40	< 0.1	6	5	20	< 1	310	-	91	60	12	0.26	19,200	0.21	< 1	< 100	-	2,190	6	10
	GL10-1-20110704	2011 07 04	< 5	215	558	1,890	1,830	46	7,700	< 0.2	1.1	19	< 0.04	22	0.12	107	5.3	11	< 0.1	310	-	82.3	56	88.9	0.1	18,600	0.23	< 0.1	< 10	-	2,470	31.8	9
	GL10-1-20120626	2012 06 26	< 50a	259	1,150	1,970	1,940	46	7,670	< 2	10	20	< 0.4	< 40	< 0.1	14	4.9	10	< 1	350	-	71	60	24	< 0.10	20,300	0.22	< 1	< 100	-	2,230	6	20
	GL10-1-20121204	2012 12 04	< 50a	231	247	1,890	1,760	38.4	7,800	< 2	9.6	10	< 0.40	< 40	< 0.10	19.9	9.25	10	< 1.0	270	-	76.2	50	29.6	< 0.10	19,500	0.3	< 1.0	< 100	-	2,490	7.07	< 10
	GL10-1-20130626	2013 06 26	< 150a	250	1,050	1,720	1,810	44	7,920	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	360	< 0.20	61.5	35	< 50a	< 0.50	15,200	< 5.0a	< 300	< 100	-	1,930	< 300a	< 50
	GL10-1-20140605	2014 06 05	< 150a	214	710	1,460	1,530	39	6,440	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	310	< 0.20	66.8	39	< 50a	< 0.50	13,600	< 5.0a	< 300	< 100	-	1,770	< 300a	< 50
	GL10-1-20141125	2014 11 25	< 150a	217	1,450	1,460	1,540	40	6,460	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	320	< 0.20	66.4	26	< 50a	< 0.50	13,600	< 5.0a	< 300	< 100	-	1,640	< 300a	< 50
	GL10-1-20150610	2015 06 10	< 50	231	1,330	1,380	1,450	35	5,830	< 5.0	< 5.0	< 100	< 50a	< 1,000a	< 0.25	< 5.0	< 5.0	< 10a	< 2.5	290	< 0.20	64.3	28	< 2.5	< 0.50	14,100	< 0.50	< 300	< 100	-	1,660	< 300a	< 50
	GL10-1-20151109	2015 11 09	< 20	228	< 300	1,310	1,370	36	5,530	< 2.0	< 2.0	< 100	< 50a	< 1,000a	< 0.10	< 2.0	3	4.1	< 1.0	290	< 0.20	67.2	25	< 1.0	< 0.20	13,300	< 0.20	< 300	< 100	-	1,660	< 300a	< 50
	DUP2-20151109	Duplicate	< 20	225	< 300	1,270	1,350	36	5,470	< 2.0	< 2.0	< 100	< 50a	< 1,000a	< 0.10	< 2.0	2.8	< 4.0a	< 1.0	280	< 0.20	61.1	24	< 1.0	< 0.20	13,200	< 0.20	< 300	< 100	-	1,540	< 300a	< 50
	QA/QC RPD%		*	1	*	3	1	0	1	*	*	*	*	*	*	*	7	*	*	4	*	10	4	*	*	1	*	*	*	-	8	*	*
GL12-1	GL 12-1-20111218	2011 12 18	< 50a	420	< 5	513	466	17.6	863	7	2	10	< 0.4	50	0.4	6	0.9	30	< 1	160	-	30	30	< 6	< 0.10	13,600	0.62	2	< 10	-	272	< 1	< 10
	GL12-1-20091112	2009 11 12	77	411	140	540	19	18.6	883	< 2	< 2	< 10	< 0.4	< 40	0.1	< 4	0.7	10	< 1	130	-	16	10	< 6	< 0.10	11,300	0.13	< 1	< 10	-	250	< 1	10
	GL12-1-20100811	2010 08 11	< 50a	400	140	504	68	17	896	< 2	< 2	< 10	< 0.4	< 40	< 0.1	< 4	0.9	< 10a	< 1	120	-	18	20	< 6	< 0.1	11,700	0.13	< 1	< 100	-	206	< 1	< 10
	GL12-1-20110629	2011 06 29	< 5	435	13	541	< 1	17.9	870	0.6	< 0.2	10	< 0.04	8	0.12	3.2	0.84	8	< 0.1	123	-	24.2	14	18.1	< 0.01	11,200	0.09	< 0.1	< 10	-	205	1.3	4
	GL30-1-20110629	Duplicate	< 5	445	5	557	< 1	17.4	892	0.4	0.2	9	< 0.04	8	0.12	3.4	0.69	9	< 0.1	111	-	20.7	12	17.1	< 0.01	11,100	0.07	< 0.1	< 10	-	206	1.4	4
	QA/QC RPD%		*	2	*	3	*	3	2	*	*	11	*	*	0	6	20	12	*	10	-	16	15	6	*	1	25	*	*	-	0	7	0
	GL12-1-20120625	2012 06 25	< 50a	473	640	569	790	21	952	< 2	< 2	10	< 0.4	< 40	0.15	< 4	1.6	20	< 1	140	-	23	20	< 6	< 0.10	12,900	0.19	< 1	< 100	-	210	1	10
	GL12-1-20121204	2012 12 04	< 50a	472	< 5	591	778	19.2	1,010	< 2.0	< 2.0	10	< 0.40	< 40	0.33	6.8	2.43	20	< 1.0	140	-	27.6	20	< 6.0	< 0.10	13,300	0.3	< 1.0	< 10	-	272	2.51	< 10
	GL12-1-20130626	2013 06 26	< 15a	472	< 60	616	549	23.5	1,130	< 0.50	< 1.0	< 20	< 10a	< 200	0.31	< 2.5	0.51	16.8	< 1.0	177	< 0.20	30.4	12	< 5.0	< 0.050	11,000	< 0.50	< 60	< 50	-	325	< 60	< 10
	GL12-1-20131113	2013 11 13	< 15a	489	< 60	652	696	24.8	1,110	0.55	< 1.0	< 20	< 10a	< 200	0.36	< 2.5	1.03	18.5	< 1.0	262	< 0.20	35.6	14.9	< 5.0	< 0.050	11,000	< 0.50	< 60	< 50	-	332	< 60	< 10
	GL12-1-20140604	2014 06 04	< 15a	493	62	694	2,280	55.7	1,290	< 0.50	8.6	< 20	< 10a	< 200	0.47	< 2.5	6.31	47.7	< 1.0	213	< 0.20	48.4	32	< 5.0	< 0.050	11,100	< 0.50	< 60	< 50	-	278	< 60	< 10
	GL12-1-20141118	2014 11 18	< 15a	467	786	667	4,640	42.8	1,240	< 0.50	6.1	< 30	< 15a	< 300	< 0.25	< 2.5	30	3.8	< 1.0	192	< 0.20	47.6	30.7	< 5.0	< 0.050	11,500	< 0.50	< 90	< 50	-	343	< 90	< 15
	GL12-1-20150609	2015 06 09	< 10	503	4,410	638	8,750	32.7	982	< 0.50	17.1	22	< 10a	< 200	< 0.050	0.83	13	1.4	< 1.0	185	< 0.20	41.5	39.2	< 1.0	< 0.050	10,600	0.073	< 60	< 50	-	312	< 60	< 10
	DUP3-20150609	Duplicate	10	502	4,340	642	8,580	31.8	969	< 0.50	16.9	21	< 10a	< 200	< 0.050	0.72	12.7	1.4	< 1.0	176	< 0.20	40.6	39	< 1.0	< 0.050	10,500	0.083	< 60	< 50	-	304	< 60	< 10
	QA/QC RPD%		*	0	2	1	2	3	1	*	1	5	*	*	*	*	2	0	*	5	*	2	1	*	*	1	13	*	*	-	3	*	*
	GL12-1-20151104	2015 11 04	< 10	451	3,880	572	4,230	32.1	982	< 0.50	9.3	< 20	< 10a	< 200	< 0.050	< 0.50	10.6	1.1	< 1.0	161	< 0.20	33	27.7	< 1.0	< 0.050	10,500	0.153	< 60	< 50	-	263	< 60	< 10
	GL12-1-20160524	2016 05 24	23	497	8,900	631	10,100	57.3	1,070	< 0.50	16.7	25	< 10a	< 200	< 0.050	1.8	9.8	< 1.0a	< 1.0	179	< 0.20	30.4	29.5	< 1.0	< 0.050	11,000	< 0.050	< 60	62	-	204	< 60	< 10
	GL12-1-20160921	2016 09 21	103	481	5,340	579	13,800	87.8	983	< 0.50	16.5	32	< 10a	330	< 0.050	3.26	5.4	< 1.0a	< 1.0	188	< 0.20	15.6	28.6	< 1.0	< 0.050	10,400	< 0.050	< 60	< 50	-	207	< 60	< 10
	GL12-1-20170529	2017 05 29	293	378	6,070	404	8,180	195	712	0.66	31.7	37	< 5.0a	540	< 0.050	12.8	4.08	1	< 1.0	137	< 0.20	10.6	25.2	< 1.0	< 0.050	7,740	< 0.050	< 30	< 50	-	120	< 30	< 5.0
	GL12-1-20170926	2017 09 26	86	449	12,700	513	11,600	145	805	< 0.50	24.2	40	< 10a	340	< 0.050	6.58	4.92	1.5	< 1.0	133	< 0.20	14.9	23.4	< 1.0	< 0.050	9,860	< 0.050	< 60	< 50	-	127	< 60	< 10
	GL12-1-180604	2018 06 04	19.6	469	8,590	539	15,000	87.9	805	< 0.20	10.7	39.4	< 0.10	201	0.03	3.31	3.43	0.5	< 0.20	118	< 0.010	24.2	17.6	0.5	< 0.050	10,600	0.03	< 0.20	5.9	< 1.0	151	4.2	< 4.0
	GL12-1-180919	2018 09 19	20.8	521	19,600	628	15,700	79.2	919	< 0.20	24	45.8	< 0.10	167	0.017	3.34	4.79	0.56	< 0.20	143	< 0.010	29.3	21.3	< 0.50	< 0.050	10,800	< 0.020	< 0.20	7.8	< 1.0	205	6	< 4.0
	GL12-1-190527	2019 05 27	17.4	474	12,500	648	14,800	66.6	909	< 0.20	13.3	37.2	< 0.10	137	0.026	2.99	4.6	0.55	< 0.20	128	< 0.010	30.7	20.9	< 0.50	< 0.050	12,300	0.021	< 0.20	< 5.0	< 1.0	225	3	< 4.0
	GL12-1-190919	2019 09 19	12.4	500	20,500	626	16,700	61.4	859	< 0.20	24.2	35	< 0.10	117	< 0.010	2.53	4.91	0.41	< 0.20	126	< 0.010	28.5	20.3	< 0.50	< 0.050	13,100	< 0.020	< 0.20	< 5.0	< 1.0	227	3.6	< 4.0
	GL12-1-200610	2020 06 10	< 100a	583	19,700	736	22,000	85.1	780	< 5.00	21	48.7	< 1.00	214	< 0.200	< 10.0a	4.54	< 10.0a	< 5.00	144	< 0.010	21.2	27.1	< 10.0	< 1.00	13,600	< 0.400	< 5.00	< 20.0	< 20.0	288	< 20.0	< 100
	GL12-1-201102	2020 11 02	15.9	642	24,400	757	21,300	82.4	895	0.114	22	43.9	0.073	94.2	0.0075	1.99	5.17	0.5	< 0.050	133	< 0.010	21.4	24.7	0.51	< 0.010	15,000	0.0204	< 0.050	2.44	< 0.20	260	1.84	1.3
	GL12-1-210525	2021 05 25	9.8	512	14,800	683	15,200	70.6	816	0.089	11.4	33.5	0.048	95.7	0.0078	1.93	7.35	0.53	0.054	161	< 0.010	27.8	27.6	0.42	< 0.010	12,800	0.0269	0.052	1.36	< 0.20	250	1.38	2.6
	GL12-1-211005	2021 10 05	< 100	521	23,100	689	14,000	66.1	882	< 5.00	20.5	28	< 1.00	115	< 0.200	< 10.0a	5.87	< 10.0	< 5.00	134	< 0.010	24	26.6	< 10.0	< 1.00	12,200	< 0.400	< 5.00	< 20.0	< 20.0	211	< 20.0	< 100
	GL12-1-220607	2022 06 07	12.3	484	15,500	609	13,700	72.6	708	<0.250	10.2	29.2	<0.050	68	<0.0100	1.58	6.16	0.89	<0.250	99	< 0.010	24.2	25	<0.50	0.114	13,000	<0.0200	<0.250	<1.00	<1.00	212	<5.00	<5.0
	GL12-1-221005	2022 10 05	12.6	456	21,000	553	12,400	65	606	<0.250	16.5	27.8	0.057	57.1	<0.0100	1.97	5.84	0.64	<0.250	107	< 0.010	21.4	22.6	<0.50	<0.050	11,900	0.0251	<0.250	1.23	<1.00	212	<5.00	<5.0
GL13-1	GL13-1-20091117	2009 11 17	74	278	200	689	325	21	1,640	< 2	3	< 10	< 0.4	< 40	0.18	< 4	1	< 10a	< 1	90	-	53	10	< 6	< 0.10	7,550	< 0.1	5	< 10	-	142	< 1	< 10
	GL13-1-20100811	2010 08 11	79	308	340	675	138	22	1,660	< 2	3	< 10	< 0.4	< 40	< 0.1	< 4	0.9	< 10a	< 1	80	-	43	20	< 6	< 0.1	8,060	< 0.1	< 1	< 100	-	128	1	< 10
	GL13-1-20110627	2011 06 27	< 50a	326	47	762	207	20.2	1,760	< 2	2	< 10	< 0.4	< 40	0.13	< 4	1.4	< 10a	< 1	100	-	44	10	< 6	< 0.10	8,180	< 0.1	< 1	< 10	-	178	1	20

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals Aluminum	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Lithium	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
			µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GL13-1 (Cont'd)	GL13-1-20111217	2011 12 17	< 50a	292	< 5	673	46	19	1,610	< 2	4	< 10	< 0.4	< 40	0.12	7	0.4	10	< 1	120	-	55	20	< 6	< 0.10	9,590	0.43	< 1	< 10	-	193	4	< 10
	DUPC-20111217	Duplicate	< 50a	19.2	453	15.8	83	11.8	555	< 2	4	220	< 0.4	70	< 0.1	10	0.2	< 10a	< 1	250	-	< 1	< 10	< 6	< 0.10	4,020	0.31	< 1	< 10	-	< 4	4	< 10
	QA/QC RPD%		*	175	*	191	57	47	97	*	*	*	*	*	*	35	*	*	*	70	-	*	*	*	*	82	32	*	*	-	*	0	*
	GL13-1-20120625	2012 06 25	< 50a	305	< 50	684	520	20	1,670	< 2	< 2	< 10	< 0.4	< 40	0.2	< 4	0.7	< 10a	< 1	80	-	50	10	9	< 0.10	8,250	< 0.1	< 1	< 100	-	124	1	10
	GL13-1-20121204	2012 12 04	< 50a	284	< 50	664	23	18.3	1,660	< 2	< 2.0	< 10	< 0.40	< 40	< 0.10	7.6	8.8	10	< 1.0	60	-	45.8	< 10	7.3	< 0.10	8,720	< 0.10	< 1.0	< 100	-	194	2.72	< 10
GL14-1	GL14-1-20091116	2009 11 16	535	5.8	490	6.2	42	1.1	381	< 2	3	20	< 0.4	190	< 0.1	< 4	0.5	< 10a	< 1	140	-	9	< 10	< 6	< 0.10	1,470	< 0.1	< 1	< 10	-	< 4	8	20
	GL14-1-20100811	2010 08 11	146	5	150	6	32	3	399	< 2	3	20	< 0.4	200	< 0.10	< 4	0.4	< 10a	< 1	130	-	9	< 10	< 6	< 0.1	1,470	< 0.1	< 1	< 100	-	< 4	9	< 10
	GL14-1-20110704	2011 07 04	87	7.3	72	7.2	41	1.6	413	< 0.2	2.2	19	< 0.04	185	0.02	16.9	0.36	2	< 0.1	121	-	8.2	< 1	19	< 0.01	1,390	< 0.01	< 0.1	< 10	-	1.3	9.4	2
	GL14-1-20120627	2012 06 27	< 50a	6	330	6	< 10	< 1	424	< 2	< 2	20	< 0.4	200	< 0.1	4	< 0.2	< 10a	< 1	130	-	5	< 10	< 6	< 0.10	1,490	< 0.1	< 1	< 100	-	< 4	5	< 10
	GL14-1-20120704	2012 07 04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GL14-1-20121204	2012 12 04	659	5.36	483	5.35	26	1.1	418	< 2.0	< 2.0	20	< 0.40	210	< 0.10a	6.7	9.04	< 10a	< 1.0	110	-	8.44	< 10	< 6.0	< 0.10	1,510	< 0.10	< 1.0	36	-	< 4.0	7.42	< 10
GL15-1	GL15-1-20091117	2009 11 17	< 50a	101	< 100	109	21	2.9	163	< 2	< 2	70	< 0.4	< 40	0.2	< 4	0.4	< 10a	< 1	20	-	6	< 10	< 6	< 0.10	5,710	< 0.1	< 1	< 10	-	31	2	< 10
	GL30-3-20091117	Duplicate	< 50a	94.5	< 100	104	20	2.5	157	< 2	< 2	60	< 0.4	< 40	< 0.1	< 4	0.4	20	< 1	20	-	6	< 10	< 6	< 0.10	5,710	< 0.1	< 1	< 10	-	30	2	10
	QA/QC RPD%		*	7	*	5	5	*	4	*	*	15	*	*	*	*	*	*	*	0	-	0	*	*	*	0	*	*	*	-	3	0	*
	GL15-1-20140604	2014 06 04	< 10a	31.9	< 30	62.1	67	< 2.0	176	< 0.50	< 1.0	29	< 5.0a	< 100	0.339	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.7	< 5.0	< 1.0	< 0.050	3,260	< 0.20	< 30	< 50	-	5.16	< 30	< 5.0
	GL15-1-20141117	2014 11 17	< 10a	32.3	< 30	63.1	148	< 2.0	178	< 0.50	< 1.0	31	< 5.0a	< 100	< 0.050	< 0.50	0.5	< 1.0a	< 1.0	< 50	< 0.20	6	< 5.0	< 1.0	< 0.050	3,440	< 0.20	< 30	< 50	-	5.76	< 30	< 5.0
	GL15-1-20150610	2015 06 10	< 10	32.7	< 30	62.4	88	< 2.0	191	< 0.50	< 1.0	28	< 5.0a	< 100	0.136	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.6	< 5.0	< 1.0	< 0.050	3,550	< 0.010	< 30	< 50	-	5.13	< 30	< 5.0
	DUP4-20150610	Duplicate	< 10	32.4	< 30	59.7	85	< 2.0	188	< 0.50	< 1.0	28	< 5.0a	< 100	0.141	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.9	< 5.0	< 1.0	< 0.050	3,540	< 0.010	< 30	< 50	-	5.23	< 30	< 5.0
	QA/QC RPD%		*	1	*	4	3	*	2	*	*	0	*	*	4	*	*	*	*	*	*	5	*	*	*	0	*	*	*	-	2	*	*
	GL15-1-20151103	2015 11 03	< 10	32.8	73	61.7	210	< 2.0	189	< 0.50	< 1.0	32	< 5.0a	< 100	< 0.050	< 0.50	1.69	< 1.0a	< 1.0	< 50	< 0.20	5.8	< 5.0	< 1.0	< 0.050	3,700	< 0.010	< 30	< 50	-	5.66	< 30	< 5.0
	GL15-1-20160920	2016 09 20	< 10	36.3	< 30	71.3	24	< 2.0	182	< 0.50	< 1.0	36	< 5.0a	< 100	0.363	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.9	< 5.0	< 1.0	< 0.050	3,850	0.012	< 30	< 50	-	6.74	< 30	< 5.0
	GL15-1-20170925	2017 09 25	< 10	31.9	< 30	59.8	20	< 2.0	175	< 0.50	< 1.0	28	< 5.0a	< 100	0.141	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.4	< 5.0	< 1.0	< 0.050	3,480	< 0.010	< 30	< 50	-	5.97	< 30	< 5.0
	GL15-1-180928	2018 09 28	5.8	31.3	< 10	61.8	32.8	1.44	177	< 0.20	< 0.50	27.6	< 0.10	9	0.038	< 0.50	< 0.10	< 0.40a	< 0.20	17.8	< 0.010	5.71	< 0.40	< 0.50	< 0.050	3,470	< 0.020	< 0.20	< 5.0	< 1.0	5.67	< 1.0	< 4.0
	GL15-1-190924	2019 09 24	< 5.0	31	< 10	60.6	45.2	1.55	173	< 0.20	< 0.50	30.5	< 0.10	14	0.02	< 0.50	< 0.10	0.14	< 0.20	17.8	< 0.010	6.18	0.63	< 0.50	< 0.050	3,690	< 0.020	< 0.20	< 5.0	< 1.0	6.04	1	< 4.0
	GL15-1-201104	2020 11 04	< 1.0	220	5.9	238	52.1	5.5	437	0.261	0.633	136	< 0.010	16.1	0.528	0.37	0.526	4.01	< 0.050	32.5	< 0.010	10.2	4.73	19.9	< 0.010	12,900	0.0152	< 0.050	< 0.20	< 0.20	95.8	5.75	2.2
	GL15-1-211007	2021 10 07	4.8	45.3	2.5	86	0.375	2.12	212	0.107	0.443	40.8	< 0.010	9.6	0.0891	0.23	0.0243	2.84	0.051	15.4	< 0.010	7.52	1.03	1.53	< 0.010	4,920	0.0073	0.07	< 0.20	< 0.20	13.6	1.32	2.1
	GL15-1-221005	2022 10 05	<3.0	34.1	<2.0	63.1	0.794	1.62	172	<0.050	0.333	30.2	<0.010	7.9	0.0571	0.21	0.0056	1.2	<0.050	16.7	< 0.010	6.51	0.359	0.25	<0.010	3,790	0.0061	<0.050	<0.20	<0.20	6.35	1.12	1.1
	GL15-1-231025	2023 10 25	<1.0	39.2	99.7	68.5	66	1.5	183	<0.050	0.336	31.2	<0.010	11.3	0.0424	<0.50	0.0624	0.59	<0.050	18.1	<0.010	6.26	0.458	0.19	<0.010	4210	<0.0040	<0.050	<0.20	<0.20	7.97	<1.00	<1.0
GL15-2	GL15-2-20110704	2011 07 04	< 5	261	10	350	< 1	10	406	< 0.2	1.3	18	< 0.04	17	0.15	17.8	0.67	5	< 0.1	39	-	11.7	23	49.8	< 0.01	7,230	0.03	< 0.1	< 10	-	149	5.9	6
	GL15-2-20120627	2012 06 27	< 50a	397	400	562	< 10	10	590	< 2	< 2	20	< 0.4	< 40	< 0.1	7	< 0.2	< 10a	< 1	40	-	7	< 10	32	< 0.10	9,840	< 0.1	< 1	< 100	-	258	2	< 10
	GL15-2-20121205	2012 12 05	54	414	< 5	618	< 1	9.1	670	< 2.0	< 2.0	20	< 0.40	40	0.1	9	< 0.20	< 10a	< 1.0	60	-	12.7	< 10	34.9	< 0.10	10,400	< 0.10	< 1.0	< 1,000	-	332	2.65	< 10
	GL15-2-20130708	2013 07 08	< 15a	423	< 60	696	< 10	14.1	786	< 0.50	< 1.0	< 20	< 10a	< 200	< 0.25	5.9	< 0.50	2.6	< 1.0	58	< 0.20	13	< 5.0	47.3	< 0.050	8,850	< 0.50	< 60	< 50	-	393	< 60	< 10
	GL15-2-20140604	2014 06 04	< 15a	346	< 60	588	< 10	12.5	763	< 0.50	< 1.0	< 20	< 10a	< 200	< 0.25	5.5	< 0.50	< 2.5a	< 1.0	61	< 0.20	12.2	< 5.0	36.4	< 0.050	7,560	< 0.50	< 60	< 50	-	336	< 60	< 10
	GL15-2-20141117	2014 11 17	< 15a	339	< 60	584	< 10	13.2	720	< 0.50	< 1.0	< 20	< 10a	< 200	0.55	4.2	< 0.50	2.6	< 1.0	51	< 0.20	13.1	< 5.0	30.3	< 0.050	7,680	< 0.50	< 60	< 50	-	316	< 60	< 10
	GL15-2-20150610	2015 06 10	< 10	393	< 60	661	< 10	13	814	< 0.50	< 1.0	< 20	< 10a	< 200	0.276	6.68	< 0.50	2.3	< 1.0	< 50	< 0.20	12.5	< 5.0	41.9	< 0.050	8,660	< 0.050	< 60	< 50	-	349	< 60	< 10
	GL15-2-20151103	2015 11 03	< 10	409	< 60	703	< 10	13.3	858	< 0.50	< 1.0	< 20	< 10a	< 200	0.129	6.98	< 0.50	2.7	< 1.0	< 50	< 0.20	14.1	< 5.0	44.1	< 0.050	9,520	< 0.050	< 60	< 50	-	383	< 60	< 10
	GL15-2-20160920	2016 09 20	< 10	458	< 150	938	< 25	16	1,150	< 0.50	< 1.0	< 50	< 25a	< 500	0.06	9.67	< 0.50	2.8	< 1.0	63	< 0.20	14.1	< 5.0	62.8	< 0.050	11,400	< 0.050	< 150	< 50	-	511	< 150a	< 25
	GL15-2-20170925	2017 09 25	< 10	368	< 60	795	< 10	15.1	1,070	< 0.50	< 1.0	< 20	< 10a	< 200	0.061	8.64	< 0.50	3	< 1.0	55	< 0.20	15	< 5.0	51.9	< 0.050	8,810	< 0.050	< 60	< 50	-	423	< 60	< 10
	GL15-2-180928	2018 09 28	< 5.0	284	< 10	629	< 0.20	13.9	992	< 0.20	0.73	12.8	< 0.10	12.2	0.041	4.77	0.19	2.92	< 0.20	49.2	< 0.010	17.8	1.69	19.3	< 0.050	6,020	< 0.020	< 0.20	< 5.0	< 1.0	318	2.1	< 4.0
	GL15-2-190924	2019 09 24	< 5.0	336	< 10	638	0.28	13	794	< 0.20	0.72	20.1	< 0.10	17	0.045	5.62	0.19	2.61	< 0.20	52.8	< 0.010	17.4	1.66	28.3	< 0.050	8,810	< 0.020	< 0.20	< 5.0	< 1.0	355	2	< 4.0
	GL15-2-201104	2020 11 04	1.1	538	< 2.0	1,190	0.088	20.3	1,630	0.103	0.95	20.8	< 0.010	9.8	0.0432	22.4	0.297	4.75	< 0.050	64.9	< 0.010	21.3	2.8	82.1	< 0.010	14,900	0.0104	< 0.050	< 0.20	0.32	549	2.84	< 1.0
	DUP2-201104	Duplicate	1	542	< 2.0	1,220	0.091	20.6	1,660	0.107	0.948	21.4	< 0.010	9.5	0.0446	22.6	0.296	4.78	< 0.050	64.5	< 0.010	21	2.8	79.3	< 0.010	14,100	0.0101	< 0.050	< 0.20	0.32	545	2.8	< 1.0
	QA/QC RPD%		*	1	*	2	*	1	2	*	0	3	*	*	3	1	0	1	*	1	*	1	0	3	*	6	*	*	*	*	1	1	*
	GL15-2-211007	2021 10 07	8.7	< 4	3	< 0.5	0.258	19.7	< 1	0.085	0.84	18.8	< 0.010	6.2	0.0516	17.9	0.234	5.05	< 0.050	36.1	< 0.010	24.2	2.19	51.1	< 0.010	< 10.0	0.0093	< 0.050	0.22	0.68	453	2.47	1.3
	GL15-2-221005	2022 10 05	<5.0	285	<10.0	581	1.18	11.4	786	<0.250	0.641	13.3	<0.050	<10.0	0.0477	6.69	0.167	3.21	<0.250	39.6	< 0.010	19	1.89	12.3	<0.050	6830	<0.0200	<0.250	<1.00	<1.00	329	<5.00	<5.0
	GL15-2-231025	2023 10 25	15.9	361	27.4	581	1.04	11	838	<0.100	0.643	15	<0.020	9.3	0.0452	8.25	0.182	2.36	<0.100	44.4	<0.010	18.8	1.53	21	<0.020	8430	<0.0080	<0.100	0.54	<0.40	362	<2.00	<2.0
GL16-1	GL 16-1-20091111	2009 11 11	124	180	620	339	960	28	26.8	< 2	15	10	< 0.4	60	0.14	< 4	2.6	< 10a	< 1	320	-	15	10	< 6	< 0.10	21,100	< 0.1	< 1	< 10	-	5	2	10
	GL 16-1-20111217	2011 12 17	< 50a	108	< 5	174	40	18.4	991	2	5	10	< 0.4	80	0.21	7	< 0.2	10	< 1	320	-	15	< 10	< 6	< 0.10	20,600	0.34	< 1	< 10	-	12	4	< 10
	GL16-1-20100811	2010 08 11	379	174	450	307	1,060	27	1,470	< 2	6	10	< 0.4	70	< 0.1	< 4	2.2	< 10a	< 1	260	-	12	10	< 6	< 0.1	19,800	< 0.1	< 1	< 100	-	13	2	< 10
	GL16-1-20110627	2011 06 27	< 50a	127	7	216	58	21.1	1,130	< 2	4	20	< 0.4	80	< 0.1	< 4	0.2	< 10a	< 1	300	-	15	< 10	< 6	< 0.1	20,600	< 0.1	< 1	< 10	-	13	1	< 10
	GL16-1-20110627	Duplicate	< 50a	130	15	214	63	21.8	1,130	< 2	4	20	< 0.4	60	< 0.1	< 4	0.7	< 10a	< 1	290	-	14	< 10	< 6	< 0.10	20,200	< 0.1	< 1	< 10	-	13	< 1	10
	QA/QC RPD%		*	2	*	1	8	3	0	*	0	0	*	29	*	*	*	*	*	3	-	7	*	*	*	2	*	*	*	-	0	*	*
	GL16-1-20120626	2012 06 26	< 50a	143	2,400	220	900	23	1,120	< 2	21	20	< 0.4	50	< 0.1	< 4	1.9	< 10a	< 1	270	-	12	< 10	< 6	< 0.10	23,200	< 0.1	< 1	< 100	-	10	2	10
	GL16-1-20121204	2012 12 04	< 50a	103	4,510	186	1,020	18	1,030	< 2.0	23	20	< 0.40	70	< 0.10	9.6	1.77	< 10a	< 1	230	-	10.6	< 10	< 6.0	< 0.10	20,800	< 0.10	< 1.0	< 10	-	9.2	2.94	< 10
	GL16-1-20130626	2013 06 26	< 15a	123	1,380	179	821	20.9	1,060	< 0.50	16.4	< 20	< 10a	< 200	< 0.25	< 2.5	1.56	< 2.5a	< 1.0	267	< 0.20	14.7	< 5.0	< 5.0	< 0.050	17,800	< 0.50	< 60	< 50	-	10.3	< 60	< 10

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals																														
			Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL16-1	GL16-1-20131113	2013 11 13	< 15a	104	91	168	90	19.9	945	< 0.50	7.1	< 20	< 5.0a	< 100	< 0.25	< 2.5	< 0.50	< 2.5a	< 1.0	256	< 0.20	15.2	12.7	< 5.0	< 0.050	15,800	< 0.50	< 30	< 50	-	10	< 30	< 5.0
(Cont'd)	GL16-1-20140605	2014 06 05	< 15a	108	860	160	767	19.5	972	< 0.50	12.2	< 20	< 10a	< 200	< 0.25	< 2.5	1.14	< 2.5a	< 1.0	266	< 0.20	13.2	< 5.0	< 5.0	< 0.050	17,200	< 0.50	< 60	< 50	-	8.43	< 60	< 10
	GL16-1-20141118	2014 11 18	< 15a	92.3	256	149	277	19.5	950	< 0.50	8.7	< 20	< 5.0a	< 100	< 0.25	< 2.5	< 0.50	< 2.5a	< 1.0	268	< 0.20	15.5	< 5.0	< 5.0	< 0.050	15,900	< 0.50	< 30	< 50	-	9.17	< 30	< 5.0
	GL16-1-20150610	2015 06 10	< 10	106	1,020	154	819	19.1	933	< 0.50	14.4	< 20	< 10a	< 200	0.101	< 0.50	1.24	< 1.0a	< 1.0	260	< 0.20	14.4	< 5.0	< 1.0	< 0.050	16,600	< 0.050	< 60	< 50	-	9.18	< 60	< 10
	GL16-1-20151103	2015 11 03	< 10	95.4	< 30	143	60	18.7	997	< 0.50	7.1	< 20	< 5.0a	< 100	1.64	< 0.50	< 0.50	1.3	< 1.0	256	< 0.20	15.1	< 5.0	< 1.0	< 0.050	16,400	< 0.050	< 30	< 50	-	8.66	< 30	< 5.0
	DUP3-20151103	Duplicate	< 10	95.8	< 30	143	60	18.7	993	< 0.50	6.5	< 20	< 5.0a	< 100	1.61	< 0.50	< 0.50	1.1	< 1.0	254	< 0.20	14.2	< 5.0	< 1.0	< 0.050	16,200	< 0.050	< 30	< 50	-	8.1	< 30	< 5.0
	QA/QC RPD%		*	0	*	0	0	0	0	*	9	*	*	*	2	*	*	17	*	1	*	6	*	*	*	1	*	*	*	-	7	*	*
	GL16-1-20160524	2016 05 24	< 10	90.1	< 30	140	< 10	18.7	943	< 0.50	7.5	< 20	< 5.0a	< 100	0.508	< 0.50	< 0.50	< 1.0a	< 1.0	250	< 0.20	15.5	< 5.0	< 1.0	< 0.050	15,200	< 0.050	< 30	< 50	-	8.88	< 30	< 5.0
	GL16-1-20170525	2017 05 25	< 10	92.8	< 30	146	< 10	19.7	952	< 0.50	7.5	< 20	< 5.0a	< 100	0.418	< 0.50	< 0.50	< 1.0a	< 1.0	276	< 0.20	14.6	< 5.0	< 1.0	< 0.050	16,400	< 0.050	< 30	< 50	-	8.43	< 30	< 5.0
	DUP2-20170525	Duplicate	< 10	93.3	< 30	149	< 10	19.8	955	< 0.50	7.3	< 20	< 5.0a	< 100	0.385	< 0.50	< 0.50	< 1.0a	< 1.0	280	< 0.20	14.8	< 5.0	< 1.0	< 0.050	16,400	< 0.050	< 30	< 50	-	8.37	< 30	< 5.0
	QA/QC RPD%		*	1	*	2	*	1	0	*	3	*	*	*	8	*	*	*	*	1	*	1	*	*	*	0	*	*	*	-	1	*	*
	GL16-1-180604	2018 06 04	< 5.0	96.5	< 10	126	0.45	18.1	815	< 0.20	5.98	13.4	< 0.10	71	0.172	< 0.50	< 0.10	0.63	< 0.20	256	< 0.010	15.5	< 0.40	< 0.50	< 0.050	15,400	< 0.020	< 0.20	< 5.0	< 1.0	7.93	< 1.0	< 4.0
	GL16-1-190529	2019 05 29	15.5	89.6	< 10	129	4.19	18.5	849	< 0.20	6.51	16.2	< 0.10	71.1	0.154	0.81	< 0.10	0.57	< 0.20	259	< 0.010	18	1.19	< 0.50	0.07	15,600	0.037	< 0.20	< 5.0	< 1.0	8.53	< 1.0	< 4.0
	GL16-1-200608	2020 06 08	3.6	95.1	424	112	335	19.9	832	0.062	18.4	13.6	0.011	65.3	0.057	0.6	0.567	0.93	0.2	249	< 0.010	16.7	1.05	< 0.10	< 0.010	17,200	0.0192	< 0.050	< 0.20	1.71	6.69	< 0.20	1.7
	GL16-1-210609	2021 06 09	3	87.9	78.9	106	170	17.9	806	0.085	10.7	15.1	< 0.010	71.2	0.0338	< 0.10	0.216	0.48	< 0.050	285	< 0.010	15.9	0.885	< 0.10	< 0.010	15,300	0.0206	0.06	< 0.20	1.28	6.57	< 0.20	2.2
	GL16-1-220602	2022 06 02	<5.0	73.5	235	113	153	16.5	777	<0.250	12.3	16	<0.050	76.5	0.0242	<0.50	0.198	1.39	<0.250	278	< 0.010	15.8	0.779	<0.50	<0.050	15,300	<0.0200	<0.250	<1.00	1.02	6.34	<5.00	<5.0
GL17-1	GL17-1-20091112	2009 11 12	72	341	4,680	617	3,640	20	1,240	< 2	3	10	< 0.4	< 40	< 0.1	< 4	4.8	< 10a	< 1	110	-	38	30	< 6	< 0.10	9,310	< 0.1	< 1	11	-	133	1	10
	GL17-1-20100811	2010 08 11	< 50a	355	920	582	3,290	22	1,250	< 2	3	10	< 0.4	< 40	< 0.10	< 4	5.1	< 10a	< 1	90	-	36	30	< 6	< 0.1	8,820	< 0.1	< 1	< 100	-	119	< 1	< 10
	GL30-4-20100811	Duplicate	62	341	1,160	563	3,640	21	1,210	< 2	3	10	< 0.4	< 40	< 0.10	< 4	5.2	< 10a	< 1	90	-	38	30	< 6	< 0.1	9,450	< 0.1	< 1	< 100	-	129	1	10
	QA/QC RPD%		*	4	23	3	10	5	3	*	0	0	*	*	*	*	2	*	*	0	-	5	0	*	*	7	*	*	*	-	8	*	*
	GL17-1-20110628	2011 06 28	< 5	381	2,170	638	3,260	17.3	1,290	< 0.2	1.8	16	< 0.04	14	0.11	1.1	7.97	4	< 0.1	94	-	35	31	3.3	< 0.01	8,700	0.01	< 0.1	< 10	-	143	0.9	9
	GL17-1-20120625	2012 06 25	< 50a	20	880	18	70	15	582	< 2	2	220	< 0.4	40	< 0.1	4	1	< 10a	< 1	200	-	< 1	< 10	< 6	< 0.10	3,990	< 0.1	< 1	< 100	-	< 4	2	< 10
	GL17-1-20121204	2012 12 04	< 50a	15.9	643	14.2	111	13.2	596	< 2	3.2	220	< 0.40	40	< 0.10	11.2	6.11	< 10a	< 1.0	170	-	< 1.0	< 10	< 6.0	< 0.10	3,920	< 0.10	< 1.0	< 10	-	< 4.0	3.33	< 10
	GL17-1-20160526	2016 05 26	< 10	18.8	961	17.4	62	14.9	616	< 0.50	< 1.0	231	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	243	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,630	< 0.050	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL17-1-20160919	2016 09 19	< 10	19.8	836	17.8	58	14	564	< 0.50	1.4	178	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	184	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,510	< 0.010	< 30	< 50	-	0.31	< 30	< 5.0
	GL17-1-20170531	2017 05 31	< 10	20	1,680	18.2	69	15	614	< 0.50	2.4	216	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	227	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,840	< 0.020	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL17-1-20170926	2017 09 26	< 10	19.5	1,430	17.5	57	14.9	563	< 0.50	2.1	212	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	227	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	3,720	< 0.020	< 30	< 50	-	< 0.20	< 30	< 5.0
	GL17-1-180604	2018 06 04	< 5.0	22	1,250	17.4	46.5	14.4	562	< 0.20	1.64	198	< 0.10	81.8	< 0.010	< 0.50	0.26	< 0.40a	< 0.20	231	< 0.010	0.42	< 0.40	< 0.50	< 0.050	3,650	< 0.020	< 0.20	< 5.0	< 1.0	0.125	< 1.0	< 4.0
	GL17-1-180919	2018 09 19	< 5.0	22.6	626	17.9	42.5	13.7	571	< 0.20	1.06	185	< 0.10	74.7	< 0.010	< 0.50	0.12	< 0.40a	< 0.20	206	< 0.010	0.35	< 0.40	< 0.50	< 0.050	3,650	< 0.020	< 0.20	< 5.0	< 1.0	0.276	< 1.0	< 4.0
	GL17-1-190527	2019 05 27	< 5.0	20.8	1,450	17.4	53.8	14.2	567	< 0.20	2.22	220	< 0.10	87.1	< 0.010	0.85	0.23	< 0.40a	< 0.20	237	< 0.010	0.45	0.51	< 0.50	< 0.050	4,140	< 0.020	< 0.20	< 5.0	< 1.0	0.175	< 1.0	< 4.0
	DUP1-190527	Duplicate	< 5.0	20	1,370	16.9	49.9	13.9	561	< 0.20	2.14	217	< 0.10	78	< 0.010	0.79	0.22	< 0.40a	< 0.20	227	< 0.010	0.48	0.51	< 0.50	< 0.050	3,950	< 0.020	< 0.20	< 5.0	< 1.0	0.297	< 1.0	< 4.0
	QA/QC RPD%		*	4	6	3	8	2	1	*	4	1	*	11	*	*	*	*	*	4	*	*	*	*	*	5	*	*	*	*	52	*	*
	GL17-1-190923	2019 09 23	< 5.0	21.9	1,450	17.9	54.9	14.3	583	< 0.20	2.32	215	< 0.10	89	< 0.010	< 0.50	0.16	< 0.10	< 0.20	252	< 0.010	0.36	< 0.40	< 0.50	< 0.050	4,040	< 0.020	< 0.20	< 5.0	< 1.0	0.144	< 1.0	< 4.0
	GL17-1-200608	2020 06 08	1.2	22.6	1,750	15.7	46.9	15.4	629	< 0.050	3.27	218	0.015	69.1	0.0051	0.74	0.202	0.49	< 0.050	197	< 0.010	0.388	0.695	< 0.10	< 0.010	4,080	< 0.0040	< 0.050	< 0.20	0.38	0.097	< 0.20	< 1.0
	GL17-1-201020	2020 10 20	1.4	23.9	1,790	17.4	51.3	17.4	531	< 0.050	2.61	277	0.011	52.6	< 0.0020	0.23	0.192	< 0.10	< 0.050	199	< 0.010	0.477	0.264	< 0.10	< 0.010	4,180	< 0.0040	< 0.050	0.23	0.44	0.129	< 0.20	1.1
	GL17-1-210604	2021 06 04	1.8	24.3	1,290	18.1	51.6	15.3	637	0.06	3.28	212	< 0.010	93.7	< 0.0020	0.24	0.151	10.2	0.279	245	< 0.010	0.488	0.368	0.12	< 0.010	4,150	< 0.0040	0.25	5.19	0.4	0.122	< 0.20	17.4
	GL17-1-211006	2021 10 06	1.7	20.8	1,640	18.3	47.9	15.9	694	< 0.050	2.81	224	< 0.010	87.7	< 0.0020	0.28	0.154	0.15	< 0.050	225	< 0.010	0.477	0.336	< 0.10	< 0.010	3,820	< 0.0040	< 0.050	0.36	0.35	0.0992	< 0.20	1.1
	GL17-1-220531	2022 05 31	<2.0	17.9	1,620	20.4	49.6	14.9	656	<0.100	2.23	205	<0.020	83.1	<0.0040	<0.20	0.111	<0.20	<0.100	225	< 0.010	0.44	0.307	<0.20	<0.020	3,810	<0.0080	<0.100	<0.40	<0.40	0.112	<2.00	<2.0
	GL17-1-220928	2022 09 28	2.1	21.5	1870	15.7	49.9	15.4	565	<0.100	2.16	235	<0.020	84.9	<0.0040	<0.20	0.148	0.3	<0.100	231	< 0.010	0.497	0.342	<0.20	<0.020	4,110	<0.0080	<0.100	<0.40	<0.40	0.0954	<2.00	<2.0
GL17-2	GL17-2-20091112	2009 11 12	4,020	20.6	2,560	18.6	194	15.7	554	< 2	< 2	190	< 0.4	< 40	< 0.1	5	1.3	< 10a	1	220	-	< 1	< 10	< 6	< 0.10	3,520	< 0.1	< 1	20	-	< 4	6	20
	GL30-2-20091112	Duplicate	< 50a	19.3	< 100	17.2	252	14.7	569	< 2	< 2	160	< 0.4	40	< 0.1	< 4	0.6	10	< 1	230	-	< 1	< 10	< 6	< 0.10	3,270	< 0.1	< 1	< 10	-	< 4	1	< 10
	QA/QC RPD%		*	7	*	8	26	7	3	*	*	17	*	*	*	*	74	*	*	4	-	*	*	*	*	7	*	*	*	-	*	143	*
	GL17-2-20100811	2010 08 11	130	19	770	17	247	15	562	< 2	3	210	< 0.4	60	< 0.10	< 4	0.8	< 10a	< 1	220	-	< 1	< 10	< 6	< 0.1	3,570	< 0.1	< 1	< 100	-	< 4	2	< 10
	GL17-2-20110628	2011 06 28	13	18.8	364	15.2	61	11.7	580	< 0.2	1.6	222	< 0.04	70	< 0.01	4.7	0.83	1	< 0.1	235	-	0.7	< 1	< 0.6	< 0.01	3,940	< 0.01	< 0.1	40	-	< 0.4	1.5	1
	GL17-2-20120625	2012 06 25	< 50a	318	6,180	643	2,480	20	1,580	< 2	4	20	< 0.4	< 40	< 0.10	< 4	1.6	< 10a	< 1	70	-	53	10	< 6	< 0.10	8,300	< 0.1	< 1	< 100	-	81	< 1	10
	GL17-2-20121204	2012 12 04	< 50a	394	569	712	2,800	17.6	1,520	< 2	< 2.0	20	< 0.40	< 40	0.26	7.2	7.1	< 10a	< 1.0	70	-	50.1	30	< 6.0	< 0.10	9,920	< 0.10	< 1.0	< 10	-	150	2.44	< 10
	GL17-2-20130626	2013 06 26	< 30a	404	< 90	727	2,380	21.8	1,700	< 1.0	< 1.0	< 30	< 15a	< 300	< 0.50a	< 5.0	3.4	< 5.0a	< 1.0	101	< 0.20	57.5	20.6	< 10	< 0.10	8,720	< 1.0	< 90	< 50	-	176	< 90	< 15
	GL17-2-20131113	2013 11 13	< 30a	427	390	759	2,600	24	1,710	< 1.0	< 1.0	< 50	< 25a	< 500	< 0.50a	< 5.0	4.2	< 5.0a	< 1.0	179	< 0.20	54.1	20.1	< 10	< 0.10	9,350	< 1.0	< 150	53	-	172	< 150a	< 25
	GL17-2-20140605	2014 06 05	< 30a	346	585	676	1,430	20.4	1,690	< 1.0	< 1.0	< 20	< 10a	< 200	< 0.50a	< 5.0	2.2	< 5.0a	< 1.0	104	< 0.20	58.3	15.1	< 10	< 0.10	7,610	< 1.0	< 60	< 50	-	155	< 60	< 10
	GL17-2-20141118	2014 11 18	< 30a	367	938	716	1,950	22.1	1,670	< 1.0	< 1.0	< 30	< 15a	< 300	< 0.50a	< 5.0	3.1	< 5.0a	< 1.0	93	< 0.20	54.4	14.1	< 10	< 0.10	7,930	< 1.0	< 90	< 50	-	163	< 90	< 15
	GL17-2-20150608	2015 06 08	< 10	378	442	745	1,180	22.2	1,710	< 1.0	< 1.0	< 30	< 15a	< 300	0.338	< 1.0	1.8	4.5	< 1.0	95	< 0.20	51.8	14.7	3.6	< 0.10	7,910	< 0.10	< 90	< 50	-	152	< 90	< 15
	GL17-2-20151104	2015 11 04	< 10	383	183	680	1,280	21.1	1,550	< 1.0	< 1.0	< 30	< 15a	< 300	0.144	< 1.0	2.9	< 2.0a	< 1.0	101	< 0.20	46	15.4	< 1.0	< 0.10	8,190	< 0.10	< 90	< 50	-	182	< 90	< 15

