



Maximum Predicted Water Table and Level 1 and Level 2 Water Studies

Proposed Below Water Aggregate Operation

McGee Pit Expansion

Lot 11
Concession IV
Township of West Carleton (Geo. Twp. Of Huntley)
City of Ottawa

Karson Holdings Inc.

July, 2024

Executive Summary

Karson Holdings Inc. proposes to expand the existing McGee Pit operation, located in the City of Ottawa, Ontario. The current operation is licensed under the Aggregate Resources Act (ARA License #624971) for 80 hectares, with a 74-hectare extraction area. The proposed expansion adds 33 hectares, resulting in a total licensed area of 113 hectares and an extraction area of approximately 105 hectares. The pit is a Class A below-water operation.

GRI Inc. was retained to conduct a Level 1 and Level 2 Hydrogeological Assessment in accordance with the Ministry of Natural Resources and Forestry (MNRF) Technical Standards. This report addresses the site's hydrogeological setting, the predicted maximum water table elevation, and the potential effects of the proposed below-water expansion on surrounding groundwater and surface water resources.

The investigation confirms that the shallow unconfined aquifer targeted for extraction is hydraulically separated from the deeper aquifers used by private wells in the area. A thick clay aquitard ranging from 6 to 20 m in thickness provides vertical separation. Nearby domestic wells draw water from deeper interface and bedrock aquifers and are unlikely to be affected by the proposed excavation.

Long-term groundwater level monitoring shows that the maximum observed water table elevation is 118.6 mASL. The proposed excavation base of 113.0 mASL maintains a 5.6 m vertical buffer, meeting MNRF requirements. Groundwater flow direction in the unconfined aquifer is northeastward, consistent with regional trends. No surface water features or wetlands are located within 120 m of the expansion area.

Water budget analyses indicate that the proposed development will result in negligible change to regional infiltration, with a reduction of less than 0.03% at the watershed scale. Climate trends, recharge rates, and surficial geology were factored into this assessment. No adverse cumulative impacts are anticipated.

This report concludes that the proposed below-water expansion is technically feasible and protective of local water resources. A groundwater monitoring program is in place and will continue to support adaptive management.

Summary of Recommendations

Maximum Water Table

it is recommended an average water table for the existing license plus expansion be set at 117.75 mASL

Neighbouring Wells

- Once the aggregate license is issued, a well survey should be undertaken at 1117 William Mooney Dr and 1135 William Mooney Dr before operations in the expansion area begin. Participation in the survey by property owners is voluntary. The survey should document the property setting, well location and construction and water use and should confirm whether a water well record can be correlated to the site.
- Water samples should be collected from an untreated tap following industry standard sampling procedures and analysed by a certified laboratory for the parameters below. Parameters may be added if a specific location warrants.

Water Sample Parameter List

	Parameter/ Analyte
Field Measurements	temperature, TDS, conductivity, dissolved oxygen, pH
General Characteristics	ph, alkalinity, hardness, TDS, conductivity, Ca, Mg, Cl, NO ₂ , NO ₃ , NH ₃ , Total Kjeldahl Nitrogen, SO ₄ , Fe, Mn, Na, F, phenols
Bacteriological Analysis	e.coli, total coliforms, background plate count

- The survey should be repeated before the below water extraction lift moves into the expansion area if the period elapsed from the beginning of the operation has been 10 years or longer.

Groundwater Monitoring

- The intent that the groundwater program will change and adapt should be clearly indicated on the site plan. Specific monitoring details (e.g. well locations or frequency, etc.) should be avoided on the site plan.
- The water levels should be reviewed as they are collected with attention given to flag and follow up on anomalies. An explanation should be provided for any of these noted deviations, and the observations and conclusions included in the next review report.
- The PTTW and ECA should continue to be the devices to provide detail on the monitoring and mitigation of potential issues. Annual report recommendations should be implemented by the operator. The site plan should indicate current PTTW and ECA approvals contain the requirements to effectively provide environmental protection.
- At monitoring events, observations and/or photos of the site activity should be recorded. Weather conditions on, and for two or three days before the monitoring, should be noted.
- Monitoring wells that are removed or irreparably damaged should be replaced expeditiously, and the elevation recalibrated. New measurement points should be surveyed to a geodetic elevation before the first review.

- A staff gauge should be added to the monitoring program and added to the approved monitoring program with the reading recorded on the day as the groundwater and other surface water levels. As the open water area expands it may be beneficial to install a second staff gauge to record the change in water level across the feature. The staff gauge should be calibrated to a surveyed water level in the pond.
- If, when the field measurements are made, the visual inspection indicates a sheen or film, a sample should be taken and analysed for oil and grease and PHCs.

Contingency Plan

Action to address observed or potential impacts by the operation should be addressed in a timely manner.

1 Predicted Negative Impact on Sensitive Receiver

- If a negative impact on a sensitive receiver is predicted through data review, the conditions will be evaluated in more detail if needed, and remediation will be implemented to prevent the impact.

2 Receipt of Unexpected Well Problem

- If a water loss occurs at one of the addresses within 500 m, and an initial investigation cannot identify an obvious cause, the licensee will provide an interim potable water supply to the affected well within 24 hours. The interim supply will be continued until the matter is resolved.
- If an unexpected complaint arises, the license holder will retain a qualified professional, who will investigate the issue, provide an opinion on the cause, and provide recommendations to the licensee in a timely manner. If the problem is attributed to the pit operation, remediation or compensation will be offered by the licensee as soon as possible.

3 Replacement Well Construction and Quality

- Any work on a well by or on behalf of the licensee will meet the Wells Regulation (O.Reg. 903 or current equivalent). Effort will be made to construct the well to as near the depth as the impacted well that will obtain a comparable water quantity. The analysis of the well records indicated that the overburden, interface aquifer and bedrock aquifers are all used in the area and it is possible for the water supply to be replaced.
- If natural water quality exceeding the ODWS is encountered because of the remediation, appropriate water treatment will be considered.

Operations - Spills Prevention and Response

- Fuel storage must not be located within 30 metres of any body of water. Refuelling should take place on an impervious surface.
- The potential for spills should be addressed on the ARA site plan, with prevention as the key goal by compliance with current legislative and regulatory requirements, such as the Technical Standards and Safety Act, 2000, Liquid Fuels Regulation O.Reg. 217/01 and the Liquid Fuels Handling Code, 2000.



- A spill prevention and response plan should be prepared and kept on site. Site personnel should receive training regarding the spill action plan procedure. A copy of the plan should be posted in a prominent location in the operations area.
- Appropriate mitigation and clean-up materials (absorbent pads and granular absorbent material) should be kept on site when the pit is operating.



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Key changes to the report resulting from external peer review or agency comments, or errata.

Section Heading	Change/ Source	Date	Review Version	

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1 INTRODUCTION

An expansion of an operation licensed under the *Aggregate Resources Act* (ARA) is being proposed Karson Holdings Inc. (Karson) is proposed. The site is in the City of Ottawa, Ontario, on Parts of Lot 11 and 12, Concession 4, Former Township of Huntley. Reference civic addresses are 3175 Carp Rd and 1200 Diamondview Rd (Teranet Enterprises Inc. 2024). The site is currently operated under ARA license #624971.

The current aggregate license is 80 hectares*, with an extraction area of 74 ha (NovaTech Engineering Consultants Ltd. approved 2010). The proposal will add 33 ha for a total licence area of 113.2 ha and an extraction area of 105.3 ha (McIntosh Perry Consulting Engineers Ltd. 2023).

GRI Inc. (GRI) was retained by Karson Holdings Inc. to prepare a hydrogeological study to fulfill the Water Studies requirements described in the Technical Reports and Information Standards (Ontario Ministry of Natural Resources and Forestry 2020). This report addresses the requirements for the Maximum Predicted Water Table report and the Water Report.

2 EXISTING AND PROPOSED OPERATION

The McGee Pit (ARA # 624971) was established in approximately 1990. The McGee Pit is owned by Karson Holdings Inc. and is operated by Karson Sand & Gravel Inc.. The total parcel is 159.03 ha. The licensed area is 80-hectares, and the extraction area is approximately 75 hectares. The pit is a Class 'A' below water operation with an extraction limit of 500,000 tonnes per year.

The subject property is located approximately 5.4 km northwest of the intersection of Carp Road and Highway 417. The site is immediately southwest of William Mooney Road and northwest of McGee Side Road (OS Figure 1). The land parcel covers an area of 159 hectares and includes McGee Pit and surrounding tree covered areas (Teranet Enterprises Inc. 2024). The proposed expansion area is south to southwest of the existing license area and is mostly tree covered with two cleared trails. The site is accessed from Carp Road.

The ground surface at the proposed expansion area has an average elevation of approximately 119 m above sea level (mASL). The aggregate in the expansion area will be excavated down to an elevation of 113.0 mASL, the licensed excavation depth of the existing pit, for a final excavation of approximately 6 m. The elevations shown on the site plan and used in this report are geodetic.

2.1 Existing Aggregate License – McGee Pit

Extraction of sand and some gravel has occurred according to market demand. Above water extraction is carried out using track mounted excavators and below water extraction is achieved using excavators. Site features are indicated on OS Figure 2 and include:

- The existing sand pit and pond
- A scale house and office
- A fuel storage area

* Distances and areas are approximate



- A berm along the northeastern side of the existing sand pit and along parts of the southeastern margin of the existing sand pit.
- Stockpiles adjacent to the northwest and southwest sides of the sand pit.
- Six sedimentation ponds in series along the northwestern side of the existing pit.

The pit is operated according to the site plan that forms part of the aggregate license (NovaTech Engineering Consultants Ltd. approved 2010). The site plan shows the elevation of the groundwater table was estimated to be 118.6 mASL.

The Permit to Take Water (PTTW P-300-5229047655), which includes pump volume and groundwater monitoring allows taking of up to 6.48 million L/day from the pond within the sand pit for dewatering and aggregate washing. Pit dewatering is conducted from April to November each year for a maximum allowable 260 days per year. A copy of the PTTW is included in Appendix A.

Water pumped from the pond is discharged according to the requirements of an Environmental Compliance Approval (ECA) for a Section 53 treated water discharge. The ECA (9363-9FLMDG) describes the Works, which consists of on-site settling ponds, and requirements for surface water monitoring and sampling. A copy of the ECA is included in Appendix A. ECA monitoring details for 2024 are included in the annual monitoring report (GRI Inc. 2025).

2.2 Proposed Expansion of License Area – McGee Pit

The proposed expansion will add 33-hectares to the ARA license for a new license area of approximately 113 ha, with a new total extraction area of approximately 105 ha. A draft site plan for the operation has been prepared by McIntosh Perry Consulting Engineers (McIntosh Perry, 2023). The new area will similarly be excavated below the water table and will expand the existing 'below water' operation. The new area is intended to provide additional resource. Therefore, the operational practices described in Section 2.1 will not be changed. The license boundary of the expansion area will be at least 150 m from Diamondview Road, McGee Side Road, and William Mooney Road. The extraction area within the proposed expansion area will have an additional 15 m setback from the license boundary on the west, south and east sides.

The ECA will have to be updated and amended upon approval of the expansion. The current ECA specifies the Works is for the 82 ha license/74.9 ha extraction area. If pumping rates require increasing to maintain the desired water table lowering, an amendment to the PTTW will also be required.

3 STUDY SCOPE

The study followed the format prescribed by the Provincial Standards (Ontario Ministry of Natural Resources and Forestry 2020). The purpose of the study was to;

1. Predict the maximum water table that will be encountered; and
2. Identify groundwater and surface water resources and their uses and determine the potential for impact by the proposal. If potential impacts were identified, the study provides an impact assessment and if appropriate an adaptive management plan to identify and trigger action if the predicted impacts occur.

Three areas of interest are used in the report:



- “site” consists of the property, licensed and extraction areas. As the expansion area will become part of the existing license, the impact assessment considers the full area while providing detail on the expansion portion.
- “site and surrounding 120 m buffer zone”. The Provincial Standards defines 120 m as the area to be examined in assessments for the site.
- A broader area where the effect of the proposal within the area of impact is required. The “extended study area” with respect to this study consists of the site and up to 2 km surrounding zone. The level of investigation and detail is higher within the nearest 500 m. Within these areas there is enough data to represent the regional groundwater conditions and uses around the site that may potentially be affected by the operation.

3.1 Information Sources

The available background and published information used in the assessment included;

- Site plans for the existing licensed operation and proposed site plans for the expanded operation
- Reports of previous investigations of the site and surrounding area
- Published geological mapping
- Topographic databases
- Conservation authority reports and online resources
- Ontario well records database
- Public access geographic information system (GIS) databases
- Province of Ontario online resources and studies

4 REGIONAL SETTING

The site and study areas are shown on OS Figure 1. The sections below describe the characteristics of the site and extended study area.

4.1 Physiography and Topography

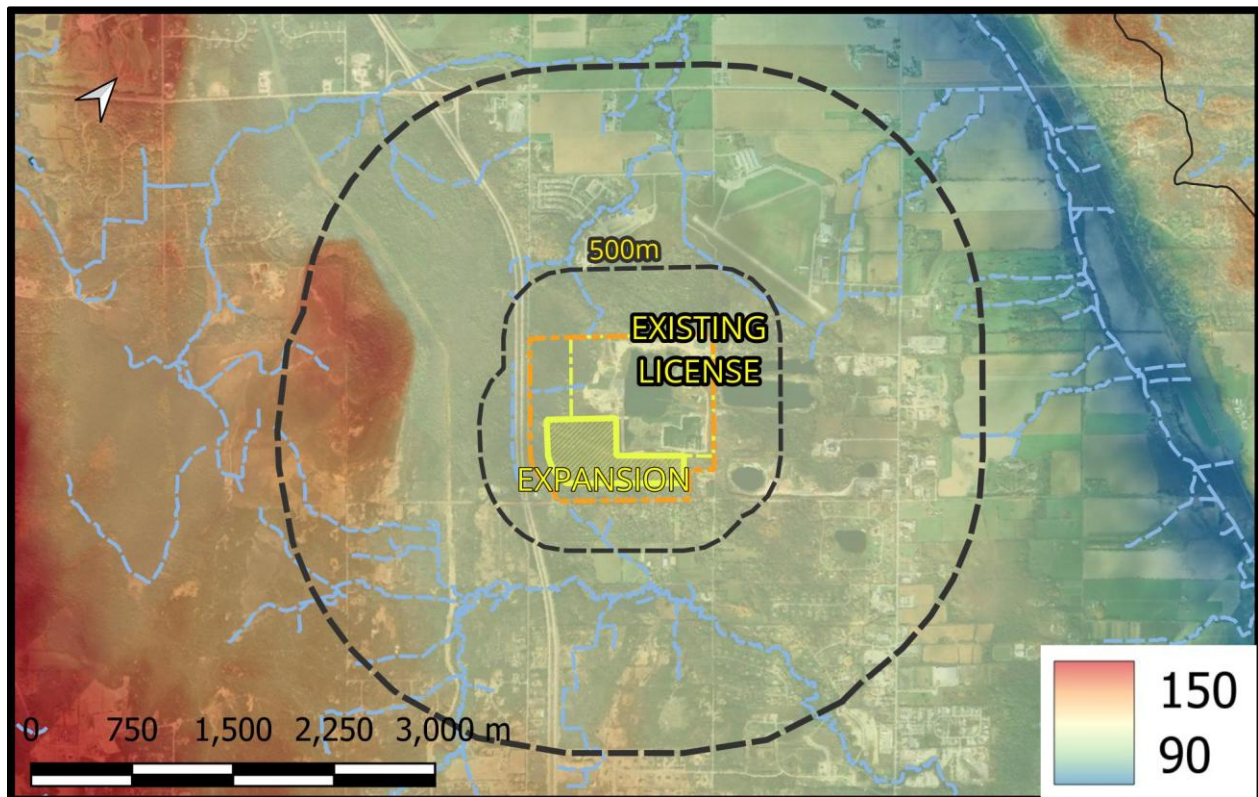
An analysis of the terrain at the site was conducted using LiDAR (‘laser imaging, detection, and ranging’) data. High resolution digital elevation data was obtained through the Government of Canada Open Maps website (National Research Council 2022). Figure 1 shows a colour shaded digital terrain model image of the site and surrounding area.

The topography in the extended study area slopes from a maximum of about 142 mASL on the west side of the area, to a minimum of around 90 mASL in the north-east, adjacent to the Carp River (Figure 1).