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

			Dissolved Metals																														
Sample Location	Sample ID	Sample Date (yyyy mm dd)	Aluminum	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Lithium	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
			µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GL18-2	GL 18-2-20091110	2009 11 10	< 50a	99.7	940	196	503	19	22.4	< 2	17	10	< 0.4	< 40	< 0.1	< 4	0.6	< 10a	< 1	10	-	32	< 10	< 6	< 0.10	4,990	< 0.1	< 1	< 10	-	< 4	< 1	20
	GL18-2-20100811	2010 08 11	258	281	1,640	164	544	20	1,460	< 2	12	20	< 0.4	< 40	< 0.10	< 4	0.8	< 10a	< 1	< 10	-	34	< 10	< 6	< 0.1	4,840	< 0.1	< 1	< 100	-	< 4	2	< 10
	GL18-2-20110629	2011 06 29	25	315	294	175	405	20.9	1,500	1.8	13.7	21	< 0.04	24	0.06	1.2	2.07	4	< 0.1	12	-	42.4	7	24	< 0.01	6,800	< 0.01	< 0.1	< 10	-	2.5	5.2	4
	GL18-2-20120626	2012 06 26	< 50a	314	1,210	169	460	19	1,550	8	9	10	< 0.4	< 40	< 0.1	< 4	0.6	< 10a	< 1	10	-	35	< 10	< 6	< 0.10	4,970	< 0.1	< 1	< 100	-	< 4	< 1	20
	DUP-A-20120626	Duplicate	< 50a	324	1,030	173	480	20	1,590	< 2	10	10	< 0.4	< 40	< 0.1	< 4	0.8	< 10a	< 1	10	-	36	< 10	6	< 0.10	5,230	< 0.1	< 1	< 100	-	< 4	1	< 10
	QA/QC RPD%		*	3	16	2	4	5	3	*	11	0	*	*	*	*	29	*	*	0	-	3	*	*	*	5	*	*	*	-	*	*	*
	GL18-2-20121205	2012 12 05	53	286	2,330	161	180	17.2	1,380	< 2.0	9.4	10	< 0.40	40	< 0.10	< 4.0	2.85	< 10a	< 1	10	-	38.6	< 10	6.4	< 0.10	4,890	< 0.10	< 1.0	< 1,000	-	< 4.0	< 1.0	< 10
	GL18-2-20130627	2013 06 27	< 30a	288	1,600	166	466	17.9	1,620	< 1.0	6.7	< 20	< 10a	< 200	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	< 50	< 0.20	37.4	< 5.0	< 10	< 0.10	4,230	< 1.0	< 60	< 50	-	< 0.20	< 60	< 10
	GL18-2-20131114	2013 11 14	< 15a	284	1,560	162	467	17.4	1,550	< 0.50	7.3	< 20	< 10a	< 200	< 0.25	< 2.5	< 0.50	< 2.5a	< 1.0	< 50	< 0.20	41.8	< 5.0	< 5.0	< 0.050	4,120	< 0.50	< 60	< 50	-	0.26	< 60	< 10
	GL18-2-20140609	2014 06 09	< 30a	280	1,640	164	472	17.7	1,540	< 1.0	7.3	< 20	< 10a	< 200	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	< 50	< 0.20	40.5	< 5.0	< 10	< 0.10	4,160	< 1.0	< 60	< 50	-	< 0.20	< 60	< 10
	GL18-2-20141126	2014 11 26	< 15a	283	1,550	163	465	17.6	1,540	< 0.50	6.5	< 20	< 10a	< 200	< 0.25	< 2.5	< 0.50	< 2.5a	< 1.0	< 50	< 0.20	39.3	< 5.0	< 5.0	< 0.050	4,230	< 0.50	< 60	< 50	-	< 0.20	< 60	< 10
	DUP3-20141126	Duplicate	< 30a	287	1,560	164	470	17.7	1,540	< 1.0	7.1	< 20	< 10a	< 200	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	< 50	< 0.20	39.7	< 5.0	< 10	< 0.10	4,230	< 1.0	< 60	< 50	-	< 0.20	< 60	< 10
	QA/QC RPD%		*	1	1	1	1	1	0	*	9	*	*	*	*	*	*	*	*	*	*	1	*	*	*	0	*	*	*	-	*	*	*
	GL18-2-20150615	2015 06 15	< 10	284	1,410	154	425	17.3	1,550	< 1.0	6.6	< 20	< 10a	< 200	< 0.050	< 1.0	< 1.0	< 2.0a	< 1.0	< 50	< 0.20	37.4	< 5.0	< 1.0	< 0.10	4,200	< 0.10	< 60	< 50	-	< 0.20	< 60	< 10
	GL18-2-20170529	2017 05 29	< 10	282	1,390	161	476	16.9	1,460	< 1.0	7.1	< 30	< 15a	< 300	< 0.050	< 1.0	< 1.0	2.4	< 1.0	< 50	< 0.20	41.1	< 5.0	< 1.0	< 0.10	4,260	< 0.10	< 90	< 50	-	2.23	< 90	< 15
	GL18-2-180604	2018 06 04	< 5.0	306	1,610	158	524	17.7	1,450	< 0.20	6.92	9.7	< 0.10	32.6	0.018	< 0.50	< 0.10	< 0.40a	< 0.20	11.6	< 0.010	41.5	< 0.40	< 0.50	< 0.050	4,630	< 0.020	< 0.20	< 5.0	< 1.0	0.134	< 1.0	< 4.0
	DUP-180604	Duplicate	< 5.0	311	1,600	158	521	17.9	1,450	< 0.20	6.95	9.5	< 0.10	31.5	0.027	< 0.50	< 0.10	< 0.40a	< 0.20	11	< 0.010	41.6	< 0.40	< 0.50	< 0.050	4,590	< 0.020	< 0.20	< 5.0	< 1.0	0.132	< 1.0	< 4.0
	QA/QC RPD%		*	2	1	0	1	1	0	*	0	2	*	3	*	*	*	*	*	5	*	0	*	*	*	1	*	*	*	*	2	*	*
GL20-1	GL20-1-20091112	2009 11 12	124	145	10,400	154	452	390	1,780	< 2	27	290	< 0.4	6,230	< 0.1	35	30.3	< 10a	5	90	-	10	60	< 6	< 0.10	2,290	< 0.1	8	93	-	< 4	33	< 10
	GL20-1-20100811	2010 08 11	209	132	17,400	162	471	490	1,730	< 2	34	410	< 0.4	6,190	< 0.1	44	35.7	< 10a	< 1	70	-	6	60	< 6	< 0.1	2,370	< 0.1	9	< 100	-	< 4	33	< 10
	GL20-1-20110629	2011 06 29	13	14.5	923	18.6	34	400	201	< 0.2	11.2	31	< 0.04	531	< 0.01	5.3	3.47	7	< 0.1	8	-	1.2	7	24.6	< 0.01	263	< 0.01	0.8	< 10	-	< 0.4	3	8
	GL20-1-20111217	2011 12 17	1,340	128	13,500	165	320	520	1,950	< 20	40	300	< 4a	6,300	< 1a	80	31	< 100a	< 10	< 100	-	< 10	< 100	< 60a	< 1.0	2,300	3.3	< 10	< 100	-	< 40a	20	< 100
	DUPA-20111217	Duplicate	< 500a	127	8,430	163	310	510	1,820	< 20	40	200	< 4a	6,400	< 1a	80	33	< 100a	< 10	< 100	-	< 10	< 100	< 60a	< 1.0	2,300	2.8	< 10	< 100	-	< 40a	30	< 100
	QA/QC RPD%		*	1	46	1	3	2	7	*	0	40	*	2	*	0	6	*	*	*	-	*	*	*	*	0	16	*	*	-	*	40	*
	GL20-1-20120625	2012 06 25	120	133	15,400	170	340	420	1,960	3	14	280	< 0.4	4,480	< 0.1	52	27	< 10a	< 1	70	-	1	60	< 6	< 0.10	2,260	< 0.1	8	< 100	-	4	21	10
	GL20-1-20121203	2012 12 03	< 500a	102	13,400	150	261	547	1,860	< 20	< 20.0	300	< 4.0a	4,800	< 1.00a	92.1	43.3	< 100a	< 10	< 100	-	< 10	< 100	< 60a	< 1.00	2,270	< 1.00	< 10	< 100	-	< 40a	29.2	< 100
	GL20-1-20130625	2013 06 25	116	87.4	4,040	221	1,120	390	2,640	2.5	23.3	250	< 25a	4,130	< 0.50a	35	28.4	5.9	3.5	69	< 0.20	10	76.4	< 10	< 0.10	2,890	< 1.0	< 150	104	-	2.79	< 150a	32
	GL20-1-20140605	2014 06 05	74	65.4	2,750	181	494	229	2,430	3.9	19.4	117	< 25a	2,700	0.56	16.9	19.1	17.9	5	69	< 0.20	27.4	54.9	< 10	< 0.10	2,520	< 1.0	< 150	< 50	-	42.7	< 150a	< 25
	DUP4-20140605	Duplicate	80	65.7	2,800	178	489	225	2,390	4.3	21.2	117	< 25a	2,620	0.57	19.1	21.3	20.1	5.3	65	< 0.20	28.1	60.5	< 10	0.11	2,500	< 1.0	< 150	< 50	-	43.5	< 150a	< 25
	QA/QC RPD%		8	0	2	2	1	2	2	10	9	0	*	3	2	12	11	12	6	6	*	3	10	*	*	1	*	*	*	-	2	*	*
	GL20-1-20141126	2014 11 26	173	93.8	6,170	173	310	275	2,090	1.6	20.6	374	< 15a	3,410	< 0.50a	34.2	22.6	< 5.0a	< 1.0	61	< 0.20	11.6	45.8	< 10	< 0.10	2,850	< 1.0	< 90	95	-	0.95	< 90	< 15
	GL20-1-20150611	2015 06 11	74	64.3	2,080	167	424	236	2,460	4	14.5	122	< 25a	3,010	0.636	16.9	29.9	19.2	1.5	86	< 0.20	29.3	87.6	2.4	0.2	2,210	0.11	< 150	< 50	-	48.2	< 150a	< 25
	GL20-1-200826	2020 08 26	19.6	5.1	897	25.6	54.1	40.5	404	0.198	3.46	58.9	0.099	24.3	0.0021	5.18	3.82	< 0.10	0.359	0.614	< 0.010	1.01	8.64	< 0.10	< 0.010	519	0.17	0.865	12.5	< 0.20	0.0021	2.43	< 1.0
	GL20-1-201020	2020 10 20	66.5	88.1	8,910	83.7	247	173	1,540	0.678	12.2	280	0.023	1,760	0.0205	25	18.7	0.36	0.051	65.4	< 0.010	3.93	32.7	0.27	< 0.010	2,500	< 0.0040	3.94	88.8	0.76	2.55	22.3	1.2
	GL20-1-210511	2021 05 11	76.7	68	11,600	125	401	175	1,830	0.624	13.6	255	0.025	2,280	0.0091	19.3	17.7	1.26	0.072	86.6	< 0.020	4.62	37.6	0.88	< 0.010	2,000	< 0.0040	3.52	90.6	0.59	7.02	20.6	1.7
	GL20-1-210924	2021 09 24	83.1	43.9	9,640	111	300	178	2,110	0.729	22.3	246	0.018	1,700	0.0145	25.2	18.8	0.74	0.055	47.1	< 0.010	8.91	40.9	0.97	< 0.010	1,920	< 0.0040	4.53	86.9	0.5	1.41	21.7	1.5
	DUP 2-210924	Duplicate	81.9	41.9	9,730	108	299	177	2,100	0.723	22	253	0.019	1,610	0.014	25.4	19.1	0.73	< 0.050	43.7	< 0.010	5.2	39.5	1.01	< 0.010	1,980	< 0.0040	4.51	82.2	0.42	1.29	20.5	1.6
	QA/QC RPD%		1	5	1	3	0	1	0	1	1	3	*	5	4	1	2	1	*	7	*	53	3	4	*	3	*	0	6	*	9	6	*
	GL20-1-220531	2022 05 31	58.7	61.2	19,400	104	409	136	1,660	0.483	13.3	183	<0.050	1890	0.0118	12.5	12.5	1.9	<0.250	77.4	< 0.010	6.17	30	0.67	<0.050	1,710	<0.0200	2.68	42.4	<1.00	14.2	14.8	<5.0
	GL20-1-220927	2022 09 27	71.2	62.9	10,200	825	256	136	1,470	0.495	10.8	200	<0.050	2800	0.0726	15.2	12.8	0.6	<0.250	79.9	< 0.010	3.49	25.2	0.7	<0.050	1,510	<0.0200	3.46	59.9	<1.00	5.86	16.1	<5.0
	GL20-1-231024	2023 10 24	73.2	49.8	6880	77.6	198	126	1,450	0.554	9.75	195	<0.050	2170	<0.0100	18.7	11.7	0.59	<0.250	77.4	<0.010	4.97	22.1	<0.50	<0.050	1230	<0.0200	4.11	66	<1.00	2.62	18.8	<5.0
GL21-1	GL21-1-20091117	2009 11 17	174	216	140	897	30	37	2,590	< 2	6	20	< 0.4	< 40	0.13	8	0.9	< 10a	< 1	140	-	68	20	< 6	< 0.10	12,700	0.36	< 1	16	-	792	3	< 10
	GL21-1-20110705	2011 07 05	< 5	201	10	4	< 1	< 1	386	0.3	3.8	21	< 0.04	6	0.2	22.6	0.7	15	< 0.1	120	-	61.4	16	43.8	< 0.01	13,600	0.18	< 0.1	< 10	-	848	4	10
	GL21-1-20120625	2012 06 25	< 50a	219	< 50	1,000	< 10	36	2,920	< 2	4	20	< 0.4	< 40	0.14	26	1.2	10	< 1	120	-	63	10	10	< 0.10	14,600	0.13	< 1	< 100	-	799	4	10
	GL21-1-20121204	2012 12 04	< 50a	206	< 50	919	< 10	34.1	2,940	< 2.0	4.4	20	< 0.40	< 40	< 0.10	22.9	< 0.20	10	< 1.0	100	-	64.3	20	11.2	< 0.10	15,000	0.2	< 1.0	< 100	-	999	4.71	< 10
GL22-1	GL 22-1-20091110	2009 11 10	109	95	< 100	198	951	16.5	166	< 2	6	110	< 0.4	< 40	< 0.1	< 4	3.1	< 10a	< 1	20	-	14	20	< 6	< 0.10	3,700	< 0.1	< 1	< 10	-	42	3	10
	GL22-1-20100811	2010 08 11	395	82	600	186	1,260	16	139	< 2	3	110	< 0.4	70	< 0.10	< 4	3.1	< 10a	< 1	20	-	14	20	< 6	< 0.1	3,800	< 0.1	< 1	< 100	-	51	2	< 10
GL23-1	GL 23-1-20091110	2009 11 10	< 50a	88	< 100	224	951	17.6	222	< 2	3	80	< 0.4	< 40	0.22	< 4	3.1	< 10a	< 1	30	-	15	20	< 6	< 0.10	3,770	< 0.1	< 1	< 10	-	75	2	< 10
	GL 23-1-20120627	2012 06 27	< 50a	81	60	228	80	15	231	< 2	< 2	70	< 0.4	< 40	< 0.1	7	< 0.2	< 10a	< 1	30	-	17	10	< 6	< 0.10	4,010	< 0.1	2	< 100	-	149	3	< 10
	GL23-1-20100811	2010 08 11	< 50a	77	160	201	638	15	207	< 2	2	80	< 0.4	40	< 0.1	< 4	1.6	< 10a	< 1	30	-	16	20	< 6	< 0.1	4,050	< 0.1	< 1	< 100	-	95	2	< 10
	GL23-1-20110704	2011 07 04	< 5	87.1	25	229	368	16.6	238	< 0.2	1.2	68	< 0.04	24	0.09	20.9	2.14	2	< 0.1	38	-	19.9	14	2.5	< 0.01	4,120	< 0.01	< 0.1	< 10	-	168	7.4	2
	GL23-1-20121203	2012 12 03	< 50a	72.4	17	21.8	454	16.4	233	< 2	< 2.0	70	< 0.40	< 40	0.18	12	7.61	< 10a	< 1	20	-	19.9	20	< 6.0	< 0.10	4,100	0.1	11.2	< 10	-	151	4.64	< 10
	GL23-1-20130627	2013 06 27	< 10a	82.6	35	233	253	16.5	238	< 0.50	< 1.0	72	< 5.0a	< 100	0.112	< 0.50	1.05	1.6	< 1.0	< 50	< 0.20	16.5	11.1	< 1.0	< 0.050	3,670	< 0.20	< 30	< 50	-	141	< 30	< 5.0
	GL23-1-20140603	2014 06 03	< 10a	75.8	< 30	215	185	14.7	219	< 0.50	< 1.0	67	< 5.0a	< 100	0.345	< 0.50	0.77	1.5	< 1.0	< 50	< 0.20	18.6	9.5	< 1.0	< 0.050	3,430	< 0.20	< 30	< 50	-	143	< 30	< 5.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals																														
			Aluminum	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Lithium	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
			µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GL23-1 (Cont'd)	GL23-1-20141124	2014 11 24	< 10a	87.1	39	240	208	17.5	249	< 0.50	< 1.0	75	< 5.0a	< 100	0.313	< 0.50	0.7	1.6	< 1.0	< 50	< 0.20	16.8	9.5	< 1.0	< 0.050	3,990	< 0.20	< 30	< 50	-	139	< 30	< 5.0
	GL23-1-20150608	2015 06 08	< 10	82.6	< 30	224	19	15.3	211	< 0.50	< 1.0	72	< 5.0a	< 100	0.327	< 0.50	< 0.50	2.4	< 1.0	< 50	< 0.20	15.8	9	< 1.0	< 0.050	3,870	< 0.010	< 30	< 50	-	116	< 30	< 5.0
	GL23-1-20151104	2015 11 04	< 10	79	< 30	208	642	14.8	194	< 0.50	< 1.0	67	< 5.0a	< 100	0.307	< 0.50	0.56	1.2	< 1.0	< 50	< 0.20	17.3	13.4	< 1.0	< 0.050	3,700	0.011	< 30	< 50	-	99.1	< 30	< 5.0
	GL23-1-20160526	2016 05 26	< 10	78.4	< 30	215	77	14.9	203	< 0.50	< 1.0	70	< 5.0a	< 100	0.312	< 0.50	< 0.50	3	< 1.0	< 50	< 0.20	13.8	10.5	< 1.0	< 0.050	3,750	< 0.010	< 30	< 50	-	84.1	< 30	< 5.0
	GL23-1-20160531	2016 05 31	< 50	84.8	< 100	228	25	-	205	< 1	< 5	70	< 1	40	0.4	< 5	< 0.5	< 2a	< 1	39	-	17	9	< 5	< 0.5	4,040	< 0.2	-	< 50	-	90	< 10	< 40
	GL23-1-20170525	2017 05 25	< 10	82.6	< 30	229	33	14.9	191	< 0.50	< 1.0	72	< 5.0a	< 100	0.216	< 0.50	< 0.50	3.5	< 1.0	< 50	< 0.20	13.6	9.7	< 1.0	< 0.050	4,100	< 0.010	< 30	< 50	-	74.7	< 30	< 5.0
	DUP3-20170525	Duplicate	< 10	85	< 30	228	43	15.8	203	< 0.50	< 1.0	78	< 5.0a	< 100	0.219	< 0.50	< 0.50	3.4	< 1.0	< 50	< 0.20	13.7	9.8	< 1.0	< 0.050	4,270	< 0.010	< 30	< 50	-	73.4	< 30	< 5.0
	QA/QC RPD%		*	3	*	0	26	6	6	*	*	8	*	*	1	*	*	3	*	*	*	1	1	*	*	4	*	*	*	-	2	*	*
	GL23-1-180529	2018 05 29	< 5.0	86.2	< 10	254	19.3	15	201	< 0.20	< 0.50	63	< 0.10	29.9	0.1	< 0.50	0.35	20	0.6	38.9	< 0.010	12.4	10	< 0.50	< 0.050	4,000	< 0.020	0.82	< 5.0	< 1.0	77.7	< 1.0	< 4.0
	GL23-1-190523	2019 05 23	< 5.0	87.3	< 10	231	5.34	15.7	199	< 0.20	0.56	71.7	< 0.10	34.4	0.076	0.8	0.35	1.95	< 0.20	42.5	< 0.010	13.6	10.6	< 0.50	< 0.050	4,940	< 0.020	< 0.20	< 5.0	< 1.0	80.5	< 1.0	< 4.0
	GL23-1-190917	2019 09 17	< 5.0	85.2	< 10	222	455	14.5	191	< 0.20	0.52	72.8	< 0.10	31	0.409	1.23	0.42	2.72	< 0.20	39.8	-	16.7	13.5	< 0.50	< 0.050	4,780	< 0.020	< 0.20	< 5.0	< 1.0	75.6	1.1	< 4.0
	GL23-1-200617	2020 06 17	< 1.0	85.7	< 2.0	192	316	13.7	178	< 0.050	0.581	64.8	< 0.010	30.4	0.0823	0.11	0.746	1.97	< 0.050	36.7	< 0.010	15	10.4	0.34	< 0.010	4,430	0.0073	< 0.050	< 0.20	< 0.20	68.9	0.97	1.2
	GL23-1-200910	2020 09 10	1.2	101	< 2.0	213	870	14.9	189	< 0.050	0.561	69.6	< 0.010	29.5	0.321	0.15	0.69	3.02	< 0.050	41.7	-	17	13.3	0.26	< 0.010	4,640	0.0139	< 0.050	< 0.20	< 0.20	74.7	0.79	2.2
	GL23-1-210513	2021 05 13	< 1.0	82.7	< 2.0	212	165	14.8	191	< 0.050	0.685	67.4	< 0.010	28.9	0.0358	0.33	0.574	1.68	< 0.050	36.7	< 0.010	13.8	9.61	0.29	< 0.010	3,980	< 0.0040	< 0.050	< 0.20	< 0.20	68.5	0.76	< 1.0
	DUP 1-210513	Duplicate	< 1.0	90.1	< 2.0	210	146	14.7	189	< 0.050	0.672	65.9	< 0.010	31.3	0.0323	0.35	0.523	1.97	0.075	40.6	< 0.010	13.6	9.58	0.26	< 0.010	4,170	< 0.0040	< 0.050	< 0.20	< 0.20	74.6	0.6	< 1.0
	QA/QC RPD%		*	9	*	1	12	1	1	*	2	2	*	8	10	*	9	16	*	10	*	1	0	*	*	5	*	*	*	*	9	*	*
	GL23-1-220606	2022 06 06	2.9	86.3	4.5	232	309	16.3	197	<0.050	0.478	68.8	<0.010	37.9	0.0486	0.21	0.755	4.25	<0.050	39.6	< 0.010	14.4	8.48	0.2	0.022	4,770	<0.0040	0.065	0.29	<0.20	73.5	<1.00	<1.0
	GL23-1-230523	2023 05 23	<1.0	92	<2.0	224	437	16.3	193	<0.050	0.452	68.1	<0.010	24.8	0.049	<0.50	1.36	2.07	0.091	38.6	<0.010	13.4	8.45	0.23	0.016	4680	0.0047	<0.050	<0.20	<0.20	72	<1.00	<1.0
	GL23-1-231023	2023 10 23	2.1	92.9	3.7	231	888	16.1	194	<0.050	0.461	77.9	<0.010	26.1	0.136	<0.50	1.89	2.63	<0.050	33.8	<0.010	16.8	9.35	0.21	<0.010	4900	0.0104	0.05	<0.20	<0.20	72	<1.00	1.7
GL24-1	GL24-1-20100811	2010 08 11	94	93	190	242	1,400	15	254	< 2	2	80	< 0.4	90	0.19	< 4	1.4	< 10a	< 1	20	-	38	20	< 6	< 0.1	4,170	< 0.1	< 1	< 100	-	94	2	< 10
	GL24-1-20160531	2016 05 31	< 50	73.6	< 100	203	7	-	210	< 1	< 5	70	< 1	100	< 0.1a	< 5	< 0.5	< 2a	< 1	25	-	11	3	9	< 0.5	2,470	< 0.2	-	< 50	-	75.9	< 10	< 40
	GL24-1-180612	2018 06 12	< 5.0	91.6	< 10	260	342	12.6	391	< 0.20	1.6	61.7	< 0.10	78.6	0.342	< 0.50	1.95	5.47	< 0.20	43.1	< 0.010	24.9	15.1	2.39	< 0.050	3,760	< 0.020	< 0.20	< 5.0	< 1.0	154	2.8	< 4.0
	GL24-1-20180927	2018 09 27	< 5.0	130	< 10	349	810	15.2	516	0.21	1.67	83.3	< 0.10	89.1	0.256	< 0.50	2.12	6.55	< 0.20	46.2	< 0.010	22.6	19.8	6.22	< 0.050	5,100	0.029	< 0.20	< 5.0	-	192	3.3	< 4.0
	GL24-1-190917	2019 09 17	36.6	76.8	23	220	104	10.9	308	< 0.20	1.66	46.1	< 0.10	95.9	0.139	1.51	0.9	2.51	< 0.20	42.7	-	24.2	8.71	2.49	< 0.050	3,320	0.02	< 0.20	< 5.0	< 1.0	126	3	45.2
	GL24-1-200910	2020 09 10	< 1.0	64.6	< 2.0	169	24.7	9.03	226	0.148	1.18	35.2	< 0.010	77.2	0.105	0.35	0.555	1.85	< 0.050	31.6	-	23.6	4.64	2.35	< 0.010	2,620	0.0154	0.053	0.88	< 0.20	101	0.84	1.1
	GL24-1-231023	2023 10 23	<1.0	53.2	<2.0	169	133	10.4	243	0.14	1.73	40.3	<0.010	91.6	0.0788	1.94	0.549	2.34	<0.050	33.8	<0.010	14.6	5.62	10.8	<0.010	2320	0.0198	<0.050	<0.20	<0.20	91.1	3.04	<1.0
GL25-1	GL25-1-20091117	2009 11 17	< 50a	246	< 100	223	3,030	13.3	242	< 2	2	80	< 0.4	< 40	0.2	< 4	6.7	< 10a	< 1	20	-	20	20	< 6	< 0.10	7,760	0.18	< 1	< 10	-	49	< 1	10
	GL25-1-20100812	2010 08 12	221	209	< 100	233	2,330	12.5	234	< 2	< 2	50	< 0.4	< 40	0.1	10	5.3	< 10a	< 1	20	-	7	20	< 6	< 0.1	7,640	< 0.1	< 1	< 10	-	8	4	< 10
GL26-1	GL26-1-20091112	2009 11 12	< 50a	159	460	62.7	1,730	15.2	167	2	42	20	0.6	< 40	0.28	< 4	7	< 10a	< 1	180	-	275	30	< 6	< 0.10	1,670	< 0.1	< 1	< 10	-	52	< 1	< 10
	GL26-1-20100812	2010 08 12	< 50a	128	850	50.5	1,800	13.9	135	< 2	33	20	0.7	< 40	< 0.1	6	0.8	< 10a	< 1	200	-	56	< 10	< 6	< 0.1	1,670	< 0.1	< 1	< 10	-	12	2	10
	GL30-5-20100812	Duplicate	62	140	1,070	55.1	1,830	15.4	152	< 2	26	20	1.2	< 40	< 0.10	6	0.6	< 10a	< 1	190	-	51	< 10	< 6	< 0.1	1,670	< 0.1	< 1	< 10	-	11	2	10
	QA/QC RPD%		*	9	23	9	2	10	12	*	24	0	53	*	*	0	29	*	*	5	-	9	*	*	*	0	*	*	*	-	9	0	0
GL26-2	GL26-2-20091116	2009 11 16	< 50a	122	960	78.8	2,440	8.8	185	< 2	5	90	< 0.4	< 40	< 0.1	< 4	4	< 10a	< 1	60	-	25	< 10	< 6	< 0.10	1,550	< 0.1	< 1	< 10	-	27	1	< 10
	GL26-2-20100812	2010 08 12	83	93.9	890	62.3	1,130	8.3	141	< 2	5	60	< 0.4	< 40	< 0.10	5	2.6	< 10a	< 1	60	-	24	< 10	< 6	< 0.1	1,590	< 0.1	< 1	< 10	-	27	2	< 10
	GL26-2-20110629	2011 06 29	< 5	120	2,230	81.4	1,140	7.4	173	< 0.2	7	58	< 0.04	16	0.01	3.8	2.26	2	< 0.1	64	-	16.4	4	8.7	< 0.01	2,120	< 0.01	< 0.1	< 10	-	24.1	1.2	2
	GL26-2-20120625	2012 06 25	< 50a	127	2,280	86	1,060	8	182	< 2	4	50	< 0.4	< 40	< 0.10	< 4	1.6	< 10a	< 1	60	-	11	< 10	< 6	< 0.10	1,720	< 0.1	< 1	< 100	-	26	< 1	< 10
	GL26-2-20121204	2012 12 04	< 50a	108	2,070	73.6	883	7.7	172	< 2.0	5.2	50	< 0.40	< 40	< 0.10	5.6	7.16	< 10a	< 1.0	50	-	14.1	< 10	< 6.0	< 0.10	1,700	< 0.10	< 1.0	< 10	-	26.1	1.63	< 10
	GL26-2-20130626	2013 06 26	< 10a	129	2,300	85.5	731	8.7	189	< 0.50	4.3	37	< 5.0a	< 100	< 0.050	< 0.50	1.09	< 1.0a	< 1.0	70	< 0.20	19	< 5.0	< 1.0	< 0.050	1,610	< 0.20	< 30	< 50	-	28.2	< 30	< 5.0
	GL26-2-20131114	2013 11 14	< 10a	120	1,360	82.2	679	8.3	171	< 0.50	2.9	33	< 5.0a	< 100	< 0.050	< 0.50	0.69	< 1.0a	< 1.0	64	< 0.20	19.5	< 5.0	< 1.0	< 0.050	1,570	< 0.20	< 30	< 50	-	25.7	< 30	< 5.0
	GL26-2-20140605	2014 06 05	< 10a	126	1,530	85.1	698	8.9	191	< 0.50	3	37	< 5.0a	< 100	< 0.050	< 0.50	0.67	< 1.0a	< 1.0	73	< 0.20	18.3	< 5.0	< 1.0	< 0.050	1,610	< 0.20	< 30	< 50	-	24.7	< 30	< 5.0
	DUP2-20140605	Duplicate	< 10a	128	1,550	84.6	705	8.9	193	< 0.50	2.9	37	< 5.0a	< 100	< 0.050	< 0.50	0.6	< 1.0a	< 1.0	74	< 0.20	17.8	< 5.0	< 1.0	< 0.050	1,610	< 0.20	< 30	< 50	-	24.8	< 30	< 5.0
	QA/QC RPD%		*	2	1	1	1	*	1	*	*	*	*	*	*	*	*	*	*	*	*	3	*	*	*	0	*	*	*	-	0	*	*
	GL26-2-20141117	2014 11 17	< 10a	121	877	81.7	658	8.5	176	< 0.50	1.8	32	< 5.0a	< 100	< 0.050	< 0.50	0.54	< 1.0a	< 1.0	73	< 0.20	20.4	< 5.0	< 1.0	< 0.050	1,610	< 0.20	< 30	< 50	-	23.8	< 30	< 5.0
	GL26-2-20150608	2015 06 08	< 10	122	276	82	615	8.3	189	< 0.50	< 1.0	32	< 5.0a	< 100	< 0.050	< 0.50	0.58	< 1.0a	< 1.0	75	< 0.20	17.9	< 5.0	< 1.0	< 0.050	1,620	< 0.010	< 30	< 50	-	26.2	< 30	< 5.0
	GL26-2-20151104	2015 11 04	< 10	121	921	76.2	597	8.5	174	< 0.50	1.8	28	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	69	< 0.20	22	< 5.0	< 1.0	< 0.050	1,620	< 0.010	< 30	< 50	-	24.9	< 30	< 5.0
GL26-3	GL26-3-20091111	2009 11 11	< 50a	99.8	1,470	105	3,960	8.1	259	< 2	5	100	< 0.4	< 40	0.13	< 4	11.7	< 10a	< 1	20	-	24	< 10	< 6	< 0.10	1,710	< 0.1	< 1	< 10	-	45	1	30
	GL26-3-20100812	2010 08 12	62	75.3	170	84.9	1,090	8	197	< 2	2	70	< 0.4	< 40	< 0.1	4	2	< 10a	< 1	30	-	40	< 10	< 6	< 0.1	1,700	< 0.1	< 1	< 10	-	52	3	< 10
GL27-1	GL27-1-20091116	2009 11 16	< 50a	14.5	340	14	243	14.6	632	< 2	95	410	< 0.4	< 40	0.26	< 4	< 0.2	< 10a	< 1	210	-	243	< 10	< 6	< 0.10	2,970	< 0.1	< 1	< 10	-	< 4	3	< 10
	GL27-1-20100812	2010 08 12	129	10	700	10.2	123	14.6	645	< 2	68	440	< 0.4	50	< 0.10	9	< 0.2	< 10a	< 1	210	-	174	< 10	< 6	< 0.1	2,920	< 0.1	< 1	< 10	-	< 4	4	20
	GL27-1-20110629	2011 06 29	21	14	1,400	12.9	202	13.3	622	1.7	44.9	452	< 0.04	46	0.07	11	0.43	1	< 0.1	187	-	54.1	< 1	8.1	< 0.01	3,230	< 0.01	< 0.1	< 10	-	1	3.8	< 1
	GL 27-1-20120626	2012 06 26	< 50a	14	1,500	14	140	13	655	< 2	38	400	< 0.4	80	< 0.1	36	< 0.2	< 10a	< 1	190	-	48	< 10	< 6	< 0.1	3,020	< 0.1	< 1	< 100	-	< 4	4	< 10
	GL27-1-20121204	2012 12 04	< 50a	11.6	482	10.6	126	12.7	648	< 2.0	32	380	< 0.40	60	< 0.10	13.3	3.62	< 10a	< 1.0	160	-	43.2	< 10	< 6.0	< 0.10	3,040	< 0.10	< 1.0	< 10	-	< 4.0	4.14	< 10
	GL27-1-20130626	2013 06 26	< 15a	13.5	988	13.3	136	14.1	665	0.63	51.3	415	< 5.0a	< 100	< 0.25a	< 2.5	< 0.50	< 2.5a	< 1.0	220	< 0.20	72.6	< 5.0	< 5.0	0.103	2,670	< 0.50	< 30	< 50	-	1.54	< 30	< 5.0
	GL27-1-20131113	2013 11 13	< 15a	14.5	852	13.9	146	14.1	704	< 0.50	35.5	422	< 5.0a	< 100	< 0.25a	< 2.5	< 0.50	< 2.5a	< 1.0	219	< 0.20	56.6	< 5.0	< 5.0	< 0.050	2,960	< 0.50	< 30	< 50	-	1.41	< 30	< 5.0
	GL27-1-20140605	2014 06 05	< 10a	14.6	1,080	14.1	129	14.9	704	< 0.50	34.8	439	< 5.0a	< 100	< 0.10	< 1.0	< 0.50	< 1.0a	< 1.0	222	< 0.20	44.5	< 5.0	< 2.0	< 0.050	3,060	< 0.20	< 30	< 50	-	1.08	< 30	< 5.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals																														
			Aluminum	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Lithium	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc
			µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GL27-1 (Cont'd)	GL27-1-20141118	2014 11 18	< 15a	13.4	882	12.9	117	13	619	< 0.50	28	419	< 5.0a	< 100	< 0.25a	< 2.5	< 0.50	< 2.5a	< 1.0	207	< 0.20	34.9	< 5.0	< 5.0	< 0.050	2,900	< 0.50	< 30	< 50	-	1.08	< 30	< 5.0
	GL27-1-20150610	2015 06 10	< 10	13.7	878	12.9	110	13.9	706	< 0.50	26.5	406	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	204	< 0.20	42.6	< 5.0	< 1.0	< 0.050	2,930	< 0.050	< 30	< 50	-	1.23	< 30	< 5.0
	GL27-1-20151104	2015 11 04	< 10	13.4	39	12.9	106	13.2	626	< 0.50	20.5	365	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	198	< 0.20	36.2	< 5.0	< 1.0	< 0.050	2,770	< 0.020	< 30	< 50	-	1.02	< 30	< 5.0
	GL27-1-20160526	2016 05 26	< 10	13.9	662	13.8	102	14.1	708	< 0.50	17.4	432	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	221	< 0.20	43.2	< 5.0	< 1.0	< 0.050	2,900	< 0.050	< 30	< 50	-	1.02	< 30	< 5.0
	DUP-1-20160526	Duplicate	< 10	13.1	637	12.9	99	13.4	684	< 0.50	17.9	412	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	212	< 0.20	43.5	< 5.0	< 1.0	< 0.050	2,810	< 0.050	< 30	< 50	-	1.02	< 30	< 5.0
	QA/QC RPD%		*	6	4	7	3	5	3	*	3	5	*	*	*	*	*	*	*	4	*	1	*	*	*	3	*	*	*	-	0	*	*
	GL27-1-20160919	2016 09 19	< 10	14.2	695	13.5	104	13.5	633	< 0.50	17.8	433	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	204	< 0.20	37.2	< 5.0	< 1.0	< 0.050	2,970	< 0.050	< 30	< 50	-	0.9	< 30	< 5.0
	GL27-1-20170525	2017 05 25	< 10	14.5	713	14.3	101	14.2	710	< 0.50	33.1	451	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	233	< 0.20	79	< 5.0	< 1.0	< 0.050	3,120	< 0.050	< 30	< 50	-	0.94	< 30	< 5.0
	GL27-1-20170925	2017 09 25	< 10	14.1	690	13.8	95	13.7	645	< 0.50	17	438	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	220	< 0.20	44.9	< 5.0	< 1.0	< 0.050	2,960	< 0.020	< 30	< 50	-	0.82	< 30	< 5.0
	GL27-1-180815	2018 08 15	< 5.0	14.9	521	12.7	82.1	12.4	584	< 0.20	28.7	470	< 0.10	75	0.038	< 0.50	< 0.10	< 0.40a	< 0.20	217	< 0.010	51.2	< 0.40	< 0.50	< 0.050	3,200	< 0.020	< 0.20	< 5.0	< 1.0	1.4	< 1.0	< 4.0
	GL27-1-180919	2018 09 19	< 5.0	17.1	633	13.8	83.2	13	650	< 0.20	23.7	479	< 0.10	64.6	0.01	< 0.50	< 0.10	< 0.40a	< 0.20	228	< 0.010	29.2	< 0.40	< 0.50	< 0.050	3,180	< 0.020	< 0.20	< 5.0	1.2	0.965	< 1.0	< 4.0
	GL27-1-190527	2019 05 27	7.8	14.8	630	13	91.5	12.6	602	< 0.20	18	472	< 0.10	70	< 0.010	0.86	< 0.10	< 0.40a	< 0.20	216	< 0.010	20.9	< 0.40	< 0.50	< 0.050	3,220	< 0.020	< 0.20	< 5.0	1.4	0.983	< 1.0	< 4.0
	GL27-1-190919	2019 09 19	< 5.0	15.3	560	13.2	90.6	13.2	605	< 0.20	16.4	443	< 0.10	69.6	< 0.010	< 0.50	< 0.10	< 0.10	< 0.20	212	< 0.010	7.11	< 0.40	< 0.50	< 0.050	3,070	< 0.020	< 0.20	< 5.0	1.2	0.933	< 1.0	< 4.0
	GL27-1-200608	2020 06 08	2.8	16.7	636	12.5	90.8	13.5	712	< 0.050	17.7	474	0.025	60.4	0.0051	0.8	0.0068	0.46	< 0.050	194	< 0.010	16.7	0.067	< 0.10	< 0.010	3,320	< 0.0040	< 0.050	0.24	1.35	0.666	0.31	1
	GL27-1-201022	2020 10 22	< 1.0	14.2	551	12.1	82.8	11	566	< 0.050	8.73	424	0.028	64.7	0.0099	< 0.10	0.0068	< 0.10	< 0.050	200	< 0.010	13.4	< 0.040	< 0.10	< 0.010	2,880	< 0.0040	< 0.050	< 0.20	1.25	0.585	0.27	< 1.0
	GL27-1-210602	2021 06 02	< 1.0	17.4	112	14.4	116	13.4	672	< 0.050	14.9	458	0.015	68.2	0.0027	0.12	0.0088	< 0.10	< 0.050	241	< 0.010	14.5	< 0.040	< 0.10	< 0.010	3,060	< 0.0040	< 0.050	< 0.20	1.28	0.741	< 0.20	< 1.0
	GL27-1-210924	2021 09 24	1.3	18.1	533	15	108	15	721	0.065	12.2	528	0.023	155	< 0.0020	0.27	0.0151	0.19	< 0.050	231	< 0.010	9.23	0.08	< 0.10	< 0.010	2,900	< 0.0040	0.083	0.28	1.38	0.824	< 0.20	1
	GL27-1-220531	2022 05 31	<2.0	12.6	683	15.4	92.3	13.4	700	<0.100	10.1	459	0.033	67.4	<0.0080	<0.20	<0.0100	<0.20	<0.100	211	< 0.010	29.9	0.144	<0.20	<0.020	2,980	<0.0080	<0.100	<0.40	1.36	0.566	<2.00	<2.0
	GL27-1-220927	2022 09 27	<2.0	15.1	625	12.8	82.9	13	611	<0.100	9.06	467	0.036	73.5	<0.0040	0.23	<0.0100	<0.20	<0.100	216	< 0.010	34.4	<0.080	1.46	<0.020	3130	<0.0080	<0.100	<0.40	1.37	0.687	<2.00	<2.0
	GL27-1-230525	2023 05 25	2.3	13.8	707	14.2	80.3	13.6	632	<0.100	10	465	0.038	73.2	<0.0100	<1.00	<0.0100	<0.20	<0.100	213	<0.010	35.7	<0.080	0.21	<0.020	3050	<0.0080	<0.100	<0.40	1.44	0.763	<2.00	<2.0
	GL27-1-231024	2023 10 24	1.3	15.9	500	14	72.3	14.3	637	<0.050	9.72	498	0.049	67.1	<0.0260	<0.50	0.0052	<0.10	<0.050	200	<0.010	36	0.309	<0.10	<0.010	3030	<0.0040	<0.050	<0.20	1.65	0.448	<1.00	<1.0
GL27-2	GL27-1-20111217	2011 12 17	< 50a	13.6	1,140	12	178	11.2	604	2	59	410	< 0.4	70	0.13	8	< 0.2	< 10a	< 1	230	-	68	< 10	< 6	< 0.10	3,180	0.23	< 1	< 10	-	< 4	2	< 10
	GL27-2-20091116	2009 11 16	458	300	2,420	731	5,380	33	2,720	< 2	6	60	< 0.4	< 40	0.1	< 4	19.9	< 10a	< 1	50	-	59	30	< 6	< 0.10	15,000	0.28	< 1	15	-	90	3	< 10
	GL27-2-20100812	2010 08 12	410	298	690	679	1,940	40	2,900	< 2	7	40	< 0.4	60	< 0.1	8	9.2	< 10a	< 1	80	-	53	20	< 6	< 0.1	16,900	0.17	< 1	15	-	91	9	< 10
GL27-3	GL27-3-20091112	2009 11 12	< 50a	354	1,440	1,200	996	26	3,300	< 2	9	20	< 0.4	< 40	0.17	< 4	7	< 10a	< 1	70	-	51	20	< 6	< 0.10	11,500	0.22	< 1	< 10	-	94	1	20
	GL27-3-20100812	2010 08 12	131	332	2,440	940	588	31	3,190	< 2	10	20	< 0.4	< 40	< 0.10	8	3.8	< 10a	< 1	80	-	53	10	6	< 0.1	11,500	< 0.1	< 1	< 10	-	70	3	10
	GL27-3-20110629	2011 06 29	32	370	1,690	1,030	374	25.6	3,070	< 0.2	1.7	14	< 0.04	15	0.1	4.8	4.04	6	< 0.1	71	-	64.4	10	41.6	< 0.01	11,000	0.02	< 0.1	< 10	-	66	1.8	5
	GL27-3-20111217	2011 12 17	< 50a	320	1,270	900	270	23.4	2,800	< 2	7	< 10	< 0.4	< 40	0.13	8	2.3	10	< 1	100	-	69	20	< 6	< 0.10	11,600	0.43	< 1	< 10	-	98	6	< 10
	GL27-3-20120625	2012 06 25	< 50a	359	2,190	1,010	350	24	3,050	< 2	7	10	< 0.4	< 40	< 0.1	< 4	3.2	< 10a	< 1	70	-	58	10	< 6	< 0.10	11,400	< 0.1	< 1	< 100	-	75	1	20
	GL27-3-20121204	2012 12 04	< 50a	315	2,540	897	253	21.6	2,960	< 2.0	7.5	20	< 0.40	< 40	< 0.10	7.5	2.86	< 10a	< 1	70	-	62.3	10	6.2	< 0.10	9,440	< 0.10	< 1.0	< 100	-	97.4	2.16	< 10
	GL27-3-20130626	2013 06 26	< 60a	382	2,600	1,050	563	26	3,760	< 2.0	5.9	< 50	< 25a	< 500	< 1.0a	< 10a	2.6	< 10a	< 1.0	73	< 0.20	58.4	< 10	< 20	0.25	10,100	< 2.0	< 150	< 50	-	87.3	< 150a	< 25
	GL27-3-20131113	2013 11 13	< 60a	363	2,880	967	372	26	3,190	< 2.0	6.4	< 50	< 25a	< 500	< 1.0a	< 10a	< 2.0	< 10a	< 1.0	145	< 0.20	59.1	< 10	< 20	< 0.20	10,100	< 2.0	< 150	< 50	-	85.9	< 150a	< 25
	GL27-3-20140605	2014 06 05	< 60a	359	1,840	1,030	479	25	3,440	< 2.0	5.4	< 50	< 25a	< 500	< 1.0a	< 10a	< 2.0	< 10a	< 1.0	85	< 0.20	56.7	< 10	< 20	< 0.20	10,200	< 2.0	< 150	< 50	-	82.4	< 150a	< 25
	GL27-3-20141118	2014 11 18	< 30a	326	1,620	910	331	24	2,990	< 1.0	4.3	< 50	< 25a	< 500	< 0.50a	< 5.0	1.4	< 5.0a	< 1.0	73	< 0.20	58.6	< 5.0	< 10	< 0.10	9,270	< 1.0	< 150	< 50	-	84	< 150a	< 25
	GL27-3-20150610	2015 06 10	< 20	354	2,190	997	438	24	3,210	< 2.0	6	< 50	< 25a	< 500	< 0.10	< 2.0	< 2.0	< 4.0a	< 1.0	63	< 0.20	52.9	< 10	< 1.0	< 0.20	10,200	< 0.20	< 150	< 50	-	72.1	< 150a	< 25
	GL27-3-20151104	2015 11 04	< 10	316	1,190	873	298	22	2,780	< 1.0	3.3	< 50	< 25a	< 500	0.17	< 1.0	1.2	< 2.0a	< 1.0	72	< 0.20	57.6	< 5.0	< 1.0	< 0.10	9,000	< 0.10	< 150	< 50	-	79.4	< 150a	< 25
	GL27-3-20160524	2016 05 24	< 20	342	2,060	970	357	24	3,050	< 2.0	5	< 50	< 25a	< 500	0.12	< 2.0	< 2.0	< 4.0a	< 1.0	67	< 0.20	53.5	< 10	< 1.0	< 0.20	9,350	< 0.20	< 150	< 50	-	73.2	< 150a	< 25
	GL27-3-20170925	2017 09 25	< 10	361	2,630	1,010	435	25	3,400	< 1.0	5.8	< 50	< 25a	< 500	0.066	< 1.0	1.7	< 2.0a	< 1.0	69	< 0.20	49.8	< 5.0	< 1.0	< 0.10	9,860	< 0.10	< 150	< 50	-	79.4	< 150a	< 25
	GL27-3-180815	2018 08 15	< 5.0	392	2,260	1,090	688	27.7	3,000	< 0.20	5.73	14.6	< 0.10	42.9	0.127	< 0.50	2.83	< 0.40a	< 0.20	78.2	< 0.010	67	4.5	< 0.50	< 0.050	11,100	< 0.020	< 0.20	< 5.0	< 1.0	86.2	< 1.0	< 4.0
	GL27-3-190527	2019 05 27	< 5.0	372	< 10	1,070	203	28.6	3,430	0.39	1.45	9.1	< 0.10	34.9	0.809	1.4	0.79	2.1	< 0.20	93.9	< 0.010	73.8	3.09	< 0.50	< 0.050	12,300	< 0.020	< 0.20	< 5.0	< 1.0	91.2	< 1.0	8.6
	GL27-3-200608	2020 06 08	1.4	439	4,610	1,080	555	42	3,830	< 0.050	9.61	9.77	0.014	33.7	0.0349	0.58	2.1	5.33	< 0.050	90.2	< 0.010	69.3	3.26	0.42	< 0.010	12,500	0.0162	< 0.050	0.41	< 0.20	73.6	0.23	1.1
	GL27-3-210603	2021 06 03	2.2	441	4,450	1,210	582	31.2	3,630	< 0.050	10.1	11.4	< 0.010	30.4	0.0214	0.27	2.26	0.73	< 0.050	70.5	< 0.010	64.8	3.5	0.77	< 0.010	11,800	0.014	< 0.050	0.26	< 0.20	66.3	< 0.20	< 1.0
	GL27-3-220531	2022 05 31	<10.0	366	3940	1,390	466	27.9	3,980	<0.500	8.43	7.79	<0.100	32.4	<0.0200	<1.00	1.47	1.07	<0.500	66.4	< 0.010	56	2.9	<1.00	0.153	11,100	<0.0400	<0.500	<2.00	<2.00	53.1	<10.0	<10.0
	GL27-3-230525	2023 05 25	<20.0	434	5480	1270	635	29.5	3820	<1.00	10.2	12.1	<0.200	70	<0.0400	<10.0	2.02	<2.00	<1.00	64.2	<0.010	54.4	3.93	<2.00	<0.200	12000	<0.0800	<1.00	<4.00	<4.00	57.2	<20.0	<20.0
GL27-4	GL27-4-20100812	2010 08 12	< 50a	420	3,510	809	8,160	121	2,480	< 2	12	90	< 0.4	190	< 0.10	31	6.2	< 10a	< 1	20	-	2	20	7	< 0.1	10,400	< 0.1	< 1	30	-	20	24	< 10
GL28-1	GL28-1-20091116	2009 11 16	< 50a	211	390	282	1,390	11.2	550	< 2	3	50	< 0.4	< 40	< 0.1	< 4	5.4	< 10a	< 1	80	-	14	10	< 6	< 0.10	6,000	< 0.1	< 1	< 10	-	113	< 1	10
	GL30-5-20091116	Duplicate	62	218	990	286	1,140	11.5	556	< 2	4	50	< 0.4	< 40	< 0.1	< 4	4.1	< 10a	< 1	110	-	14	10	< 6	< 0.10	6,150	< 0.1	< 1	< 10	-	119	< 1	20
	QA/QC RPD%		*	3	87	1	20	3	1	*	29	0	*	*	*	*	27	*	*	32	-	0	0	*	*	2	*	*	*	-	5	*	67
	GL28-1-20100812	2010 08 12	< 50a	171	660	284	804	12.5	571	< 2	3	40	< 0.4	< 40	< 0.10	7	3.2	< 10a	< 1	90	-	11	< 10	< 6	< 0.1	6,310	< 0.1	< 1	< 10	-	62	2	20
	GL28-1-20110627	2011 06 27	< 50a	148	6	140	< 1	6.8	562	< 2	2	10	< 0.4	< 40	< 0.1	< 4	0.7	< 10a	< 1	60	-	35	< 10	< 6	< 0.10	3,090	< 0.1	< 1	< 10	-	97	< 1	< 10
	GL28-1-20120626	2012 06 26	< 50a	130	180	56	140	6	284	< 2	< 2	< 10	< 0.4	< 40	< 0.1	< 4	0.4	< 10a	< 1	10	-	33	< 10	< 6	< 0.10	1,710	< 0.1	< 1	< 100	-	15	< 1	< 10
	GL28-1-20121203	2012 12 03	< 50a	181	1,110	299	258	8.6	560	< 2.0	3	20	< 0.40	< 40	0.14	6.1	7.37	< 10a	1.1	70	-	14.8	< 10	< 6.0	0.2	6,850	0.24	< 1.0	< 10	-	120	3.82	< 10
	DUP-A-20121203	Duplicate	< 50a	183	1,150	304	262	8.4	564	< 2.0	2.5	20	< 0.40	< 40	< 0.10	6.6	4.8	< 10a	< 1.0	70	-	12.2	< 10	< 6.0	< 0.10	6,880	< 0.10	< 1.0	< 10	-	122	1.79	< 10
	QA/QC RPD%		*	1	4	2	2	2	1	*	18	0	*	*	*	8	42	*	*	0	-	19	*	*	*	0	*	*	*	-	2	72	*
	GL28-1-20130708	2013 07 08	< 10a	204	1,440	299	253	10.5	549	< 0.50	3.2	< 20	< 5.0a	< 100	< 0.10	< 1.0	1	< 1.0a	< 1.0	105	< 0.20	12.5	< 5.0	< 2.0	< 0.050	5,560	< 0.20	< 30	< 50	-	122	< 30	< 5.0
	DUP1-20130708	Duplicate	< 10a	205	1,460	299	253	10.6	547	< 0.50	3.3	< 20	< 5.0a	< 100	< 0.10	< 1.0	1	< 1.0a	< 1.0	107	< 0.20	13.1	< 5.0	< 2.0	< 0.050	5,560	< 0.20	< 30	< 50	-	125	< 30	< 5.0
	QA/QC RPD%		*	0	1	0	0	1	0	*	3	*	*	*	*	*	0	*	*	2	*	5	*	*	*	0	*	*	*	-	2	*	*

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

			Dissolved Metals																														
Sample Location	Sample ID	Sample Date (yyyy mm dd)	Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL28-1 (Cont'd)	GL28-1-20140603	2014 06 03	< 10a	188	1,420	274	209	9.4	537	< 0.50	3.4	< 20	< 5.0a	< 100	< 0.10	< 1.0	0.77	< 1.0a	< 1.0	99	< 0.20	13.4	< 5.0	< 2.0	< 0.050	5,370	< 0.20	< 30	< 50	-	116	< 30	< 5.0
	GL28-1-20141117	2014 11 17	< 10a	197	1,540	292	212	9.9	559	< 0.50	3	< 20	< 5.0a	< 100	< 0.10	< 1.0	0.63	< 1.0a	< 1.0	91	< 0.20	13.2	< 5.0	< 2.0	< 0.050	5,700	< 0.20	< 30	< 50	-	118	< 30	< 5.0
	GL28-1-20150611	2015 06 11	< 10	192	1,520	280	208	9.4	518	< 0.50	3.2	< 20	< 5.0a	< 100	< 0.050	< 0.50	0.6	< 1.0a	< 1.0	81	< 0.20	14	< 5.0	< 1.0	< 0.050	5,370	< 0.020	< 30	< 50	-	131	< 30	< 5.0
	GL28-1-20151105	2015 11 05	< 10	190	1,600	274	214	9.6	553	< 0.50	3.1	< 20	< 5.0a	< 100	< 0.050	< 0.50	0.5	< 1.0a	< 1.0	88	< 0.20	13.9	< 5.0	< 1.0	< 0.050	5,850	< 0.020	< 30	< 50	-	122	< 30	< 5.0
	GL28-1-20160524	2016 05 24	< 10	197	1,750	295	220	10.1	561	< 0.50	3.9	< 20	< 5.0a	< 100	< 0.050	< 0.50	0.58	< 1.0a	< 1.0	93	< 0.20	14.2	< 5.0	< 1.0	< 0.050	5,710	< 0.020	< 30	< 50	-	121	< 30	< 5.0
	GL28-1-20160920	2016 09 20	< 10	194	1,800	305	260	10.4	557	< 0.50	3.5	< 20	< 5.0a	< 100	< 0.050	< 0.50	0.6	< 1.0a	< 1.0	87	< 0.20	12.5	< 5.0	< 1.0	< 0.050	5,790	< 0.020	< 30	< 50	-	123	< 30	< 5.0
	GL28-1-20170711	2017 07 11	< 10	193	1,680	276	230	10	560	< 0.50	2.6	< 20	< 5.0a	< 100	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	90	< 0.20	12.2	< 5.0	< 1.0	< 0.050	5,500	< 0.020	< 30	< 50	-	109	< 30	< 5.0
	GL28-1-20170926	2017 09 26	< 10	189	1,720	279	237	10.4	519	< 0.50	3.3	< 20	< 5.0a	< 100	< 0.050	< 0.50	0.55	< 1.0a	< 1.0	88	< 0.20	12.4	< 5.0	< 1.0	< 0.050	5,480	< 0.020	< 30	< 50	-	107	< 30	< 5.0
	GL28-1-180528	2018 05 28	< 5.0	201	333	292	148	11.7	536	< 0.20	1.01	14.7	< 0.10	18.3	0.193	< 0.50	0.48	0.98	< 0.20	81.1	< 0.010	12.4	1.96	0.72	< 0.050	5,950	< 0.020	< 0.20	< 5.0	< 1.0	123	< 1.0	< 4.0
	GL28-1-180925	2018 09 25	< 5.0	207	1,220	300	301	11.3	553	< 0.20	1.49	9.7	< 0.10	20.2	0.041	< 0.50	0.7	< 0.40a	< 0.20	85.9	< 0.010	12.9	1.85	< 0.50	< 0.050	6,000	< 0.020	< 0.20	< 5.0	< 1.0	115	< 1.0	< 4.0
	DUP1-180925	Duplicate	< 5.0	207	1,280	295	313	11.9	544	< 0.20	1.75	10	< 0.10	10.1	0.039	< 0.50	0.71	1.15	< 0.20	69.3	< 0.010	13.1	1.93	< 0.50	< 0.050	5,910	< 0.020	< 0.20	< 5.0	< 1.0	114	< 1.0	< 4.0
	QA/QC RPD%		*	0	5	2	4	5	2	*	16	3	*	67	*	*	1	*	*	21	*	2	*	*	*	2	*	*	*	*	1	*	*
	GL28-1-190528	2019 05 28	< 5.0	195	1,720	293	297	10.2	489	< 0.20	2.3	10.8	< 0.10	14.5	0.034	1.04	0.64	< 0.40a	< 0.20	91.1	< 0.010	13	1.66	< 0.50	< 0.050	6,420	< 0.020	< 0.20	< 5.0	< 1.0	119	< 1.0	< 4.0
	GL28-1-190919	2019 09 19	< 5.0	193	1,710	284	300	9.94	448	< 0.20	2.36	10	< 0.10	18.8	0.021	< 0.50	0.6	< 0.10	< 0.20	80.7	< 0.010	12.4	1.71	< 0.50	< 0.050	6,190	< 0.020	< 0.20	< 5.0	< 1.0	120	< 1.0	< 4.0
	GL28-1-200610	2020 06 10	< 1.0	214	1,720	300	287	10.7	461	< 0.050	3.37	10.1	0.014	18.6	0.0107	0.14	0.536	0.21	< 0.050	83	< 0.010	12.6	0.871	< 0.10	< 0.010	6,210	0.0044	< 0.050	< 0.20	< 0.20	112	0.3	1.3
	DUPB-200610	Duplicate	< 1.0	208	1,760	269	276	10.3	415	< 0.050	3.67	10.9	0.019	11.1	0.012	0.17	0.541	0.22	< 0.050	62.6	< 0.010	13.1	0.906	< 0.10	< 0.010	6,270	0.005	< 0.050	< 0.20	< 0.20	112	0.24	1.4
	QA/QC RPD%		*	3	2	11	4	4	11	*	9	8	*	51	11	*	1	*	*	28	*	4	4	*	*	1	*	*	*	*	0	*	*
	GL28-1-201104	2020 11 04	< 1.0	237	1,770	306	320	11.5	454	< 0.050	2.9	9.69	0.022	16.4	0.0046	< 0.10	0.589	0.4	< 0.050	82.5	< 0.010	13.3	1.79	< 0.10	< 0.010	7,000	0.0045	< 0.050	< 0.20	< 0.20	118	< 0.20	1.4
	DUP3-201104	Duplicate	< 1.0	236	1,760	307	316	11.5	451	< 0.050	2.86	9.59	0.072	16.4	0.0059	< 0.10	0.577	2.83	< 0.050	84.1	< 0.010	13.1	1.76	< 0.10	< 0.010	7,000	0.0043	< 0.050	< 0.20	< 0.20	119	< 0.20	< 1.0
	QA/QC RPD%		*	0	1	0	1	0	1	*	1	1	*	0	*	*	2	*	*	2	*	2	2	*	*	0	*	*	*	*	1	*	*
	GL28-1-210609	2021 06 09	2.2	220	1,670	283	314	10.6	407	< 0.050	2.44	10	0.013	17	0.0057	0.15	0.565	0.34	< 0.050	82.9	< 0.010	12.1	1.76	< 0.10	< 0.010	5,950	0.0041	< 0.050	< 0.20	< 0.20	110	< 0.20	1.2
	GL28-1-211007	2021 10 07	6.7	195	1,830	333	341	11.7	442	< 0.050	2.68	10.6	0.014	12.3	0.0093	0.19	0.598	0.36	< 0.050	61.1	< 0.010	14.5	1.98	< 0.10	< 0.010	5,590	< 0.0040	< 0.050	< 0.20	< 0.20	123	< 0.20	< 1.0
	DUP 3-211007	Duplicate	13.7	192	1,880	330	334	12	454	< 0.050	2.96	10.9	< 0.010	12.1	0.0099	0.23	0.58	0.58	< 0.050	56.8	< 0.010	14.4	1.94	< 0.10	< 0.010	6,200	0.0043	< 0.050	< 0.20	< 0.20	121	< 0.20	< 1.0
	QA/QC RPD%		69	2	3	1	2	3	3	*	10	3	*	2	*	*	3	*	*	7	*	1	2	*	*	10	*	*	*	*	2	*	*
	GL28-1-220602	2022 06 02	1.3	193	6.8	289	154	10.4	392	0.382	1.08	18.3	<0.010	15.1	0.207	0.2	0.633	1.83	<0.050	78.6	< 0.010	12.3	3.49	0.37	0.015	5,540	0.0243	<0.050	<0.20	<0.20	122	1.5	1.8
	GL28-1-221006	2022 10 06	<6.0	221	190	316	279	10.5	386	0.148	0.865	11.4	<0.020	17.9	0.0613	<0.20	0.984	1	<0.100	73.2	< 0.010	12.3	2.61	<0.20	<0.020	6,100	0.013	<0.100	<0.40	<0.40	133	<2.00	<2.0
	GL28-1-230530	2023 05 30	<1.0	237	579	313	358	11.4	412	0.065	1.03	10.9	0.013	16.7	0.0573	<0.50	0.807	0.37	<0.050	84	<0.010	11	2.99	0.2	<0.010	6490	0.012	<0.050	<0.20	<0.20	123*	<1.00	1.4
	GL28-1-231026	2023 10 26	1.1	237	882	316	344	11.3	410	0.067	1.44	9.94	0.012	18.4	0.0229	<0.50	0.813	1.06	<0.050	81.2	<0.010	11.4	2.64	<0.10	<0.010	6310	0.0105	0.057	<0.20	<0.20	118*	<1.00	2.3
GL28-2	GL28-2-20091116	2009 11 16	< 50a	245	< 100	224	62	12	561	< 2	< 2	20	< 0.4	< 40	0.1	< 4	0.5	< 10a	< 1	40	-	4	< 10	< 6	< 0.10	4,940	< 0.1	< 1	< 10	-	130	1	< 10
	GL28-2-20160524	2016 05 24	< 10	308	< 30	261	33	11.4	698	< 0.50	< 1.0	< 20	< 5.0a	< 100	0.065	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	5.5	< 5.0	1.6	< 0.050	5,890	< 0.050	< 30	< 50	-	183	< 30	< 5.0
	GL28-2-20160920	2016 09 20	94	306	127	255	19	11.6	743	< 0.50	< 1.0	< 20	< 5.0a	< 100	0.221	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	4.1	< 5.0	2.2	< 0.050	6,160	< 0.050	< 30	< 50	-	184	< 30	< 5.0
	DUP1-20160920	Duplicate	76	608	235	508	37	23.4	1,480	< 0.50	< 1.0	27	< 10a	< 200	0.247	< 0.50	< 0.50	< 1.0a	< 1.0	95	< 0.20	3.9	< 5.0	2.1	< 0.050	12,300	< 0.050	< 60	< 50	-	178	< 60	< 10
	QA/QC RPD%		21	66	60	66	64	67	66	*	*	*	*	*	11	*	*	*	*	*	*	5	*	5	*	67	*	*	*	-	3	*	*
	GL28-2-20170711	2017 07 11	< 10	284	< 30	236	12	11	751	< 0.50	< 1.0	< 20	< 5.0a	< 100	0.105	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	4.9	< 5.0	1.7	< 0.050	5,460	< 0.050	< 30	< 50	-	170	< 30	< 5.0
	GL28-2-20170926	2017 09 26	< 10	317	< 30	275	18	12	714	< 0.50	< 1.0	< 20	< 5.0a	< 100	0.072	< 0.50	< 0.50	1.3	< 1.0	< 50	< 0.20	4.3	< 5.0	1.8	< 0.050	6,300	< 0.020	< 30	< 50	-	168	< 30	< 5.0
	GL28-2-180528	2018 05 28	< 5.0	303	< 10	278	17.4	12.8	735	< 0.20	< 0.50	13.2	< 0.10	16.3	0.065	< 0.50	0.29	0.69	< 0.20	45.5	< 0.010	4.81	2.58	1.49	< 0.050	7,280	< 0.020	< 0.20	< 5.0	< 1.0	181	< 1.0	< 4.0
	DUP1-180528	Duplicate	< 5.0	274	< 10	286	17.6	13.4	772	< 0.20	< 0.50	13.5	< 0.10	13.4	0.073	< 0.50	0.28	0.68	< 0.20	38.1	< 0.010	4.84	2.6	1.59	< 0.050	7,320	< 0.020	< 0.20	< 5.0	< 1.0	190	< 1.0	5.4
	QA/QC RPD%		*	10	*	3	1	5	5	*	*	2	*	20	12	*	*	1	*	18	*	1	1	6	*	1	*	*	*	*	5	*	*
	GL28-2-180925	2018 09 25	39.7	382	< 10	322	20.4	14.1	862	< 0.20	< 0.50	14.1	< 0.10	17.8	0.075	< 0.50	0.31	1.06	< 0.20	51	< 0.010	5.07	2.85	1.33	< 0.050	7,980	< 0.020	< 0.20	< 5.0	< 1.0	196	1.1	< 4.0
	GL28-2-190528	2019 05 28	< 5.0	352	< 10	312	21.5	12.8	820	< 0.20	< 0.50	14	< 0.10	14.6	0.079	< 0.50	0.36	0.85	< 0.20	58.8	< 0.010	5.41	2.88	1.18	< 0.050	8,620	< 0.020	< 0.20	< 5.0	< 1.0	200	1	< 4.0
	GL28-2-190919	2019 09 19	47.9	340	17	286	20.2	12.4	762	< 0.20	< 0.50	13.9	< 0.10	19.1	0.072	1.02	0.34	0.71	< 0.20	52.8	< 0.010	4.99	2.86	1.57	< 0.050	7,880	< 0.020	0.43	< 5.0	< 1.0	199	< 1.0	14
	GL28-2-200610	2020 06 10	< 1.0	301	< 2.0	237	8.74	12	657	< 0.050	0.466	12.5	< 0.010	18.6	0.052	0.3	0.189	0.58	< 0.050	43.8	< 0.010	5.31	1.33	0.6	< 0.010	6,550	0.0053	< 0.050	< 0.20	< 0.20	151	1.15	1.1
	GL28-2-201104	2020 11 04	< 1.0	397	171	293	19.2	14.2	955	< 0.050	0.414	13.4	< 0.010	16.9	0.0582	28.2	0.31	1.13	< 0.050	53.9	< 0.010	5.86	3.06	1.05	< 0.010	8,600	0.0089	< 0.050	< 0.20	< 0.20	196	1.15	< 1.0
	GL28-2-210609	2021 06 09	5	327	6.7	264	23.6	12.9	775	< 0.050	0.341	13.4	< 0.010	19.4	0.0591	0.19	0.343	0.75	< 0.050	56.1	< 0.010	5.21	2.49	0.67	< 0.010	7,000	0.0085	< 0.050	0.21	< 0.20	180	0.78	1.2
	GL28-2-211007	2021 10 07	1.9	387	2.4	363	22.4	16.3	957	< 0.050	0.487	15.4	< 0.010	11.5	0.0505	0.24	0.336	1.02	< 0.050	39.7	< 0.010	6.39	2.79	1.02	< 0.010	8,080	0.0092	< 0.050	< 0.20	< 0.20	207	1.03	< 1.0
	GL28-2-220602	2022 06 02	1.1	277	<2.0	299	20.4	11.5	886	<0.050	0.367	12.4	<0.010	16.4	0.0623	0.21	0.298	0.88	<0.050	61.1	< 0.010	5.43	2.21	0.62	0.014	7,270	0.0072	<0.050	<0.20	<0.20	177	<1.00	<1.0
	GL28-2-221006	2022 10 06	<6.0	319	<4.0	284	15.5	12.9	806	<0.100	0.326	11.8	<0.020	18.6	0.067	0.21	0.247	4.05	<0.100	48.1	< 0.010	5.29	2.26	0.6	<0.020	7240	<0.0080	<0.100	<0.40	<0.40	192	<2.00	<2.0
	GL28-2-230530	2023 05 30	<2.0	314	<4.0	249	14.4	12.1	661	<0.100	0.309	13.3	<0.020	22	0.053	<1.00	0.218	0.71	<0.100	47.5	<0.010	5.31	1.95	0.76	<0.020	6850	<0.0080	<0.100	<0.40	<0.40	171*	<2.00	<2.0
	GL28-2-231026	2023 10 26	2.4	384	<4.0	285	17.8	13.1	661	<0.100	0.328	11.5	<0.020	23	0.0644	<1.00	0.222	1.49	<0.100	47.1	<0.010	5.2	2.33	0.49	<0.020	7690*	<0.0080	<0.100	<0.40	<0.40	206*	<2.00	<2.0
GL28-3	GL28-3-20091116	2009 11 16	< 50a	279	< 100	260	353	11.9	556	< 2	< 2	30	< 0.4	< 40	0.17	< 4	1.6	10	< 1	40	-	8	20	< 6	< 0.10	5,490	< 0.1	< 1	< 10	-	145	1	10
	GL28-3-20100812	2010 08 12	91	207	< 100	257	82	12.2	610	< 2	< 2	40	< 0.4	< 40	< 0.1	7	0.3	< 10a	< 1	30	-	5	10	< 6	< 0.1	5,430	< 0.1	< 1	< 10	-	73	3	< 10
	GL28-3-20160524	2016 05 24	< 10	377	< 60	438	173	12.3	1,000	< 0.50	< 1.0	20	< 10a	< 200	0.213	< 0.50	0.65	< 1.0a	< 1.0	52	< 0.20	11.4	8.8	< 1.0	< 0.050	7,550	< 0.050	< 60	51	-	238	< 60	< 10
	GL28-3-20160920	2016 09 20	< 10	158	< 30	215	194	5.5	514	< 0.50	< 1.0	< 20	< 5.0a	< 100	0.265	< 0.50	1.16	< 1.0a	< 1.0	< 50	< 0.20	11.9	11.6	< 1.0	< 0.050	3,660	< 0.050	< 30	< 50	-	263	< 30	< 5.0
	GL28-3-20170711	2017 07 11	< 10	296	< 60	423	18	10.2	1,000	< 0.50	< 1.0	< 20	< 10a	< 200	0.164	< 0.50	< 0.50	< 1.0a	< 1.0	< 50	< 0.20	12	< 5.0	< 1.0	< 0.050	6,650	< 0.050	< 60	< 50	-	245	< 60	< 10
	GL28-3-20170926	2017 09 26	< 10	300	< 60	430	192	10.6	1,020	< 0.50	< 1.0	< 20	< 10a	< 200	0.343	< 0.50	< 0.50	1.5	< 1.0	< 50	< 0.20	13.2	9.8	< 1.0	< 0.050	7,040	0.052	< 60	< 50	-	232	< 60	< 10
	GL28-3-180528	2018 05 28	38	282	84	501	146	13	1,110	< 0.20	0.76	21.6	< 0.10	5.6	0.382	0.56	0.44	1.72	< 0.20	35	< 0.010	12.5	10	< 0.50	< 0.050	9,150	0.038	< 0.20	< 5.0	< 1.0	239	1.4	< 4.0
	GL28-3-180925	2018 09 25	< 5.0	378	< 10	518	321	13.8	1,230	< 0.20	0.82	19.1	< 0.10	5.5	0.316	< 0.50	0.51	1.5	< 0.20	42.9	< 0.010	14.2	12	< 0.50	< 0.050	8,940	0.052	< 0.20	< 5.0	< 1.0	278	1.5	< 4.0
	GL28-3-190528	2019 05 28	6.7	343	< 10	491	50.2	12	1,170	< 0.20	0.71	18.1	< 0.10	< 5.0	0.128	1.12	0.19	1.14	< 0.20	51.3	< 0.010	13.6	7.2	< 0.50	< 0.050	9,270	0.033	< 0.20	< 5.0	< 1.0	268	1.4	< 4.0
	DUP2-190528	Duplicate	< 5.0	341	< 10	481	50	11.8	1,150	< 0.20	0.67	17.9	< 0.10	< 5.0	0.134	< 0.50	0.19	1.15	< 0.20	50.7	< 0.010	13.3	7.27	< 0.50	< 0.050	9,220	0.028	< 0.20	< 5.0	< 1.0	265	1.4	< 4.0
	QA/QC RPD%		*	1	*	2	0	2	2	*	*	1	*	*	5	*	*	1	*	1	*	2	1	*	*	1	*	*	*	*	1	0	*
	GL28-3-190919	2019 09 19	< 5.0	342	< 10	469	175	11.5	1,090	< 0.20	0.62	18.5	< 0.10	10	0.212	< 0.50	0.25	1.14	< 0.20	45.4	< 0.010	13	9.41	< 0.50	< 0.050	8,880	0.041	< 0.20	< 5.0	< 1.0	274	1.3	< 4.0
	DUP1-190919	Duplicate	< 5.0	352	< 10	475	174	11.7	1,110	< 0.20	0.68	17.9	< 0.10	16.3	0.225	1.18	0.27	1.13	< 0.20	46.5	< 0.010	13.3	9.41	< 0.50	< 0.050	8,890	0.039	< 0.20	< 5.0	< 1.0	272	1.3	< 4.0
	QA/QC RPD%		*	3	*	1	1	2	2	*	*	3	*	48	6	*	*	1	*	2	*	2	0	*	*	0	*	*	*	*	1	0	*

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

Sample Location	Sample ID	Sample Date (yyyy mm dd)	Dissolved Metals																														
			Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL28-3	GL28-3-200610	2020 06 10	< 1.0	395	< 2.0	462	130	12.7	1,190	0.11	0.893	19.9	0.012	6	0.18	0.35	0.356	1.45	< 0.050	40.5	< 0.010	13.1	8.14	0.23	< 0.010	9,460	0.03	< 0.050	0.22	< 0.20	273	1.68	1.8
	GL28-3-201105	2020 11 05	< 1.0	408	4.2	448	281	12.3	1,170	0.142	0.815	19.2	< 0.010	5	0.227	0.28	0.484	1.69	< 0.050	46.5	< 0.010	16.5	11.6	0.17	< 0.010	8,710	0.0416	0.087	0.34	< 0.20	269	2.02	3
	GL28-3-210609	2021 06 09	1.7	339	< 2.0	479	27	12.6	1,170	0.157	0.684	18.5	< 0.010	6.6	0.0836	0.34	0.118	1.62	< 0.050	51.5	< 0.010	12.9	4.96	0.13	< 0.010	8,070	0.0194	< 0.050	< 0.20	< 0.20	255	1.22	4.3
	GL28-3-211007	2021 10 07	1.2	351	2.2	537	186	15.2	1,230	0.139	0.82	21.5	< 0.010	4.5	0.208	0.34	0.191	1.42	< 0.050	32.7	< 0.010	17.3	9.09	0.29	< 0.010	8,300	0.0408	< 0.050	< 0.20	< 0.20	306	1.46	2
	GL28-3-210602	2022 06 02	<100	613	<200	9520	364	212	22800	<5.00	13	349	<1.00	221	1.83	<10.0	2.26	116	<5.00	1,010	< 0.010	246	90.9	<10.0	<1.00	160000	<0.400	6.26	<20.0	<20.0	4950	<100	<100
	GL28-3-221006	2022 10 06	<5.0	330	<10.0	505	120	11,7	1170	<0.250	0.721	15.8	<0.050	<10.0	0.194	<0.50	0.15	2.05	<0.250	40.9	< 0.010	13.2	8.5	<0.50	<0.050	8610	0.0324	<0.250	<1.00	<1.00	278	<5.00	<5.0
	GL28-3-230530	2023 05 30	<2.0	393	<4.0	508	27.4	13.1	1,270	0.11	0.697	21.1	<0.020	7.8	0.131	<1.00	0.12	1.91	<0.100	48.9	<0.010	13.1	6.18	0.57	<0.020	9,390*	0.03	<0.100	<0.40	<0.40	289*	<2.00	<2.0
	GL28-3-231026	2023 10 26	<5.0	375	<10.0	463	183	12.3	1,230	<0.250	0.569	14.6	<0.050	<10.0	0.401	<2.50	0.252	3.08	<0.250	46.5	<0.010	12.8	9.04	<0.50	<0.050	8850*	0.033	<0.250	<1.00	<1.00	272*	<5.00	<5.0
GL29-1	GL29-1-20130708	2013 07 08	< 10a	82.5	217	57.8	658	10.5	272	< 0.50	3	60	< 5.0a	< 100	< 0.050	< 0.50	1.25	< 1.0a	< 1.0	114	< 0.20	8.8	< 5.0	< 1.0	< 0.050	2,530	< 0.20	< 30	< 50	-	12.1	< 30	< 5.0
	GL29-1-20131113	2013 11 13	< 10a	83.7	597	69	1,130	9.8	315	< 0.50	5.1	98	< 5.0a	< 100	< 0.050	< 0.50	2.91	< 1.0a	< 1.0	82	< 0.20	15.8	8.3	< 1.0	< 0.050	2,580	< 0.20	< 30	< 50	-	23.7	< 30	< 5.0
	DUP3-20131113	Duplicate	< 10a	84	593	69.3	1,130	9.7	311	< 0.50	5.1	96	< 5.0a	< 100	< 0.10	< 1.0	2.97	< 1.0a	< 1.0	79	< 0.20	15.8	8.5	< 2.0	< 0.050	2,570	< 0.20	< 30	< 50	-	22.8	< 30	< 5.0
	QA/QC RPD%		*	0	1	0	0	1	1	*	0	2	*	*	*	*	2	*	*	4	*	0	2	*	*	0	*	*	*	-	4	*	*
	GL29-1-20140603	2014 06 03	< 10a	84.6	438	73.9	946	8.6	320	< 0.50	3.8	108	< 5.0a	< 100	< 0.050	< 0.50	7.65	< 1.0a	< 1.0	63	< 0.20	16.5	8.2	< 1.0	< 0.050	2,520	< 0.20	< 30	< 50	-	27.9	< 30	< 5.0
	GL29-1-20141118	2014 11 18	< 10a	106	1,980	105	1,530	9.8	411	< 0.50	6.5	134	< 5.0a	< 100	< 0.10	< 1.0	14.4	< 1.0a	< 1.0	61	< 0.20	21	8.8	< 2.0	< 0.050	3,460	< 0.20	< 30	< 50	-	30.4	< 30	< 5.0
	GL29-1-20150609	2015 06 09	< 10	99.5	823	92.4	1,250	9.3	391	< 0.50	4.5	111	< 5.0a	< 100	< 0.050	< 0.50	8.07	< 1.0a	< 1.0	51	< 0.20	20.2	8.8	< 1.0	< 0.050	3,370	< 0.020	< 30	< 50	-	31.6	< 30	< 5.0
	GL29-1-20151105	2015 11 05	< 10	116	176	92.5	1,070	9.6	347	< 0.50	1.9	93	< 5.0a	< 100	0.057	< 0.50	12.6	5.3	< 1.0	< 50	< 0.20	23.3	18.7	< 1.0	< 0.050	3,100	< 0.020	< 30	< 50	-	36	< 30	< 5.0
	GL29-1-20160524	2016 05 24	< 10	128	94	87.9	861	10.2	306	< 0.50	2.4	83	< 5.0a	240	0.097	0.58	5.88	13.5	< 1.0	< 50	< 0.20	29.9	30.1	< 1.0	< 0.050	2,880	< 0.020	< 30	< 50	-	46.9	< 30	< 5.0
	GL29-1-20160921	2016 09 21	< 10	118	47	83.6	885	9.7	312	0.5	2.3	86	< 5.0a	190	0.2	< 0.50	14.5	13.5	< 1.0	< 50	< 0.20	28.9	30.1	< 1.0	< 0.050	3,050	< 0.020	< 30	< 50	-	49.9	< 30	< 5.0
	GL29-1-20170529	2017 05 29	< 10	115	< 30	72.8	< 10	10.2	272	0.54	2.1	68	< 5.0a	210	0.07	< 0.50	1.64	13.4	< 1.0	51	< 0.20	23.8	19.8	< 1.0	< 0.050	2,770	< 0.010	< 30	< 50	-	41.1	< 30	< 5.0
	GL29-1-20170926	2017 09 26	< 10	101	< 30	70.2	312	9.8	262	0.52	2.1	69	< 5.0a	170	0.297	< 0.50	12.6	8.8	< 1.0	52	< 0.20	21.4	21.2	< 1.0	< 0.050	2,730	< 0.010	< 30	< 50	-	38.2	< 30	< 5.0
	DUP1-20170926	Duplicate	< 10	99.6	< 30	70.6	307	9.8	258	0.53	2.2	68	< 5.0a	170	0.305	< 0.50	13	9.1	< 1.0	53	< 0.20	21.6	22.3	< 1.0	< 0.050	2,690	< 0.010	< 30	< 50	-	38.6	< 30	< 5.0
	QA/QC RPD%		*	1	*	1	2	0	2	*	5	1	*	0	3	*	3	3	*	2	*	1	5	*	*	1	*	*	*	-	1	*	*
	GL29-1-180604	2018 06 04	6.1	191	73	43.7	39.8	16	70.9	1.3	3.64	51.9	< 0.10	512	0.267	2.08	2.15	84	< 0.20	16.4	< 0.010	40.1	30.8	0.69	< 0.050	1,570	0.039	< 0.20	< 5.0	1.7	21.5	5.5	6.1
	GL29-1-180919	2018 09 19	< 5.0	192	78	49.2	637	15.8	83.2	1.7	3.88	63.4	< 0.10	518	0.371	1.97	53	84.5	< 0.20	18.6	< 0.010	45	39.2	0.79	< 0.050	1,720	0.054	< 0.20	< 5.0	5.1	27.3	5.2	7.7
	GL29-1-190603	2019 06 03	38.8	87.4	65	60.3	557	11.1	284	0.8	1.67	52.4	0.2	92	0.053	< 0.50	20.1	1.92	< 0.20	118	< 0.010	9.71	6.47	0.6	< 0.050	3,190	< 0.020	< 0.20	< 5.0	1	19	< 1.0	< 4.0
	GL29-1-190924	2019 09 24	8.3	79.6	584	60.6	704	9.74	267	0.33	2.08	68.5	< 0.10	75.2	< 0.010	0.71	3.33	< 0.10	< 0.20	89.8	< 0.010	1.67	2.82	0.66	< 0.050	2,860	< 0.020	< 0.20	< 5.0	5.2	31.4	1.2	< 4.0
	GL29-1-200612	2020 06 12	1.9	74.4	1,030	57	674	9.32	263	0.478	4.78	68.4	0.089	59.8	0.0043	0.19	33	< 0.10	< 0.050	99.1	< 0.010	8.96	2.52	0.11	< 0.010	2,880	< 0.0040	0.051	0.29	4.51	25.2	0.3	< 1.0
	GL29-1-201120	2020 11 20	1.1	84.5	898	56.1	532	10.3	276	< 0.050	3.99	56	0.122	43.4	< 0.0020	0.15	47.6	< 0.10	< 0.050	95	< 0.010	8.94	1.39	< 0.10	< 0.010	3,000	< 0.0040	< 0.050	< 0.20	3.08	21.1	< 0.20	< 1.0
	GL29-1-210611	2021 06 11	2.6	84.1	1,170	60.7	717	11.9	285	< 0.050	4.8	64.2	0.124	48.4	< 0.0020	0.16	124	< 0.10	< 0.050	101	< 0.010	9.2	1.84	< 0.10	< 0.010	2,940	< 0.0040	< 0.050	< 0.20	6.33	16.3	< 0.20	< 1.0
	GL29-1-211006	2021 10 06	2.9	75.9	1,740	59.9	875	9.71	259	0.074	4.36	78.3	0.058	63.8	< 0.0020	0.31	73.1	< 0.10	< 0.050	72.2	< 0.010	8.47	1.3	0.15	< 0.010	2,760	< 0.0040	< 0.050	0.31	7.36	26.5	< 0.20	1.6
	GL29-1-220606	2022 06 06	5.8	120	156	61.8	478	18.7	205	4.71	3.93	98.3	0.115	403	0.0553	0.98	286	13.6	0.185	62	< 0.010	29.5	39.2	0.93	<0.010	2,820	<0.0040	0.141	0.77	2.93	40.7	<3.00	4.3
	GL29-1-221006	2022 10 06	<7.0	118	121	61.7	469	16.6	201	4.08	3.84	90.1	0.148	366	0.0669	0.98	310	14.8	0.205	57	< 0.010	29.7	48	1.02	<0.010	2750	0.006	0.076	0.72	2.9	45.1	2.35	4
	GL29-1-230706	2023 07 06	6.7	76.2	1070	626	544	13.4	256	0.161	2.18	69.3	0.04	164	<0.0020	0.82	19.8	0.87	<0.050	98.1	<0.010	12.9	14	0.32	<0.010	2950	<0.0040	0.75	0.75	0.73	21.6	1.37	<1.0
	GL29-1-231026	2023 10 26	8.3	127	289	581	502	24.7	215	1.67	3.64	84.6	0.056	379	0.0602	1.38	40.7	38.9	0.249	66.2	<0.010	25.7	119	0.57	<0.010	2590	0.0161	0.702	0.93	1.47	28.8	2.91	16.9
GL29-2	GL29-2-20130627	2013 06 27	< 15a	333	276	486	3,310	20.2	1,230	< 0.50	4.1	55	< 10a	< 200	< 0.25	< 2.5	17.7	< 2.5a	< 1.0	58	< 0.20	46.3	60.5	< 5.0	< 0.050	7,280	< 0.50	< 60	< 50	-	106	< 60	< 10
	GL29-2-20131113	2013 11 13	< 30a	346	1,080	496	3,410	20.4	1,260	< 1.0	4.5	49	< 10a	< 200	< 0.50a	< 5.0	8.6	< 5.0a	< 1.0	109	< 0.20	31.2	30.1	< 10	< 0.10	7,240	< 1.0	< 60	< 50	-	66.7	< 60	< 10
	GL29-2-210608	2021 06 08	3.1	371	10.2	509	307	22.6	1,200	0.187	1.71	27.2	< 0.010	42.5	0.209	0.23	0.156	1.1	< 0.050	82.1	< 0.010	55.1	8.21	0.23	< 0.010	7,890	0.0124	0.135	< 0.20	< 0.20	140	< 0.20	4
	GL29-2-211006	2021 10 06	106	380	< 200	597	1,380	22.7	1,250	< 5.00	< 5.00	63	< 1.00	263	0.429	< 10.0a	1.69	< 10.0	< 5.00	101	< 0.010	60.9	19.4	< 10.0	< 1.00	8,350	< 0.400	< 5.00	< 20.0	< 20.0	206	< 20.0	< 100
	GL29-2-220606	2022 06 06	<5.0	374	<10.0	522	25.8	21.4	1,120	<0.250	1.05	25.2	<0.050	36.8	0.0425	<0.50	0.119	2.01	<0.250	81.8	< 0.010	47.6	4.07	0.56	0.051	8,870	<0.0200	<0.250	<1.00	<1.00	201	<5.00	<5.0
	GL29-2-221005	2022 10 05	<5.0	369	22.3	485	432	19.4	9,970	<0.250	1.11	20.8	<0.050	23.1	0.236	<0.50	0.21	1.78	<0.250	78.9	< 0.010	56.6	11.4	0.55	<0.050	8,480	<0.0200	<0.250	<1.00	<1.00	195	<5.00	<5.0
	GL29-2-230525	2023 05 25	2.4	389	32.4	504	121	21.5	1,060	0.138	1.29	25.7	<0.020	46.3	0.0566	<1.00	0.262	2.48	<0.100	84.7	<0.010	50.9	4.42	0.83	0.025	8320	<0.0080	<0.100	<0.40	<0.40	219	<2.00	<2.0
	GL29-2-231026	2023 10 26	3.3	412	403	462	1630	23.4	1,080	<0.100	1.94	32.2	<0.020	52.4	0.0622	<1.00	3.72	2	<0.100	87.4	<0.010	61.9	16.4	0.34	<0.020	8190	0.0119	<0.100	<0.40	<0.40	213	<2.00	6.2
GL31-1	GL31-3-20130627	2013 06 27	< 60a	199	< 150	909	485	38	3,470	< 2.0	4	< 50	< 25a	< 500	< 1.0a	< 10a	5.4	< 10a	< 1.0	55	< 0.20	33.7	< 10	< 20	< 0.20	9,270	< 2.0	< 150	< 50	-	25.6	< 150a	< 25
	GL31-3-20141126	2014 11 26	< 60a	195	7,070	921	435	38	3,250	< 2.0	26.2	< 50	< 25a	< 500	< 1.0a	< 10a	4.6	< 10a	< 1.0	< 50	< 0.20	33	< 10	< 20	< 0.20	9,560	< 2.0	< 150	< 50	-	26	< 150a	< 25
GL31-3	BH 11-18C-20120627	2012 06 27	< 50a	207	4,440	992	1,240	41	3,460	< 2	19	30	< 0.4	< 40	< 0.1	18	11.1	40	< 1	50	-	33	20	11	< 0.10	10,900	< 0.1	< 1	< 100	-	28	6	< 10
	GL31-3-20121205	2012 12 05	56	202	6,580	964	1,020	37.3	3,350	< 2.0	19.1	30	< 0.40	50	< 0.10	18.2	7.67	< 10a	< 1.0	70	-	37.9	20	10.7	< 0.10	11,300	< 0.10	< 1.0	< 1,000	-	29.8	5.86	< 10
	GL31-3-20131114	2013 11 14	< 60a	195	6,250	929	454	37	3,410	< 2.0	23.5	< 50	< 25a	< 500	< 1.0a	< 10a	4.9	< 10a	< 1.0	53	< 0.20	36.4	11	< 20	< 0.20	9,260	< 2.0	< 150	< 50	-	27.3	< 150a	< 25
	GL31-3-20140609	2014 06 09	< 60a	194	1,690	955	521	39	3,490	< 2.0	11.1	< 50	< 25a	< 500	< 1.0a	< 10a	5.1	< 10a	< 1.0	62	< 0.20	34.4	10	< 20	< 0.20	9,540	< 2.0	< 150	< 50	-	24.7	< 150a	< 25
	GL31-3-20150611	2015 06 11	< 20	202	9,360	961	446	40	3,660	< 2.0	31.3	< 50	< 25a	< 500	< 0.10	< 2.0	4.2	< 4.0a	< 1.0	< 50	< 0.20	34.7	< 10	< 1.0	< 0.20	9,820	< 0.20	< 150	< 50	-	27.4	< 150a	< 25
	GL31-3-20151109	2015 11 09	21	190	2,000	870	421	38	3,430	< 2.0	16.2	< 50	< 25a	< 500	< 0.10	< 2.0	3.5	4.1	< 1.0	51	< 0.20	22.6	< 10	< 1.0	< 0.20	9,440	< 0.20	< 150	< 50	-	22.8	< 150a	< 25
	DUP4-20151109	Duplicate	< 20	189	720	871	420	38	3,450	< 2.0	14.3	< 50	< 25a	< 500	< 0.10	< 2.0	3.6	< 4.0a	< 1.0	52	< 0.20	22.9	< 10	< 1.0	< 0.20	9,280	< 0.20	< 150	< 50	-	23.2	< 150a	< 25
	QA/QC RPD%		*	1	94	0	0	0	1	*	12	*	*	*	*	*	3	*	*	2	*	1	*	*	*	2	*	*	*	-	2	*	*
GL35-3	BH11-31C-20111217	2011 12 17	< 500a	8	< 50	264	< 10	400	13,100	100	300	< 100	< 4a	1,300	8.1	250	< 2	200	< 10	< 100	-	10	< 100	< 60a	< 1.0	2,300	< 1	130	< 100	-	260	80	< 100
	DUPB-20111217	Duplicate	< 500a	8	< 50	260	< 10	400	12,800	100	300	< 100	< 4a	1,200	6.8	220	< 2	200	< 10	< 100	-	30	< 100	< 60a	< 1.0	2,200	< 1	140	100	-	270	70	< 100
	QA/QC RPD%		*	0	*	2	*	0	2	0	0	*	*	8	17	13	*	0	*	*	-	100	*	*	*	4	*	7	*	-	4	13	*
	BH11-31C-20120625	2012 06 25	< 50a	265	10,800	505	480	46	2,630	< 2	3	20	< 0.4	60	< 0.10	12	0.9	< 10a	< 1	370	-	< 1	< 10	6	< 0.10	12,300	< 0.1	< 1	< 100	-	20	6	10
	GL35-3-20121205	2012 12 05	58	258	11,400	495	250	39.6	2,490	< 2.0	3.8	20	< 0.40	130	< 0.10	14.7	< 0.20	< 10a	< 1	490	-	< 1.0	< 10	< 6.0	< 0.10	12,500	< 0.10	< 1.0	< 1,000	-	26.3	5.55	< 10
	DUP-C-20121205	Duplicate	57	260	14,700	504	290	39.7	2,510	< 2.0	4	20	< 0.40	120	< 0.10	15.1	< 0.20	< 10a	< 1	490	-	< 1.0	< 10	8.2	< 0.10	12,400	< 0.10	54.1	< 1,000	-	25.8	5.84	< 10
	QA/QC RPD%		2	1	25	2	15	0	1	*	5	0	*	8	*	3	*	*	*	0	-	*	*	*	*	1	*	*	*	-	2	5	*
	GL35-3-20130627	2013 06 27	< 30a	219	< 90	406	467	36.8	2,320	< 1.0	< 1.0	< 30	< 15a	< 300	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	377	< 0.20	< 1.0	< 5.0	< 10	< 0.10	8,740	< 1.0	< 90	< 50	-	10	< 90	< 15
	DUP3-20130627	Duplicate	< 30a	220	< 90	410	470	37.2	2,340	< 1.0	< 1.0	< 30	< 15a	< 300	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	380	< 0.20	< 1.0	< 5.0	< 10	< 0.10	8,840	< 1.0	< 90	< 50	-	9.03	< 90	< 15
	QA/QC RPD%		*	0	*	1	1	1	1	*	*	*	*	*	*	*	*	*	*	1	*	*	*	*	*	1	*	*	*	-	10	*	*
	GL35-3-20131113	2013 11 13	< 30a	221	15,100	419	471	38	2,270	< 1.0	1.7	< 50	< 25a	< 500	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	402	< 0.20	< 1.0	< 5.0	< 10	< 0.10	9,040	< 1.0	< 150	< 50	-	10.1	< 150a	< 25
	GL35-3-20140609	2014 06 09	< 30a	207	10,300	413	407	36.3	2,310	< 1.0	< 1.0	< 30	< 15a	< 300	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	406	< 0.20	< 1.0	< 5.0	< 10	< 0.10	8,080	< 1.0	< 90	< 50	-	9.53	< 90	< 15
	GL35-3-20141126	2014 11 26	< 30a	186	6,480	387	391	38	2,200	< 1.0	2.3	< 50	< 25a	< 500	< 0.50a	< 5.0	< 1.0	< 5.0a	< 1.0	353	< 0.20	< 1.0	< 5.0	< 10	< 0.10	8,070	< 1.0	< 150	< 50	-	6.6	< 150a	< 25
	GL35-3-20150611	2015 06 11	< 10	205	18,700	402	438	37	2,290	< 1.0	1.1	< 50	< 25a	< 500	< 0.050	< 1.0	< 1.0	< 2.0a	< 1.0	368	< 0.20	< 1.0	< 5.0	< 1.0	< 0.10	8,730	< 0.10	< 150	< 50	-	4.21	< 150a	< 25
	GL35-3-20151109	2015 11 09	< 20	175	< 150	387	385	61	3,180	2.1	12	< 50	< 25a	< 500	< 0.10	4.4	< 2.0	< 4.0a	< 1.0	305	< 0.20	< 1.0	< 10	4	< 0.20	8,100	< 0.20	< 150	< 50	-	16.5	< 150a	< 25
	GL35-3-20160526	2016 05 26	< 10	209	20,700	407	442	35.6	2,340	< 1.0	1.4	< 30	< 15a	< 300	< 0.050	< 1.0	< 1.0	< 2.0a	< 1.0	377	< 0.20	< 1.0	< 5.0	< 1.0	< 0.10	8,350	< 0.10	< 90	< 50	-	3.83	< 90	< 15

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
RDL Denotes reported detection limit.

Table H2: Historical Summary of Analytical Results For Groundwater - Metals

			Dissolved Metals																															
Sample Location	Sample ID	Sample Date (yyyy mm dd)	Aluminum µg/L	Calcium mg/L	Iron µg/L	Magnesium mg/L	Manganese µg/L	Potassium mg/L	Sodium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Boron µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Strontium µg/L	Thallium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L
GL35-3 (Cont'd)	GL35-3-20170926	2017 09 26	< 10	196	25,000	369	374	32.9	2,110	< 0.50	< 1.0	< 30	< 15a	< 300	< 0.050	< 0.50	< 0.50	< 1.0a	< 1.0	368	< 0.20	< 1.0	< 5.0	< 1.0	< 0.050	8,380	< 0.050	< 90	< 50	-	3.75	< 90	< 15
	GL35-3-180815	2018 08 15	< 5.0	211	24,800	374	443	34.1	1,980	< 0.20	0.67	17.2	< 0.10	87	< 0.010	0.52	< 0.10	< 0.40a	< 0.20	413	< 0.010	0.21	< 0.40	< 0.50	< 0.050	8,860	< 0.020	< 0.20	< 5.0	< 1.0	4.17	1.2	< 4.0
	GL35-3-190530	2019 05 30	5.1	194	23,200	368	348	32	1,980	0.21	0.61	16.3	< 0.10	76.9	< 0.010	1.28	< 0.10	< 0.40a	< 0.20	421	< 0.010	0.27	0.46	< 0.50	< 0.050	9,410	< 0.020	< 0.20	< 5.0	< 1.0	7.01	1.3	< 4.0
	GL35-3-200608	2020 06 08	3	228	16,700	392	377	37.1	2,040	< 0.050	0.842	15.9	0.066	55.4	0.0077	1.73	0.0296	0.9	< 0.050	350	< 0.010	2.34	0.361	0.1	< 0.010	9,340	< 0.0040	< 0.050	1.16	< 0.20	21.9	1.25	< 1.0
	DUPA-200608	Duplicate	2.9	213	15,900	376	363	36.2	2,090	< 0.050	0.82	15.8	0.059	50.2	0.0067	1.62	0.0297	0.97	< 0.050	316	< 0.010	2.29	0.35	0.11	< 0.010	9,410	< 0.0040	< 0.050	1.19	< 0.20	21	1.23	< 1.0
	QA/QC RPD%		*	7	5	4	4	2	2	*	3	1	11	10	*	7	0	7	*	10	*	2	3	*	*	1	*	*	3	*	4	2	*
	GL35-3-210610	2021 06 10	2.5	213	463	322	347	26.9	1,670	< 0.050	0.162	16.3	0.038	64.2	< 0.0020	< 0.10	0.0148	0.19	< 0.050	408	< 0.010	2.14	0.427	< 0.10	< 0.010	7,440	< 0.0040	< 0.050	< 0.20	< 0.20	20.7	< 0.20	< 1.0
	DUP3-210610	Duplicate	1.7	212	35.9	325	351	27.2	1,720	< 0.050	0.151	16.3	0.037	63.2	0.0022	< 0.10	0.0173	0.16	< 0.050	413	< 0.010	2.16	0.403	< 0.10	< 0.010	7,470	< 0.0040	< 0.050	< 0.20	< 0.20	21.4	< 0.20	< 1.0
	QA/QC RPD%		*	0	171	1	1	1	3	*	*	0	*	2	*	*	*	*	*	1	*	1	6	*	*	0	*	*	*	*	3	*	*
	GL35-3-220531	2022 05 31	5.7	165	12.6	371	325	26.6	1,850	<0.250	0.698	15.2	0.09	58.8	0.0183	<0.50	<0.0250	<0.50	<0.250	337	< 0.010	2.46	0.54	<0.50	0.051	7,720	<0.0200	<0.250	<1.00	<1.00	20.3	<5.00	<5.0
	GL35-3-230525	2023 05 25	<5.0	183	15.7	352	360	28.5	1,710	<0.250	0.487	16.5	0.065	81.6	<0.0100	<2.50	<0.0250	<0.50	<0.250	358	<0.010	1.71	0.503	<0.50	<0.050	8270	<0.0200	<0.250	<1.00	<1.00	20.8	<5.00	<5.0
GL37	GL37-20130708	2013 07 08	< 150a	285	6,850	1,250	1,160	200	6,650	< 5.0	15.2	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	176	< 2.5	< 100	< 0.20	104	57	< 50a	< 0.50	7,660	< 5.0a	< 300	< 100	-	251	< 300a	< 50
	GL37-20131114	2013 11 14	< 150a	298	7,060	1,270	1,150	210	7,010	< 5.0	16.1	< 100	< 50a	< 1,000a	< 2.5a	< 25a	< 5.0	< 25a	< 2.5	< 100	< 0.20	103	< 25	< 50a	< 0.50	8,160	< 5.0a	< 300	< 100	-	236	< 300a	< 50
GL39-1	GL39-1-191205	2019 12 05	< 5.0	180	< 10	326	161	12.4	406	< 0.20	< 0.50	14.8	< 0.10	20.4	0.07	< 0.50	1.4	0.89	< 0.20	61.6	< 0.010	21.5	1.89	4.89	< 0.050	5,690	0.034	< 0.20	< 5.0	< 1.0	191	< 1.0	< 4.0
	GL39-1-200609	2020 06 09	1.1	229	< 2.0	376	31.8	14.2	476	< 0.050	0.333	13.5	< 0.010	15.9	0.0609	0.5	0.286	1.19	< 0.050	67.4	< 0.010	22.4	1.07	10.6	< 0.010	45.5	0.0157	< 0.050	< 0.20	< 0.20	219	0.42	1.4
	GL39-1-201019	2020 10 19	1.7	253	3.9	324	10.2	13.5	380	< 0.050	0.472	12.4	< 0.010	8.4	0.0459	0.35	0.207	1.16	< 0.050	59.5	< 0.010	22.4	1.02	5.58	< 0.010	6,840	0.0144	< 0.050	0.24	< 0.20	219	0.23	1.4
	GL39-1-210526	2021 05 26	2.2	325	< 2.0	605	18	16.5	566	< 0.050	0.372	14.1	< 0.010	20.9	0.0578	0.21	0.22	1.58	< 0.050	96	< 0.010	22.1	1	14.6	< 0.010	8,270	0.0184	< 0.050	< 0.20	< 0.20	310	< 0.20	1.2
	GL39-1-210914	2021 09 14	2.5	284	9.1	466	16.1	16	578	0.059	0.619	14.3	< 0.010	33.6	0.0629	0.34	0.256	2.32	< 0.050	74.5	< 0.010	26.2	1.33	2.69	< 0.010	6,770	0.0189	< 0.050	< 0.20	< 0.20	276	< 0.20	1.9
	GL39-1-220531	2022 05 31	2	237	<4.0	492	13.4	13.9	571	<0.100	0.328	11.9	<0.020	13.7	0.0597	0.24	0.173	1.88	<0.100	76.4	< 0.010	20.3	1.05	4.69	0.036	7,110	0.0149	<0.100	<0.40	<0.40	244	<2.00	<2.0
	GL39-1-220923	2022 09 23	6.8	235	<4.0	399	11.4	14.7	483	<0.100	0.275	10.4	0.021	14.3	0.0635	0.29	0.14	1.56	<0.100	66.5	< 0.010	21.2	0.739	5.09	<0.020	6,780	0.0237	<0.100	<0.40	<0.40	240	<2.00	<2.0
	GL39-1-230525	2023 05 25	1.4	251	<2.0	443	17.5	15.4	520	0.05	0.362	10.8	<0.010	15.7	0.0554	<0.50	0.202	1.63	<0.050	72.9	<0.010	21.1	1.14	1.34	0.019	6860	0.0246	<0.050	<0.20	<0.20	281	<1.00	<1.0
	GL39-1-231024	2023 10 24	3.7	224	<4.0	398	25.9	14.3	525	<0.100	0.324	10.7	<0.020	16.4	0.0812	<1.00	0.242	1.82	<0.100	64.8	<0.010	24	1.16	0.78	<0.020	6380	0.0203	<0.100	<0.40	<0.40	258	<2.00	<2.0
GL39-2	GL39-2-191205	2019 12 05	5.7	183	< 10	360	13.3	11.3	741	< 0.20	0.51	16.2	< 0.10	15.2	0.05	12.9	0.16	1.75	< 0.20	28.6	< 0.010	21.5	2.18	12.2	< 0.050	4,940	< 0.020	< 0.20	< 5.0	< 1.0	131	< 1.0	< 4.0
	GL39-2-200609	2020 06 09	4.5	188	8.8	349	6.72	9.71	1.27	0.059	0.419	12.3	< 0.010	9.7	0.048	7.3	0.137	1.74	< 0.050	23.6	< 0.010	23.2	1.33	4.73	< 0.010	27.6	0.0111	< 0.050	0.31	< 0.20	120	0.79	< 1.0
	GL39-2-201016	2020 10 16	1.6	117	< 2.0	230	4.88	7.93	531	0.082	0.422	12.9	< 0.010	10.9	0.0236	3.31	0.109	1.63	< 0.050	22.2	< 0.010	26.8	1.02	5.17	< 0.010	2,870	0.0089	0.132	< 0.20	< 0.20	89.8	0.61	< 1.0
	DUP1-201016	Duplicate	1.6	121	< 2.0	233	4.86	7.9	545	0.085	0.421	12.8	< 0.010	10.3	0.0213	3.29	0.105	1.48	< 0.050	22	< 0.010	26.9	1.02	5.22	< 0.010	2,840	0.0084	0.217	< 0.20	< 0.20	91.1	0.6	< 1.0
	QA/QC RPD%		*	3	*	1	0	0	3	*	0	1	*	6	10	1	4	10	*	1	*	0	0	1	*	1	*	*	*	*	1	*	*
	GL39-2-210526	2021 05 26	1.4	106	< 2.0	201	5.71	7.24	430	< 0.050	0.404	10.9	< 0.010	11.8	0.0176	1.15	0.0787	1.43	< 0.050	20.4	< 0.010	26.6	0.932	0.92	< 0.010	2,400	0.0067	0.055	0.22	< 0.20	80.6	0.38	< 1.0
	DUP 2-210526	Duplicate	1.1	106	< 2.0	203	5.38	7.32	434	0.059	0.354	10.6	< 0.010	11.2	0.0176	1.13	0.0828	1.67	< 0.050	20.7	< 0.010	26.5	0.906	0.95	< 0.010	2,440	0.0064	0.062	< 0.20	< 0.20	82.6	0.44	< 1.0
	QA/QC RPD%		*	0	*	1	6	1	1	*	13	3	*	5	0	2	5	15	*	1	*	0	3	3	*	2	*	*	*	*	2	*	*
	GL39-2-210914	2021 09 14	97.7	182	167	327	15.3	9.42	630	0.07	0.692	20.5	< 0.010	22.8	0.0369	2.81	0.283	2.02	0.075	21.5	< 0.010	29.3	1.83	11.9	< 0.010	3,770	0.0116	< 0.050	8.35	< 0.20	134	< 0.20	1
	GL39-2-220531	2022 05 31	1.1	87.2	<2.0	206	4.07	5.32	412	0.059	0.324	9.76	<0.010	6.7	<0.0180	0.69	0.0645	1.56	<0.050	15.8	< 0.010	23.1	0.813	0.83	0.014	2,130	<0.0040	<0.050	<0.20	<0.20	64.4	<1.00	<1.0
	GL39-2-220923	2022 09 23	1.2	75.1	<2.0	130	3.65	6.13	329	0.073	0.345	10.8	<0.010	7.5	<0.0200	0.51	0.0652	1.52	<0.050	14	< 0.010	34.4	0.684	0.44	<0.010	1,740	0.0066	<0.050	<0.20	<0.20	50.7	<1.00	<1.0
	GL39-2-230525	2023 05 25	1.3	55.2	<2.0	105	7.7	4.44	227	0.062	0.335	14.3	<0.010	10.8	<0.0140	<0.50	0.0942	0.82	<0.050	11.6	<0.010	30.9	0.739	0.32	<0.010	1250	0.0057	<0.050	<0.20	<0.20	41.9	<1.00	<1.0
	GL39-2-231024	2023 10 24	1.2	58.3	<2.0	113	10.2	5.4	263	0.074	0.35	19.9	<0.010	10.3	<0.0380	<0.50	0.109	0.94	<0.050	12.6	<0.010	39.5	0.793	0.6	<0.010	1450	0.0072	<0.050	<0.20	<0.20	53.5	<1.00	<1.0
GL40-3	GL40-3-201117	2020 11 17	2.1	75.4	66.6	29.7	466	10.6	1,230	1.45	15.4	585	< 0.010	76.9	0.0058	0.24	0.119	< 0.10	< 0.050	283	< 0.010	1.52	1.13	< 0.10	< 0.010	8,370	< 0.0040	0.176	1.29	0.66	8.49	1.22	< 1.0
	GL40-3-210610	2021 06 10	1.4	77.5	42	31.3	451	11.2	1,090	0.602	4.35	272	< 0.010	75.5	< 0.0020	0.11	0.103	0.18	< 0.050	321	< 0.010	0.607	1.3	< 0.10	< 0.010	7,280	< 0.0040	< 0.050	1.04	0.65	6.76	0.94	< 1.0
GL41-1	GL41-1-200616	2020 06 16	3.4	69.4	4	118	669	17.4	249	0.122	1.3	192	< 0.010	45.7	0.393	0.58	1.01	1.17	< 0.050	38.3	< 0.010	12	4.8	0.79	< 0.010	2,540	0.0521	0.2	< 0.20	< 0.20	29.2	1.85	5.6
	GL41-1-201102	2020 11 02	2.1	61.4	< 2.0	141	215	18.6	312	0.156	1.2	118	< 0.010	50.6	0.311	1.68	0.229	1.69	< 0.050	44.2	< 0.010	11	2.4	0.54	< 0.010	2,830	0.026	< 0.050	0.26	< 0.20	27.7	2.73	4.7
	GL41-1-210525	2021 05 25	2.6	71	< 2.0	140	1.05	17.9	282	0.112	1.03	158	< 0.010	36	0.0391	1.59	0.0478	1.82	< 0.050	44.2	< 0.010	8.48	2.15	0.46	< 0.010	2,860	0.0517	0.124	< 0.20	< 0.20	28.1	1.68	2.5
	GL41-1-220615	2022 06 15	2.3	56.6	2.2	109	7.64	15.7	246	0.544	1.21	81.6	<0.010	39.1	0.0538	1.66	0.0469	2.93	<0.050	39.4	< 0.010	13.1	1.2	0.91	<0.010	2,250	0.0365	0.166	<0.20	<0.20	30.6	1.38	2.7
	GL41-1-220923	2022 09 23	1.6	58.7	<2.0	109	1.8	17.1	230	0.384	1.07	75.3	0.011	36.9	0.0339	1.28	0.05	2.71	<0.050	38.1	< 0.010	15.8	1.01	0.79	<0.010	2,200	0.0536	0.128	<0.20	<0.20	37.2	<1.00	2.6
	GL41-1-230531	2023 05 31	20.4	57	4.7	105	2.65	17.3	232	0.303	0.991	74.6	<0.010	36.4	0.0307	1.73	0.0463	1.69	0.079	42.1	<0.010	11	0.714	0.63	<0.010	2150	0.0377	0.052	<0.20	<0.20	32.2	1.43	2.7
	GL41-1-231026	2023 10 26	1.6	30.4	3.7	64.6	9.98	13.4	202	0.116	1.13	48.3	<0.010	26.3	0.0299	1.79	0.0438	2.01	<0.050	32.5	<0.010	11	0.643	0.49	<0.010	1370	0.01	0.08	<0.20	<0.20	14.4	3.05	2.2
GL41-2	GL41-2-191205	2019 12 05	75.7	53.6	97	96.3	164	15.1	234	< 0.20	1.19	67.3	< 0.10	30	0.044	3.18	0.29	1.52	0.24	36.9	< 0.010	10.9	1.55	0.64	< 0.050	2,320	< 0.020	< 0.20	< 5.0	< 1.0	20.3	2.6	< 4.0
	GL41-2-200612	2020 06 12	< 1.0	71.1	< 2.0	133	0.111	16	279	0.073	1.05	87.9	< 0.010	25.2	0.0102	2.26	0.0429	1.13	< 0.050	45.2	< 0.010	7.49	0.479	0.49	0.01	3,120	0.0064	< 0.050	< 0.20	< 0.20	26.3	2.29	< 1.0
	DUPD-200612	Duplicate	< 1.0	71.4	< 2.0	137	0.085	16.3	284	0.074	1.06	87.8	< 0.010	25.2	0.0119	2.26	0.0404	1.13	< 0.050	45.3	< 0.010	7.45	0.454	0.51	< 0.010	3,080	0.0065	< 0.050	< 0.20	< 0.20	26.1	2.32	< 1.0
	QA/QC RPD%		*	0	*	3	*	2	2	*	1	0	*	0	15	0	6	0	*	0	*	1	5	*	*	1	*	*	*	*	1	1	*
	GL41-2-201022	2020 10 22	< 1.0	72.6	< 2.0	122	0.07	15.1	256	0.072	1.05	85.2	0.011	29.7	0.0149	2.44	0.0438	1.24	< 0.050	41.7	< 0.010	7.1	0.516	0.49	0.011	2,840	< 0.0040	< 0.050	< 0.20	< 0.20	25.8	2.54	< 1.0
	GL41-2-210525	2021 05 25	< 1.0	76.2	< 2.0	137	< 0.050	17.1	286	0.069	1.1	85.6	< 0.010	30.2	0.0082	1.87	0.0452	1.33	< 0.050	42.5	< 0.010	7.22	0.569	0.34	< 0.010	2,990	< 0.0040	< 0.050	< 0.20	< 0.20	24.5	2.2	< 1.0
	GL41-2-210907	2021 09 07	< 1.0	75.8	2.4	127	0.166	16.9	266	0.076	1.14	86.2	0.011	33.1	0.0111	2.13	0.0527	1.25	< 0.050	41.5	< 0.010	6.96	0.604	0.46	0.011	2,960	< 0.0040	< 0.050	< 0.20	< 0.20	24.6	1.76	< 1.0
	GL41-2-220615	2022 06 15	1.2	50.1	2.9	84.6	0.547	12.8	195	0.064	0.944	57.5	<0.010	25.6	0.0064	1.62	0.0354	1.82	0.058	29.7	< 0.010	7.27	0.474	0.52	<0.010	2,140	<0.0040	0.082	<0.20	<0.20	15.4	2.09	1.2
	GL41-2-220923	2022 09 23	<1.0	60.4	<2.0	98.4	<0.050	15100	199	0.061	0.96	65.7	<0.010	23.6	0.0099	1.68	0.039	0.91	<0.050	32.9	<0.000010	7.39	0.467	0.55	<0.010	2,440	<0.0040	<0.050	<0.20	<0.20	18	2.09	<1.0
	GL41-2-230531	2023 05 31	2.1	57.3	<2.0	89	0.342	14.5	189	0.059	0.965	59	<0.010	23.4	0.0083	1.75	0.0367	0.74	<0.050	34.1	<0.010	6.08	0.47	0.68	<0.010	2260	<0.0040	<0.050	<0.20	<0.20	14.2	2.16	<1.0
	GL41-2-231023	2023 10 23	<1.0	52.3	<2.0	83.6	0.071	12.6	173	0.069	0.895	57.1	<0.010	21.5	<0.0160	1.64	0.0318	0.66	<0.050	29.9	<0.010	7.63	0.443	1.95	<0.010	2060	<0.0040	<0.050	<0.20	<0.20	18.5	2.04	<1.0
GL41-3	GL41-3-200612	2020 06 12	< 1.0	69.3	2.2	141	7.31	17.2	290	0.08	1.07	104	< 0.010	24.2	0.024	2.09	0.0981	1.37	< 0.050	47.5	< 0.010	8.33	0.925	0.53	< 0.010	3,080	0.0242	< 0.050	< 0.20	< 0.20	27.7	1.82	< 1.0
	GL41-3-201022	2020 10 22	2.1	70.9	4.7	126	5.82	17.1	273	0.075	1.14	91.5	< 0.010	27.7	0.0231	2.02	0.0589	2.26	< 0.050	41.3	< 0.010	8.25	0.91	0.35	< 0.010	2,840	0.0135	< 0.050	< 0.20	< 0.20	26.9	2.14	4.9
	GL41-3-210525	2021 05 25	2.3	75.8	< 2.0	146	5.15	18.7	299	0.064	1.12	95.1	< 0.010	28.8	0.0148	1.74	0.0691	1.68	< 0.050	45.3	< 0.010	7.54	0.755	0.35	< 0.010	3,050	0.0087	< 0.050	< 0.20	< 0.20	26.3	1.82	< 1.0
	GL41-3-210907	2021 09 07	5.7	74	10.4	131	2.82	19.3	288	0.088	1.24	92.8	< 0.010	32.3	0.0143	1.96	0.061	1.53	< 0.050	43.4	< 0.010	7.97	0.756	0.39	< 0.010	2,810	0.0095	< 0.050	0.46	< 0.20	24.6	1.28	< 1.0
	DUP 1-210907	Duplicate	6.2	70.6	11.4	131	2.35	19	286	0.083	1.28	92.1	< 0.010	30.9	0.0166	1.92	0.0612	1.43	< 0.050	41.9	< 0.010	7.94	0.767	0.39	< 0.010	2,830	0.0093	< 0.050	0.63	< 0.20	23.8	1.57	< 1.0
	QA/QC RPD%		8	5	9	0	18	2	1	*	3	1	*	4	15	2	0	7	*	4	*	0	1	*	*	1	*	*	*	*	3	20	*
	GL41-3-220615	2022 06 15	9.8	47.4	13.5	86.3	1.65	13.6	200	0.063	0.924	56.7	<0.010	25.5	0.0112	1.5	0.0508	1	<0.050	31.1	< 0.010	6.82	0.534	0.43	<0.010	1,960	0.0058	<0.050	0.48	<0.20	14.1	1.65	<1.0
	GL41-3-220923	2022 09 23	9.2	63.9	13.6	111	1.33	18.4	221	0.077	0.957	74.5	<0.010	25.1	0.0148	1.42	0.0518	1.14	<0.050	37	<0.000010	7.35	0.64	0.45	<0.010	2,600	0.0049	<0.050	0.49	<0.20	19.3	1.99	<1.0
	GL41-3-230531	2023 05 31	2.1	53.2	<2.0	88.9	0.363	15.5	193	<0.050	0.962	58.8	<0.010	22.7	0.0167	1.54	0.0358	1.36	<0.050	34.7	<0.010	6.35	0.523	0.52	<0.010	2010	<0.0040	<0.050	<0.20	<0.20	14.2	1.79	1.5
	GL41-3-231023	2023 10 23	2.4	29	<2.0	53	0.227	11.4	145	0.072	1.12	38.7	<0.010	19.8	<0.0180	1.37	0.0285	1.14	<0.050	24.1	<0.010	11.5	0.668	0.52	<0.010	1150	0.0047	<0.050	<0.20	<0.20	11.2	1.97	<1.0
GL42-1	GL42-1-200612	2020 06 12	< 1.0	35	2,940	23.4	343	9.87	1,530	0.225	2.67	551	0.025	82.3	0.027	0.3	0.154	< 0.10	0.11	1,270	< 0.010	4	0.61	0.12	< 0.010	3,460	< 0.0040	0.115	1	0.24	1.73	1.36	1.7
	GL42-1-201106	2020 11 06	1.7	33.4	3,500	21.3	467	9.63	1,440	0.655	5.24	640	0.014	55.3	0.0334	0.48	0.292	0.19	0.065	1,270	< 0.010	3.08	0.932	< 0.10	< 0.010	3,360	< 0.0040	0.269	1.78	0.22	0.956	1.5	1.9
	GL42-1-210603	2021 06 03	3.8	36.1	3,650	23.5	322	9.8	1,490	0.654	10.4	689	0.013	91	0.0118	0.23	0.906	0.25	< 0.050	1,410	< 0.010	2.13	2.02	< 0.10	< 0.010	3,530	< 0.0040	0.087	1.49	0.37	0.603	0.61	< 1.0
	GL42-1-220607	2022 06 07	<5.0	24	1,820	20	139	8.87	1,180	<0.250	4.37	580	<0.050	73.1	<0.0100	<0.50	0.444	<0.50	<0.250	861	< 0.010	3.24	1.58	<0.50	0.053	2,740	<0.0200	<0.250	<1.00	<1.00	1.47	<5.00	<5.0
	GL42-1-230621	2023 06 21	2.7	202	154	273	629	25.5	1,190	4.99	14.8	63.2	0.023	54.5	0.09	<1.00	14.5	1.28	0.153	721	<0.010	32	26.5	0.78	<0.020	6300	0.0971	<0.100	0.43	<0.40	132	2.78	9
	GL42-1-231030	2023 10 30	<5.0	146	2270	150	439	20.7	1,220	<0.250	26.4	55.6	<0.050	68.4	<0.0100	<2.50	1.81	<0.50	<0.250	852	<0.010	26.7	11.6	0.58	<0.050	4380	<0.0200	<0.250	<1.00	<1.00	61.2	<5.00	<5.0
GL42-2	GL42-2-200616	2020 06 16	55.4	89.2	122	153	1,320	7.78	973	0.353	2.53	102	0.013	48.3	0.195	0.18	1.88	0.63	0.167	105	< 0.010	18.4	6.5	0.21	< 0.010	4,000	0.0497	0.346	1.62	< 0.20	85.4	0.77	2.8
	GL42-2-201109	2020 11 09	30.2	117	51.3	238	606	8.76	1,350	0.868	1.74	47.2	< 0.010	43.1	0.719	3.51	1.88	2.36	0.068	200	< 0.010	21.7	9.37	0.73	< 0.010	5,560	0.0787	0.429	2.24	< 0.20	100	1.56	4.2
	GL42-2-210607	2021 06 07	< 1.0	119	3.7	227	655	9.69	1,170	1.03	1.42	65.7	0.013	49.3	0.188	0.27	1.18	7.23	0.127	156	< 0.010	19.4	8.82	0.53	< 0.010	5,650	0.0808	1.34	< 0.20	< 0.20	107	0.63	6.4
	GL42-2-220617	2022 06 17	<5.0	109	<10.0	271	207	9.09	1,250	0.904	1.05	40.5	<0.050	34.8	0.158	0.97	0.177	2.69	<0.250	121	< 0.010	18.2	7.83	0.64	<0.050	6010	0.083	<0.250	<1.00	<1.00	122	<5.00	<5.0
	GL42-2-230621	2023 06 21	5.2	255	<10.0	679	45.1	15.5	1,550	0.539	0.803	25.5	<0.050	30.4	0.237	<2.50	0.231	3.25	<0.250	198	<0.200	15.2	8.87	4.9	<0.050	11800	0.121	<0.250	<1.00	<1.00	322	<5.00	10.7
	GL42-2-231031	2023 10 31	<5.0	144	<10.0	557	71.8	12.4	1,350	0.776	0.844	19.6	<0.050	22.2	0.0722	<2.50	0.199	1.64	0.358	174	<0.010	15.4	6.85	2.38	<0.050	9970	0.106	0.858	<1.00	<1.00	248	<5.00	<5.0

Associated CARO files available upon request.
Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
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* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H3: Historical Summary of Analytical Results For Surface Water - Inorganics

			Physical Parameters																	Dissolved Inorganics												
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH pH	Hardness mg/L	pH (field) pH	Temperature C	Conductivity µS/cm	Field Conductivity µS/cm	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Dissolved Organic Carbon mg/L	Total Nitrogen-N mg/L	Ammonia, Total (as N) µg/L	Nitrate (as N) µg/L	Nitrite (as N) µg/L	Nitrate+Nitrite Nitrogen µg/L	Chloride mg/L	Fluoride µg/L	Sulfate mg/L	Total Alkalinity mg/L	Alkalinity, Bicarbonate (as CaCO3) mg/L	Alkalinity, Carbonate (as CaCO3) mg/L	Alkalinity, Hydroxide (as CaCO3) mg/L	Alkalinity, Phenolphthalein (as CaCO3) mg/L	Bicarbonate mg/L	Kjeldahl Nitrogen-N mg/L	Bromide mg/L	Chemical Oxygen Demand mg/L	Phosphate mg/L	Ortho-Phosphate mg/L	Total Organic Carbon mg/L	Total Phosphorous as P mg/L
BREDIN POND	Bredin Pond-20010611	2001 06 11	-	-	-	-	-	-	1,180	-	-	-	-	-	-	-	-	-	320	-	-	-	-	-	-	-	-	-	-	-	10	-
	Bredin Pond-20010815	2001 08 15	-	-	-	-	-	-	1,360	-	-	-	-	-	-	-	-	-	375	-	-	-	-	-	-	-	-	-	-	-	18	-
	Bredin Pond-20010920	2001 09 20	-	-	-	-	-	-	1,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.3	-
	Bredin Pond-20080506	2008 05 06	8.46	-	-	-	1,470	-	1,000	-	-	-	140	< 20	-	-	79.8	-	198	546	-	-	-	-	-	0.75	-	14	-	< 0.01	11.2	-
	Bredin Pond-20080507	2008 05 07	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20080520	2008 05 20	8.39	728	-	-	1,470	-	994	< 1	-	-	120	189	-	-	94	-	216	542	-	-	-	-	-	1.16	-	20	-	< 0.01	11.8	-
	Bredin Pond-20090521	2009 05 21	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20091119	2009 11 19	-	716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20130429	2013 04 29	8.82	757	-	-	1,860	-	1,170	< 3.0	-	-	28.9	< 100	-	-	128	1,530	285	-	-	-	-	-	-	-	< 1.0	42	-	0.0099	11.5	-
	Bredin Pond-20130528	2013 05 28	8.56	745	-	-	1,910	-	1,050	< 3.0	-	-	90.8	< 100	-	-	135	1,150	286	-	-	-	-	-	-	-	< 1.0	35	-	0.105	9.4	-
	Bredin Pond-20130718	2013 07 18	8.76	789	-	-	1,990	-	1,230	10.3	-	-	< 5.0	< 100	-	-	133	1,540	309	736	611	124	< 1.0	-	-	1.82	< 1.0	43	-	0.176	16.2	-
	Bredin Pond-20131016	2013 10 16	8.9	766	-	-	1,930	-	1,310	6.3	-	-	22.4	< 100	-	-	140	1,010	308	739	581	158	< 1.0	-	-	1.46	< 1.0	43	-	0.0011	11.2	-
	Bredin Pond-20140331	2014 03 31	8.66	759	-	-	1,950	-	1,240	< 3.0	-	-	96.8	460	-	-	129	1,170	307	724	617	107	< 1.0	-	-	1.09	< 1.0	34	-	0.056	9.83	-
	Bredin Pond-20140528	2014 05 28	8.86	754	-	-	1,960	-	1,280	3.1	-	-	12.3	< 100	-	-	134	1,480	315	628	494	134	< 1.0	-	-	1	< 1.0	34	-	0.0479	10.4	-
	Bredin Pond-20140828	2014 08 28	9.01	673	-	-	1,830	-	1,180	13.5	-	-	14.5	< 100	-	-	131	1,820	273	661	477	184	< 1.0	-	-	2.32	< 1.0	64	-	0.0016	15.2	-
	Bredin Pond-20150311	2015 03 11	-	721	-	-	1,790	-	1,110	< 3.0	-	-	80	1,080	-	-	120	1,190	257	638	542	96.2	< 1.0	-	-	0.97	< 0.50	22	-	0.0697	8.52	-
	Bredin Pond-20150616	2015 06 16	-	623	-	-	1,520	-	1,040	3.2	-	-	11.7	< 50	-	-	113	1,170	238	639	478	162	< 1.0	-	-	0.92	< 0.50	30	-	0.0045	9.01	-
	Bredin Pond-20151029	2015 10 29	9.27	553	-	-	1,560	-	980	< 3.0	-	-	34.1	356	-	-	107	1,100	216	574	390	184	< 1.0	-	-	0.94	< 0.50	32	-	0.0184	8.55	-
	BREDIN POND-20160518	2016 05 18	-	506	-	-	1,380	-	838	< 3.0	-	-	18.3	< 25	-	-	98.4	1,030	200	520	183	337	< 1.0	-	-	0.73	< 0.25	24	-	0.0048	8.31	-
	BREDIN POND-20160914	2016 09 14	-	597	-	-	1,540	-	980	< 3.0	-	-	8.5	< 50	-	-	112	1,190	222	592	421	171	< 1.0	-	-	0.87	< 0.50	38	-	< 0.0010	11.1	-
	BREDIN POND-20161116	2016 11 16	8.52	611	-	-	1,670	-	1,080	< 3.0	-	-	75.3	419	-	-	110	1,160	252	611	572	38.8	< 1.0	-	-	0.9	< 0.50	36	-	0.008	9.28	-
	BREDIN POND-20170418	2017 04 18	8.63	684	-	-	1,770	-	1,180	< 3.0	-	-	61.8	192	-	-	113	1,060	271	659	597	61.8	< 1.0	-	-	1.34	< 0.50	35	-	0.0033	11	-
	BREDIN POND-20170607	2017 06 07	8.72	732	-	-	1,880	-	1,170	4.9	-	-	73.6	< 50	-	-	125	1,250	306	705	619	86.4	< 1.0	-	-	0.98	< 0.50	28	-	0.0213	10.6	-
	BREDIN POND-20170907	2017 09 07	8.73	685	-	-	1,810	-	1,190	22.4	-	-	308	< 50	-	-	145	1,150	252	654	570	83.8	< 1.0	-	-	3.61	< 0.50	71	-	< 0.0010	19	-
	BREDIN POND-20171101	2017 11 01	8.41	649	-	-	1,720	-	1,030	3	-	-	215	939	-	-	145	1,220	223	617	591	26.6	< 1.0	-	-	1.19	< 0.50	21	-	0.0284	7	-
	BREDIN POND-180404	2018 04 04	8.77	580	9.08	9.4	1,450	1,235	918	65.3	-	3.27	176	897	< 10	897	128	870	144	477	389	88.2	< 1.0	44.1	-	2.37	0.17	76	0.0108	-	9.18	1
	BREDIN POND-180523	2018 05 23	8.36	604	8.7	21.6	1,710	1,764	1,070	< 3.3	-	2.69	449	1,360	48	1,410	153	450	211	519	504	14.7	< 1.0	7.4	-	1.28	< 0.10	< 20	0.1	-	7.65	0.257
	BREDIN POND-180906	2018 09 06	8.87	581	9.03	19.4	1,560	1,580	1,020	3.4	-	1.9	439	556	39	595	129	870	206	471	471	< 1.0	< 1.0	< 1.0	-	1.3	< 0.10	58	< 0.0050	-	10.8	0.159
	BREDIN POND-181107	2018 11 07	8.31	586	8.24	8	1,600	1,389	964	2.6	-	2.6	880	1,110	82	1,190	149	760	207	509	501	7.3	< 1.0	3.6	-	1.42	< 1.00	29	0.0653	-	7.15	0.172
	BREDIN POND-190329	2019 03 29	8.24	640	8.16	8.8	1,680	1,418	986	2.3	-	2.98	128	2,150	18	2,170	142	830	197	556	-	< 1.0	< 1.0	< 1.0	556	0.81	0.15	21	0.108	-	6.38	0.253
	BREDIN POND-190605	2019 06 05	8.84	750	8.62	21.7	1,880	1,671	1,330	3	-	0.875	54	33	16	48.6	160	880	296	653	451	202	< 1.0	101	-	0.83	< 0.10	< 20	< 0.0050	-	8.11	0.288
	BREDIN POND-190904	2019 09 04	9.17	721	9.63	21.6	1,870	1,715	1,220	5	9.45	1.04	135	< 10	< 10	< 10.0	178	980	281	624	328	296	< 1.0	148	-	1.04	< 0.10	27	-	0.0068	10.5	0.112
	BREDIN POND-191023	2019 10 23	8.6	663	9.43	9.6	1,790	1,788	1,120	7.7	6.89	1.53	42	562	15	577	169	840	224	557	557	< 1.0	< 1.0	< 1.0	-	0.95	< 0.10	22	-	< 0.0050	7.25	0.08
	BREDINPOND-200407	2020 04 07	8.44	627	9.05	8.8	1,630	1,470	1,040	7.2	5.93	1.92	206	664	21	685	166	680	184	481	452	29.3	< 1.0	14.6	-	1.24	< 0.10	< 20	-	< 0.0050	6.84	0.092
	BREDINPOND-200605	2020 06 05	8.8	565	8.76	19.4	1,460	1,344	935	2	6.99	0.615	< 50	< 10	< 10	< 10.0	159	600	155	493	356	137	< 1.0	68.5	-	0.62	0.12	< 20	-	< 0.0050	7.04	0.059
	BREDINPOND-200917	2020 09 17	8.89	736	8.98	21.6	1,860	1,945	1,270	21.2	11.7	2.25	84	< 10	< 10	-	164	970	280	608	409	199	< 1.0	99.3	-	2.25	< 0.10	62	-	< 0.0050	13.4	0.146
	BREDINPOND-201028	2020 10 28	8.62	755	8.85	5.5	2,010	2,025	1,300	18.7	14.8	3.06	115	301	79	380	157	990	296	664	559	105	< 1.0	52.4	-	2.68	< 0.10	53	-	< 0.0050	14.8	0.219
	BREDIN POND-210323	2021 03 23	8.5	696	8.9	6.7	1,590	1,736.00	1,070	22	8.39	1.44	< 50	195	< 10	195	151	780	209	568	528	39.5	< 1.0	19.7	-	1.25	< 1.00	50	-	< 0.0050	8.57	0.077
	BREDIN POND-210616	2021 06 16	8.82	797	8.83	20.1	1,880	1,963.00	1,310	2.8	9.53	1.17	76	< 10	< 10	< 10.0	170	1,030	296	713	502	210	< 1.0	105	-	1.17	< 0.10	39	-	< 0.0050	9.62	0.123
	BREDIN POND-211019	2021 10 19	8.35	832	8.41	11.2	2,010	2,038.00	1,340	-	9.33	2.86	1,670	68	45	113	188	1,030	275	700	679	20	< 1.0	10	-	2.74	< 0.10	21	-	< 0.0500	9.68	0.295
	BREDIN POND-220322	2022 03 22	8.51	650	-	-	1,800	1,784	1,030	-	6.03	1.59	<50	<10	<10	<10	177	780	203	584	533	51	<1.0	25.5	-	1.59	<0.10	25	<0.0050	-	-	0.121
	BREDIN POND-220621	2022 06 21	8.69	626	-	-	1,870	1,888	1,210	-	7.72	1.03	<50	<10	<10	<10	167	1,000	255	647	524	123	<1.0	61.5	-	1.03	<0.10	31	<0.0050	-	-	0.2
	BREDIN POND-220912	2022 09 12	8.98	707	-	-	2,010	2,044	1,270	-	10.8	1.62	0.163	<100	100	100	185	<1,000	315	688	436	251	<1.0	126	-	1.52	<1.00	37	<0.0500	-	-	0.118
	BREDIN POND-221019	2022 10 19	8.79	759	-	-	1,980	1,984	1,260	-	8.44	1.49	<50	11	20	29.9	184	1,170	289	608	419	189	<1.0	94.4	-	1.46	<0.10	40	<0.0050	-	-	0.102
	BREDIN POND-230329	2023 03 29	8.59	653	-	-	-	-	1020	-	6.52	0.885	<50	<10	<10	<10	166	870	211	499	418	80.6	<1.0	40.3	-	0.89	<0.10	48	<0.0050	-	-	0.056
	BREDIN POND-230518	2023 05 18	8.65	596	-	-	-	-	1050	-	6.91	0.623	<50	<10	<10	<10	151	870	171	496	398	98.8	<1.0	49.4	-	0.62	<0.10	21	<0.0050	-	-	0.043
	BREDIN POND-230927	2023 09 27	9.09	714	-	-	-	-	1210	-	10.4	1.31	98	<10	12	11.9	180	1,150	295	644	333	311	<1.0	155	-	1.3	<1.00	35	<0.0050	-	-	0.036
	BREDIN POND-231101	2023 11 01	8.74	675	-	-	-	-	1120	-	8.33	1.39	127	247	59	306	163	1,010	267	569	404	165	<1.0	82.5	-	1.08	<1.00	23	<0.0050	-	-	0.087
NORTHEAST POND	NE Pond-20130429	2013 04 29	8.72	899	-	-	2,220	-	1,260	3.1	-	-	95.1	< 100	-	-	137	2,080	417	-	-	-	-	-	-	-	< 1.0	43	-	0.369	14.9	-
	NE Pond-20130528	2013 05 28	8.76	948	-	-	2,360	-	1,670	4	-	-	56.9	< 100	-	-	145	1,640	465	-	-	-	-	-	-	-	< 1.0	51	-	0.503	13.5	-
	NE Pond-20130718	2013 07 18	8.83	951	-	-	2,400	-	1,540	< 3.0	-	-	65.1	< 100	-	-	150	1,820	446	870	684	186	< 1.0	-	-	1.88	< 1.0	41	-	0.445	17.7	-
	NE Pond-20131016	2013 10 16	8.78	937	-	-	2,430	-	1,750	6	-	-	149	< 100	-	-	157	1,700	432	871	726	145	< 1.0	-	-	1.59	< 1.0	48	-	0.157	16.9	-
	NE Pond-20140331	2014 03 31	8.66	858	-	-	2,230	-	1,490	5.5	-	-	8.2	< 100	-	-	133	1,400	405	808	696	112	< 1.0	-	-	1.29	< 1.0	39	-	0.27	12.1	-
	NE Pond-20140528	2014 05 28	8.77	814	-	-	2,190	-	1,190	< 3.0	-	-	62.2	< 100	-	-	137	1,800	379	785	659	127	< 1.0	-	-	1.17	< 1.0	37	-	0.353	11	-
	NE Pond-20140828	2014 08 28	8.96	775	-	-	2,160	-	1,440	10.3	-	-	17.6	< 100	-	-	150	1,940	363	780	581	199	< 1.0	-	-	2.35	< 1.0	80	-	0.114	18.8	-

Available CARO file(s) available on request

Associated Exova file(s): 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

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* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H3: Historical Summary of Analytical Results For Surface Water - Inorganics

			Physical Parameters																	Dissolved Inorganics												
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH pH	Hardness mg/L	pH (field) pH	Temperature C	Conductivity µS/cm	Field Conductivity µS/cm	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Dissolved Organic Carbon mg/L	Total Nitrogen-N mg/L	Ammonia, Total (as N) µg/L	Nitrate (as N) µg/L	Nitrite (as N) µg/L	Nitrate+Nitrite Nitrogen µg/L	Chloride mg/L	Fluoride µg/L	Sulfate mg/L	Total Alkalinity mg/L	Alkalinity, Bicarbonate (as CaCO3) mg/L	Alkalinity, Carbonate (as CaCO3) mg/L	Alkalinity, Hydroxide (as CaCO3) mg/L	Alkalinity, Phenolphthalein (as CaCO3) mg/L	Bicarbonate mg/L	Kjeldahl Nitrogen-N mg/L	Bromide mg/L	Chemical Oxygen Demand mg/L	Phosphate mg/L	Ortho-Phosphate mg/L	Total Organic Carbon mg/L	Total Phosphorous as P mg/L
NORTHEAST POND (Cont'd)	NE Pond-20150311	2015 03 11	-	810	-	-	2,240	-	1,510	8.8	-	-	180	< 100	-	-	143	1,390	413	791	660	131	< 1.0	-	-	1.59	< 1.0	44	-	0.199	12.8	-
	NE Pond-20150616	2015 06 16	-	870	-	-	2,240	-	1,670	3.4	-	-	15.1	< 100	-	-	155	1,540	486	888	727	161	< 1.0	-	-	1.28	< 1.0	49	-	0.307	14.1	-
	NE Pond-20151029	2015 10 29	9.08	941	-	-	2,780	-	2,060	3.6	-	-	50.3	< 100	-	-	183	1,540	551	949	690	258	< 1.0	-	-	1.58	< 1.0	55	-	0.146	16.9	-
	NE POND-20160914	2016 09 14	-	1,060	-	-	3,160	-	2,310	14.1	-	-	26.4	< 100	-	-	212	1,820	744	1,090	871	217	< 1.0	-	-	2.71	< 1.0	74	-	0.125	20.6	-
	NE POND-20161116	2016 11 16	8.47	1,010	-	-	2,960	-	2,130	4.5	-	-	2,090	< 100	-	-	185	1,560	644	992	939	53	< 1.0	-	-	3.17	< 1.0	52	-	0.357	15.9	-
	NE POND-20170418	2017 04 18	8.62	944	-	-	2,460	-	1,630	3.6	-	-	73.4	< 100	-	-	146	1,320	539	852	766	85.4	< 1.0	-	-	1.11	< 1.0	33	-	0.085	13	-
	NE POND-20170607	2017 06 07	8.86	967	-	-	2,500	-	1,730	6.9	-	-	11.2	< 100	-	-	155	1,560	586	876	719	157	< 1.0	-	-	1.05	< 1.0	35	-	0.3	15	-
	NE POND-20170907	2017 09 07	9.31	1,050	-	-	2,790	-	2,070	4.2	-	-	71.8	< 100	-	-	192	1,570	685	933	530	403	< 1.0	-	-	2.13	< 1.0	57	-	0.15	20.7	-
	NE POND-20171101	2017 11 01	9.11	1,060	-	-	2,740	-	1,980	3.6	-	-	122	< 100	-	-	207	1,790	676	945	651	294	< 1.0	-	-	1.32	< 1.0	53	-	0.226	15.8	-
	NE SAMPLE-20160518	2016 05 18	-	913	-	-	2,760	-	1,950	< 3.0	-	-	21.9	< 100	-	-	167	1,440	598	943	747	196	< 1.0	-	-	1.29	< 1.0	47	-	0.172	17.2	-
	NORTHEAST POND-180404	2018 04 04	8.81	961	8.95	8.8	2,400	1,965	1,670	6.4	-	0.955	40	17	< 10	16.8	13.2	1,210	483	757	568	189	< 1.0	94.3	-	0.94	0.48	59	0.133	-	12.8	0.48
	NORTHEAST POND-180523	2018 05 23	8.8	937	8.72	24.1	2,440	2,436	1,740	< 2.5	-	0.988	67	< 10	< 10	< 10.0	133	920	431	717	542	175	< 1.0	87.6	-	0.99	< 0.10	< 20	0.0154	-	13.8	0.081
	NORTHEAST POND-180906	2018 09 06	8.52	1,180	8.84	17.9	3,100	385	2,210	106	-	3.4	154	< 100	< 100	< 100	176	2,260	518	1,120	1,020	99.6	< 1.0	49.8	-	3.4	< 1.00	116	0.066	-	20.8	1.24
	NORTHEAST POND-181107	2018 11 07	8.45	1,030	8.61	7.7	2,170	2,050	1,570	41.5	-	2.37	133	< 10	< 10	< 10.0	164	1,360	456	787	725	61.8	< 1.0	30.9	-	2.37	< 1.00	67	0.0951	-	18.3	0.452
	Northeast Pond	2019 03 29	8.49	724	8.72	10.9	1,910	1,577	1,080	28.5	-	1.36	24	< 10	< 10	< 10.0	113	1,010	349	603	-	46.7	< 1.0	23.4	556	1.36	0.23	49	0.109	-	8.16	0.383
	Northeast Pond	2019 06 05	8.6	1,010	8.33	22.4	2,570	2,267	1,800	7.2	-	1.33	195	< 10	< 10	< 10.0	161	1,260	506	858	712	146	< 1.0	72.9	-	1.33	< 0.10	32	< 0.0050	-	12.1	0.31
	Northeast Pond	2019 09 04	8.98	1,040	9.62	19.8	2,620	2,484	1,710	8.7	14	1.22	60	< 10	< 10	< 10.0	180	1,670	546	907	584	323	< 1.0	161	-	1.22	< 0.10	40	-	< 0.0050	14.5	0.144
	NE Pond	2019 10 23	8.52	1,040	9.04	9	2,710	2,659	1,850	3.8	11.2	1.25	225	224	< 10	224	194	1,600	523	987	987	< 1.0	< 1.0	< 1.0	-	1.02	< 0.10	35	-	< 0.0050	11.5	0.347
	NEPOND-200407	2020 04 07	8.46	1,000	9	9.3	2,470	2,264	1,810	2.4	11	0.863	< 50	< 10	< 10	< 10.0	167	1,370	543	821	753	68.3	< 1.0	34.2	-	0.86	< 0.10	34	-	< 0.0050	11	0.314
	NEPOND-200605	2020 06 05	8.72	1,050	8.67	20.2	2,460	2,311	1,820	3.2	14.5	1.33	199	< 10	< 10	< 10.0	160	1,310	488	870	662	208	< 1.0	104	-	1.33	< 0.10	48	-	0.104	15.2	0.357
	NEPOND-200918	2020 09 18	8.82	1,030	8.85	18.4	2,750	2,914	2,380	10.2	25.8	3.66	422	< 10	< 10	-	194	1,660	541	992	703	289	< 1.0	144	-	3.66	0.26	93	-	0.0212	26.3	0.457
	NEPOND-201028	2020 10 28	8.5	1,030	8.69	4.5	2,660	2,758	1,580	12.4	18.4	2.33	180	31	< 10	31.1	139	1,220	397	907	798	109	< 1.0	54.5	-	2.3	< 0.10	69	-	< 0.0050	19	0.322
	NE POND-210323	2021 03 23	8.42	963	8.5	6.5	2,200	2,392.00	1,640	6	12.4	0.965	< 50	< 10	< 10	< 10.0	143	1,380	424	851	801	50	< 1.0	25	-	0.97	< 1.00	42	-	< 0.0050	14.1	0.243
	NE POND-210616	2021 06 16	8.89	1,080	8.83	23.6	2,420	2,729	1,800	9.2	13.4	1.43	112	< 10	< 10	< 10.0	186	1,660	541	990	724	266	< 1.0	133	-	1.43	< 0.10	45	-	< 0.0050	13.8	0.227
	NE POND-211019	2021 10 19	8.6	1,220	8.7	10.8	2,960	2,980.80	2,040	-	14.8	1.95	735	< 10	25	25	201	1,840	569	1,020	846	172	< 1.0	86.2	-	1.92	< 1.00	41	-	< 0.0500	17	0.218
	NE POND-220322	2022 03 22	8.43	977	-	-	2,630	2,640	1,740	-	11.1	1.21	<50	<10	<10	<10	173	1,440	513	907	847	60.7	<1.0	30.3	-	1.21	0.31	126	<0.0050	-	-	0.36
	NE POND-220621	2022 06 21	8.72	942	-	-	2,660	2,833	1,950	-	26	1.66	59	<100	<10	<100	184	1,130	545	944	714	230	<1.0	115	-	1.66	<1.00	50	0.128	-	-	0.512
	NE POND-220912	2022 09 12	9.42	1,140	-	-	2,850	2,915	1,840	-	19.4	1.79	266	<10	<10	<10	220	2,000	655	1020	430	590	<1.0	295	-	1.79	<0.10	65	<0.0050	-	-	0.179
	NE POND-221019	2022 10 19	8.97	1,250	-	-	2,890	2,900	1,870	-	18.2	1.4	<50	20	<10	20.3	210	1,900	624	928	593	334	<1.0	167	-	1.38	<0.10	46	<0.0050	-	-	0.123
	NE POND-230329	2023 03 29	8.47	933	-	-	-	-	1,430	-	13.4	0.87	69	<10	<10	<10	166	1,350	502	681	616	64.9	<1.0	32.4	-	0.87	<0.10	<20	<0.0050	-	-	0.22
	NE POND-230518	2023 05 18	8.67	1,010	-	-	-	-	1,910	-	9.49	1.28	85	<500	<10	<500	182	1,540	547	806	648	158	<1.0	79.1	-	1.28	<0.10	45	0.0119	-	-	0.339
	NE POND-230927	2023 09 27	9.07	1,130	-	-	-	-	2,700	-	20.4	1.66	163	<100	<10	<100	248	1,380	708	947	526	421	<1.0	211	-	1.66	<1.00	43	<0.0050	-	-	0.147
	NE POND-231101	2023 11 01	8.76	1,160	-	-	-	-	1,800	-	16.6	1.98	509	<10	39	38.8	228	1,470	658	886	673	213	<1.0	107	-	1.94	<0.10	44	<0.0050	-	-	0.227
SLOUGH	Alki Lake-20080506	2008 05 06	9.49	-	-	-	20,000	-	17,500	-	-	-	490	23	-	-	1,050	-	4,680	7,420	-	-	-	-	-	13.1	-	556	-	< 1.00	285	-
	Alki Lake-20080507	2008 05 07	-	-	-	-	-	-	-	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Alki Lake-20080520	2008 05 20	9.43	1,070	-	-	22,000	-	18,400	88	-	-	1,770	25	-	-	1,130	-	4,980	8,220	-	-	-	-	-	20.8	-	440	-	< 1.00	307	-
	Alki Lake-20091119	2009 11 19	-	1,120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20010619	2001 06 19	-	-	-	-	-	-	24,200	-	-	-	-	-	-	-	-	-	6,850	-	-	-	-	-	-	-	-	-	-	-	260	-
	Slough-20010815	2001 08 15	-	-	-	-	-	-	53,500	-	-	-	-	-	-	-	-	-	17,800	-	-	-	-	-	-	-	-	-	-	-	810	-
	Slough-20010920	2001 09 20	-	-	-	-	-	-	91,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,440	-
	Slough-20090521	2009 05 21	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20130429	2013 04 29	9.51	715	-	-	20,000	-	18,000	154	-	-	1,330	< 500	-	-	1,260	2,700	5,110	-	-	-	-	-	-	-	12.8	618	-	5.65	163	-
	Slough-20130528	2013 05 28	9.46	789	-	-	22,400	-	20,100	72.7	-	-	428	< 500	-	-	1,480	831	6,030	-	-	-	-	-	-	-	10.5	559	-	6.54	187	-
	Slough-20130718	2013 07 18	9.65	803	-	-	27,200	-	25,900	356	-	-	364	< 500	-	-	1,780	996	7,630	9,320	4,000	5,320	< 5.0	-	-	36.9	17.2	920	-	6.3	251	-
	Slough-20131016	2013 10 16	9.73	567	-	-	38,900	-	37,600	142	-	-	998	< 500	-	-	2,740	< 2,000a	12,100	15,200	6,010	9,190	< 100	-	-	24.4	20.1	1,050	-	10.5	286	-
	Slough-20140331	2014 03 31	9.46	531	-	-	9,940	-	7,580	34.8	-	-	1,310	< 250	-	-	621	< 1,000	2,360	2,760	1,560	1,200	< 1.0	-	-	9.17	5.4	294	-	2.21	96	-
	Slough-20140528	2014 05 28	9.37	665	-	-	19,100	-	15,200	59.1	-	-	491	< 500	-	-	1,230	764	5,030	6,600	4,350	2,260	< 100	-	-	19.4	12.3	514	-	5.33	159	-
	Slough-20140828	2014 08 28	9.58	911	-	-	48,700	-	49,700	321	-	-	1,760	< 500	-	-	3,660	588	15,600	18,100	6,440	11,600	< 100	-	-	56.4	35	1,680	-	12.4	506	-
	Slough-20150311	2015 03 11	-	535	-	-	11,600	-	8,970	12.6	-	-	1,910	< 250	-	-	715	< 1,000	2,910	3,330	2,630	700	< 100	-	-	9.19	5.8	296	-	2.97	90.4	-
	Slough-20150616	2015 06 16	-	732	-	-	13,700	-	13,600	36.3	-	-	87.8	< 500	-	-	1,130	< 2,000a	4,610	5,780	5,760	19.2	< 1.0	-	-	12	10	458	-	4.31	149	-
	Slough-20151029	2015 10 29	9.59	999	-	-	46,700	-	42,700	47.9	-	-	465	< 500	-	-	3,700	< 2,000a	16,300	3,230	3,030	200	< 1.0	-	-	31.7	32	1,210	-	12	464	-
	SLOUGH-20160518	2016 05 18	-	687	-	-	14,100	-	10,800	16	-	-	509	< 500	-	-	881	< 2,000a	3,540	3,860	2,730	1,130	< 5.0	-	-	11.3	6.8	449	-	4.06	151	-
	SLOUGH-20160914	2016 09 14	-	1,300	-	-	28,200	-	24,000	43.8	-	-	815	< 500	-	-	2,110	< 2,000a	8,560	8,330	4,370	3,950	< 1.0	-	-	23.1	16.5	838	-	8.68	284	-
	SLOUGH-20161116	2016 11 16	9.38	974	-	-	22,400	-	20,000	49.4	-	-	1,300	< 500	-	-	1,630	< 2,000a	6,800	8,450	5,350	3,100	< 1.0	-	-	19.3	13.1	694	-	6.67	224	-
	SLOUGH-20170418	2017 04 18	9.23	681	-	-	7,460	-	5,860	10.3	-	-	913	< 250	-	-	466	< 1,000	1,880	2,070	1,400	672	< 1.0	-	-	7.41	2.8	242	-	2.25	77.3	-

Available CARO file(s) available on request
Associated Exova file(s): 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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H3: Historical Summary of Analytical Results For Surface Water - Inorganics

			Physical Parameters																	Dissolved Inorganics												
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH pH	Hardness mg/L	pH (field) pH	Temperature C	Conductivity µS/cm	Field Conductivity µS/cm	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Dissolved Organic Carbon mg/L	Total Nitrogen-N mg/L	Ammonia, Total (as N) µg/L	Nitrate (as N) µg/L	Nitrite (as N) µg/L	Nitrate+Nitrite Nitrogen µg/L	Chloride mg/L	Fluoride µg/L	Sulfate mg/L	Total Alkalinity mg/L	Alkalinity, Bicarbonate (as CaCO3) mg/L	Alkalinity, Carbonate (as CaCO3) mg/L	Alkalinity, Hydroxide (as CaCO3) mg/L	Alkalinity, Phenolphthalein (as CaCO3) mg/L	Bicarbonate mg/L	Kjeldahl Nitrogen-N mg/L	Bromide mg/L	Chemical Oxygen Demand mg/L	Phosphate mg/L	Ortho-Phosphate mg/L	Total Organic Carbon mg/L	Total Phosphorous as P mg/L
SLOUGH (Cont'd)	SLOUGH-20170607	2017 06 07	9.04	738	-	-	7,660	-	5,880	11.3	-	-	574	< 250	-	-	504	< 1,000	2,010	2,160	1,650	505	< 1.0	-	-	6.85	4.1	245	-	2.54	89	-
	SLOUGH-20170907	2017 09 07	9.03	1,070	-	-	13,500	-	11,000	15.8	-	-	1,090	< 500	-	-	944	< 2,000a	3,580	4,700	3,410	1,300	< 1.0	-	-	17.2	5.6	644	-	5.6	232	-
	SLOUGH-20171101	2017 11 01	9.1	1,210	-	-	15,000	-	12,000	39.6	-	-	701	< 500	-	-	1,060	< 2,000a	3,980	4,050	2,820	1,220	< 1.0	-	-	19.4	6.8	630	-	5.68	261	-
	SLOUGH-180404	2018 04 04	8.94	744	8.85	10.5	3,660	2,328	2,440	41	-	9.47	168	1,080	108	1,190	274	660	791	902	656	246	< 1.0	123	-	8.28	1.09	250	1	-	65.1	2.78
	SLOUGH-180523	2018 05 23	8.82	840	8.63	26.3	6,050	6,029	4,440	11.5	-	10.5	1,330	< 250	< 10	< 250	391	590	1,310	1,540	1,220	322	< 1.0	161	-	10.5	< 2.50	299	2.57	-	117	3.46
	SLOUGH-180906	2018 09 06	9.02	1,170	9.16	18.9	12,100	11,069	10,200	26.2	-	20	516	< 100	< 100	< 100	695	1,230	2,480	3,480	3,480	< 1.0	< 1.0	< 1.0	-	20	3.9	627	2.28	-	306	6.33
	SLOUGH-181107	2018 11 07	9.04	1,120	8.97	7.4	6,930	6,117	5,520	41.2	-	12.5	926	101	< 100	101	544	< 1,000	1,910	1,830	1,270	552	< 1.0	276	-	12.4	1.14	355	1.94	-	193	2.67
	Slough	2019 03 29	8.94	662	9.11	9.8	3,670	3,169	2,470	20	-	6.49	138	< 100	< 100	< 100	257	< 1,000	766	946	-	245	< 1.0	122	701	6.49	< 1.00	176	0.797	-	53	1.44
	Slough	2019 06 05	8.92	879	8.69	21	6,270	5,270	4,620	14.8	-	8.16	627	< 100	< 100	< 100	438	< 1,000	1,470	1,660	1,230	435	< 1.0	217	-	8.16	< 1.00	241	0.814	-	89.2	2.34
	Slough	2019 09 04	9.11	1,010	9.21	21.3	10,200	9,072	7,930	43.7	135	13.5	281	< 100	< 100	< 100	748	< 1,000	2,460	2,590	1,740	848	< 1.0	424	-	13.5	2.95	399	-	1.12	139	2.65
	Slough	2019 10 23	9.14	1,090	9.44	11	10,200	9,820	8,030	97.7	132	13.7	408	< 100	< 100	< 100	759	< 1,000	2,560	2,430	2,430	< 1.0	< 1.0	< 1.0	-	13.7	3.5	525	-	0.825	142	3.61
	SLOUGH-200407	2020 04 07	9.03	778	9.41	9.9	5,070	4,428	3,770	37.5	74.6	9.78	192	< 10	< 10	< 10.0	365	500	1,210	1,170	810	365	< 1.0	182	-	9.78	1.44	281	-	0.36	84.3	1.67
	SLOUGH-200605	2020 06 05	9.02	867	9.01	20.6	5,220	5,012	4,260	18.4	78.6	6.93	382	< 10	34	33.8	385	530	1,280	1,430	973	457	-	229		6.89	1.62	199	-	0.864	80	1.77
	SLOUGH-200918	2020 09 18	9.61	893	9.63	18.6	8,600	9,004	7,100	13.8	117	7.88	211	< 10	< 10	-	699	710	2,280	2,100	821	1,280	-	642		7.88	< 2.50	291	-	< 0.0050	119	0.196
	SLOUGH-201028	2020 10 28	9.29	895	9.56	3.6	8,480	8,543	6,200	39.7	121	10.7	115	< 250	< 10	< 250	648	590	2,080	2,010	1,140	864	-	432		10.7	< 2.50	291	-	< 0.0050	137	1.19
	SLOUGH-210323	2021 03 23	8.78	918	9.03	8.5	3,900	4,350	3,190	30.4	50.2	4.5	559	< 100	< 100a	< 100	322	< 1,000	941	1,070	827	247	-	124		4.5	1.07	154	-	0.205	53.2	0.83
	Slough	2021 06 17	8.74	1,170	8.73	19.4	5,850	6,399.00	4,980	34.4	66.5	8.12	2,460	< 100	< 100a	< 100	439	< 1,000	1,590	1,590	1,270	317	-	158		8.12	1.44	214	-	1.21	72.4	1.37
	SLOUGH-210921	2021 09 21	9.25	2,050	9.23	17.5	12,500	12,713.00	9,900	-	125	16.2	331	< 100	< 100a	< 100	1,040	< 1,000	3,840	2,910	1,630	1,280	-	642		16.2	3.7	455	-	0.221	127	1.83
	SLOUGH-211020	2021 10 20	9.33	1,650	9.52	8.7	13,200	12,068	8,700	-	132	17.2	255	< 100	< 100a	< 100	911	< 1,000	3,380	2,890	1,550	1,340	-	672		17.2	3.45	489	-	0.11	134	2.18
	SLOUGH-220322	2022 03 22	9.28	837	-	-	5,210	2,695	3,760	-	54.5	7.5	148	< 100	< 100	<100	397	< 1,000	1,340	1,170	605	566	<1.0	283	-	7.5	1.29	258	0.199	-	-	1.35
	SLOUGH-220621	2022 06 21	8.66	970	-	-	6,020	6,174	4,690	-	66.3	9.28	4,120	< 100	110	110	487	< 1,000	1,640	1,390	1,130	259	<1.0	129	-	9.18	<1.00	196	0.92	-	-	2.05
	SLOUGH-220909	2022 09 09	9.17	1,290	-	-	10,100	10,445	8,110	-	138	13.4	425	< 100	< 100	<100	880	< 1,000	3,030	2,240	1,470	775	<1.0	388	-	13.4	<1.00	463	0.244	-	-	1.34
	SLOUGH-221019	2022 10 19	9.16	1,690	-	-	10,900	11,216	8,760	-	125	14.3	273	< 100	< 100	<100	1000	< 1,000	3,530	2,210	1,400	814	<1.0	407	-	14.3	3.38	417	0.19	-	-	1.73
	SLOUGH-230329	2023 03 29	8.96	945	-	-	-	-	3,530	-	63.7	8,880	0.131	< 100	< 100	< 100	391	< 1,000	1,370	934	627	307	<1.0	153	-	8.88	1.21	219	0.094	-	-	1.31
	SLOUGH-230518	2023 05 18	8.68	1,030	-	-	-	-	4,850	-	70.2	7,780	3.04	< 500	19	< 500	497	550	1,820	1,210	1,010	192	<1.0	96	-	7.76	1.36	220	0.603	-	-	1.74
	SLOUGH-230927	2023 09 27	9.68	1,480	-	-	-	-	16,800	-	229	44,200	0.382	< 250	< 250	< 250	1920	< 2,500	7,220	2,740	961	1,780	<1.0	888	-	44.2	5.62	1,690	<0.125	-	-	4.37
	SLOUGH-231101	2023 11 01	9.14	1,630	-	-	-	-	10,100	-	208	17,800	1.69	< 100	< 100	< 100	1200	< 1,000	4,630	2,080	1,250	828	<1.0	414	-	17.8	2.64	586	0.09	-	-	1.44
TUTT POND	Tutt Pond-20010611	2001 06 11	-	-	-	-	-	-	630	-	-	-	-	-	-	-	-	-	89	-	-	-	-	-		-	-	-	-	-	31.7	-
	Tutt Pond-20010815	2001 08 15	-	-	-	-	-	-	4,140	-	-	-	-	-	-	-	-	-	1,200	-	-	-	-	-		-	-	-	-	-	44	-
	Tutt Pond-20010920	2001 09 20	-	-	-	-	-	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	14.8	-
	Tutt Pond-20080506	2008 05 06	8.35	-	-	-	2,130	-	1,320	-	-	-	240	65	-	-	123	-	318	605	-	-	-	-	-	1.07	-	28	-	0.15	18.1	-
	Tutt Pond-20080507	2008 05 07	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20080520	2008 05 20	8.3	850	-	-	2,000	-	1,420	2	-	-	230	60	-	-	142	-	371	636	-	-	-	-	-	1.58	-	31	-	0.3	20	-
	Tutt Pond-20090521	2009 05 21	-	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20091119	2009 11 19	-	967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20130429	2013 04 29	8.65	831	-	-	2,340	-	1,620	7.1	-	-	335	< 100	-	-	176	1,300	529	-	-	-	-	-	-	-	< 1.0	35	-	0.355	12.6	-
	Tutt Pond-20130528	2013 05 28	8.71	894	-	-	2,460	-	1,670	3.3	-	-	81.6	< 100	-	-	182	900	540	-	-	-	-	-	-	-	< 1.0	37	-	0.33	11.6	-
	Tutt Pond-20130718	2013 07 18	8.82	869	-	-	2,430	-	1,560	3	-	-	20	< 100	-	-	184	1,300	542	665	535	130	< 1.0	-	-	1.26	< 1.0	36	-	0.273	12.3	-
	Tutt Pond-20130819	2013 08 19	8.69	874	-	-	2,540	-	1,720	3.9	-	-	52	< 100	-	-	191	1,430	566	699	584	116	< 1.0	-	-	1.43	< 1.0	44	-	0.353	13.5	-
	Tutt Pond-20130911	2013 09 11	8.82	906	-	-	2,550	-	1,920	16.3	-	-	18.5	< 100	-	-	197	970	573	739	623	116	< 1.0	-	-	1.98	< 1.0	53	-	0.43	16.7	-
	Tutt Pond-20131016	2013 10 16	8.5	943	-	-	2,700	-	1,920	< 3.0	-	-	1,520	< 100	-	-	205	820	623	764	733	31.6	< 1.0	-	-	2.67	< 1.0	38	-	0.679	13.3	-
	Tutt Pond-20140331	2014 03 31	8.56	923	-	-	2,510	-	1,690	3.1	-	-	440	530	-	-	190	920	565	710	637	73.4	< 1.0	-	-	1.63	< 1.0	34	-	0.332	11.8	-
	Tutt Pond-20140528	2014 05 28	8.68	984	-	-	2,680	-	1,810	3	-	-	48.4	< 100	-	-	204	1,190	693	710	614	96.7	< 1.0	-	-	0.98	< 1.0	35	-	0.187	11.4	-
	Tutt Pond-20140731	2014 07 31	8.79	964	-	-	2,740	-	1,940	< 3.0	-	-	63	< 100	-	-	219	1,240	753	674	531	143	< 1.0	-	-	1.24	< 1.0	44	-	0.236	13.4	-
	Tutt Pond-20140828	2014 08 28	8.78	967	-	-	2,870	-	2,140	15.4	-	-	15.7	< 100	-	-	232	1,510	780	705	564	141	< 1.0	-	-	1.36	< 1.0	52	-	0.277	13.1	-
	Tutt Pond-20140930	2014 09 30	8.54	999	-	-	2,680	-	1,840	< 3.0	-	-	1,160	< 100	-	-	214	1,280	706	720	649	71.9	< 1.0	-	-	2.37	< 1.0	52	-	0.664	25.6	-
	Tutt Pond-20150311	2015 03 11	-	822	-	-	2,190	-	1,460	11.8	-	-	15.3	< 100	-	-	182	1,070	454	665	554	112	< 1.0	-	-	3.33	< 1.0	58	-	0.068	12.8	-
	Tutt Pond-20150616	2015 06 16	-	864	-	-	2,170	-	1,530	< 3.0	-	-	13.3	< 100	-	-	189	980	594	667	537	129	< 1.0	-	-	1.05	< 1.0	39	-	0.137	12.3	-
	Tutt Pond-20150902	2015 09 02	8.5	1,060	-	-	2,960	-	2,100	8.8	-	-	712	110	-	-	212	940	784	718	669	48.4	< 1.0	-	-	1.84	< 1.0	45	-	0.602	12.6	-
	Tutt Pond-20151029	2015 10 29	8.46	960	-	-	2,840	-	1,910	4.4	-	-	1,090	160	-	-	195	920	740	721	681	39.8	< 1.0	-	-	2.3	< 1.0	39	-	0.464	10.9	-
	TUTT POND-20160518	2016 05 18	-	843	-	-	2,480	-	1,660	< 3.0	-	-	34.9	< 100	-	-	181	850	627	606	537	68.4	< 1.0	-	-	0.93	< 1.0	36	-	0.103	12.4	-
	TUTT POND-20160914	2016 09 14	-	960	-	-	2,660	-	1,860	< 3.0	-	-	234	< 100	-	-	193	940	702	687	608	78.6	< 1.0	-	-	1.36	< 1.0	44	-	0.318	12	-
	TUTT POND-20161116	2016 11 16	8.44	820	-	-	2,310	-	1,610	4.7	-	-	720	310	-	-	169	1,000	571	652	621	31.6	< 1.0	-	-	1.71	< 1.0	38	-	0.348	11.7	-
	TUTT POND-20170418	2017 04 18	8.63	777	-	-	2,090	-	1,420	< 3.0	-	-	99.2	59	-	-	146	840	462	633	570	63	< 1.0	-	-	0.99	< 0.50	34	-	0.107	10.8	-
	TUTT POND-20170607	2017 06 07	8.75	860	-	-	2,220	-	1,500	3.3	-	-	9.5	< 100	-	-	164	1,070	510	682	586	96.2	< 1.0	-	-	0.96	< 1.0	38	-	0.166	13.1	-
	TUTT POND-20170907	2017 09 07	8.54	1,010	-	-	2,790	-	2,020	< 3.0	-	-	58.9	< 100	-	-	203	980	743	744	680	64	< 1.0	-	-	1.32	< 1.0	47	-	0.23	14.8	-

Available CARO file(s) available on request
Associated Exova file(s): 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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H3: Historical Summary of Analytical Results For Surface Water - Inorganics