On the site, the natural topography is flat to gently sloping. A low, streamlined ridge with an approximately east-west alignment found in the proposed extraction area represents the natural high point on the site. The lowest point beyond the extraction area is at the northeastern site boundary (approximately 117 mASL). The natural topography was modified due to the operation resulting in a highest point on the site of approximately 124 mASL at the top of a berm that runs along the southeastern side of the existing pit. The lowest point is the excavation.



Figure 1: Topography, Site and Extended Study Area (Elevations mASL)



The McGee Pit is situated near the western edge of the Ottawa Clay Plain physiographic region (Chapman and Putnam 1984). The Clay Plain extends from south of the site near North Gower, northward to Pembroke. The boundary, located west of Highway 417, is with the Smith Falls Limestone Plain that extends through the southwest portion of the City of Ottawa, the eastern portion of the County of Lanark and the United Counties of Leeds and Grenville,

4.2 Bedrock Geology

Bedrock mapping for the area indicates that the bedrock underlying the site is the Verulam Formation (Wolfe, Williams and Rae 1984), which consists of limestone and interbedded shale with shale beds commonly thicker than 5 cm. In the Ottawa area the Verulam Formation is on the order of 30 to 40 m thick (Williams and Telford 1986).

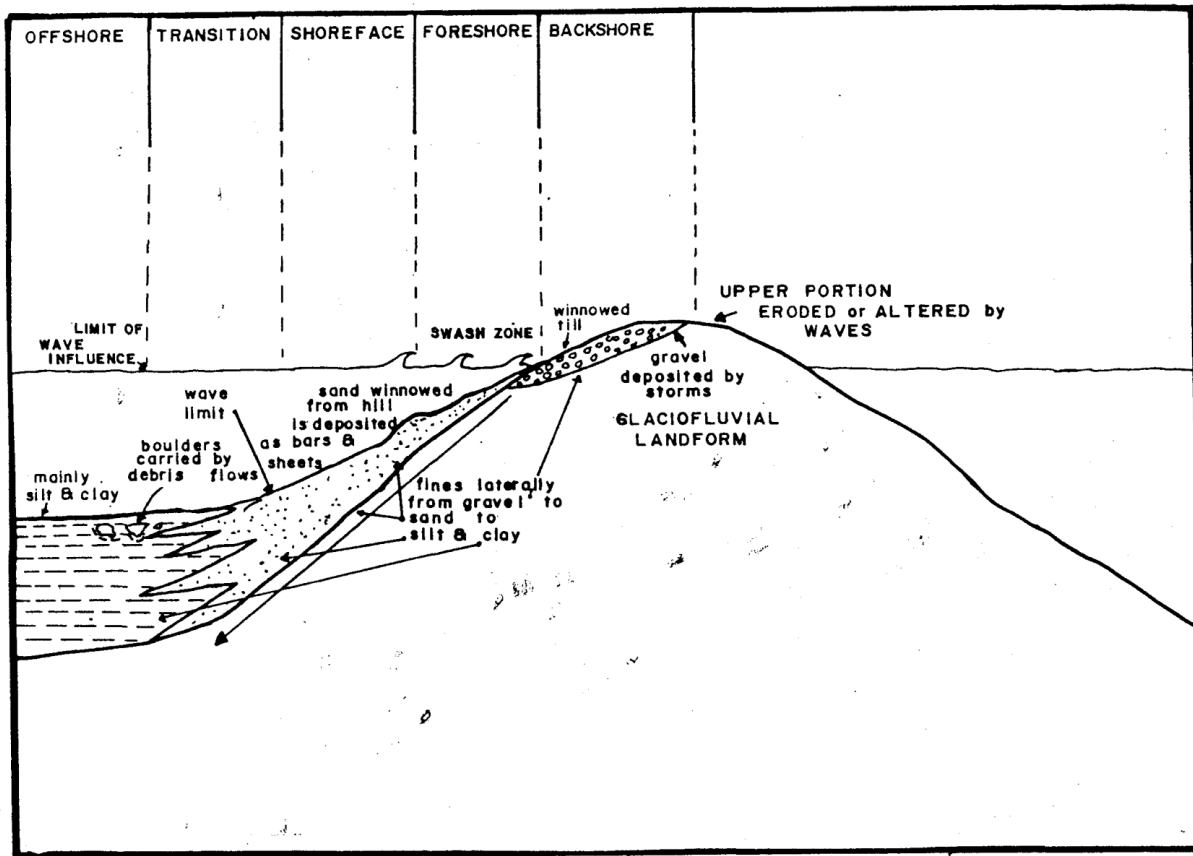
South of the site within the extended study area, Bobcaygon and Gull River Formations are also found at the surface. The geology is shown on OS Figure 1.

4.3 Surficial Geology

The area contains one of the largest shorelines that developed during the presence of the Champlain Sea (S. H. Richard 1981; S. Richard 1984; G. A. Gorrell 1991). The sediment on site is associated with the development, modification, and alternation of a glaciofluvial assemblage that extends from north of Arnprior through Galetta and Carp, continues southward to the Town of Richmond, and is located approximately 1400 m east of the site. The surficial geology of the extended study area is shown on OS Figure 1.

Studies of the adjacent glaciofluvial assemblage indicate that it formed in response to large subglacial meltwater flows (Gorrell and Shaw 1991). Detailed site mapping shows that the deposit on site represents a shoreline that prograded west to northwest from the adjacent glaciofluvial and till highlands. This progradation occurred as a clastic wedge composed of bars, spits, and sand flats. The facies model for this type of deposit suggests that material in the upper shoreface will fine downward and outward from the highland. Coarser sand with minor gravel lenses was deposited in the higher-energy shoreface environment at the wave base, which became a focal point for wave energy over time. Shoreface assemblage relationships are shown in Figure 2.

Figure 2: Glaciofluvial Assemblage / Shoreline Deposits (G. A. Gorrell 1991)



As the Laurentide Ice Sheet melted, existing valleys acted as conduits for subglacial meltwater. Like modern river systems, larger valleys channeled discharge from adjacent lower-tier tributaries. One such system is the Carp to Richmond assemblage, part of several located in the Ottawa Valley. These systems were subglacial, and the flow expanded—either from a floating ice margin or enlargement of glacier cavities. When water pressure dropped suddenly, sediment was rapidly deposited, with coarser material settling near the outlet and finer material dispersing farther away.

At the site, shoreline deposits are underlain by deep-water clay ranging from approximately 6 to 20 m thick. This clay corresponds to the Ottawa Clay Plain and is itself underlain by a sand-gravel layer that rests directly on bedrock.

The McGee Pit is one of several aggregate operations in the area, selected for its coarse sand and gravel deposits. These shoreline sediments, which prograded from the Champlain Sea's glaciofluvial

assemblage, originated from the same deposit located east of the site that stretches from north of Arnprior through Galetta and Carp, beneath the Carp River, and continues southward to Richmond. Although often buried by the deep-water clay of the Ottawa Clay Plain, the coarse-grained assemblage remains a valuable resource. It flowed through a valley situated between the limestone plains and the Precambrian ridge extending from Kinburn Side Road to the South March Highlands at March Road.

4.4 Land Use

Land uses in the area were determined by reviewing Google Earth satellite imagery (Google Earth Inc. 2025). The City of Ottawa Official Plan and Zoning By-Law were reviewed to assess the planning considerations for the surrounding area.

The area is partially developed with a composite of roads, aggregate pits, and industrial and residential uses. Rural residential properties are found along McGee Side Road and William Mooney Road. A residential subdivision is located south of McGee Side Road between William Mooney Road and Carp Road. New residential subdivisions are being constructed west of Carp Airport.

Diamondview Road and Highway 417 are located west of the site. The land to the west of the highway and to the immediate northeast of the site is unused / undeveloped woodland. The Carp Airport is located north of the undeveloped lands northeast of the site. All existing development in the area uses private individual water supply wells and sewage systems.

The City of Ottawa Zoning By-law shows the licensed area as Mineral Extraction (ME). The zoning around the site has a variety of designations, including Agricultural (AG), Rural (RU), Rural Residential (RR), Rural Commercial (RC), Mineral Resource (MR), Open (O) and Air Transportation Facility (T1B). The main zones are shown on OS Figure 3. The boundaries shown are approximate.

Within each designation, sub-zones that provide property-specific modifications are described in the Zoning By-law. In particular, the sub-zones within the T1B zone are complex and were not reproduced on the figure.

The approximate proportion of use estimated from the zoning and satellite imagery is:

Land Use	Area within 2 km (ha)	% of Area
Agricultural	175.0	4.2%
Commercial	158.5	3.8%
Industrial	14.2	0.3%
Institutional	7.0	0.2%
Mineral Resource	267.8	6.4%
Open Space/ Parkland	44.6	1.1%
Rural	3031.0	72.7%
Rural Residential	80.4	1.9%
Transportation	389.1	9.3%

4.4.1 Undeveloped Land – Forested and/or Wetland

Undeveloped land, which is comprised of forest or surface water is generally included within the Rural designation in the City of Ottawa but may also be recognized separately as Open Space or Parkland. The



Rural designation is the predominant land use in the extended study area. Much of the rural area is located south and west of the site. The land north of the site is undeveloped but is part of the Carp Airport land.

The Natural Environment Study on the site (Ecological Services 2022) found no significant features within 120 m of the site.

4.4.2 Agricultural

The agriculture lands are used predominantly for crops. The land used for agriculture is found mainly on the fine-grained sand, silt and clay that were deposited deeper water marine environments and is on the Ottawa Valley Clay Plains (Section 4.1). Groundwater, which may be sourced from overburden and bedrock, is relied upon for water supply for residents and livestock. Groundwater or surface water may be used for irrigation.

4.4.3 Industrial and Commercial

Rural Industrial and Rural Commercial developments comprise just over 10% of the extended study area. The industrial sector includes existing aggregate operations (discussed below) and a mineral aggregate resource area west of the site and Hwy 417.

4.4.3.1 Aggregate Operations

There are three licensed sites within 2 km of the proposed site. There are several other former water-filled pits within the extended study area.

The McGee Pit (ARA # 624971) aggregate license holder is Karson Holdings Inc. Another licensed sand and gravel pit (2419787 Ontario Inc.) is located approximately 90 m southeast of the site. This 15.75 ha Class A pit is permitted to extract below water. North of this pit and just east of the site entrance are the former Spratt and Wilson pits in which each excavated material from below the water table. The ARA licenses at these sites have been surrendered.

Table 1: Aggregate Licenses (shown on OS Figure 1)

ARA License	Pit Name/ Licensee	Authorized Area	License Class/ Annual Tonnage	Notes
624971	McGee Pit Karson Holdings Inc	80 ha	Class 'A' 500,000 tonnes	-Site proposed for expansion -Below water operation
4090	2419787 Ontario Inc	15.75 ha	Class 'A' 250,000 tonnes	-on McGee Sdrd, just east of William Mooney Dr -Below water operation
4095	T.G. Carrol Cartage Ltd.	53.41 ha	Class 'A' 250,000 tonnes	-approximately 2.2 km west of site at Bearhill Rd -Excavation below water is conditional on receiving approval from MNRF

The glaciofluvial deposit on which the pits are situated is one of a series of large glaciofluvial deposits that supply much of the high-quality aggregate that remains within the City of Ottawa. Parts of the assemblage have been used as a source of high-quality aggregate in the City for many years (G. A. Gorrell 1991, Lee 2013) and parts have been licensed or have had their licenses surrendered once the material has been depleted or sterilized. The sand and gravel assessments (MHBC & Gorrell Resource Investigations 1998) identified the deposit as having primary significance.

The land parcel at 1186 William Mooney Road features a garage/workshop and a residence. The site is currently being used for commercial operations by Kodiak.

4.4.4 Transportation

Approximately 9% of the area, all north of the site, is designated as transportation land, and is part of the Carp Airport. A variety of uses occur in this parcel, including subdivisions (which were not included in the “residential” category that follows”.

4.4.5 Residential

Residential development is found in the form of farmsteads, development by severances along area roads, and subdivisions (OS Figure 3). The residences are serviced by individual wells and septic systems.

5 CLIMATE STATION AND RECORD

The Drummond Centre Climate Station (Table 2) is located approximately 30 km southwest of the site just south of Mississippi Lake. This station was chosen because of its comparable topography and other environmental conditions as the site as well as the development setting. Monthly precipitation, temperature and water surplus for 1981 to 2010 Normals, annual and 5-Year Average (2019-2023), are summarized in OS Table 1 to OS Table 3.

Table 2: Drummond Centre Climate Station Details

Drummond Centre	
Station ID	6102J13
Latitude	45°01'56.082" N
Longitude	6°15'10.098" W
Elevation	145.0
Distance from site	+/- 35 km

6 REGIONAL HYDROGEOLOGY

The Renfrew County-Mississippi-Rideau Groundwater Study or RCMRGS (Golder Associates Ltd. 2003) provides a coverage of regional groundwater systems and characterizes aquifers regarding quantity and quality potential and susceptibility to contamination. The study indicates there are generally three aquifer zones in the region, including an overburden aquifer, an interface aquifer and a bedrock aquifer, which are all found in the study area.

The overburden aquifer may be used if there is sufficient granular material present (depth and extent). The number of wells that directly used the overburden may be greater than reported in the provincial database as they are not always reported.

The interface aquifer usually consists of the upper 5 to 10 m of bedrock. The bedrock was either weathered during the glacial period and from isostatic rebound or is developed in well drilling techniques such as surging and fracturing. The zone uses the more permeable bedrock to transmit



stored groundwater in the overburden aquifer that might not be sufficiently permeable to transmit a sufficient flow. Wells where the overburden consists of sand and gravel deposits provide the highest yields, but this technique is also used in areas where the overburden is till or fine-grained lacustrine deposits. Where the depth of the water bearing zone is unknown in a well record, it may be because the interface zone developed as the well drilling continued and the yield gradually increased.

The remainder reported obtaining water from the bedrock. The RMRGS indicated that the identified aquifers are all generally capable of supplying enough water to support residential development on private services, although the study also indicated that yields within some of the Precambrian-age aquifers may be marginal. No wells within 500 m of the site are using the Precambrian bedrock as a water source. The closest wells using this aquifer would be located on the Carp Ridge approximately 3.5 km northeast of the site.

The RCMRGS shows that west and east of the site on the limestone plains the aquifer is vulnerable because the bedrock surface is close to the surface. On the site the aquifer vulnerability was mapped as low to moderate due mainly to the presence of significant thickness of clay which is above the bedrock surface. The study indicated that in both areas that groundwater flow in the sedimentary bedrock formations is mainly horizontal along fractures and bedding planes.

The RMRGS describes both large and small-scale characteristics of the aquifer using published data such as water well records. The data was subsequently refined into the Source Protection Plan for the City of Ottawa[†]. The nearest source water protection area shown on the geoportal is about 2.8 km north of the site, just north of March Road at the town of Carp.

Well records from the provincial well record database were reviewed generally for the extended area and specifically within 500 m around the site. The data provides details of specific wells at the provided location. For well records drilled before the 1990s, the UTM coordinates were interpreted from the provided driller's information by Provincial staff. This sometimes resulted in a mismatch of the location. Wells records from the past 10 years regularly include civic addresses that improve the location accuracy.