			Physical Parameters																	Dissolved Inorganics												
Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH (pH)	Hardness (mg/L)	pH (field) (pH)	Temperature (C)	Conductivity (µS/cm)	Field Conductivity (µS/cm)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Dissolved Organic Carbon (mg/L)	Total Nitrogen-N (mg/L)	Ammonia, Total (as N) (µg/L)	Nitrate (as N) (µg/L)	Nitrite (as N) (µg/L)	Nitrate+Nitrite Nitrogen (µg/L)	Chloride (mg/L)	Fluoride (µg/L)	Sulfate (mg/L)	Total Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Alkalinity, Hydroxide (as CaCO3) (mg/L)	Alkalinity, Phenolphthalein (as CaCO3) (mg/L)	Bicarbonate (mg/L)	Kjeldahl Nitrogen-N (mg/L)	Bromide (mg/L)	Chemical Oxygen Demand (mg/L)	Phosphate (mg/L)	Ortho-Phosphate (mg/L)	Total Organic Carbon (mg/L)	Total Phosphorous as P (mg/L)
TUTT POND (Cont'd)	TUTT POND-20171101	2017 11 01	8.39	1,100	-	-	2,930	-	2,100	6	-	-	973	150	-	-	216	990	852	780	749	31.4	< 1.0	-	-	2.2	< 1.0	36	-	0.502	12.8	-
	TUTT POND-180404	2018 04 04	8.68	792	8	6.6	1,970	2,158	1,390	63.3	-	1.93	135	11	< 10	11.2	141	720	409	476	401	74.8	< 1.0	37.4	-	1.92	0.24	73	0.0069	-	14.3	0.388
	TUTT POND-180417	2018 04 17	8.64	799	8.66	9.3	2,080	2,184	1,470	22.7	-	12.6	39	4,930	< 10	4,930	145	570	443	510	449	61.2	< 1.0	30.6	-	7.67	0.18	34	< 0.0050	-	11	0.065
	TUTT POND-180503	2018 05 03	8.62	681	8.02	6.1	1,740	1,539	1,110	< 5.0	-	3.13	442	584	22	606	157	650	225	475	413	61.2	< 1.0	30.6	-	2.52	< 0.10	24	0.024	-	10.6	0.087
	TUTT POND-180523	2018 05 23	8.46	708	8.49	22.4	1,930	1,987	1,210	< 2.0	-	2.11	161	803	65	868	182	540	276	530	500	30.3	< 1.0	15.2	-	1.24	< 0.10	< 20	0.0578	-	9.64	0.227
	TUTT POND-180615	2018 06 15	8.46	831	8.83	17.9	2,140	1,821	1,420	7.3	-	2.15	78	225	32	256	174	930	364	573	539	33.7	< 1.0	16.9	-	1.89	0.21	44	0.018	-	10.6	0.232
	TUTT POND-180712	2018 07 12	8.82	748	9.04	23.7	2,050	1,902	1,410	3	-	1.01	46	< 100	< 10	< 100	160	830	354	586	433	152	< 1.0	76.2	-	1.01	< 1.00	32	0.0821	-	11.6	0.197
	TUTT POND-180906	2018 09 06	8.64	857	8.9	18.7	2,300	228.3	1,620	15.2	-	1.46	337	157	< 100	157	177	1,280	507	527	441	85.9	< 1.0	42.9	-	1.3	< 1.00	49	< 0.0500	-	14.2	0.362
	TUTT POND-181107	2018 11 07	8.39	909	8.37	7.9	2,150	1,882	1,400	8.4	-	1.71	297	500	53	552	175	790	504	586	562	23.9	< 1.0	11.9	-	1.16	< 1.00	39	0.132	-	11.1	0.322
	Tutt Pond	2019 03 29	8.22	792	8.33	9	1,940	1,618	1,230	12.3	-	2.5	248	1,180	23	1,200	136	600	396	498	-	< 1.0	< 1.0	< 1.0	498	1.3	0.13	28	0.23	-	7.49	0.472
	Tutt Pond	2019 05 06	8.47	975	8.5	17.3	2,400	2,076	1,660	5.4	-	1.02	191	64	12	75.3	192	650	636	628	582	46.6	< 1.0	23.3	-	0.94	0.16	45	0.0646	-	9.54	0.233
	Tutt Pond	2019 06 05	8.69	865	8.67	21.6	2,260	2,031	1,690	4.6	-	1.27	94	174	14	188	182	740	484	664	525	139	< 1.0	69.6	-	1.08	< 0.10	31	0.0075	-	9.46	0.33
	Tutt Pond	2019 09 04	8.76	912	8.84	21.3	2,500	2,312	1,660	10.7	12.1	1.37	181	< 10	< 10	< 10.0	202	870	565	680	510	170	< 1.0	85.1	-	1.37	< 0.10	52	-	0.0082	13	0.343
	Tutt Pond	2019 10 23	8.48	1,040	8.76	9.3	2,860	2,818	2,080	3	11.3	1.74	669	44	42	86.6	211	820	723	688	688	< 1.0	< 1.0	< 1.0	-	1.65	< 0.10	32	-	0.0988	11.3	0.494
	TUTTPOND-200407	2020 04 07	8.4	842	8.95	8	2,330	2,032	1,630	4.4	8.99	1.02	132	15	< 10	14.8	199	690	536	551	523	28.4	< 1.0	14.2	-	1	< 0.10	29	-	0.0128	9.2	0.124
	TUTTPOND-200605	2020 06 05	8.68	819	8.72	19.1	2,140	1,981	1,560	3.4	10.5	0.947	< 50	< 10	< 10	< 10.0	189	640	442	608	468	140	< 1.0	70.1	-	0.95	0.16	35	-	0.0982	11	0.312
	TUTTPOND-200918	2020 09 18	8.58	917	8.7	19.1	2,520	2,688	2,050	3	16.2	1.38	226	< 10	< 10	-	212	840	591	665	558	108	< 1.0	53.8	-	1.38	< 1.00	53	-	0.0431	16.4	0.306
	TUTTPOND-201028	2020 10 28	8.12	1,130	8.07	6.1	3,050	3,131	2,040	9.3	19.4	3.16	1,590	10	< 10	10.2	227	790	788	748	748	< 1.0	< 1.0	< 1.0	-	3.14	0.26	48	-	< 0.0050	19.4	0.935
	TUTT POND-210323	2021 03 23	8.42	990	8.63	7.7	2,250	2,541	1,780	9.2	7.67	1.32	< 50	< 10	< 10	< 10.0	185	670	573	624	589	35.2	< 1.0	17.6	-	1.32	< 1.00	46	-	< 0.0050	11.7	0.164
	TUTT POND-210616	2021 06 16	8.53	1,140	8.49	20	2,670	2,976.00	2,180	3.6	15.7	1.49	169	< 10	< 10	< 10.0	240	780	752	771	654	117	< 1.0	58.4	-	1.49	< 0.10	46	-	< 0.0050	15.8	0.371
	TUTT POND-210921	2021 09 21	8.62	1,250	8.56	15.9	3,180	3,201.00	2,340	-	12.6	1.43	153	< 10	< 10	< 10.0	258	800	926	698	568	130	< 1.0	65	-	1.43	< 0.10	< 20	-	0.0127	12.7	0.231
	TUTT POND-211020	2021 10 20	8.49	1,270	8.54	10.1	3,330	2,967.00	2,370	-	14.2	1.12	244	< 100	< 100a	< 100	272	< 1,000	818	721	651	69.9	< 1.0	34.9	-	1.12	< 1.00	37	-	< 0.0500	14.6	0.453
	TUTT POND-220322	2022 03 22	8.5	948	-	-	2,660	2,695	1,870	-	10.3	1.33	<50	< 100	< 100	< 100	219	< 1,000	656	661	594	66.8	<1.0	33.4	-	1.33	<1.00	28	<0.0500	-	-	0.199
	TUTT POND-220621	2022 06 21	8.62	869	-	-	2,500	2,597	1,880	-	11.5	1.6	<50	< 100	< 100	< 100	218	< 1,000	605	652	539	113	<1.0	56.6	-	1.6	<1.00	46	0.073	-	-	0.305
	TUTT POND-220909	2022 09 09	8.56	1,050	-	-	3,170	3,305	2,380	-	15.7	1.62	137	< 100	< 100	< 100	284	< 1,000	886	745	635	110	<1.0	55	-	1.62	<1.00	42	<0.100	-	-	0.453
	TUTT POND-221019	2022 10 19	8.42	1,270	-	-	3,380	3,393	2,630	-	15	1.72	332	< 100	110	108	268	< 1,000	997	707	655	52.5	<1.0	26.3	-	1.61	<1.00	47	0.059	-	-	0.541
	TUTT POND-230329	2023 03 29	8.39	994	-	-	-	-	1,570	-	11.3	1.15	192	< 100	< 100	< 100	226	< 1,000	687	547	523	24.2	<1.0	12.1	-	1.15	<1.00	23	<0.0500	-	-	0.102
	TUTT POND-230518	2023 05 18	8.58	975	-	-	-	-	1,930	-	10.5	0.885	68	< 500	< 10	< 500	254	670	799	554	458	95.5	<1.0	47.8	-	0.89	<0.10	29	<0.0050	-	-	0.133
	TUTT POND-230927	2023 09 27	8.8	1,080	-	-	-	-	2,070	-	13.5	1.15	125	< 250	< 10	< 250	261	900	886	647	423	224	<1.0	112	-	1.15	<2.50	39	<0.0050	-	-	0.17
	TUTT POND-231101	2023 11 01	8.5	1,110	-	-	-	-	2,000	-	15.7	1.98	731	< 100	115	115	259	<1.00	853	620	542	78.4	<1.0	39.2	-	1.86	<1.00	38	0.081	-	-	0.501
BUBNA SLOUGH	Bubna Slough-20150616	2015 06 16	-	1,280	-	-	4,340	-	3,250	12.8	-	-	26.2	< 250	-	-	1,000	< 1,000	623	857	693	165	< 1.0	-	-	2.52	< 2.5	145	-	< 0.0010	43.9	-
	BUBNA DISCHARGE-180420	2018 04 20	8.29	858	-	-	2,810	-	1,900	3.5	-	1.33	30	< 10	< 10	< 10.0	555	320	214	548	548	< 1.0	< 1.0	< 1.0	-	1.33	< 0.10	75	< 0.0050	-	20.6	0.046
	BUBNA DISCHARGE-180503	2018 05 03	8.56	963	8.08	15.6	2,920	2,584	1,850	5.7	-	1.41	56	< 1,000	< 10	< 1,000	476	360	170	561	495	65.7	< 1.0	32.9	-	1.41	< 0.10	69	< 0.0050	-	24.1	0.017
	BUBNA DISCHARGE-180615	2018 06 15	8.91	940	9.06	15.7	2,950	2,484	5,980	3.8	-	1.97	23	< 10	< 10	< 10.0	542	410	201	516	355	161	< 1.0	80.3	-	1.97	0.19	87	< 0.0050	-	27.6	0.033
	BUBNA SLOUGH-181108	2018 11 08	8.36	1,110	8.43	3.1	3,330	3,359	2,200	4.7	-	1.32	38	< 100	< 100	< 100	630	< 1,000	268	661	639	21.6	< 1.0	10.8	-	1.32	< 1.00	75	< 0.0500	-	24.5	0.034
	Bubna	2019 03 29	8.39	300	8.56	10.9	1,060	866	559	5	-	0.76	41	< 10	< 10	< 10.0	173	150	58.8	218	-	5.8	< 1.0	2.9	212	0.76	< 0.10	27	< 0.0050	-	6.68	0.042
	Bubna	2019 05 06	8.71	961	8.41	19.2	3,050	2,559	1,790	16	-	1.57	90	< 10	< 10	< 10.0	573	340	207	646	514	132	< 1.0	66.1	-	1.57	0.13	74	< 0.0050	-	27.9	0.037
	BUBNASLOUGH-200407	2020 04 07	8.33	819	8.66	8.7	2,620	2,431	1,710	2.8	20.9	1.02	< 50	< 10	< 10	< 10.0	506	320	158	502	489	12.3	< 1.0	6.2	-	1.02	< 0.10	53	-	< 0.0050	21.2	0.017
	BUBNASLOUGH-200605	2020 06 05	8.44	724	8.44	19.8	2,690	2,573	1,790	3.8	24.7	1.36	78	< 10	< 10	< 10.0	540	320	166	627	572	54.7	< 1.0	27.4	-	1.36	< 0.10	66	-	< 0.0050	25.3	0.022
	BUBNASLOUGH-200928	2020 09 28	8.28	897	7.97	14.9	3,200	3,317	2,070	2.6	21.3	1.66	285	< 100	< 100	-	635	< 1,000	213	655	655	< 1.0	< 1.0	< 1.0	-	1.66	< 1.00	62	-	< 0.0500	30.2	0.016
	BUBNASLOUGH-201029	2020 10 29	8.29	888	8.32	4.3	3,230	3,248	1,710	3.8	23	2	637	< 100	< 100	< 100	518	< 1,000	204	692	692	< 1.0	< 1.0	< 1.0	-	2	< 1.00	121	-	< 0.0500	25	0.022
	BUBNA SLOUGH-210412	2021 04 12	8.35	901	8.36	8.6	2,520	2,893	1,770	2	26.8	1.19	80	< 10	< 10	< 10.0	508	440	169	667	645	21.5	< 1.0	10.7	-	1.19	< 2.50	63	-	< 0.0050	34.7	0.017
	BUBNA SLOUGH-210616	2021 06 16	8.52	944	8.46	19.9	2,710	3,018	1,800	3	18	1.68	153	< 100	< 100a	< 100	498	< 1,000	184	688	605	83	< 1.0	< 1.0	-	1.68	< 1.00	86	-	< 0.0500	24.8	0.014
	BUBNA SLOUGH-211020	2021 10 20	8.54	1,040	8.63	9.1	3,530	3,587	2,010	-	24.8	1.85	297	< 100	< 100a	< 100	581	< 1,000	219	792	685	108	< 1.0	53.8	-	1.85	< 1.00	64	-	< 0.0500	24.9	0.017
	BUBNA SLOUGH-220323	2022 03 23	8.42	538	-	-	1,860	1,427	1,080	-	9.27	0.518	<50	< 100	< 100	< 100	301	< 1,000	97.7	442	420	21.6	<1.0	10.8	-	0.52	<1.00	42	<0.0500	-	-	0.023
	BUBNA SLOUGH-220621	2022 06 21	8.48	765	-	-	2,900	3,023	1,850	-	22.6	1.71	<50	< 100	< 100	< 100	552	< 1,000	185	687	626	60.4	<1.0	30.2	-	1.71	<1.00	74	<0.0500	-	-	0.024
	BUBNA SLOUGH-220912	2022 09 12	8.52	938	-	-	3,270	3,371	1,930	-	25.9	1.54	233	< 100	< 100	< 100	668	< 1,000	217	744	715	28.6	<1.0	14.3	-	1.54	<1.00	77	<0.0500	-	-	0.02
	BUBNA SLOUGH-221019	2022 10 19	8.54	1,090	-	-	3,340	3,403	2,040	-	24	1.81	384	< 100	< 100	< 100	665	< 1,000	220	708	597	112	<1.0	55.8	-	1.81	<1.00	71	<0.0500	-	-	0.019
	BUBNA SLOUGH-230329	2023 03 29	8.22	550	-	-	-	-	625	-	11.2	0.613	123	< 100	< 100	< 100	203	< 1,000	59.1	244	244	<1.0	<1.0	<1.0	-	0.61	<1.00	<20	<0.0500	-	-	0.013
	BUBNA SLOUGH-230518	2023 05 18	8.52	868	-	-	-	-	1,660	-	25.7	1.66	132	< 10	< 10	< 10	633	370	214	585	515	69.9	<1.0	35	-	1.66	<0.10	73	<0.0050	-	-	0.021
	BUBNA SLOUGH-230927	2023 09 28	8.77	1,080	-	-	-	-	2,130	-	37.7	1.57	59	< 100	< 100	< 100	763	< 1,000	251	788	550	239	<1.0	119	-	1.57	<1.00	81	<0.0500	-	-	0.016
	BUBNA SLOUGH-231102	2023 11 02	8.78	1,110	-	-	-	-	1,780	-	38.7	1.62	68	< 10	< 10	< 10	717	370	223	740	502	237	<1.0	119	-	1.62	<2.50	72	<0.0050	-	-	0.016
SLOUGH #2	SLOUGH #2-200407	2020 04 07	8.58	590	-	-	4,260	-	2,950	4.8	36.8	2.53	339	12	< 10	11.9	492	630	897	671	586	85.4	< 1.0	42.7	-	2.52	0.95	96	-	< 0.0050	37.3	0.069
	SLOUGH #2-200605	2020 06 05	9	506	-	-	4,230	-	3,070	6.4	49.5	2.85	< 50	< 10	< 10	< 10.0	512	660	933	766	487	278	< 1.0	139	-	2.85	< 10.0	142	-	< 0.0050	52	0.066
	SLOUGH #2-200917	2020 09 17	8.7	811	-	-	5,320	-	3,880	4	46.4	3.21	550	< 10	< 10	-	623	830	1,180	841	677	164	< 1.0	82.2	-	3.21	< 0.10	133	-	< 0.0050	48.3	0.071
	SLOUGH #2-201029	2020 10 29	8.51	657	-	-	5,420	-	3,580	2.4	46.4	3.61	1,160	< 100	< 100	< 100	617	< 1,000	1,190	862	782	79.7	< 1.0	39.8	-	3.61	1.68	110	-	< 0.0500	48.4	0.04
	SLOUGH # 2-210616	2021 06 16	8.9	704	8.95	19.4	4,420	4,926	3,370	4.8	40.7	2.82	118	< 100	< 100a	< 100	558	< 1,000	1,050	875	601	274	< 1.0	137	-	2.82	1.4	163	-	< 0.0500	41.6	0.037
	SLOUGH #2-210412	2021 04 12	8.72	661	8.87	9	4,160	4,522.00	3,120	6.2	39.4	2.61	210	< 100	< 100a	< 100	484	< 1,000	907	802	628	174	< 1.0	86.9	-	2.61	1.4	99	-	< 0.0500	45.2	0.054
	SLOUGH #2-211020	2021 10 20	8.61	788	8.74	9.8	6,080	5,874.00	3,910	-	45.9	4.36	1,280	< 100	< 100a	< 100	568	< 1,000	1,100	974	825	149	< 1.0	74.7	-	4.36	1.67	104	-	< 0.0500	47.6	0.055
	SLOUGH #2-220323	2022 03 23	8.62	517	-	-	3,690	3,548	2,380	-	25.5	1.76	189	< 100	< 100	< 100	363	< 1,000	661	651	557	93.9	<1.0	46.9	-	1.76	<1.00	75	<0.0500	-	-	0.057
	SLOUGH # 2-220621	2022 06 21	8.69	642	-	-	5,170	5,057	3,680	-	35.9	2.99	622	< 100	< 100	< 100	643	< 1,000	1160	904	738	165	<1.0	82.7	-	2.99	<1.00	110	<0.0500	-	-	0.058
	SLOUGH #2-220912	2022 09 12	8.77	745	-	-	5,730	5,889	3,880	-	45.3	3.19	535	< 100	< 100	< 100	778	< 1,000	1,380	973	776	197	<1.0	98.4	-	3.19	<1.00	113	<0.0500	-	-	0.148
	SLOUGH #2-221019	2022 10 19	8.65	767	-	-	5,920	5,950	4,000	-	47.8	3.9	1,280	< 100	< 100	< 100	759	< 1,000	1,410	910	754	157	<1.0	78.4	-	3.9	<1.00	110	<0.0500	-	-	0.08
	SLOUGH #2-230329	2023 03 29	8.63	575	-	-	-	-	2,410	-	36.6	2.38	301	< 100	< 100	< 100	481	< 1,000	807	558	463	94.8	<1.0	47.4	-	2.38	1.3	81	<0.0500	-	-	0.062
	SLOUGH #2-230518	2023 05 18	8.79	686	-	-	-	-	3,630	-	39.4	4.65	98	< 500	20	< 500	705	780	1,270	771	583	188	<1.0	93.9	-	4.63	2.33	175	<0.0050	-	-	0.244
	SLOUGH #2-230927	2023 09 27	8.79	864	-	-	-	-	4,480	-	60.1	3.69	767	< 100	60	< 100	856	850	1,530	1,030	768	262	<1.0	131	-	3.63	2.17	135	<0.0050	-	-	0.073
	SLOUGH #2-231102	2023 11 02	8.62	812	-	-	-	-	3,920	-	45.4	7.02	1,580	< 250	55	< 250	772	750	1,410	939	786	153	<1.0	76.6	-	6.96	<2.50	184	0.0241	-	-	0.405
LITTLE ROBERT LK	Little Robert Lake-20150616	2015 06 16	-	990	-	-	3,340	-	2,750	22.4	-	-	36.7	< 100	-	-	86	< 400	1,570	782	531	252	< 1.0	-	-	2.79	< 1.0	104	-	1.18	34.6	-
	LITTLE ROBERT'S LAKE-20160921	2016 09 21	8.45	1,200	-	-	4,400	-	3,680	5.3	-	-	-	160	-	-	102	410	1,860	934	-	-	-	-	-	-	< 1.0	-	-	-	30.9	-
	LITTLE ROBERT LK-180417	2018 04 17	8.73	1,240	8.92	11	3,780	3,334	3,140	21.5	-	1.83	54	< 10	< 10	< 10.0	76.5	310	1,490	626	495	130	< 1.0	65.2	-	1.83	0.16	59	1.32	-	46.6	1.43
	LITTLE ROBERT LK-180503	2018 05 03	8.56	763	8.34	17.2	2,000	1,779	1,450	4.3	-	1.67	173	442	22	464	151	650	400	511	465	46.5	< 1.0	23.3	-	1.2	< 0.10	37	0.15	-	14.2	0.448
	LITTLE ROBERT LK-180615	2018 06 15	8.51	855	9.19	17.1	2,140	1,940	1,470	12.7	-	1.71	53	405	< 10	405	172	880	403	590	543	47.1	< 1.0	23.6	-	1.3	0.24	42	< 0.0500	-	16	0.235
	Little Robert Lk	2019 05 06	8.67	1,170	8.59	18.7	3,060	2,656	2,350	4.7	-	1.29	113	132	13	146	154	590	1,030	690	563	128	< 1.0	63.8	-	1.15	0.19	38	0.413	-	15.6	0.865

Available CARO file(s) available on request

Associated Exova file(s): 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.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H3: Historical Summary of Analytical Results For Surface Water - Inorganics

Sample Location	Sample ID	Sample Date (yyyy mm dd)	pH pH	Hardness mg/L	pH (field) pH	Temperature C	Conductivity µS/cm	Field Conductivity µS/cm	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Dissolved Organic Carbon mg/L	Total Nitrogen-N mg/L	Ammonia, Total (as N) µg/L	Nitrate (as N) µg/L	Nitrite (as N) µg/L	Nitrate+Nitrite Nitrogen µg/L	Chloride mg/L	Fluoride µg/L	Sulfate mg/L	Total Alkalinity mg/L	Alkalinity, Bicarbonate (as CaCO3) mg/L	Alkalinity, Carbonate (as CaCO3) mg/L	Alkalinity, Hydroxide (as CaCO3) mg/L	Alkalinity, Phenolphthalein (as CaCO3) mg/L	Bicarbonate mg/L	Kjeldahl Nitrogen-N mg/L	Bromide mg/L	Chemical Oxygen Demand mg/L	Phosphate mg/L	Ortho-Phosphate mg/L	Total Organic Carbon mg/L	Total Phosphorous as P mg/L
			Physical Parameters																	Dissolved Inorganics												
LITTLE ROBERT LK Cont'	Little Robert Lk	2019 06 05	9.02	987	8.84	22.3	2,690	2,335	2,010	3.8	-	1.32	84	< 100	< 100	< 100	181	< 1,000	749	637	384	253	< 1.0	127	-	1.32	< 1.00	36	0.209	-	12.7	0.787
	Little Robert Lk	2019 09 04	8.98	1,110	8.19	25	3,100	3,090	2,160	4.4	23.7	1.82	45	< 100	< 100	< 100	165	< 1,000	972	745	478	267	< 1.0	133	-	1.82	< 1.00	49	-	0.387	25.5	1.16
	LITTLEROBERTLAKE-200928	2020 09 28	8.72	1,330	8.76	14.2	4,350	4,285	3,490	153	24	2.85	211	< 100	< 100	-	115	< 1,000	1,720	675	520	155	< 1.0	77.7	-	2.85	< 1.00	93	-	0.564	27.2	1.5
	LITTLEROBERTLAKE-201029	2020 10 29	8.5	1,300	8.71	5	4,150	4,187	3,210	6.4	19.5	2.65	440	309	< 100	309	103	< 1,000	1,540	697	621	75.8	< 1.0	37.9	-	2.34	< 1.00	52	-	0.618	23.3	1.58
	LTTILEROBERTLAKE-200605	2020 06 05	8.86	1,240	8.97	20.5	3,520	3,393	3,040	8.8	23.5	1.78	< 50	< 10	< 10	< 10.0	116	430	1,630	648	414	234	< 1.0	117	-	1.78	< 1.00	50	-	0.604	25.7	0.592
	LITTLE ROBERT LAKE-210412	2021 04 12	8.42	1,560	8.59	10.8	4,200	4,486	3,740	29	24.4	1.58	110	< 100	< 100a	< 100	100	< 1,000	1,840	749	701	47.4	< 1.0	23.7	-	1.58	< 1.00	51	-	0.953	28.3	1.67
	Little Robert Lake	2021 06 17	9.08	1,620	9.29	20.6	4,220	4,945	4,320	30.4	16.6	1.9	< 50	< 100	< 100a	< 100	110	< 1,000	2,210	661	349	312	< 1.0	156	-	1.9	< 1.00	67	-	0.6	22.7	1.09
	LITTLE ROBERT LAKE-210922	2021 09 22	8.61	1,630	8.61	15	5,370	5,225	4,310	-	24.1	1.96	340	< 100	< 100a	< 100	123	< 1,000	2,500	772	629	142	< 1.0	71.1	-	1.96	< 1.00	66	-	0.44	24.7	1.44
	LITTLE ROBERT LAKE-211021	2021 10 21	8.47	1,520	8.47	8.3	5,020	4,527	4,110	-	22.1	2.45	486	< 100	< 100a	< 100	110	< 1,000	2,320	770	699	70.9	< 1.0	35.5	-	2.45	< 1.00	58	-	0.442	24.4	1.35
	LITTLE ROBERT LAKE-220323	2022 03 23	8.65	1,350	-	-	4,370	4,227	3,190	-	15.6	2.08	54	< 100	< 100	< 100	82.2	< 1,000	1,810	656	521	135	<1.0	67.5	-	2.08	<1.00	68	0.445	-	-	1.54
	LITTLE ROBERT LAKE-220621	2022 06 21	8.82	1,260	-	-	4,460	4,580	3,860	-	17.8	1.85	<50	< 100	< 100	< 100	90.3	< 1,000	2,200	701	493	208	<1.0	104	-	1.85	<1.00	61	0.59	-	-	1.67
	LITTLE ROBERT LAKE-220912	2022 09 12	8.94	1,660	-	-	5,400	5,528	4,520	-	23.8	2.4	146	< 100	< 100	< 100	120	< 1,000	2,930	719	448	271	<1.0	135	-	2.4	<1.00	98	0.085	-	-	1.45
	LITTLE ROBERT LAKE-221019	2022 10 19	8.63	1,830	-	-	5,480	5,482	4,600	-	23.1	2.8	197	< 100	< 100	< 100	119	< 1,000	2,850	703	554	149	<1.0	74.6	-	2.8	<1.00	80	0.201	-	-	1.68
	LITTLE ROBERT LAKE-230329	2023 03 29	8.64	1,670	-	-	-	-	3,730	-	37.2	2.41	65	< 100	< 100	< 100	106	< 1,000	2,450	611	464	148	<1.0	73.8	-	2.41	<1.00	70	0.422	-	-	1.9
	LITTLE ROBERT LAKE-230518	2023 05 18	8.61	1,580	-	-	-	-	4,490	-	19.4	2.52	96	< 500	< 10	< 500	113	250	2,550	630	498	132	<1.0	66	-	2.52	<5.00	94	<0.0050	-	-	2.15
	LITTLE ROBERT LAKE-230928	2023 09 28	8.62	309	-	-	-	-	5,660	-	26.2	2.48	331	< 100	< 100	< 100	152	< 1,000	3,350	847	655	192	<1.0	95.9	-	2.48	<1.00	80	0.208	-	-	2.01
	LITTLE ROBERT LAKE-231102	2023 11 02	8.55	2,070	-	-	-	-	4,950	-	26.5	3.37	1,110	< 250	< 250	< 250	113	< 2,500	2,920	820	678	142	<1.0	70.8	-	3.37	<2.50	78	0.88	-	-	1.88
ROBERT LK	Robert Lake-20150616	2015 06 16	-	1,150	-	-	12,500	-	13,700	31.1	-	-	82	< 500	-	-	346	< 2,000a	8,420	1,760	1,230	530	< 1.0	-	-	5.85	< 5.0	233	-	4.85	82.3	-
	ROBERT'S LAKE 1-20160921	2016 09 21	9.67	1,450	-	-	21,800	-	21,300	19.7	-	-	-	< 500	-	-	524	< 2,000a	12,800	2,010	-	-	-	-	-	-	< 5.0	-	-	-	110	-
	ROBERT LAKE - NORTH-20161117	2016 11 17	-	1,150	-	-	15,600	-	13,300	188	-	-	510	< 500	-	-	358	< 2,000a	8,640	1,410	821	592	< 1.0	-	-	7.85	< 5.0	252	-	2.94	81.7	-
	ROBERT LAKE - SOUTH-20161117	2016 11 17	-	1,070	-	-	16,300	-	13,700	67.3	-	-	83.9	< 500	-	-	387	< 2,000a	9,250	1,440	783	661	< 1.0	-	-	8.09	< 5.0	258	-	2.6	82.1	-
	ROBERT LK-180417	2018 04 17	8.98	1,040	8.92	11	9,100	3,334	7,730	18	-	3.59	47	< 10	< 10	< 10.0	161	450	3,840	1,010	714	297	< 1.0	148	-	3.59	0.8	127	1.79	-	74	2.21
	ROBERT LK-180503	2018 05 03	8.98	1,090	8.58	19.3	8,740	7,684	7,330	17	-	4.71	119	1,350	< 10	1,350	145	520	3,850	1,010	713	296	< 1.0	148	-	3.36	< 10.0	109	1.61	-	39.7	2.45
	ROBERT LK-180614	2018 06 14	8.97	1,200	9.19	19.1	8,000	6,915	6,690	12.8	-	3.56	98	< 100	< 100	< 100	198	< 1,000	3,490	1,020	706	316	< 1.0	158	-	3.56	< 1.00	113	1.24	-	39.9	1.99
	ROBERT LK-180712	2018 07 12	9.02	1,120	9.22	27.2	8,110	7,162	6,820	12.6	-	3.98	66	< 10	< 10	< 10.0	205	710	3,280	1,110	766	347	< 1.0	173	-	3.98	< 0.10	115	1.02	-	49.9	2.14
	Robert Lk	2019 03 29	9.02	685	9.25	8	5,660	636.7	3,900	17.7	-	3.72	105	< 100	< 100	< 100	140	< 1,000	2,280	763	-	231	< 1.0	115	532	3.72	< 1.00	110	0.735	-	29.2	1.44
	Robert Lk	2019 05 06	8.92	1,060	8.6	20.9	7,900	6,464	6,200	34.7	-	5.44	139	< 10	< 10	< 10.0	209	660	3,310	1,180	859	321	< 1.0	160	-	5.44	0.94	165	1.59	-	48.4	2.22
	Robert Lk	2019 06 05	8.85	1,130	8.62	22	8,000	6,741	6,520	27.4	-	5.64	733	< 100	< 100	< 100	212	< 1,000	3,160	1,210	898	313	< 1.0	156	-	5.64	< 1.00	143	0.988	-	45.3	2.55
	Robert Lk	2019 09 04	8.91	1,490	8.61	26.6	10,300	10,048	8,440	42.3	53.4	5.52	372	< 100	127	127	279	< 1,000	4,350	1,660	1,210	459	< 1.0	229	-	5.4	1.14	154	-	1.61	59.8	3.71
	ROBERTLAKE-200407	2020 04 07	8.87	1,190	9.4	14	7,620	6,679	6,240	21.7	38.2	3.64	68	< 10	< 10	< 10.0	203	590	3,350	1,170	873	294	< 1.0	147	-	3.64	< 0.10	117	-	1.26	39.3	2.95
	ROBERTLAKE-200605	2020 06 05	8.81	1,220	8.86	21.1	7,520	735.8	7,100	147	53.3	7.34	438	< 1,000	< 10	< 1,000	193	630	3,560	1,440	1,090	349	< 1.0	175	-	7.34	< 10.0	245	-	2.7	57.5	4.96
	ROBERTLAKE-200928	2020 09 28	8.97	1,450	8.92	15.4	10,400	10,282	8,580	32	60.3	6.66	1,160	< 100	107	-	262	< 1,000	4,160	1,560	1,050	516	< 1.0	258	-	6.56	< 1.00	179	-	1.88	64.1	3.47
	ROBERTLAKE-201028	2020 10 28	8.94	1,380	9.18	4	9,880	9,840	7,960	44.7	58.4	6.8	129	< 250	79	< 250	245	630	4,160	1,580	1,100	477	< 1.0	239	-	6.72	0.98	153	-	0.869	68.3	3.47
	ROBERT LAKE-210412	2021 04 12	8.73	1,330	9.12	11	7,810	8,577	7,290	60	38.4	6.14	204	< 100	< 100a	< 100	190	< 1,000	3,200	1,440	1,050	393	< 1.0	196	-	6.14	< 1.00	213	-	1.75	46.7	3.28
	ROBERT LAKE-210616	2021 06 16	8.96	1,510	9.02	17.9	8,560	9,489	8,250	44	47.4	7.32	118	< 100	< 100a	< 100	242	< 1,000	4,110	1,690	1,150	541	< 1.0	270	-	7.32	< 1.00	234	-	1.12	57	3.46
	ROBERT LAKE-210922	2021 09 22	9.12	1,980	9.12	15.7	12,800	12,687	9,700	-	65.6	8.96	143	< 100	< 100a	< 100	365	< 1,000	6,060	2,110	1,300	810	< 1.0	405	-	8.96	1.33	271	-	1.68	77.7	3.8
	ROBERT LAKE-211021	2021 10 21	9.08	1,530	9.29	7.9	12,600	11,012	9,700	-	61.6	12.7	173	< 100	< 100a	< 100	336	< 1,000	5,790	2,020	1,290	731	< 1.0	365	-	12.7	1.22	255	-	1.37	76.1	3.82
	ROBERT LAKE-220323	2022 03 23	9.00	1,130	-	-	8,620	8,300	6,680	-	38.4	5.38	205	< 100	< 100	< 100	188	< 1,000	3,540	1,290	840	453	<1.0	227	-	5.38	<1.00	198	1.13	-	-	2.9
	ROBERT LAKE-220621	2022 06 21	8.95	1,320	-	-	9,830	9,829	8,390	-	47.6	5.87	90	< 100	< 100	< 100	253	< 1,000	4,510	1,560	1,070	491	<1.0	245	-	5.87	<1.00	168	1.51	-	-	3.22
	ROBERT LAKE-220912	2022 09 12	9.05	1,750	-	-	11,900	12,400	10,700	-	61.6	6.28	144	< 100	< 100	< 100	326	< 1,000	5,050	1,930	1,320	609	<1.0	305	-	6.28	1.33	199	0.866	-	-	3.47
	ROBERT LAKE-221019	2022 10 19	9.06	1,820	-	-	12,300	12,671	11,200	-	65.5	8.44	222	< 100	< 100	< 100	350	< 1,000	6,280	1,790	1,170	612	<1.0	306	-	8.44	1.48	247	1.34	-	-	3.68
	ROBERT LAKE-230329	2023 03 29	8.98	1,350	-	-	-	-	7,460	-	48.8	5.51	95	< 100	< 100	< 100	243	< 1,000	4,330	1,110	737	375	<1.0	187	-	5.51	1.05	150	0.919	-	-	2.67
	ROBERT LAKE-230518	2023 05 18	8.95	1,440	-	-	-	-	9,320	-	49.3	4.38	103	< 500	< 10	< 500	293	640	5,010	1,410	985	421	<1.0	211	-	4.38	<5.00	172	<0.250	-	-	3.42
	ROBERT LAKE-230928	2023 09 28	9.08	2,890	-	-	-	-	14,800	-	73.4	8.18	317	< 100	< 100	< 100	458	< 1,000	8,200	2,160	1,340	826	<1.0	413	-	8.18	1.91	266	1.62	-	-	3.9
	ROBERT LAKE-231102	2023 11 02	9.08	2,070	-	-	-	-	12,800	-	75.9	7.55	591	< 250	< 250	< 250	367	< 2,500	7,660	1,890	1,150	739	<1.0	370	-	7.55	<2.50	249	0.762	-	-	3.36
DIFFUSER	DIFFUSER-180417	2018 04 17	8.98	1,090	9.26	12	9,030	8,592	7,570	19.3	-	2.69	56	< 10	< 10	< 10.0	168	460	3,890	1,010	720	294	< 1.0	147	-	2.69	0.8	132	1.86	-	61	5.73
	DIFFUSER-180503	2018 05 03	8.98	1,110	8.67	19.7	8,740	7,700	7,710	15	-	3.39	135	< 1,000	< 10	< 1,000	145	520	3,890	1,020	726	299	< 1.0	149	-	3.39	< 10.0	112	1.38	-	42.7	2.51
	DIFFUSER-180615	2018 06 15	8.99	1,230	9.29	19.5	7,940	6,818	10,400	10.8	-	3.86	48	< 10	< 10	< 10.0	182	970	3,350	1,050	691	363	< 1.0	181	-	3.86	0.91	99	0.71	-	41.6	1.97
JH Outfall	JH OUTFALL-180417	2018 04 17	8.68	861	8.89	10.3	2,100	2,069	1,580	28	-	1.53	23	486	< 10	486	150	650	485	520	441	78.8	< 1.0	39.4	-	1.04	0.2	30	< 0.0050	-	12.4	0.058
	JH OUTFALL-180503	2018 05 03	8.63	710	8.31	16.1	1,830	1,586	1,150	< 3.3	-	2.56	469	1,090	21	1,110	148	670	241	476	411	65.4	< 1.0	32.7	-	1.45	< 0.10	31	0.009	-	10.1	0.093
QUAIL RIDGE	Treated Leachate Feb 02/00-20000202	2000 02 02	-	-	-	-	-	-	0.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20081104	2008 11 04	7.18	-	-	-	7,040	-	-	-	-	-	106,000	63,500	-	-	-	-	-	3,580	-	-	-	-	-	-	-	430	-	1.8	-	-
	Quail Ridge-20091119	2009 11 19	7.12	1,650	-	-	-	-	-	-	-	-	100,000	49,900	-	-	-	-	-	< 5	-	-	-	-	-	-	-	490	-	1.9	-	-
	Quail Ridge-20130312	2013 03 12	7.48.09	1,410	-	-	8,160	-	5,580	4.4	-	-	112,000	14,400	-	-	503	1,600	577	-	-	-	-	-	-	-	2.9	434	-	2.32	123	-
	Quail Ridge-20130911	2013 09 11	7.63	1,260	-	-	7,380	-	5,060	6.1	-	-	101,000	12,500	-	-	433	< 1,000	503	-	-	-	-	-	-	-	2.8	366	-	2.16	112	-
	Quail Ridge-20131211	2013 12 11	7.67	1,290	-	-	6,900	-	4,400	51.5	-	-	111,000	27,200	-	-	398	2,000	430	-	-	-	-	-	-	-	2.8	361	-	2.01	118	-
	Quail Ridge-20140408	2014 04 08	-	1,060	-	-	-	-	5,220	-	-	-	69,600	< 250	-	-	434	< 1,000	917	3,000	-	-	-	-	-	-	3.4	459	-	2.37	-	-
	Quail Ridge-20140610	2014 06 10	-	1,430	-	-	-	-	7,080	-	-	-	76,800	8,160	-	-	542	886	969	4,790	-	-	-	-	-	-	4.5	505	-	3.87	-	-
	Quail Ridge-20150122	2015 01 22	7.54	1,530	-	-	-	-	3,510	-	-	-	45,700	122,000	-	-	356	< 1,000	316	1,930	1,930	< 1.0	< 1.0	-	-	-	< 2.5	191	-	0.887	-	-
	Quail Ridge-20150615	2015 06 15	7.76	1,380	-	-	-	-	4,680	-	-	-	89,300	35,500	-	-	388	1,700	576	3,450	-	-	-	-	-	-	2.7	321	-	2.08	-	-
	Quail Ridge-20150915	2015 09 15	7.47	1,580	-	-	-	-	6,260	-	-	-	118,000	49,600	-	-	479	< 2,000a	912	4,290	4,290	< 1.0	< 1.0	-	-	-	< 5.0	407	-	2.83	-	-
	Quail Ridge-20151203	2015 12 03	7.46	1,580	-	-	-	-	6,160	-	-	-	118,000	64,200	-	-	451	1,000	804	4,150	4,150	< 1.0	< 1.0	-	-	-	3.2	377	-	2.76	-	-
	QUAIL RIDGE-20160315	2016 03 15	7.49	1,350	-	-	-	-	5,140	-	-	-	79,100	12,300	-	-	471	< 1,000	793	3,570	3,570	< 1.0	< 1.0	-	-	-	3.3	446	-	2.44	-	-
	QUAIL RIDGE-20160915	2016 09 15	-	1,650	-	-	-	-	6,580	-	-	-	104,000	9,710	-	-	508	1,900	1,070	4,090	-	-	-	-	-	-	3.5	447	-	3.01	-	-
	QUAIL RIDGE-20161117	2016 11 17	-	1,540	-	-	-	-	6,750	-	-	-	119,000	38,500	-	-	602	< 1,000	1,100	4,210	-	-	-	-	-	-	4	556	-	0.281	-	-

Available CARO file(s) available on request

Associated Exova file(s): 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.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

\- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H4: Historical Summary of Analytical Results For Surface Water - Metals

			Total Metals																																					
Sample Location	Sample ID	Sample Date (yyyy mm	Aluminum µg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Bismuth µg/L	Boron µg/L	Cadmium µg/L	Calcium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Lithium µg/L	Magnesium µg/L	Manganese µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Phosphorous µg/L	Potassium µg/L	Selenium µg/L	Silicon µg/L	Silver µg/L	Sodium µg/L	Strontium µg/L	Sulphur µg/L	Tellurium µg/L	Thallium µg/L	Thorium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L	Zirconium µg/L
BREDIN POND	Bredin Pond-20010611	2001 06 11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20010711	2001 07 11	13	< 5	< 10	81	< 0.5a	10	18	< 0.5a	7,300	< 0.8	1.7	4	38	7	48	183,000	7.6	-	10	6	< 30	25,800	< 4a	2,840	< 1a	214,000	218	123,000	-	< 4a	-	< 3	2.7	-	-	8	0.8	-
	Bredin Pond-20010815	2001 08 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20010816	2001 08 16	61	< 20a	< 50	12.5	< 3a	130	40	< 3a	7,700	< 4a	< 3	< 5a	448	34	37	170,000	7.5	-	< 5	27	< 100	20,600	< 20a	12,700	< 5a	192,000	233	115,000	-	< 20a	-	< 20	12	-	-	10	< 3	-
	Bredin Pond-20010920	2001 09 20	28	< 5	< 10	13.1	< 0.5a	11	< 2	< 0.5a	10,600	< 0.8	1.5	2	13	< 2	43	174,000	4	-	16	10	30	23,100	8	18,900	< 1a	209,000	371	128,000	-	< 4a	-	< 3	< 0.4	-	-	4	1	-
	Bredin Pond-20080506	2008 05 06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20080507	2008 05 07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20080520	2008 05 20	-	-	-	-	-	-	-	-	29,100	-	-	-	-	-	-	159,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20090521	2009 05 21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20091119	2009 11 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Bredin Pond-20130429	2013 04 29	11	< 0.50	1	65	< 5.0a	-	< 100	< 0.050	41,200	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	159,000	21	< 0.20a	11	< 5.0	-	-	1.2	-	< 0.050	203,000	-	-	-	< 0.20	-	-	< 50	-	27.7	< 30	< 5.0	-
	Bredin Pond-20130528	2013 05 28	< 10	< 0.50	1.1	68	< 5.0a	-	< 100	< 0.050	32,700	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	161,000	60	< 0.20a	11	< 5.0	-	-	1	-	< 0.050	196,000	-	-	-	< 0.20	-	-	< 50	-	23.2	< 30	< 5.0	-
	Bredin Pond-20130718	2013 07 18	< 10	< 0.50	1.5	62	< 5.0a	-	< 100	< 0.050	40,600	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	169,000	72	< 0.20a	13	< 5.0	-	-	< 1.0	-	< 0.050	197,000	-	-	-	< 0.20	-	-	< 50	-	24.6	< 30	< 5.0	-
	Bredin Pond-20131016	2013 10 16	< 10	< 0.50	1.4	67	< 5.0a	-	< 100	< 0.050	26,700	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	170,000	< 10	< 0.20a	10.9	< 5.0	-	-	< 1.0	-	< 0.050	223,000	-	-	-	< 0.20	-	-	< 50	-	20.1	< 30	< 5.0	-
	Bredin Pond-20140331	2014 03 31	14	< 0.50	1.6	65	< 5.0a	-	< 100	< 0.050	38,600	0.51	< 0.50	< 1.0a	< 30	< 1.0	< 50	161,000	30	< 0.20a	15.2	< 5.0	-	-	1.2	-	< 0.050	195,000	-	-	-	< 0.20	-	-	< 50	-	29.5	< 30	< 5.0	-
	Bredin Pond-20140528	2014 05 28	108	< 0.50	1.6	< 20	< 5.0a	-	< 100	< 0.050	36,500	< 0.50	< 0.50	< 1.0a	125	< 1.0	< 50	161,000	57	< 0.20a	17.8	< 5.0	-	-	1.1	-	< 0.050	211,000	-	-	-	< 0.20	-	-	< 50	-	31.6	< 30	< 5.0	-
	Bredin Pond-20140828	2014 08 28	13	< 0.50	1.6	74	< 5.0a	-	< 100	< 0.050	22,600	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	150,000	25	< 0.20a	15.5	< 5.0	-	-	1.5	-	< 0.050	184,000	-	-	-	< 0.20	-	-	< 50	-	25.8	< 30	< 5.0	-
	Bredin Pond-20150311	2015 03 11	11	< 0.50	1.3	78	< 5.0a	-	< 100	< 0.050	42,400	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	149,000	11	< 0.20a	15.7	< 5.0	-	-	1.6	-	< 0.050	191,000	-	-	-	< 0.20	-	-	< 50	-	28.3	< 30	5.3	-
	Bredin Pond-20150616	2015 06 16	12	< 0.50	1.3	38	< 5.0a	< 200	< 100	< 0.050	20,400	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	139,000	11	< 0.20a	15	< 5.0	< 300	11,000	1.2	7,460	< 0.050	174,000	2,620	75,600	0.41	< 0.20	< 0.10	< 30	< 50	-	24.2	< 30	33.5	-
	Bredin Pond-20151029	2015 10 29	22	< 0.50	1.5	60	< 5.0a	< 200	< 100	< 0.050	17,100	0.7	< 0.50	< 1.0a	< 30	< 1.0	< 50	124,000	< 10	< 0.20a	17	< 5.0	< 300	10,100	1.3	9,500	< 0.050	163,000	2,570	72,900	0.35	< 0.20	< 0.10	< 30	< 50	-	23.7	< 30	15.6	< 0.30
	BREDIN POND-20160518	2016 05 18	< 10	< 0.50	< 1.0	63	< 5.0a	-	< 100	< 0.050	10,400	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	117,000	< 10	< 0.20a	13.8	< 5.0	-	-	1.6	-	< 0.050	155,000	-	-	-	< 0.20	-	-	< 50	-	22	< 30	< 5.0	-
	BREDIN POND-20160914	2016 09 14	13	< 0.50	< 1.0	< 20	< 5.0a	< 200	< 100	< 0.050	18,300	< 0.50	< 0.50	1.1	< 30	< 1.0	< 50	134,000	< 10	< 0.20a	15	< 5.0	< 300	13,500	1.4	7,430	< 0.050	181,000	3,050	-	-	< 0.20	-	< 30	< 50	-	22.3	< 30	< 5.0	-
	BREDIN POND-20161116	2016 11 16	14	< 0.50	1.4	46	< 5.0a	< 200	< 100	< 0.050	30,400	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	130,000	< 10	< 0.20a	14.1	< 5.0	< 300	13,600	1.2	7,020	< 0.050	180,000	2,900	-	0.39	< 0.20	-	< 30	< 50	-	20.6	< 30	< 5.0	< 0.30
	BREDIN POND-20170418	2017 04 18	12	< 0.50	1.3	79	< 5.0a	< 200	< 100	< 0.050	46,000	0.53	< 0.50	1.7	< 30	< 1.0	< 50	138,000	19	< 0.20a	11	< 5.0	< 300	13,500	1.3	4,970	< 0.050	186,000	2,870	-	0.25	< 0.20	< 0.10	< 30	< 50	-	21.5	< 30	12.2	< 0.30
	BREDIN POND-20170607	2017 06 07	16	< 0.50	1.6	44	< 5.0a	< 200	< 100	< 0.050	47,400	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	149,000	35	< 0.20a	13.8	< 5.0	< 300	13,100	1.1	2,290	< 0.050	203,000	2,920	-	0.47	< 0.20	< 0.10	< 30	< 50	-	23.4	< 30	< 5.0	< 0.30
	BREDIN POND-20170907	2017 09 07	29	< 0.50	1.4	87	< 5.0a	< 200	< 100	< 0.050	33,300	< 0.50	< 0.50	< 1.0a	41	< 1.0	< 50	146,000	74	< 0.20a	12.5	< 5.0	< 300	14,800	1.3	13,900	< 0.050	177,000	2,900	-	0.41	< 0.20	< 0.10	< 30	< 50	-	20.9	< 30	8.1	< 0.30
	BREDIN POND-20171101	2017 11 01	12	< 0.50	1.6	94	< 5.0a	< 200	< 100	< 0.050	41,400	< 0.50	< 0.50	1.3	< 30	< 1.0	< 50	133,000	< 10	< 0.20a	21.8	< 5.0	< 300	14,200	< 1.0	14,100	< 0.050	170,000	2,870	-	0.4	< 0.20	< 0.10	< 30	< 50	-	38.1	< 30	< 5.0	< 0.30
	BREDIN POND-180404	2018 04 04	53.8	< 0.20	1.11	78.1	< 0.10	< 0.10	28.1	0.06	38,700	0.94	0.14	1.56	92	< 0.20	25.4	117,000	8.34	< 0.010	18.8	0.96	187	11,500	1.94	< 1,000	< 0.050	148,000	2,850	52,700	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	27.4	3.5	9.6	0.12
	BREDIN POND-180523	2018 05 23	25.6	< 0.20	2.09	82.1	< 0.10	< 0.10	31.4	< 0.010	56,700	0.5	0.18	1.25	40	< 0.20	26.7	112,000	27	< 0.010	14.1	1.36	234	13,200	1.4	6,500	< 0.050	161,000	2,830	73,800	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	23.6	3.4	8.7	< 0.10
	BREDIN POND-180906	2018 09 06	33.1	< 0.20	1.71	90.6	< 0.10	< 0.10	21.9	0.02	35,000	0.68	0.19	1.88	44	< 0.20	27.2	120,000	51.4	< 0.010	9.74	1.2	145	11,600	1.29	9,200	< 0.050	165,000	2,940	87,500	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	17.8	2.8	5.9	0.12
	BREDIN POND-181107	2018 11 07	41.2	< 0.20	1.28	95.2	< 0.10	< 0.10	23.5	< 0.010	53,300	< 0.50	0.12	1.44	47	< 0.20	24.8	110,000	26.8	< 0.010	10.3	1.17	175	10,800	1.02	11,500	< 0.050	143,000	2,840	65,900	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	22	2.8	8.6	0.13
	BREDIN POND-190329	2019 03 29	41.2	< 0.20	1.54	98.2	< 0.10	< 0.10	29.4	< 0.010	61,600	0.74	0.16	1.35	50	< 0.20	28.2	118,000	78.3	< 0.040a	11.1	1.22	257	11,000	1.39	9,300	< 0.050	152,000	3,090	76,900	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	25.6	2.9	10.6	0.15
	BREDIN POND-190605	2019 06 05	15	< 0.20	2.28	97	< 0.10	< 0.10	48.7	0.012	55,600	< 0.50	0.19	1.02	17	< 0.20	33.5	148,000	21.9	< 0.040a	14.3	1.48	311	11,600	1.03	8,800	< 0.050	213,000	3,260	108,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	29.9	4.4	< 4.0	0.11
	BREDIN POND-190904	2019 09 04	37.3	< 0.20	1.89	99.3	< 0.10	< 0.10	22.3	< 0.010	22,400	< 0.50	0.18	0.57	55	< 0.20	37.4	161,000	12.8	< 0.010	14.7	1.33	129	13,000	1.36	9,600	< 0.050	214,000	3,450	109,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	26.6	3	< 4.0	< 0.10
	BREDIN POND-191023	2019 10 23	173	< 0.20	1.4	102	< 0.10	< 0.10	27.8	0.014	39,500	0.89	0.22	1.19	227	0.21	32.1	137,000	18.6	< 0.010	13.5	1.49	84	12,400	1.28	11,000	< 0.050	174,000	3,440	86,900	< 0.50	< 0.020	< 0.10	< 0.20	9.2	< 1.0	26.9	3.4	7.4	0.19
	BREDINPOND-200407	2020 04 07	87.1	0.101	0.875	72.4	< 0.010	< 0.010	25.9	0.0073	54,900	1.06	0.183	1.1	120	0.14	31.7	119,000	36.4	< 0.010	10.2	1.09	87	10,700	1.19	10,500	0.014	151,000	3,400	68,100	< 0.050	< 0.0040	0.015	0.05	4.55	< 0.20	24.7	2.94	3.7	0.207
	BREDINPOND-200605	2020 06 05	28.7	0.128	0.963	76.8	< 0.010	< 0.010	27.8	0.0056	44,300	0.32	0.149	1	35.8	0.056	27.4	110,000	13	< 0.010	8.84	0.941	50	9,510	0.9	410	< 0.010	140,000	3,430	58,100	< 0.050	< 0.0040	< 0.010	< 0.050	1.31	< 0.20	20.2	2.95	1.3	0.091
	BREDINPOND-200917	2020 09 17	56.3	0.181	2.48	65.6	< 0.010	< 0.010	41.9	0.0046	36,300	0.29	0.182	0.62	73.3	0.058	33.2	157,000	39.1	< 0.010	10.4	1.39	168	14,800	0.67	4,730	< 0.010	213,000	3,220	113,000	< 0.050	< 0.0040	0.011	< 0.050	2.67	< 0.20	20.1	2.63	3	0.183
	BREDINPOND-201028	2020 10 28	70.9	0.173	2.46	95.2	< 0.010	< 0.010	51.5	0.0053	40,900	0.38	0.244	0.88	88.1	0.094	36.5	159,000	44.5	< 0.010	10.8	1.59	269	15,700	0.7	800	0.011	225,000	3,430	120,000	< 0.050	< 0.0040	0.016	< 0.050	3.39	< 0.20	20.9	2.24	3.6	0.251
	BREDIN POND-210323	2021 03 23	27.4	0.12	1.08	113	< 0.010	< 0.010	48.7	0.0081	53,400	0.81	0.174	0.73	41.2	0.055	28.9	137,000	26.1	< 0.010	10.5	1.35	144	12,600	0.98	2,820	< 0.010	178,000	100,000,00	82,000	< 0.050	< 0.0040	< 0.010	0.103	1.92	< 0.20	22.4	2.2	3.5	0.198
	BREDIN POND-210616	2021 06 16	9.8	0.159	1.69	85.8	< 0.010	< 0.010	42.8	0.008	48,100	0.48	0.195	0.65	25.4	< 0.050	35.9	164,000	29.2	< 0.010	14.3	1.66	163	12,300	0.64	2,950	< 0.010	221,000	3,190	117,000	< 0.050	< 0.0040	< 0.010	< 0.050	0.82	< 0.20	26.1	1.7	1.7	0.1
	BREDIN POND-211019	2021 10 19	36.9	0.133	1.48	124	< 0.010	< 0.010	46.7	0.0055	52,400	0.38	0.166	0.33	65.7	0.053	39.3	170,000	64	< 0.010	14.4	1.35	318	15,800	0.68	12,000	< 0.010	224,000	4,140	99,800	< 0.050	< 0.0040	< 0.010	< 0.050	2.32	< 0.20	27.4	0.97	2.9	0.139
	BREDIN POND-220322	2022 03 22	86.5	<0.250	0.699	104	<0.050	<0.050	30.1	<0.0100	42,600	0.78	0.147	<1.00	76.7	<0.250	28.7	132,000	48.3	< 0.010	12.3	1.04	112	11,000	0.8	1,710	<0.050	173,000	3,030	66,800	<0.250	<0.0200	<0.050	<0.250	2.6	<1.00	20.3	4.28	<5.0	0.142
	BREDIN POND-220621	2022 06 21	13.4	0.107	1.59	71.7	<0.010	<0.010	35.7	<0.0060	47,500	0.27	0.161	0.56	16.6	0.066	27.8	123,000	45.6	< 0.010	15.6	1.22	195	10,700	0.69	5,350	<0.010	165,000	2,980	78,800	<0.050	<0.0040	<0.010	<0.050	0.61	<0.20	24.3	2.35	1.3	0.151
	BREDIN POND-220912	2022 09 12	6.9	0.127	1.79	110	<0.010	<0.010	43.5	<0.0040	21,400	0.26	0.128	0.23	9.8	<0.050	35.2	159,000	48.4	< 0.010	14	1.25	105	13,700	0.92	10,700	<0.010	217,000	3,400	108,000	<0.050	<0.0040	<0.010	<0.050	0.34	<0.20	21.5	2.06	<1.0	0.094
	BREDIN POND-221019	2022 10 19	30.5	0.123	1.55	103	<0.010	<0.010	36.6	<0.0060	25,800	0.31	0.139	0.32	40.8	<0.050	32	169,000	38	< 0.010	15.1	1.39	106	14,100	0.88	11,300	0.012	240,000	3,360	104,000	<0.050	<0.0040	<0.010	<0.050	1.47	<0.20	24.5	2.93	1.2	0.126
	BREDIN POND-230329	2023 03 29	14	0.09	0.744	93.8	<0.010	<0.010	26.6	<0.0020	37,500	0.48	0.122	1.4	24.9	<0.050	28.4	136,000	37.1	<0.010	12.5	1.01	67	12,000	0.9	5,190	<0.010	187,000	3,220	76,100	<0.050	<0.0040	0.039	<0.050	1.25	<0.20	22.3	2.46	1.5	0.151
	BREDIN POND-230518	2023 05 18	8.6	0.089	1.04	87.2	<0.010	<0.010	30.6	<0.0030	35,800	<0.50	0.12	0.41	13.7	<0.050	27.6	123,000	16.4	<0.010	13.2	1.07	52	10,900	0.93	4,290	<0.010	164,000	2,990	72,300	<0.050	<0.0040	<0.010	<0.050	0.43	<0.20	23.6	2.8	<1.0	0.084
	BREDIN POND-230927	2023 09 27	22.6	0.136	1.56	108	<0.010	<0.010	32.7	<0.0060	18,700	0.52	0.128	0.56	36	0.055	36.9	162,000	35.9	<0.010	14.3	1.31	92	15,000	1.11	5,330	<0.010	225,000	3,300	108,000	<0.050	<0.0040	0.073	<0.050	1.26	<0.20	22.6	2.49	2.6	0.087
	BREDIN POND-231101	2023 11 01	21.2	0.131	1.5	95.8	<0.010	<0.010	25.4	<0.0120	22,400	<0.50	0.114	0.37	34.3	<0.050	33.8	150,000	18.4	<0.010	16.9	1.2	87	13,500	1.02	7,310	<0.010	207,000	3,130	95,500	<0.050	<0.0040	0.013	<0.050	0.93	<0.20	25.2	2.74	1.9	0.095
NORTHEAST POND	NE Pond-20130429	2013 04 29	73	< 0.50	2.1	53	< 5.0a	-	< 100	0.101	43,900	< 0.50	< 0.50	< 1.0a	93	< 1.0	< 50	192,000	59	< 0.20a	13.3	< 5.0	-	-	< 1.0	-	< 0.050	256,000	-	-	-	< 0.20	-	-	< 50	-	25.3	< 30	< 5.0	-
	NE Pond-20130528	2013 05 28	36	< 0.50	3.1	< 20	< 5.0a	-	< 100	< 0.050	51,200	0.6	< 0.50	1.4	59	< 1.0	< 50	199,000	99	< 0.20a	16.7	< 5.0	-	-	< 1.0	-	< 0.050	263,000	-	-	-	< 0.20	-	-	< 50	-	27.9	< 30	< 5.0	-
	NE Pond-20130718	2013 07 18	15	< 0.50	2.7	< 20	< 5.0a	-	< 100	< 0.050	48,200	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	208,000	202	< 0.20a	15.4	< 5.0	-	-	< 1.0	-	< 0.050	285,000	-	-	-	< 0.20	-	-	< 50	-	23.3	< 30	< 5.0	-
	NE Pond-20131016	2013 10 16	56	< 0.50	3.1	73	< 5.0a	-	< 100	< 0.10	43,500	< 1.0	< 0.50	< 1.0a	69	< 1.0	< 50	201,000	22	< 0.20a	20.3	< 5.0	-	-	< 2.0	-	< 0.050	296,000	-	-	-	< 0.20	-	-	< 50	-	28.6	< 30	< 5.0	-
	NE Pond-20140331	2014 03 31	84	< 0.50	2.3	69	< 5.0a	-	< 100	< 0.050	49,700	< 0.50	< 0.50	< 1.0a	119	< 1.0	< 50	178,000	87	< 0.20a	18.2	< 5.0	-	-	< 1.0	-	< 0.050	230,000	-	-	-	< 0.20	-	-	< 50	-	26.2	< 30	< 5.0	-
	NE Pond-20140528	2014 05 28	23	< 0.50	2.5	52	< 5.0a	-	< 100	< 0.050	45,300	< 0.50	< 0.50	< 1.0a	32	< 1.0	< 50	170,000	59	< 0.20a	16.9	< 5.0	-	-	< 1.0	-	< 0.050	235,000	-	-	-	< 0.20	-	-	< 50	-	27.2	< 30	< 5.0	-
	NE Pond-20140828	2014 08 28	23	< 0.50	3.4	89	< 5.0a	-	< 100	< 0.050	23,300	< 0.50	< 0.50	< 1.0a	30	< 1.0	< 50	174,000	116	< 0.20a	13.2	< 5.0	-	-	< 1.0	-	< 0.050	225,000	-	-	-	< 0.20	-	-	< 50	-	22.1	< 30	< 5.0	-
	NE Pond-20150311	2015 03 11	56	< 0.50	2	96	< 5.0a	-	< 100	< 0.050	45,500	< 0.50	< 0.50	< 1.0a	94	< 1.0	< 50	169,000	113	< 0.20a	11.2	< 5.0	-	-	< 1.0	-	< 0.050	244,000	-	-	-	< 0.20	-	-	< 50	-	17.5	< 30	< 5.0	-
	NE Pond-20150616	2015 06 16	26	< 0.50	3.6	56	< 5.0a	< 200	< 100	< 0.050	31,800	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	192,000	43	< 0.20a	16.2	< 5.0	390	17,400	< 1.0	3,730	< 0.050	286,000	3,060	147,000	0.61	< 0.20	< 0.10	< 30	< 50	-	21	< 30	< 5.0	-
	NE Pond-20151029	2015 10 29	64	< 0.50	4.3	83	< 5.0a	< 200	< 100	< 0.050	22,500	< 0.50	< 0.50	< 1.0a	94	< 1.0	< 50	215,000	47	< 0.20a	17.9	< 5.0	< 300	18,800	< 1.0	6,970	< 0.050	349,000	3,450	181,000	< 0.40	< 0.20	< 0.20	< 30	< 50	-	21.4	< 30	< 5.0	< 0.60
	NE SAMPLE-20160518	2016 05 18	< 10	< 0.50	4.2	72	< 5.0a	-	< 100	< 0.050	32,300	< 0.50	< 0.50	< 1.0a	< 30	< 1.0	< 50	202,000	29	< 0.20a	15.1	< 5.0	-	-	< 1.0	-	< 0.050	352,000	-	-	-	< 0.20	-	-	< 50	-	24	< 30	< 5.0	-
	NE POND-20160914	2016 09 14	44	< 0.50	5.8	104	< 5.0a	< 200	100	< 0.050	26,400	< 0.50	< 0.50	2	63	< 1.0	< 50	242,000	65	< 0.20a	19.6	< 5.0	350	27,300	< 1.0	8,680	< 0.050	442,000	3,690	-	-	< 0.20	-	< 30	< 50	-	26.5	< 30	< 5.0	-
	NE POND-20161116	2016 11 16	69	< 0.50	3.7	107	< 5.0a	< 200	< 100	< 0.050	34,300	< 0.50	< 0.50	< 1.0a	84	< 1.0	< 50	225,000	97	< 0.20a	21.4	< 5.0	410	22,700	< 1.0	7,500	< 0.050	388,000	3,520	-	< 0.40	< 0.20	-	< 30	< 50	-	27.7	< 30	< 5.0	0.69
	NE POND-20170418	2017 04 18	62	< 0.50	2.4	82	< 5.0a	< 200	< 100	< 0.050	51,400	< 0.50	< 0.50	< 1.0a	81	< 1.0	< 50	198,000	71	< 0.20a	18.9	< 5.0	< 300	17,000	< 1.0	3,590	< 0.050	300,000	3,240	-	< 0.40	< 0.20	< 0.20	< 30	< 50	-	28.6	< 30	< 5.0	0.78
	NE POND-20170607	2017 06 07	31	< 0.50	4.1	96	< 5.0a	< 200	< 100	< 0.050	46,400	< 0.50	< 0.50	< 1.0a	32	< 1.0	< 50	207,000	65	< 0.20a	17.7	< 5.0	390	17,300	< 1.0	3,040	< 0.050	316,000	3,360	-	0.55	< 0.20	< 0.10	< 30	< 50	-	25.6	< 30	15.8	0.61
	NE POND-20170907	2017 09 07	159	< 0.50	6.5	110	< 5.0a	< 200	< 100	< 0.050	17,200	< 0.50	< 0.50	1.6	162	< 1.0	< 50	244,000	25	< 0.20a	19.6	< 5.0	< 300	17,700	< 1.0	3,460	0.152	363,000	3,500	-	0.44	< 0.20	< 0.20	< 30	< 50	-	28.7	< 30	< 5.0	0.46
	NE POND-20171101	2017 11 01	100	< 0.50	5.3	90	< 5.0a	< 200	< 100	< 0.050	24,900	< 0.50	< 0.50	1.1	111	< 1.0	< 50	241,000	141	< 0.20a	24.7	< 5.0	< 300	18,700	< 1.0	2,580	< 0.050	370,000	3,430	-	< 0.40	< 0.20	< 0.20	< 30	< 50	-	34.4	< 30	< 6.0	0.45
	NORTHEAST POND-180404	2018 04 04	98.2	0.23	4.08	67.1	< 0.10	< 0.10	53.4	< 0.010	42,300	< 0.50	0.42	1.42	155	< 0.20	32	208,000	181	< 0.010	22.1	2.88	354	16,700	< 0.50	5,000	< 0.050	343,000	3,300	191,000	< 0.50	< 0.020	< 0.10	< 0.20	6.2	< 1.0	31.2	2.8	< 4.0	0.71
	NORTHEAST POND-180523	2018 05 23	23.6	0.27	4.63	79.9	< 0.10	< 0.10	66.3	0.01	44,700	< 0.50	0.36	1.17	39	< 0.20	31.7	200,000	44.6	< 0.010	23.9	2.57	90	19,200	< 0.50	< 1,000	< 0.050	279,000	3,640	224,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	32.3	3.3	4.4	0.19
	NORTHEAST POND-180906	2018 09 06	1,660	0.44	9.04	150	< 0.10	< 0.10	131	0.035	64,800	4.42	1.64	9.73	2,440	1.35	48	247,000	701	< 0.010	12	6.57	1,260	24,200	< 0.50	15,800	< 0.050	360,000	4,880	228,000	< 0.50	0.02	0.14	< 0.20	95	< 1.0	29.1	8	8.5	0.39

Associated CARO file(s) available on request

Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223.

All terms defined within the body of Keltech's report.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

\- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H4: Historical Summary of Analytical Results For Surface Water - Metals

Sample Location	Sample ID	Sample Date (yyyy mm	Total Metals																																					
			Aluminum µg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Bismuth µg/L	Boron µg/L	Cadmium µg/L	Calcium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Lithium µg/L	Magnesium µg/L	Manganese µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Phosphorous µg/L	Potassium µg/L	Selenium µg/L	Silicon µg/L	Silver µg/L	Sodium µg/L	Strontium µg/L	Sulphur µg/L	Tellurium µg/L	Thallium µg/L	Thorium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L	Zirconium µg/L
NORTHEAST POND	NORTHEAST POND-181107	2018 11 07	588	0.21	3.25	117	< 0.10	< 0.10	102	0.019	67,000	1.6	0.93	5.35	942	0.58	40.3	211,000	183	< 0.010	23.3	3.78	575	19,200	< 0.50	13,200	< 0.050	288,000	3,880	169,000	< 0.50	< 0.020	< 0.10	< 0.20	33.9	< 1.0	36.6	3.6	4.4	0.66
(Cont'd)	Northeast Pond	2019 03 29	331	< 0.20	2.59	64.8	< 0.10	< 0.10	56.9	0.024	53,900	0.9	0.62	1.54	555	0.51	27.7	143,000	180	< 0.040a	11.9	3.11	345	11,500	< 0.50	8,100	< 0.050	192,000	2,780	135,000	< 0.50	< 0.020	< 0.10	< 0.20	18	< 1.0	25.1	2.7	4.2	0.52
	Northeast Pond	2019 06 05	140	0.23	3.77	93.4	< 0.10	< 0.10	102	0.026	52,700	< 0.50	0.56	1.92	194	0.21	44.9	214,000	119	< 0.040a	27.3	3.54	325	16,000	< 0.50	2,300	< 0.050	317,000	3,840	197,000	< 0.50	< 0.020	< 0.10	< 0.20	7.8	< 1.0	41	4.6	< 4.0	0.55
	Northeast Pond	2019 09 04	142	0.28	4.42	84.7	< 0.10	< 0.10	34.2	< 0.010	24,300	0.92	0.37	0.72	202	< 0.20	53.6	237,000	81.1	< 0.010	30	2.87	149	15,800	< 0.50	2,000	< 0.050	329,000	4,120	206,000	< 0.50	< 0.020	< 0.10	< 0.20	7.8	< 1.0	40.8	2.2	< 4.0	0.23
	NE Pond	2019 10 23	35.1	0.2	3.48	64.8	< 0.10	< 0.10	48.7	0.013	33,200	< 0.50	0.53	0.48	62	< 0.20	45.4	232,000	220	< 0.010	32.9	4.34	246	16,100	< 0.50	3,000	< 0.050	304,000	4,160	202,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	54.4	1.6	< 4.0	0.35
	NEPOND-200407	2020 04 07	27.2	0.178	3.37	39.2	< 0.010	< 0.010	61	0.0056	53,000	0.58	0.324	0.67	55.4	0.06	44.1	211,000	176	< 0.010	22.2	2.94	350	15,900	0.38	5,480	< 0.010	298,000	3,890	198,000	< 0.050	< 0.0040	0.011	< 0.050	2.04	< 0.20	40.9	2.12	< 1.0	0.572
	NEPOND-200605	2020 06 05	17.6	0.219	3.95	15.4	< 0.010	< 0.010	87.1	0.0069	52,600	0.14	0.245	0.32	36.8	< 0.050	40.2	223,000	132	< 0.010	18.6	2.45	343	17,600	0.28	2,760	< 0.010	328,000	4,210	211,000	< 0.050	< 0.0040	< 0.010	< 0.050	1.32	< 0.20	33.6	2.5	< 1.0	0.345
	NEPOND-200918	2020 09 18	73.4	0.345	6.45	115	< 0.010	< 0.010	78	0.0061	39,400	0.36	0.545	0.66	149	0.117	34.8	226,000	318	< 0.010	18.6	3.01	555	22,100	0.33	10,400	< 0.010	322,000	3,670	176,000	< 0.050	< 0.0040	0.016	< 0.050	5.71	< 0.20	26.6	4.09	3	0.716
	NEPOND-201028	2020 10 28	77.9	0.22	3.76	105	0.196	< 0.010	89.7	0.0084	40,500	0.27	0.621	10.6	151	0.157	48.2	225,000	261	< 0.010	22	3.28	344	17,600	0.22	10,000	< 0.010	323,000	4,230	194,000	< 0.050	< 0.0040	0.026	< 0.050	6.83	< 0.20	32.6	3.41	2.4	0.948
	NE POND-210323	2021 03 23	117	0.201	2.53	60.5	< 0.010	< 0.010	92.7	0.0067	57,300	0.49	0.492	1.15	187	0.122	33.8	199,000	112	< 0.010	24.3	3.41	297	15,100	0.26	5,270	< 0.010	278,000	7,730	165,000	< 0.050	< 0.0040	0.013	0.097	6.88	< 0.20	35.8	2.9	1.7	0.782
	NE POND-210616	2021 06 16	198	0.214	3.31	55.1	< 0.010	< 0.010	65.5	0.0087	38,300	0.62	0.495	0.96	329	0.222	47.7	239,000	105	< 0.010	31.9	3.81	262	15,700	0.21	6,120	< 0.010	321,000	4,020	198,000	< 0.050	< 0.0040	0.024	< 0.050	13.2	0.26	40.1	3.12	2.3	0.382
	NE POND-211019	2021 10 19	79.9	0.187	2.65	129	< 0.010	< 0.010	48.8	0.0117	40,400	0.36	0.392	0.48	160	0.084	54.6	272,000	118	< 0.010	45.7	3.69	260	19,700	0.26	4,040	0.021	379,000	4,770	220,000	< 0.050	< 0.0040	0.01	0.055	5.75	0.25	51	1.1	1.4	0.84
	NE POND-220322	2022 03 22	114	<0.250	2	86.3	<0.050	<0.050	49	0.0147	47,200	<0.50	0.455	<1.00	151	<0.250	36.1	209,000	214	< 0.010	25.7	3.41	455	14,100	<0.50	6,200	<0.050	294,000	3,410	177,000	<0.250	<0.0200	<0.050	<0.250	5.56	<1.00	34	3.73	<5.0	0.724
	NE POND-220621	2022 06 21	58.2	0.172	3.71	94.6	<0.010	<0.010	70.7	<0.0080	52,500	0.27	0.368	0.9	65.5	0.121	33.3	197,000	113	< 0.010	26	2.9	509	16,500	0.32	940	0.011	279,000	3,680	187,000	<0.050	<0.0040	0.013	<0.050	2.89	0.29	34.8	2.77	1.3	0.684
	NE POND-220912	2022 09 12	210	0.236	4.11	119	<0.010	<0.010	57.3	<0.0080	16,600	0.66	0.415	0.66	296	0.19	57.4	266,000	54.2	< 0.010	24.4	3.18	157	17,300	0.31	2,600	<0.010	355,000	4,050	216,000	<0.050	<0.0040	0.028	<0.050	10.6	0.21	32.1	2.6	1.8	0.259
	NE POND-221019	2022 10 19	198	0.199	3.49	123	<0.010	0.015	49	0.0102	19,400	0.65	0.397	0.85	292	0.196	42	292,000	46.1	< 0.010	31.3	3.64	164	17,900	0.29	3,060	0.02	403,000	3,890	229,000	<0.050	<0.0040	0.03	<0.050	11.4	0.28	40.3	2.92	1.4	0.484
	NE POND-230329	2023 03 29	31	0.128	2.08	82.2	<0.010	<0.010	50.1	0.0086	40,700	0.14	0.301	3.62	51.9	0.057	33.5	202,000	132	<0.010	23	2.58	225	14,300	0.43	4,640	<0.010	281,000	3,380	180,000	<0.050	<0.0040	0.072	<0.050	2.04	<0.20	34.1	1.33	1.8	0.649
	NE POND-230518	2023 05 18	233	0.174	3.06	107	0.012	0.013	64.5	<0.0120	47,500	0.62	0.48	1.19	338	0.289	35.1	217,000	326	<0.010	23.1	3.33	517	16,200	0.49	2,390	<0.010	300,000	3,810	197,000	<0.050	<0.0040	0.042	<0.050	12.6	0.22	35.9	3	2.6	0.721
	NE POND-230927	2023 09 27	113	0.308	4.35	112	<0.010	<0.010	42.7	<0.0120	22,600	<0.50	0.341	0.56	133	0.113	50.3	260,000	28.9	<0.010	46.9	3.37	220	20,100	0.44	1,940	<0.010	408,000	3,950	261,000	<0.050	<0.0040	0.104	<0.050	6.28	0.37	47.4	3.92	1.1	0.871
	NE POND-231101	2023 11 01	278	0.246	3.62	117	0.011	<0.010	41.9	<0.0360	26,300	0.7	0.497	0.92	366	0.241	45.2	266,000	54.1	<0.010	47.4	3.85	253	19,100	0.42	3,160	0.01	391,000	4,170	229,000	<0.050	<0.0040	0.046	<0.050	14.1	0.39	51.2	4.51	2	0.995
SLOUGH	Slough-20010619	2001 06 19	190	< 50a	140	430	< 50a	< 70	2,470	< 5a	2,700	< 8a	32	10	240	22	106	139,000	8	-	37	59	1,700	447,000	< 40a	1,720	< 10a	8,930,000	532	2,600,000	-	< 40a	-	< 30	5	-	-	< 10	< 6	-
	Slough-20010711	2001 07 11	260	< 100a	< 200a	108	< 10a	< 200	3,840	< 10a	< 5,000	< 20a	65	30	400	63	210	124,000	7.5	-	60	70	1,600	725,000	< 100a	4,340	< 30a	12,700,000	535	4,040,000	-	< 100a	-	< 80	63	-	-	53	< 20a	-
	Slough-20010815	2001 08 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20010816	2001 08 16	-	< 200a	< 500a	95	< 30a	< 400	5,480	< 30a	< 10,000	< 40a	< 30a	< 50a	310	140	320	135,000	< 10	-	50	85	3,200	1,000,000	< 200a	4,050	< 50a	19,100,000	595	5,760,000	-	< 200a	-	< 200	70	-	-	< 50	< 30a	-
	Slough-20010920	2001 09 20	460580	< 200a	530	255	< 30a	< 400	8,110	< 30a	< 10,000	< 40a	130	< 50a	420	< 100a	310	194,000	20	-	55	220	8,600	1,570,000	< 200a	2,860	< 50a	29,700,000	845	9,400,000	-	< 200a	-	< 200	205	-	-	90	85	-
	Alki Lake-20080506	2008 05 06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Alki Lake-20080507	2008 05 07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Alki Lake-20080520	2008 05 20	-	-	-	-	-	-	-	-	18,000	-	-	-	-	-	-	249,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20090521	2009 05 21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Alki Lake-20091119	2009 11 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20130429	2013 04 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Slough-20130528	2013 05 28	2,530	13.5	91.7	< 100	< 50a	-	1,400	< 2.5a	14,200	< 25a	< 5.0a	< 25a	3,580	4.8	< 100	183,000	68	< 0.20a	60.3	34	-	-	< 50a	-	0.56	6,780,000	-	-	-	< 5.0a	-	-	140	-	195	< 300a	< 50	-
	Slough-20130718	2013 07 18	1,530	12.9	106	< 100	< 50a	-	1,700	< 2.5a	9,300	< 25a	< 5.0a	< 25a	2,160	< 2.5	< 100	188,000	< 50	< 0.20a	78.1	30	-	-	< 50a	-	< 0.50	8,690,000	-	-	-	< 5.0a	-	-	< 100	-	255	< 300a	< 50	-
	Slough-20131016	2013 10 16	< 150	20.9	162	< 200	< 100a	-	2,100	< 2.5a	6,400	< 25a	< 5.0a	< 25a	< 600	< 2.5	< 200	134,000	< 100	< 0.20a	86.3	37	-	-	< 50a	-	0.87	12,100,000	-	-	-	< 5.0a	-	-	< 200	-	436	< 600a	< 100	-
	Slough-20140331	2014 03 31	1,750	4.5	35.5	< 50	< 25a	-	520	< 0.50a	24,700	6.5	2.8	9.2	2,360	1.2	< 50	114,000	73	< 0.20a	27.6	13.8	-	-	< 10a	-	0.12	2,480,000	-	-	-	< 1.0a	-	-	104	-	81.8	< 150a	< 25	-
	Slough-20140528	2014 05 28	3,080	11.3	80.4	< 100	< 50a	-	1,000	< 1.0a	12,500	< 10a	4.3	10	4,520	1.7	< 100	154,000	84	< 0.20a	41	27	-	-	< 20a	-	0.3	5,250,000	-	-	-	< 2.0a	-	-	160	-	158	< 300a	< 50	-
	Slough-20140828	2014 08 28	2,330	22	198	< 200	< 100a	-	3,100	< 2.5a	7,400	< 25a	< 5.0a	< 25a	4,420	< 2.5	< 200	217,000	< 100	< 0.20a	91	43	-	-	< 50a	-	0.96	17,000,000	-	-	-	< 5.0a	-	-	< 200	-	491	< 600a	< 100	-
	Slough-20150311	2015 03 11	3,070	7.3	45.6	63	< 25a	-	560	< 0.50a	24,400	8.4	3.2	10.4	4,180	1.8	< 50	115,000	109	< 0.20a	30.1	16.3	-	-	< 10a	-	0.2	2,970,000	-	-	-	< 1.0a	-	-	159	-	109	< 150a	< 25	-
	Slough-20150616	2015 06 16	3,010	8.7	71.5	< 50	< 25a	< 1,000	900	< 0.10	14,900	7.4	3.1	11	3,550	1.9	64	169,000	85	< 0.20a	44.3	23	5,000	209,000	< 1.0	7,200	0.21	4,720,000	1,520	1,430,000	< 4.0	< 0.20	< 2.0	< 150	133	-	162	< 150a	< 25	-
	Slough-20151029	2015 10 29	1,540	14	153	< 200	< 100a	< 4,000	2,500	< 0.50a	10,100	< 10a	< 10a	< 50a	2,330	< 5.0	< 200	236,000	< 100	< 0.20a	153	< 50	11,700	662,000	< 5.0a	2,600	< 1.0	15,600,000	920	4,710,000	< 20	< 1.0a	< 10	< 600	< 200	-	543	< 600a	< 100	336
	SLOUGH-20160518	2016 05 18	2,860	6.1	51.3	52	< 25a	-	710	< 0.10	24,000	8.4	3.1	12	3,790	1.9	57	152,000	104	< 0.20a	36.4	21	-	-	< 1.0	-	< 0.20	3,610,000	-	-	-	< 0.20	-	-	131	-	126	< 150a	29	-
	SLOUGH-20160914	2016 09 14	3,600	10.3	124	< 200	< 100a	< 4,000	< 2,000a	< 0.25	12,100	7.9	< 5.0a	< 25a	4,870	< 2.5	< 200	308,000	100	< 0.20a	76.9	35	8,900	430,000	< 2.5a	13,500	< 0.50	8,390,000	1,450	-	-	< 0.50	-	< 600	220	-	309	< 600a	< 100	-
	SLOUGH-20161116	2016 11 16	1,490	6.9	79.5	< 100	< 50a	< 2,000	1,300	< 0.25	14,100	5.3	< 5.0a	< 25a	2,100	< 2.5	< 100	228,000	80	< 0.20a	60.9	28	8,200	346,000	< 2.5a	5,280	< 0.50	7,000,000	948	-	< 10	< 0.50	-	< 300	< 100	-	230	< 300a	< 50	94
	SLOUGH-20170418	2017 04 18	444	2.9	24.6	45	< 15a	< 600	370	0.056	35,800	2.3	1.1	6.4	655	< 1.0	< 50	144,000	98	< 0.20a	18.5	8	2,770	111,000	< 1.0	4,200	< 0.10	1,900,000	1,790	-	< 2.0	< 0.20	< 1.0	< 90	< 50	-	68.2	< 90	15	18.8
	SLOUGH-20170607	2017 06 07	395	3.4	29.2	45	< 15a	< 600	440	< 0.050	44,200	2.3	1.2	5.4	517	< 1.0	< 50	152,000	86	< 0.20a	19.3	9	3,160	115,000	< 1.0	2,280	< 0.10	1,790,000	2,120	-	< 2.0	< 0.20	< 1.0	< 90	< 50	-	67.4	< 90	< 15	15.5
	SLOUGH-20170907	2017 09 07	395	4.9	63	< 50	< 25a	< 1,000	1,010	< 0.050	37,400	3.3	2	8.5	630	< 1.0	68	237,000	101	< 0.20a	27.7	19	6,000	279,000	1.2	4,050	< 0.10	3,220,000	2,310	-	< 2.0	< 0.20	< 1.0	< 150	< 50	-	92.7	< 150a	< 25	22.5
	SLOUGH-20171101	2017 11 01	1,030	4.6	63.4	48	< 5.0a	< 200	1,070	0.072	33,200	4.7	2.1	10.9	1,380	1.6	77	273,000	105	< 0.20a	29.8	19.2	7,330	341,000	1.1	5,100	0.11	3,880,000	2,170	-	< 2.0	< 0.20	< 1.0	< 30	54	-	96.8	< 30	< 30	26.9
	SLOUGH-180404	2018 04 04	397	1.12	16.3	56	< 0.10	0.14	195	0.116	66,800	3.36	1.56	20.3	817	1.56	31.9	140,000	144	< 0.010	18.2	7.36	2,290	110,000	1.11	4,200	0.054	813,000	2,640	324,000	< 0.50	< 0.020	< 0.10	0.46	28.3	1.3	41.7	6.8	38.2	3.02
	SLOUGH-180523	2018 05 23	66.5	2.07	23.6	69.1	< 0.10	< 0.10	387	0.098	75,900	4.58	2.04	12.4	413	1.57	39.3	158,000	250	< 0.010	21.9	10	3,300	172,000	0.89	2,500	0.071	1,100,000	2,880	545,000	< 0.50	< 0.020	< 0.10	0.76	14.8	2.8	44.5	9	38.1	7.43
	SLOUGH-180906	2018 09 06	141	5.51	64.5	59.3	< 0.10	< 0.10	786	0.047	50,900	5.75	2.19	4.53	387	0.65	67.3	252,000	169	< 0.010	20.4	17.2	5,310	324,000	1.02	< 1,000	< 0.050	2,780,000	3,610	1,140,000	< 0.50	< 0.020	< 0.10	1.33	21.9	5.8	66.6	12.3	12	16.6
	SLOUGH-181107	2018 11 07	577	2.57	33.7	68.4	< 0.10	< 0.10	501	0.038	64,000	3.72	1.89	6.82	1,060	0.93	58.7	232,000	144	< 0.010	21.3	12.7	3,510	203,000	1.03	7,300	< 0.050	1,820,000	3,480	726,000	< 0.50	< 0.020	< 0.10	0.64	38	3.2	59.7	10	17.1	7.37
	Slough	2019 03 29	208	1.28	14.7	59.9	< 0.10	< 0.10	197	0.023	52,400	1.55	0.85	3.31	327	0.46	32.7	129,000	118	< 0.040a	10.5	5.26	1,480	79,200	0.73	6,600	< 0.050	671,000	2,600	312,000	< 0.50	< 0.020	< 0.10	0.27	13.2	1.1	25.6	5.4	9.3	2.4
	Slough	2019 06 05	293	3.22	31.6	55.2	< 0.10	< 0.10	471	0.027	54,900	1.67	1.06	3.23	451	0.4	53.4	180,000	46.8	< 0.040a	24.4	9.26	2,510	144,000	0.72	1,900	< 0.050	1,400,000	2,990	555,000	< 0.50	< 0.020	< 0.10	0.39	17	2.8	46.8	11.8	6.5	6.88
	Slough	2019 09 04	1,250	3.09	41.8	43.8	< 0.10	< 0.10	717	0.033	17,500	3.73	1.62	5.07	1,710	0.93	75.4	235,000	43.8	< 0.010	55.1	14.6	2,560	270,000	0.68	5,100	0.081	2,360,000	1,970	932,000	< 0.50	< 0.020	0.15	0.67	69.5	5.2	70	12	13.6	12.3
	Slough	2019 10 23	4,400	3.86	46.2	79.3	0.17	< 0.10	708	0.097	28,500	12.5	5.05	14	6,620	3.32	76.1	246,000	169	< 0.010	68.8	26.1	3,760	299,000	0.9	16,900	0.117	2,530,000	2,180	1,050,000	< 0.50	0.05	0.48	1.47	285	5.8	91.5	36.1	28.4	19.5
	SLOUGH-200407	2020 04 07	679	2.12	19.1	51.1	0.028	0.023	319	0.0265	47,900	2.8	1.61	6.35	988	0.683	49.1	160,000	60.2	< 0.010	25.9	9.18	1,840	138,000	0.69	7,620	0.016	1,030,000	2,620	457,000	< 0.050	0.006	0.089	0.451	39.4	2.04	46.1	13.3	7.3	4.99
	SLOUGH-200605	2020 06 05	648	2.04	20.9	50.9	0.026	0.016	449	0.0152	45,400	1.98	1.26	4.45	915	0.498	56.3	183,000	25.1	< 0.010	24.7	9	1,530	151,000	0.51	2,450	0.012	1,060,000	3,040	530,000	< 0.050	0.0065	0.083	0.448	35.5	2.41	41.8	11.7	3.9	6.12
	SLOUGH-200918	2020 09 18	131	4.15	37.5	22.8	< 0.010	0.013	366	0.0191	8,200	0.96	0.589	3.64	209	0.297	54	212,000	7.14	< 0.010	33.2	8.75	213	250,000	0.43	1,610	< 0.010	1,660,000	1,740	741,000	0.058	< 0.0040	0.024	0.34	9.83	4.74	46.5	7.07	4.6	3.85
	SLOUGH-201028	2020 10 28	930	3.48	32.2	31.5	0.044	0.025	486	0.0298	16,600	2.74	1.35	4.18	1,190	0.772	71	207,000	48.4	< 0.010	31.7	11.4	1,280	229,000	0.67	5,060	0.022	2,010,000	1,530	847,000	< 0.050	0.0108	0.136	0.667	55.7	4.72	53	10.8	8.1	7.07
	SLOUGH-210323	2021 03 23	397	2.73	20.2	56.2	0.016	0.017	210	0.0197	55,000	1.83	0.998	3.05	628	0.436	45.6	189,000	80	< 0.010	15.5	6.68	1,080	106,000	0.65	3,130	0.01	793,000	2,620	412,000	< 0.050	0.0049	0.046	0.658	27.1	1.5	41.7	7.09	5.5	2.98
	SLOUGH-210617	2021 06 17	550	2.44	25.3	25.1	0.026	0.014	440	0.0163	31,800	1.48	0.796	2.27	609	0.458	68.6	264,000	32.9	< 0.010	18	8.03	1,740	150,000	0.52	4,420	< 0.010	1,470,000	2,680	637,000	0.065	0.0104	0.054	0.211	27.7	2.22	37.7	5.11	5.8	3.79
	SLOUGH-210921	2021 09 21	1,330	2.89	44.8	41.2	0.041	0.03	472	0.0339	16,200	3.61	1.65	4.54	1,750	1.03	78.6	488,000	51.7	< 0.010	50.9	14.4	2,120	349,000	0.93	4,710	0.018	3,020,000	1,400	1,520,000	0.094	0.0122	0.136	0.419	68.5	6.16	100	12.2	9.3	9.17
	SLOUGH-211020	2021 10 20	933	4.48	44.1	47.4	0.034	0.025	761	0.029	13,700	2.85	1.81	3.85	1,460	0.815	103	393,000	38.6	< 0.010	71.7	14.4	1,960	334,000	1.39	4,360	0.018	3,370,000	1,440	1,410,000	0.123	0.011	0.105	0.588	59.7	6.71	120	17	10.2	11.9
	SLOUGH-220322	2022 03 22	469	2.92	23.1	47	<0.100	<0.100	225	0.0365	38,100	1.99	1.16	4.29	623	<0.500	40.5	180,000	63.2	< 0.010	18	6.79	1,170	103,000	<1.00	4,970	<0.100	996,000	2,090	445,000	<0.500	<0.0400	<0.100	0.518	25.3	<2.00	38	10.3	<10.0	2.37
	SLOUGH-220621	2022 06 21	677	4.21	33.2	55.6	<0.050	<0.050	373	<0.0150	50,600	1.72	1.25	2.67	836	0.6	54.4	205,000	35.6	< 0.010	16.1	9.11	1,950	138,000	0.76	4,000	<0.050	1,050,000	2,780	544,000	<0.250	<0.0200	0.081	0.304	32	2.14	42.8	11	5.5	2.77
	SLOUGH-220909	2022 09 09	711	4.05	47.5	35.4	<0.050	<0.050	536	0.0312	18,000	2.45	1.35	3.79	998	0.686	75.8	303,000	54.1	< 0.010	24.5	11.9	1,170	279,000	0.6	3,570	<0.050	2,010,000	1,610	959,000	<0.250	<0.0200	0.104	0.382	38.5	4.32	52.9	8.22	6.6	3.56
	SLOUGH-221019	2022 10 19	667	3.9	40.5	32.7	<0.050	0.056	577	0.0234	16,200	2.01	1.26	2.37	918	0.545	73.1	399,000	36	< 0.010	30.7	14	1,940	306,000	0.78	3,560	<0.050	2,780,000	1,680	1,260,000	<0.250	<0.0200	0.101	0.374	32.4	4.8	68.4	8.84	6.5	6.12
	SLOUGH-230329	2023 03 29	432	3.44	29.5	42.7	0.025	<0.020	226	0.0184	42,900	1.68	1.14	3.31	600	0.394	39.4	203,000	75.1	<0.010	12.4	6.88	1,320	120,000	0.7	4,790	<0.020	962,000	2,560	514,000	<0.100	<0.0080	0.171	0.531	25.6	1.43	33.1	6.71	5.7	2.76
	SLOUGH-230518	2023 05 18	436	3.48	34	20.5	<0.050	<0.050	397	<0.0100	44,700	<2.50	0.931	1.54	594	0.311	51.7	224,000	28.7	<0.010	12.1	8.46	1,620	152,000	1.52	3,300	<0.050	1,130,000	3,020	613,000	<0.250	<0.0200	0.065	<0.250	21.7	2.2	35.2	9.65	<5.0	3.05
	SLOUGH-230927	2023 09 27	573	9.79	70.6	26.3	<0.100	<0.100	1010	<0.0400	11,300	<5.00	3.14	7.15	1220	0.581	118	353,000	57.5	<0.010	46.2	17.4	6,090	619,000	1.57	2,680	<0.100	5,420,000	828	2,850,000	<0.500	<0.0400	1.79	0.626	40.1	9.27	120	<10.0	27.9	5.22
	SLOUGH-231101	2023 11 01	490	17.3	115	44.1	<0.050	<0.050	586	0.0107	28,600	<2.50	1.14	1.42	658	0.428	72.8	378,000	51.4	<0.010	15.1	11.6	1,550	332,000	0.83	3,870	<0.050	3,230,000	2,860	1,610,000	<0.250	<0.0200	0.117	2.18	20.1	3.76	75.4	9.1	6.4	4.84
TUTT POND	Tutt Pond-20010611	2001 06 11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20010711	2001 07 11	83	< 20a	< 50	21	< 3a	55	177	< 3a	< 4	10	6	33	69	< 5a	22	1,720	43	-	2,570	< 5	3,780	431,000	< 20a	< 20	10	35	4.5	35,300	-	198,000	-	1,160,000	19,000	-	-	130	25	-
	Tutt Pond-20010815	2001 08 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20010816	2001 08 16	< 40	< 20a	< 50	43.5	< 3a	73	178	< 3a	< 4	< 3a	< 5a	48	69	< 5a	32	2,420	< 20	-	2,730	< 5	3,770	438,000	< 20a	< 20	20.5	9	3	41,100	-	203,000	-	1,200,000	19,000	-	-	175	74	-
	Tutt Pond-20010920	2001 09 20	89	< 5	< 10	19	< 0.5a	< 7	12	< 0.5a	< 0.8	< 0.7	6	< 2a	6	< 1	4	310	< 4	-	6,790	< 1	437	25,800	< 4a	< 3	< 0.04	5	1.3	23,900	-	15,500	-	67,800	2,800	-	-	103	8.5	-
	Tutt Pond-20080506	2008 05 06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20080507	2008 05 07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20080520	2008 05 20	-	-	-	-	-	-	-	-	67,900	-	-	-	-	-	-	165,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20090521	2009 05 21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20091119	2009 11 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tutt Pond-20130429	2013 04 29	157	< 0.50	3.3	66	< 5.0a	-	< 100	< 0.050	69,800	< 0.50	0.58	1.1	207	< 1.0	< 50	159,000	114	< 5.0	8.2		-	-	< 1.0	-	< 0.050	278,000	-	-	-	< 0.20	-	-	< 50	-	34.2	< 30	< 5.0	-
	Tutt Pond-20130528	2013 05 28	30	< 0.50	3.9	66	< 5.0a	-	< 100	< 0.050	74,300	< 0.50	0.52	1.6	38	< 1.0	< 50	172,000	43	< 5.0	9.3		-	-	< 1.0	-	< 0.050	292,000	-	-	-	< 0.20	-	-	< 50	-	33.5	< 30	< 5.0	-
	Tutt Pond-20130718	2013 07 18	21	< 0.50	4.3	54	< 5.0a	-	< 100	< 0.10	56,800	< 1.0	< 0.50	< 1.0a	< 30	< 1.0	< 50	178,000	32	< 5.0	8.7		-	-	< 2.0	-	< 0.050	282,000	-	-	-	< 0.20	-	-	< 50	-	31.7	< 30	< 5.0	-
	Tutt Pond-20130819	2013 08 19	49	< 0.50	4.4	56	< 5.0a	-	< 100	< 0.050	56,600	< 0.50	< 0.50	< 1.0a	61	< 1.0	< 50	179,000	71	< 5.0	8.6		-	-	< 1.0	-	< 0.050	304,000	-	-	-	< 0.20	-	-	< 50	-	28.1	< 30	< 5.0	-
	Tutt Pond-20130911	2013 09 11	104	< 0.50	5	66	< 5.0a	-	< 100	< 0.050	63,800	< 0.50	< 0.50	1	124	< 1.0	< 50	182,000	77	< 5.0	8.4		-	-	< 1.0	-	< 0.050	305,000	-	-	-	< 0.20	-	-	< 50	-	30.8	< 30	< 5.0	-
	Tutt Pond-20131016	2013 10 16	48	< 0.50	4.6	74	< 5.0a	-	< 100	< 0.10	74,600	< 1.0	< 0.50	< 1.0a	82	< 1.0	< 50	184,000	208	< 5.0	7.1		-	-	< 2.0	-	< 0.050	330,000	-	-	-	< 0.20	-	-	< 50	-	27.7	< 30	< 5.0	-

Associated CARO file(s) available on request

Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223.

All terms defined within the body of Keltech's report.

< Denotes concentration less than indicated detection limit or RPD less than indicated value.

\- Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

* RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

Table H4: Historical Summary of Analytical Results For Surface Water - Metals

Sample Location	Sample ID	Sample Date (yyyy mm	Total Metals																																						
			Aluminum µg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Bismuth µg/L	Boron µg/L	Cadmium µg/L	Calcium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Lithium µg/L	Magnesium µg/L	Manganese µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Phosphorous µg/L	Potassium µg/L	Selenium µg/L	Silicon µg/L	Silver µg/L	Sodium µg/L	Strontium µg/L	Sulphur µg/L	Tellurium µg/L	Thallium µg/L	Thorium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L	Zirconium µg/L
TUTT POND (Cont'd)	Tutt Pond-20140331	2014 03 31	84	< 0.50	2.7	75	< 5.0a	-	< 100	< 0.050	81,100	< 0.50	0.53	< 1.0a	119	< 1.0	< 50	175,000	157	< 0.20a	9.3	< 5.0	-	-	< 1.0	-	< 0.050	284,000	-	-	-	< 0.20	-	-	< 50	-	33.4	< 30	< 5.0	-
	Tutt Pond-20140528	2014 05 28	119	< 0.50	3.8	66	< 5.0a	-	< 100	< 0.10	85,400	< 1.0	0.61	1.4	146	< 1.0	< 50	187,000	41	< 0.20a	9.6	< 5.0	-	-	< 2.0	-	< 0.050	329,000	-	-	-	< 0.20	-	-	< 50	-	38	< 30	< 5.0	-
	Tutt Pond-20140731	2014 07 31	26	< 0.50	4.7	< 20	< 5.0a	-	< 100	< 0.10	52,300	< 1.0	< 0.50	< 1.0a	32	< 1.0	< 50	202,000	55	< 0.20a	8.6	< 5.0	-	-	< 2.0	-	< 0.050	364,000	-	-	-	< 0.20	-	-	< 50	-	29.3	< 30	< 5.0	-
	Tutt Pond-20140828	2014 08 28	372	< 0.50	5.3	39	< 5.0a	-	< 100	< 0.10	64,700	< 1.0	0.62	1.2	461	< 1.0	< 50	195,000	156	< 0.20a	8.6	< 5.0	-	-	< 2.0	-	< 0.050	337,000	-	-	-	< 0.20	-	-	< 50	-	31.1	< 30	< 5.0	-
	Tutt Pond-20140930	2014 09 30	198	< 0.50	5.6	66	< 5.0a	-	< 100	< 0.10	77,600	< 1.0	0.64	1.1	253	< 1.0	< 50	195,000	320	< 0.20a	8.8	< 5.0	-	-	< 2.0	-	< 0.050	338,000	-	-	-	< 0.20	-	-	< 50	-	31.2	< 30	5.7	-
	Tutt Pond-20150311	2015 03 11	65	< 0.50	2.5	71	< 5.0a	-	< 100	< 0.050	70,600	< 0.50	< 0.50	1.3	90	< 1.0	< 50	157,000	51	< 0.20a	12.1	< 5.0	-	-	< 1.0	-	< 0.050	247,000	-	-	-	< 0.20	-	-	< 50	-	30.6	< 30	< 5.0	-
	Tutt Pond-20150616	2015 06 16	22	< 0.50	3.2	58	< 5.0a	< 200	< 100	< 0.050	47,300	< 0.50	< 0.50	1.1	< 30	< 1.0	< 50	181,000	13	< 0.20a	11	< 5.0	< 300	13,100	< 1.0	1,610	< 0.050	286,000	4,130	188,000	0.61	< 0.20	< 0.20	< 30	< 50	-	31	< 30	< 5.0	-
	Tutt Pond-20150902	2015 09 02	305	< 0.50	5.9	85	< 5.0a	< 200	< 100	< 0.050	91,600	0.64	0.79	< 1.0a	383	< 1.0	< 50	202,000	279	< 0.20a	10.3	< 5.0	660	15,900	< 1.0	9,670	< 0.050	359,000	5,280	269,000	0.54	< 0.20	< 0.20	< 30	< 50	-	40.6	< 30	6.4	0.7
	Tutt Pond-20151029	2015 10 29	131	< 0.50	4.6	75	< 5.0a	< 200	< 100	< 0.050	89,300	< 0.50	0.72	< 1.0a	149	< 1.0	< 50	179,000	251	< 0.20a	13.2	< 5.0	500	12,700	< 1.0	9,270	< 0.050	302,000	4,950	239,000	0.71	< 0.20	< 0.20	< 30	< 50	-	41.8	< 30	< 5.0	0.63
	TUTT POND-20160518	2016 05 18	35	< 0.50	2.5	62	< 5.0a	-	< 100	< 0.050	78,600	< 0.50	< 0.50	2	44	< 1.0	< 50	157,000	20	< 0.20a	13.6	< 5.0	-	-	1	-	< 0.050	281,000	-	-	-	< 0.20	-	-	< 50	-	43.4	< 30	< 5.0	-
	TUTT POND-20160914	2016 09 14	117	< 0.50	3.9	72	< 5.0a	< 200	< 100	< 0.050	79,300	< 0.50	< 0.50	< 1.0a	139	< 1.0	< 50	185,000	102	< 0.20a	12.1	< 5.0	390	14,800	< 1.0	7,550	< 0.050	333,000	4,990	-	-	< 0.20	-	< 30	< 50	-	40.1	< 30	< 5.0	-
	TUTT POND-20161116	2016 11 16	199	< 0.50	3.6	63	< 5.0a	< 200	< 100	< 0.050	72,400	< 0.50	0.66	1.4	220	< 1.0	< 50	155,000	164	< 0.20a	12.6	< 5.0	410	14,000	< 1.0	8,100	< 0.050	267,000	3,990	-	< 0.40	< 0.20	-	< 30	< 50	-	36.9	< 30	< 5.0	< 0.60
	TUTT POND-20170418	2017 04 18	73	< 0.50	2	72	< 5.0a	< 200	< 100	< 0.050	76,500	< 0.50	< 0.50	1.3	87	< 1.0	< 50	142,000	55	< 0.20a	10.7	< 5.0	< 300	12,400	< 1.0	6,190	< 0.050	234,000	3,650	-	0.35	< 0.20	< 0.10	< 30	< 50	-	31.9	< 30	< 5.0	0.69
	TUTT POND-20170607	2017 06 07	26	< 0.50	2.2	80	< 5.0a	< 200	< 100	< 0.050	79,100	< 0.50	< 0.50	1.3	32	< 1.0	< 50	161,000	20	< 0.20a	11.1	< 5.0	< 300	13,300	1	470	< 0.050	265,000	3,850	-	0.59	< 0.20	< 0.10	< 30	< 50	-	32.2	< 30	< 5.0	< 0.30
	TUTT POND-20170907	2017 09 07	42	< 0.50	3.6	56	< 5.0a	< 200	< 100	< 0.050	90,900	< 0.50	< 0.50	1.1	50	< 1.0	< 50	190,000	70	< 0.20a	10.9	< 5.0	300	14,800	< 1.0	5,170	< 0.050	304,000	4,790	-	0.48	< 0.20	< 0.20	< 30	< 50	-	43	< 30	< 5.0	0.38
	TUTT POND-20171101	2017 11 01	45	< 0.50	4.1	74	< 5.0a	< 200	< 100	< 0.050	120,000	< 0.50	0.56	< 1.0a	71	< 1.0	< 50	194,000	314	< 0.20a	10.5	< 5.0	610	15,300	< 1.0	10,400	< 0.050	329,000	5,790	-	0.55	< 0.20	< 0.20	< 30	< 50	-	49.4	< 30	< 6.0	0.58
	TUTT POND-180404	2018 04 04	291	< 0.20	2.05	56.5	< 0.10	< 0.10	39.8	0.011	70,600	1.02	0.57	4.76	419	< 0.20	25.5	149,000	61.5	< 0.010	14.8	2.31	226	13,600	1.38	< 1,000	< 0.050	249,000	3,690	162,000	< 0.50	< 0.020	< 0.10	< 0.20	18.3	< 1.0	38.7	4	6.5	0.46
	TUTT POND-180417	2018 04 17	181	< 0.20	1.82	60.1	< 0.10	< 0.10	47.6	< 0.010	67,200	1.12	0.53	1.89	269	< 0.20	25.3	153,000	61	< 0.010	14.6	2.41	115	13,000	1.1	< 1,000	< 0.050	248,000	3,590	183,000	< 0.50	< 0.020	< 0.10	< 0.20	10.6	< 1.0	38	3.6	5.2	0.36
	TUTT POND-180503	2018 05 03	22.8	0.22	1.95	69.3	< 0.10	< 0.10	46.6	0.017	56,900	0.68	0.29	2.5	37	< 0.20	30.1	131,000	23.4	-	15.6	1.55	82	14,800	1.48	2,000	< 0.050	200,000	3,090	98,500	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	26.4	4.4	7.2	0.24
	TUTT POND-180523	2018 05 23	1,170	< 0.20	2.28	83.2	< 0.10	< 0.10	34.9	< 0.010	68,200	10.2	0.38	2.14	104	< 0.20	27.7	131,000	53.1	< 0.010	14.3	8.73	219	14,700	1.23	3,500	< 0.050	206,000	3,610	114,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	26.9	4.3	8	0.16
	TUTT POND-180615	2018 06 15	34.7	< 0.20	2.7	84.5	< 0.10	< 0.10	37.9	0.011	73,800	< 0.50	0.34	1.8	59	< 0.20	34.9	157,000	45.6	< 0.010	14.9	1.93	244	13,900	1.05	3,300	< 0.050	246,000	3,820	149,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	31.2	3.7	5.3	0.16
	TUTT POND-180712	2018 07 12	57.3	< 0.20	2.81	80.7	< 0.10	< 0.10	41.1	0.014	53,000	< 0.50	0.32	2.28	80	< 0.20	31.1	150,000	26.8	< 0.010	13.7	1.87	221	13,100	0.86	4,600	< 0.050	230,000	3,410	137,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	26.1	3.2	< 4.0	0.13
	TUTT POND-180906	2018 09 06	472	0.24	3.26	99.5	< 0.10	< 0.10	37.1	0.022	69,200	1.54	0.9	3.91	719	0.35	28.9	166,000	141	< 0.010	13.5	3.49	329	14,500	1.09	10,800	< 0.050	271,000	4,550	206,000	< 0.50	< 0.020	0.1	< 0.20	29.2	< 1.0	34.3	6.3	6.8	0.67
	TUTT POND-181107	2018 11 07	138	< 0.20	2.77	96.3	< 0.10	< 0.10	45.7	< 0.010	91,600	0.58	0.58	2	234	< 0.20	29.7	165,000	116	< 0.010	12	3.1	368	14,400	1.05	9,600	< 0.050	262,000	4,190	189,000	< 0.50	< 0.020	< 0.10	< 0.20	8.5	< 1.0	36.6	4.7	5.1	0.38
	Tutt Pond	2019 03 29	202	< 0.20	2.25	91.7	< 0.10	< 0.10	31.1	0.018	93,900	0.73	0.62	2.02	308	0.25	26.6	135,000	301	< 0.040a	8.58	4.08	541	11,900	0.89	8,700	< 0.050	214,000	4,190	175,000	< 0.50	< 0.020	< 0.10	< 0.20	13.7	< 1.0	33	3.7	10	0.39
	Tutt Pond	2019 05 06	76.2	< 0.20	2.6	86.7	< 0.10	< 0.10	33.1	0.01	111,000	< 0.50	0.58	1.89	122	< 0.20	31.7	169,000	102	< 0.040a	9.12	2.34	227	11,400	0.8	1,100	< 0.050	285,000	5,450	230,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	44.5	3.4	< 4.0	0.26
	Tutt Pond	2019 06 05	43.6	< 0.20	3.08	76.6	< 0.10	< 0.10	45.3	0.01	78,400	< 0.50	0.39	1.04	66	< 0.20	33.8	162,000	55.8	< 0.040a	12	2.06	358	11,900	0.72	1,100	< 0.050	263,000	4,100	177,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	38	4.8	< 4.0	0.19
	Tutt Pond	2019 09 04	119	0.27	4.27	96.1	< 0.10	< 0.10	37.5	< 0.010	61,900	0.67	0.64	1.76	178	< 0.20	34.4	184,000	128	< 0.010	13.7	2.66	381	14,900	1.09	10,300	< 0.050	296,000	4,720	206,000	< 0.50	< 0.020	< 0.10	< 0.20	8.1	< 1.0	39.5	5.4	< 4.0	0.41
	Tutt Pond	2019 10 23	47.9	0.29	4.72	92.2	< 0.10	< 0.10	43.7	< 0.010	94,300	0.66	0.61	0.74	92	< 0.20	33.5	196,000	147	< 0.010	12.8	2.92	539	14,400	0.95	11,700	< 0.050	326,000	5,930	272,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	49.7	5.5	< 4.0	0.44
	TUTTPOND-200407	2020 04 07	41.9	0.149	2.33	60.9	< 0.010	< 0.010	57.6	0.0053	84,100	0.95	0.446	0.85	65.6	0.05	33.1	154,000	92.1	< 0.010	10.1	2.01	132	11,800	0.88	8,960	< 0.010	245,000	4,710	186,000	< 0.050	< 0.0040	0.013	< 0.050	2.72	< 0.20	37	3.82	1.8	0.407
	TUTTPOND-200605	2020 06 05	31.2	0.207	2.66	63.4	< 0.010	< 0.010	34.6	0.0062	81,800	0.21	0.418	1.19	59.8	0.054	28.7	149,000	39	< 0.010	10.1	1.98	296	12,300	0.7	550	< 0.010	237,000	4,810	168,000	< 0.050	< 0.0040	< 0.010	< 0.050	1.78	< 0.20	33.6	4.67	< 1.0	0.276
	TUTTPOND-200918	2020 09 18	47.8	0.276	4.25	73.2	< 0.010	< 0.010	30.2	0.009	77,200	0.3	0.624	1.23	87.2	0.083	23.6	176,000	131	< 0.010	13.7	2.61	335	16,700	0.78	6,820	< 0.010	286,000	4,490	196,000	0.068	< 0.0040	0.013	< 0.050	3.75	< 0.20	36	5.49	1.3	0.646
	TUTTPOND-201028	2020 10 28	178	0.318	4.84	94.7	0.013	< 0.010	44	0.0133	114,000	0.71	0.811	1.48	273	0.178	33.5	205,000	470	< 0.010	11	3.85	1,120	16,400	1.69	8,250	< 0.010	364,000	5,650	314,000	< 0.050	< 0.0040	0.034	< 0.050	11.3	< 0.20	49.1	4.95	2.5	1.04
	TUTT POND-210323	2021 03 23	126	0.202	2.36	88.7	< 0.010	< 0.010	57.4	0.008	95,200	0.66	0.648	1.44	198	0.134	28.4	183,000	190	< 0.010	10.1	3.11	191	13,600	1.38	2,100	0.051	310,000	4,290	233,000	< 0.050	< 0.0040	0.024	0.168	8.39	< 0.20	46.3	3.76	2.2	0.777
	TUTT POND-210616	2021 06 16	59.9	0.744	3.24	57.1	< 0.010	0.011	42.3	0.0073	104,000	0.44	0.767	1.91	103	0.133	32.2	214,000	149	< 0.010	14.1	3.71	423	16,800	1.32	2,800	< 0.010	364,000	4,690	287,000	< 0.050	< 0.0040	0.014	0.062	4.8	< 0.20	52.9	4.67	3.3	0.895
	TUTT POND-210921	2021 09 21	61	0.232	3.85	68.5	< 0.010	< 0.010	23.3	0.0049	85,000	0.34	0.45	0.96	88.8	0.072	35.4	252,000	31.1	< 0.010	12.5	2.81	283	15,600	1.41	8,730	< 0.010	432,000	5,940	355,000	< 0.050	< 0.0040	0.011	< 0.050	4.03	< 0.20	54	4.48	1.1	0.335
	TUTT POND-211020	2021 10 20	51.1	0.289	4.48	76.3	< 0.010	< 0.010	29.5	0.0055	105,000	0.41	0.465	0.94	89.6	0.081	39.1	245,000	55.7	< 0.010	12.8	2.87	450	16,700	1.18	8,600	< 0.010	433,000	5,920	359,000	0.053	< 0.0040	0.011	< 0.050	3.52	0.2	55	3.01	2	0.5
	TUTT POND-220322	2022 03 22	283	0.267	2.45	85.4	<0.050	<0.050	30.5	0.0148	85,500	0.92	0.698	1.64	434	0.305	27.5	178,000	200	< 0.010	10.2	3.91	175	12,100	0.71	4,370	<0.050	307,000	4,520	226,000	<0.250	<0.0200	<0.050	<0.250	18	<1.00	36.6	5.47	<5.0	0.527
	TUTT POND-220621	2022 06 21	82.2	0.169	2.78	42.7	<0.010	<0.010	36.1	<0.0060	77,200	0.32	0.507	1.26	93.1	0.118	24.7	164,000	56.6	< 0.010	12.1	2.29	341	13,300	0.67	2,010	<0.010	265,000	4,130	205,000	<0.050	<0.0040	0.014	<0.050	5.63	<0.20	35.7	3.73	1.1	0.545
	TUTT POND-220909	2022 09 09	98.6	0.229	4.38	62.3	<0.010	<0.010	41.4	0.0058	84,600	0.41	0.621	1.03	135	0.094	30.5	202,000	101	< 0.010	14.5	3.04	401	16,600	0.88	8,600	<0.010	365,000	5,340	297,000	<0.050	<0.0040	0.022	<0.050	5.46	0.22	47.4	5.07	<1.0	0.613
	TUTT POND-221019	2022 10 19	97.7	0.227	4.78	71.3	<0.020	<0.020	43.9	<0.0080	94,600	0.45	0.636	0.85	151	0.106	28.6	250,000	161	< 0.010	13.3	3.33	625	16,900	0.85	8,440	<0.020	448,000	5,900	374,000	<0.100	<0.0080	<0.020	<0.100	5.27	<0.40	53.5	5.04	<2.0	0.57
	TUTT POND-230329	2023 03 29	143	0.169	2.59	75	<0.010	<0.010	38.7	0.0077	87,300	0.47	0.531	1.71	205	0.107	29	188,000	167	<0.010	11.3	2.52	172	13,700	0.74	5670	<0.010	320,000	4870	257,000	<0.050	<0.0040	0.073	<0.050	8.03	<0.20	37.5	3.64	1.9	0.541
	TUTT POND-230518	2023 05 18	49.6	0.185	2.99	69	<0.010	<0.010	40.7	<0.0050	82,700	<0.50	0.454	0.95	70.7	0.076	30	187,000	48.3	<0.010	11.6	2.61	132	13,400	0.83	1230	0.011	317,000	4830	272,000	<0.050	<0.0040	0.013	<0.050	2.75	<0.20	41.8	4.02	<1.0	0.426
	TUTT POND-230927	2023 09 27	97	0.243	4.85	75.8	<0.010	<0.010	39.5	<0.0060	66,300	<0.50	0.449	0.83	106	0.093	34.9	223,000	46	<0.010	13.6	2.55	314	16,600	0.71	4070	0.017	396,000	5650	326,000	<0.050	<0.0040	0.108	<0.050	4.91	0.24	40	4.7	1.2	0.459
	TUTT POND-231101	2023 11 01	98.5	0.292	5.25	76.4	<0.010	<0.010	36.3	<0.0120	63,200	<0.50	0.5	0.63	156	0.12	34.2	231,000	148	<0.010	13.2	2.66	612	15,800	0.62	4200	<0.010	397,000	5980	318,000	0.052	<0.0040	0.029	<0.050	5.28	0.26	40.2	4.49	1.1	0.476
BUBNA DISCHARGE	Bubna Slough-20150616	2015 06 16	< 15	0.54	4.3	< 20	< 5.0a	< 200	< 100	< 0.050	41,500	< 0.50	< 0.50	< 2.5a	< 30	< 1.0	127	285,000	< 10	< 0.20a	4.6	< 5.0	< 300	51,700	< 1.0	7,070	< 0.050	571,000	2,990	191,000	< 1.0	< 0.20	< 0.50	< 30	< 50	-	15.4	< 30	18.9	-
	BUBNA DISCHARGE-180420	2018 04 20	13.1	0.25	2.24	23	< 0.10	< 0.10	21.1	< 0.010	60,900	< 0.50	< 0.10	0.61	20	< 0.20	67.1	171,000	6.71	< 0.040a	1.95	0.87	< 50	26,800	< 0.50	4,200	< 0.050	344,000	3,280	77,700	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	7.55	3.1	< 4.0	0.17
	BUBNA DISCHARGE-180503	2018 05 03	7.9	0.31	2.91	15.8	< 0.10	< 0.10	24	< 0.010	65,700	< 0.50	< 0.10	0.44	11	< 0.20	76.5	194,000	10.1	-	1.97	0.79	< 50	32,800	< 0.50	2,200	< 0.050	400,000	3,600	92,800	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	7.37	3.6	< 4.0	0.19
	BUBNA DISCHARGE-180615	2018 06 15	22.4	0.3	2.63	12.1	< 0.10	< 0.10	15.9	0.037	32,300	< 0.50	< 0.10	0.56	32	0.33	89.1	209,000	7.14	< 0.010	2.02	0.89	< 50	33,300	< 0.50	3,000	< 0.050	408,000	1,550	95,400	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	6.48	2.1	15.4	0.18
	BUBNA SLOUGH-181108	2018 11 08	82.5	0.28	2.17	19.7	< 0.10	< 0.10	36.2	< 0.010	45,800	< 0.50	< 0.10	< 0.40a	65	< 0.20	101	242,000	13.6	-	1.66	0.52	< 50	37,700	< 0.50	9,000	< 0.050	460,000	2,460	105,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	6.1	1.6	< 4.0	0.45
	Bubna-20190329	2019 03 29	176	< 0.20	1.13	14	< 0.10	< 0.10	13.6	< 0.010	23,500	< 0.50	< 0.10	0.51	59	< 0.20	25.4	58,600	11.9	< 0.040a	0.71	< 0.40	< 5041.7	9,620	< 0.50	2,500	< 0.050	113,000	1,160	-	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	-	2.04	1.9	< 4.0	0.23
	Bubna	2019 03 29	176	< 0.20	1.13	14	< 0.10	< 0.10	13.6	< 0.010	23,500	< 0.50	< 0.10	0.51	59	< 0.20	25.4	58,600	11.9	< 0.040a	0.71	< 0.40	< 50	9,620	< 0.50	2,500	< 0.050	113,000	1,160	24,400	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	2.04	1.9	< 4.0	0.23
	Bubna	2019 05 06	145	0.27	2.3	20.7	< 0.10	< 0.10	24.1	< 0.010	50,200	< 0.50	0.18	0.87	197	0.22	88.8	203,000	12.7	< 0.040a	1.29	0.95	< 50	30,500	< 0.50	< 1,000	< 0.050	405,000	2,830	85,200	< 0.50	< 0.020	< 0.10	< 0.20	9.5	< 1.0	5.59	2.4	< 4.0	0.31
	Bubna-20190506	2019 05 06	145	0.27	2.3	20.7	< 0.10	< 0.10	24.1	< 0.010	50,200	< 0.50	0.18	0.87	197	0.22	88.8	203,000	12.7	< 0.040a	1.29	0.95	< 5037.2	30,500	< 0.50	< 1,000	< 0.050	405,000	2,830	-	< 0.50	< 0.020	< 0.10	< 0.20	9.5	-	5.59	2.4	< 4.0	0.31
	BUBNASLOUGH-200407	2020 04 07	6.7	0.171	1.6	21.3	< 0.010	< 0.010	30.2	0.0093	53,900	0.14	0.042	0.26	11.7	< 0.050	73.1	166,000	7.23	< 0.010	0.936	0.494	19	25,400	0.12	7,090	< 0.010	325,000	2,580	69,800	< 0.050	< 0.0040	< 0.010	< 0.050	0.46	< 0.20	4.01	2.13	3	0.065
	BUBNASLOUGH-200605	2020 06 05	3.1	0.218	1.68	11.1	< 0.010	< 0.010	17.2	< 0.0020	38,200	0.11	0.037	0.44	7.5	< 0.050	44.7	153,000	6.79	< 0.010	0.815	0.437	13	25,000	< 0.10	5,080	< 0.010	289,000	2,270	61,500	< 0.050	< 0.0040	< 0.010	< 0.050	0.32	< 0.20	3.26	1	< 1.0	0.049
	BUBNASLOUGH-200928	2020 09 28	3.5	0.192	1.66	21	< 0.010	< 0.010	39.8	< 0.0020	42,600	0.13	0.0353	0.83	7.1	< 0.050	86.7	192,000	20.6	< 0.010	0.561	0.444	15	30,600	< 0.10	14,600	< 0.010	375,000	2,070	83,400	< 0.050	< 0.0040	< 0.010	< 0.050	0.25	< 0.20	2.25	0.81	1.6	0.036
	BUBNASLOUGH-201029	2020 10 29	3.3	0.147	1.45	20.2	< 0.010	< 0.010	32	< 0.0020	41,500	< 0.10	0.0365	0.33	5.3	< 0.050	98.6	190,000	3.8	< 0.010	0.94	0.456	26	31,500	< 0.10	14,900	< 0.010	378,000	2,140	79,500	< 0.050	< 0.0040	< 0.010	< 0.050	0.3	< 0.20	3.7	0.8	1.1	0.035
	BUBNA SLOUGH-210412	2021 04 12	2.4	0.16	1.37	24.4	< 0.010	< 0.010	29.6	< 0.0020	60,400	0.28	0.0478	0.28	6	< 0.050	82.4	182,000	6	< 0.010	1.16	0.538	19	28,000	< 0.10	7,040	< 0.010	341,000	2,690	68,800	< 0.050	< 0.0040	< 0.010	< 0.050	< 0.20	< 0.20	5.2	1.95	1.2	0.046
	BUBNA SLOUGH-210616	2021 06 16	< 2.0	0.234	1.79	17.2	< 0.010	< 0.010	33.2	0.0146	43,000	0.14	0.0516	0.31	8.3	< 0.050	87.1	203,000	6.85	< 0.010	1.28	0.434	27	31,300	< 0.10	8,780	< 0.010	384,000	1,690	76,000	< 0.050	< 0.0040	< 0.010	< 0.050	0.21	< 0.20	4.84	0.41	1.4	0.037
	BUBNA SLOUGH-211020	2021 10 20	3.3	0.148	1.58	14.2	< 0.010	< 0.010	32.6	0.0024	35,400	0.13	0.045	< 0.20	6.7	< 0.050	101	231,000	2.28	< 0.010	1.54	0.46	35	37,900	0.12	11,600	< 0.010	439,000	1,520	82,500	0.053	< 0.0040	< 0.010	< 0.050	0.22	< 0.20	5.63	< 0.20	1.3	0.037
	BUBNA SLOUGH-220322	2022 03 22	7.8	0.085	1.08	16.4	<0.010	<0.010	17.1	0.0025	41,600	0.18	0.043	0.69	14.9	0.051	40.2	105,000	6.76	< 0.010	1.28	0.49	21	15,500	0.15	3,160	<0.010	205,000	1,730	40,100	<0.050	<0.0040	<0.010	<0.050	0.28	<0.20	6.15	4.23	1.5	0.061
	BUBNA SLOUGH-220621	2022 06 21	3.9	0.125	1.54	7.06	<0.010	<0.010	26.3	<0.0020	35,200	0.13	0.0424	<0.20	7.2	0.079	61.4	164,000	7.96	< 0.010	1.38	0.452	18	26,100	0.11	6,240	0.01	304,000	1,500	62,300	<0.050	<0.0040	<0.010	<0.050	0.26	<0.20	4.93	<1.00	<1.0	0.031
	BUBNA SLOUGH-220912	2022 09 12	3.2	0.125	1.6	11.9	<0.010	<0.010	40	<0.0020	29,100	0.18	0.0329	<0.20	3.7	<0.050	88.7	210,000	10.7	< 0.010	1.15	0.432	12	30,100	0.1	17,500	<0.010	377,000	1,230	71,800	<0.050	<0.0040	<0.010	<0.050	<0.20	<0.20	3.53	<1.00	<1.0	<0.020
	BUBNA SLOUGH-221019	2022 10 19	5.3	0.115	1.5	9.47	<0.010	<0.010	34	<0.0020	28,100	0.15	0.0437	<0.20	6.7	<0.050	73.9	247,000	4.74	< 0.010	1.26	0.504	22	33,300	0.1	17,400	0.013	447,000	1,380	79,300	<0.050	<0.0040	<0.010	<0.050	0.31	<0.20	4.66	<1.00	<1.0	0.035
	BUBNA SLOUGH-230329	2023 03 29	4.1	0.084	0.996	18.4	<0.010	<0.010	18.3	<0.0020	42,700	<0.10	0.0342	0.26	8.3	<0.050	39.3	108,000	14.9	<0.010	0.975	0.363	44	16,100	0.17	6,850	<0.010	203,000	1,780	38,700	<0.050	<0.0040	0.022	<0.050	0.23	<0.20	4.54	2.46	1.5	0.052
	BUBNA SLOUGH-230518	2023 05 18	2.4	0.117	1.5	8.58	<0.010	<0.010	27.6	<0.0020	35,700	<0.50	0.0392	0.46	5.2	<0.050	71.6	189,000	10	<0.010	1.35	0.448	18	27,300	0.22	7,800	0.011	345,000	1,480	70,900	<0.050	<0.0040	<0.010	<0.050	<0.20	<0.20	5.49	1.14	<1.0	0.025
	BUBNA SLOUGH-230927	2023 09 28	3.3	0.187	1.66	9.52	<0.010	<0.010	36.5	<0.0020	18,600	<0.50	0.0447	<0.20	9.2	<0.050	100	251,000	7.33	<0.010	1.41	0.492	<20	37,900	0.16	15,300	<0.010	474,000	658	94,200	<0.050	<0.0040	0.051	<0.050	0.2	<0.20	4.9	<1.00	<1.0	0.128
	BUBNA SLOUGH-231102	2023 11 02	5.1	0.155	1.53	8.66	<0.010	<0.010	29.1	<0.0020	21,300	<0.50	0.0447	0.7	6.3	<0.050	91.4	256,000	3.5	<0.010	1.57	0.785	30	37,000	0.13	11,600	<0.010	522,000	834	91,800	<0.050	<0.0040	<0.010	0.053	0.23	<0.20	5.33	1.32	<1.0	0.03
SLOUGH #2	SLOUGH #2-200407	2020 04 07	16.8	0.354	4.08	15	< 0.010	< 0.010	29.6	0.0047	52,000	0.32	0.29	1.09	51.4	0.072	109	112,000	129	< 0.010	3.46	1.19	68	71,700	0.2	7,290	< 0.010	782,000	1,300	347,000	< 0.050	< 0.0040	< 0.010	< 0.050	1.77	< 0.20	15.9	1.38	2.4	0.527
	SLOUGH #2-200605	2020 06 05	23.3	0.466	5.23	7.94	< 0.010	< 0.010	12.3	0.0061	35,800	0.59	0.322	0.7	64.3	0.101	67.8	101,000	41	< 0.010	3.77	1.49	46	71,400	0.16	6,470	< 0.010	823,000	1,260	335,000	< 0.050	< 0.0040	< 0.010	< 0.050	2.02	< 0.20	16.1	1.5	< 1.0	0.395
	SLOUGH #2-200917	2020 09 17	12.5	0.616	7.92	29.1	< 0.010	< 0.010	19.8	0.0081	38,500	0.3	0.265	0.55	37.5	0.062	122	174,000	37.1	< 0.010	6.94	1.76	75	118,000	0.2	9,930	0.015	997,000	1,470	595,000	< 0.050	< 0.0040	< 0.010	< 0.050	1.29	< 0.20	22.2	2.27	1.7	0.475
	SLOUGH #2-201029	2020 10 29	8.3	0.474	5.19	18.4	< 0.010	< 0.010	19.3	< 0.0020	37,100	0.13	0.181	< 0.20	33.2	0.07	156	137,000	39.2	< 0.010	5.18	1.18	55	96,100	0.2	8,580	< 0.010	1,100,000	1,180	481,000	< 0.050	< 0.0040	< 0.010	< 0.050	1.5	< 0.20	22.6	0.71	< 1.0	0.364
	SLOUGH #2 210412	2021 04 12	27.3	0.444	4.8	5.22	< 0.010	< 0.010	17.2	0.0051	53,300	0.35	0.296	0.99	96	0.264	120	128,000	97.4	< 0.010	4.4	1.51	61	81,600	0.12	6,240	< 0.010	922,000	1,330	373,000	< 0.050	< 0.0040	0.013	0.088	2.08	< 0.20	19.3	1.53	2.3	0.556
	SLOUGH # 2-210616	2021 06 16	6.3	0.76	5.57	7.69	< 0.010	0.015	22.6	0.0026	42,800	0.26	0.239	0.62	28.8	0.084	126	145,000	42	< 0.010	4.73	1.27	58	97,000	0.17	8,630	< 0.010	1,020,000	1,110	429,000	< 0.050	< 0.0040	< 0.010	< 0.050	0.94	< 0.20	19.7	0.83	1.3	0.315
	SLOUGH #2-211020	2021 10 20	12.6	0.427	5.21	24	< 0.010	< 0.010	16.8	0.0035	35,200	0.36	0.154	1.44	40.4	0.125	150	170,000	34.8	< 0.010	7.33	1.12	62	117,000	0.22	12,100	< 0.010	1,500,000	1,360	545,000	0.06	< 0.0040	< 0.010	< 0.050	1.17	< 0.20	30.2	< 0.20	4.2	0.344
	SLOUGH #2-220323	2022 03 22	53.7	0.256	3.37	27.3	<0.010	<0.010	10.9	0.0051	44,100	0.33	0.249	0.8	92.9	0.112	74.6	98,800	114	< 0.010	3.62	1.1	128	59,200	0.14	4,720	<0.010	660,000	1,120	276,000	<0.050	<0.0040	0.013	<0.050	3.06	<0.20	18.3	1.52	2	0.568
	SLOUGH #2-220621	2022 06 21	17.9	0.352	4.27	5.25	<0.020	<0.020	18.5	0.0045	41,300	0.26	0.171	<0.40	34.3	0.181	106	131,000	67	< 0.010	5.28	1.12	58	80,900	<0.20	7,780	<0.020	889,000	1,190	384,000	<0.100	<0.0080	<0.020	<0.100	0.97	<0.40	24.9	<2.00	<2.0	0.318
	SLOUGH #2-220912	2022 09 12	28.2	0.334	5.5	27	<0.010	<0.010	18.7	0.0048	35,000	0.22	0.145	0.27	68.6	0.078	141	160,000	28.6	< 0.010	5.98	1.13	438	98,500	0.25	13,100	<0.010	1,090,000	1,300	479,000	<0.050	<0.0040	0.016	<0.050	1.63	<0.20	25.5	<1.00	2.5	0.313
	SLOUGH #2-221019	2022 10 19	27	0.289	5.05	25.3	<0.050	<0.050	18	<0.0100	30,500	<0.50	0.145	<1.00	56.7	<0.250	117	168,000	27.9	< 0.010	6.58	1.3	124	104,000	<0.50	11,000	<0.050	1,260,000	1,250	487,000	<0.250	<0.0200	<0.050	<0.250	1.86	<1.00	30.5	<5.00	<5.0	0.348
	SLOUGH #2-230329	2023 03 29	65.5	0.206	2.62	26	<0.020	<0.020	16.2	<0.0040	41,000	<0.20	0.229	0.78	107	0.145	84.8	115,000	37.1	<0.010	4.46	0.979	81	63,700	0.21	4,650	<0.020	742,000	1,080	331,000	<0.100	<0.0080	0.067	<0.100	3.81	<0.40	20	<2.00	<2.0	0.565
	SLOUGH #2-230518	2023 05 18	29.1	0.293	4.2	35.7	<0.050	<0.050	20.8	<0.0100	40,800	<2.50	0.293	<1.00	65.6	0.269	105	142,000	31.6	<0.010	7.57	1.59	159	86,300	0.91	2,650	<0.050	960,000	1,380	432,000	<0.250	<0.0200	<0.050	<0.250	2.29	<1.00	33.5	<5.00	<5.0	0.903
	SLOUGH #2-230927	2023 09 27	63	0.404	5.66	42.1	<0.050	<0.050	23.9	<0.0100	26,700	<2.50	0.205	<1.00	106	<0.250	153	194,000	26.6	<0.010	8.42	1.36	93	123,000	<0.50	4,390	<0.050	1,390,000	1,370	576,000	<0.250	<0.0200	0.186	<0.250	3.45	<1.00	37	<5.00	<5.0	0.845
	SLOUGH #2-231102	2023 11 02	29.2	0.32	4.69	34.2	<0.050	<0.050	20.2	<0.0100	26,500	<2.50	0.158	<1.00	70	<0.250	130	181,000	32.6	<0.010	10.8	1.09	457	109,000	<0.50	3,830	<0.050	1,540,000	1,200	536,000	<0.250	<0.0200	<0.050	<0.250	1.87	<1.00	39.3	<5.00	<5.0	0.602
LITTLE ROBERT LK	Little Robert Lake-20150616	2015 06 16	173	0.66	8.8	30	< 5.0a	< 200	< 100	< 0.050	73,200	0.61	0.64	< 2.5a	203	< 1.0	< 50	196,000	442	< 0.20a	5.1	< 5.0	1,220	36,200	< 1.0	3,690	< 0.050	619,000	2,050	471,000	< 1.0	< 0.20	< 0.50	< 30	< 50	-	14.5	< 30	< 5.0	-
	LITTLE ROBERT'S LAKE-20160921	2016 09 21	105	< 0.50	9.6	34	< 5.0a	< 200	< 100	< 0.050	118,000	< 0.50	< 0.50	< 2.5a	155	< 1.0	< 50	225,000	756	< 0.20a	5.6	< 5.0	3,830	46,200	< 1.0	11,700	< 0.050	791,000	2,690	-	-	< 0.20	-	< 30	< 50	-	19.9	< 30	< 5.0	-
	LITTLE ROBERT LK-180417	2018 04 17	189	0.49	6.31	38.6	< 0.10	< 0.10	38.4	< 0.010	141,000	0.75	0.76	1.51	273	< 0.20	25.5	216,000	1,120	< 0.010	10.6	2.33	1,830	26,300	0.61	6,600	< 0.050	624,000	3,400	593,000	< 0.50	< 0.020	< 0.10	< 0.20	12.3	< 1.0	40.7	3.9	< 4.0	0.46
	LITTLE ROBERT LK-180503	2018 05 03	42.6	0.26	2.67	57	< 0.10	< 0.10	45.5	0.011	70,800	0.54	0.36	1.54	59	< 0.20	29.8	142,000	106	-	15	1.74	415	15,300	1.29	1,200	< 0.050	255,000	3,230	161,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	29.9	3.6	6.5	0.25
	LITTLE ROBERT LK-180615	2018 06 15	55.4	0.22	2.74	79.7	< 0.10	< 0.10	37.7	0.023	76,800	< 0.50	0.34	1.44	81	< 0.20	35.3	161,000	75.2	< 0.010	14.3	1.85	275	14,100	1	2,700	< 0.050	246,000	3,830	163,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	31.5	3.4	15.2	0.2
	Little Robert Lk	2019 05 06	112	0.3	3.61	60.7	< 0.10	< 0.10	35.6	< 0.010	139,000	< 0.50	0.55	1.57	162	< 0.20	35.3	199,000	68.1	< 0.040a	10	2.31	943	14,800	< 0.50	< 1,000	< 0.050	423,000	5,390	374,000	< 0.50	< 0.020	< 0.10	< 0.20	6.6	< 1.0	52.7	3.1	< 4.0	0.25
	Little Robert Lk	2019 06 05	32.1	0.32	4.17	70.2	< 0.10	< 0.10	38.3	< 0.010	82,100	< 0.50	0.36	0.68	52	< 0.20	39	190,000	81.7	< 0.040a	9.77	1.9	749	11,500	0.55	1,300	< 0.050	369,000	4,560	291,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	37	3.3	< 4.0	0.1
	Little Robert Lk	2019 09 04	18.8	0.57	7.15	65	< 0.10	< 0.10	80	< 0.010	101,000	0.63	0.25	0.35	31	< 0.20	37.9	208,000	93.8	< 0.010	6.6	1.48	1,280	22,000	< 0.50	3,700	< 0.050	442,000	4,940	379,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	24.2	1	< 4.0	0.1
	LITTLEROBERTLAKE-200928	2020 09 28	7,380	0.542	7.05	126	0.276	0.096	40.3	0.0648	167,000	15.5	5.09	12.5	8,430	3.93	50.3	221,000	376	< 0.010	7.2	13.7	1,520	25,900	0.48	16,800	0.037	632,000	4,300	673,000	< 0.050	0.0819	1.29	0.275	424	< 0.20	35.8	19.9	23.2	4.95
	LITTLEROBERTLAKE-201029	2020 10 29	224	0.521	6.26	46.4	< 0.010	< 0.010	35.9	0.0049	142,000	0.6	0.426	0.69	249	0.148	45.1	229,000	131	< 0.010	6.79	1.67	1,900	26,100	0.38	2,750	< 0.010	658,000	4,240	684,000	< 0.050	< 0.0040	0.036	< 0.050	13.5	< 0.20	34.3	2.82	1.6	0.4
	LTTILEROBERTLAKE-200605	2020 06 05	189	0.404	4.94	52.1	0.013	< 0.010	26.9	0.0088	144,000	0.54	0.639	1.11	274	0.182	20.1	213,000	63.5	< 0.010	9.98	2.17	1,430	19,700	0.25	1,060	< 0.010	561,000	4,750	602,000	< 0.050	< 0.0040	0.037	< 0.050	12	< 0.20	42.1	3.78	1.3	0.401
	LITTLE ROBERT LAKE-210412	2021 04 12	89.1	0.428	5.12	48.7	0.01	< 0.010	32.8	0.0043	188,000	0.33	0.552	1.23	138	0.146	41.3	265,000	190	< 0.010	9.36	2.12	1,900	25,200	0.28	610	< 0.010	732,000	4,580	770,000	0.058	< 0.0040	0.018	< 0.050	5.41	< 0.20	53.1	3.89	1.6	0.481
	LITTLE ROBERT LAKE-210617	2021 06 17	240	0.631	6.4	47.1	< 0.010	< 0.010	20.5	0.0068	130,000	0.63	0.522	1.07	293	0.193	48.5	314,000	119	< 0.010	8.17	1.9	1,330	24,200	0.27	1,610	< 0.010	841,000	4,330	878,000	< 0.050	< 0.0040	0.032	0.054	15.2	< 0.20	32.1	2.55	3.5	0.269
	LITTLE ROBERT LAKE-210922	2021 09 22	685	0.458	6.1	57	0.019	0.01	32.3	0.009	139,000	1.74	0.778	3.89	906	0.449	47.6	312,000	177	< 0.010	8.58	2.78	1,540	31,500	0.37	2,970	< 0.010	969,000	4,910	915,000	< 0.050	0.0073	0.084	0.087	43.5	< 0.20	32.4	3.11	4.6	0.781
	LITTLE ROBERT LAKE-211021	2021 10 21	2.4	0.357	5.03	39.9	< 0.010	< 0.010	22.5	0.0029	135,000	0.15	0.276	0.27	15.6	< 0.050	44.2	288,000	244	< 0.010	8.43	1.06	1,700	29,500	0.24	1,390	< 0.010	705,000	5,420	727,000	< 0.050	< 0.0040	< 0.010	< 0.050	0.74	< 0.20	39.8	1.44	1.4	0.316
	LITTLE ROBERT LAKE-220323	2022 03 23	248	0.416	4.32	56.2	0.011	0.012	27.7	0.0075	168,000	0.74	0.668	1.17	374	0.231	35.8	226,000	2,080	< 0.010	8.37	2.1	1,470	21,300	0.39	6,260	<0.010	634,000	4,310	717,000	<0.050	0.0044	0.052	<0.050	16.9	<0.20	55.2	3.22	2.8	0.622
	LITTLE ROBERT LAKE-220621	2022 06 21	231	0.409	4.8	46.1	<0.010	<0.020	27.7	<0.008	149,000	0.54	0.469	0.88	242	0.238	33.6	216,000	305	< 0.010	8.39	1.84	1,610	17,400	0.32	930	<0.020	615,000	4,060	706,000	<0.100	<0.0080	0.025	<0.100	10	<0.40	37	2.29	<2.0	0.284
	LITTLE ROBERT LAKE-220912	2022 09 12	7,270	0.714	8.98	131	0.285	0.099	27.2	0.0808	141,000	15.6	5.46	12.9	10300	4.08	62.5	316,000	306	< 0.010	7.53	14.9	1,320	29,100	0.4	15,600	0.041	873,000	4,990	961,000	<0.100	0.0893	1.36	0.205	421	<0.40	28.7	19.9	27.2	3.95
	LITTLE ROBERT LAKE-221019	2022 10 19	268	0.537	6.57	54.5	0.021	0.021	29.8	0.0063	143,000	0.67	0.445	0.63	292	0.166	47.8	357,000	336	< 0.010	8.52	1.78	1,780	30,300	0.32	2,630	<0.020	996,000	5,160	1,000,000	<0.100	<0.0080	0.045	<0.100	14.2	<0.40	37.8	2.93	<2.0	0.475
	LITTLE ROBERT LAKE-230329	2023 03 29	526	0.52	5.92	68.4	<0.020	<0.020	30.1	0.0081	176,000	1.11	0.769	1.69	663	0.319	43.6	298,000	2,700	<0.010	8.03	2.49	2100	26,500	0.54	8,510	<0.020	836,000	5040	893,000	<0.100	<0.0080	0.159	<0.100	29.7	<0.40	49.9	3.68	2.1	0.647
	LITTLE ROBERT LAKE-230518	2023 05 18	234	0.465	5.87	57.4	<0.050	<0.050	35	<0.0100	179,000	<2.50	0.53	1.04	317	0.26	41.4	276,000	793	<0.010	9.18	2.3	1660	22,600	1.18	4,360	<0.050	788,000	4860	898,000	<0.250	<0.0200	0.057	<0.250	13.9	<1.00	46.9	<5.00	<5.0	0.399
	LITTLE ROBERT LAKE-230928	2023 09 28	723	0.177	5.56	94.7	0.045	<0.010	6.7	0.0108	83,400	1.3	0.719	0.99	1120	0.766	6.37	24,500	51.6	<0.010	0.156	1.37	<60	942	<0.10	4,500	<0.010	999	137	3,700	<0.050	0.0221	0.064	0.126	12.1	<0.20	0.301	1.02	5.4	0.261
	LITTLE ROBERT LAKE-231102	2023 11 02	416	0.389	6.16	69.1	0.019	<0.010	28.7	<0.0160	186,000	0.8	0.503	0.92	508	0.265	52	389,000	1580	<0.010	10.8	1.91	2220	39,300	0.45	7,550	<0.010	1,320,000	6500	1,360,000	<0.050	<0.0040	0.063	0.059	22.1	<0.20	43.5	2.76	2.1	0.641
ROBERT LK	Robert Lake-20150616	2015 06 16	1,910	< 2.0	21.8	< 50	< 25a	< 1,000	< 500	< 0.10	60,100	3.6	< 2.0	< 10a	1,690	1.4	< 50	243,000	107	< 0.20a	72.7	11	5,000	90,000	1.2	9,200	< 0.20	4,290,000	4,130	2,580,000	< 4.0	< 0.20	< 2.0	< 150	82	-	145	< 150a	< 25	-
	ROBERT'S LAKE 1-20160921	2016 09 21	< 150	< 5.0	13.2	< 100	< 50a	< 2,000	< 1,000a	< 0.25	23,000	< 5.0a	< 5.0a	< 25a	< 300	< 2.5	< 100	331,000	< 50	< 0.20a	112	< 25	3,0002,72	120,000	< 2.5a	1,970	< 0.50	5,980,000	5,070	-	-	< 0.50	-	< 300	< 100	-	172	< 300a	< 50	-
	ROBERT LAKE - NORTH-20161117	2016 11 17	2,990	< 2.0	10.8	51	< 25a	< 1,000	< 500	< 0.10	40,700	4.3	< 2.0	< 10a	3,000	1.6	< 50	255,000	169	< 0.20a	85.9	< 10	3,700	89,000	< 1.0	11,400	< 0.20	4,430,000	3,710	-	-	< 0.20	-	< 150	149	-	131	< 150a	< 25	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H4: Historical Summary of Analytical Results For Surface Water - Metals