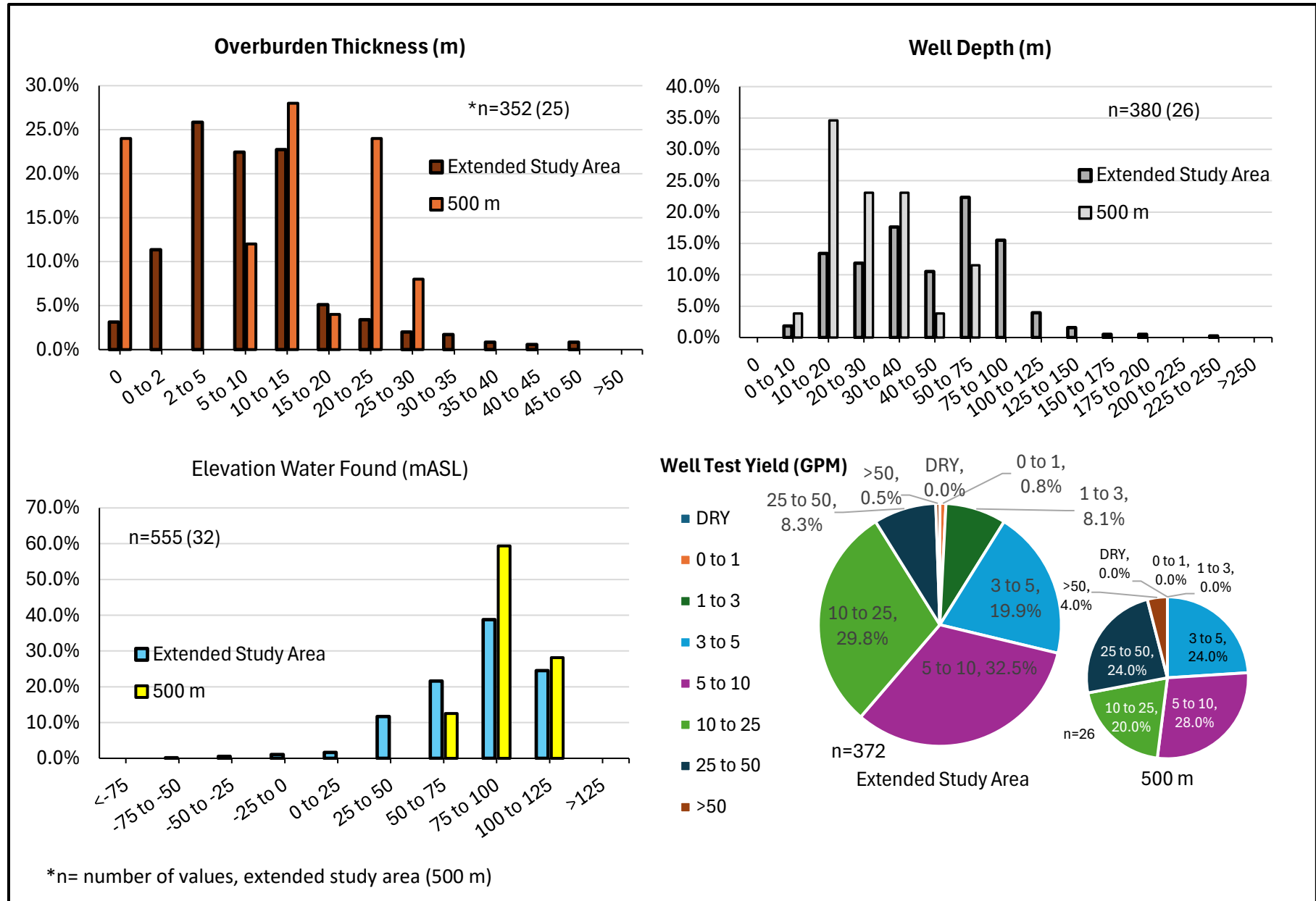
The well records were analyzed to refine the assessment of the groundwater characteristics in this report's study area to identify:

- aquifers in the area
- aquifers being used as a water supply.
- groundwater flow directions
- range of well yield.

The well records are summarized in Appendix B and the locations are plotted on Figure 3.

[†] <http://www.mrsourcewater.ca/PublicMappingTool.html>

Figure 3: Well Record Analysis



The number of wells that access the overburden aquifer may be unrepresented since dug wells and sand points are not always reported. No information was observed regarding additional overburden wells in the study area.

Graphical representation of some of the well data is shown on Figure 3. The analysed wells ranged in depth from 6.7 to 99.1 m. The shallowest wells are monitoring wells drilled for aggregate operations (McGee Pt and others) and at the Carp Airport. Wells were most often less than 40 m deep. The reported water bearing zones occurred over a broad range between 70 and 110 mASL. The most common water bearing zones (elevation water found on Figure 3) were between 90 and 100 mASL (30.3%). At the site, this corresponds to 20 to 30 m below the current pit floor.

Out of the well records analysed, none were reported as dry. Most of the wells (80%) reported a yield greater than 10 GPM³ (Figure 3). A sustainable yield of 3 to 5 GPM (24.3%) is considered suitable for residential use. A residence can be sustained with a yield as low as 1 GPM if the flow is augmented with storage.

The static level from the water well records were used to evaluate the regional groundwater flow, which is shown on OS Figure 4. The regional groundwater flow in the study area is generally from south-west to north-east. Regionally, recharge to the bedrock occurs along the Precambrian Highland, with discharge at the Ottawa River.

6.1 Overburden Aquifers

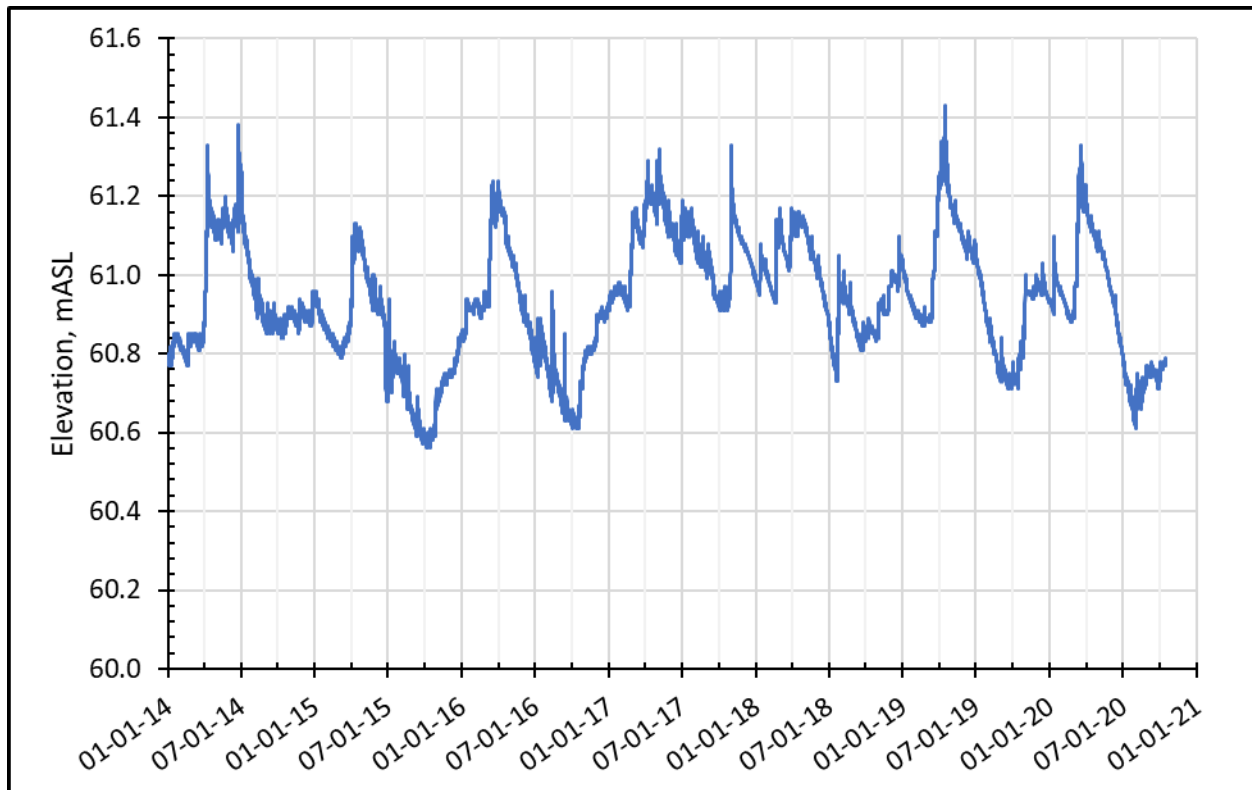
Data from the Provincial Groundwater Monitoring Network (MECP, 2024) were reviewed to assess the regional character of the overburden aquifer (Figure 4). The closest well (W0000400-2) is 11 km northwest of the site near Dunrobin (Latitude 45°25'14"N Longitude 76°1'26"W). The well is screened in a sand aquifer from 15.6 to 16.8 metres below ground surface (mBGS). The well recorded data up to October 15, 2020, which is before the site records are available. The groundwater elevation shows the seasonal variation in an unconfined aquifer in the area.

The study area has moderate to low vulnerability (Mississippi-Rideau Source Protection Committee 2022). The reason for this is that a significant thickness of clay is generally found above the bedrock surface.

Eight of the wells within 500 m were reportedly completed in overburden aquifers. Three were test wells or monitoring wells, located on the former Spratt pit. Five wells, within 500 m are supplying residences from the interface aquifer, which was intercepted 12 to 20 from the surface and is separated from the sand being excavated by the pit by 5.5 to 20 m of clay. The overburden aquifer may be used if there is sufficient granular material present. Well records for wells completed in this upper sand are not always submitted to the MECP water well data base.

³ Based on driller's test rate. Recommended rate for use may be lower.

Figure 4: Provincial Groundwater Monitor W0000400-2



6.2 Interface Aquifer

The primary aquifers used for water supply in the RCMRGS study area are in bedrock and the interface zone, and the well records show that regionally, 13.6i% are using the interface aquifer, compared to 25.9% of wells within 500 m. This aquifer includes up to ten metres of bedrock and includes groundwater from the overlying overburden. Within 500 m of the site, the well records indicated this aquifer is up to 25 m below the surface and separated from the material that is being extracted by between 5.8 and 13.1 m of clay. The potentiometric elevation for the wells using the interface zone shows the aquifer is confined by the clay layer and is moderately to strongly upward.

Well casings in the bedrock wells typically extend less than two metres into the top of bedrock, so the bedrock aquifer wells also access groundwater from the interface aquifer.

6.3 Bedrock Aquifer

The bedrock formation is used in 80% of the water well records regionally, and 51.9% of the wells reported within 500 m of the site. The bedrock at the site is the Verulam Formation. The Verulam Formation consists of thinly bedded limestone with shale interbeds (>5 cm), and in the Ottawa area is 30 to 40 m thick (Williams and Telford 1986). A previous investigation on the property found the groundwater in the bedrock was unsuitable as a water supply for residential development (Aqua Terre Solutions Inc. 2008).

The well record analysis found that 71% of the wells were drilled more than 30 m into the bedrock and 54.4% were drilled more than 40 m through bedrock. Based on information on the geological sequence

for the area, it indicates that most of the wells completed in the bedrock are likely obtaining water from either the interface between the Verulam and the underlying Bobcaygeon formations, or from the Bobcaygeon Formation. These zones would be targeted because the Verulam Formation is known in Eastern Ontario as a poor aquifer. The formation has low transmissivity and yield, and if water is intercepted at all the bedrock does not usually provide acceptable water quality due to the very thick shale beds.

6.4 Source Protection Area and Wellhead Protection

The site is located within the Mississippi Valley Source Protection Area (Ministry of the Environment,

Figure 5: Source Protection Information
(Ministry of the Environment,
Conservation and Parks 2024)

Source Protection Area: **Mississippi Valley**
[View Source Protection Plan](#)
Wellhead Protection Area: **No**
Wellhead Protection Area (WHPA-E): **No**
Issue Contributing Area: **No**
Significant Groundwater Recharge Area: **No**
Highly Vulnerable Aquifer: **Yes** ; score is 6
Event Based Area: **No**
Wellhead Protection Area Q1: **No**
Wellhead Protection Area Q2: **No**
Intake Protection Zone Q: **No**
Information is current as of: **December 12, 2024**

Conservation and Parks 2024). The available information indicates the site is not within a Wellhead Protection Area for Quantity or Quality, an Intake Protection Zone, or a Significant Groundwater Recharge Zone. The groundwater is rated as a Highly Vulnerable Aquifer (Score=6).

7 HYDROLOGY

The site is in the Carp River quaternary watershed, which is part of the Ottawa River. The Carp River is approximately 42 km in length and drains a 307.8 km² area.

8 AREA GROUNDWATER AND SURFACE WATER USE, SENSITIVE RECEPTORS

An assessment was completed to “determine the potential for impacts to ground water and surface water resources and their uses (e.g. water wells, ground water aquifers, surface water courses and bodies, springs, discharge areas) and identify if the proposed site is in a Wellhead Protection Area for Quantity (WHPA-Q) set out in an applicable source water protection plan under the *Clean Water Act*”.

The *Ontario Water Resources Act*, Sections 34 and 53 requires any high-water use that results in a site water taking of more than 50,000 L/day to maintain a Permit to Take Water (PTTW).

A review of the provincial database for Permits to Take Water was carried out. PTTW information was obtained directly from the Access Environment interactive GIS system (Ontario Ministry of Environment, Conservation and Parks 2025). The only active water taking permit within 2 km of the site is the McGee Pit (PTTW P-300-5229047655) for taking of up to 6,480,000 L/day of pond water for aggregate extraction and aggregate washing). Other active PTTWs are more than 2 km from the site.

Groundwater use in the area is by wells for individual water supply, as previously discussed. The water supplies within the radius of influence of the site operation have been considered sensitive receptors for this study.

In the review of water well records, more than 40 were initially identified in the data base as being within 500 m. The well record information was refined by checking the location sketches on each well record to correlate the well records accurately to addresses. Abandoned wells, wells that had been amended or upgraded such as by having casing extended and wells that were beyond 500 m were not used in the analysis. After the detailed review, 26 well records were confirmed as being in the surrounding area.

Out of the 26 well records that were reviewed;

- 5 wells were completed in the overburden sequence.
- 11 were completed in the interface aquifer.
- 10 wells were completed in the bedrock aquifers.

The number of wells that use the unconfined overburden aquifer may be greater since dug wells or sand points are not always reported.

Around the site, all the well records indicated the water bearing zones occurred between 50 and 117 mASL, most commonly between the most common water bearing zones were between 75 and 100 mASL, or 13 m or more below the current pit floor. Where the wells were drilled through into bedrock, as well as in most of the overburden wells, a clay layer was reported between the aggregate resource extracted in the operation, and the water bearing zones. No wells within 500 m of the site reported yields less than 5 GPM.

There is no surface water use on the site or surrounding area. There is provincial and MVCA mapping of unevaluated local wetlands., but the natural environment study found no defined wetlands on the site or within 120 m.

8.1 Potential Sources of Contamination

The Access Environment site was also reviewed for Environmental Compliance Approvals and Pesticide Licenses. Within the extended study area, a property approximately 1 km from the site has registered pesticide licenses. There were several ECAs in addition to the ECA held by Karson. The ECAs are for stormwater management systems to reduce suspended solids in the runoff.

As described in Section 4.4.3, there are permitted industrial, commercial, agricultural and mineral extraction land uses in the extended study area.

Some surrounding zoning might potentially have associated contaminants based on field observations or the zoning. Several “windshield surveys” of the area during the study period found properties that included small commercial or light industrial businesses, indicated by specific zoning, observed activity or signs.

Properties on William Mooney Road, McGee Sideroad and Diamondview Road have private sewage systems, disperse sewage effluent into the shallow groundwater aquifer. The potential for contamination depends on the condition of the individual systems and management by each property owner. Residential properties may also store fuel, such as for vehicles or home heating. Commercial or light industrial properties may employ contaminants in activities.



Application of road salt along the area roads and Highway 417 may result in impacts to the surface water and groundwater along the roadside and ditches.

The existing and draft site plans for the McGee Pit show a fuel storage area near the scale house. The site plans also indicate that storage and handling of hydrocarbon products are done in accordance with regulatory requirements. As a condition of the PTTW, Karson was required to prepare a spill response plan.

9 SUMMARY OF PRELIMINARY EVALUATION

The Level 1 preliminary investigation identified that the pit will be extracted below groundwater and area surface water features. The site is in a highly vulnerable aquifer but is not within a Wellhead Protection Zone or Intake Protection Zone. Significant wetlands, surface water courses and bodies, springs, discharge areas are not found on or near the site, but water wells and ground water aquifers are present (Ontario Ministry of Natural Resources and Forestry 2020).

Groundwater is used in the study area as a water supply for residences and commercial uses. The current site operation uses a PTTW to lower the unconfined water table, and the practice will continue if the expansion proceeds.

As a result of the presence of sensitive features on and around the site, a detailed site investigation was conducted. The remainder of the report consists of the Level 2 Water Study that was completed to address the Provincial Standards

Level 2 Water Study

This portion of the report was prepared to address the Provincial Standard for a Water Study in support of a Below Water Aggregate Operation (Ontario Ministry of Natural Resources and Forestry 2020), which says;

“Where the results of Level 1 have identified a potential for impacts from the aggregate site on ground water and/or surface water resources and their uses, an impact assessment is required. The assessment is to determine the significance of the effect and the potential for mitigation.”

10 SITE INVESTIGATION

The Level 2 hydrogeological assessment consisted of;

- reviewing the available hydrogeological information on the site and surrounding area,
- driving around the study area to observe natural features, land uses and activities,
- investigating the geological and hydrogeological site conditions with test wells and groundwater monitoring data,
- conducting field tests to measure the physical characteristics of the encountered stratigraphy,
- measuring the groundwater levels on multiple occasions, and
- collecting samples of the groundwater from the monitors to assess the ambient groundwater quality.

The information was used to characterize the current hydrogeological setting and predict the impact of the proposed operation.

10.1 Information Review

The information from the background resources review was summarized in Sections 4 to 8.

10.2 Drilling and Installation of Monitoring Wells

Three boreholes/monitoring wells (MW7, MW8, and MW9) were installed in the area of the proposed expansion on June 13, 2022, by George Downing Estate Drilling of Hawkesbury Ontario under the supervision of GRI. The boreholes were drilled to depths of 7 m and 8.2 m below ground surface (mBGS) using a CME drilling rig with hollow stem augers.

Split-spoon samples were collected in 0.76 m increments, and the samples were logged and stored in plastic bags. Drilling observations were used to refine the interpretation of the stratigraphy that was encountered.

Piezometers were installed in each borehole using 5 cm diameter PVC well screen and PVC riser. Silica sand (#3 sand, 2.46 mm) was placed around the well screens and to 0.6 m above the top of each well screen. Bentonite was used to seal the borehole from the sand pack to the ground surface. The wells were finished with protective casings and a locking well cap.



10.3 Geomatic Survey

An aerial site photograph with ground surface control was prepared from provincial LiDAR mapping (TEC Surveying Inc. 2021) for the site topography. Specific features were added independently.

The elevation of the monitoring wells was surveyed by GRI using survey grade GPS equipment (Trimble DA2 GNSS receiver with Catalyst™) on December 14, 2023. The survey included horizontal coordinates and ground surface reference elevations with < 5 cm vertical accuracy.

10.4 Surface Water Monitoring and Sampling

Flow and water quality monitoring of three surface water monitoring stations (SW1, SW2, and SW3) was conducted during the study period to comply with conditions in ECA 9363-9FLMDG.

The monitoring is conducted by Karson staff (trained and supervised by GRI) according to industry standards. The samples are collected in laboratory-supplied containers with preservatives. Provincial procedures were followed with respect to metals filtration, sample temperature control, holding times, and chain of custody. A Hanna HI 991300 multi-meter was used to measure field parameters. The equipment was maintained in accordance with the manuals and the meter serviced by Pine Environmental before the start of the monitoring season and was calibrated by Karson staff on the day before or the day the instruments were used.

Surface water samples were submitted to Eurofins Environment Testing Canada (Ottawa) for analysis.

10.5 Groundwater Monitoring and Sampling

Groundwater elevation monitoring was conducted at the groundwater monitoring well network monthly. The groundwater measurements have been recorded in this manner since January 2021. Depth to groundwater is measured by Karson personnel using an electronic water level tape.

Groundwater sampling was conducted by GRI following provincial procedures with respect to metals filtration, sample temperature control, holding times, and chain of custody protocols.

Monitoring wells MW1 to MW5 were sampled by GRI on July 26, and August 16 and 17, 2022, September 30, 2023 and October 16, 2024. To prepare for sampling, each monitoring well was pumped for approximately 30 minutes to remove more than 20 well volumes using a Waterra™ foot valve or Waterra™ electronic pump, with intake set at the level of the well screen. Field measurements were recorded with a Hanna HI 991300 portable pH/EC/TDS meter, a Hach 2100Q portable turbidity meter, a YSI 95 portable dissolved oxygen meter. The meters were serviced by certified technician annually and were calibrated the day before or on the day the instruments were used. Groundwater samples were submitted to Eurofins Environment Testing Canada (Ottawa) for analysis.

10.6 In-situ Field Testing

Slug tests were conducted by GRI at MW6A and MW6B on August 16 and 17, 2022. An electronic pressure transducer data logger deployed in the piezometer below the test zone was installed in the tested well to monitor the changing water level. The water levels during the test were recorded in 0.125 second increments. The tests were completed by rapidly inserting or removing a slug (i.e. a 0.04 or 0.11 m PVC tube filled with sand and capped at both ends). The response to the instantaneous change in



water level caused by the insertion or removal of the slug was used to obtain data from which the hydraulic conductivity of the overburden formation at each test well could be analysed.

11 CLIMATE AND WATER BUDGET

A water budget describes the relationship between the inputs and outputs of a water system. The water budget is defined as:

$$P = E + I + R + \Delta S$$

Where:

P = total precipitation

E = evaporation

I = infiltration

R = runoff

ΔS = change in storage.

Storage change (ΔS) is assumed to be zero in an analysis that considers the long term or steady state condition, such as for this study. The precipitation, evaporation, seepage, water surplus, topography, soil conditions, vegetative cover, infiltration and runoff characteristics at the site are described below.

11.1 Precipitation and Temperature

Precipitation and temperature Normals (1981 to 2010) at the Drummond Centre station are found in OS Table 1 and OS Table 2. In addition, the 5-year average was calculated for 2019-2023. The average as well as the individual years from 2021 to 2024 over which the groundwater measurements have been collected were compared. The data record is essentially complete from 2021 to 2023. One day's data is missing in 2021, and 4 are missing in 2023. The data for 2024 was only available until November 23. The Environment Canada data indicated that these readings are either missing, invalid or subject to review (Environment Canada accessed January 2025).

The mean daily temperature and precipitation over the study period are shown on OS Figure 5. The Normal precipitation is 876.2 mm. Table 3 shows how from 2021 to 2024, the annual precipitation ranged from 859.3 mm (2023) to 1047.4 mm (2022). In the previous 5 years, the increase in temperature (14.8%) and resultant potential evaporation (2.7%) were not balanced with the corresponding increased precipitation (11.5%), resulting in a decline in average water surplus of 13%.

Table 3: Water Budget, Drummond Centre Station

Period	Data Completeness (Days Missing)	Annual (mm)			
		Total Precipitation	Average Temperature	Potential Evaporation	Water Surplus
Normal	NA	876.3	6.1	592.9	283.4
2021	1	949.6	7.8	631.9	317.7
2022	0	1,047.4	6.5	607.5	439.9



Period	Data Completeness (Days Missing)	Annual (mm)			
		Total Precipitation	Average Temperature	Potential Evaporation	Water Surplus
2023	4	859.3	7.5	613.0	246.3
2024	37	962.0	9.7	642.4	319.6
2019 - 2023	5	977.1	7.0	609.0	246.6

11.2 Evaporation

The Thornthwaite formula (C. W. Thornthwaite 1948, Thornthwaite and Mather 1957) was used to calculate the Normal annual potential evaporation (PE) using the Drummond Centre temperature and precipitation data. This data is shown on Table 3.

The Thornthwaite equation, is;

$$U = 1.6 \times \sum (10t / TE)^{0.9916}$$

where:

U - Evaporation (cm)

t - mean monthly temperature (OP)

TE - Annual Heat Index = $(t/5)^{1.514}$

The mean monthly temperature was used in the estimate. The mean monthly temperature is compared to Normal and 5-year indices in Figure 6. As noted above, both the annual mean temperature and resultant potential infiltration were higher than the Normal on average over the past five years.

The calculated evaporation is listed in Table 3 and shown on Figure 7. The annual evaporation was 592.9 mm, calculated from the Normal temperature data.

11.3 Water Surplus

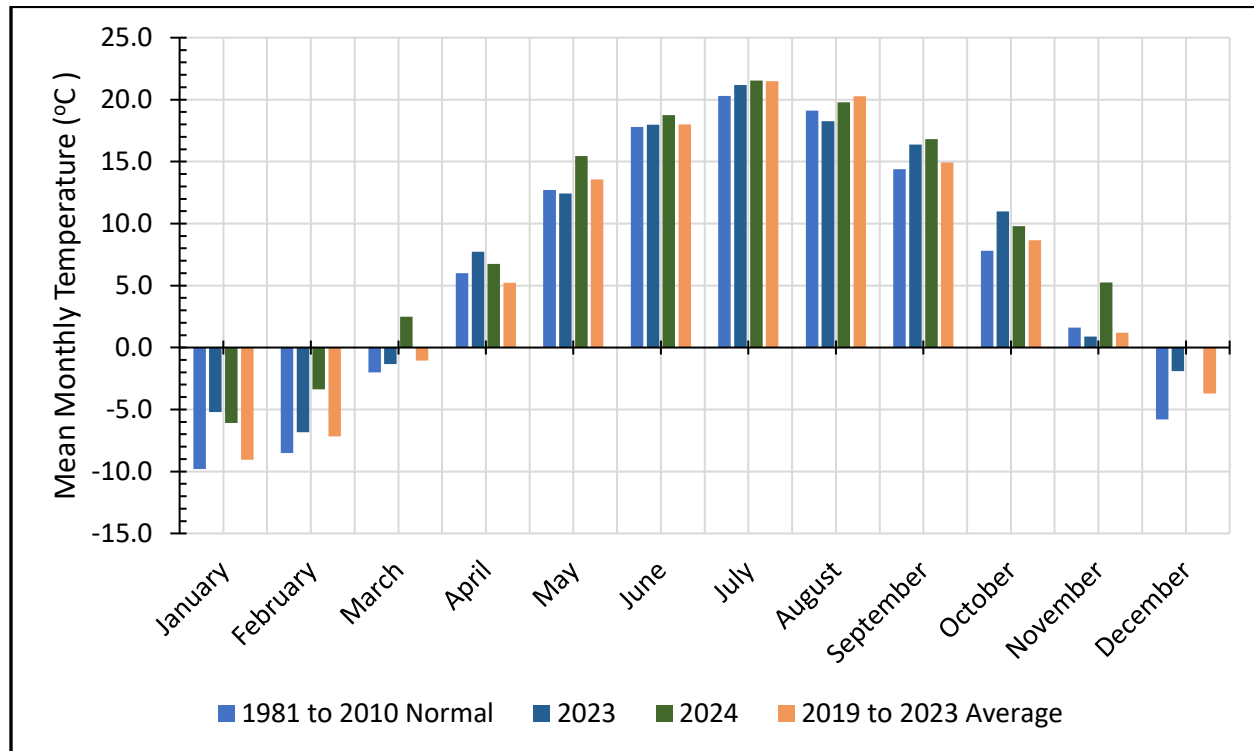
The water surplus remains after the evaporation is deducted from the precipitation. For the Normal data,

$$876.3 - 592.9 = 283.4 \text{ mm}$$

is available for runoff or infiltration. The water surplus is shown in Table 3.

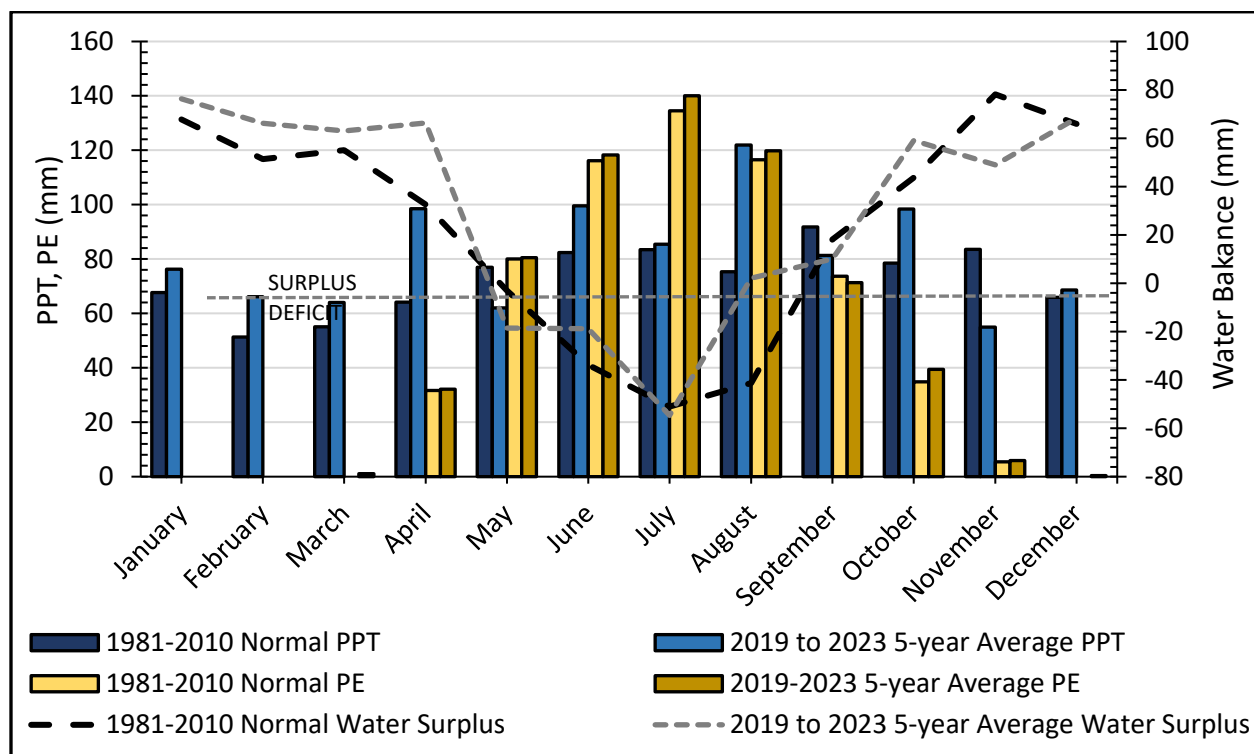
The monthly water surplus is also shown on Figure 7. It is generally recognized that over the calendar year there are two periods of recharge, but the recharge really occurs in a continuum that, in this area, begins in September and continues through the spring recharge period. Recharge is stored when the temperatures are below freezing, which means that the volumes of recharge are generally higher in the spring phase as the accumulated snow melts.

Figure 6: Normal, Annual and 5-Year Average Mean Monthly Temperature



For the Drummond Centre data, there is Normally a water surplus from September through to May. A water deficit occurs from May to September. The past five years show a similar pattern, except the water balance recovered earlier, in August. For both periods, the greatest deficit occurs in July.

Figure 7: Monthly Water Budget



The water surplus can be subdivided into infiltration and runoff components.

11.4 Infiltration and Runoff

An infiltration factor was calculated using MECP guidelines (Ministry of Environment and Energy 1995, Ministry of the Environment 2008). The infiltration factor is the sum of topographic, soil and cover (i.e. vegetation) factors.

The site has a flat to undulating terrain. A topographic infiltration factor of 0.2 is applicable. Since portions of the site and surrounding areas are relatively flat, an infiltration factor of 0.2 is conservative.

Undisturbed soil at the site is classified as Type A soil (Ontario Ministry of Transportation 1997), and a soil infiltration factor of 0.4 (open sandy loam) is applicable.

Much of the existing license area is clear of trees, and the license expansion area will also be largely cleared. It is planned that the woodland around the site and expansion area on property owned by the applicant will remain intact. For the present condition, a cover factor of 0.15 was calculated using the comparative areas. Post-development, the infiltration factor reduces slightly to 0.13 due to the tree removal. The infiltration factor (topography + soil + cover) for the current setting is 0.75, and for post-development is 0.73.

Infiltration is estimated by multiplying the combined infiltration factor by the water surplus. The available infiltration at the site is estimated to be (0.73 x 390 mm) 284.7 mm/year.

Runoff is calculated by subtracting infiltration from the water surplus. The runoff at the site is

$$390 - 285 = 105 \text{ mm/year.}$$

The water balance components used in the water budget are listed in Table 4.

Table 4: Site Water Budget, Existing and Post-Development

Period	Existing (Vegetation Factor = 0.75)		Post Development (Vegetation Factor = 0.73)	
	Infiltration	Runoff	Infiltration	Runoff
Normal	212.6	76.5	206.9	76.5
2021	238.3	231.9	231.9	85.8
2022	329.9	321.1	321.1	118.8
2023	184.7	179.8	179.8	66.5
2024	239.7	233.3	233.3	86.3
2019 - 2023	185.0	180.0	180.0	66.6

11.5 Water Budget

The water budget translates the water balance components into volume to assess the water cycle components related to the property. The annual water balance calculated using the Drummond Centre Climate Station 1981-2010 Normal data was compared to the 5-year average. The current conditions as well as the post-operations condition were compared.