Sample Location	Sample ID	Sample Date (yyyy mm	Total Metals																																					
			Aluminum µg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Bismuth µg/L	Boron µg/L	Cadmium µg/L	Calcium µg/L	Chromium µg/L	Cobalt µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Lithium µg/L	Magnesium µg/L	Manganese µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Phosphorous µg/L	Potassium µg/L	Selenium µg/L	Silicon µg/L	Silver µg/L	Sodium µg/L	Strontium µg/L	Sulphur µg/L	Tellurium µg/L	Thallium µg/L	Thorium µg/L	Tin µg/L	Titanium µg/L	Tungsten µg/L	Uranium µg/L	Vanadium µg/L	Zinc µg/L	Zirconium µg/L
ROBERT LK	ROBERT LAKE - SOUTH-20161117	2016 11 17	2,750	< 2.0	11	< 50	< 25a	< 1,000	< 500	< 0.10	33,100	5.3	2.2	< 10a	3,410	1.6	< 50	241,000	123	< 0.20a	90.3	< 10	3,300	90,000	< 1.0	9,480	< 0.20	4,500,000	3,630	-	-	< 0.20	-	< 150	147	-	131	< 150a	< 25	-
(Cont'd)	ROBERT LK-180417	2018 04 17	150	0.91	9.89	31	< 0.10	< 0.10	22.3	0.025	55,600	1.19	0.82	2.2	198	0.2	8.81	220,000	345	< 0.010	61.1	4.42	2,750	58,600	0.59	7,000	< 0.050	2,710,000	3,190	1,780,000	< 0.50	< 0.020	< 0.10	< 0.20	10.8	1.4	89.9	6	< 4.0	2.31
	ROBERT LK-180503	2018 05 03	58.8	0.65	10.2	32.8	< 0.10	< 0.10	31.7	0.033	63,000	< 0.50	0.74	1.83	77	< 0.20	12.3	225,000	242	-	55.5	4.05	2,610	57,100	0.58	5,800	< 0.050	2,460,000	3,540	1,700,000	< 0.50	< 0.020	< 0.10	< 0.20	5	1	82.2	6.2	4.8	1.86
	ROBERT LK-180614	2018 06 14	47	0.8	11.1	33.6	< 0.10	< 0.10	29.3	0.033	79,500	< 0.50	0.39	1.06	70	< 0.20	21	244,000	238	< 0.010	45.2	2.85	2,390	57,500	< 0.50	3,400	< 0.050	2,020,000	4,080	1,570,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	74.3	3.1	4.3	1.19
	ROBERT LK-180712	2018 07 12	110	0.57	9.51	23.8	< 0.10	< 0.10	44.8	0.029	71,300	0.52	0.31	1.18	101	< 0.20	19.8	229,000	95.7	< 0.010	47.5	2.92	2,270	51,700	< 0.50	1,700	< 0.050	1,840,000	4,050	1,310,000	< 0.50	< 0.020	< 0.10	< 0.20	5.5	< 1.0	73.3	2.4	< 4.0	0.85
	Robert Lk	2019 03 29	118	0.29	5.21	25.9	< 0.10	< 0.10	17.2	0.021	36,000	< 0.50	0.5	1.56	165	0.23	10.7	144,000	206	< 0.040a	36.8	2.7	1,530	31,100	< 0.50	4,600	< 0.050	1,240,000	2,170	890,000	< 0.50	< 0.020	< 0.10	< 0.20	7.5	< 1.0	54.1	3.1	< 4.0	1.3
	Robert Lk	2019 05 06	691	0.53	7.39	42.8	< 0.10	< 0.10	32	0.061	59,300	1.49	0.88	2.42	777	0.59	17	221,000	172	< 0.040a	47.5	4.42	2,400	46,600	0.51	8,200	< 0.050	1,960,000	3,530	1,300,000	< 0.50	< 0.020	< 0.10	< 0.20	40.7	< 1.0	76.8	5	7.1	2.33
	Robert Lk	2019 06 05	631	0.58	8.52	51.9	< 0.10	< 0.10	49.1	0.03	68,200	1.37	0.8	1.95	731	0.53	20.9	234,000	236	< 0.040a	39.2	4.41	2,700	47,700	0.71	6,900	< 0.050	2,020,000	3,750	1,290,000	< 0.50	< 0.020	< 0.10	< 0.20	34.2	< 1.0	71.7	5	7.1	1.64
	Robert Lk	2019 09 04	1,040	0.76	13.8	55.8	< 0.10	< 0.10	81.9	0.027	92,800	2.51	1.15	3	1,230	0.81	25.5	306,000	153	< 0.010	45.2	5.87	4,280	68,500	0.85	8,500	0.072	2,630,000	5,420	1,750,000	< 0.50	< 0.020	0.15	< 0.20	61.5	1.2	90.9	8.1	6.7	2.93
	ROBERTLAKE-200407	2020 04 07	420	0.436	8.04	42.6	0.016	< 0.010	51.1	0.0189	63,900	0.98	1.02	2.84	515	0.399	19.4	250,000	192	< 0.010	53.2	4.56	3,000	48,700	0.56	8,020	< 0.010	1,740,000	3,380	1,350,000	< 0.050	< 0.0040	0.08	< 0.050	26.5	0.85	91.5	10.2	3.2	3.68
	ROBERTLAKE-200605	2020 06 05	850	0.558	8.9	56.7	0.038	0.014	43.1	0.0434	96,800	2.19	1.64	2.84	1,150	0.66	15.1	239,000	373	< 0.010	56.6	5.8	4,250	51,100	0.49	4,780	< 0.010	1,800,000	4,530	1,230,000	0.052	0.008	0.124	0.075	71.6	1	94.6	10	5.3	4.69
	ROBERTLAKE-200928	2020 09 28	1,430	0.611	11.9	58.8	0.046	0.019	63.4	0.0379	93,200	2.7	1.23	3.38	1,330	0.864	24	296,000	168	< 0.010	52.9	6.02	3,770	63,200	0.79	9,630	< 0.010	2,410,000	4,650	1,740,000	0.054	0.0113	0.212	0.066	77.4	1.29	90.7	7.73	7.7	3.46
	ROBERTLAKE-201028	2020 10 28	1,790	0.621	12.1	61.6	0.077	0.021	65.9	0.0484	66,400	3.08	1.48	3.97	1,770	1.24	27.4	295,000	145	< 0.010	56.6	6.68	3,920	62,600	1.08	13,100	0.018	2,280,000	4,100	1,680,000	< 0.050	0.0165	0.228	0.071	104	1.48	90	11.3	9.2	3.72
	ROBERT LAKE-210412	2021 04 12	1,630	0.546	10.1	62.3	0.058	0.025	48.6	0.0478	62,200	3.28	1.85	4.79	1,950	1.33	22.6	286,000	261	< 0.010	66.3	7.22	3,620	54,100	0.61	15,100	0.012	2,070,000	3,700	1,410,000	< 0.050	0.0147	0.19	0.09	102	1.16	96.4	13.6	8.6	3.25
	ROBERT LAKE-210616	2021 06 16	1,450	0.485	9.71	69.5	0.053	0.027	64.5	0.0425	93,500	2.74	1.51	5.88	1,730	1.18	25.2	311,000	291	< 0.010	58	6.38	3,840	63,100	0.5	15,000	< 0.010	2,300,000	4,060	1,550,000	< 0.050	0.0149	0.184	0.053	80.5	1.08	105	7.59	7.7	3.1
	ROBERT LAKE-210922	2021 09 22	1,150	0.649	15.4	81.5	0.029	0.017	62.6	0.0383	44,500	2.47	1.29	3.63	1,210	1.2	22.6	453,000	127	< 0.010	76.2	7.53	4,120	90,200	1.25	13,500	< 0.010	3,460,000	4,990	2,270,000	< 0.050	0.0101	0.136	< 0.050	63.2	1.88	127	7.83	7.5	3.23
	ROBERT LAKE-211021	2021 10 21	1,250	< 5.00	12.7	58.5	< 1.00a	< 1.00	278	< 0.200	42,500	< 10.0a	1.13	< 10.0	1,450	< 5.00	26.9	345,000	105	< 0.010	60.1	4.95	4,110	66,200	< 10.0a	11,500	< 1.00	2,740,000	4,530	1,910,000	< 5.00	< 0.400	< 1.00	< 5.00	73.1	< 5.00	96.5	< 20.0	< 100	2.51
	ROBERT LAKE-220323	2022 03 23	277	<0.500	7.3	39.2	<0.100	<0.100	42.4	0.0319	44,400	1.01	0.854	2.55	399	<0.500	15.6	248000	213	< 0.010	57.5	4.44	2,740	44200	<1.00	6,600	<0.100	1,900,000	3,200	1,360,000	<0.500	<0.0400	<0.100	<0.500	19	<2.00	90.2	9.23	<10.0	2.35
	ROBERT LAKE-220621	2022 06 21	449	0.5	8.61	51.7	<0.050	<0.050	69.8	<0.0350	59,500	1.29	0.673	2.22	450	0.56	19.7	285,000	119	< 0.010	59.8	4.89	3,140	51,300	0.69	5,260	<0.050	2,100,000	3,870	1,530,000	<0.250	<0.0200	0.079	<0.250	21.1	1.14	88.2	<5.00	<5.0	2.45
	ROBERT LAKE-220912	2022 09 12	242	<0.500	11	56	<0.100	<0.100	76.9	<0.0300	59,400	<1.00	0.428	<2.00	260	<0.500	24.1	388,000	64.4	< 0.010	64.7	4.17	3,290	68,100	<1.00	6,610	<0.100	2,780,000	4,810	1,930,000	<0.500	<0.0400	<0.100	<0.500	11.2	<2.00	98.2	<10.0	<10.0	1.54
	ROBERT LAKE-221019	2022 10 19	848	<0.500	12.1	63	<0.100	<0.100	73.2	0.0506	43,200	1.85	0.914	2.85	1060	0.991	24.2	417,000	103	< 0.010	73.3	6.12	3,890	76,600	<1.00	8,010	<0.100	3,320,000	5,230	2,110,000	<0.500	<0.0400	0.121	<0.500	45.5	<2.00	109	<10.0	<10.0	2.41
	ROBERT LAKE-230329	2023 03 29	294	0.265	6.71	36.2	<0.050	<0.050	50.8	<0.0300	39,000	0.66	0.684	2.15	363	0.366	17.1	303,000	222	<0.010	64.3	4.19	2730	49,400	0.92	5910	<0.050	2,220,000	3,340	1,580,000	<0.250	<0.0200	0.196	<0.250	16.9	1.07	90.9	<5.00	<5.0	2.37
	ROBERT LAKE-230518	2023 05 18	340	<0.500	8.22	48.2	<0.100	<0.100	60.7	<0.0200	44,900	<5.00	0.652	3.18	368	<0.500	19.1	323,000	122	<0.010	68.6	4.66	3090	57,900	2.48	3740	<0.100	2,430,000	4,210	1,780,000	<0.500	<0.0400	0.118	<0.500	17.4	<2.00	98.2	<10.0	<10.0	7.18
	ROBERT LAKE-230928	2023 09 28	4930	0.691	10.7	107	0.275	0.077	356	0.182	9,47,000	11.5	12.7	31.3	9,350	99.3	136	128,000	510	<0.010	3.98	22.4	296	4,630	<0.50	16700	0.951	68,600	11,100	700,000	<0.250	0.121	1.29	3.77	55.6	3.08	16	9.2	101	1.26
	ROBERT LAKE-231102	2023 11 02	1080	0.613	11.3	64.5	<0.100	<0.100	70.2	<0.160	31,000	<5.00	0.944	3.06	1,160	0.811	26.6	484,000	84.6	0.022	113	5.77	3530	91,000	1.35	7360	<0.100	4,590,000	5,650	2,710,000	<0.500	<0.0400	0.167	<0.500	53.9	2.26	137	10.6	<10.0	3.76
DIFFUSER	DIFFUSER-180417	2018 04 17	176	0.59	10.1	31.2	< 0.10	< 0.10	20.6	0.017	57,400	0.97	1.05	2.44	248	0.27	8.99	230,000	355	< 0.010	60.8	4.72	2,900	60,800	0.57	7,400	< 0.050	2,440,000	3,170	1,840,000	< 0.50	< 0.020	< 0.10	< 0.20	12.7	1.2	90.2	6.2	4.5	2.3
	DIFFUSER-180503	2018 05 03	51.5	0.67	10.5	33.2	< 0.10	< 0.10	30	0.033	64,700	< 0.50	0.74	1.64	69	< 0.20	12.5	230,000	250	-	56.4	4.08	2,710	58,700	0.57	5,900	< 0.050	2,540,000	3,610	1,740,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	83.9	6.4	6.5	1.9
	DIFFUSER-180615	2018 06 15	70.1	0.75	11.1	33.3	< 0.10	< 0.10	28.2	0.032	82,100	< 0.50	0.41	0.99	109	< 0.20	20.3	249,000	243	< 0.010	44.9	2.99	2,410	59,400	< 0.50	3,600	< 0.050	2,000,000	4,130	1,600,000	< 0.50	< 0.020	< 0.10	0.26	5.3	< 1.0	73	3.2	5.3	1.15
JH Outfall	JH OUTFALL-180417	2018 04 17	312	< 0.20	1.92	59.3	< 0.10	< 0.10	41.8	< 0.010	76,100	1.13	0.65	2.13	452	0.3	27.2	163,000	84.2	< 0.010	14.9	2.72	96	13,700	1.22	< 1,000	< 0.050	272,000	3,630	201,000	< 0.50	< 0.020	< 0.10	< 0.20	17.7	< 1.0	38.4	4.1	5.4	0.45
	JH OUTFALL-180503	2018 05 03	29.1	0.2	2.05	70	< 0.10	< 0.10	42.1	0.014	63,500	0.76	0.31	2.04	47	< 0.20	32	134,000	27.3	-	15.8	1.67	84	15,200	1.55	2,300	< 0.050	212,000	3,320	113,000	< 0.50	< 0.020	< 0.10	< 0.20	< 5.0	< 1.0	28.3	4.5	6.1	0.24
QUAIL RIDGE	Treated Leachate Feb 02/00-20000202	2000 02 02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge Leachate-20001115	2000 11 15	244	< 10a	< 20	245	< 1a	< 10	2,350	< 1a	102,000	19.6	16.2	56	476	< 4a	39	287,000	468	-	< 2	26	4,220	327,000	< 8a	18,500	< 2a	1,980,000	2,550	-	-	< 8a	-	< 6	86.6	-	-	15	22.4	-
	Quail Ridge Leachate-20010223	2001 02 23	740	-	-	-	-	-	-	-	148,000	-	-	-	1,750	-	-	325,000	1,120	-	-	-	-	262,000	-	19,000	-	1,710,000	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge Leachate-20010423	2001 04 23	780	-	-	-	-	-	-	-	125,000	-	-	-	1,090	-	-	253,000	914	-	-	-	-	204,000	-	17,600	-	1,240,000	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge Leachate-20050124	2005 01 24	74	1.9	15.6	272	0.4	< 0.5	1,880	< 0.01	110,000	15.9	9.8	196	700	2.5	38	302,000	579	-	3	21.4	-	245,000	1.8	16,200	0.1	1,660,000	3,430	-	-	< 0.05	-	5	71.1	-	4.1	11.6	16	21
	Quail Ridge Leachate-20051018	2005 10 18	110	3	27	340	< 1a	< 5	2,680	< 0.1a	109,000	25	14	1,650	800	23	40	310,000	614	< 0.1a	< 10	25	-	280,000	< 2	17,200	< 1a	1,880,000	3,960	-	-	< 0.5	-	10	102	-	< 5	16	50	30
	Quail Ridge-20071218	2007 12 18	84	2	13	330	< 0.5a	< 2	1,720	< 0.05a	137,000	17	8.8	340	2,000	9.5	53	282,000	938	-	< 5	17	-	170,000	1	17,500	< 0.5a	1,140,000	3,920	-	-	< 0.2	-	8	62.7	-	6.7	13	54	20
	Quail Ridge-20080331	2008 03 31	< 100	< 1	5	220	< 0.2a	-	1,140	< 0.4a	106,000	8.5	5.62	160	1,200	4	40	225,000	676	-	0.8	20	1,600	124,000	< 3.0a	7,060	< 1a	806,000	2,900	-	< 0.5	< 0.05	< 0.1	< 4	30	-	6.2	7.6	20	10
	Quail Ridge-20081104	2008 11 04	69	2	9.7	310	< 0.5a	< 2	1,790	0.3	251,000	18	8.2	150	1,000	1	50	248,000	898	-	< 5	16	-	156,000	< 1	17,500	0.17	1,020,000	4,850	-	-	< 0.2	-	< 5	63.6	-	5.6	14	30	20
	Quail Ridge-20091119	2009 11 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20130312	2013 03 12	52	7.36	13.6	285	< 10a	-	1,710	< 0.25	151,000	15.7	8.82	214	703	4.8	< 50	252,000	650	< 0.20a	2.1	17.7	-	-	< 5.0a	-	0.061	1,420,000	-	-	-	< 0.50	-	-	71	-	4.1	< 60	68	-
	Quail Ridge-20130911	2013 09 11	75	5.33	10.1	265	< 10a	-	1,730	< 0.25	142,000	14.1	7.76	388	1,530	7.3	< 50	219,000	588	< 0.20a	1.5	19.5	-	-	< 5.0a	-	0.064	1,390,000	-	-	-	< 0.50	-	-	78	-	3.29	< 60	142	-
	Quail Ridge-20131211	2013 12 11	2,600	4.24	9.7	283	< 10a	-	1,680	< 0.25	149,000	16.8	8.61	168	3,620	6.3	< 50	222,000	548	< 2.5a	5.8	18.3	-	-	< 5.0a	-	0.13	1,160,000	-	-	-	< 0.50	-	-	181	-	3.87	< 60	67	-
	Quail Ridge-20140408	2014 04 08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20140610	2014 06 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20150122	2015 01 22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20150615	2015 06 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20150915	2015 09 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quail Ridge-20151203	2015 12 03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QUAIL RIDGE-20160315	2016 03 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QUAIL RIDGE-20160915	2016 09 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QUAIL RIDGE-20161117	2016 11 17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223.
All terms defined within the body of Keltech's report.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse 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
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
Parameter	Units	Analytical Results											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	118,000	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 250	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	490	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	5,200	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	503	-	-	-	-	-	-	-	-	-	-	-
Total Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	3.3	-	-	-	-	-	-	-	-	-	-	-
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	454	-	-	-	-	-	-	-	-	-	-	-
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	2.5	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	120	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals													
Aluminium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Iron	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Mangnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Managanses	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Postassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Barium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Copper	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Lead	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Lithium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphrous	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Strontium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	3.13	16	11	14	13	11	7	9	8	11	12	8
Ethylbenzene	µg/L	19.3	63	46	64	60	56	47	56	44	49	49	38
Toluene	µg/L	1.03	2	2	3	3	2	2	2	2	2	3	2
Xylenes	µg/L	9.35	9	9	11	13	12	10	12	7	11	8	9
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Acridine	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds													
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Tetrachloride	µg/L	< 0.50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	µg/L	3.8	3	2	2	3	3	3	3	3	2	3	2

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse MH											
Sample ID		N Pumphouse MH-20131211	N Pumphouse MH-20140408	N Pumphouse MH-20140610	N Pumphouse MH-20150122	N Pumphouse MH-20150615	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
Sample Date (yyyy mm dd)		2013 12 11	2014 04 08	2014 06 10	2015 01 22	2015 06 15	2015 09 15	2015 12 03	2016 03 15	2016 06 23	2016 09 15	2016 11 17	2017 09 14
Parameter	**Units**	**Analytical Results**											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	108,000	64,800	65,300	40,600	95,000	99,700	111,000	76,800	11,400	99,000	140,000	87,000
Nitrate (as N)	µg/L	< 250	< 250	350	< 250	< 250	< 250	350	< 250	5,710	< 250	< 250	< 250
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	380	506	553	368	377	416	441	420	217	502	671	503
Fluoride	µg/L	2,200	< 1,000	778	< 1,000	1,600	< 1,000	< 1,000	< 1,000	1,280	< 1,000	< 1,000	1,100
Sulfate	mg/L	376	1,130	860	299	545	548	698	573	347	893	996	954
Total Alkalinity	mg/L	-	3,440	4,930	2,100	3,470	3,640	3,640	3,190	934	3,920	4,680	3,760
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	2,100	-	3,640	3,640	3,190	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	2.6	4.2	4.7	< 2.5	2.6	3.3	2.9	2.8	< 1.0	3.7	5.3	3.4
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	381	626	660	205	357	421	415	518	46	482	681	508
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	2.2	3.07	4.55	0.8	2.3	2.46	2.63	2.29	0.222	3.01	0.392	3.33
Total Organic Carbon	mg/L	106	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals													
Aluminium	µg/L	-	94	82	20	36	42	46	59	< 10	49	58	70
Calcium	mg/L	-	66.2	64.4	115	104	95	96.2	84.6	58.7	113	89.6	96.8
Iron	µg/L	-	261	144	1,060	116	106	76	89	130	122	84	< 90
Mangnesium	mg/L	-	185	257	214	250	265	286	236	149	291	262	270
Managanses	µg/L	-	283	299	841	423	377	395	494	90	493	355	411
Postassium	mg/L	-	-	-	-	-	166	169	182	31.6	177	243	177
Sodium	mg/L	-	1,770	2,260	686	1,140	1,370	1,520	1,580	308	1,760	2,020	1,700
Antimony	µg/L	-	3.8	11.8	< 0.50	3.3	7.69	8	7.85	0.73	12.3	9.3	8.5
Arsenic	µg/L	-	16.5	33.9	1.7	9.6	14.1	16	21.8	2.3	24.8	23.5	17.2
Barium	µg/L	-	100	148	201	238	247	256	151	97	303	234	233
Beryllium	µg/L	-	< 10	< 15	< 5.0	< 10	< 10	< 10	< 10	< 5.0	< 10	< 10	< 15
Boron	µg/L	-	1,590	1,640	890	1,390	1,490	1,520	1,650	230	1,680	2,060	1,520
Cadmium	µg/L	-	< 0.50	< 0.50	< 0.25	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chromium	µg/L	-	16.1	22.3	5.2	11.1	13.4	15	16.1	3.14	17	22.5	12.6
Cobalt	µg/L	-	6.6	6.1	3.27	7.03	6.92	7.7	6.57	0.84	8.5	11.5	5.2
Copper	µg/L	-	< 5.0	< 5.0	< 2.5	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0
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
Lithium	µg/L	-	< 50	59	< 50	< 50	< 50	< 50	< 50	< 50	52	< 50	52
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
Molybdenum	µg/L	-	3	4.6	< 1.0	1.4	2.2	1.3	2.5	13.4	2	2	1.8
Nickel	µg/L	-	25.8	26	8.5	14.1	16.1	17.6	21.8	< 5.0	19.7	25.5	18
Selenium	µg/L	-	< 10	< 10	< 5.0	< 1.0	1.7	< 1.0	11.4	5	< 1.0	3.964	11.6
Silver	µg/L	-	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10
Thallium	µg/L	-	< 1.0	< 1.0	< 0.50	< 0.050	< 0.20	< 0.10	< 0.050	< 0.010	< 0.10	< 0.10	< 0.10
Titanium	µg/L	-	59	73	< 50	< 50	55	55	< 50	< 50	58	67	59
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	-	22.5	16.2	3.61	5.43	5.09	4.55	8.59	33.3	5.43	4.77	9.1
Vanadium	µg/L	-	< 60	< 90	< 30	< 60	< 60	< 60	< 60	< 30	< 60	< 60	< 90
Zinc	µg/L	-	< 10	< 15	< 5.0	< 10	< 10	< 10	< 10	< 5.0	< 10	< 10	< 15
Bismuth	µg/L	-	-	-	-	-	< 400	< 400	< 400	< 200	< 400	< 400	< 600
Phosphorous	µg/L	-	-	-	-	-	2,640	3,180	3,180	< 300	3,190	4,140	3,410
Silicon	µg/L	-	-	-	-	-	15,700	15,400	12,700	10,100	16,700	16,200	14,500
Strontium	µg/L	-	-	-	-	-	3,610	3,440	2,660	2,670	3,960	3,100	3,400
Sulphur	µg/L	-	-	-	-	179,000	720,000	657,000	793,000	93,800	322,000	520,000	604,000
Tellurium	µg/L	-	-	-	-	< 1.0	< 1.0	< 2.0	< 1.0	< 0.20	-	-	< 2.0
Thorium	µg/L	-	-	-	-	< 0.50	< 0.50	< 1.0	< 0.50	< 0.10	-	-	< 1.0
Tin	µg/L	-	-	-	-	-	< 60	< 60	< 60	< 30	< 60	< 60	< 90
Zirconium	µg/L	-	-	-	-	17.8	19.2	22.3	17.5	2.64	-	-	19.6
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	3.74	2.05	4.75	-	2.86	3.08	2.98	2.96	-	-	3.43	3.34
Ethylbenzene	µg/L	11.9	22.1	45.9	-	9.41	11	13.4	15.8	-	-	22.8	18.8
Toluene	µg/L	0.79	3.8	4.01	-	0.76	0.88	0.72	1.04	-	-	1.29	0.7
Xylenes	µg/L	9.62	19.8	40.5	-	5.25	5.45	7.9	9.68	-	-	14.3	13.4
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	-	3.19	3.09	0.36	1.45	2.11	2.76	2.94	0.19	1.57	3.55	1.53
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Acenaphthene	µg/L	-	0.33	0.263	0.2	0.328	0.508	0.415	0.346	< 0.050	0.222	0.4	0.325
Fluorene	µg/L	-	0.229	0.159	0.142	0.229	0.362	0.298	0.201	< 0.050	0.176	0.238	0.259
Phenanthrene	µg/L	-	0.245	0.184	0.074	0.09	0.154	0.125	0.124	< 0.050	0.081	0.16	0.154
Anthracene	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Acridine	µg/L	-	< 0.050	< 0.060	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.070	< 0.050
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
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
Benz(a)anthracene	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
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
Benzo(b)fluoranthene	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
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
Benzo(a)pyrene	µg/L	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050
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
Dibenz(a,h)anthracene	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0050	< 0.0050	< 0.0050
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
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Quinoline	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.070	< 0.050	< 0.070	< 0.050	< 0.050	< 0.050	< 0.070
Volatile Organic Compounds													
Bromodichloromethane [BDCM]	µg/L	< 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
Carbon Tetrachloride	µg/L	< 0.50	< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.50	-	-	< 0.50	< 0.50
Chlorobenzene	µg/L	4.2	< 1.0	-	-	2.7	2.4	2.3	1.7	-	-	2.3	1.8

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse MH											
Sample ID		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	N Pumphouse MH	N Pumphouse MH-20190903
Sample Date (yyyy mm dd)		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	2019 09 03	2019 09 03
Parameter	Units	Analytical Results											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	65,600	171	52,900	52,900	50,200	50,200	14,600	14,600	39,500	39,500	33,800	33,800
Nitrate (as N)	µg/L	< 250	7,230	< 100	< 100	< 250	< 250	3,530	3,530	< 100	< 100	< 10	< 10
Nitrite (as N)	µg/L	-	< 100	< 100	-	< 250	-	390	-	< 100	-	< 10	-
Chloride	mg/L	554	131	437	437	936	936	501	501	410	410	89.9	89.9
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 2,500	< 2,500	< 1,000	< 1,000	1,100	1,100	110	110
Sulfate	mg/L	1,160	236	1,010	1,010	2,660	2,660	1,340	1,340	1,120	1,120	240	240
Total Alkalinity	mg/L	5,390	575	2,740	2,740	6,350	6,350	2,890	2,890	3,310	3,310	6,780	6,780
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	575	2,740	2,740	6,350	6,350	2,790	2,790	3,310	3,310	6,780	6,780
Alkalinity, Carbonate (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	102	102	< 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	-	50.8	-	< 1.0	-	< 1.0	-
Bromide	mg/L	3.9	< 1.00	< 1.00	< 1.00	< 2.50	< 2.50	2.37	2.37	< 1.00	< 1.00	< 1.00	< 1.00
Sulfide	mg/L	-	< 0.020	31.7	-	102	-	26.7	-	46.1	-	129	-
Biochemical Oxygen Demand	mg/L	-	< 5.5	63.7	-	301	-	111	-	58.3	-	275	-
Chemical Oxygen Demand	mg/L	529	< 20	382	382	925	925	436	436	430	430	947	947
Phosphate	mg/L	-	0.086	3.02	-	6.51	-	-	-	2.9	-	-	-
Ortho-Phosphate	mg/L	4.5	-	-	3.02	-	6.51	3.27	3.27	-	2.9	0.865	0.865
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	0.143	4	-	8.06	-	4.3	-	3.99	-	10.1	-
Dissolved Metals													
Aluminium	µg/L	156	< 5.0	78.3	78.3	180	180	81.6	81.6	72.4	72.4	168	168
Calcium	mg/L	66.2	69.3	83	83	54.6	54.6	57.9	57.9	83.1	83.1	50.6	50.6
Iron	µg/L	53	11	97	97	68	68	48	48	52	52	62	62
Mangnesium	mg/L	305	136	205	205	257	257	204	204	232	232	215	215
Managanses	µg/L	317	27.9	305	305	196	196	157	157	316	316	154	154
Postassium	mg/L	253	16.7	151	151	307	307	134	134	158	158	251	251
Sodium	mg/L	3,250	184	1,330	1,330	4,180	4,180	1,960	1,960	1,720	1,720	4,200	4,200
Antimony	µg/L	4.66	< 0.20	9.61	9.61	25.1	25.1	8.9	8.9	6.92	6.92	11.2	11.2
Arsenic	µg/L	15.8	1.15	25.8	25.8	89.9	89.9	20.8	20.8	19.8	19.8	34.5	34.5
Barium	µg/L	172	78.9	205	205	142	142	85.7	85.7	159	159	156	156
Beryllium	µg/L	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	1,930	28	1,350	1,350	1,740	1,740	978	978	1,240	1,240	2,260	2,260
Cadmium	µg/L	< 0.025	0.015	0.011	0.011	0.012	0.012	0.013	0.013	< 0.010	< 0.010	0.014	0.014
Chromium	µg/L	26.5	2.63	15.7	15.7	45.7	45.7	14.3	14.3	15.3	15.3	47.6	47.6
Cobalt	µg/L	5	0.12	3.88	3.88	5.46	5.46	2.14	2.14	4.59	4.59	5.77	5.77
Copper	µg/L	2	1.09	< 0.40	< 0.40	< 0.40	< 0.40	0.68	0.68	0.43	0.43	0.48	0.41
Lead	µg/L	< 0.25	< 0.20	< 0.20	< 0.20	0.22	0.22	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Lithium	µg/L	65.8	36.9	54.6	54.6	49.2	49.2	55.4	55.4	48.8	48.8	64.5	64.5
Mercury	µg/L	< 0.25	< 0.010	< 0.010	< 0.010	< 0.200	< 0.200	< 0.100	< 0.100	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	2.33	18.9	6.22	6.22	5.33	5.33	7.16	7.16	3.32	3.32	5.46	5.46
Nickel	µg/L	27.5	1.02	21.8	21.8	33.6	33.6	13.2	13.2	16.6	16.6	33.1	33.1
Selenium	µg/L	14.4	7.41	2.58	2.58	1.35	1.35	2.42	2.42	0.96	0.96	20.7	20.7
Silver	µg/L	0.078	< 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	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Titanium	µg/L	60.1	< 5.0	40.4	40.4	116	116	30.4	30.4	45.2	45.2	118	118
Tungsten	µg/L	-	< 1.0	2.3	-	4.8	-	1.8	-	2.4	-	4.9	-
Uranium	µg/L	14.2	39.5	25	25	37.2	37.2	33.3	33.3	16.8	16.8	26.2	26.2
Vanadium	µg/L	19.1	3.3	13	13	27.6	27.6	8.5	8.5	11.6	11.6	24.1	24.1
Zinc	µg/L	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Bismuth	µg/L	< 0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phosphorous	µg/L	8,100	158	4,380	4,380	9,480	9,480	4,530	4,530	4,100	4,100	9,920	9,920
Silicon	µg/L	13,100	10,700	14,200	14,200	14,700	14,700	10,300	10,300	13,500	13,500	15,300	15,300
Strontium	µg/L	2,800	3,160	3,480	3,480	2,510	2,510	2,320	2,320	3,410	3,410	2,440	2,440
Sulphur	µg/L	1,180,000	100,000	431,000	-	1,420,000	-	581,000	-	473,000	-	2,810,000	-
Tellurium	µg/L	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thorium	µg/L	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	14.7	< 0.20	15.4	15.4	59.9	59.9	18.8	18.8	11.4	11.4	53.3	53.3
Zirconium	µg/L	32.7	0.18	21.5	21.5	51.1	51.1	15.1	15.1	18.7	18.7	50.6	50.6
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	5.43	< 0.5	4.9	4.9	8.7	8.7	2.9	2.9	3	3	8.8	8.8
Ethylbenzene	µg/L	41.4	< 1.0	79.4	79.4	53.4	53.4	5.9	5.9	47	47	79.3	79.3
Toluene	µg/L	1.23	< 1.0	3.8	3.8	2.3	2.3	1.7	1.7	< 1.0	< 1.0	2.7	2.7
Xylenes	µg/L	31.1	< 2.0	59.6	59.6	86.4	86.4	7.3	7.3	26.8	26.8	99.6	99.6
Styrene	µg/L	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	2.06	< 0.200	2.08	2.08	3.52	3.52	5.93	5.93	3.41	3.41	6.98	6.98
Methylnaphthalene, 1-	µg/L	-	< 0.100	0.62	-	0.545	-	1.06	-	0.644	-	0.947	-
Methylnaphthalene, 2-	µg/L	-	< 0.100	0.721	-	0.407	-	1.1	-	0.568	-	0.886	-
Acenaphthylene	µg/L	< 0.010	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200
Acenaphthene	µg/L	0.312	< 0.050	0.233	0.233	0.293	0.293	0.386	0.386	0.518	0.518	0.41	0.41
Fluorene	µg/L	0.234	< 0.050	0.164	0.164	0.212	0.212	0.221	0.221	0.336	0.336	0.271	0.271
Phenanthrene	µg/L	0.213	< 0.100	0.19	0.19	0.341	0.341	0.242	0.242	0.419	0.419	0.395	0.395
Anthracene	µg/L	< 0.030	< 0.010	0.019	0.019	< 0.010	< 0.010	0.019	0.019	0.023	0.023	0.045	0.045
Acridine	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
Fluoranthene	µg/L	0.05	< 0.030	< 0.030	< 0.030	0.172	0.172	0.09	0.09	0.118	0.118	0.15	0.15
Pyrene	µg/L	0.043	< 0.020	0.033	0.033	0.091	0.091	0.064	0.064	0.025	0.025	0.115	0.115
Benz(a)anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.017	0.017	< 0.010	< 0.010	< 0.010	< 0.010	0.017	0.017
Chrysene	µg/L	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	< 0.050	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-
Benzo(k)fluoranthene	µg/L	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(a)pyrene	µg/L	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-cd)pyrene	µg/L	< 0.010	< 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	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(g,h,i)perylene	µg/L	< 0.010	< 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	-
Quinoline	µg/L	< 0.070	< 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	< 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
Carbon Tetrachloride	µg/L	< 0.50	< 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	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.1	< 1.1	< 1.0	< 1.0

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse 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	N Pumphouse MH	N Pumphouse MH
Sample Date (yyyy mm dd)		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
Parameter	Units	Analytical Results											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	52,300	52,300	55,100	35,000	101,000	29,800	37,300	56,500	70,600	32,000	40,800	44,200
Nitrate (as N)	µg/L	< 100	< 100	< 10	< 100	< 100	1,240	1,950	< 100	< 100	< 100	< 100	< 100
Nitrite (as N)	µg/L	< 100	-	< 10	< 100	< 100	< 100	5,110	< 100	< 100	< 100	< 100	< 100
Chloride	mg/L	401	401	337	530	605	369	548	518	704	362	779	540
Fluoride	µg/L	< 1,000	< 1,000	810	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000
Sulfate	mg/L	1,160	1,160	859	1,350	1,200	813	1,430	1,360	1,620	834	1850	1330
Total Alkalinity	mg/L	3,440	3,440	2,900	3,310	4,280	3,350	4,080	4,540	5,950	2,530	5240	3470
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,440	3,440	2,900	3,310	4,280	3,340	4,080	4,540	5,660	2,530	5240	3470
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.7	< 1.0	< 1.0	292	< 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
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	< 1.0	-	< 1.0	< 1.0	< 1.0	4.3	< 1.0	< 1.0	146	< 1.0	<1.0	<1.0
Bromide	mg/L	2.6	2.6	1.88	2.59	< 10.0	2.56	< 10.0	1.16	< 10.0	< 10.0	<1.00	1.1
Sulfide	mg/L	75.3	-	46.3	38.4	73.3	82.3	70.5	51.7	89.2	11.6	79.1	49.5
Biochemical Oxygen Demand	mg/L	60.2	-	79.4	113	269	334	88	64	200	34	325	> 400
Chemical Oxygen Demand	mg/L	310	310	385	549	789	460	472	562	653	188	700	1680
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	3.57	0.387
Ortho-Phosphate	mg/L	1	1	2.01	3.42	2.96	2.67	2.04	0.647	4	0.923	-	-
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	110	112
Total Phosphorous as P	mg/L	2.9	-	2.8	5.01	5.27	3.73	4.39	4.53	5.39	2.12	5.6	5.18
Dissolved Metals													
Aluminium	µg/L	40.7	40.7	32.7	105	60.7	116	70.1	160	68.1	61.3	341	72.2
Calcium	mg/L	95.4	95.4	104	7.35	103	43.6	77.4	125	92.6	103	68.4	81.2
Iron	µg/L	76.2	76.2	182	56.3	30.8	< 200	69.1	< 200	118	51.8	<200	28
Mangnesium	mg/L	272	272	293	157	234	135	197	209	183	302	213	259
Managanses	µg/L	369	369	580	250	490	101	211	253	313	273	120	311
Postassium	mg/L	146	146	138	168	161	132	138	222	120	129	167	167
Sodium	mg/L	1,690	1,690	1,410	1,750	1,810	1,950	1,860	2,170	1,680	1,620	2700	1770
Antimony	µg/L	9.63	9.63	7.65	10.8	11.1	17.3	14	12.8	15.8	16	26.8	10.1
Arsenic	µg/L	35.4	35.4	21.3	46.1	31.2	41.6	53.6	33.8	43.8	43.4	65.4	24.8
Barium	µg/L	232	232	228	98.6	204	79.5	111	127	134	176	97.1	156
Beryllium	µg/L	0.024	0.024	0.017	< 0.010	0.024	< 1.00	0.024	< 1.00	0.022	0.024	<1.00	<0.050
Boron	µg/L	1,160	1,160	1,290	135	1,510	1,140	1,300	1,990	1,230	1,290	1820	1650
Cadmium	µg/L	0.0053	0.0053	0.0036	0.0088	0.0038	< 0.200	0.0056	< 0.200	0.0075	0.0068	<0.200	<0.0100
Chromium	µg/L	18	18	13.8	18.6	21.4	18.7	16.7	17.6	19	17.1	18.1	14.1
Cobalt	µg/L	6.6	6.6	7.21	3.56	6.72	2.56	2.82	4.39	3.35	5.49	3.19	4.64
Copper	µg/L	0.22	0.22	0.13	0.97	0.6	< 10.0	0.49	< 10.0	0.27	0.39	<10.0	<0.50
Lead	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 5.00	< 0.050	< 5.00	< 0.050	< 0.050	<5.00	<0.250
Lithium	µg/L	53.7	53.7	45.4	4.24	57.6	35.5	54.3	69.5	52.9	76.5	71.3	63.2
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.060	< 0.010	< 0.040	< 0.020	< 0.020	< 0.040
Molybdenum	µg/L	4.49	4.49	1.82	3.68	3.24	5.48	8.35	2.68	10.4	6.88	5.72	2.96
Nickel	µg/L	18.7	18.7	19.3	16.1	20.2	15.9	15.4	21.2	14.1	16.8	17.1	16.3
Selenium	µg/L	0.83	0.83	0.66	1.29	1.63	< 10.0	2.12	< 10.0	2.12	2.61	34.4	1.91
Silver	µg/L	< 0.010	< 0.010	0.018	< 0.010	< 0.010	< 1.00	< 0.010	< 1.00	< 0.010	< 0.010	<1.00	<0.050
Thallium	µg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.400	< 0.0040	< 0.400	< 0.0040	< 0.0040	4.61	<0.0200
Titanium	µg/L	52	52	46.6	44.1	48	49.6	37.8	64	50.7	38.9	53.5	31.1
Tungsten	µg/L	2.19	-	1.78	0.39	2.24	< 20.0	1.68	< 20.0	2.03	1.96	<20.0	2.42
Uranium	µg/L	12.7	12.7	8.87	2.15	14.2	13.3	25.2	16.8	24.5	19.7	28.3	16.9
Vanadium	µg/L	12	12	9.97	14.9	9.96	< 20.0	9.46	< 20.0	10.2	10	<20.0	9.55
Zinc	µg/L	1.6	1.6	< 1.0	2	1.3	< 100	< 1.0	< 100	< 1.0	1.6	<100	<5.0
Bismuth	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 1.00	< 0.010	< 1.00	< 0.010	< 0.010	<1.00	<0.050
Phosphorous	µg/L	4,120	4,120	3,210	5,910	4,110	4,070	4,720	4,390	3,290	4,740	5000	4040
Silicon	µg/L	18,500	18,500	16,500	12,600	16,500	5,810	13,600	5,880	12,400	16,700	11700	12600
Strontium	µg/L	4,220	4,220	4,120	2,250	3,540	1,600	3,120	2,570	2,960	4,350	2060	3220
Sulphur	µg/L	497,000	-	331,000	489,000	407,000	519,000	444,000	631,000	344,000	462,000	622000	490000
Tellurium	µg/L	0.096	0.096	0.06	< 0.050	0.067	< 5.00	0.065	7.03	0.09	0.145	<5.00	<0.250
Thorium	µg/L	0.024	0.024	0.02	< 0.010	0.019	< 1.00	0.02	< 1.00	0.015	0.017	<1.00	<0.050
Tin	µg/L	11.3	11.3	5.44	25	6.33	41.6	27.5	38.7	26.3	20.1	44.2	7.79
Zirconium	µg/L	26.2	26.2	21.1	17.8	22.5	11.2	15	15.6	17.9	23.3	18.9	18.3
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	6	6	4.1	4	4.6	3.7	4.6	6.9	8.4	1.6	4	4.3
Ethylbenzene	µg/L	54.4	54.4	84.6	52.2	42.7	43.1	53.5	48.1	64.1	11.7	45.9	44.6
Toluene	µg/L	1.8	1.8	3.6	< 2.0	2.2	1.4	2.6	1.8	1.8	< 1.0	2	1.9
Xylenes	µg/L	41.5	41.5	6.7	30.4	25.5	32.1	36.1	37.8	52.5	7.8	27.6	35
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
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	3.8	3.8	1.62	3.6	4.57	2.57	2.54	2.79	4.49	1.48	6.04	5.27
Methylnaphthalene, 1-	µg/L	0.56	-	0.21	0.471	0.596	0.408	0.489	< 0.670	< 1.06	0.199	<1.03	1.5
Methylnaphthalene, 2-	µg/L	0.391	-	0.163	0.266	0.282	0.246	0.227	< 0.536	< 1.06	< 0.100	<1.03	0.524
Acenaphthylene	µg/L	< 0.0100	< 0.0100	< 0.200	< 0.200	< 0.200	< 0.200	0.225	< 1.07	< 2.13	< 0.200	<2.06	<0.200
Acenaphthene	µg/L	0.444	0.444	0.251	0.273	0.457	0.175	0.187	< 0.268	< 0.532	0.109	<0.514	1.59
Fluorene	µg/L	0.333	0.333	0.177	0.186	0.273	0.12	0.144	< 0.268	< 0.532	0.074	<0.514	1.2
Phenanthrene	µg/L	0.294	0.294	0.171	0.252	0.299	0.186	0.133	< 0.536	< 1.06	< 0.100	<1.03	3.07
Anthracene	µg/L	< 0.0400	< 0.0400	0.013	0.018	0.035	0.016	0.172	< 0.054	< 0.106	< 0.010	<0.103	<0.414
Acridine	µg/L	0.054	0.054	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	0.283
Fluoranthene	µg/L	0.062	0.062	0.041	0.142	0.085	0.088	0.087	< 0.161	< 0.319	0.032	<0.309	0.422
Pyrene	µg/L	0.044	0.044	< 0.020	0.042	0.05	0.052	0.532	< 0.107	< 0.213	< 0.020	<0.206	<0.020
Benz(a)anthracene	µg/L	< 0.0100	< 0.0100	< 0.010	< 0.010	< 0.010	0.019	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	0.163
Chrysene	µg/L	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	0.177
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	< 0.0100	-	< 0.050	< 0.050	< 0.050	0.061	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050
Benzo(k)fluoranthene	µg/L	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050
Benzo(a)pyrene	µg/L	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	0.017
Indeno(1,2,3-cd)pyrene	µg/L	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050
Dibenz(a,h)anthracene	µg/L	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	<0.010
Benzo(g,h,i)perylene	µg/L	< 0.0100	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050
Chloronaphthalene, 2-	µg/L	-	-	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.536	< 1.06	< 0.100	<1.03	<0.100
Quinoline	µg/L	< 0.0500	< 0.0500	< 0.050	< 0.050	< 0.050	< 0.050	< 0.115	< 0.268	< 0.532	< 0.050	<0.514	<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
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
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
Chlorobenzene	µg/L	< 1.0	< 1.0	< 2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0

Sample Location		N Pumphouse MH						P1 Leachate MH							
Sample ID		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	P1 LEACHATE MH-20150615
Sample Date (yyyy mm dd)		2022 09 14	2022 10 20	2023 03 21	2023 05 17	2023 09 27	2023 10 31	2006 11 09	2006 11 16	2006 11 22	2013 09 11	2014 04 08	2014 06 10	2015 01 22	2015 06 15
Parameter	Units	Analytical Results													
Dissolved Inorganics															
Ammonia, Total (as N)	µg/L	52,900	23,300	77,000	41,200	81,200	56,500	-	-	-	102,000	82,000	73,700	23,900	78,300
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	702	-	-	-	< 250	< 250	< 250	< 100	< 250
Nitrite (as N)	µg/L	< 100	< 100	< 100	< 100	< 250	13300	-	-	-	-	-	-	-	-
Chloride	mg/L	792	439	549	473	731	695	-	-	-	445	391	319	304	355
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	-	-	-	1,000	1,400	1,530	1,000	1,600
Sulfate	mg/L	1660	754	1520	1240	1790	1610	-	-	-	448	878	784	374	959
Total Alkalinity	mg/L	5740	2290	3510	2380	5650	5380	-	-	-	-	4,020	4,850	1,510	4,270
Alkalinity, Bicarbonate (as CaCO3)	mg/L	5080	2220	3510	2380	5560	5150	-	-	-	-	-	-	1,510	-
Alkalinity, Carbonate (as CaCO3)	mg/L	660	70.4	<1.0	<1.0	88.8	226	-	-	-	-	-	-	< 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	330	35.2	<1.0	<1.0	44.4	113	-	-	-	-	-	-	-	-
Bromide	mg/L	3.67	1.75	<1.0	<1.0	<1.0	<10	-	-	-	2.8	3.4	3.1	< 1.0	2.8
Sulfide	mg/L	77.4	32.5	51.4	3.55	38.5	8.32	-	-	-	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	182	67.7	241	58.1	108	215	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	667	240	562	270	712	527	-	-	-	413	433	353	117	336
Phosphate	mg/L	0.463	0.189	26.8	7.26	<82.5	<0.050	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	-	-	-	-	-	-	-	-	-	2.34	3.27	3.94	0.43	3.32
Total Organic Carbon	mg/L	152	76.1	88.4	58.4	109	209	-	-	-	114	-	-	-	-
Total Phosphorous as P	mg/L	5.44	2.27	3.91	2.43	5.62	4.39	-	-	-	-	-	-	-	-
Dissolved Metals															
Aluminium	µg/L	95.3	53.7	53.7	22	59.2	102	-	-	-	-	41	22	13	29
Calcium	mg/L	73.8	71.5	103	107	99.7	119	-	-	-	-	89.4	107	99.9	100
Iron	µg/L	32.8	28.8	27.7	27.7	51.6	11.8	-	-	-	-	695	65	1,830	< 90
Mangnesium	mg/L	220	188	255	196	250	245	-	-	-	-	301	389	186	304
Managanses	µg/L	130	106	242	454	205	137	-	-	-	-	442	475	636	440
Postassium	mg/L	211	105	151	82.8	162	185	-	-	-	-	-	-	-	-
Sodium	mg/L	2810	1490	1940	850	2030	2670	-	-	-	-	1,580	1,730	541	1,520
Antimony	µg/L	26.7	16.6	15.3	4.15	20.5	39.7	-	-	-	-	2.43	1.35	< 0.50	1.4
Arsenic	µg/L	59.9	36.1	33.9	9.19	45	87.2	-	-	-	-	10.1	6.7	1.4	7
Barium	µg/L	130	128	150.00	145.00	162.00	153.00	-	-	-	-	316	401	130	261
Beryllium	µg/L	<0.100	<0.050	<0.050	<0.020	<0.050	<0.050	-	-	-	-	< 10	< 10	< 5.0	< 15
Boron	µg/L	1850	947	1450.00	952.00	1480.00	1630.00	-	-	-	-	1,460	1,400	540	1,360
Cadmium	µg/L	<0.0200	<0.0100	0.02	0.01	0.01	<0.010	-	-	-	-	< 0.25	< 0.25	< 0.10	< 0.050
Chromium	µg/L	29.2	14.5	14.00	6.00	21.00	31.00	-	-	-	-	12.3	10.3	2.9	11.3
Cobalt	µg/L	4.74	2.32	4.00	3.00	6.00	6.00	-	-	-	-	6.52	6.66	1.54	6.2
Copper	µg/L	<1.00	<0.50	<0.50	<0.2	<0.5	<0.5	-	-	-	-	< 2.5	< 2.5	< 1.0	< 2.0
Lead	µg/L	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	60.2	55.6	61.00	54.00	53.00	56.00	-	-	-	-	< 50	< 50	< 50	< 50
Mercury	µg/L	< 0.040	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	6.48	11.4	4.00	1.00	8.00	9.00	-	-	-	-	2.7	2.1	< 1.0	1.6
Nickel	µg/L	21.7	10.7	16.00	12.00	19.00	23.00	-	-	-	-	15.6	10.3	6.9	12.7
Selenium	µg/L	<1.00	2.4	1.00	1.00	2.00	1.00	-	-	-	-	< 5.0	< 5.0	< 2.0	< 1.0
Silver	µg/L	<0.100	<0.050	<0.050	<0.020	<0.050	<0.050	-	-	-	-	0.072	0.086	< 0.050	< 0.10
Thallium	µg/L	<0.0400	<0.0200	<0.0200	<0.0080	<0.0200	<0.0200	-	-	-	-	< 0.50	< 0.50	< 0.20	< 0.10
Titanium	µg/L	62.6	27.9	35.00	12.00	57.00	68.00	-	-	-	-	61	57	< 50	< 50
Tungsten	µg/L	4.31	1.93	2.00	1.00	3.00	4.00	-	-	-	-	-	-	-	-
Uranium	µg/L	15.5	32.2	21.90	12.00	15.40	16.80	-	-	-	-	11.5	3.9	5.96	6.22
Vanadium	µg/L	12.2	7.13	8.00	4.00	12.00	13.00	-	-	-	-	< 60	< 60	< 30	< 90
Zinc	µg/L	<10.0	<5.0	<5.0	<2.0	<5.0	<5.0	-	-	-	-	< 10	< 10	< 5.0	< 15
Bismuth	µg/L	<0.100	<0.050	<0.050	<0.020	<0.050	<0.050	-	-	-	-	-	-	-	-
Phosphorous	µg/L	5570	2570	4210.00	1880.00	4070.00	5530.00	-	-	-	-	-	-	-	-
Silicon	µg/L	11100	11200	13400.00	12100.00	13900.00	13400.00	-	-	-	-	-	-	-	-
Strontium	µg/L	2550	3280	3110.00	3150.00	3340.00	3070.00	-	-	-	-	-	-	-	-
Sulphur	µg/L	611000	357000	567000.00	250000.00	493000.00	561000.00	-	-	-	-	-	-	-	308,000
Tellurium	µg/L	<0.500	<0.250	<0.250	<0.100	<0.250	<0.250	-	-	-	-	-	-	-	< 2.0
Thorium	µg/L	<0.100	<0.050	<0.080	0.04	0.08	<0.050	-	-	-	-	-	-	-	< 1.0
Tin	µg/L	42.4	27.4	23.00	6.00	42.00	73.00	-	-	-	-	-	-	-	-
Zirconium	µg/L	28.2	16.1	17.80	7.58	26.10	34.90	-	-	-	-	-	-	-	32.9
Monocyclic Aromatic Hydrocarbons															
Benzene	µg/L	9	2.1	3.2	2.8	4.4	4.1	4	4	4	3.08	1.76	1.69	-	1.29
Ethylbenzene	µg/L	87.3	28.6	37.7	22	37.8	43.8	42	46	40	9.49	9.32	3.15	-	1.7
Toluene	µg/L	2.7	<1.0	1.2	<1.0	1.2	1.4	1	1	1	1	1.6	0.66	-	12.8
Xylenes	µg/L	63.7	24	24.7	16.7	29	38.5	9	9	9	8.7	8.4	4.33	-	1.55
Styrene	µg/L	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons															
Naphthalene	µg/L	5.57	1.65	5.7	1.31	3.6	3.46	-	-	-	-	1.42	0.728	0.105	0.662
Methylnaphthalene, 1-	µg/L	0.847	0.264	2	0.62	0.633	0.53	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	0.255	<0.100	0.58	0.289	0.131	0.519	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Acenaphthene	µg/L	0.275	0.062	2.03	0.311	0.25	0.152	-	-	-	-	0.367	0.444	0.078	0.403
Fluorene	µg/L	0.19	0.062	1.45	<0.214	0.18	<0.050	-	-	-	-	0.335	0.431	0.08	0.294
Phenanthrene	µg/L	0.19	<0.100	2.64	0.38	0.111	0.145	-	-	-	-	0.08	< 0.060	< 0.050	0.071
Anthracene	µg/L	<0.010	<0.010	0.302	<0.010	<0.010	<0.010	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Acridine	µg/L	<0.050	<0.050	0.056	<0.294	<0.050	<0.050	-	-	-	-	< 0.20	< 0.080	< 0.050	< 0.050
Fluoranthene	µg/L	<0.030	<0.030	0.649	<0.030	<0.030	<0.030	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Pyrene	µg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benz(a)anthracene	µg/L	<0.010	<0.010	0.033	<0.010	<0.010	<0.010	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Chrysene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(b+j)fluoranthene	µg/L	<0.050	<0.050	<0.050	0.269	<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
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
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
Dibenz(a,h)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	< 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
Chloronaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	-	-	-	-	-	-	-	-
Quinoline	µg/L	<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	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Bromoform	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Carbon Tetrachloride	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 1	< 1	< 1	< 0.50	< 0.50	-	-	< 0.50
Chlorobenzene	µg/L	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	3	3	3	3.8	3.6	-	-	1.5

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P1 Leachate MH											
Sample ID		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
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 08 16
Parameter	**Units**	**Analytical Results**											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	91,500	78,200	58,300	17,300	18,400	71,100	74,300	88,900	59,400	67,700	67,700	61,600
Nitrate (as N)	µg/L	< 250	< 250	< 250	4,060	170	< 250	< 250	< 250	< 250	< 1,000	< 1,000	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	< 250	< 1,000	-	< 100
Chloride	mg/L	389	306	435	219	246	392	408	428	294	270	270	329
Fluoride	µg/L	1,200	1,200	< 1,000	1,100	1,230	1,400	< 4,000	1,100	< 2,500	1,140	1,140	1,600
Sulfate	mg/L	1,170	890	753	443	404	982	933	1,090	808	662	662	868
Total Alkalinity	mg/L	4,410	3,910	3,030	1,070	1,300	3,990	3,700	4,130	2,370	3,390	3,390	3,710
Alkalinity, Bicarbonate (as CaCO3)	mg/L	4,410	3,910	3,030	-	-	-	-	-	2,370	3,390	3,390	3,710
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
Bromide	mg/L	3.9	< 2.5	2.6	< 1.0	1	3.3	3.1	3.1	< 0.10	< 10.0	< 10.0	< 10.0
Sulfide	mg/L	-	-	-	-	-	-	-	-	28.9	29.5	-	36.5
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	49.8	40.8	-	42.5
Chemical Oxygen Demand	mg/L	405	288	411	71	100	319	374	444	294	212	212	243
Phosphate	mg/L	-	-	-	-	-	-	-	-	2.05	1.48	-	2.22
Ortho-Phosphate	mg/L	3.26	3.32	0.503	0.27	0.502	0.319	3.09	3.76	-	-	1.48	-
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	2.53	2.44	-	3.38
Dissolved Metals													
Aluminium	µg/L	659	32	55	< 10	< 10	16	47	49.7	40.3	31.9	31.9	24.7
Calcium	mg/L	102	97.9	124	83.2	85	94.3	106	95	109	122	122	106
Iron	µg/L	100	156	224	92	276	80	93	53	74	90	90	105
Mangnesium	mg/L	369	364	203	156	172	336	310	344	200	378	378	326
Managanses	µg/L	419	505	860	215	650	473	560	455	562	705	705	717
Postassium	mg/L	160	113	125	43.9	51.4	125	147	175	157	117	117	105
Sodium	mg/L	1,880	1,500	1,090	419	409	1,670	1,590	1,960	1,440	1,230	1,230	1,270
Antimony	µg/L	< 0.50	1.52	2.64	0.76	< 0.50	1.9	5.2	2.53	4.88	2.25	2.25	2.57
Arsenic	µg/L	1.1	6.8	12.6	2.1	2.4	4.2	12.2	8.25	15.2	7.41	7.41	11.4
Barium	µg/L	304	330	145	92	108	254	251	258	128	382	382	344
Beryllium	µg/L	< 15	< 10	< 10	< 5.0	< 5.0	< 10	< 15	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	1,370	1,040	1,170	360	460	1,390	1,330	1,610	1,270	1,090	1,090	1,090
Cadmium	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.025	< 0.010	< 0.010	< 0.010	< 0.010
Chromium	µg/L	1.33	9.24	11.1	1.73	2.02	9.5	12.5	14.9	10.3	9.73	9.73	11
Cobalt	µg/L	1.31	4.68	4.62	1.5	1.98	6.6	5.6	5.7	4.06	5.62	5.62	5.61
Copper	µg/L	6	< 1.0	< 1.0	3.5	1.4	< 2.0	< 2.0	< 1.0	1.19	< 0.40	< 0.40	< 0.40
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	0.2
Lithium	µg/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	41.8	37	37.3	37.3	39.8
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	< 0.020
Molybdenum	µg/L	11.1	1.5	1.8	15.3	3.6	2.1	1.4	1.27	1.76	1.81	1.81	1.67
Nickel	µg/L	< 5.0	11.7	14.8	9	12.8	11.3	13	14.3	11.1	11.5	11.5	11.7
Selenium	µg/L	< 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
Silver	µg/L	< 0.050	0.096	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	0.086	< 0.050	< 0.050	< 0.050	< 0.050
Thallium	µg/L	< 0.20	< 0.050	< 0.050	< 0.020	< 0.020	< 0.10	< 0.10	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020
Titanium	µg/L	58	< 50	< 50	< 50	< 50	< 50	62	55.1	49.1	38.5	38.5	42.7
Tungsten	µg/L	-	-	-	-	-	-	-	-	1.4	2.7	-	2.5
Uranium	µg/L	1.71	3.72	10.1	29.1	9.13	8.91	8.64	8.34	7.02	7.06	7.06	6.98
Vanadium	µg/L	< 90	< 60	< 60	< 30	< 30	< 60	< 90	18.9	10.8	18.3	18.3	18.3
Zinc	µg/L	< 15	< 10	< 10	< 5.0	< 5.0	< 10	25	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0
Bismuth	µg/L	< 600	< 400	< 400	< 200	< 200	< 400	< 600	< 0.25	< 0.10	< 0.10	< 0.10	< 0.10
Phosphorous	µg/L	3,770	3,610	2,050	< 300	590	3,570	3,170	4,580	2,850	2,810	2,810	3,530
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
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
Sulphur	µg/L	377,000	840,000	247,000	142,000	134,000	280,000	451,000	528,000	358,000	329,000	-	326,000
Tellurium	µg/L	< 0.20	< 1.0	< 1.0	< 0.40	-	-	< 2.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50
Thorium	µg/L	0.16	< 0.50	< 0.50	< 0.20	-	-	< 1.0	< 0.50	< 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
Zirconium	µg/L	3	38.9	13.1	4	-	-	31	34.5	16.2	45.1	45.1	42
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	1.88	1.28	2.4	-	-	1.3	1.7	2.4	1.6	1	1	1.3
Ethylbenzene	µg/L	3.84	3.73	11.9	-	-	1.65	7.33	12.5	10.5	< 1.0	< 1.0	5.9
Toluene	µg/L	< 0.50	< 0.50	0.69	-	-	0.9	< 0.45	0.57	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes	µg/L	2.95	3.1	7.26	-	-	2.89	5.19	8.59	6	< 2.0	< 2.0	4.5
Styrene	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	0.894	0.675	1.28	0.106	< 0.050	0.66	0.545	0.806	1.04	1.05	1.05	0.607
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	0.544	0.323	-	0.151
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	0.687	0.496	-	< 0.100
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
Acenaphthene	µg/L	0.416	0.347	0.234	0.057	< 0.050	0.311	0.339	0.331	0.264	0.389	0.389	0.369
Fluorene	µg/L	0.33	0.324	0.144	< 0.050	< 0.050	0.227	0.26	0.237	0.166	0.263	0.263	0.279
Phenanthrene	µg/L	0.074	< 0.050	0.074	< 0.050	< 0.050	< 0.050	0.104	0.114	0.122	< 0.100	< 0.100	< 0.100
Anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.021	< 0.010	0.019	0.019	0.017
Acridine	µg/L	< 0.050	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.027	< 0.030	< 0.030	< 0.030	0.043
Pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.022	< 0.020	0.029	0.029	0.029
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	< 0.010
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
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
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
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
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
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
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
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	< 0.100	< 0.100	-	< 0.100
Quinoline	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.060	< 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
Bromoform	µg/L	< 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
Chlorobenzene	µg/L	2.4	2.7	1.2	-	-	3.4	1.7	2.3	< 1.0	2.6	2.6	< 2.9

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P1 Leachate MH			P1 Leachate MH 2															S Leachate Wet Well						
Sample ID		P1 Leachate MH-20180816	P1 Leachate MH	P1 Leachate MH	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 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
Sample Date (yyyy mm dd)		2018 08 16	2018 11 08	2019 03 15	2019 03 15	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	2013 12 11	2014 04 08	2014 06 10	2015 06 15	2015 09 15	2015 12 03	2016 03 15
Parameter	Units	Analytical Results																								
Dissolved Inorganics																										
Ammonia, Total (as N)	µg/L	61,600	60,700	43,000	43,000	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	128,000	65,400	46,500	189,000	255,000	224,000	99,200
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 250	< 250	< 500	< 500	< 500	< 250
Nitrite (as N)	µg/L	-	< 100	< 100	-	< 100	191	543	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	117	< 100	< 100	-	-	-	-	-	-	-
Chloride	mg/L	329	244	238	238	976	849	831	430	1,950	2,010	1030	719	2050	1630	1370	1470	1690	2110	909	524	352	803	924	886	598
Fluoride	µg/L	1,600	1,770	1,590	1,590	< 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	2,200	< 1,000	668	< 2,000	< 2,000	< 2,000	< 1,000
Sulfate	mg/L	868	795	661	661	326	261	< 10.0	686	< 10.0	< 10.0	369	451	<10.0	382	<10.0	53.4	16.2	22.2	1,860	1,190	533	2,370	2,310	1,620	857
Total Alkalinity	mg/L	3,710	3,360	2,500	2,500	5,110	4,600	6,580	2,920	10,100	10,600	6530	4330	10900	8340	6930	6620	7760	8930	-	3,250	2,990	7,730	8,640	6,960	4,450
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,710	3,360	2,500	2,500	5,110	4,600	6,580	2,920	10,100	10,600	6530	4330	10900	8340	6930	6620	7760	8930	-	-	-	-	8,640	6,960	4,450
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	<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	<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	-	-	-	-	-	-	-
Bromide	mg/L	< 10.0	< 10.0	1.39	1.39	< 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	9.1	4.6	3	7.1	8.3	6.9	4.7
Sulfide	mg/L	-	26.2	18.9	-	< 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	-	-	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	-	36.1	38.7	-	8,120	2,770	1,550	< 354	2,130	1,280	642	406	421	212	311	183	222	141	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	243	223	184	184	13,600	3,910	3,840	1,180	4,560	3,990	2130	5700	2320	1900	1840	1810	1890	2430	1,090	676	398	982	1,130	996	705
Phosphate	mg/L	-	0.975	-	-	-	-	-	-	-	-	0.221	2.3	6.57	3.78	6.87	5.24	7.67	8.2	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	2.22	-	1.1	1.1	8.27	10.8	11	< 0.0500	3.95	2.91	-	-	-	-	-	-	-	-	7.66	3.37	3.05	6.68	8.29	7.03	3.71
Total Organic Carbon	mg/L	-	-		-	-	-	-	-	-	-	381	140	994	615	528	458	475	550	273	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	2.36	2.15	-	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	-	-	-	-	-	-	-
Dissolved Metals																										
Aluminium	µg/L	24.7	22.9	14.6	14.6	67.4	101	169	24.1	191	149	352	112	233	225	266	237	262	270	-	96	103	82	77	66	62
Calcium	mg/L	106	107	104	104	1,030	691	942	278	548	466	396	146	290	204	321	254	186	144	-	60.6	64.2	94.8	78.8	73.5	79.6
Iron	µg/L	105	69	87	87	14,400	1,210	7,460	1,690	37,300	20,400	499	2720	4640	565	1810	1620	3250	4330	-	198	< 120	< 150	< 300	< 150	70
Mangnesium	mg/L	326	342	363	363	239	278	375	256	413	457	369	273	430	383	410	387	277	277	-	178	294	319	374	344	250
Managanses	µg/L	717	593	661	661	14,300	8,140	13,500	2,920	7,660	7,450	4540	1530	1740	1260	2260	1580	1060	814	-	251	335	320	297	308	460
Postassium	mg/L	105	104	91.1	91.1	566	588	487	208	985	964	406	340	893	853	728	717	838	725	-	-	-	-	426	364	224
Sodium	mg/L	1,270	1,210	1,080	1,080	1,190	972	896	834	1,770	1,810	1290	8200	1660	2210	1460	1510	1510	1470	-	1,850	3,100	3,590	4,490	3,530	1,820
Antimony	µg/L	2.57	2.08	0.53	0.53	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	-	3.9	15.5	19	27.4	16.1	7.8
Arsenic	µg/L	11.4	7.73	2.72	2.72	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	-	17.7	46.7	60.9	75.3	46.9	21.7
Barium	µg/L	344	288	268	268	80.1	72.7	366	138	316	219	213	193	202	276	270	24.2	24.7	22.4	-	80	166	247	270	224	125
Beryllium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	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	-	< 10	< 20	< 25	< 50	< 25	< 10
Boron	µg/L	1,090	1,110	1,280	1,280	4,720	3,210	7,480	2,880	11,600	12,100	7000	3310	14800	11600	10600	11100	10400	10600	-	1,650	2,170	2,670	3,300	3,050	1,980
Cadmium	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	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	-	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.050
Chromium	µg/L	11	8.15	5.07	5.07	95.7	104	108	29.9	235	242	83.2	68.6	211	180	159	159	199	191	-	16.6	26.2	43.2	55.1	44.4	18.1
Cobalt	µg/L	5.61	5.13	4.95	4.95	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	-	6.4	7.2	13.8	15.5	14.9	7.6
Copper	µg/L	< 0.40	< 0.40	< 0.40	< 0.40	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	-	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 2.0
Lead	µg/L	0.2	< 0.20	< 0.20	< 0.20	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	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	39.8	33.9	42	42	233	153	199	98.8	305	390	185	104	290	252	217	233	220	201	-	< 50	75	< 50	< 100	< 50	50
Mercury	µg/L	< 0.020	< 0.010	< 0.010	< 0.010	< 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	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	1.67	2	1.23	1.23	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	-	3.2	4.3	3.1	3.3	3	2.6
Nickel	µg/L	11.7	9.42	9.33	9.33	204	128	130	46.9	273	354	131	87.7	339	249	233	257	261	267	-	26.8	30.2	36	40	37	23.7
Selenium	µg/L	0.52	< 0.50	< 0.50	< 0.50	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	-	< 10	< 10	11	3.6	2.1	8.3
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 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	-	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.10
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	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	-	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.10
Titanium	µg/L	42.7	33	20.4	20.4	11.5	45.6	66.4	11	164	150	83.1	52.4	165	145	130	151	196	193	-	62	84	129	150	132	52
Tungsten	µg/L	-	2.2	1.6	-	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	-	-	-	-	-	-	-
Uranium	µg/L	6.98	5.96	4.96	4.96	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	-	23.8	13.4	2.88	2.61	3.12	8.51
Vanadium	µg/L	18.3	15.3	11.1	11.1	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	-	< 60	< 120	< 150	< 300	< 150	< 60
Zinc	µg/L	< 4.0	< 4.0	< 4.0	< 4.0	59.9	< 100	30.8	2.5	39.3	24.4	<100	12.5	23	<10.0	23.1	<10	28.7	28.8	-	< 10	< 20	< 25	< 50	< 25	< 10
Bismuth	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	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	-	-	-	-	< 2,000	< 1,000	< 400
Phosphorous	µg/L	3,530	2,670	2,410	2,410	2,470	14,500	23,100	1,990	13,900	13,900	10800	6470	10000	10200	12800	10500	13000	9180	-	-	-	-	9,000	7,100	3,890
Silicon	µg/L	21,000	21,000	20,300	20,300	33,600	23,400	42,100	21,300	34,400	30,600	19800	17600	20200	19700	24000	22400	18400	14500	-	-	-	-	17,300	16,200	12,000
Strontium	µg/L	4,250	4,260	4,100	4,100	5,490	4,530	7,300	4,000	5,260	5,160	4410	4000	3420	3650	3790	3550	2230	1980	-	-	-	-	3,390	3,020	2,360
Sulphur	µg/L	-	317,000	278,000	-	182,000	160,000	21,100	258,000	26,800	24,900	150000	179000	28900	197000	23700	66700	29500	24800	-	-	-	2,160,000	1,270,000	1,780,000	603,000
Tellurium	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	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	-	-	-	< 4.0	< 4.0	< 4.0	< 2.0
Thorium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	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	-	-	-	< 2.0	< 2.0	< 2.0	< 1.0
Tin	µg/L	4.63	3.83	1.12	1.12	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	-	-	-	-	< 300	< 150	< 60
Zirconium	µg/L	42	34.8	25.8	25.8	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	-	-	-	46.4	60.9	46.2	19.6
Monocyclic Aromatic Hydrocarbons																										
Benzene	µg/L	1.3	0.7	0.5	0.5	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	11.9	2.08	7.19	7.9	8.08	5.73	3.85
Ethylbenzene	µg/L	5.9	< 1.0	< 1.0	< 1.0	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	123	26.2	70.4	44.4	43.9	42.1	27.2
Toluene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	268	274	318	70.5	200	120	128	106	84.8	138	83.6	60.6	48	21.9	18.6	4.61	6.26	2.36	2.08	1.52	1.49
Xylenes	µg/L	4.5	< 2.0	< 2.0	< 2.0	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	121	23.7	60.1	43.7	40.7	33.9	18.9
Styrene	µg/L	-	< 1.0	< 1.0	-	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	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons																										
Naphthalene	µg/L	0.607	0.254	0.313	0.313	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	-	3.6	4.91	10.8	3.41	11.8	4.43
Methylnaphthalene, 1-	µg/L	-	< 0.100	< 0.116	-	< 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	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	-	< 0.100	< 0.100	-	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	-	-	-	-	-	-	-
Acenaphthylene	µg/L	< 0.200	< 0.200	< 0.200	< 0.200	< 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	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Acenaphthene	µg/L	0.369	0.213	0.321	0.321	< 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	-	0.358	0.42	0.454	0.504	0.457	0.465
Fluorene	µg/L	0.279	0.185	0.268	0.268	< 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	-	0.225	0.212	0.235	0.333	0.236	0.27
Phenanthrene	µg/L	< 0.100	< 0.100	< 0.100	< 0.100	< 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	-	0.272	0.261	0.205	0.157	0.185	0.189
Anthracene	µg/L	0.017	< 0.010	0.015	0.015	< 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	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Acridine	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 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	-	< 0.080	< 0.070	< 0.050	< 0.050	< 0.070	< 0.050
Fluoranthene	µg/L	0.043	< 0.040	0.072	0.072	< 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	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Pyrene	µg/L	0.029	< 0.020	0.037	0.037	< 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	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benz(a)anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 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	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 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	< 0.050	< 0.050	< 0.050
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	0.053	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 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	< 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	0.023	< 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	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	-	< 0.050	< 0.050	< 0.050	< 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	< 0.066	< 0.010	<0.101	<0.010	<0.010	<0.010	<0.010	<0.097	<0.010	<0.100	-	< 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	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	-	< 0.100	< 0.100	-	< 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	-	-	-	-	-	-	-
Quinoline	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 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	-	< 0.050	< 0.050	< 0.20	< 0.080	< 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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 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	<50.0	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	< 1.0	< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	µg/L	< 2.9	3.1	3.9	3.9	< 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	< 2.0	< 1.0	-	2.3	2.1	1.2	< 1.0

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		S Leachate Wet Well											
Sample ID		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	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
Sample Date (yyyy mm dd)		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	2018 11 08
Parameter	Units	Analytical Results											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	119,000	192,000	142,000	90,800	71,800	71,600	54,500	54,500	56,200	56,200	48,800	48,800
Nitrate (as N)	µg/L	< 250	< 500	< 100	< 500	< 500	< 250	< 100	< 100	< 100	< 100	< 100	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	< 250	< 100	-	< 100	-	< 100	-
Chloride	mg/L	613	890	168	888	903	815	523	523	871	871	980	980
Fluoride	µg/L	< 1,000	< 2,000	< 400	< 10,000	< 2,000	< 2,500	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000
Sulfate	mg/L	1,380	2,920	252	1,950	2,040	2,080	1,440	1,440	2,240	2,240	2,990	2,990
Total Alkalinity	mg/L	4,030	9,780	24,600	5,680	6,440	5,380	3,890	3,890	5,470	5,470	6,690	6,690
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	5,380	3,890	3,890	5,470	5,470	6,690	6,690
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	-
Bromide	mg/L	4.5	8.1	1.3	7.5	7	< 2.50	< 1.00	< 1.00	< 10.0	< 10.0	< 10.0	< 10.0
Sulfide	mg/L	-	-	-	-	-	87.9	63	-	93.8	-	85.4	-
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	201	174	-	227	-	329	-
Chemical Oxygen Demand	mg/L	686	1,110	967	1,110	1,020	784	711	711	826	826	988	988
Phosphate	mg/L	-	-	-	-	-	6.91	6.35	-	6.24	-	6.58	-
Ortho-Phosphate	mg/L	3.98	9.72	22	7.43	8.23	-	-	6.35	-	6.24	-	6.58
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	7.35	7.43	-	9.07	-	8.24	-
Dissolved Metals													
Aluminium	µg/L	91	99	100	199	170	172	154	154	187	187	177	177
Calcium	mg/L	142	68.3	88.1	73.4	57.8	101	63.1	63.1	70.9	70.9	47.5	47.5
Iron	µg/L	< 90	< 300	< 120	< 150	< 100	89	59	59	69	69	56	56
Mangnesium	mg/L	276	413	313	302	312	344	187	187	228	228	248	248
Managanses	µg/L	538	207	364	433	300	581	451	451	273	273	180	180
Postassium	mg/L	270	370	402	307	285	280	223	223	276	276	313	313
Sodium	mg/L	2,250	5,330	2,970	3,560	3,680	3,530	2,100	2,100	3,130	3,130	4,450	4,450
Antimony	µg/L	10	34.7	12.4	18	8	25.9	14.8	14.8	26.8	26.8	26.5	26.5
Arsenic	µg/L	29.7	83.9	35.9	45.2	32.7	73.5	42.1	42.1	87.4	87.4	91.3	91.3
Barium	µg/L	181	250	212	193	152	196	132	132	179	179	133	133
Beryllium	µg/L	< 15	< 50	< 20	< 25	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	2,210	2,900	3,120	2,490	2,250	2,790	1,610	1,610	2,090	2,090	1,860	1,860
Cadmium	µg/L	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	0.014	0.011	0.011	0.015	0.015	0.013	0.013
Chromium	µg/L	21.2	58.3	30.1	28.5	29	36.6	21.3	21.3	40.1	40.1	44.3	44.3
Cobalt	µg/L	7.7	13.8	13.3	6.6	5.7	7.37	4.62	4.62	5.98	5.98	4.93	4.93
Copper	µg/L	< 2.0	< 4.0	< 2.0	< 2.0	3.4	1.27	< 0.40	< 0.40	1.1	1.1	0.48	0.48
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.26	0.26
Lithium	µg/L	55	< 100	58	75	71	96.5	63.6	63.6	69.7	69.7	55.8	55.8
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.25	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	< 0.200	< 0.200
Molybdenum	µg/L	1.9	4.1	2.4	3.4	2.7	4.76	3.71	3.71	5.46	5.46	4.81	4.81
Nickel	µg/L	25	41	33.8	32.8	30.7	28.6	22.3	22.3	30.6	30.6	32.2	32.2
Selenium	µg/L	1.1	2.1	6.19	14.5	18.3	1.28	0.79	0.79	1.69	1.69	1.27	1.27
Silver	µg/L	< 0.10	< 0.20	< 0.10	< 0.10	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.053	0.053
Thallium	µg/L	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Titanium	µg/L	55	210	103	77	61.4	130	67.6	67.6	119	119	101	101
Tungsten	µg/L	-	-	-	-	-	3.5	3.7	-	5.2	-	4.9	-
Uranium	µg/L	8.23	3.24	3.06	15.4	9.8	22	17.1	17.1	22.7	22.7	39.2	39.2
Vanadium	µg/L	< 90	< 300	< 120	< 150	20.1	24.1	19.3	19.3	28.1	28.1	25.5	25.5
Zinc	µg/L	< 15	< 50	< 20	< 25	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Bismuth	µg/L	< 600	< 2,000	< 800	< 1,000	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phosphorous	µg/L	4,510	10,400	6,100	7,600	9,180	11,100	7,970	7,970	10,300	10,300	9,850	9,850
Silicon	µg/L	14,300	17,300	16,600	12,400	12,400	20,900	12,900	12,900	15,900	15,900	13,000	13,000
Strontium	µg/L	4,180	3,530	3,200	2,870	2,440	4,270	2,490	2,490	3,150	3,150	2,250	2,250
Sulphur	µg/L	496,000	3,380,000	752,000	1,590,000	1,460,000	1,270,000	666,000	-	995,000	-	1,420,000	-
Tellurium	µg/L	< 2.0	-	-	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thorium	µg/L	< 1.0	-	-	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	< 90	< 300	< 120	< 150	28.6	56.6	30.6	30.6	67	67	65.2	65.2
Zirconium	µg/L	20.5	-	-	37.3	37.3	52.2	27.4	27.4	51.3	51.3	52.3	52.3
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	-	-	6.16	6.5	7.77	6.1	4.8	4.8	7.9	7.9	8.7	8.7
Ethylbenzene	µg/L	-	-	19.5	56.4	68	71.6	80.3	80.3	74.6	74.6	61.6	61.6
Toluene	µg/L	-	-	22.3	1.73	1.82	1.5	4	4	3.2	3.2	2.3	2.3
Xylenes	µg/L	-	-	24.6	40.7	50.9	47.9	60.1	60.1	61.4	61.4	95.9	95.9
Styrene	µg/L	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	2.99	9.37	5.82	3.36	3.22	3.56	3.37	3.37	5.02	5.02	3.44	3.44
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	1.11	0.897	-	0.967	-	0.548	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	0.946	0.8	-	0.476	-	0.43	-
Acenaphthylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	0.011	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200
Acenaphthene	µg/L	0.351	0.368	0.384	0.389	0.42	0.422	0.397	0.397	0.438	0.438	0.276	0.276
Fluorene	µg/L	0.261	0.218	0.196	0.299	0.29	0.245	0.242	0.242	0.312	0.312	0.205	0.205
Phenanthrene	µg/L	0.268	0.203	0.161	0.327	0.34	0.302	0.333	0.333	0.464	0.464	0.365	0.365
Anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	0.028	0.023	0.031	0.031	< 0.010	< 0.010	< 0.010	< 0.010
Acridine	µg/L	< 0.070	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	0.065	0.07	< 0.030	< 0.030	< 0.030	0.129	0.129	0.192	0.192
Pyrene	µg/L	< 0.050	< 0.050	< 0.050	0.064	0.065	0.032	0.039	0.039	0.104	0.104	0.089	0.089
Benz(a)anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.010	< 0.010	< 0.010	0.019	0.019	0.021	0.021
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(b)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	< 0.050	< 0.050	-	< 0.050	-	< 0.050	-
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(a)pyrene	µg/L	< 0.010	0.0113	< 0.0050	0.005	0.0052	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	< 0.050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(g,h,i)perylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	-	< 0.050	-	< 0.050	-
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	< 0.100	< 0.100	-	< 0.100	-	< 0.100	-
Quinoline	µg/L	< 0.090	< 0.050	< 0.20	< 0.070	< 0.090	< 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
Bromoform	µg/L	-	-	< 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	< 0.5	< 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