The following analysis should be considered a high-level assessment of the changes and impact to the water budget by the proposed expansion. Infiltration factors for the area within 500m study area and the Carp River basin were determined from land use (Province of Ontario 2025), published geological mapping and average slope conditions in each area. The infiltration factors for the comparison areas are found in Table 5. It was assumed the ratio of infiltration to runoff would not change between the present and post operations periods. The factors were calculated for the Normal climate data and are summarized in Table 5.

Table 5: Infiltration Factors, Comparison Areas

Factor	License Area/ Property (Existing, Post-Development)	500m Surrounding Area	Carp River Basin
Slope Factor	0.2	0.3	0.2
Soil Factor	0.4	0.4	0.19
Vegetation Factor	0.15/ 0.13	0.15	0.09
Infiltration Factor	0.75/ 0.73	0.85	0.48

No change to the water surplus will occur from the operation, but the ratio between infiltration and runoff will potentially change because of the development. The change results from the reduction in tree cover.

The effect of the change in water budget from the proposal is tabulated in OS Table 4. The quantities of water surplus and proportions of infiltration and runoff post development compared to the existing condition were compared for the Normal, 2022 and 2023 climate data sets. The highest water surplus was measured in 2022 and the lowest was in 2023 over the past 5 years. In the analysis, changes in the wider areas of the 500 m study area and the Carp River Basin could not be predicted, so the analysis assumed these would be the same under the existing and post-development scenarios. The results show that infiltration will decrease a small amount, mainly due to the removal of trees in the expansion area (amendment parcel). In that area, the infiltration could decrease by about 11%. But it is reduced to about 3% when the full amended license is considered. This is partly because the existing licensed area has been largely cleared (Table 6). The overall effect on the region is even lower. The infiltration could theoretically decrease by slightly more than 1%, and the overall impact on the Carp River basin is negligible (Table 7).

Table 6: Change in Infiltration at Post-Development

Area	Decrease in Infiltration at Post Development (million m ³)			
Climate Data Set -->	Normal	High	Low	% decrease
Property	10.42	16.17	9.05	3.1%
Existing license	1.57	2.43	1.36	1.0%
Amendment Parcel	8.42	13.07	7.32	11.4%
Amended License	9.99	15.50	8.68	4.3%
500m Study Area	Analysis assumed no changes due to development beyond property			
Carp River Basin				

Table 7: Change to Regional Water Budget from Proposed Expansion

500m Study Area	-1.2%
Carp River Basin	-0.024%

12 SITE GEOLOGY

The regional geology was summarized in Section 4.2 and 4.3. The site geology focussed on the upper sand that is proposed to be excavated. Background information was collected from geological reports (S. H. Richard 1981, S. Richard 1984, G. A. Gorrell 1991, Lee 2013), previous subsurface testing completed on the site (Aqua Terre Solutions Inc. 2008, SNC Lavalin Environment 2013). The site investigation included examining existing pit faces, and drilling three new test holes in the expansion area.

The overburden sequence at the site consists of sand underlain by clay and basal sand-gravel over the bedrock. Five water supply wells in the study area were completed in the overburden. Well records indicate the overburden wells in the study area range in depth from 6.7 to 30.5 m. Two of the were decommissioned immediately after drilling (#1514737 and #1514738). Well #1524591 is a water supply well at the sand/gravel pit at 2355 McGee Side Road. Two residential water supply wells (#1518357 at 1081 William Mooney, and #1520280 at 2464 McGee Side Road) extend through the clay to 14 m below ground surface (mBGS). A well (#1520031) at 2472 McGee Side Road encountered silt and sand to a depth of 19 mBGS and is approximately 200 m southeast of the proposed pit expansion boundary.

Cross-section A-A' shows an interpretation of the stratigraphy using the site wells and water well records (OS Figure 11).

12.1 Upper Sand

The site is situated on sand that was deposited as a prograding shoreline which developed from the glaciofluvial assemblage located to the east of the site. The shoreface (green) and bars (yellow to orange) can be differentiated on the LiDAR image (Figure 8). The shoreface environment prograded westward. The subsurface investigation found that the depositional environment is consistent with the features of a complex prograding shoreline. The unit is complex because overall, the deposit coarsens upward, but within the overall deposit, there are a series of beds that either coarsen or fine upward depending on the depositing current and the material source that was eroded as the shoreline prograded. Silt and clay were carried to deeper water and were not deposited in large quantities in the shoreface zone. Well records indicate that the sand is 3 to 19 m in thickness. The unit thickens eastward. On the site and in the surrounding area, in the shoreface environment, 3 to 8 m is representative. The thicker sand will be found 1400 m to the east, where the glaciofluvial is present.

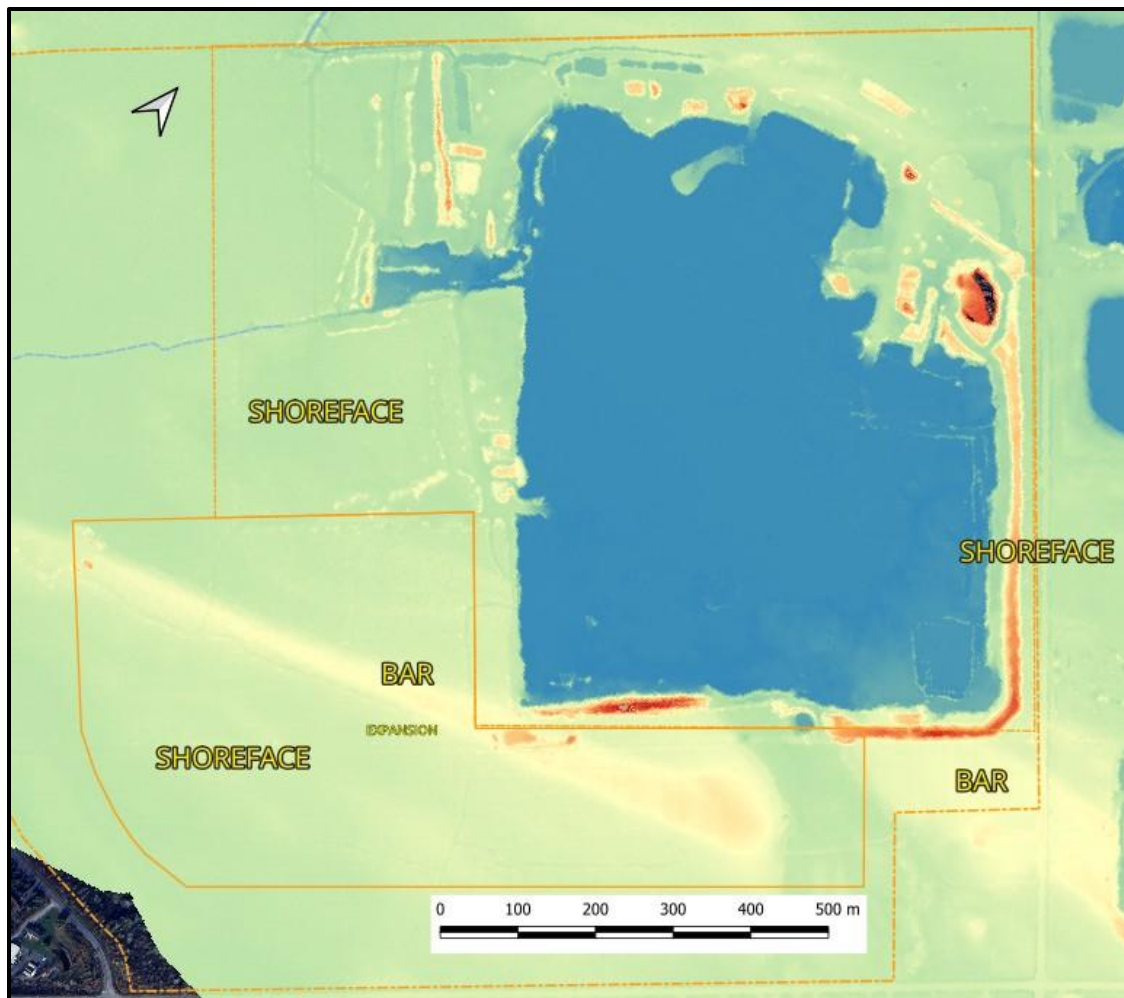
The logs for the new test holes are found in Appendix C. Since the drilling process uses water, the water table determined at the time of drilling was approximate. The test well locations are shown on OS Figure 2.

- MW7 encountered 7.01 m of medium to medium fine to silty fine-grained sand over clay. The hole was advanced to 8.23 m. The stratigraphy consisted of a fining downward sand sequence,

with the fineness modulus⁴ (FM) ranging from 1.8 to 2.4 near the surface to 1.5 near the base of the unit.

- MW8 was encountered 5.8 m of fine to silty fine-grained sand over clay. The hole was advanced to 8.22 m. The stratigraphy consisted of a fining downward sand sequence with the fineness modulus (FM) ranging from 1.5 to 2.
- MW9 was encountered 5.8 m of fine to silty fine-grained sand over clay. The hole was advanced to 7.01 m. The stratigraphy consisted of a fining downward sand sequence with the fineness modulus (FM) ranging from 1.5 to 2.

Figure 8: Site Morphology



12.2 Clay

The McGee Pit is situated west of the Ottawa Clay Plain. The water that entered the Ottawa Valley from spillways and other water channels in the Precambrian valleys in the Counties of Lanark and Renfrew and from the Precambrian uplands in western Quebec drained into the deep, quiet water of

⁴ Fineness modulus is an index that represents the coarseness of the deposit. It is calculated by adding the % retained in a standard sieve analysis and dividing by 100. A higher number represents a coarser deposit.

the Champlain Sea. The clay plain extends from south of the site near North Gower to north of the site near Pembroke. Mapping (Barnett and Clarke 1980a, S. H. Richard 1981, S. Richard 1984) indicates that the clay consists of rhythmites of silt and clay with occasional sand beds. At the site the clay is an aquitard that separates the upper sand that will be excavated from the interface aquifer. The thickness of the clay in the study area ranges from 0.6 m to 17.4 m. The clay was not penetrated in the testing for the expansion area.

12.3 Basal Sand-Gravel

Well records indicate the thickness of the sand-gravel in the study area ranges from 2.1 m to 20.1 m. The sand-gravel likely found above the bedrock in most areas but is not always reported in the well record because it is often thin, < 1 m above the bedrock.

12.4 Interface Aquifer

Of the well records analysed 11 wells in the study area were completed in the interface aquifer. One was decommissioned immediately after drilling due to poor groundwater quality. Well records indicate that the interface wells in the study area range in depth from 11.6 to 29.9 m. The interface aquifer includes the overburden groundwater interface and the upper ten metres of the Verulam Formation bedrock (i.e. the relatively permeable upper weathered and fractured bedrock layer). In the study area this aquifer extends to approximately 30 mBGS. The interface aquifer is typically overlain 6-20 m of clay, but in some locations coarse textured material extends to the bedrock interface.

Well casings in the interface well typically extend to the interface. The hydraulic conductivity at the interface aquifer can be increased by well development enabling groundwater stored in the overburden to flow through the upper weathered bedrock zone.

12.5 Bedrock Geology

The bedrock geology was not specifically investigated for the expansion study. Previous studies for the area and available resources showed the bedrock is consistent with the published mapping that Verulam Formation is present over most of the site. A small area of Bobcaygeon Formation may be encountered at the very south end of the property (OS Figure 1).

13 SITE HYDROGEOLOGY

Regionally, the site is in neither a recharge nor discharge area (OS Figure 4). The direction of groundwater flow in the sand on the site is northward.

The Source Protection Atlas identifies the site as being located within a Significant Groundwater Recharge Area (SGRA) and a Highly Vulnerable Aquifer (HVA). These designations are based on regional-scale assessments that rely primarily on water well records and broad geologic mapping. While appropriate at that scale, such assessments can overgeneralize local conditions.

The site-specific investigation provides a more detailed understanding of the hydrogeological setting. The upper sand unit is indeed an unconfined aquifer and, as such, is inherently vulnerable to surface influences. However, this aquifer is not widely used for water supply in the area. The interface and bedrock aquifers that supply local wells are protected by a continuous, low-permeability clay aquitard,

which is 6 to 20 metres thick across the site. This confining layer significantly reduces the vulnerability of the deeper aquifers beneath the site, making them much less susceptible to surface-derived impacts.

Previous site studies (Aqua Terre Solutions Inc. 2008) concluded the water quality from the Verulam Formation is unsatisfactory for consumption. Wells that targeted the underlying Bobcaygeon Formation or the contact between the Verulam and Bobcaygeon may produce an acceptable quantity or quality of groundwater.

Well casings in the bedrock wells typically extend less than two metres into the top of bedrock, so the bedrock aquifer wells also potentially access groundwater from the interface aquifer.

The wells within 500 m reportedly use the aquifers described below, with 11.5% using overburden, 19.2% using the interface aquifer, 50% using the Verulam Formation and 7.7% using the bedrock contact. Two wells reported water bearing zones in two of the aquifers, and one had no data.

13.1 Upper Sand Aquifer

In the upper sand aquifer, the average groundwater elevation at the site is 117.3 mASL, based on monthly groundwater elevation data from 2021 through 2024. Seasonal fluctuations within the upper sand range from 0.68 m at MW13-4, to 3.38 m at MW7. The direction of shallow groundwater flow in the upper sand is to the north. Some variation is expected when pit dewatering occurs.

Three new groundwater monitors were installed in the expansion area adding to the monitoring wells in the existing pit. Borehole logs for the existing monitoring wells are not all available, but some details were summarized in a previous report (SNC Lavalin Environment 2013).

Since 1989, some 12 monitoring wells or well nests were installed, of which 6 were removed by the operation or decommissioned in advance of the expanding operation between 2005 and 2021. The current groundwater monitoring program uses 7 monitoring wells. Table 8 summarizes the current monitoring well network. The information on the full list of former wells is found in OS Table 5, and well record for MW6A follows.

Table 8: Summary of Current Monitoring Wells

Monitoring Well ID	Date	Easting Northing	Construction Details (Depth, m)	Stratigraphy	Well Depth (m)
Monitoring wells, Upper Sand – Unconfined Aquifer					
MW2	2003	420335 5017895	0.051 m (2") PVC well, screened from 3.0 to 6.1 m	Shoreface Sand^	6.1
MW4	2003	419808 5018126	0.051 (2") PVC well, screened from 3.0 to 6.1 m	Shoreface Bar^	6.1
MW6B	2009	420406 5017489	0.051 m (2") PVC well, screened from 3.0 to 6.1 m	Shoreface Sand	6.1

Monitoring Well ID	Date	Easting Northing	Construction Details (Depth, m)	Stratigraphy	Well Depth (m)
MW13-4	2013	419600 5017718	0.051 m (2") PVC well, screened from 1.2 to 4.3 m	Shoreface Bar	4.3
MW7	13-Jun-22	420416 5017289	0.051 m (2") PVC well, screened from 4.5 to 7.6 m	Shoreface Bar	7.6
MW8	13-Jun-22	420156 5017089	0.051 m (2") PVC well, screened from 3.0 to 6.1 m	Shoreface Sand	6.1
MW9	13-Jun-22	419502 5017008	0.051 m (2") PVC well, screened from 3.0 to 6.1 m	Shoreface Sand	6.1
^Shoreface sand is deposited below the wave base on the sea floor, whereas shoreface bars develop over the shoreface sand and tend to have a coarser sand texture reflecting higher depositing currents					
Monitoring wells, Interface Aquifer (upper weathered Verulam Formation)					
MW6A	2009	420405 5017490	steel cased to 25.5 m, open hole from 25.5 to 35.1 m in Verulam Formation	Interface Aquifer	35.1
Other (Does not represent site hydrostratigraphy)					
MW3	1989	419963 5018326	0.15 m diameter steel casing drilled to bedrock surface at 32 m, well not extended into bedrock	Casing sits on bedrock surface, minor seepage into the well from below the casing occurs	25.6

MW3 is monitored, as required, but the data is not considered reliable and was not used in the assessment. It consists of steel casing down to and sitting on bedrock. The water levels do not reflect the hydrogeological conditions on the site.

13.2 Aquifer Testing

Testing was conducted to determine the aquifer characteristics.

13.2.1 Pumping Tests

A pumping step test was conducted at former monitoring well MW1B in October 2008 (Aqua Terre Solutions Inc. 2008). Analysis of the step test data provided an estimate of hydraulic conductivity (1.2×10^{-5} m/sec).