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		S Leachate Wet Well																							
Sample ID		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	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
Sample Date (yyyy mm dd)		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	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
Parameter	Units	Analytical Results																							
Dissolved Inorganics																									
Ammonia, Total (as N)	μg/L	17,800	17,800	28,600	28,600	25,900	25,900	59,500	59,500	25,000	28,600	103,000	66400	35500	50,300	59,900	71,800	50,600	38,900	69,300	65,700	50,200	41,100	94,400	86,900
Nitrate (as N)	μg/L	< 100	< 100	< 1,000	< 1,000	< 1,000	< 1,000	< 100	< 100	< 10	< 100	< 100	< 100	3260	16,600	21,400	< 100	< 100	< 100	< 100	142	3390	3530	< 100	7150
Nitrite (as N)	μg/L	< 100	-	< 100	-	< 1,000	-	< 100	-	< 10	< 100	< 100	< 100	961	7,970	20,000	10,300	< 100	< 100	8,190	< 100	9450	17700	38800	43100
Chloride	mg/L	698	698	587	587	949	949	908	908	487	540	673	834	620	595	788	792	789	654	859	805	640	566	870	880
Fluoride	μg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 10,000	< 10,000	< 1,000	< 1,000	490	< 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	< 1,000
Sulfate	mg/L	1,950	1,950	1,570	1,570	2,500	2,500	2,370	2,370	1,200	1,350	1,260	1900	1540	1,410	1,730	1,710	1880	1620	1820	1770	1570	1540	2090	1880
Total Alkalinity	mg/L	3,870	3,870	3,390	3,390	7,300	7,300	7,670	7,670	2,570	2,630	4,400	5940	4230	4,680	6,670	7,290	5560	4110	6400	6170	4040	2990	7130	6700
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,650	3,650	3,260	3,260	7,300	7,300	7,190	7,190	2,550	2,610	4,400	5680	3910	4,380	5,770	6,070	5560	3980	5340	5590	3600	2970	6620	6240
Alkalinity, Carbonate (as CaCO3)	mg/L	222	222	123	123	< 1.0	< 1.0	484	484	17.4	22.7	< 1.0	263	321	306	893	1,220	<1.0	138	1060	580	443	22.3	508	458
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
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	111	-	61.6	-	< 1.0	-	242	-	8.7	11.4	< 1.0	131	161	153	446	612	<1.0	69.1	529	290	222	11.1	254	229
Bromide	mg/L	3.16	3.16	< 10.0	< 10.0	< 10.0	< 10.0	< 1.00	< 1.00	2.57	2.73	1.77	5.6	< 10.0	1.31	< 1.00	< 10.0	<1.00	2.18	2.24	2.67	<1.00	1.03	<10	<10
Sulfide	mg/L	46.5	-	60.9	-	139	-	178	-	63.9	49.1	95.7	250	114	71.1	85.5	219	156	61.6	179	139	69.1	52.7	158	150
Biochemical Oxygen Demand	mg/L	195	-	114	-	323	-	354	-	111	174	-	469	178	123	351	605	291	161	295	313	217	60.7	363	376
Chemical Oxygen Demand	mg/L	646	646	617	617	935	935	865	865	512	585	890	859	564	642	856	794	752	658	844	887	580	502	868	950
Phosphate	mg/L	-	-	2.66	-	-	-	-	-	-	-	-	-	-	-	-	-	3.62	0.664	2.87	1.49	11.4	23.2	1.28	0.882
Ortho-Phosphate	mg/L	5.4	5.4	-	2.66	8.72	8.72	1.91	1.91	3.59	3.67	3.93	6.14	2.19	1.25	5.13	5.19	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88.8	105	153	127	367	90.5	319	189
Total Phosphorous as P	mg/L	6.08	-	5.94	-	9.99	-	9.99	-	3.84	5.24	6.36	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
Dissolved Metals																									
Aluminium	μg/L	124	124	129	129	186	186	149	149	66.7	91.7	107	196	114	160	298	125	359	90.7	100	113	641	54	114	125
Calcium	mg/L	54.5	54.5	59	59	43.2	43.2	61.4	61.4	38.6	< 0.04	79	60.3	56.6	141	120	129	69.1	48.1	71.6	85.9	91.5	127	154	136
Iron	μg/L	46	46	64	64	70	70	87.4	87.4	32.4	38.2	40.9	< 200	36.4	< 200	< 200	29.3	<200	26.7	23.7	69.2	22.1	19.8	42.6	54.4
Mangnesium	mg/L	220	220	174	174	202	202	217	217	143	134	190	229	195	235	262	249	217	199	198	252	215	190	283	287
Managanses	μg/L	215	215	228	228	133	133	192	192	174	211	344	200	137	382	206	204	128	197	104	275	122	155	156	151
Postassium	mg/L	195	195	203	203	255	255	289	289	141	158	245	271	208	222	283	221	180	195	192	269	182	164	273	251
Sodium	mg/L	2,770	2,770	2,300	2,300	4,380	4,380	4,120	4,120	1,700	1,820	2,770	4000	2810	2,100	4,070	4,370	2900	2080	2630	3840	2570	2060	3850	3940
Antimony	μg/L	11.6	11.6	6.14	6.14	13.7	13.7	33.9	33.9	6.82	8.65	15.1	37.3	14.2	13.4	39.2	32.9	31.5	12.3	30.8	41.4	22.6	10.2	42	39
Arsenic	μg/L	33	33	28.3	28.3	40.1	40.1	134	134	26.2	35.8	51.7	81.4	79.4	32.7	95.5	95	74	31.3	65.2	97.2	52.8	29.2	11.7	99.5
Barium	μg/L	85.6	85.6	89.2	89.2	145	145	177	177	56.7	77.7	157	145	90.8	153	175	156	108	95.6	112	144	112	85.9	15.7	170
Beryllium	μg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.057	0.057	0.02	< 0.010	0.035	< 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
Boron	μg/L	1,390	1,390	1,470	1,470	2,140	2,140	1,740	1,740	1,160	< 2.0	2,070	2340	1660	1,930	2,420	2,040	1990	1610	1770	1950	1630	1310	2480	2350
Cadmium	μg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.014	0.014	0.0119	0.0119	0.0042	0.0056	0.0079	< 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
Chromium	μg/L	18.2	18.2	17.8	17.8	54.2	54.2	52.5	52.5	13.2	14.3	33.9	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
Cobalt	μg/L	2.72	2.72	2.98	2.98	5.52	5.52	7.47	7.47	2.47	2.57	7.88	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
Copper	μg/L	0.63	0.63	0.6	0.6	0.45	0.72	0.48	0.48	0.42	0.57	0.25	< 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
Lead	μg/L	< 0.20	< 0.20	< 0.20	< 0.20	0.2	0.2	0.157	0.157	0.068	< 0.050	0.106	< 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
Lithium	μg/L	66.1	66.1	52.4	52.4	63	63	54.2	54.2	36.9	< 0.050	55.5	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
Mercury	μg/L	< 0.100	< 0.100	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 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
Molybdenum	μg/L	4.22	4.22	2.42	2.42	5.8	5.8	6.04	6.04	3.23	2.67	2.71	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
Nickel	μg/L	17.8	17.8	17.3	17.3	36.9	36.9	34.1	34.1	12.5	13.5	23.7	31	17.6	23	25.3	27.1	17.9	14.4	18.8	26.1	13.6	10.7	29.9	31.1
Selenium	μg/L	0.76	0.76	0.78	0.78	26.6	26.6	1.25	1.25	0.73	< 0.10	0.89	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
Silver	μg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.014	0.014	< 0.010	< 0.010	< 0.010	< 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
Thallium	μg/L	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.005	< 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
Titanium	μg/L	48.4	48.4	52.2	52.2	120	120	124	124	27.2	32.7	65.1	99.8	52.3	38	75.2	67.3	71.1	30.5	53.6	75.8	30.7	<25	81.2	75.2
Tungsten	μg/L	2.6	-	3.1	-	5	-	5.07	-	1.8	< 0.20	3.36	< 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
Uranium	μg/L	30.3	30.3	17.9	17.9	27.5	27.5	17.7	17.7	21.3	0.0206	7.62	17.8	15.7	18.3	12	8.94	28.5	17.4	10.5	18.5	27.8	19	11.5	12.6
Vanadium	μg/L	12.4	12.4	15.9	15.9	24.8	24.8	32.1	32.1	7.9	13	14.7	< 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
Zinc	μg/L	< 4.0	< 4.0	< 4.0	< 4.0	4.7	4.7	3.8	3.8	1.4	1.4	2.7	< 100	1.1	< 100	< 100	1.2	<100	<5.0	<10.0	<10.0	<5.0	<5.0	<5.0	<10
Bismuth	μg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	0.011	< 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
Phosphorous	μg/L	6,880	6,880	6,440	6,440	10,300	10,300	9,650	9,650	3,860	4,860	6,040	8240	7230	5,280	9,840	8,790	6890	4920	5940	7090	4920	3800	8510	8100
Silicon	μg/L	10,300	10,300	10,300	10,300	14,500	14,500	14,500	14,500	7,810	10,000	15,300	13700	12100	< 5,000	14,100	15,200	12100	10800	10200	13300	10500	10400	14500	14100
Strontium	μg/L	2,050	2,050	2,310	2,310	2,220	2,220	2,470	2,470	1,460	1,870	2,440	2420	2130	3,030	2,950	3,320	2020	2010	2140	2900	2110	2360	3160	3080
Sulphur	μg/L	810,000	-	625,000	-	3,180,000	-	1,210,000	-	421,000	428,000	663,000	882000	892000	555,000	792,000	1,010,000	723000	889000	566000	788000	751000	563000	925000	704000
Tellurium	μg/L	< 0.50	< 0.50	< 0.50	< 0.50	0.62	0.62	0.132	0.132	0.079	< 0.050	0.121	< 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
Thorium	μg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.03	0.03	0.014	< 0.010	0.021	< 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
Tin	μg/L	24	24	15	15	61.7	61.7	66.3	66.3	15.4	18.8	38.8	93.6	34.6	17.5	127	90.1	93.7	37.3	93.7	129	63.4	33.2	132	82.2
Zirconium	μg/L	21.5	21.5	17.6	17.6	55.2	55.2	60	60	12.1	13.8	27	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
Monocyclic Aromatic Hydrocarbons																									
Benzene	μg/L	5.5	5.5	4	4	9.7	9.7	11.3	11.3	4.1	4.1	5.9	7.9	6.3	8	9.5	7.4	7	5.7	9.6	10.7	5.7	9.6	6.3	5.7
Ethylbenzene	μg/L	109	109	82.1	82.1	91.4	91.4	93.1	93.1	84.7	60.1	70.7	103	55.3	55	114	97.3	97.4	61	104	94.5	77.6	77.8	55.1	64.2
Toluene	μg/L	3.4	3.4	< 1.0	< 1.0	2.9	2.9	2.4	2.4	3.6	< 1.6	< 1.0	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
Xylenes	μg/L	72.8	72.8	46.6	46.6	120	120	98.2	98.2	58.9	34.7	41.8	77.8	51.4	44	80.2	66.7	69.7	48	72.8	66.2	58.6	79.6	43.6	56.9
Styrene	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	1.4	<10.0	1.4	<1.0	<1.0	<1.0
Polycyclic Aromatic Hydrocarbons																									
Naphthalene	μg/L	5.51	5.51	4.21	4.21	7.64	7.64	6.43	6.43	2.43	3.99	8.56	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
Methylnaphthalene, 1-	μg/L	1.03	-	0.811	-	1.23	-	1.09	-	0.408	0.569	1.03	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
Methylnaphthalene, 2-	μg/L	1.07	-	0.606	-	1.55	-	0.662	-	0.259	0.302	0.486	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
Acenaphthylene	μg/L	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.0200	< 0.0200	< 0.200	< 0.200	< 0.200	< 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
Acenaphthene	μg/L	0.309	0.309	0.392	0.392	0.389	0.389	0.373	0.373	0.185	0.281	0.58	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
Fluorene	μg/L	0.205	0.205	0.269	0.269	0.267	0.267	0.337	0.337	0.124	0.195	0.319	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
Phenanthrene	μg/L	0.254	0.254	0.464	0.464	0.401	0.401	0.464	0.464	0.202	0.291	0.368	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
Anthracene	μg/L	0.021	0.021	0.031	0.031	0.063	0.063	< 0.0500	< 0.0500	0.015	0.018	0.04	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
Acridine	μg/L	< 0.050	< 0.050	0.137	0.137	< 0.050	< 0.050	< 0.0700	< 0.0700	< 0.050	< 0.050	< 0.050	< 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
Fluoranthene	μg/L	0.096	0.096	0.122	0.122	0.096	0.096	0.112	0.112	0.062	0.091	0.095	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
Pyrene	μg/L	0.07	0.07	0.063	0.063	0.077	0.077	0.1	0.1	0.045	0.054	0.069	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
Benz(a)anthracene	μg/L	< 0.010	< 0.010	0.015	0.015	0.016	0.016	< 0.0200	< 0.0200	< 0.010	< 0.010	< 0.010	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
Chrysene	μg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0300	< 0.0300	< 0.050	< 0.050	< 0.050	< 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
Benzo(b)fluoranthene	μg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	μg/L	< 0.050	-	< 0.050	-	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050	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
Benzo(k)fluoranthene	μg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 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
Benzo(a)pyrene	μg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.023	0.023	0.0054	0.0054	< 0.010	< 0.010	< 0.010	< 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
Indeno(1,2,3-cd)pyrene	μg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 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
Dibenz(a,h)anthracene	μg/L	0.016	0.016	0.017	0.017	< 0.010	< 0.010	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010	< 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
Benzo(g,h,i)perylene	μg/L	< 0.050	-	< 0.050	-	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050	< 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
Chloronaphthalene, 2-	μg/L	< 0.100	-	< 0.100	-	< 0.100	-	-	-	< 0.100	< 0.100	< 0.100	< 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
Quinoline	μg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.175	< 0.175	< 0.0800	< 0.0800	< 0.050	< 0.050	< 0.050	< 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
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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<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	<0.5	<0.5	<5.0	<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	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P2 A2 Leachate MH											
Sample ID		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
Sample Date (yyyy mm dd)		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
Parameter	Units	Analytical Results											
Dissolved Inorganics													
Ammonia, Total (as N)	µg/L	81,400	127,000	161000	155000	69800	210000	212000	211000	139000	152000	206000	141000
Nitrate (as N)	µg/L	< 100	221	< 100	388	7700	<100	<100	1570	23200	<100	<100	9640
Nitrite (as N)	µg/L	< 100	< 100	< 1,000	< 100	290	< 100	< 100	< 100	599	<100	195	1010
Chloride	mg/L	1,030	830	1150	1310	934	1480	1480	1420	1360	1410	1390	1430
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
Sulfate	mg/L	345	305	115	145	410	66	<100	104	185	106	50.2	220
Total Alkalinity	mg/L	2,940	3,390	4450	4470	2450	4550	4520	4000	3170	3460	4310	3300
Alkalinity, Bicarbonate (as CaCO3)	mg/L	2,940	3,390	4450	4470	2450	4550	4520	4000	3170	3460	4310	3300
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
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
Bromide	mg/L	13.6	73.4	70.5	< 10.0	1.51	<1.00	4.4	3.2	2.11	2.1	<1.0	<10
Sulfide	mg/L	0.114	1.8	3.41	2.49	29.8	0.108	0.026	0.02	<0.020	0.028	<0.020	<0.020
Biochemical Oxygen Demand	mg/L	1,270	3,260	3160	< 34268.8	2520	107	37	128	155	25.4	42.6	<25.3
Chemical Oxygen Demand	mg/L	1,870	6,460	4690	644	4100	822	787	662	509	712	800	655
Phosphate	mg/L	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.273
Ortho-Phosphate	mg/L	< 0.0500	< 0.0500	< 0.0500	< 0.0500	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	-	-	-	-	112	535	186	224	182	191	291	381
Total Phosphorous as P	mg/L	3.19	5.79	4.42	1.66	85.8	2.42	1.64	1.13	0.472	1.33	2.46	1.58
Dissolved Metals													
Aluminium	µg/L	42.8	56.8	34.6	153	264	24.4	20.2	19.5	17.5	19.2	21.6	46.2
Calcium	mg/L	280	675	525	163	146	145	134	144	150	146	138	129
Iron	µg/L	6,890	37,900	85,300	9530	13600	16000	2240	1870	909	12500	5630	2550
Mangnesium	mg/L	401	322	421	410	422	461	441	454	445	411	429	453
Managanses	µg/L	4,990	20,800	21,900	671	369	107	135	140	126	206	191	95.4
Postassium	mg/L	228	186	205	222	221	209	208	233	228	219	225	246
Sodium	mg/L	1,270	922	1,070	1380	1120	1300	1430	1450	1360	1300	1380	1500
Antimony	µg/L	4.2	9.73	4.1	< 5.00	<5.00	1.96	2.02	2.06	2.26	1.68	1.71	2.34
Arsenic	µg/L	20.7	16.8	55.8	64.1	73.7	116	34.2	33	12.8	16	41.8	31.4
Barium	µg/L	380	924	1,240	1830	2060	1930	1340	1490	994	1020	1300	1010
Beryllium	µg/L	0.017	0.013	0.016	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron	µg/L	5,170	7,330	6,100	4710	3870	5680	6170	5770	6540	6290	6040	6520
Cadmium	µg/L	0.116	0.0198	0.0253	< 0.200	<0.200	0.0108	0.02	0.0133	0.322	0.0616	0.0475	0.127
Chromium	µg/L	25.9	51	23.5	15	17.1	21.2	18.6	17.5	15.2	16	18.4	17.4
Cobalt	µg/L	61.9	157	31.8	15.8	40.8	14.6	13.9	15.1	41.3	25.5	17.2	24.7
Copper	µg/L	3.66	0.64	1.13	< 10.0	<10.0	1.19	1.83	1.92	15.9	2.96	1.93	4.7
Lead	µg/L	0.37	< 0.050	0.13	< 5.00	<5.00	<0.250	<0.250	<0.250	0.484	<0.250	<0.250	0.361
Lithium	µg/L	39.9	65	37.7	29.3	42.3	33.6	31.9	34.9	33.5	35.5	33.3	35.7
Mercury	µg/L	< 0.040	< 0.010	< 0.040	< 0.020	< 0.020	< 0.040	< 0.010	< 0.010	< 0.010	<0.020	< 0.010	< 0.010
Molybdenum	µg/L	60.7	4.43	6.49	8.25	31.2	8.06	5.5	7.01	24.4	12	8.42	35.2
Nickel	µg/L	305	356	149	183	201	182	192	198	231	193	183	224
Selenium	µg/L	3.97	2.32	2.12	< 10.0	<10.0	3.74	2.01	2.17	2.84	3.05	2.41	2.61
Silver	µg/L	0.012	< 0.010	0.012	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Thallium	µg/L	< 0.0040	< 0.0040	< 0.0040	< 0.400	<0.400	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Titanium	µg/L	19.1	5.49	22.8	30.3	<20.0	25.5	17.3	16.4	10.7	7.13	15	15
Tungsten	µg/L	2.23	0.96	2.88	< 20.0	<20.0	4.58	3.8	3.83	3.23	3.15	4.5	4.59
Uranium	µg/L	12.6	3.07	2.73	3.58	22.5	2.84	1.98	3.03	9.97	5.82	2.96	10.2
Vanadium	µg/L	19.3	7.39	36	39.7	<20.0	57.8	28.2	24.8	17.6	26.7	30.5	24.8
Zinc	µg/L	15.7	15.1	13.2	< 100	<100	<5.0	<5.0	<5.0	41.3	7.8	<5.0	8
Bismuth	µg/L	< 0.010	< 0.010	< 0.010	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphorous	µg/L	791	655	2,550	1600	1480	1440	459	457	205	192	584	486
Silicon	µg/L	28,600	51,600	38,400	36000	21400	33500	27900	27400	23600	28200	27800	21600
Strontium	µg/L	7,100	6,710	7,670	7600	6430	8490	8000	9110	7520	7950	7440	7100
Sulphur	µg/L	140,000	121,000	49,600	58000	170000	38900	45500	44800	75900	52200	27600	92900
Tellurium	µg/L	0.258	0.265	0.271	< 5.00	<5.00	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250
Thorium	µg/L	0.018	< 0.010	0.018	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	0.138	0.054	<0.050
Tin	µg/L	1.99	1.41	2	< 5.00	<5.00	2.44	2.13	2.32	1.94	2	2.25	2.11
Zirconium	µg/L	81.8	5.82	77.5	95.3	86.9	94.4	102	102	104	97.7	94.9	146
Monocyclic Aromatic Hydrocarbons													
Benzene	µg/L	0.8	1.2	3.1	0.7	<2.0	1.4	3.4	<0.5	<0.5	1	<0.5	<0.5
Ethylbenzene	µg/L	< 1.0	3.1	9.1	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0
Toluene	µg/L	17.4	64.6	61.5	6.3	<1.0	3.8	5	<1.0	<1.0	1.4	<1.0	<1.0
Xylenes	µg/L	5.5	11.4	20.3	2.8	<1.0	5.4	5	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	µg/L	2.3	3.5	2.3	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/L	< 0.200	0.525	< 2.09	< 1.97	0.291	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Methylnaphthalene, 1-	µg/L	< 0.100	< 0.100	< 1.05	< 0.983	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Methylnaphthalene, 2-	µg/L	< 0.100	0.109	< 1.05	< 0.983	0.297	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Acenaphthylene	µg/L	< 0.200	< 0.200	< 2.09	< 1.97	0.193	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acenaphthene	µg/L	< 0.050	< 0.050	< 0.524	< 0.491	7840	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/L	< 0.050	< 0.050	< 0.524	< 0.491	0.079	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	µg/L	< 0.100	< 0.100	< 1.05	< 0.983	0.928	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anthracene	µg/L	< 0.010	< 0.038	< 0.105	< 0.098	0.414	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	µg/L	< 0.050	0.539	< 0.524	< 0.491	<0.200	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	µg/L	< 0.030	< 0.030	< 0.314	< 0.295	<0.010	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Pyrene	µg/L	< 0.020	0.045	< 0.209	< 0.197	0.184	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benz(a)anthracene	µg/L	< 0.010	< 0.039	< 0.105	< 0.098	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	µg/L	< 0.050	0.057	< 0.524	< 0.491	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	< 0.050	< 0.150	< 0.524	< 0.491	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	< 0.050	0.076	< 0.524	< 0.491	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	µg/L	< 0.010	0.064	< 0.105	< 0.098	<0.071	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	0.102	< 0.524	< 0.491	0.111	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	< 0.010	0.095	< 0.105	< 0.098	<0.241	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	µg/L	< 0.050	0.116	< 0.524	< 0.491	<0.398	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	< 0.100	< 0.100	< 1.05	< 0.983	<0.055	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Quinoline	µg/L	< 0.264	< 0.778	1.19	< 0.491	<0.020	<0.610	<0.100	<0.776	<0.050	<0.228	<14.6	<8.55
Volatile Organic Compounds													
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	<0.5	<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
Carbon Tetrachloride	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	<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	<0.5	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse 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
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
Parameter	**Units**	**Analytical Results**											
Volatile Organic Compounds Cont.													
Chloroethane	µg/L	9.7	20	10	30	20	10	< 10	20	20	20	20	10
Chloroform	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	µg/L	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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
Dichlorobenzene, 1,3-	µg/L	< 1.0	1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1
Dichlorobenzene, 1,4-	µg/L	1.1	< 1	1	1	1	1	1	1	< 1	1	1	1
Dichloroethane, 1,1-	µg/L	17.6	13	12	13	12	11	11	15	15	19	21	11
Dichloroethane, 1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichloromethane	µg/L	< 5.0	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dichloropropane, 1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.4	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-cis-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichloropropene, 1,3-trans-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethane, 1,1,1-	µg/L	< 1.0	8	5	5	6	5	5	6	6	3	9	3
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichlorofluoromethane	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	µg/L	< 1.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Gross Parameters													
VH (C6-C10)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
VPH (C6-C10)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
EPH (C10-C19)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
LEPH (C10-C19)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
EPH (C19-C32)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
HEPH (C19-C32)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse MH											
Sample ID		N Pumphouse MH-20131211	N Pumphouse MH-20140408	N Pumphouse MH-20140610	N Pumphouse MH-20150122	N Pumphouse MH-20150615	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
Sample Date (yyyy mm dd)		2013 12 11	2014 04 08	2014 06 10	2015 01 22	2015 06 15	2015 09 15	2015 12 03	2016 03 15	2016 06 23	2016 09 15	2016 11 17	2017 09 14
Parameter	**Units**	**Analytical Results**											
Volatile Organic Compounds													
Chloroethane	µg/L	6.3	1.3	-	-	6	6	4.3	5.2	-	-	3.7	9
Chloroform	µg/L	< 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	< 5.0
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/L	< 0.70	< 0.70	-	-	< 0.70	< 0.70	< 0.70	< 0.70	-	-	< 0.70	< 0.50
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	1.5	< 1.0	-	-	1.1	1.2	1.1	< 1.0	-	-	1.1	1.3
Dichloroethane, 1,1-	µg/L	16.2	1.5	-	-	12.4	9.4	6.4	12.6	-	-	13.3	10.1
Dichloroethane, 1,2-	µg/L	< 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
Dichloroethylene, 1,2-cis-	µg/L	< 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
Dichloromethane	µg/L	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	< 5.0	-	-	< 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
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.4	< 1.4	-	-	< 1.4	< 1.4	< 1.4	< 1.4	-	-	< 1.4	< 1.0
Dichloropropene, 1,3-cis-	µg/L	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50
Dichloropropene, 1,3-trans-	µg/L	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	< 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	< 1.0	-	-	< 1.0	< 0.20
Trichloroethane, 1,1,1-	µg/L	1.6	< 1.0	-	-	1.6	1.1	< 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	< 0.50
Trichloroethylene	µg/L	< 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
Vinyl Chloride	µg/L	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.40
Gross Parameters													
VH (C6-C10)	µg/L	-	< 100	< 100	-	< 100	< 100	< 100	< 100	-	-	< 100	-
VPH (C6-C10)	µg/L	-	< 100	< 100	-	< 100	< 100	< 100	< 100	-	-	< 100	-
EPH (C10-C19)	µg/L	-	1,110	1,180	650	< 250	260	310	260	< 250	< 250	400	< 250
LEPH (C10-C19)	µg/L	-	1,110	1,170	650	< 250	250	310	260	< 250	< 250	400	< 250
EPH (C19-C32)	µg/L	-	640	850	720	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
HEPH (C19-C32)	µg/L	-	640	850	720	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse MH											
Sample ID		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	N Pumphouse MH	N Pumphouse MH-20190903
Sample Date (yyyy mm dd)		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	2019 09 03	2019 09 03
Parameter	**Units**	**Analytical Results**											
Volatile Organic Compounds													
Chloroethane	µg/L	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2	< 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
Chloromethane	µg/L	< 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
Dibromoethane, 1,2-	µg/L	-	< 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	-
Dichlorobenzene, 1,2-	µg/L	< 0.50	< 0.5	< 0.5	< 0.5	0.6	0.6	< 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	2.1	2.1	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	1.6	< 1.0	< 2.3	< 2.3	3	3	< 1.0	< 1.0	2.1	2.1	3	3
Dichloroethane, 1,1-	µg/L	3.2	< 1.0	1.8	1.8	10.8	10.8	2.6	2.6	3.6	3.6	9	9
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
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
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
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
Dichloromethane	µg/L	< 5.0	< 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
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.0	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Dichloropropene, 1,3-cis-	µg/L	< 0.50	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	< 0.50	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	< 0.20	< 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
Trichloroethane, 1,1,2-	µg/L	< 0.50	< 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
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
Vinyl Chloride	µg/L	< 0.40	< 1.0	< 1.0	< 1.0	1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Gross Parameters													
VH (C6-C10)	µg/L	-	< 100	147	147	181	181	< 100	< 100	< 100	< 100	224	224
VPH (C6-C10)	µg/L	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	250	< 250	766	766	346	346	681	681	724	724	953	953
LEPH (C10-C19)	µg/L	250	< 250	763	763	342	342	675	675	719	719	945	945
EPH (C19-C32)	µg/L	< 250	< 250	660	660	< 250	< 250	429	429	474	474	858	858
HEPH (C19-C32)	µg/L	< 250	< 250	660	660	< 250	< 250	429	429	474	474	858	858
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	< 3.0	-	< 3.0	-	3	-
Butyric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Caporic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	2.4	-	< 2.0	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Propionic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
Valeric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
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\- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		N Pumphouse MH																		P1 Leachate MH							
Sample ID		N Pumphouse MH	N Pumphouse MH-20191031	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	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	P1 LEACHATE MH-20150615
Sample Date (yyyy mm dd)		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	2023 05 17	2023 09 27	2023 10 31	2006 11 09	2006 11 16	2006 11 22	2013 09 11	2014 04 08	2014 06 10	2015 01 22	2015 06 15
Parameter	**Units**	**Analytical Results**																									
Volatile Organic Compounds																											
Chloroethane	µg/L	< 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	3.2	4.8	<2.0	< 10	< 10	< 10	8.1	< 1.0	-	-	< 1.0
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	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 10	< 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	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 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	<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	<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	<0.5	< 1	< 1	< 1	< 0.70	< 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	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichlorobenzene, 1,4-	µg/L	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	1.4	1.5	1.6	< 1	< 1	< 1	1.2	1.1	-	-	< 1.0
Dichloroethane, 1,1-	µg/L	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	2.7	2.1	2.6	1	1	1	20.3	1.8	-	-	4.5
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	<1.0	< 1	< 1	< 1	< 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	<1.0	< 1	< 1	< 1	< 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	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 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	<1.0	< 1	< 1	< 1	< 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	<3.0	< 5	< 5	< 5	< 5.0	< 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	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 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	<1.0	<1.0	-	-	-	< 1.4	< 1.4	-	-	< 1.4
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 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	<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	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 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	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 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	<1.0	< 1	< 1	< 1	< 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	<1.0	< 1	< 1	< 1	< 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	<1.0	< 1	< 1	< 1	< 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	< 1.2	< 1.0	1.2	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	< 2	< 2	< 2	< 1.0	< 1.0	-	-	< 1.0
Gross Parameters																											
VH (C6-C10)	µg/L	< 100	< 100	104	< 100	< 100	< 100	173	168	199	< 100	120	108	328	<210	<100	<100	146	140	-	-	-	-	< 100	< 100	-	< 100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	<100	<100	165	<210	<100	<100	<100	<100	-	-	-	-	< 100	< 100	-	< 100
EPH (C10-C19)	µg/L	330	330	< 250	< 250	442	< 250	355	792	< 2,500	321	<2500	821	734	472	772	1900	474	385	-	-	-	-	920	920	400	< 250
LEPH (C10-C19)	µg/L	325	-	< 250	< 250	437	< 250	352	789	< 2,500	319	<2500	810	728	470	862	10800	335	<250	-	-	-	-	920	920	400	< 250
EPH (C19-C32)	µg/L	< 250	< 250	< 250	426	292	< 250	1,180	2,400	< 2,500	< 250	<2500	1210	521	251	760	1900	470	382	-	-	-	-	450	590	430	< 250
HEPH (C19-C32)	µg/L	< 250	-	< 250	426	292	< 250	1,180	2,400	< 2,500	< 250	<2500	1210	521	251	861	10800	335	<250	-	-	-	-	450	590	430	< 250
MTBE																											
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	< 1.0	< 1.0	-	-	-	-	-	-	-	-
Resin and Fatty Acids																											
Acetic Acid	mg/L	< 3.0	-	23.4	< 3.0	25.7	5.9	-	-	-	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	< 2.0	-	7.2	< 2.0	13.7	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	< 2.0	-	3.5	< 2.0	5.6	< 2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic 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	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	< 2.0	-	< 2.0	< 2.0	7	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	< 2.0	-	< 2.0	< 2.0	2.7	< 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	-	3.8	< 2.0	3.3	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	< 2.0	-	2	< 2.0	5	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-
VFAs																											
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P1 Leachate MH											
Sample ID		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
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 08 16
Parameter	**Units**	**Analytical Results**											
Volatile Organic Compounds													
Chloroethane	µg/L	1.2	< 1.0	4	-	-	< 1.0	6	6.9	8.9	< 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
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
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	-	-	-	< 0.3	< 0.3	-	< 0.3
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	< 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	< 0.5
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
Dichlorobenzene, 1,4-	µg/L	1.1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.2
Dichloroethane, 1,1-	µg/L	2.7	1.3	16.6	-	-	3.5	6.4	3.2	2.3	< 1.0	< 1.0	1
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
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
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
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
Dichloromethane	µg/L	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	< 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
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
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	-	-	-	-
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
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
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
Trichloroethylene	µg/L	< 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
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.40	< 0.40	< 1.0	< 1.0	< 1.0	< 1.0
Gross Parameters													
VH (C6-C10)	µg/L	< 100	< 100	< 100	-	-	< 100	-	-	< 100	< 100	< 100	< 100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	-	-	< 100	-	-	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	280	< 250	< 250	< 250	< 250	270	< 250	< 250	714	616	616	< 250
LEPH (C10-C19)	µg/L	280	< 250	< 250	< 250	< 250	270	< 250	< 250	712	615	615	< 250
EPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	609	480	480	< 250
HEPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	609	480	480	< 250
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
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n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P1 Leachate MH				P1 Leachate MH 2														S Leachate Wet Well						
Sample ID		P1 Leachate MH-20180816	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH-20190315	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH	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
Sample Date (yyyy mm dd)		2018 08 16	2018 11 08	2019 03 15	2019 03 15	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	2013 12 11	2014 04 08	2014 06 10	2015 06 15	2015 09 15	2015 12 03	2016 03 15
Parameter	**Units**	**Analytical Results**																								
Volatile Organic Compounds																										
Chloroethane	µg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 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	< 1.0	-	1.4	1.1	< 1.0	< 1.0
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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0
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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 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	<30.0	<0.3	<3.0	<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	<100	<1.0	<10.0	<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	<50.0	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	< 1.4	< 0.70	-	< 0.70	< 0.70	< 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	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	< 1.2	< 1.0	< 1.0	< 1.0	< 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	2.9	< 1.0	-	2	2.2	1.3	1.1
Dichloroethane, 1,1-	µg/L	1	< 1.0	< 1.0	< 1.0	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	5.2	< 1.0	-	< 1.0	< 1.0	< 1.0	1.1
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	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	< 2.0	< 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	2	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	5	8.3	12.8	1.4	9	3.3	4	<100	4.4	<10.0	4.9	4.5	4.3	3.1	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	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	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	< 3.0	< 3.0	< 3.0	< 3.0	264	234	174	54.1	12.4	< 3.0	16.7	<300	4.2	<30.0	9.3	3.3	3	3.1	< 10	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 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	< 2.0	< 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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.8	< 1.4	-	< 1.4	< 1.4	< 1.4	< 1.4
Dichloropropene, 1,3-cis-	µg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3-trans-	µg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	-	-		-	-	-	-	-	4.4	<100	6.2	<10.0	<0.5	<0.5	<0.5	<0.5	< 2.0	< 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	<50.0	<0.5	<5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 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	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 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	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 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	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	1.4	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0	< 4.1	< 1.0	< 10.0	6.8	3	<100	21.6	<10.0	3.8	6.3	6.8	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0
Gross Parameters																										
VH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	1,430	889	1,570	287	1,240	481	439	<10000	1450	<2880	470	452	756	740	-	< 100	120	130	140	< 100	< 100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	1,050	425	1,100	194	918	270	260	<10000	1290	<2880	324	350	666	701	-	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	< 250	< 250	< 250	< 250	615	1,250	1,600	384	7,600	3,930	4970	919	2140	2490	1890	1780	1380	1670	-	1,230	1,960	770	260	640	380
LEPH (C10-C19)	µg/L	< 250	< 250	< 250	< 250	614	1,250	1,600	384	7,600	3,930	4970	916	2140	2480	377	<250	304	<250	-	1,230	1,950	750	250	620	370
EPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	405	352	430	< 250	13,800	259	21800	528	253	663	1890	1780	1380	1670	-	710	1,340	< 250	< 250	< 250	< 250
HEPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	405	352	430	< 250	13,800	259	21800	528	253	663	377	<250	304	<250	-	710	1,340	< 250	< 250	< 250	< 250
MTBE																										
Methyl Tert-butyl Ether [MTBE]	µg/L	-	< 1.0	< 1.0	-	< 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	-	-	-	-	-	-	-
Resin and Fatty Acids																										
Acetic Acid	mg/L	-	-	< 3.0	-	3,610	848	-	-	-	-	-	-	-	-	84.4	35.8	48.2	4	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	< 2.0	-	1,730	169	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	< 2.0	-	771	86.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-		-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	< 2.0	-	124	11.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	< 2.0	-	2,540	102	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	< 2.0	-	19	6.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	< 2.0	-	359	53.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	< 2.0	-	445	466	-	-	-	-	-	-	-	-	14.6	4.2	<2.0	<2.0	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	< 2.0	-	870	89.9	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
VFAs																										
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		S Leachate Wet Well											
Sample ID		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	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
Sample Date (yyyy mm dd)		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	2018 11 08
Parameter	Units	Analytical Results											
Volatile Organic Compounds													
Chloroethane	µg/L	-	-	< 1.0	< 1.0	< 1.0	< 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
Chloromethane	µg/L	-	-	< 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
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	< 0.3	< 0.3	-	< 0.3	-	< 0.3	-
Dibromomethane	µg/L	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-
Dichlorobenzene, 1,2-	µg/L	-	-	< 0.70	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	0.6	0.6	0.6	0.6
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
Dichlorobenzene, 1,4-	µg/L	-	-	< 1.0	2.2	2.4	< 2.5	< 2.2	< 2.2	3.3	3.3	3.4	3.4
Dichloroethane, 1,1-	µg/L	-	-	< 1.0	1.6	2.2	1.8	1.5	1.5	3.6	3.6	9.7	9.7
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
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
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
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
Dichloromethane	µg/L	-	-	< 5.0	< 5.0	< 5.0	< 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
Dichloropropene, 1,3- (cis+trans)	µg/L	-	-	< 1.4	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-
Dichloropropene, 1,3-cis-	µg/L	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	-	< 1.0	< 0.20	< 0.20	< 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
Trichloroethane, 1,1,2-	µg/L	-	-	< 1.0	< 0.50	< 0.50	< 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
Trichlorofluoromethane	µg/L	-	-	< 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	< 0.40	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.1
Gross Parameters													
VH (C6-C10)	µg/L	-	-	< 100	-	-	136	159	159	186	186	219	219
VPH (C6-C10)	µg/L	-	-	< 100	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	290	760	520	300	380	1,020	804	804	312	312	484	484
LEPH (C10-C19)	µg/L	280	750	510	290	380	1,020	799	799	306	306	480	480
EPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	709	665	665	< 250	< 250	891	891
HEPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	709	665	665	< 250	< 250	891	891
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on demand
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.
< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		S Leachate Wet Well																							
Sample ID		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-20190903	S Leachate Wet Well	S Leachate Wet Well-20191031	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 Wet Well	S Leachate Wet Well	S Leachate Wet Well
Sample Date (yyyy mm dd)		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	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
Parameter	Units	Analytical Results																							
Volatile Organic Compounds																									
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	< 2.0	<2.0	<2.0	4.9	<20.0	<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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<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	<3.0	<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	<10.0	<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	<0.5	0.6	<5.0	<0.5	0.8	<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	<1.0	<1.0	<10.0	3.2	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	2.9	2.9	2.8	2.8	3.3	3.3	3.1	3.1	< 2.6	2	2.4	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
Dichloroethane, 1,1-	µg/L	4.1	4.1	2.5	2.5	9.7	9.7	8.3	8.3	2.3	2.2	3.8	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
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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	1.2	1.2	< 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	1.1	<10.0	<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	<1.0	<1.0	<10.0	<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	<3.0	<3.0	<30.0	<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	<1.0	<1.0	<10.0	<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	<10.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	-	-	-	-	-	-					-	-	-	-	<0.5	<0.5	<0.5	<5.0	<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	< 0.5	< 0.5	< 0.5	< 0.5	< 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
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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<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	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	1.4
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	1.3	1.3	< 1.8	< 1.8	< 1.0	< 1.0	< 1.0	< 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
Gross Parameters																									
VH (C6-C10)	µg/L	206	206	127	127	270	270	200	200	237	< 100	120	215	235	179	114	< 100	125	157	<400	<2880	121	<100	196	<100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	120	< 100	< 100	< 100	<100	<100	<400	<2880	<100	<100	<100	<100
EPH (C10-C19)	µg/L	1,020	1,020	458	458	2,580	2,580	600	600	337	< 250	2,300	424	< 250	483	544	< 2,500	<2500	368	<2500	1040	449	1340	553	575
LEPH (C10-C19)	µg/L	1,020	1,020	452	452	2,580	2,580	592	-	334	< 250	2,290	417	< 250	480	536	< 2,500	<2500	362	<2500	1030	<250	6090	<250	<250
EPH (C19-C32)	µg/L	604	604	334	334	3,470	3,470	380	380	268	439	785	322	< 250	685	313	< 2,500	3320	<250	<2500	825	443	1330	547	570
HEPH (C19-C32)	µg/L	604	604	334	334	3,470	3,470	380	-	267	439	785	322	< 250	685	313	< 2,500	3320	<250	<2500	825	<250	6090	<250	<250
MTBE																									
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	<10.0	< 1.0	< 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	5.2	-	-	-	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0
Butyric Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	10.5	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0
Caporic Acid	mg/L	< 2.0	-	2.3	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	4.9	< 2.0	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic 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	<2.0	<2.0
Isobutyric Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	4	< 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	3.5	< 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	<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	<2.0	<2.0	<2.0
Valeric Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	2.7	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0
VFAs																									
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-

Associated CARO file(s) available on demand
Associated Exova file(s): 506479, 507801, 509233, 600276, 602695, 605393, 608922, 611891, 614770, 617175, 619914, 625680, 627511, 629501.
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< Denotes concentration less than indicated detection limit or RPD less than indicated value.
- Denotes analysis not conducted.
n/a Denotes no applicable standard/guideline.
QA/QC RPD Denotes quality assurance/quality control relative percent difference
* RPDs are not calculated where one or more concentrations are less than five times RDL.
RDL Denotes reported detection limit.

Table H5: Historical Summary of Analytical Results For Leachate

Sample Location		P2 A2 Leachate MH											
Sample ID		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
Sample Date (yyyy mm dd)		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
Parameter	**Units**	**Analytical Results**											
Volatile Organic Compounds													
Chloroethane	µg/L	< 2.0	< 2.0	< 5.2	< 2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	µg/L	< 1.0	1.2	< 1.0	< 1.0	<2.0	<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
Dibromoethane, 1,2-	µg/L	< 0.3	< 0.3	< 0.3	< 0.3	<1.0	<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	<0.3	<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	<1.0	1.8	<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	<0.5	1.5	<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	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	< 1.0	< 1.0	2.2	< 1.0	<1.0	2.3	3.2	<1.0	<1.0	1.9	<1.0	<1.0
Dichloroethane, 1,2-	µg/L	2	7.6	10.6	< 1.0	<1.0	1.1	1.6	<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
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	2	6.7	5.7	<1.0	4.4	6	<1.0	<1.0	2.9	<1.0	<1.0
Dichloroethylene, 1,2-trans-	µg/L	1.8	2	2.8	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	38.3	58.1	32.4	< 3.0	<1.0	<3.0	<3.0	<3.0	<3.0	3.6	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	<3.0	<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
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	-	-	<1.0	<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	<1.0	<1.0	<1.0	<1.0	1.3	<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	<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
Trichloroethylene	µg/L	< 1.0	< 1.0	1.6	< 1.0	<1.0	1.3	<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
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 2.8	1.9	<1.0	1.6	5.2	1.7	<1.0	1.8	1.1	<1.0
Gross Parameters													
VH (C6-C10)	µg/L	284	496	439	< 100	<100	195	430	<425	<100	<100	160	106
VPH (C6-C10)	µg/L	258	413	343	< 100	<100	185	417	<425	<100	<100	158	106
EPH (C10-C19)	µg/L	299	1,150	< 2,500	< 2,500	1600	998	913	774	459	917	691	508
LEPH (C10-C19)	µg/L	299	1,140	< 2,500	< 2,500	1600	998	913	774	<250	949	<250	<250
EPH (C19-C32)	µg/L	< 250	859	< 2,500	< 2,500	16400	284	<250	<250	459	917	691	508
HEPH (C19-C32)	µg/L	< 250	859	< 2,500	< 2,500	16400	284	<250	<250	<250	949	<250	<250
MTBE													
Methyl Tert-butyl Ether [MTBE]	µg/L	4	3.5	< 9.0	< 5.0	<1.0	9.1	11.5	<1.0	4.5	9.9	6	3.3
Resin and Fatty Acids													
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	<3.0	<3.0	-	<3.0
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0
VFAs													
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	0.1	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	0.7	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	0.03	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	<1.0	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	3	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	0.5	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	0.6	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	0.7	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	<0.02	-	-	-
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	-	-	-	-	-	-	-	-	<0.02	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	0.2	-	-	-

Associated CARO file(s) available on demand

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.

<   Denotes concentration less than indicated detection limit or RPD less than indicated value.

-     Denotes analysis not conducted.

n/a Denotes no applicable standard/guideline.

QA/QC RPD Denotes quality assurance/quality control relative percent difference

*   RPDs are not calculated where one or more concentrations are less than five times RDL.

RDL Denotes reported detection limit.

APPENDIX G

QUALITY ASSURANCE AND QUALITY CONTROL

APPENDIX G – QUALITY ASSURANCE AND QUALITY CONTROL

1.0 METHODS

A quality assurance and quality control (QA/QC) program was implemented as per the operational certificate (OC). This ensures that sampling and analytical data are meaningful, reproducible, and reliable. Standard industry QA/QC procedures should be used to collect (field program) and analyze (laboratory) water samples. The following includes a summary of the QA/QC measures to be implemented during the field program and the data review, as well as QA/QC measures implemented by the laboratory.

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, are to be recorded during the stages of the monitoring program and are 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 are to be transported to the laboratory using a 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 20% of all samples collected within 48 hours of each other. A blind field duplicate sample is a second sample from the exact location 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.
- The relative percent difference (RPD – the absolute difference between the two values, divided by the mean) of duplicate analyses is used to evaluate the sample result variability. An RPD value of less than 30 percent indicates acceptable sample variability and, therefore, represents a good correlation between the duplicate samples. An RPD value greater than 30 percent may reflect “within bottle” variability (which reflects the nature of the contaminant distribution) or variation in test procedures
- Evaluation of the data acceptability based on criteria set by such laboratory.

The British Columbia Laboratory Manual contains recommended Data Quality Objectives (DQOs) for laboratory duplicate RPDs. 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

The following are considered acceptable for laboratory QA/QC samples:

- Analytical blanks below the detection limits used for the specified analyses

APPENDIX G – QUALITY ASSURANCE AND QUALITY CONTROL

- Laboratory duplicates within the DQO set by the laboratory; and,
- 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; and,
- Analysis holding time status.

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.

2.0 RESULTS

Chain-of-custody procedures were followed during the sampling events, and the chain of custody was accompanied for all 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, QA/QC samples, or duplicate samples. Samples were stored in coolers prior to submission to the analytical laboratory.

The target for QA/QC for the monitoring program for duplicates is two samples for up to every ten samples analyzed for a regulated substance. This target was met.

The laboratory met internal QA/QC requirements for field and trip blanks samples.

Tables G-1 to G-3 below summarizes analytical results for duplicate samples and includes 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.

Keltech requested a comment from Brent Whitehead, Account Manager, CARO, on the reliability of the data with high RPDs. He responded with specific information for each duplicate pair and parameter. Table A below shows the RPD values greater than the thresholds and the CARO comments. In general, the high RPDs for these analytes in the 2024 duplicate pairs appear to be due to sample heterogeneity and/or the nature of the sample (such as high sediment in total metals samples), and not due to instrument or analytical issues.

The majority of the analytical data may be relied upon with the exception of the results for Robert LakeSouth/DUP C (September 12, 2024), for total coliforms (possible lab error), and metals (possible fieldfiltering error), and the results for S Leachate Wetwell/DUP B (May 9, 2024) for DOC (possiblelaberror).

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Table A: Summary of 2024 High RPDs and Data Reliability

Sample ID	Sample Date	Parameter (RPD)	CARO Laboratory Comments
GL23-1/ DUP A	2024 05 13	Uranium (31%)	All other dissolved metals over 10x the detection limit had acceptable RPDs. This was about 18 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity
GL16-1/ DUP A	2024 05 14	Iron (89%) Thallium (34%)	All other dissolved metals over the 10x detection limit had acceptable RPDs. This was about 21 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity.
GL27-1/ DUP D	2024 09 17	Arsenic (32%)	All other dissolved metals that were over 10x the detection limit had acceptable RPDs. This was about 19 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity.
GL29-2/ DUP C	2024 05 21	Fluoride (45%) Zirconium (42%)	Other detected Anions (Bromide, Chloride, Sulfate) had RPDs within acceptance limits. Due to the nature of the samples, samples were diluted prior to analysis. Suspect sample heterogeneity issues for Fluoride. All other dissolved metals that were over 10x the detection limit had acceptable RPDs. This was about 24 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity.
Bredin Pond/ Dup A	2024 03 21	Aluminium (38%) Zirconium (50%)	These are total metal parameters. The dissolved metals were all within acceptance. The biggest source of difference is the sediment level in the sample. The rest of the total metal parameters had acceptable RPDs.
Robert Lake South/ Dup B	2024 03 22	Total coliforms (48%)	Since you are dealing with a living organism, we don't use RPDs for acceptance criteria for coliforms. We use the difference of the log values of the results with an acceptance range determined by historical laboratory duplicates and statistical values. Our current acceptance value is ~0.7168. The difference of the log values of these 2 samples for Total coliforms is 0.2113, which is within our acceptance limits.
Bredin Pond/ Dup B	2024 09 11	Aluminium (33%)	This is a total metal parameter. The dissolved metals were all within acceptance. The biggest source of difference is the sediment level in the sample. The rest of the total metal parameters had acceptable RPDs
Robert Lake South/ Dup C	2024 09 12	Aluminium (86%) Cobalt (48%) Iron (86%) Lead (40%) Manganese (87%)	To follow up on the metals for the Robert Lake South/Dup C 24I1604 sample, our Metals analyst expects an issue with collecting the sample in the field or with the field filtering. Some of the metals you highlighted are total metals (aluminum, cobalt, iron, titanium), and some are dissolved metals (manganese, aluminum).

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		Titanium (89%) Total coliform (196%) Fecal coliform (59%)	For the dissolved metals, we are concerned about the filtration, and for both total and dissolved, we are concerned with the sediment level, making the field duplicates different. Two elements that give a strong indication of high sediment are Aluminum and Iron. The values for those are significantly different in the samples. This bacteria analysis on DUP C raises some concerns. All 4 samples were run with 100mL and 1mL dilutions for Total Coliforms, but the DUP sample was only run at 100mL. The 100mL sample for Robert Lake South completely overgrew but that wasn't the case for the data recorded for DUP C. We suspect that DUP C data was not recorded correctly and was actually run as a 1mL, but we can't confirm. I would not have faith in the DUP C Total Coliform value. Another reason to not trust the Total Colifrom value for DUP C is the Fecal Coliform was similar for DUP C and Robert Lake South. But on Robert Lake South (and the other samples) the Fecal value was significantly less than Total but that wasn't the case for DUP C
NE Pond/ DUP 2	2024 10 22	Cobalt (49%) Copper (32%) Iron (56%) Nickel (123%) Total coliform (82%)	The dissolved Cobalt values had acceptable RPDs. The total didn't. The dissolved Copper values had acceptable RPDs. The total didn't. The dissolved Iron values had acceptable RPDs. The total didn't. The dissolved Nickel values had acceptable RPDs. The total didn't. In all cases, sample NE Pond had higher Total values than DUP 2. Therefore, we suspect sample heterogeneity issues—sample NE Pond probably had higher sediment values. Since you are dealing with a living organism, we don't use RPDs for acceptance criteria for coliforms. We use the difference of the log values of the results with an acceptance range determined by historical laboratory duplicates and statistical values. Our current acceptance value is ~0.7168. The difference of the log values of these 2 samples for Total Coliforms is 0.3795, which is within our acceptance limits.

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Little Robert Lake / DUP 3	2024 10 23	Molybdenum (38%) Titanium (38%) Total coliform (60%)	This sample was analyzed for total and dissolved metals. The Titanium RPD for dissolved was within acceptance criteria, but the total was over. For Molybdenum, the RPD over acceptance was dissolved, while the total RPD was within acceptance. The rest of the metals, for both total and dissolved, had RPDs within acceptance criteria. Therefore, we suspect sample heterogeneity. Since you are dealing with a living organism, we don't use RPDs for acceptance criteria for coliforms. We use the difference of the log values of the results with an acceptance range determined by historical laboratory duplicates and statistical values. Our current acceptance value is ~0.7168. The difference of the log values of these 2 samples for Total Coliforms is 0.2672, which is within our acceptance limits.
S Leachate Wetwell/ DUP B	2024 05 09	DOC (138%) Cadmium (38%)	We originally suspected a dilution error for the difference. But the instrument we use, does the dilution automatically so that shouldn't be the cause of the different. Both samples were auto-diluted 50x by the instrument. Our only thought is that the sample before DUP A was also high (and diluted 50x times) but maybe that sample carried over and interfered with the DUP A result, biasing it high. Normally there are checks to catch this but with both of those samples diluted 50x, the normal checks didn't catch any issue. I would suspect that the DUP A DOC result is biased high due to instrument carry over. All other dissolved metals that were over 10x the detection limit had acceptable RPDs. This was about 25 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity.
S Leachate Wetwell/ DUP A	2024 09 06	Total sulfide (30%) Thorium (62%) DOC (35%) Naphthalene (59%)	Polycyclic Aromatic Hydrocarbons (PAH): Naphthalene had an RPD over 30% with results over 10x the detection limit, but the RPDs for 3 compounds below the 10x detection limit were also high. Four compounds were only found in 1 sample: S Leachate Wetwell. In all cases, the PAHs were higher in the S Leachate Wetwell than the Dup A; therefore, high RPDs are suspected due to sampling issues (sample heterogeneity). Thorium had a high RPD, but all other dissolved metals that were over the 10x detection limit had acceptable RPDs. This was about 25 parameters. Therefore, it doesn't seem to be an analysis or instrument issue. Suspect sample heterogeneity. Sulfide—reported as Total Sulfide—had an RPD of 29.5%. Sample N Pumphouse MH was run as a laboratory duplicate for Total Sulfide and had an RPD of 4%, showing that the method was working well. Suspect sample heterogeneity. DOC analysis. The instrument/lab QC was all acceptable, but I noticed low-level DOC in the field and a trip blank. The samples contain high amounts of hydrocarbons (EPH/VPH over detection), so I suspect sample heterogeneity, as hydrocarbons would show up in DOC analysis.

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N Pumphouse MH/ DUP 1	2024 10 18	Ethylbenzene (32%)	Sample P1 Leachable was run as a laboratory duplicate. That sample had acceptable RPDs for all parameters over detection. Benzene and total xylenes were over-detection but had less than 10x detection limits. The RPDs for these samples were 25% and 31.6%. Similar to Ethylbenzene. Chloroethane and 1,1-Dichloroethane were detected in N Pumphouse MH but not DUP 1. All 5 parameters were higher in N Pumphouse MH than DUP 1; therefore, they suspect high RPDs due to sampling issues (sample heterogeneity).

Tables G-5 to G-7 provide the analytical results of field blank and trip blank samples.

Table G-1: Summary of Groundwater Analytical QA/QC Results

Lab Report Number			24E1685		RPD	24E2173		RPD	24E2625		RPD	24E3203		RPD	24E3317		RPD	24E3571		RPD	24I1705		RPD	24I2185		RPD	24I2545		RPD	24I2547		RPD	24I3421		RPD
Matrix Type			Water			Water			Water			Water			Water			Water			Water			Water			Water			Water			Water		
Date			13 May 2024			14 May 2024			21 May 2024			24 May 2024			27 May 2024			28 May 2024			13 Sep 2024			17 Sep 2024			18 Sep 2024			19 Sep 2024			25 Sep 2024		
Field ID			GL 23-1	DUP A		GL 16-1	DUP A		GL 29-2	DUP C		GL 41-2	DUP D		GL 39-1	DUP E		GL 28-3	DUP F		GL 2-1	DUP D		GL 27-1	DUP E		GL 39-1	DUP F		GL41-2	DUP G		GL 44-1	DUP H	
Parameter	**Unit**	**RDL**	**Analytical Results**																																
Inorganics																																			
pH (Lab)	-	0.1	7.80	7.88	1%	7.81	7.86	1%	7.79	7.79	0%	7.80	7.83	0%	7.59	7.63	1%	7.80	7.78	0%	7.91	7.79	2%	8.11	8.09	0%	7.86	7.83	0%	8.04	8.06	0%	7.96	7.93	0%
Total Dissolved Solids (Lab) (filtered)	mg/L	15	1,640	1,640	0%	2,840	2,790	2%	6,800	6,890	1%	845	831	2%	4,150	4,320	4%	7,060	7,180	2%	1,470	1,480	1%	1,600	1,600	0%	4,030	3,990	1%	718	743	3%	5,210	5,310	2%
Dissolved Organic Carbon (filtered)	mg/L	0.5	11.4	12.0	5%	2.82	1.18	NA	14	13.1	7%	3.08	3.95	25%	11.7	11.2	4%	8.55	8.27	3%	2.45	2.51	NA	3.08	3.07	0%	12.8	12.6	2%	3.89	3.48	11%	5.70	<5.00	NA
Alkalinity (total) as CaCO3	mg/L	1	928	925	0%	852	851	0%	300	298	1%	415	416	0%	569	574	1%	756	750	1%	160	163	2%	1,320	1,320	0%	580	582	0%	392	391	0%	655	649	1%
Hardness as CaCO3 (filtered)	mg/L	0.125	1,190	1,200	1%	612	642	5%	2,790	2,720	3%	469	462	2%	2,300	2,260	2%	2,850	2,890	1%	728	737	1%	100	93.4	7%	2,400	2,390	0%	431	444	3%	2,540	2,470	3%
Chemical Oxygen Demand	mg/L	20	42	47	NA	<20	<20	NA	40	31	NA	<20	<20	NA	28	25	NA	24	30	NA	20	<20	NA	<20	<20	NA	24	<20	NA	<20	<20	NA	<20	<20	NA
Alkalinity (P)	mg/L	1	<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	<1.0	<1.0	NA	<1.0	<1.0	NA
Sulfur (As S) (filtered)	mg/L	1	196	168	15%	406	424	4%	1,530	1,490	3%	34.3	34.1	1%	862	848	2%	1,560	1,580	1%	278	278	0%	5.42	5.75	6%	1,010	979	3%	31.7	33.2	5%	1,250	1,190	5%
Alkalinity (Carbonate as CaCO3)	mg/L	1	<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	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	928	925	0%	852	851	0%	300	298	1%	415	416	0%	569	574	1%	756	750	1%	160	163	2%	1,320	1,320	0%	580	582	0%	392	391	0%	655	649	1%
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<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	<1.0	<1.0	NA	<1.0	<1.0	NA
Chloride	mg/L	0.1	26.1	22.8	13%	124	122	2%	171	173	1%	170	162	5%	139	144	4%	60.4	64.7	7%	113	110	3%	37.6	38.2	2%	160	152	5%	138	136	1%	43.9	43.9	0%
Sulphate	mg/L	1	491	390	23%	1,240	1,200	3%	3,970	3,950	1%	92.1	89.7	3%	2,260	2,460	8%	4,220	4,170	1%	675	646	4%	17.7	15.7	12%	2,490	2,220	11%	85.1	83.3	2%	3,250	3,230	1%
Sodium (filtered)	mg/L	0.02	192	187	3%	725	760	5%	905	882	3%	165	162	2%	527	514	2%	1,220	1,260	3%	205	208	1%	747	685	9%	564	574	2%	157	160	2%	792	763	4%
Ammonia as N	mg/L	0.05	<0.050	<0.050	NA	0.293	0.268	9%	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	0.270	0.263	3%	0.309	0.269	14%	<0.050	<0.050	NA	<0.050	<0.050	NA	0.197	0.191	NA
Nitrate (as N)	mg/L	0.01	0.314	<0.500	NA	<0.100	<0.100	NA	<0.500	<0.500	NA	2.74	2.81	3%	12.0	13.9	15%	8.74	8.61	1%	0.042	0.042	NA	<0.010	<0.010	NA	15.3	13.1	15%	1.98	1.7	15%	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Bromide	mg/L	0.1	0.20	0.17	NA	<0.100	<0.100	NA	0.62	0.57	8%	0.16	0.16	NA	0.27	0.27	NA	<0.100	<0.100	NA	0.79	0.82	4%	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Fluoride	mg/L	0.1	0.58	0.37	NA	<1.00	<1.00	NA	1.86	1.18	45%	0.85	0.82	4%	1.43	1.21	17%	<1.00	<1.00	NA	0.56	0.58	4%	3.16	2.53	22%	<1.00	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA
Metals																																			
Aluminium (filtered)	mg/L	0.001	0.0018	<0.0010	NA	<0.0020	<0.0020	NA	0.0022	0.0034	NA	<0.0010	<0.0010	NA	0.0025	0.0029	NA	<0.0020	<0.0020	NA	<0.0010	<0.0010	NA	0.0023	0.0027	NA	0.0014	0.0016	NA	<0.0010	<0.0010	NA	0.0017	0.0014	NA
Antimony (filtered)	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000100	<0.000100	NA	0.000147	0.000144	NA	0.000064	0.000068	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	0.000057	0.000052	NA	0.000063	0.00006	NA	0.000293	0.000308	5%
Arsenic (filtered)	mg/L	0.00005	0.000511	0.000569	11%	0.0165	0.0138	18%	0.00107	0.00109	2%	0.000912	0.000904	1%	0.000324	0.000315	3%	0.000635	0.00062	2%	0.00320	0.00345	8%	0.00492	0.00676	32%	0.000380	0.000376	1%	0.000930	0.000917	1%	0.00161	0.00157	3%
Barium (filtered)	mg/L	0.0001	0.0739	0.0697	6%	0.0146	0.0148	1%	0.0233	0.0239	3%	0.0515	0.0522	1%	0.0102	0.0101	1%	0.0148	0.0146	1%	0.0513	0.0489	5%	0.541	0.505	7%	0.0108	0.0106	2%	0.0459	0.0452	2%	0.0771	0.0798	3%
Beryllium (filtered)	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	<0.000010	<0.000010	NA	0.000058	0.000052	11%	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Bismuth (filtered)	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	0.000074	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Boron (filtered)	mg/L	0.002	0.0248	0.0278	11%	0.0742	0.0729	2%	0.0557	0.0553	1%	0.0211	0.0202	4%	0.0154	0.0152	1%	0.0090	0.009	NA	0.0122	0.0122	0%	0.0815	0.0717	13%	0.0196	0.0212	8%	0.0238	0.026	9%	0.0365	0.0353	3%
Calcium (filtered)	mg/L	0.05	96	85.3	12%	68.9	71.4	4%	384	377	2%	50	50.3	1%	244	239	2%	369	373	1%	141	144	2%	13.4	12.8	5%	254	247	3%	43.9	45.6	4%	300	296	1%
Cadmium (filtered)	mg/L	0.000002	0.000136	0.000134	1%	0.0000367	0.0000415	12%	0.0000835	0.0000744	12%	<0.0000120	<0.0000100	NA	0.0000695	0.0000675	3%	0.000137	0.000145	6%	<0.0000040	<0.0000060	NA	<0.0000040	<0.0000040	NA	0.0000652	0.0000685	5%	<0.0000080	<0.0000080	NA	0.000125	0.00013	4%
Chromium (III+VI) (filtered)	mg/L	0.0005	<0.00050	<0.00050	NA	<0.00100	<0.00100	NA	<0.00100	<0.00100	NA	0.00182	0.00178	NA	<0.00100	<0.00100	NA	<0.00100	<0.00100	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	0.00165	0.00168	NA	<0.00050	<0.00050	NA
Cobalt (filtered)	mg/L	0.000005	0.00136	0.00141	4%	0.000378	0.00029	26%	0.000145	0.000134	8%	0.0000386	0.0000362	6%	0.000187	0.000199	6%	0.000170	0.000177	4%	0.0000266	0.0000297	11%	<0.0000050	<0.0000050	NA	0.000182	0.00018	1%	0.0000329	0.0000332	1%	0.000137	0.000136	1%
Copper (filtered)	mg/L	0.0001	0.00227	0.00220	3%	0.00178	<0.00020	NA	0.00212	0.0021	1%	0.00065	0.00066	2%	0.00202	0.00206	2%	0.00127	0.00129	2%	<0.00010	<0.00010	NA	<0.00010	0.00013	NA	0.00216	0.00214	1%	0.00060	0.00056	7%	0.00053	0.00054	2%
Iron (filtered)	mg/L	0.002	<0.0020	<0.0020	NA	0.889	0.341	89%	0.0520	0.0473	9%	<0.0020	<0.0020	NA	<0.0040	<0.0040	NA	<0.0040	<0.0040	NA	1.54	1.59	3%	0.361	0.469	26%	<0.0020	<0.0020	NA	<0.0020	<0.0020	NA	0.0024	0.0026	NA
Lead (filtered)	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA	<0.000050	<0.000050	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA
Lithium (filtered)	mg/L	0.00005	0.0384	0.0345	11%	0.229	0.229	0%	0.0937	0.0938	0%	0.0298	0.0286	4%	0.0777	0.073	6%	0.0419	0.0462	10%	0.0155	0.0147	5%	0.25	0.22	13%	0.0890	0.0932	5%	0.0342	0.0365	7%	0.194	0.152	24%
Magnesium (filtered)	mg/L	0.005	232	240	3%	107	112	5%	444	432	3%	83.6	81.7	2%	410	404	1%	469	476	1%	91	91.4	0%	16.2	14.9	8%	427	431	1%	78.1	80	2%	436	421	4%
Manganese (filtered)	mg/L	0.00005	0.363	0.361	1%	0.377	0.355	6%	0.0670	0.0609	10%	0.000062	0.000084	NA	0.0174	0.0187	7%	0.0546	0.0563	3%	0.185	0.188	2%	0.0752	0.0714	5%	0.0177	0.0171	3%	<0.000050	0.000052	NA	0.275	0.28	2%
Mercury (filtered)	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000040	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Molybdenum (filtered)	mg/L	0.0001	0.0148	0.0124	18%	0.0158	0.0168	6%	0.0551	0.0542	2%	0.00828	0.00833	1%	0.0231	0.023	0%	0.0133	0.0133	0%	0.0186	0.0182	2%	0.0147	0.0162	10%	0.0261	0.0255	2%	0.00924	0.00914	1%	0.0181	0.0189	4%
Nickel (filtered)	mg/L	0.00004	0.00795	0.00796	0%	0.00205	0.00163	23%	0.00463	0.00467	1%	0.000373	0.000362	3%	0.00108	0.00111	3%	0.00654	0.00673	3%	0.000054	0.000060	NA	<0.000040	0.000046	NA	0.00111	0.00114	3%	0.000322	0.000306	5%	0.00726	0.00747	3%
Phosphorus (filtered)	mg/L	0.005	<0.01	<0.01	NA	0.017	0.023	NA	0.014	0.017	NA	0.032	0.033	3%	<0.0050	<0.0050	NA	0.027	0.026	4%	<0.0050	<0.0050	NA	0.041	0.038	8%	<0.0050	<0.0050	NA	0.032	0.035	9%	<0.0050	<0.0050	NA
Potassium (filtered)	mg/L	0.02	16.2	15.8	2%	17.5	18.2	4%	21	20.2	4%	12.9	12.7	2%	14.2	14	1%	12.3	12.7	3%	4.98	4.99	0%	14.5	13.5	7%	15.7	15.7	0%	12.7	13.1	3%	24.4	24.2	1%
Selenium (filtered)	mg/L	0.0001	0.00031	0.00026	NA	<0.00020	<0.00020	NA	0.00074	0.00076	3%	0.00064	0.00061	5%	0.00057	0.00061	7%	0.00028	0.00024	NA	<0.00010	<0.00010	NA	<0.00010	<0.00010	NA	0.00053	0.00055	4%	0.00056	0.00068	19%	0.00086	0.0009	5%
Silicon (filtered)	mg/L	0	12.1	10.8	11%	5.47	5.61	3%	8.10	7.90	2%	11.2	11.0	2%	11.6	11.5	1%	11.4	11.6	2%	9.43	9.42	0%	6.60	5.98	10%	13.5	13.3	1%	11.7	12.3	5%	14.7	14.3	3%
Silver (filtered)	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Strontium (filtered)	mg/L	0.0001	4.85	4.77	2%	15.6	15.8	1%	7.63	7.41	3%	2.08	2.06	1%	6.43	6.44	0%	8.61	8.7	1%	4.67	4.66	0%	3.34	3.07	8%	6.32	6.28	1%	1.7	1.7	0%	7.88	8.15	3%
tellurium (filtered)	mg/L	0.00005	<0.00005	<0.00005	NA	<0.0001	<0.0001	NA	<0.0001	<0.0001	NA	<0.00005	<0.00005	NA	<0.0001	<0.0001	NA	<0.0001	<0.0001	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA
Thallium (filtered)	mg/L	0.000004	0.0000063	0.0000055	NA	0.0000218	0.0000307	34%	<0.0000080	<0.0000080	NA	<0.0000040	<0.0000040	NA	0.0000246	0.0000243	1%	0.0000298	0.0000273	9%	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA	0.0000278	0.0000266	4%	<0.0000040	<0.0000040	NA	0.0000217	0.0000241	10%
Thorium (filtered)	mg/L	0.00001	<0.000010	<0.000010	NA	0.000090	0.000076	17%	0.000204	0.000218	7%	<0.000010	<0.000010	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA	0.000038	0.000042	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Tin (filtered)	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA	<0.000050	<0.000050	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA	<0.000050	<0.000050	NA	<0.000050	0.000056	NA	<0.000050	<0.000050	NA	<0.000050	0.000067	NA	0.000272	0.000283	4%
Titanium (filtered)	mg/L	0.0002	<0.00020	<0.00020	NA	<0.00040	<0.00040	NA	<0.00040	<0.00040	NA	<0.00020	<0.00020	NA	<0.00040	<0.00040	NA	<0.00040	<0.00040	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA
Tungsten (filtered)	mg/L	0.0002	<0.00020	<0.00020	NA	0.00147	0.00126	15%	<0.00040	<0.00040	NA	<0.00020	<0.00020	NA	<0.00040	<0.00040	NA	<0.00040	<0.00040	NA	<0.00020	<0.00020	NA	0.00101	0.0009	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA
Uranium (filtered)	mg/L	0.000001	0.0742	0.0544	31%	0.00659	0.00698	6%	0.225	0.214	5%	0.0157	0.0155	1%	0.25	0.252	1%	0.264	0.264	0%	0.00261	0.0025	4%	0.000311	0.000379	20%	0.268	0.268	0%	0.0144	0.0145	1%	0.13	0.135	4%
Vanadium (filtered)	mg/L	0.001	<0.00100	<0.00100	NA	<0.00200	<0.00200	NA	<0.00200	<0.00200	NA	0.00208	0.00212	NA	<0.00200	<0.00200	NA	<0.00200	<0.00200	NA	<0.00100	<0.00100	NA	<0.00100	<0.00100	NA	<0.00100	<0.00100	NA	0.00214	0.00216	NA	<0.00100	<0.00100	NA
Zinc (filtered)	mg/L	0.001	0.0011	<0.0010	NA	<0.0020	0.0025	NA	0.0043	0.0084	NA	0.0010	<0.0010	NA	<0.0020	<0.0020	NA	<0.0020	<0.0020	NA	<0.0010	<0.0010	NA	<0.0010	0.001	NA	<0.0010	0.0011	NA	<0.0010	<0.0010	NA	0.0034	0.0035	NA
Zirconium (filtered)	mg/L	0.00002	0.000330	0.000370	11%	0.000353	0.000303	15%	0.000357	0.000545	42%	0.000030	0.000036	NA	0.000053	0.00007	NA	0.000363	0.000362	0%	<0.000020	<0.000020	NA	0.00124	0.00128	3%	0.000052	0.000053	NA	<0.000020	0.000026	NA	0.00089	0.00091	2%