A hydrogeological assessment at the site to support a PTTW renewal application in 2013 (SNC Lavalin Environment 2013). As part of the study, a seven-day pump test was carried at the site out between April 26 and May 3, 2014, at the pond. The pond was pumped for at rate of approximately 6,000 cubic

metres / day. The report does not provide an estimate of hydraulic conductivity for the upper sand. The report provides a range of transmissivity (0.04 to 0.36 m²/s) from results and storativity (0.05 to 5.77) values from the pumping well and nearby monitoring wells.

13.2.2 Hydraulic Conductivity Tests

Rising head hydraulic conductivity tests were completed at monitoring wells MW1B (replaced by MW6B) and MW2 in October 2004 (Aqua Terre Solutions Inc. 2008). The analysis was not completed because the water levels recovered too quickly.

In-situ rising and falling head slug tests were completed by GRI at the new monitoring wells and additionally on existing monitors MW6A and MW6B in August 2022. The data from the hydraulic conductivity testing and analyses are found in Appendix D. MW6B is representative of the upper sand. MW6A is representative of the interface aquifer. The data were analysed using AQTESOLV™ software. Aquifer parameters were calculated using the Bower and Rice method of analysis (Bouwer and Rice 1976). The method is suitable for use in sediment with higher permeability and compensates for oscillation in the data. Table 9 provides a summary of well response test analysis results.

Table 9: Summary of Hydraulic Conductivity Test Results

WELL	TEST	Hydraulic Conductivity (m/s)	Average	WELL	TEST	Hydraulic Conductivity (m/s)	Average
MW 6A (Interface Aquifer)	1	1.37E-06	2.36E-06	MW 8	1	8.78E-06	7.82E-06
	2	2.03E-06			2	7.97E-06	
	3	2.91E-06			3	6.45E-06	
	4	2.72E-06			4	9.07E-06	
	5	2.25E-06			5	6.85E-06	
	6	2.90E-06			6	7.78E-06	
MW6B	1	9.28E-05	2.89E-05	MW 9	1	4.38E-06	1.15E-05
	2	1.41E-05			2	1.03E-05	
	3	2.32E-05			3	2.57E-05	
	4	1.53E-05			4	1.01E-05	
	5	1.57E-05			5	1.16E-05	
	6	1.22E-05			6	7.15E-06	
MW 7	1	5.75E-06	4.87E-06				
	2	4.96E-06					
	3	4.91E-06					
	4	3.56E-06					
	5	4.70E-06					
	6	4.70E-06					
	7	5.51E-06					

The individual hydraulic conductivity test results in the upper sand ranged from 3.56 x 10⁻⁶ (MW7) to 9.28 x 10⁻⁵ m/sec (MW6B). The results in the interface aquifer ranged from 1.37 x 10⁻⁶ to 2.91 x 10⁻⁶

m/sec. Hydraulic conductivity values for medium fine to medium coarse sand typically range from 9×10^{-7} m/sec to 5×10^{-4} m/sec (Domenico and Schwartz 1990).

All Wells Tested	Minimum	3.56E-06	MW 7
	Maximum	9.28E-05	MW6B
	Average	1.29E-05	
Expansion Area	Minimum	3.56E-06	MW 7
	Maximum	2.57E-05	MW 9
	Average	7.91E-06	

The hydraulic conductivity at MW6B and MW9 were higher than in the other wells. This is likely because the wells are situated on a sand bar, which will be coarser grained than the nearshore sand (Figure 8).

13.3 Groundwater Levels

The direction of groundwater flow in the interface aquifer and bedrock aquifer were interpreted from static level reported in water well records. The flow in both aquifers is north to north-east, towards the Ottawa River.

At the site, groundwater levels in the upper sand have been recorded since January 2021. Water taking did not occur in 2019 and 2020 and consequently water levels were not recorded. Records are not available for the period prior to Karson's purchase of the operation in 2021, but regular water level monitoring has been conducted since.

PTTW P-300-5229047655 for the current operation includes a groundwater monitoring program of the site wells. The groundwater data are found in OS Table 6. The historical groundwater elevations are shown on OS Figure 6.

Representative groundwater elevation contours for the upper sand during selected periods are shown in OS Figure 7 to OS Figure 10. The general direction of groundwater flow in the upper sand at the site is northward.

A review of the water levels for the monitoring wells in the shoreface zone (OS Figure 6) shows that the water levels in the monitoring wells fluctuated seasonally, with peaks starting in April, followed by a slow increase in levels to August followed by a decrease to the end of the year. On OS Figure 6, the difference between wells affected by the operation and not can be distinguished. The amplitude of the seasonal effects are dampened in the wells nearest the excavation.

The average potentiometric groundwater elevation at MW6A (118.2 mASL) is higher than the elevation at MW6B (116.2 mASL) indicating there is an upward vertical hydraulic gradient due to the confinement of the interface aquifer by the clay.

The date the highest water levels recorded varied but were usually in the month of April. The highest water level measured 120.18 mASL at MW4 on January 24, 2025, and the lowest water level was 116.46 mASL at MW6B, on October 14, 2021.



Out of the data, the truly lowest water level was 109.04 mASL in MW3 on October 31, 2023. As described in Section 13.1, MW3 data do not represent the hydrogeological conditions on the site.

The fluctuation in individual wells, along with other data analysis are shown in Table 10 and illustrated on Figure 9 and Figure 10.

Table 10: Maximum Water Level Range

Well	Maximum	Minimum	Difference
MW 2	116.97	116.19	0.78
MW 3	116.55	109.04	7.51
MW 4	120.18	116.64	3.54
MW 6A	118.34	117.47	0.87
MW 6B	117.47	116.46	1.01

Well	Maximum	Minimum	Difference
MW 13-4	117.49	116.81	0.68
TW 7	118.95	117.74	1.21
TW 8	119.52	118.18	1.34
TW 9	117.61	116.81	0.80
All	120.18	109.04	

Figure 9: Average Groundwater Level, Jan 2021 to May 2025

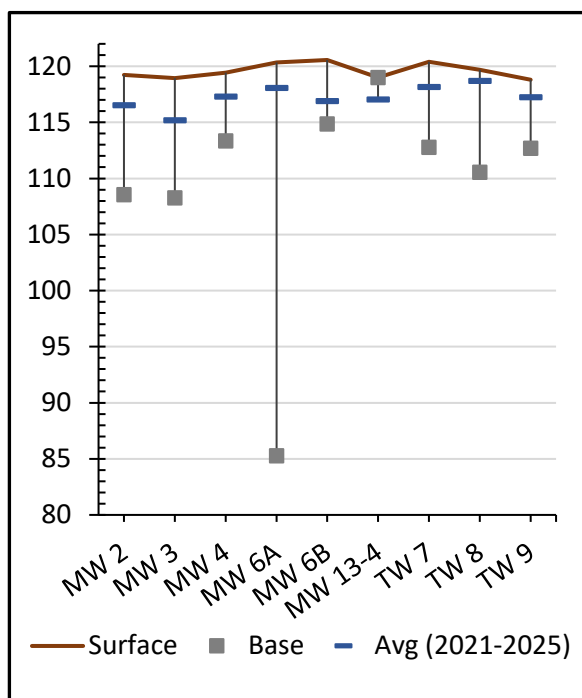
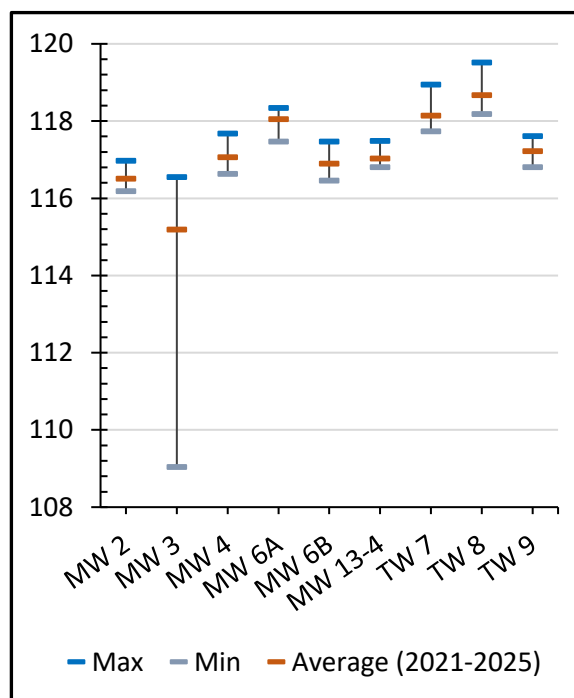


Figure 10: Range of Groundwater Levels, Jan 2021 to May 2025



13.4 Water Balance

The catchment for the property, determined using the digital terrain model, is approximately 220 ha. annual recharge (calculation rounded) will be on the order of 634,500 m³/yr (Calculation

1). Calculations are found in the calculation section at the end of the report.

The groundwater flow through the site in cross-section was also estimated (Calculation 2). The groundwater flow through the site and deposit northward on the order of 3,150 m³/yr.

13.5 Site Hydrology

The water surplus drains to the site mainly through infiltration. Since seasonal water table lowering is part of the operation at the pit, there is a local drainage component toward the excavated pond. Water from the operation is pumped from the pit into a series of sedimentation ponds that are used to reduce the sediment load of the water before it is discharged off site through a drainage ditch along the northwestern site boundary. The drainage ditch discharges into an unnamed creek. The creek merges with other small watercourses and eventually discharges to the Carp River approximately 3.5 km north-northwest of the site. The Carp River flows northwest and discharges into the Ottawa River approximately 25 km northwest of the site.

The site and the existing licensed area comprise approximately 0.39% of the Carp River sub-watershed. There are several small unnamed watercourses through the extended study area that developed where the soil is less permeable. The catchment for the licensed area is approximately 220 ha and is comprised of nearshore sediment. The natural topography in the catchment area is flat, except where the bars are present (+2m) or the site is disturbed by the operation.

The watercourses in the area were identified from provincial data (Province of Ontario 2025), and were verified on site. They are shown on OS Figure 1 and OS Figure 2.

Provincial mapping and the Mississippi Region Conservation Authority show the nearest floodplain is along Huntley Creek, approximately 620 m away.

13.5.1 Summary of Hydrology Assessment from Natural Environment Study (Ecological Services 2022)

The information in this section has been taken from the referenced study. There were no defined wetlands found on or within 120 m of the proposed expansion, and the nearest Provincially Significant Wetland is approximately 5 km to the west.

There are excavated ponds in area surrounding the site, but they have no connection to other water bodies and are generally smaller than the 0.5-hectare evaluation threshold. The potential for wetland features at the McGee pit pond is limited as long as operations continue because of the dewatering.

Within 120 m of the site, the unnamed creek was found to have limited potential for fish habitat due to beaver dams and man-made check dams. Fish were reported to be present in the creek that is north of the site, and into which the unnamed creek merges. In June 2020 there was no water in sections of the creek. The referenced creek is a separate tributary and is unrelated to the site operations.

No impacts to the natural environment are expected from the proposed pit expansion (Ecological Services 2022).

13.5.2 Surface Water Management and Monitoring

The existing pit has been excavated below the water table and undergoes dewatering to permit the extraction of the resource. Permit to Take Water P-300- 5229047655 provides the limits and conditions for the dewatering as well as for aggregate washing.



The discharge from the existing operation is managed according to the requirements of ECA ECA#9363-9FLMDG. The surface water monitoring station information is summarized in Table 11.

Table 11: Surface Water Stations

Station ID	Location Description	UTM Coordinates	Elevation (mASL)
SW1	Property boundary, end of Sewage Works (measures water quality at the compliance point)	419277 5017694	117.77
SW2	Upstream of confluence with tributary of Unnamed Creek. Receives water from roadside ditches of Diamondview Road and Highway 417. Different watercourse as SW1 or site discharge	418616 5017816	115.51
SW3	Unnamed Creek at March Road, Downstream of SW-2 and subdivision west of Carp Airport.	418360 5019318	107.03
* Elevation from HRDEM (LIDAR) data DTM model (National Research Council 2022).			

During the study, the quantity of groundwater that was diverted from the pit pond through the treatment system, which consists of 4 settling ponds, ranged from 397,387 to 613,929 m³/yr. When dewatering occurred, the water table is lowered at the pump by approximately 1.5 m and between 0.25 and 0.5 m at the monitoring wells.

Table 12: Pumping Records, 2014 to 2024 (Years when Pumping Occurred)

	2014	2015	2017	2018	2021	2022	2023	2024
January	-	-	-	-	-	-	40,293	-
February	-	-	-	25,686	-	-	-	-
March	7,336	-	24,351	19,595	-	42,090	-	-
April	28,493	57,101	125,762	84,490	7,351	125,457	87,246	117,290
May	31,022	114,285	170,619	82,461	138,149	147,444	169,261	94,642
June	12,631	57,905	97,492	54,966	48,750	66,939	88,923	71,742
July	22,236	22,571	56,762	16,571	36,128	24,949	84,206	90,584
August	22,971	30,781	68,048	91,546	18,871	43,169	22,942	95,513
September	23,963	31,307	73,682	35,812	31,482	60,491	3,828	28,484
October	22,068	61,188	45,578	62,950	71,640	63,778	3,013	6,202
November	13,619	49,606	60,315	57,940	45,016	39,611	-	43,766
December	-	-	94,927	-	-	-	-	-
Annual (m ³)	184,339	424,744	817,537	532,016	397,387	613,929	499,713	548,223

13.6 Water Quality

Surface water quality is measured as part of the ECA requirements. Groundwater quality has also been monitored annually during the study.

13.6.1 Surface Water Quality

Laboratory certificates of analysis for 2022 to 2024 are included in Appendix E.

The analytical results were compared to the limits provided in the Ontario Provincial Water Quality Objectives (MOEE 1999), the City of Ottawa Stormwater limits and limits provided in the ECA. The lab reports indicated some exceedances. The details below are from the 2024 report on ECA monitoring (GRI Inc. 2025).

At SW1, (the ECA compliance point):

- The total suspended solids were within the ECA limit except for in November 2024. An inspection in late 2024 and again in early 2025 found that maintenance on the sewage works is needed since washing out of part of Pond 4 and short circuiting of the settling ponds by some of the effluent occurred. Karson was advised of the issues and it is our understanding that they have been resolved to restore compliance with the ECA requirements.

At SW2 ("Upstream") and SW3 (Downstream) surface water stations:

- SW2 is upstream of the point where the unnamed creek discharging from the site merges and is unrelated to the site. SW3 is about 1500 m downgradient of the site. There are several other activities that discharge to the un-named creek between the McGee Pit and the monitoring location.

At each location, the phosphorous concentrations were above the method reporting limit (MRL) but within the storm sewer limit. Unionized ammonia was within the PWQO limit.

Iron and manganese intermittently exceed the storm water sewer limits of the City of Ottawa. They are believed to be a result of fine sediment in samples that are taken during low flow periods. As SW1 the quality of samples has improved by refining the collection method, and the iron and manganese results have improved correspondingly.

13.6.2 Groundwater Quality

The groundwater quality at the monitoring wells was tested from 2021 to 2024. The laboratory reports for 2021 to 2024 are found in Appendix F⁵. The raw water in the upper sand is of generally acceptable quality.

The water samples were turbid from sediment passing through the sand pack and well screen, and consequently the field measured TSS concentrations were high for MW7 and MW8. Waterra™ inline filters were used but were quickly jammed with sediment. Three to four filters were used for sampling of metals at each well. The inability to obtain sand-free samples from the monitoring wells meant that

⁵ Sample MW13-4 was mislabelled MW13-6 in the 2023 laboratory report and MW13-3 in the 2024 laboratory report

some results are likely not representative of the groundwater. The standard sampling procedure does not allow for field filtering that would remove the sediment before the sample is preserved.

MW3 and MW6A had a concentration that was near or exceeded aesthetic limits for sodium and chloride in 2023 and 2024. The concentration was also exceeded in MW7. Sources of sodium and chloride are the Verulam Formation and the clay, but there are potentially contributions from road salt, as the shallower monitors also exhibit above background concentrations of the parameters.

The maximum concentration for fluoride was exceeded at MW6A and was elevated in MW3 and MW13-4. In sedimentary rocks high fluoride concentrations are often measured in formations which consist of shale (Brunt, Vasak and Griffioen 2004) or have high shale content. These wells are each in the interface zone, and the source of the fluoride is most likely the Verulam Formation.

14 CONCEPTUAL HYDROSTRATIGRAPHIC MODEL

The available data were used to conceptualize how the surface water and groundwater interact in the study area. The data consisted of topographic maps (Queen's Printer 2023), water well records from the Provincial database and geology maps (Barnett and Clarke 1980a).

The conceptual hydrogeological model for the site is based on previous investigations, recent subsurface data, and regional geological mapping. The site lies within the Carp River Basin, a Quaternary watershed draining to the Ottawa River, and is underlain by an unconfined sand aquifer of glacial and post-glacial origin. This aquifer consists of moderately permeable, medium-grained sand with occasional gravel lenses, deposited in a high-energy shoreface environment during the recession of the Champlain Sea. The sand forms a clastic wedge that prograded westward from a glaciofluvial upland located to the east, with depositional features such as bars, spits, and sand flats. This sedimentary sequence is characteristic of waning current conditions, with individual beds fining upward, while the overall deposit fines downward and outward from the source.

Beneath the surficial sand, a sequence of clay, basal sand and gravel, and bedrock is present (Table 13). The total overburden thickness exceeds 24 m locally, based on well records, with the sand ranging from 5 to 7 m thick. The underlying bedrock is mapped as the Verulam Formation—limestone interbedded with shale—which is known to yield poor-quality groundwater due to elevated concentrations of sodium, chloride, and fluoride. These water quality constraints have previously rendered the site unsuitable for residential development.

Hydrogeological investigations confirm that the upper sand unit is the primary hydrostratigraphic feature controlling local groundwater flow. It is hydraulically connected across the site, with measured permeabilities ranging from 4.87×10^{-6} to 2.89×10^{-5} m/s. The water table occurs within 1 to 3.7 m of ground surface and varies seasonally by up to 3.5 m. A further drawdown of up to 0.5 m occurs seasonally in proximity to on-site ponds. Groundwater flow is predominantly northerly, with a minor induced gradient toward active excavation areas during pumping. The estimated hydraulic gradient is low, on the order of 0.077. Based on a cross-sectional area of the upper sand unit, along with representative values for hydraulic conductivity and gradient, the estimated annual groundwater throughflow across the site is approximately 3,750 m³.

The catchment area contributing to and draining from the site is relatively small and flat, with limited surface flow. Drainage features are primarily road- and industry-related, and most overland flow is



Table 13: Hydrostratigraphy

Hydrostratigraphic Unit		Approximate Thickness (m)	Geological Description	Hydrostratigraphic Characterization	Estimated Hydraulic Conductivity (K in m/sec)
Upper sand		3 – 19*	Near shore environment with bars	Unconfined aquifer / porous media / homogenous / mostly medium grained / continuous at site	1.33E-05
Clay		6 - 20	Marine clay	Confined aquitard / porous media / semi homogenous / fine grained (clay and silt, some sand) / continuous at site	not measured (estimate = 1.00E-08)
Basal sand-gravel		1 - 17	Sand, gravel, silt	Confined aquifer / porous media / inhomogeneous / coarse grained (gravel, sand. boulders) / discontinuous at site	not measured (estimate = 1.00E-06)
Interface Aquifer	Interface and upper Verulam Formation	<10	Fractured - thinly bedded limestone with interbeds of shale	Confined / fractured bedrock with moderate permeability associated with weathering and isostatic rebound effects + bedding plane and subvertical fracturing	2.36E-06
Bedrock Aquifers	Verulam Formation	<32	Thinly bedded limestone with interbeds of shale	Confined / competent bedrock with low permeability associated with bedding plane and subvertical fracturing	not measured (estimate = 1.00E-07)
	Bobcaygeon Formation	87	Limestone with minor shale in upper formation	Confined / competent bedrock with moderate permeability associated with bedding plane and subvertical fracturing	not measured (estimate = 1.00E-06)

The unit will thicken eastward. At the site and surrounding area, 3 to 8 m is representative.

directed northward toward the Carp River. Dewatering of the upper sand occurs as part of site operations, with discharge routed through a series of settling ponds before entering a local unnamed watercourse. No springs or seeps have been observed on the site, and infiltration capacity is expected to remain high, even under post-closure conditions.

Taken together, the conceptual model supports the interpretation of a laterally extensive, hydraulically connected sand aquifer deposited in a prograding shoreface environment and underlain by confining clay and fractured limestone bedrock. The hydrogeological framework provides the basis for evaluating the effects of excavation, dewatering, and post-closure land use, as discussed in the following impact assessment.

15 IMPACT ASSESSMENT

This report evaluates the potential impact of an expansion to the licensed McGee Pit. The proposal will add 33 ha to an existing licensed aggregate operation creating a total license area of 113 ha. The operation extracts sand from an upper sand sequence that is underlain by clay. The clay separates the operation from the underlying interface aquifer and bedrock that are used locally for water supply.

The analysis is based on the provided operational proposal, which is;

- The license boundary of the expansion area will be at least 150 m from Diamondview Road, McGee Side Road, and William Mooney Road.
- The extraction area within the proposed expansion area will have a 15 m setback from the expansion area boundary on the west, south and east sides.
- The excavation area will be at least 50 m from the residences at 1117 and 1135 William Mooney Road.
- The annual extraction of 500,000 tonnes will not change
- The location of the entrance, scale house and fuel storage will not change.
- Extraction will occur a minimum elevation of 113.0 mASL. The expansion will become part of the approved excavation, increasing the extraction area to 105.3 ha, for an approximately 40% increase

The unconfined aquifer will continue to be lowered seasonally to permit excavation on the working floor. The discharge operates under PTTW P-300-5229047655 and ECA #9363-9FLMDG. The addition of the expansion area will not change the terms of either of these approvals if the pumping rate and discharge and treatment remain the same.

The hydrogeological impact assessment must consider the effect of the current operation and the cumulative effect of the expansion.

15.1 Impacts to Surface Water

Sensitive water features such as significant wetlands or springs were not identified on the site or within 120m (Ecological Services 2022). The main changes to the hydrology because of the proposed expansion are the proportions of infiltration and runoff. The water surplus will not be affected. The



current situation will also not be changed. The water surplus remains within the catchment and is not redirected by the proposal. The drainage will continue to be northward. Seasonally, the drainage may be influenced slightly by the groundwater lowering of the operation. Any redirected water will continue to be discharged through the settling ponds and discharged in the same manner as currently occurs. The ECA provides conditions for managing downstream flooding downstream due to the pit discharge.

Any changes to this component of the operation will require an amendment to the ECA. At that time, additional analysis could be requested if significant change is expected because of the amendment request.

The net impact of the pit on the downgradient unnamed Creek will be insignificant.

15.2 Impacts to Groundwater

Responses to the availability of water and pit dewatering are reflected in groundwater elevations data from the overburden monitoring wells. The data set shows that groundwater elevations are relatively stable over the year and decline on average between 0.68 m (MW13-4) and 1.34 m (MW8).

When pumping ceased, the water level in the pond returned to the pre-operations level, based on the recovery of the monitoring wells. A linear trend analysis of the data indicates the average groundwater elevation not changed over the period monitored.

Potential hydrogeological impacts associated with extraction within the proposed expansion area is the seasonal diversion of groundwater from the upper sand unconfined aquifer during the below water excavation.

15.2.1 Overburden Unit

The upper sand within the expansion area will be removed down to 113.0 mASL. The overburden thickness at the expansion area is 5.9 -7.4 m based on the stratigraphy encountered at MW6B, MW7, MW8, and MW9. The water table is lowered 1 m to 1.5 m seasonally when the operations occur. When the water table is lowered, seepage from the overburden aquifer into the excavation will occur.

Darcy's law was used to calculate cross sectional flow across the site. The average thickness of the overburden was used (7 m) with a saturated thickness of 5 m. The rate of groundwater flow through this cross-sectional area is estimated to be 3,150 m³/year. This value is less than 1% of the estimated volume of infiltration for the site based on the water budget so the additional intersection of horizontal flow associated with the expansion area in the overburden aquifer will not have a significant effect on the function of the unconfined aquifer. The proposed expansion will not cause any significant changes, and groundwater will continue to flow as it does now. Groundwater elevation monitoring at the site will identify any impacts in the unlikely event they occur.

The final pond may also result in small changes to the local groundwater flow in the unconfined sand aquifer. The water in the excavated pond will remain part of the groundwater system. For groundwater flow to be maintained a horizontal gradient is required. This would mean that the pond surface must slope, just as a watercourse does, to maintain the flow. This may translate to a slope on the order of several centimeters on the pond surface. (Vrzel, et al. 2023).



There will be no surface water inlets or outlets on the pond. Flow will be through the subsurface, with groundwater flow into the pond from the south, towards the north in the direction of groundwater flow.

The most conservative analysis assumes the final lake surface will be flat and there will be a lowering of the water table at the downgradient (north) end of the lake and a corresponding rise at the upgradient (south) end. The change in groundwater elevation across the site is used to estimate the final lake (Wrobel 1980).

The change of the average groundwater elevation from data collected over the study using the average change in groundwater elevation from MW7 and MW8 (south) to TW4 (north) is,

$$118.41 - 117.1 = 1.31 \text{ m}$$

If the final surface is flat, the change across the surface would be half the change in groundwater elevation may be around 0.55 m for a final pond level of around 117.75 mASL

An estimate of the radius of influence from dewatering of the pit pond was conducted using several methods. The analysis used the Normal climate data, and the aquifer characteristics measured during the current and past studies. The calculations are provided at the end of the report.

The Theis non-equilibrium (Calculation 3), Hooghoudt (Calculation 4) and Marinelli (Calculation 5) analytical methods were used. The Theis analysis found that at 150 m from the pond edge, the effect of groundwater lowering is approximately 0.15 m, and by 300 m the effect is approximately 0.1 m. The Hooghoudt and Marinelli analyses predicted the radius of influence to be 142 to 153 m.

Using the same methods as for the drawdown impact, the radius of influence of the final pond on the surrounding area will be on the order of 100 m.

At the site a clay aquitard occurs immediately below the upper sand. The clay isolates the upper sand from the basal sand-gravel and the interface aquifer. The water supply wells in the study area (except for one overburden well at a location that is also serviced by an interface well) obtain groundwater from either the basal sand-gravel, the interface aquifer or the bedrock aquifers. The monitoring data does not show a response to groundwater taking (MW6A).

Groundwater in the basal sand will not be impacted by the water taking. Water taking within the current license area has not caused an impact to groundwater in the basal sand-gravel. There have been no complaints associated with overburden water supply wells in the study area.

15.2.2 Interface Aquifer

The interface aquifer is isolated from the upper sand at the site by a thick layer of clay. The average potentiometric groundwater elevation at MW6A (118.2 mASL) is higher than the elevation at MW6B (116.2 mASL) indicating an upward vertical hydraulic gradient. The groundwater shows a seasonal fluctuation of 0.87 m and the peaks and lowest levels occur at least a month before the water levels measured in the unconfined aquifer.

The interface aquifer will not be impacted by water taking associated with the proposed expansion area. Water taking within the current license area does not appear to have affected the confined groundwater aquifer. There have been no complaints to our knowledge associated with interface water supply wells in the study area.



15.2.3 Bedrock Aquifers

An impact to the bedrock aquifers is not predicted. The units are not recharged locally, and the site data has indicated the unconfined aquifer in which the operation occurs will not be affected in the long term.

15.3 Surrounding Water Supply Wells

There are approximately 26 residences within 500 m of the expanded pit. There are additionally wells on properties that are currently industrial other non-residential land uses. Some of the additional wells were test holes.

The wells are reportedly located more than 150 m of the proposed expansion. This places them beyond the calculated radius of impact of pumping and the future lake effect. For this reason, no impact to nearby water supply wells along Diamondview Rd, William Mooney Rd or McGee Sdrd are expected to occur.

15.4 Cumulative Impact

There is one other ARA-licensed pit within 500 m of the site. The licensed area is 15.75 ha and the maximum removal is 250,000 tonnes per year. The site also does, or has in the past, extracted below the water table. The site holds a new PTTW (Ministry of Environment, Conservation and Parks 2025) that is indicated to be used for truck filling. The permit details are;

- maximum rate per minute (litres): 1,800
- maximum number of hours of taking per day: 24
- maximum volume per day (litres): 500,000
- maximum number of days of taking per year: 310
- the permit includes no groundwater monitoring requirements

Based on the above information, the water taking is small and any additional impact to the area would be expected to be minimal.

There are no other large groundwater users within 500 m of the expanded site.

15.5 Groundwater Quality

The greatest potential impact of the proposed operation is contamination. The MVCA describes the study area as being low to highly vulnerable; mainly due to the presence of a clay aquitard that isolates the water supply aquifers from direct surface influences. The water samples obtained from the onsite wells do not show any contamination although the water from the Verulam Formation has elevated chloride, sodium and fluoride levels.

Diligent site management and operations controls will prevent detrimental impacts. Contaminants from the proposed operation are predominantly hydrocarbons. The potential for spills should be addressed on the site plan, with prevention as the key goal. It can be achieved with reasonable care and caution in operational practice.

15.6 Thermal Impacts

There are no impacts predicted from seasonal temperature change. Thermal impacts are of greatest concern when there are nearby or downgradient wetlands or cold water streams. Neither were found near the site.

The potential for thermal impacts, exposure of the groundwater to pond water at the pit faces would potentially result in thermal changes to nearby groundwater. These impacts are usually localized and are generally not measurable within a few hundred metres from a pit (Harden Environmental Services Limited 1995, Ostrander, et al. 1998, Curry, Noakes and Morgan 2011).

16 RECOMMENDATIONS

Although research and the study results predict minimal changes to the hydrogeology will occur from the proposed operation, it is still recommended that some monitoring of groundwater and surface water be implemented. The monitoring data will strengthen the assessment, validate the predictions, and provide data that can be used to assess future issues if they arise. This includes monitoring for contaminants that may originate from a typical operation.

16.1 Elevation of the Water Table

The maximum predicted water table at the site based on the groundwater elevations measured in the onsite monitoring wells from January 2021 to December 2024 was 119.52 mASL, measured at MW8 on April 28, 2023. However, the elevations measured at MW7 and MW8 in April and May 2023 were higher, proportionally, in comparison to the other wells. In the expansion area only, the groundwater table would be more accurately be 118 mASL. However, based on all the site data from the past several years, it is recommended an average water table for the entire site of 117.75 mASL be used. This is the calculated final lake level. Over the site, seepage may be encountered at different levels since the unconfined groundwater surface was found to slope from south to north.

16.2 Adaptive Management Plan

The Adaptive Management Plan (AMP) incorporates information from monitoring to reduce uncertainty about the impact that the pit will have on natural systems on the site and surrounding area and sensitive receivers. The proposed operation is not predicted to have a noticeable effect on groundwater or surface water. However, the examined systems; climate, hydrogeology and hydrology; are natural and there are factors that cannot be absolutely predicted. In addition, changes that result from other anthropogenic activity within the influence area that are not in the control of the licensee cannot absolutely be accounted for.

The adaptive management plan consists of monitoring, assessment tools and contingency plans. The plan will provide data and ongoing assessment of whether and how the site operation is causing an impact. The plan will assess conditions to pre-empt impact to groundwater or surface water and their users. Action may be required if an unacceptable impact to the groundwater or surface water is predicted from the data review. Additionally, action may be required if an unpredicted impact is reported to the licensee, MECP or MNRF. Action to address potential impacts by the operation should be addressed in a timely manner.



The data will provide a record of indicator trends that, in addition to allowing changes in the physical character and quality to be assessed, may aid the licensee if concerns about the operation arise. Monitoring data collection and regular assessment will reduce uncertainty about the impact that the pit will have on natural systems on the site and surrounding area. The plan includes regular data assessment and reporting. The mitigation and contingency components of the plan illustrate that there are available solutions in the unexpected event that an impact occurs.

The contingency plan outlined below provides specific measures that apply to the area 500m around the ARA license boundary, which is where issues are most likely to occur. It does not preclude investigation or reparation if an impact is found beyond this distance.

As the name suggests, the plan should be flexible so changes can be implemented with new or updated knowledge. The components of the AMP may be updated if they are substantiated with additional data, subject to approval by the responsible authority, e.g. MNRF and/or MECP.

16.2.1 Responsibility to Investigate Well Issues

GRI is not aware of reports or instances of local well issues. If the operation proceeds as proposed, the data indicate there will be minimal change to the current conditions at the site, and none that would result in a change to the current condition at any of the surrounding wells.

However, private well issues do occasionally occur and while, in GRI's experience, they are often problems that relate to the well itself such as equipment deterioration or failure, residents may feel that the aggregate operation is responsible. It is recommended that the licensee assume responsibility for investigating well issues within 500 m that are reported to them either directly or through another source. The responsibility for remediation will depend on the result of the investigation.