RPD: Relative percentage difference

RDL: Reporting detection limit

Table G-2: Summary of Surface Water Analytical QA/QC Results

Lab Report Number			24C2549		RPD	24C2753		RPD	24E0993		RPD	24E1456		RPD	24I1405		RPD	24I1604		RPD	24J2950		RPD	24J3163		RPD
Matrix Type			Water			Water			Water			Water			Water			Water			Water			Water		
Date			21 Mar 2024			22 Mar 2024			08 May 2024			10 May 2024			11 Sep 2024			12 Sep 2024			22 Oct 2024			23 Oct 2024		
Field ID			Bredin Pond	Dup A		Robert Lake South	Dup B		Tutt Pond	Dup A		Bredin Pond	Dup B		Bredin Pond	DUP B		Robert Lake South	DUP C		NE Pond	DUP 2		Little Robert Lake	DUP 3	
Parameter	**Unit**	**RDL**	**Analytical Results**																							
Inorganics																										
pH (Lab)	-	0.1	8.78	8.79	0%	9.04	9.04	0%	8.52	8.53	0%	8.83	8.75	1%	8.88	8.92	0%	9.18	9.2	0%	9.16	9.16	0%	8.43	8.46	0%
Total Dissolved Solids (Lab) (filtered)	mg/L	15	961	940	2%	11,200	11,300	1%	1,720	1,720	0%	850	870	2%	960	956	0%	15,700	15,000	5%	2,390	2,270	5%	5,550	5,660	2%
Dissolved Organic Carbon (filtered)	mg/L	0.5	6.17	6.66	8%	56.4	69.7	21%	12.0	11.5	4%	6.81	7.43	9%	8.06	8.49	5%	96.4	93.4	3%	18.5	18.2	2%	24.6	20.8	17%
Total Organic Carbon	mg/L	0.5	6.95	7.19	3%	67.7	71.4	5%	12.1	12.1	0%	8.02	7.76	3%	8.58	8.77	2%	110	108	2%	21.5	21.3	1%	24.7	26.2	6%
Alkalinity (total) as CaCO3	mg/L	1	504	505	0%	1,540	1,540	0%	621	630	1%	500	499	0%	490	495	1%	2,150	2,140	0%	971	971	0%	744	745	0%
Hardness as CaCO3	mg/L	0.125	616	560	10%	1,760	1,760	0%	969	1,030	6%	584	572	2%	575	596	4%	2,800	2,530	10%	1,240	1,210	2%	1,860	2,050	10%
Hardness as CaCO3 (filtered)	mg/L	0.125	550	564	3%	1,750	1,710	2%	915	956	4%	567	566	0%	507	504	1%	2,820	2,540	10%	1,270	1,270	0%	2,040	1,910	7%
Chemical Oxygen Demand	mg/L	20	<20	23	NA	210	244	15%	42	41	NA	20	26	NA	27	29	NA	336	342	2%	54	56	NA	70	70	NA
Alkalinity (P)	mg/L	1	84.4	84.5	0%	292	295	1%	<1.0	<1.0	NA	64	56	13%	72.8	74.8	3%	461	467	1%	200	198	1%	33.5	38.4	14%
Sulfur (As S)	mg/L	1	79	75.6	4%	2,430	2,470	2%	240	248	3%	68.8	67.9	1%	60.3	58.5	3%	3,590	3,890	8%	274	270	1%	1,190	1,320	10%
Sulfur (As S) (filtered)	mg/L	1	77.5	77.7	0%	2,690	2,640	2%	232	244	5%	67	66.4	1%	58.4	58.9	1%	3,460	4,020	15%	265	273	3%	1,250	1,300	4%
Alkalinity (Carbonate as CaCO3)	mg/L	1	169	169	0%	583	590	1%	<1.0	<1.0	NA	128	115	11%	146	150	3%	922	934	1%	400	397	1%	67.1	76.8	13%
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	335	336	0%	957	946	1%	621	630	1%	373	384	3%	345	345	0%	1,230	1,210	2%	571	574	1%	677	668	1%
Nitrite + Nitrate as N	mg/L	0.01	<0.100	<0.500	NA	0.139	<0.100	NA	<0.0100	<0.0100	NA	<0.100	<0.500	NA	<0.0100	<0.0100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Electrical Conductivity (Lab)	µS/cm	2	1,460	1,470	1%	11,400	11,100	3%	2,390	2,380	0%	1,630	1,580	3%	1,560	1,560	0%	18,400	18,400	0%	3,140	3,140	0%	6,420	6,440	0%
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<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
Chloride	mg/L	0.1	130	145	11%	383	366	5%	219	219	0%	140	135	4%	142	138	3%	638	612	4%	221	227	3%	134	135	1%
Sulphate	mg/L	1	190	200	5%	6,660	6,740	1%	632	639	1%	201	224	11%	168	169	1%	11,200	10,400	7%	639	672	5%	3,450	3,360	3%
Sodium	mg/L	0.02	181	169	7%	3,210	3,210	0%	323	339	5%	166	163	2%	169	161	5%	4,900	5,000	2%	419	423	1%	995	1,120	12%
Sodium (filtered)	mg/L	0.02	172	171	1%	3,240	3,180	2%	310	323	4%	159	159	0%	144	143	1%	4,630	5,020	8%	437	436	0%	1,150	1,100	4%
Ammonia as N	mg/L	0.05	0.061	<0.050	NA	0.230	0.176	NA	0.150	0.147	NA	<0.050	<0.050	NA	0.133	0.132	NA	0.151	0.139	NA	0.069	0.09	NA	0.528	0.528	0%
Nitrate (as N)	mg/L	0.01	<0.100	<0.500	NA	0.139	<0.100	NA	<0.010	<0.010	NA	<0.100	<0.500	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.100	NA	<0.100	<0.100	NA
Kjeldahl Nitrogen Total	mg/L	0.05	0.719	0.727	1%	6.73	6.59	2%	1.22	1.17	4%	0.635	0.588	8%	0.996	1.09	9%	9.84	9.74	1%	1.61	1.5	7%	2.72	2.61	4%
Bromide	mg/L	0.1	0.12	0.12	NA	1.520	1.470	3%	0.25	0.26	NA	0.11	0.12	NA	<0.1	0.15	NA	2.320	2.350	1%	0.26	<1.0	NA	<1.0	<1.0	NA
Fluoride	mg/L	0.1	1.08	1	8%	<1.00	<1.00	NA	1.03	1.06	3%	0.98	1.02	4%	1.11	1.12	1%	<1.00	<1.00	NA	1.76	1.38	24%	<1.00	<1.00	NA
Nitrogen (Total)	mg/L	0.050	0.719	0.727	1%	6.870	6.590	4%	1.220	1.170	4%	0.635	0.588	8%	0.996	1.090	9%	9.840	9.740	1%	1.610	1.500	7%	2.720	2.610	4%
Orthophosphate as P	mg/L	0.005	<0.0050	<0.0050	NA	1.53	1.54	1%	0.273	0.25	9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus (P)	mg/L	0.005	0.0377	0.0382	1%	3.31	3.27	1%	0.329	0.315	4%	0.042	0.0419	0%	0.0728	0.0752	3%	3.68	3.6	2%	0.0967	0.0964	0%	1.99	1.94	3%
Metals (Total)																										
Aluminium	mg/L	0.001	0.0391	0.0267	38%	0.556	0.555	0%	0.0973	0.091	7%	0.0307	0.0245	22%	0.0055	0.0077	33%	0.527	0.209	86%	0.0893	0.0804	10%	0.0898	0.118	27%
Antimony	mg/L	0.00005	0.000073	0.00009	NA	0.000522	<0.000500	NA	0.000203	0.000207	NA	0.000107	0.000104	NA	0.000081	0.000091	NA	0.000694	0.000568	20%	0.000338	0.000332	2%	0.000586	0.000657	11%
Arsenic	mg/L	0.00005	0.000863	0.000875	1%	0.00818	0.00829	1%	0.00348	0.00358	3%	0.00101	0.00104	3%	0.000971	0.000896	8%	0.0132	0.013	2%	0.00506	0.00503	1%	0.00721	0.00759	5%
Barium	mg/L	0.0001	0.0892	0.0846	5%	0.0503	0.0498	1%	0.0687	0.0699	2%	0.0835	0.0828	1%	0.086	0.0799	7%	0.0666	0.0589	12%	0.0928	0.0921	1%	0.059	0.0638	8%
Beryllium	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Bismuth	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	<0.000010	<0.000010	NA	0.000022	0.000012	NA
Boron	mg/L	0.002	0.0251	0.023	9%	0.0495	0.0529	7%	0.0368	0.0437	17%	0.0224	0.0211	6%	0.0178	0.0166	7%	0.0703	0.0913	26%	0.0297	0.0288	3%	0.0231	0.0234	1%
Calcium	mg/L	0.05	30.6	28.6	7%	37.5	38.2	2%	68.7	72.4	5%	31.4	31.1	1%	22.6	22.2	2%	28.4	30.5	7%	14.3	14.1	1%	172	186	8%
Cadmium	mg/L	0.000002	<0.0000040	<0.0000040	NA	<0.0000400	<0.0000600	NA	<0.0000080	<0.0000100	NA	<0.0000040	<0.0000050	NA	<0.0000040	<0.0000060	NA	<0.0000800	<0.0000600	NA	<0.0000100	<0.0000120	NA	<0.0000040	<0.0000060	NA
Chromium (III+VI)	mg/L	0.0005	<0.00050	0.00051	NA	<0.00500	<0.00500	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	<0.00250	<0.00250	NA	0.0198	<0.00050	NA	<0.00050	<0.00050	NA
Cobalt	mg/L	0.000005	0.000113	0.000111	2%	0.000801	0.000819	2%	0.000481	0.00048	0%	0.000121	0.000119	2%	0.0000716	0.0000674	6%	0.000635	0.000388	48%	0.000469	0.000285	49%	0.000343	0.000368	7%
Copper	mg/L	0.0001	0.00049	0.00048	NA	0.00313	0.00325	4%	0.00069	0.00072	4%	0.0005	0.0005	NA	0.00716	<0.00020	NA	0.0018	0.0014	25%	0.00097	0.0007	32%	0.00028	0.00032	NA
Iron	mg/L	0.002	0.0261	0.0282	8%	0.601	0.607	1%	0.119	0.123	3%	0.0368	0.0349	5%	0.0076	0.0088	NA	0.567	0.227	86%	0.156	0.0875	56%	0.131	0.156	17%
Lead	mg/L	0.00005	<0.000050	<0.000050	NA	0.000654	0.000669	2%	0.000084	0.000091	NA	<0.000050	0.000053	NA	<0.000050	<0.000050	NA	0.000674	0.000448	40%	0.000129	0.000123	NA	0.000071	0.00008	NA
Lithium	mg/L	0.00005	0.0316	0.0298	6%	0.0227	0.0234	3%	0.0296	0.0338	13%	0.0297	0.0276	7%	0.0358	0.0313	13%	0.0244	0.032	27%	0.0514	0.0497	3%	0.0487	0.0526	8%
Magnesium	mg/L	0.005	131	119	10%	405	404	0%	194	206	6%	123	120	2%	126	131	4%	664	595	11%	293	285	3%	347	384	10%
Manganese	mg/L	0.00005	0.0106	0.0106	0%	0.121	0.118	3%	0.103	0.103	0%	0.0153	0.0151	1%	0.0226	0.0215	5%	0.0739	0.0547	30%	0.0148	0.013	13%	0.951	1.03	8%
Mercury	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Molybdenum	mg/L	0.00001	0.0150	0.0139	8%	0.106	0.106	0%	0.0114	0.0115	1%	0.0137	0.0137	0%	0.0123	0.0115	7%	0.127	0.124	2%	0.0305	0.0297	3%	0.00845	0.00907	7%
Nickel	mg/L	0.00004	0.000976	0.00102	4%	0.00617	0.00586	5%	0.00259	0.00259	0%	0.000912	0.000938	3%	0.00071	0.000761	7%	0.00556	0.00547	2%	0.0117	0.00278	123%	0.00146	0.00156	7%
Phosphorus	mg/L	0.005	0.035	0.039	11%	3.53	3.53	0%	0.318	0.353	10%	0.038	0.039	3%	0.089	0.087	2%	4.2	4.21	0%	0.112	0.111	1%	2.07	2.26	9%
Potassium	mg/L	0.02	12.2	11.8	3%	76.8	77.5	1%	13.9	14.5	4%	11.2	11	2%	12.1	11.6	4%	122	112	9%	18.9	18.3	3%	35.8	39.9	11%
Selenium	mg/L	0.0001	0.00088	0.0009	2%	0.00122	0.00144	17%	0.00060	0.00057	5%	0.00093	0.00096	3%	0.00086	0.00078	10%	0.00162	0.00169	4%	0.00035	0.00041	NA	0.00035	0.00036	NA
Silicon	mg/L	0.100	0.29	0.4	NA	4.820	5.000	4%	1.080	1.190	10%	0.38	0.37	NA	10.100	9.550	6%	6.100	5.340	13%	0.56	0.58	4%	3.700	4.120	11%
Silver	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	0.000016	0.000016	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	<0.000010	0.000017	NA	<0.000010	<0.000010	NA
Strontium	mg/L	0.0001	2.98	2.92	2%	5.06	4.97	2%	4.84	4.97	3%	2.88	2.85	1%	3.06	2.81	9%	7.19	6.96	3%	4.19	4.15	1%	6.51	7.02	8%
tellurium	mg/L	0.00005	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.00005	<0.00005	NA	<0.000250	<0.000250	NA	<0.00005	0.000062	NA	<0.00005	<0.00005	NA
Thallium	mg/L	0.000004	<0.0000040	<0.0000040	NA	<0.0000400	<0.0000400	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA	<0.0000200	<0.0000200	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA
Thorium	mg/L	0.00001	<0.000010	0.000036	NA	0.00036	0.000326	10%	0.000105	0.000082	25%	<0.000010	0.00001	NA	0.000011	0.000021	NA	0.000404	0.000404	0%	0.000041	0.000058	NA	0.000015	0.000027	NA
Tin	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000500	<0.000500	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000250	<0.000250	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA
Titanium	mg/L	0.0002	0.00160	0.00191	18%	0.0286	0.0309	8%	0.00506	0.00453	11%	0.00124	0.00104	18%	0.00024	0.00031	NA	0.0283	0.0109	89%	0.00452	0.00551	20%	0.00548	0.00809	38%
Tungsten	mg/L	0.0002	<0.00020	<0.00020	NA	<0.00200	<0.00200	NA	0.00021	0.00022	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	0.00248	0.00237	5%	0.00028	0.00029	NA	<0.00020	<0.00020	NA
Uranium	mg/L	0.000001	0.0233	0.0215	8%	0.135	0.133	1%	0.0337	0.034	1%	0.0236	0.0238	1%	0.0194	0.0184	5%	0.171	0.164	4%	0.0424	0.0433	2%	0.0345	0.036	4%
Vanadium	mg/L	0.001	0.00247	0.00248	NA	<0.0100	<0.0100	NA	0.00419	0.00411	NA	0.00244	0.0023	NA	0.00108	<0.00100	NA	<0.00500	<0.00500	NA	0.00473	0.00455	NA	0.00179	0.00199	NA
Zinc	mg/L	0.001	<0.0010	<0.0010	NA	<0.0100	<0.0100	NA	<0.0010	<0.0010	NA	<0.0010	<0.0010	NA	0.0015	<0.0010	NA	<0.0050	<0.0050	NA	0.0023	<0.0010	NA	<0.0010	<0.0010	NA
Zirconium	mg/L	0.00002	0.000147	0.000247	51%	0.00386	0.00408	6%	0.000723	0.000607	17%	0.000085	0.000082	NA	0.000027	0.000035	NA	0.00267	0.00243	9%	0.000494	0.000552	11%	0.000358	0.000444	21%
Metals (Dissolved)																										
Aluminium	mg/L	0.001	0.0025	0.0018	NA	0.0137	0.0127	8%	0.0035	0.0033	NA	0.0055	0.0062	12%	<0.0010	0.0012	NA	0.207	<0.0050	NA	0.0034	0.0033	NA	0.0021	0.0028	NA
Antimony	mg/L	0.00005	0.000089	0.000079	NA	<0.000500	<0.000500	NA	0.000239	0.000234	NA	0.00013	0.000097	NA	0.000099	0.000081	NA	0.000604	0.000635	5%	0.000356	0.000385	8%	0.000604	0.000571	6%
Arsenic	mg/L	0.00005	0.00088	0.000888	1%	0.00842	0.00786	7%	0.00347	0.0037	6%	0.00108	0.00108	0%	0.000896	0.00085	5%	0.0138	0.0128	8%	0.00544	0.00535	2%	0.00743	0.00689	8%
Barium	mg/L	0.0001	0.0877	0.0869	1%	0.0426	0.0429	1%	0.0724	0.0753	4%	0.0821	0.0829	1%	0.079	0.0775	2%	0.06	0.0513	16%	0.0916	0.0911	1%	0.0594	0.056	6%
Beryllium	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	<0.000010	<0.000010	NA	<0.000010	<0.000020	NA
Bismuth	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	0.000019	0.000021	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	<0.000010	<0.000010	NA	<0.000010	<0.000020	NA
Boron	mg/L	0.002	0.0227	0.0207	9%	0.0639	0.0624	2%	0.032	0.0344	7%	0.0222	0.0234	5%	0.0151	0.0149	1%	0.0865	0.0892	3%	0.0292	0.029	1%	0.0233	0.0302	26%
Calcium	mg/L	0.05	21.6	27.3	23%	40.6	40.6	0%	64.5	64.7	0%	29.6	29.4	1%	21.8	21.6	1%	27.1	29.1	7%	14	14.2	1%	174	166	5%
Cadmium	mg/L	0.000002	<0.0000040	<0.0000040	NA	<0.0000200	<0.0000400	NA	<0.0000030	<0.0000040	NA	<0.0000080	<0.0000040	NA	<0.0000040	<0.0000060	NA	<0.0000500	<0.0000300	NA	<0.0000100	<0.0000080	NA	<0.0000040	<0.0000040	NA
Chromium (III+VI)	mg/L	0.0005	<0.00050	<0.00050	NA	<0.00500	<0.00500	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	<0.00050	<0.00050	NA	<0.00250	<0.00250	NA	<0.00050	<0.00050	NA	<0.00050	<0.00100	NA
Cobalt	mg/L	0.000005	0.0000987	0.000095	4%	0.000513	0.0005	3%	0.000389	0.000403	4%	0.000102	0.000109	7%	0.0000538	0.0000566	5%	0.0003	0.000222	30%	0.000228	0.000227	0%	0.000313	0.000285	9%
Copper	mg/L	0.0001	0.00029	0.00032	NA	0.00184	0.0016	14%	0.00056	0.00048	NA	0.00048	0.00045	NA	<0.00010	0.00015	NA	0.00106	0.00122	14%	0.00053	0.00058	9%	0.0002	<0.00020	NA
Iron	mg/L	0.002	0.0024	0.0026	NA	<0.0200	<0.0200	NA	0.0077	0.0076	NA	0.0098	0.0088	NA	<0.0020	<0.0020	NA	0.0467	<0.0100	NA	0.0127	0.0128	1%	0.0277	0.0284	2%
Lead	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000500	<0.000500	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	0.000426	0.000304	33%	0.000069	0.000076	NA	<0.000050	<0.000100	NA
Lithium	mg/L	0.00005	0.0345	0.0293	16%	0.0241	0.0244	1%	0.0293	0.0325	10%	0.0293	0.0296	1%	0.0321	0.0316	2%	0.0322	0.0328	2%	0.0522	0.0517	1%	0.0622	0.0559	11%
Magnesium	mg/L	0.005	120	120	0%	400	390	3%	183	193	5%	120	120	0%	110	109	1%	668	599	11%	299	300	0%	389	362	7%
Manganese	mg/L	0.00005	0.00161	0.00139	15%	0.0378	0.0362	4%	0.0965	0.102	6%	0.00999	0.0101	1%	0.0101	0.00976	3%	0.036	0.0141	87%	0.0097	0.00972	0%	1	0.972	3%
Molybdenum	mg/L	0.00001	0.0118	0.0119	1%	0.115	0.106	8%	0.00934	0.0097	4%	0.0132	0.0134	2%	0.00906	0.0093	3%	0.125	0.124	1%	0.0259	0.0264	2%	0.00758	0.0111	38%
Nickel	mg/L	0.00004	0.000902	0.000937	4%	0.00494	0.00482	2%	0.00241	0.0023	5%	0.000923	0.000916	1%	0.000596	0.000595	0%	0.00487	0.00441	10%	0.00269	0.00269	0%	0.00139	0.00142	2%
Phosphorus	mg/L	0.005	0.015	0.013	NA	3.01	3.01	0%	0.334	0.359	7%	0.034	0.035	3%	0.034	0.032	6%	2.48	2.07	18%	0.05	0.046	8%	1.74	1.69	3%
Potassium	mg/L	0.02	12	12.1	1%	76.4	75.3	1%	14.2	15.2	7%	10.9	11	1%	10.9	10.8	1%	128	112	13%	19.3	19.3	0%	37.6	36	4%
Selenium	mg/L	0.0001	0.00092	0.00091	1%	0.00117	0.001	16%	0.00054	0.00055	2%	0.00113	0.00126	11%	0.00084	0.0008	5%	0.0013	0.0012	8%	0.00034	0.00037	NA	0.00031	0.00035	NA
Silicon	mg/L	0.100	0.15	0.13	NA	3.310	3.300	0%	0.9	0.94	4%	0.28	0.29	NA	9.580	9.590	0%	4.810	4.750	1%	0.34	0.34	NA	3.740	3.720	1%
Silver	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000100	<0.000100	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000050	<0.000050	NA	0.00001	<0.000010	NA	<0.000010	<0.000020	NA
Strontium	mg/L	0.0001	2.87	2.96	3%	4.86	4.81	1%	4.86	5.06	4%	2.9	2.9	0%	2.85	2.79	2%	7.86	7.11	10%	4.17	4.13	1%	6.56	6.3	4%
tellurium	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	<0.000250	<0.000250	NA	<0.000050	<0.000050	NA	<0.000050	<0.00010	NA
Thallium	mg/L	0.000004	<0.0000040	<0.0000040	NA	<0.0000400	<0.0000400	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000040	NA	<0.0000200	<0.0000200	NA	<0.0000040	<0.0000040	NA	<0.0000040	<0.0000080	NA
Thorium	mg/L	0.00001	<0.000010	<0.000010	NA	0.000877	0.000719	20%	0.000014	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	0.00157	<0.000850	NA	0.000012	<0.000010	NA	0.000018	<0.000020	NA
Tin	mg/L	0.00005	<0.000050	<0.000050	NA	<0.000500	<0.000500	NA	<0.000050	<0.000050	NA	<0.000050	<0.000050	NA	0.000079	0.0001	NA	<0.000250	<0.000250	NA	0.000058	0.000104	NA	<0.000050	<0.000100	NA
Titanium	mg/L	0.0002	0.00023	<0.00020	NA	0.00207	<0.00200	NA	0.00037	0.00042	NA	0.00029	0.00032	NA	<0.00020	<0.00020	NA	0.00702	<0.00100	NA	0.00069	0.00073	NA	0.00128	0.00119	7%
Tungsten	mg/L	0.0002	<0.00020	<0.00020	NA	<0.00200	<0.00200	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	<0.00020	<0.00020	NA	0.00253	0.00238	6%	0.00027	0.00026	NA	<0.00020	<0.00040	NA
Uranium	mg/L	0.000001	0.0173	0.0175	1%	0.134	0.128	5%	0.0249	0.025	0%	0.022	0.0226	3%	0.0143	0.0138	4%	0.168	0.164	2%	0.0372	0.0384	3%	0.0307	0.0305	1%
Vanadium	mg/L	0.001	0.00237	0.00237	NA	<0.0100	<0.0100	NA	0.00358	0.00369	NA	0.00223	0.00233	NA	<0.00100	<0.00100	NA	<0.00500	<0.00500	NA	0.00423	0.0042	NA	0.00176	<0.00200	NA
Zinc	mg/L	0.001	<0.0010	<0.0010	NA	<0.0100	<0.0100	NA	<0.0010	<0.0010	NA	0.0026	<0.0010	NA	<0.0010	<0.0010	NA	<0.0050	<0.0050	NA	<0.0010	<0.0010	NA	<0.0010	<0.0020	NA
Zirconium	mg/L	0.00002	0.000153	0.000143	7%	0.00537	0.00488	10%	0.000725	0.000726	0%	0.000095	0.000162	NA	0.000022	0.000022	NA	0.0029	0.00287	1%	0.000619	0.00062	0%	0.000375	0.000388	3%
Biological																										
Total Coliforms	cfu/100 mL	1	204	247	19%	1,420	2,310	48%	> 2420	> 2420	NA	46	36	24%	1,410	1,550	9%	141,000	1,300	196%	242	101	82%	457	247	60%
Faecal Coliforms	CFU/100mL	1	4	3	NA	<1	<1	NA	1	4	NA	4	6	NA	58	47	21%	613	1,120	59%	2	3	NA	14	12	15%

RPD: Relative percentage difference

RDL: Reporting detection limit

Table G-3: Summary of Leachate QA/QC Results

Lab Report Number			24E1419		RPD	24I0837		RPD	24J2668		RPD
Matrix Type			Water			Water			Water		
Date			09 May 2024			06 Sep 2024			18 Oct 2024		
Field ID			S Leachate Wetwell	DUP B		S Leachate Wet Well (LS#2)	DUP A		N Pumphouse MH	DUP 1	
Parameter	**Unit**	**RDL**	**Analytical Results**								
PHCs											
VH (C6-C10)	µg/L	100	147	159	NA	153	158	NA	<100	<100	NA
VPH (VH C6-C10 - BTEXS)	µg/L	100	108	123	NA	127	130	NA	<100	<100	NA
EPH C10-C19	µg/L	250	334	433	NA	944	1,440	NA	829	394	NA
EPH C19-C32	µg/L	250	<250	<250	NA	453	390	NA	5,000	<250	NA
LEPH	µg/L	250	329	428	NA	936	1,440	NA	824	392	NA
HEPH	µg/L	250	<250	<250	NA	453	390	NA	5,000	<250	NA
BTEX											
Benzene	µg/L	0.5	4.2	3.8	10%	3.3	3.4	3%	2.7	2.1	NA
Toluene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ethylbenzene	µg/L	1	15.6	14.3	9%	13.3	13.7	3%	7.7	5.6	32%
Xylene Total	µg/L	2	19.0	17.6	8%	9.2	10.4	NA	5.5	4	NA
Carboxylic Acids											
Propanoic acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Acetic Acid	µg/L	3,000	4,100	<3,000	NA	4,400	<3,000	NA	<3,000	<3,000	NA
Valeric Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Other											
Butyric Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Hexanoic Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Heptanoic Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Isobutyric Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Isocaproic Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Isovaleric Acid	µg/L	2,000	<2,000	<2,000	NA	<2,000	<2,000	NA	<2,000	<2,000	NA
Inorganics											
pH (Lab)	-	0.1	7.75	7.82	1%	7.84	7.92	1%	8.02	8.06	0%
Total Dissolved Solids (Lab) (filtered)	mg/L	15	10,900	11,000	1%	7,910	7,270	8%	4,690	4,840	3%
Alkalinity (total) as CaCO3	mg/L	1	4,530	4,750	5%	4,880	4,910	1%	2,480	2,470	0%
Hardness as CaCO3 (filtered)	mg/L	0.125	2,440	2,390	2%	1,460	1,590	9%	1,230	1,230	0%
Chemical Oxygen Demand	mg/L	20	690	673	2%	702	725	3%	316	312	1%
Alkalinity (P)	mg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Sulfur (As S) (filtered)	mg/L	1	730	745	2%	478	421	13%	315	317	1%
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1.0	4,750	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	4,530	<1.0	NA	4,880	4,910	1%	2,480	2,470	0%
Electrical Conductivity (Lab)	µS/cm	2	14,400	14,500	1%	11,200	11,200	0%	7,300	7,290	0%
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Chloride	mg/L	0.1	680	698	3%	607	688	13%	390	395	1%
Sulphate	mg/L	1	2,150	2,160	0%	910	973	7%	969	919	5%
Sodium (filtered)	mg/L	0.02	2,800	2,810	0%	2,120	2,170	2%	1,280	1,290	1%
Ammonia as N	mg/L	0.05	148	146	1%	183	185	1%	81.7	82.5	1%
Biochemical Oxygen Demand	mg/L	5.4	<67.6	<67.6	NA	101	92.3	9%	17.7	18.2	NA
Nitrate (as N)	mg/L	0.01	296	315	6%	<0.100	<0.100	NA	48.1	49.4	3%
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	NA	<0.100	<0.100	NA	2.08	1.8	14%
Bromide	mg/L	0.100	<0.100	7.760	NA	3.480	3.360	4%	2.280	2.300	1%
Fluoride	mg/L	0.1	<0.10	<0.10	NA	<1.00	<1.00	NA	<1.00	<1.00	NA
Total sulfide	mg/L	0.2	3.47	3.24	7%	54.0	40.1	30%	11.3	9.1	22%
Phosphate	mg/L	0.005	1.910	1.930	1%	-	-	-	-	-	-
Phosphorus (P)	mg/L	0.005	4.61	4.58	1%	4.43	4.28	3%	2.33	2.34	0%
Metals (Dissolved)											
Aluminium	mg/L	0.001	0.0530	0.0476	11%	0.0565	0.0576	2%	0.0222	0.0231	4%
Antimony	mg/L	0.00005	0.0143	0.0142	1%	0.00731	0.00777	6%	0.00594	0.0062	4%
Arsenic	mg/L	0.00005	0.0422	0.0431	2%	0.0261	0.0337	25%	0.0184	0.0185	1%
Barium	mg/L	0.0001	0.162	0.16	1%	0.205	0.219	7%	0.138	0.14	1%
Beryllium	mg/L	0.00001	<0.000100	<0.000100	NA	0.000033	0.000024	NA	<0.000020	0.000023	NA
Bismuth	mg/L	0.00001	<0.000100	<0.000100	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA
Boron	mg/L	0.002	2.67	2.8	5%	3.76	3.82	2%	1.29	1.37	6%
Calcium	mg/L	0.05	469	458	2%	147	138	6%	142	143	1%
Cadmium	mg/L	0.000002	0.0000511	0.0000348	38%	<0.0000040	<0.0000080	NA	0.0000209	0.0000216	3%
Chromium (III+VI)	mg/L	0.0005	0.0209	0.0222	6%	0.0220	0.0231	5%	0.0120	0.0121	1%
Cobalt	mg/L	0.000005	0.0118	0.0123	4%	0.0122	0.0138	12%	0.00602	0.00597	1%
Copper	mg/L	0.0001	<0.00100	0.0012	NA	<0.00020	0.0002	NA	<0.00020	<0.00020	NA
Iron	mg/L	0.002	0.203	0.205	1%	0.175	0.204	15%	0.108	0.109	1%
Lead	mg/L	0.00005	<0.000500	<0.000500	NA	<0.000100	<0.000100	NA	<0.000100	<0.000100	NA
Lithium	mg/L	0.00005	0.0577	0.0633	9%	0.0830	0.0947	13%	0.0412	0.0465	12%
Magnesium	mg/L	0.005	308	303	2%	266	303	13%	212	211	0%
Manganese	mg/L	0.00005	0.153	0.158	3%	0.41	0.434	6%	0.165	0.163	1%
Mercury	mg/L	0.00001	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA	<0.000010	<0.000010	NA
Molybdenum	mg/L	0.00001	0.00753	0.00786	4%	0.0064	0.00614	4%	0.00948	0.00968	2%
Nickel	mg/L	0.00004	0.0225	0.0222	1%	0.0205	0.0231	12%	0.0113	0.0118	4%
Phosphorus	mg/L	0.005	3.23	3.44	6%	3.18	4.06	24%	1.94	1.93	1%
Potassium	mg/L	0.02	259	258	0%	315	324	3%	137	132	4%
Selenium	mg/L	0.0001	<0.00100	0.00123	NA	0.00121	0.00117	3%	0.00087	0.00087	0%
Silicon	mg/L	0.100	16.4	17.8	8%	20.4	21.1	3%	15.2	15.4	1%
Silver	mg/L	0.00001	<0.000100	<0.000100	NA	<0.000020	<0.000020	NA	<0.000020	<0.000020	NA
Strontium	mg/L	0.0001	5.12	5.45	6%	3.55	3.77	6%	3.48	3.52	1%
tellurium	mg/L	0.00005	<0.0005	<0.0005	NA	<0.0001	<0.0001	NA	<0.0001	<0.0001	NA
Thallium	mg/L	0.000004	<0.0000400	<0.0000400	NA	<0.0000080	<0.0000080	NA	<0.0000080	<0.0000080	NA
Thorium	mg/L	0.00001	<0.000100	0.000438	NA	0.000061	0.000116	62%	<0.000020	<0.000020	NA
Tin	mg/L	0.00005	0.0395	0.0397	1%	0.0186	0.0185	1%	0.0117	0.012	3%
Titanium	mg/L	0.0002	0.0587	0.056	5%	0.0565	0.0535	5%	0.0319	0.0346	8%
Tungsten	mg/L	0.0002	0.00445	0.00448	1%	0.00362	0.00389	7%	0.00270	0.00266	1%
Uranium	mg/L	0.000001	0.0122	0.0124	2%	0.00739	0.00863	15%	0.0151	0.0152	1%
Vanadium	mg/L	0.001	0.0132	0.0131	1%	0.0135	0.0143	6%	0.00808	0.008	1%
Zinc	mg/L	0.001	<0.0100	<0.0100	NA	<0.0020	<0.0020	NA	<0.0020	<0.0020	NA
Zirconium	mg/L	0.00002	0.0296	0.0294	1%	0.0265	0.0271	2%	0.0168	0.0173	3%
MAH											
Styrene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Halogenated Benzenes											
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	NA
1,3-dichlorobenzene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
1,4-dichlorobenzene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Chlorobenzene	µg/L	1	1.2	1	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Chlorinated Hydrocarbons											
1,1,1-trichloroethane	µg/L	1	<1.0	<1.0	NA	<1.0	<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	<0.5	<0.5	NA
1,1,2-trichloroethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
1,1-dichloroethane	µg/L	1	1.4	1.3	NA	<1.0	<1.0	NA	1.2	<1.0	NA
1,1-dichloroethene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
1,2-dichloroethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
1,2-dichloropropane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Bromoform	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Bromodichloromethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<0.5	<0.5	NA
Chlorodibromomethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Chloroform	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Chloroethane	µg/L	2	<2.0	<2.0	NA	<2.0	<2.0	NA	2.3	<2.0	NA
cis-1,2-dichloroethene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Dibromomethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Dichloromethane	µg/L	3	<3.0	<3.0	NA	<3.0	<3.0	NA	<3.0	<3.0	NA
Trichloroethene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Tetrachloroethene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
trans-1,2-dichloroethene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Vinyl chloride	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Halogenated Hydrocarbons											
1,2-dibromoethane	µg/L	0.3	<0.3	<0.3	NA	<0.3	<0.3	NA	<0.3	<0.3	NA
Trichlorofluoromethane	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Organic											
Dissolved Organic Carbon (filtered)	mg/L	0.5	140	756	138%	122	174	35%	101	111	9%
Solvents											
MTBE	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
VOCs											
1,3-Dichloropropene	µg/L	1	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
PAH											
1-Methylnaphthalene	µg/L	0.1	1.02	0.988	3%	1.52	<0.100	NA	0.708	0.481	NA
2-methylnaphthalene	µg/L	0.1	0.104	<0.100	NA	0.198	<0.100	NA	0.246	<0.100	NA
2-chloronaphthalene	µg/L	0.1	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Acenaphthene	µg/L	0.05	0.404	0.411	2%	0.802	<0.050	NA	0.451	0.217	NA
Acenaphthylene	µg/L	0.2	<0.200	<0.200	NA	<0.200	<0.200	NA	<0.200	<0.200	NA
Acridine	µg/L	0.05	<0.050	<0.050	NA	0.095	<0.065	NA	0.247	<0.050	NA
Anthracene	µg/L	0.01	0.017	0.019	NA	0.018	<0.010	NA	0.057	<0.010	NA
Benz(a)anthracene	µg/L	0.01	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.032	<0.010	NA
Benzo(a) pyrene	µg/L	0.01	<0.010	<0.010	NA	<0.010	0.018	NA	<0.010	<0.010	NA
Benzo(b+j)fluoranthene	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Benzo(g,h,i)perylene	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Benzo(k)fluoranthene	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Chrysene	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Dibenz(a,h)anthracene	µg/L	0.01	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Fluoranthene	µg/L	0.03	0.078	0.086	NA	0.107	0.041	NA	0.185	0.033	NA
Fluorene	µg/L	0.05	0.244	0.233	NA	0.487	0.227	NA	0.343	0.143	NA
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Naphthalene	µg/L	0.2	3.90	3.93	1%	5.75	3.12	59%	2.92	2.33	22%
Phenanthrene	µg/L	0.1	0.235	0.243	NA	0.448	0.244	NA	0.653	0.118	NA
Pyrene	µg/L	0.02	0.044	0.047	NA	<0.020	0.027	NA	0.216	0.021	NA
Quinoline	µg/L	0.05	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA

RPD: Relative percentage difference
RDL: Reporting detection limit

Table G-4: Summary of Groundwater Analytical Results -Field and Trip Blanks

			Groundwater																					
Date			13 May 2024		14 May 2024		21 May 2024		24 May 2024		27 May 2024		28 May 2024		13 Sep 2024		17 Sep 2024		18 Sep 2024		19 Sep 2024		25 Sep 2024	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	Analytical Results																					
Inorganics																								
pH (Lab)	-	<0.1	6.98	5.76	6.42	5.52	6.72	6.01	6.42	5.34	6.69	5.32	5.67	6.92	6.32	5.68	6.62	5.66	6.75	5.85	6.5	5.66	5.71	5.63
Total Dissolved Solids (Lab) (filtered)	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
Alkalinity (total) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hardness as CaCO3	mg/L	<0.125	-	<0.125	-	<0.125	-	<0.125	-	-	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125
Hardness as CaCO3 (filtered)	mg/L	<0.125	<0.125	-	<0.125	-	<0.125	-	<0.125	<0.125	<0.125	-	<0.233	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-
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	<20	<20	<20
Alkalinity (P)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfur (As S)	mg/L	1	-	<1	-	<1	-	<1	-	-	-	<1	-	<1	-	<1	-	<1	-	1	-	1	-	1
Sulfur (As S) (filtered)	mg/L	1	<1	-	<1	-	<1	-	<1	<1	<1	-	<1	-	<1	-	<1	-	<1	-	<1	-	<1	-
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphate	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sodium	mg/L	<0.02	-	<0.02	-	<0.02	-	<0.02	-	-	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Sodium (filtered)	mg/L	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	-	<0.072	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-
Ammonia as N	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrite (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromide	µg/L	100	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Fluoride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phosphate	µg/L	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																								
Aluminium	mg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Antimony	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Arsenic	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Barium	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-
Beryllium	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Bismuth	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Boron	mg/L	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-
Calcium	mg/L	<0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	-	<0.093	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Cadmium	mg/L	<0.000002	<0.000002	-	<0.000002	-	<0.000002	-	<0.0000063	<0.000002	<0.000002	-	<0.000194	-	<0.000005	-	<0.000002	-	<0.000002	-	<0.0000106	-	<0.000002	-
Chromium (III+VI)	mg/L	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-
Cobalt	mg/L	<0.000005	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	<0.000005	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-
Copper	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.00017	-	<0.0001	-	<0.00014	-	<0.0001	-
Iron	mg/L	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-
Lead	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Lithium	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Magnesium	mg/L	<0.005	<0.005	-	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-
Manganese	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Mercury	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Molybdenum	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Nickel	mg/L	<0.00004	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	<0.00004	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-
Phosphorus	mg/L	<0.005	<0.01	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Potassium	mg/L	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-
Selenium	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-
Silicon	µg/L	100	100	-	100	-	100	-	100	100	100	-	100	-	100	-	100	-	100	-	100	-	100	-
Silver	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Strontium	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	-	<0.00037	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-
tellurium	µg/L	<0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Thallium	mg/L	<0.000004	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	<0.000004	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-
Thorium	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Tin	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Titanium	mg/L	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-
Tungsten	mg/L	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-
Uranium	µg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Vanadium	mg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Zinc	mg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	-	<0.0012	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Zirconium	µg/L	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-

Table G-4: Summary of Groundwater Analytical Results -Field and Trip Blanks

			Groundwater																			
Date			**13 May 2024**		**14 May 2024**		**21 May 2024**		**24 May 2024**		**27 May 2024**		**28 May 2024**		**13 Sep 2024**		**17 Sep 2024**		**18 Sep 2024**		**19 Sep 2024**		**25 Sep 2024**	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	**Analytical Results**																			
Total Metals																						
Aluminium	mg/L	<0.001	-	<0.002	-	<0.002	-	<0.002	-	-	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002
Antimony	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Arsenic	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Barium	mg/L	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001
Beryllium	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Bismuth	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Boron	mg/L	<0.002	-	<0.002	-	<0.002	-	<0.002	-	-	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002
Calcium	mg/L	<0.05	-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Cadmium	mg/L	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	-	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002
Chromium (III+VI)	mg/L	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	-	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005
Cobalt	mg/L	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	-	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005
Copper	mg/L	<0.0001	-	<0.0002	-	<0.0002	-	<0.0002	-	-	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002
Iron	mg/L	<0.002	-	<0.002	-	<0.002	-	<0.002	-	-	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002
Lead	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Lithium	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Magnesium	mg/L	<0.005	-	<0.005	-	<0.005	-	<0.005	-	-	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005
Manganese	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Mercury	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Molybdenum	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Nickel	mg/L	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	-	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004
Phosphorus	mg/L	<0.005	-	<0.01	-	<0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01
Potassium	mg/L	<0.02	-	<0.02	-	<0.02	-	<0.02	-	-	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Selenium	mg/L	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001
Silicon	µg/L	100	-	100	-	100	-	100	-	-	-	100	-	100	-	100	-	100	-	100	-	100	-	100
Silver	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Strontium	mg/L	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001
tellurium	µg/L	<0.05	-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Thallium	mg/L	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	-	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004
Thorium	mg/L	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	-	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001
Tin	mg/L	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	-	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005
Titanium	mg/L	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	-	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002
Tungsten	mg/L	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	-	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002
Uranium	µg/L	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001
Vanadium	mg/L	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001
Zinc	mg/L	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001
Zirconium	µg/L	<0.02	-	<0.02	-	<0.02	-	<0.02	-	-	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02

Table G-5: Summary of Surface Water Analytical Results - Field and Trip Blanks

			Surface Water											
Date			08 May 2024		10 May 2024		11 Sep 2024		12 Sep 2024		22 Oct 2024		23 Oct 2024	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	Analytical Results											
Inorganics														
pH (Lab)	-	<0.1	5.02	5.04	5.63	5.56	7.58	5.72	8.17	6.45	5.68	5.49	5.65	5.77
Total Dissolved Solids (Lab) (filtered)	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
Alkalinity (total) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hardness as CaCO3	mg/L	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
Hardness as CaCO3 (filtered)	mg/L	<0.125	<0.125	-	<0.197	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Alkalinity (P)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfur (As S)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfur (As S) (filtered)	mg/L	1	<1	-	<1	-	<1	-	<1		<1		<1	-
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nitrite + Nitrate as N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Electrical Conductivity (Lab)	µS/cm	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	mg/L	<0.1	<0.1	<0.1	<0.27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphate	mg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sodium	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sodium (filtered)	mg/L	<0.02	<0.18	-	<0.63	-	<0.02	-	<0.025	-	<0.033	-	<0.021	-
Ammonia as N	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrite (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Kjeldahl Nitrogen Total	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromide	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Fluoride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen (Total)	µg/L	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Phosphate	µg/L	5	-	-	<5	<5	-	-	-	-	-	-	-	-
Reactive Phosphorus as P (Orthophosphate as P)	mg/L	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-
Phosphorus (P)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Biological														
Total Coliforms	cfu/100 mL	1	1	1	1	1	1	1	1	1	1	1	1	1
Faecal Coliforms	CFU/100mL	1	1	1	1	1	1	1	1	1	1	1	1	1
Organic														
Dissolved Organic Carbon (filtered)	mg/L	<0.5	<0.5	-	<0.5	-	<0.5	-	<0.61	-	<0.5	-	<0.5	-
Total Organic Carbon	mg/L	<0.5	<0.5	<0.5	<0.5	<0.57	<0.76	<0.87	<0.5	<0.82	1.78	<0.5	<0.5	<0.5
Total Metals														
Aluminium	mg/L	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Barium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Bismuth	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Boron	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Calcium	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002
Chromium (III+VI)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00488	<0.0005	<0.0005	<0.0005
Cobalt	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.0000483	<0.000005	<0.000005	<0.000005
Copper	mg/L	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00029	<0.0002	<0.00059	<0.0002
Iron	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0211	<0.002	<0.002	<0.002
Lead	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Manganese	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000567	<0.00005	<0.000146	<0.00005
Mercury	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000094	<0.00001	<0.00001	<0.00001
Nickel	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00334	<0.00004	<0.000062	<0.00004
Phosphorus	mg/L	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Selenium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	µg/L	100	100	100	100	100	100	100	100	100	100	100	100	100
Silver	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Strontium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00016	<0.0001	<0.00017	<0.0001
tellurium	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium	mg/L	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004
Thorium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Titanium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tungsten	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0018	<0.001	<0.001	<0.001	<0.001	<0.001
Zirconium	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dissolved Metals														
Aluminium	mg/L	<0.001	<0.0014	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Antimony	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Arsenic	mg/L	<0.00005	<0.00005		<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Barium	mg/L	<0.0001	<0.00015	-	<0.0002	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-
Beryllium	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Bismuth	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Boron	mg/L	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-
Calcium	mg/L	<0.05	<0.05	-	<0.079	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Cadmium	mg/L	<0.000002	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-	<0.000002	-
Chromium (III+VI)	mg/L	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-
Cobalt	mg/L	<0.000005	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-	<0.000005	-
Copper	mg/L	<0.0001	<0.0001	-	<0.00025	-	<0.0001	-	<0.00014	-	<0.00032	-	<0.00079	-
Iron	mg/L	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-
Lead	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Lithium	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-	<0.00005	-
Magnesium	mg/L	<0.005	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.0101	-	<0.005	-
Manganese	mg/L	<0.00005	<0.00005	-	<0.000068	-	<0.00005	-	<0.00005	-	<0.000088	-	<0.000161	-
Molybdenum	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Nickel	mg/L	<0.00004	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-	<0.00004	-
Phosphorus	mg/L	<0.005	<0.01	-	<0.01	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Potassium	mg/L	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-
Selenium	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-
Silicon	µg/L	100	100	-	280	-	100	-	100	-	100	-	100	-
Silver	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Strontium	mg/L	<0.0001	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.0001	-	<0.00019	-
tellurium	µg/L	<0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Thallium	mg/L	<0.000004	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-	<0.000004	-
Thorium	mg/L	<0.00001	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-	<0.00001	-
Tin	mg/L	<0.00005	<0.00005	-	<0.00005	-	<0.00009	-	<0.000067	-	<0.00005	-	<0.00005	-
Titanium	mg/L	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-
Tungsten	mg/L	<0.0002	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-
Uranium	µg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Vanadium	mg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.001	-
Zinc	mg/L	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	<0.0015	-	<0.0012	-
Zirconium	µg/L	<0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-

Note: No trip and blank samples were taken for Q1 sampling period.

Table G-6: Summary of Leachate Water Analytical Results - Field and Trip Blanks

			Leachate					
Sample Date			09 May 2024		06 Sep 2024		18 Oct 2024	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	Analytical Results					
PHCs								
VH (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100
VPH (VH C6-C10 - BTEXS)	µg/L	100	<100	<100	<100	<100	<100	<100
EPH C10-C19	µg/L	250	<250	<250	<250	<250	<250	<250
EPH C19-C32	µg/L	250	<250	<250	<250	<250	<250	<250
LEPH	µg/L	250	<250	<250	<250	<250	<250	<250
HEPH	µg/L	250	<250	<250	<250	<250	<250	<250
BTEX								
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	1	<1	<1	<1	<1	<1	<1
Xylene Total	µg/L	2	<2	<2	<2	<2	<2	<2
Carboxylic Acids								
Propanoic acid	mg/L	2	<2	<2	<2	<2	<2	<2
Acetic Acid	µg/L	3,000	<3000	<3000	<3000	<3000	<3000	<3000
Valeric Acid	µg/L	2,000	<2000	<2000	<2000	<2000	<2000	<2000
Fatty Acids								
Heptanoic Acid	µg/L	2,000	<2000	<2000	<2000	<2000	<2000	<2000
Isobutyric Acid	µg/L	2,000	<2000	<2000	<2000	<2000	<2000	<2000
Isocaproic Acid	µg/L	2,000	<2000	<2000	<2000	<2000	<2000	<2000
Isovaleric Acid	µg/L	2,000	<2000	<2000	<2000	<2000	<2000	<2000
Inorganics								
pH (Lab)	-	0.1	6.2	5.68	5.72	7.42	6.09	5.87
Total Dissolved Solids (Lab) (filtered)	mg/L	15	15	15	-	15	15	15
Alkalinity (total) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1
Hardness as CaCO3	mg/L	0.125	-	-	-	<0.125	-	<0.125
Hardness as CaCO3 (filtered)	mg/L	0.125	<0.125	<0.125	<0.125	-	<0.125	
Chemical Oxygen Demand	mg/L	20	20	20	20	20	20	20
Alkalinity (P)	mg/L	1	<1	<1	<1	<1	<1	<1
Sulfur (As S)	mg/L	1	-	-	-	<1	-	<1
Sulfur (As S) (filtered)	mg/L	1	<1	<1	<1	-	1	-
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1	<1	<1	<1	<1	<1
Electrical Conductivity (Lab)	µS/cm	2	3.4	<2	<2	4.5	<2	<2
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1	<1	<1	<1	<1	<1
Chloride	mg/L	0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Sulphate	mg/L	1	<1	<1	-	<1	<1	<1
Sodium	mg/L	0.02	-	-	-	<0.02	-	<0.02
Sodium (filtered)	mg/L	0.02	<0.02	<0.02	<0.02	-	<0.023	-
Ammonia as N	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Biochemical Oxygen Demand	mg/L	5.4	6.8	6.8	-	5.6	5.4	5.4
Nitrate (as N)	mg/L	0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01
Nitrite (as N)	mg/L	0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01
Kjeldahl Nitrogen Total	mg/L	1	-	-	-	-	-	-
Total Suspended Solids (Lab)	mg/L	3.8	-	-	-	-	-	-
Bromide	µg/L	100	<100	<100	<100	<100	<100	<100
Fluoride	mg/L	0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Hydrogen sulfide	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hydrogen sulfide (filtered)	mg/L	0.02	-	-	-	-	-	-
Nitrogen (Total)	µg/L	1,000	-	-	-	-	-	-
Phosphate	µg/L	5	<5	<5	-	-	-	-
Sulfur	mg/L	3	-	-	-	-	-	-
Sulfur (filtered)	mg/L	3	-	-	-	-	-	-
Phosphorus (P)	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals								
Aluminium	mg/L	0.001	-	-	-	<0.002	-	<0.002
Antimony	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Arsenic	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Barium	mg/L	0.0001	-	-	-	<0.0001	-	<0.0001
Beryllium	mg/L	0.00001	-	-	-	<0.00001	-	<0.00001
Bismuth	mg/L	0.00001	-	-	-	<0.00001	-	<0.00001
Boron	mg/L	0.002	-	-	-	<0.002	-	<0.002
Calcium	mg/L	0.05	-	-	-	<0.05	-	<0.05
Cadmium	mg/L	0.000002	-	-	-	<0.000002	-	<0.000002
Cobalt	mg/L	0.000005	-	-	-	<0.000005	-	<0.000005
Copper	mg/L	0.0001	-	-	-	<0.0002	-	<0.0002
Iron	mg/L	0.002	-	-	-	<0.002	-	<0.002
Lead	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Lithium	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Magnesium	mg/L	0.005	-	-	-	<0.005	-	<0.005
Manganese	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Mercury	mg/L	0.000005	-	-	-	<0.000005	-	<0.000005
Molybdenum	mg/L	0.00001	-	-	-	<0.00001	-	<0.00001
Nickel	mg/L	0.00004	-	-	-	<0.00004	-	<0.00004
Phosphorus	mg/L	0.005	-	-	-	<0.01	-	<0.01
Potassium	mg/L	0.02	-	-	-	<0.02	-	<0.02
Selenium	mg/L	0.0001	-	-	-	<0.0001	-	<0.0001
Silicon	µg/L	100	-	-	-	100	-	100
Silver	mg/L	0.00001	-	-	-	<0.00001	-	<0.00001
Strontium	mg/L	0.0001	-	-	-	<0.0001	-	<0.0001
tellurium	µg/L	0.05	-	-	-	<0.05	-	<0.05

Table G-6: Summary of Leachate Water Analytical Results - Field and Trip Blanks

			Leachate					
Sample Date			09 May 2024		06 Sep 2024		18 Oct 2024	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	Analytical Results					
Thallium	mg/L	0.000004	-	-	-	<0.000004	-	<0.000004
Thorium	mg/L	0.00001	-	-	-	<0.00001	-	<0.00001
Tin	mg/L	0.00005	-	-	-	<0.00005	-	<0.00005
Titanium	mg/L	0.0002	-	-	-	<0.0002	-	<0.0002
Tungsten	mg/L	0.0002	-	-	-	<0.0002	-	<0.0002
Uranium	µg/L	0.001	-	-	-	<0.001	-	<0.001
Vanadium	mg/L	0.001	-	-	-	<0.001	-	<0.001
Zinc	mg/L	0.001	-	-	-	<0.001	-	<0.001
Zirconium	µg/L	0.02	-	-	-	<0.02	-	<0.02
Dissolved Metals								
Aluminium (filtered)	mg/L	0.001	<0.001	<0.001	<0.001	-	<0.001	-
Antimony (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-
Arsenic (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-
Barium (filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-
Beryllium (filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Bismuth (filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Boron (filtered)	mg/L	0.002	<0.002	<0.002	<0.002	-	<0.002	-
Calcium (filtered)	mg/L	0.05	<0.05	<0.05	<0.05	-	<0.05	-
Cadmium (filtered)	mg/L	0.000002	<0.000002	<0.000002	<0.000002	-	<0.000002	-
Chromium (III+VI) (filtered)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	-
Cobalt (filtered)	mg/L	0.000005	<0.000005	<0.000005	<0.000005	-	<0.000005	-
Copper (filtered)	mg/L	0.0001	<0.00017	<0.0001	<0.0001	-	<0.00018	-
Iron (filtered)	mg/L	0.002	<0.002	<0.002	<0.002	-	<0.002	-
Lead (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-
Lithium (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-
Magnesium (filtered)	mg/L	0.005	<0.005	<0.005	<0.005	-	<0.005	-
Manganese (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-
Mercury (filtered)	mg/L	0.000005	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Molybdenum (filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Nickel (filtered)	mg/L	0.00004	<0.00004	<0.00004	<0.00004	-	<0.00004	-
Phosphorus (filtered)	mg/L	0.005	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005
Potassium (filtered)	mg/L	0.02	<0.02	<0.02	<0.02	-	<0.02	-
Selenium (filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-
Silicon (filtered)	µg/L	100	<100	<100	<100	-	<100	-
Silver (filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Strontium (filtered)	mg/L	0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-
tellurium (filtered)	µg/L	0.05	<0.05	<0.05	<0.05	-	<0.05	-
Thallium (filtered)	mg/L	0.000004	<0.000004	<0.000004	<0.000004	-	<0.000004	-
Thorium (filtered)	mg/L	0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-
Tin (filtered)	mg/L	0.00005	<0.00005	<0.00005	<0.000066	-	<0.00005	-
Titanium (filtered)	mg/L	0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-
Tungsten (filtered)	mg/L	0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-
Uranium (filtered)	µg/L	0.001	<0.001	<0.001	<0.001	-	<0.001	-
Vanadium (filtered)	mg/L	0.001	<0.001	<0.001	<0.001	-	<0.001	-
Zinc (filtered)	mg/L	0.001	<0.001	<0.001	<0.001	-	<0.001	-
Zirconium (filtered)	µg/L	0.02	<0.02	<0.02	<0.02	-	<0.02	-
MAH								
Styrene	µg/L	1	1	1	1	1	1	1
Halogenated Benzenes								
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	1	<1	<1	<1	<1	<1	<1
Chlorinated Hydrocarbons								
1,1,1-trichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	1	<1	<1	<1	<1	<1	<1
Bromoform	µg/L	1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorodibromomethane	µg/L	1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1	<1	<1	<1	<1	<1	<1
Chloroethane	µg/L	2	<2	<2	<2	<2	<2	<2
cis-1,2-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
Dibromomethane	µg/L	1	<1	<1	<1	<1	<1	<1
Dichloromethane	µg/L	3	3	3	3	3	3	3
Trichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	1	<1	<1	<1	<1	<1	<1
Halogenated Hydrocarbons								
1,2-dibromoethane	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Organic								
Dissolved Organic Carbon (filtered)	mg/L	0.5	<0.5	<0.5	<0.64	<0.72	<0.5	1.38
Solvents								
MTBE	µg/L	1	<1	<1	<1	<1	<1	<1

Table G-6: Summary of Leachate Water Analytical Results - Field and Trip Blanks

			Leachate					
Sample Date			09 May 2024		06 Sep 2024		18 Oct 2024	
Field ID			Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	Unit	EQL	Analytical Results					
VOCs								
1,3-Dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1
Other								
Butyric Acid	mg/L	2	<2	<2	<2	<2	<2	<2
Hexanoic Acid	mg/L	2	<2	<2	<2	<2	<2	<2
PAH								
1-Methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-chloronaphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benz(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a) pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	µg/L	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Fluorene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phenanthrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Quinoline	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

2024 Landfill Gas Collection Efficiency Study – Glenmore Landfill

Date:	March 25, 2025
Project Name:	2024 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site
Project No:	CE845101
Attention:	Scott Hoekstra, City of Kelowna
Client:	City of Kelowna
Prepared by:	Chris Kyriazis, Jacobs
Reviewed by:	Chuck Smith, Jacobs
Document No:	250312090803_ea6ca9c9
Revision No:	0
Copies to:	Brian Beulah, City of Kelowna

Metro Tower II, Suite 2100,
4720 Kingsway
Burnaby, BC V5H 4N2
Canada

T +1.403.407.8700

F +1.604.684.3282

www.jacobs.com

1. Introduction

The City of Kelowna (City) has retained Jacobs to provide the 2024 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, Tetra Tech 2021, and Morrison Hershfield Ltd. 2016) and waste filling data (CH2M 2010; Jacobs 2024; City 2024; Beulah pers. comm. 2025; and Hoekstra, pers. comm. 2025). 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 Climate Change Strategy's (BC MOECCS's) LFG Management Facilities Design Guidelines (CRA 2010).

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 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 Areas 1 and 2 during 2024. In 2024, the total annual buried solid waste was estimated at 152,347 tonnes (Hoekstra, pers. comm. 2025).

3. Regulatory Framework

On December 8, 2008, BC MOECCS 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 BC MOECCS Director. The guidance documents include the *Landfill Gas Generation Assessment Procedure Guidelines* (BC MOECCS 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 BC MOECCS 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 1995 and 2025, 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 2029. Although wastes have been disposed at the Site since 1966, Table 1 shows tonnages from 1995, as needed to estimate LFG generation using the BC EPS simulation Tool.

The tonnage of refuse disposed at the Site between 2010 and 2022 is based on a previous LFG collection efficiency study (Jacobs 2024), whereas the 2023 tonnage of refuse disposed at the Site is based on the annual report (City 2024). The 2024 tonnage of waste landfilled at the Site is based on personal communication with Scott Hoekstra, Manager, LFG and Composting Operations at the City, on January 14, 2025. The assumed projected annual tonnage for years 2025 through 2029 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)
1995	80,458	80,458
1996	80,794	161,252

Table 1. Annual Quantity of Waste Disposed at the Site

Years	Waste Disposed (tonnes)	Cumulative Waste Disposed (tonnes)
1997	95,904	257,156
1998	83,756	340,912
1999	85,258	426,170
2000	89,547	515,717
2001	95,815	611,532
2002	102,522	714,054
2003	96,772	810,826
2004	106,483	917,309
2005	108,597	1,025,906
2006	116,218	1,142,124
2007	102,688	1,244,812
2008	100,611	1,345,423
2009	114,590	1,460,013
2010	119,861	1,579,874
2011	106,387	1,686,261
2012	108,110	1,794,371
2013	108,917	1,903,288
2014	123,178	2,026,466
2015	136,115	2,162,581
2016	154,510	2,317,091
2017	151,456	2,468,547
2018	166,916	2,635,463
2019	156,566	2,792,029
2020	145,704	2,937,733
2021	154,079	3,091,811
2022	158,114	3,249,926
2023	146,911	3,396,837
2024	152,347	3,549,184
2025	173,572	3,722,756
2026	178,085	3,900,841
2027	182,537	4,083,378
2028	186,918	4,270,296
2029	191,217	4,461,513

4.2 Waste Characterization Categories

Characterization according to waste type is required to follow the BC MOECCS 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 year 2024. 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 2024, were provided by the City and are summarized in Table 2 (Hoekstra, pers. comm. 2025).

Table 2. 2024 Waste Stream Tonnage and Percentage of Total

Waste Stream	Tonnes	Percentage (%)
Residential (Cart) Garbage	43,811.41	28.76
Commercial (ICI) Garbage	42,445.26	27.86
C&D Debris	57,988.30	38.06
Contaminated Soil	5,568.76	3.66
Asbestos	991.78	0.65
Gypsum	1,325.00	0.87
Others	216.44	0.14
Total	152,346.95	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 2024 at the Site are categorized as follows:

- Decomposable waste: 16.38% by weight of total waste buried
- Moderately decomposable waste: 40.26% by weight of total waste buried
- Relatively inert waste: 43.36% 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)
1995	80,458	21,724	43,447	15,287
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

Table 3. Waste Tonnage by Category

Years	Waste Disposed (tonnes)	Relatively Inert (tonnes)	Moderately Decomposable (tonnes)	Decomposable (tonnes)
2009	114,590	30,939	61,879	21,772
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	40,707	84,546	31,313
2020	145,704	48,126	66,802	30,776
2021	154,079	48,088	70,152	35,839
2022	158,114	56,054	67,501	34,560
2023	146,911	45,681	66,991	34,240
2024	152,347	66,061	61,336	24,950
2025	173,572	75,264	69,881	28,426
2026	178,085	77,221	71,698	29,166
2027	182,537	79,152	73,491	29,895
2028	186,918	81,051	75,254	30,612
2029	191,217	82,916	76,985	31,316

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	1995
Year of Assessment	2025
Annual waste tonnage	Annual waste acceptance from 1995 to 2024 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
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 BC MOECCS 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:

$$k(y^{-1}) = 7 \times 10^{-5} \times precipitation(mm) - 0.0172 \tag{1}$$

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 BC MOECCS 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 BC MOECCS 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 BC MOECCS LFG Guideline, the water addition factor appropriate for the Site conditions in 2024 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 BC MOECCS 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 BC MOECCS Calculation Tool for the Glenmore Landfill

Estimated Quantity of Methane Produced	Year	Tonnes per Year
In the year preceding the Assessment	2024	2,024
In the year of the Assessment	2025	2,085
1 year after the Assessment	2026	2,158
2 years after the Assessment	2027	2,232
3 years after the Assessment	2028	2,308
4 years after the Assessment	2029	2,386

According to the Tool results, 2,024 tonnes of methane were generated in 2024, which corresponds to a methane generation rate (at 25°C, 101.3 kilopascals) of approximately 351.3 cubic metres per hour (m^3/h), or 206.8 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 2024 is about 703 m^3/h (414 scfm).

7. Landfill Gas System Efficiency

This section summarizes the LFG collection data and collection efficiency for 2024.

7.1 2024 Landfill Gas Collection Data

In 2024, 479,533 m^3 of LFG were destroyed through flaring, and 2,471,742 m^3 of LFG were processed through the Fortis Biogas Plant for beneficial use by FortisBC (Beulah, pers. comm. 2025). This equates to a total of 2,951,275 m^3 (at 16°C and 101,560 pascals [Pa]) of LFG collected from the landfill or 3,050,193 m^3 (at 25°C and 101,325 Pa).

7.2 2024 Landfill Gas Collection Efficiency

In accordance with the BC MOECCS LFG Design Guidelines, collection efficiency (CE) is calculated based on the following equation:

$$CE = \left(\frac{Q_c}{Q_p}\right) \times 100\% \qquad (2)$$

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:

$$Q_c = Q_a \times \frac{C_m}{50\%} \tag{3}$$

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:

$$Q_a = \frac{V_{LFG}}{(24 \times number\ of\ days\ in\ that\ year)} \tag{4}$$

Where:

V_{LFG} = Total volume of LFG collected in the calendar year 2024 (cubic metres per year); 2024 has 366 days

Based on this formula:

$$Q_a = \frac{V_{LFG}}{(24 \times 366)}$$

$$Q_a = \frac{3{,}050{,}193\ m^3}{(24\ h/day \times 366\ days)} = 347.24\ m^3/h$$

$$Q_p = 702.7\ m^3/h\ (from\ tool)$$

Based on record data:

$$C_m = 59.6\%\ (Beulah\ 2025, pers.comm)$$

$$Q_c = Q_a \times \frac{C_m}{50\%} = 347.24\ m^3/h \times \frac{59.6\%}{50\%} = 413.92\ m^3/h$$

$$CE = \left(\frac{Q_c}{Q_p}\right) \times 100\% = \left(\frac{413.92\ m^3/h}{702.7\ m^3/h}\right) \times 100\% = 58.9\%$$

The final CE of the LFG collection system is estimated to be 59%.

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.

PROFESSIONAL
PROVINCE OF
C.J. SMITH
27872
BRITISH COLUMBIA
ENGINEER

25 Mar 2025

Chris Kyriazis

Technical Support

Chuck Smith, P.Eng.

Senior Technical Consultant

PERMIT TO PRACTICE
JACOBS CONSULTANCY CANADA INC.
PERMIT#1003650
ENGINEERS & GEOSCIENTISTS BRITISH COLUMBIA

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

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Attachment 1
British Columbia Ministry of Environment and Protection and Sustainability's Methane Generation Estimation Tool – for Annual Reporting Results for the Glenmore Landfill Site

Year of Assessment	2025		LFG Management Regulation Reference
Annual Tonnage in Preceding Year	152,347	(tonnes/year)	4-2-a
Total waste in Place in the Preceding Year	3,549,184	(tonnes/year)	4-2-c
Methane generation in the Preceding Year	2,024	(tonnes CH4/year)	4-2-d

Next Five Years	Waste Tonnage (tonnes)	Methane Generation (tonnes CH4/year)	
2025	173,572	2,085	4-2-b & 4-2-e
2026	178,085	2,158	4-2-b & 4-2-e
2027	182,537	2,232	4-2-b & 4-2-e
2028	186,918	2,308	4-2-b & 4-2-e
2029	191,217	2,386	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	1995			
4 Years after Reporting Year	2029			
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)
1995	1	80,458	80,458	21,724	43,447	15,287	0.00371	0.00741	0.01853	0.00
1996	2	80,794	161,252	21,814	43,629	15,351	0.00371	0.00741	0.01853	56.11
1997	3	95,904	257,156	25,894	51,788	18,222	0.00371	0.00741	0.01853	111.73
1998	4	83,756	340,912	22,614	45,228	15,914	0.00371	0.00741	0.01853	177.15
1999	5	85,258	426,170	23,020	46,039	16,199	0.00371	0.00741	0.01853	233.24
2000	6	89,547	515,717	24,178	48,355	17,014	0.00371	0.00741	0.01853	289.65
2001	7	95,815	611,532	25,870	51,740	18,205	0.00371	0.00741	0.01853	348.32
2002	8	102,522	714,054	27,681	55,362	19,479	0.00371	0.00741	0.01853	410.60
2003	9	96,772	810,826	26,128	52,257	18,387	0.00371	0.00741	0.01853	476.75
2004	10	106,483	917,309	28,750	57,501	20,232	0.00371	0.00741	0.01853	538.04
2005	11	108,597	1,025,906	29,321	58,642	20,633	0.00371	0.00741	0.01853	605.30
2006	12	116,218	1,142,124	31,379	62,758	22,081	0.00371	0.00741	0.01853	673.17
2007	13	102,688	1,244,812	27,726	55,452	19,511	0.00371	0.00741	0.01853	745.49
2008	14	100,611	1,345,423	27,165	54,330	19,116	0.00371	0.00741	0.01853	807.44
2009	15	114,590	1,460,013	30,939	61,879	21,772	0.00371	0.00741	0.01853	867.15
2010	16	119,861	1,579,874	32,362	64,725	22,774	0.00371	0.00741	0.01853	935.84
2011	17	106,387	1,686,261	28,724	57,449	20,214	0.00371	0.00741	0.01853	1007.34
2012	18	108,110	1,794,371	29,190	58,379	20,541	0.00371	0.00741	0.01853	1068.53
2013	19	108,917	1,903,288	29,408	58,815	20,694	0.00371	0.00741	0.01853	1130.14
2014	20	123,178	2,026,466	33,258	66,516	23,404	0.00371	0.00741	0.01853	1191.54
2015	21	136,115	2,162,581	36,751	73,502	25,862	0.00371	0.00741	0.01853	1262.11
2016	22	154,510	2,317,091	41,718	83,435	29,357	0.00371	0.00741	0.01853	1340.81
2017	23	151,456	2,468,547	40,893	81,786	28,777	0.00371	0.00741	0.01853	1431.35
2018	24	166,916	2,635,463	43,398	90,135	33,383	0.00371	0.00741	0.01853	1518.60
2019	25	156,566	2,792,029	40,707	84,546	31,313	0.00371	0.00741	0.01853	1618.69
2020	26	145,704	2,937,733	48,126	66,802	30,776	0.00371	0.00741	0.01853	1710.07
2021	27	154,079	3,091,811	54,621	65,776	33,682	0.00371	0.00741	0.01853	1789.26

Year	Year Number	Annual Tonnage (tonnes)	Cumulative Waste-in-place (tonnes)	Waste Tonnage Relatively Inert (tonnes)	Moderately Decomposable (tonnes)	Decomposable (tonnes)	Methane Generation Rate, k Relatively Inert ($year^{-1}$)	Moderately Decomposable ($year^{-1}$)	Decomposable ($year^{-1}$)	Annual Methane Production (tonnes/yr)
2022	28	158,114	3,249,926	49,164	72,100	36,851	0.00371	0.00741	0.01853	1872.74
2023	29	146,911	3,396,837	63,704	59,147	24,060	0.00371	0.00741	0.01853	1964.67
2024	30	152,347	3,549,184	66,061	61,336	24,950	0.00371	0.00741	0.01853	2023.62
2025	31	173,572	3,722,756	75,264	69,881	28,426	0.00371	0.00741	0.01853	2084.96
2026	32	178,085	3,900,841	77,221	71,698	29,166	0.00371	0.00741	0.01853	2157.72
2027	33	182,537	4,083,378	79,152	73,491	29,895	0.00371	0.00741	0.01853	2232.16
2028	34	186,918	4,270,296	81,051	75,254	30,612	0.00371	0.00741	0.01853	2308.21
2029	35	191,217	4,461,513	82,916	76,985	31,316	0.00371	0.00741	0.01853	2385.83

138 E 7th Avenue, Suite 100
Vancouver, British Columbi V5T 1M6
Canada
www.ghd.com

Our ref: 12605725

24 March 2025

Scott Hoekstra
City of Kelowna
1435 Water Street
Kelowna, British Columbia
V1Y 1J4

Glenmore Landfill EMP Addendum

Dear Mr. Hoekstra,

This letter has been prepared for the City of Kelowna (City) to present an addendum to the Glenmore Landfill's (Landfill) Environmental Monitoring Program (EMP), which will be appended to the 2024 Annual Environmental Monitoring Report. The Landfill is located at 2720 John Hindle Drive in Kelowna, British Columba (BC) and operates under Operation Certificate No. 12218 (OC).

The Landfill's EMP is detailed in 2023 Design, Operations and Closure Plan (DOCP) (GHD, 2023) Section 17. The below presents a revision to DOCP Section 17.1.1.

Section 17.1.1 Current LFG Monitoring Program

LFG monitoring is conducted at the following locations:

- Quarterly monitoring at 16 subsurface perimeter soil vapour probes.
- Monthly monitoring at all landfill gas wellheads. As of March 2025, this included 110 wellheads, and the system is to evolve as required due to site development.
- Testing of the atmosphere within buildings located 300m within the waste is completed as part of monthly safety inspections.
- Continuous monitoring for combustible gas in air at the Landfill Operations Building/Mechanic Shop.

Please do not hesitate to contact the undersigned should you have any questions.

Regards

Kathleen Hasler, B.Sc, GIT
Hydrogeologist in Training

604 754 2358
Kathleen.hasler@ghd.com

Deacon Liddy, P.Eng.
Technical Director

778 229 3370
Deacon.liddy@ghd.com

Copy to: Roxy Hasior (GHD)