16.3 Groundwater and Surface Water Monitoring

The new monitoring wells were positioned as sentry wells between the proposed operation and off-site groundwater users. They are part of the current PTTW monitoring program and will continue to be used to confirm the data analyses, provide continued groundwater assessment, and monitor groundwater quality.

The PTTW and ECA should continue to be the devices to provide detail on the monitoring and mitigation of potential issues. The site plan should indicate these instruments will be used. The current documents provide the requirements to effectively provide the necessary protection.

16.3.1 Baseline Data of Off-Site Groundwater Use

The recommended data collection will provide a baseline of existing conditions that may be used for comparison. The purpose is to provide additional information to the licensee if a local well issue or a dispute about responsibility arises in the future.

Once the aggregate license is issued, a well survey should be undertaken at 1117 William Mooney Dr and 1135 William Mooney Dr before operations in the expansion area begin. These two properties are potentially within the radius of influence of the dewatering operation. The survey should be repeated before the below water extraction lift moves into the expansion area if the period elapsed from the beginning of the operation has been 10 years or longer.



Table 14: Surrounding Users – Water Sample Parameter List

	Parameter/ Analyte
Field Measurements	temperature, TDS, conductivity, dissolved oxygen, pH
General Characteristics	ph, alkalinity, hardness, TDS, conductivity, Ca, Mg, Cl, NO ₂ , NO ₃ , NH ₃ , Total Kjeldahl Nitrogen, SO ₄ , Fe, Mn, Na, F, phenols
Bacteriological Analysis	e.coli, total coliforms, background plate count

Participation in the survey by property owners is voluntary. The survey should document the property setting, well location and construction and water use and should confirm whether a water well record can be correlated to the site. Water samples should be collected from an untreated tap and analysed for general groundwater characteristics and bacteria (Table 14) following industry standard sampling procedures. The professional conducting the survey may wish to add parameters, such as nuisance bacteria, if a specific location warrants.

16.3.2 Groundwater Monitoring

The monitoring wells installed in the study are positioned around the site to provide information on the impact of the proposed operation on the unconfined aquifer. The monitoring program for groundwater and surface water required by the PTTW and ECA are described below.

At monitoring events, observations and/or photos of the site activity should be recorded. Weather conditions on, and for two or three days before the monitoring, should also be noted.

Monitoring wells that are removed or irreparably damaged should be replaced expeditiously, and the elevation recalibrated. New measurement points should be surveyed to a geodetic elevation before the first review.

16.3.2.1 PTTW P-300-5229047655

The current PTTW, which is valid until December 1, 2033, requires daily recording of the water pumped. Water level monitoring is required starting one month prior to the commencement of the annual dewatering activities and terminating no earlier than one month after the cessation of annual dewatering activities. The monitoring wells MW2, MW3, MW4, MW6A, MW6B, MW 7, MW 8, MW 9, and MW-13-4 are in the monitoring program.

The PTTW requires a QP analyse, interpret and summarize the data collected under the monitoring program and provide it to the MECP on or before March 31st of the year following the reporting year.

16.3.2.2 Groundwater Quality

Groundwater quality has been analyzed each year since 2021. This was a requirement from a previous PTTW but is no longer required. There is a current site plan note that states;

“Groundwater samples shall be collected from each monitoring well prior to operations and analysed for a standard suite of inorganic parameters including turbidity.”

For the study, the groundwater samples from each monitoring well were analysed for field turbidity, alkalinity, chloride, conductivity, pH, sulphate, fluoride, hardness, Ca, Mg, Na, K, Fe, Mn, nitrate, nitrite and oil & grease. The results and interpretation were included in the annual review report.

The potential for spills should be addressed on the ARA site plan, with prevention as the key goal by compliance with current legislative and regulatory requirements, such as the Technical Standards and Safety Act, 2000, Liquid Fuels Regulation O.Reg. 217/01 and the Liquid Fuels Handling Code, 2000. A spill prevention and response plan should be prepared and kept on site. Fuel storage must not be located within 30 metres of any body of water. Site personnel should receive training regarding the spill action plan procedure. A copy of the plan should be posted in a prominent location in the operations area. Appropriate mitigation and clean-up materials (absorbent pads and granular absorbent material) should be kept on site when the pit is operating.

16.3.2.3 Below Water Operation

A staff gauge should be added to the monitoring program and added to the approved monitoring program with the reading recorded on the day as the groundwater and other surface water levels. As the open water area expands it may be beneficial to install a second staff gauge to record the change in water level across the feature. The staff gauge should be calibrated to a surveyed water level in the pond.

If, when the field measurements are made, the visual inspection indicates a sheen or film, a sample should be taken and analysed for oil and grease and PHCs.

16.3.2.4 Revisions to Water Monitoring Program

The water monitoring program may be revised, MECP on the recommendation of a qualified professional.

The intent that the groundwater program will change and adapt should be clearly indicated on the site plan. If possible, specific monitoring details (e.g. well locations or frequency, etc.) should be avoided on the site plan. The PTTW and ECA will provide the requirements.

16.3.3 ECA # 9363-9FLMDG

The ECA will have to be updated and amended upon approval of the expansion. The current ECA specifies the Works is for the 82 ha license/74.9 ha extraction area. The treatment system describes 4 treatment ponds, but Pond 3 is comprised of three separate ponds, for a total of 6 settling ponds.

Among other requirements, Karson is required to maintain the works as described in the ECA.

The ECA requires that total suspended solids remain below 25 mg/L, and total oil and grease remain below 15 mg/L at SW1 (effluent). Additional water quality analysis at SW1 (effluent) and SW2 and SW3 (surface water) is required.

The flow at the sump is to be recorded (done as part of the PTTW), and flow at the time of sampling is to be recorded at SW2 and SW3 at the time of sampling.



The water quality monitoring requirements from the ECA are;

Frequency	SW1: Once each month during periods of discharge SW2 & SW3: Twice each year (April & October), during periods of pump discharge.
Sample Type	Grab
Parameters	Total Suspended Solids, Total Oil and Grease, Total Phosphorus, Total Ammonia Nitrogen, Nitrate, Iron, Manganese, Aluminum, Cobalt, Copper, pH (field), Temperature (field) and Conductivity (field)

16.3.3.1 Additional Surface Water

The previous annual reports have recommended a change to the surface water upstream and downstream locations to better reflect the impact of the actual site (GRI Inc. 2025). The recommended changes require approval from the MECP before they can be implemented.

16.4 Assessment Tools and Trigger Mechanism

Action may be required if the data review predicts an unacceptable impact to the groundwater or surface water will occur. Additionally, action may be required if an unpredicted impact is reported to the licensee, MECP or MNRF.

The water levels should be reviewed as they are collected with attention given to flag and follow up on anomalies. An explanation should be provided for any of these noted deviations, and the observations and conclusions included in the next review report.

16.5 Contingency Plan

The contingency plan is not specifically described in the PTTW and ECA. The contingency plan addresses the procedure that should be followed if a groundwater or surface water issue occurs. Any change to private well water quality or quantity that is suspected to reasonably be an impact from the pit operation will be addressed by the licensee. The level of detail of the investigation may be graduated, depending on the distance from the site.

16.5.1 Predicted Negative Impact on Sensitive Receiver

If a negative impact on a sensitive receiver is predicted through data review, the conditions will be evaluated in more detail if needed, and remediation will be implemented to prevent the impact.

16.5.2 Receipt of Unexpected Well Problem

If a water loss occurs at one of the addresses within 500 m, and an initial investigation cannot identify an obvious cause, the licensee will provide an interim potable water supply to the affected well within 24 hours. The interim supply will be continued until the matter is resolved.

If an unexpected complaint arises, the license holder will retain a qualified professional, who will investigate the issue, provide an opinion on the cause, and provide recommendations to the licensee in

a timely manner. If the problem is attributed to the pit operation, remediation or compensation will be offered by the licensee as soon as possible.

16.5.3 Replacement Well Construction and Quality

Any work on a well by or on behalf of the licensee will meet the Wells Regulation (O.Reg. 903 or current equivalent). Effort will be made to construct the well to as near the depth as the impacted well that will obtain a comparable water quantity. The analysis of the well records indicated that the overburden, interface aquifer and bedrock aquifers are all used in the area and it is possible for the water supply to be replaced.

If natural water quality exceeding the ODWS is encountered because of the remediation, appropriate water treatment will be considered.

16.5.4 Emergency Spills Procedure

Appropriate clean-up material such as absorbent mats and granular absorbent material should be kept on site when the pit is operating.

An emergency spills procedure should be prepared for the site. If a spill occurs, action will immediately be taken to contain and absorb the spilled material and prevent infiltration to groundwater or surface water. Any unexplained losses of fuel or other contaminants will immediately be reported to appropriate management levels and/or agencies. The reporting requirements of the MECP will be followed under the responsibility of the licensee's designated staff to assure that clean-up has occurred. The details and actions taken should be logged.

Water surfaces, including puddles, ponds or other open water surfaces should be inspected daily when the site is in operation for sheen, film or foam. An effort should be made to identify the cause, and if needed, to take further action. The details and actions taken should be logged.

16.6 Additional Recommendations

Operational permits, such the PTTW and ECA, should be maintained.

17 CONCLUSIONS, LEVEL 2 HYDROGEOLOGICAL STUDY

The detailed site investigation confirms that the expansion of the McGee Pit remains hydrogeologically feasible. Stratigraphic data show consistent layering across the site, with a permeable sand and gravel aquifer overlying a regionally extensive marine clay aquitard. This clay unit provides effective hydraulic separation from deeper aquifers used by area wells.

Groundwater monitoring between 2021 and 2024 confirms that the maximum seasonal water table elevation is 117.75 mASL. The proposed excavation floor of 113.0 mASL preserves a vertical buffer of over 5 m, satisfying MNRF guidelines and ensuring continued protection of groundwater users.

Flow direction remains northeast toward the Carp River basin, with shallow gradients and no signs of upwelling or mounding. No domestic wells are screened in the target aquifer, and no surface water features or wetlands are present within the zone of influence. As a result, direct impacts on existing water supplies and ecological features are not expected.



Cumulative effects of the expanded excavation footprint were also evaluated. While the final flooded area will be larger, the hydrogeological setting remains unchanged, and no new risk pathways are introduced. Passive filling of the pit by natural runoff and infiltration will result in minimal effect on watershed-scale water budgets.

With continued adherence to excavation limits and ongoing monitoring, the project is not anticipated to have adverse effects on local groundwater systems.

18 QUALIFICATIONS

This study was prepared by Jennifer Gorrell, M.Sc. P.Eng. P.Geo. and George A. Gorrell, M.Sc. F.G.A.C, P.Geo.. Together they are partners in the engineering firm GRI Inc. They have provided geological, hydrogeological and associated engineering services since 1988.

The field studies found in the references that have been conducted by George Gorrell M.Sc. F.G.A.C P.Geo. since 1979 (see References) are the source of the personal knowledge used in this report. George Gorrell holds a certificate of registration under the Professional Geoscientists Act, 2000 and is a practicing member of the Association of Professional Geoscientists of Ontario. Mr. Gorrell has demonstrated and post-secondary education, including undergraduate and graduate degrees, in hydrology and sedimentology with specialization in water and resource management. He has spent over 40 years studying the geology and mineral aggregate deposits of Eastern Ontario.

Jennifer Gorrell holds a certificate of registration under the Professional Geoscientists Act, 2000 and is a practicing member of the Association of Professional Geoscientists of Ontario, and the Professional Engineers of Ontario. Mrs. Gorrell has demonstrated and post-secondary education, including undergraduate and graduate degrees, in geotechnical engineering with specialization in hydrogeology, hydrology, environmental consulting, geology and soil mechanics. Ms. Gorrell has 40 years of professional experience in the fields of geology, hydrogeology, and environmental consulting, with more than 30 years' experience related to pits and quarries.

Thank you for the opportunity to work with you on this project.


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Calculations



Calculation 1: Site Recharge

Water Budget from Drummond Centre Normal		
Precipitation	0.941	m/yr
Evaporation	0.585	m/yr
Water Surplus	0.356	m/yr
Infiltrate	0.285	m/yr (factor of 0.8)
Runoff	0.071	m/yr
Runoff and Infiltration Areas		
Catchment:	649,000	m ²
Infiltration Area:	649,000	m ² Property area
Calculate Volume = water budget component x area		
Infiltration:	184,835	m ³
Runoff:	46,209	m ³ /yr
Water Surplus:	231,044	m ³ /yr

Calculation 2: Groundwater Throughflow

Q=k i A		
Where:		
	Q = groundwater flow, m ³ /yr	
	k = hydraulic conductivity, m/yr	
	i = hydraulic gradient in the direction of flow,	
	i = d _v /d _h	0.73 d _v =change in groundwater level across the site
		860 d _h =distance over which the change occurs
12	average depth of excavation below water table	
1,400	width of cross section	
i =	0.001	
A _{x-s} =	7,800 m ²	
k =	1.92E+03 m/yr, average for site	
Q =	12,721 m³/yr	



THEORETICAL AQUIFER YIELD AND WELL INTERFERENCE CALCULATIONS

Theoretical Aquifer Yield

The theoretical aquifer yield for a 365 day pumping can be calculated using the following formula:

$$Q(\text{max}) = \{4 \cdot \pi \cdot T \cdot s(\text{max})\} / W(u)$$

where

$$Q(\text{max}) = \text{maximum discharge (m}^3/\text{day)}$$

$$T = \text{transmissivity (m}^2/\text{day)}$$

$$s(\text{max}) = \text{maximum allowable drawdown (m)}$$

$$W(u) = \text{well function}$$

The well function is derived by means of well function tables that are based on the following:

$$u = \{r^2 \cdot S\} / \{4 \cdot T \cdot t\}$$

where:

r = radial distance from pumping well (m)

S or S_y = storativity or specific yield (unconfined aquifer)

t = time since pumping began (days)

Transmissivity (T)	=	17,280 m ² /day	from SNC Lavalin 2013 report based on pumping test at MW13-4
Storativity (S)	=	2.91E+00	from SNC Lavalin 2013 report based on pumping test at MW13-4
Elapsed Time (t)	=	260 days	
Max. allowable drawdown	=	2 m	(Based on water level, pump placement, and observation of actual drawdown)
s(max)	=	2.00 m	
r	=	0.2 m	
u	=	6.48E-09	
W(u)	=	18.27780378	
Q(max)	=	6,480 m ³ /day	

Well Interference / Radius of Influence

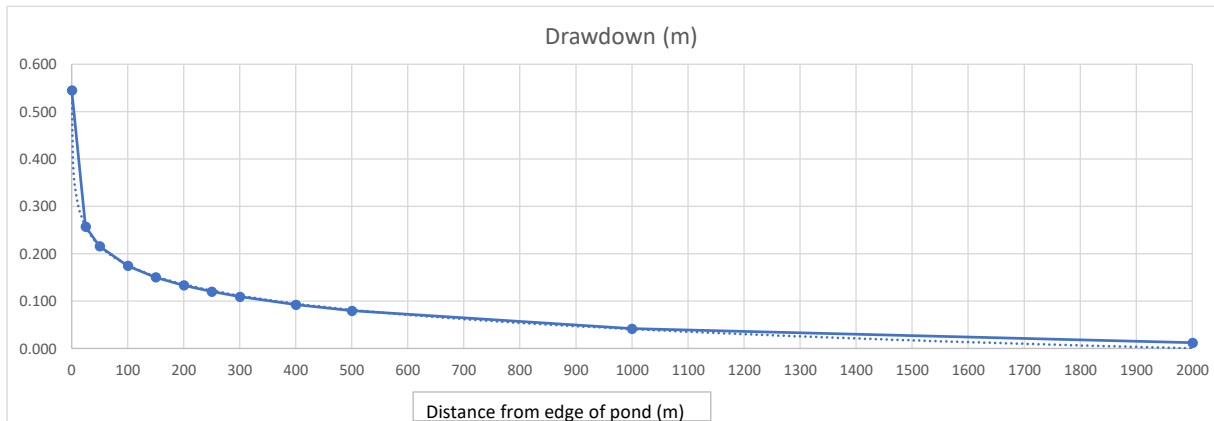
The same equations used to calculate aquifer yield can also be used to determine theoretical well interference data. Here, however, Q is kept constant and the drawdown is calculated.

Sample calculation:

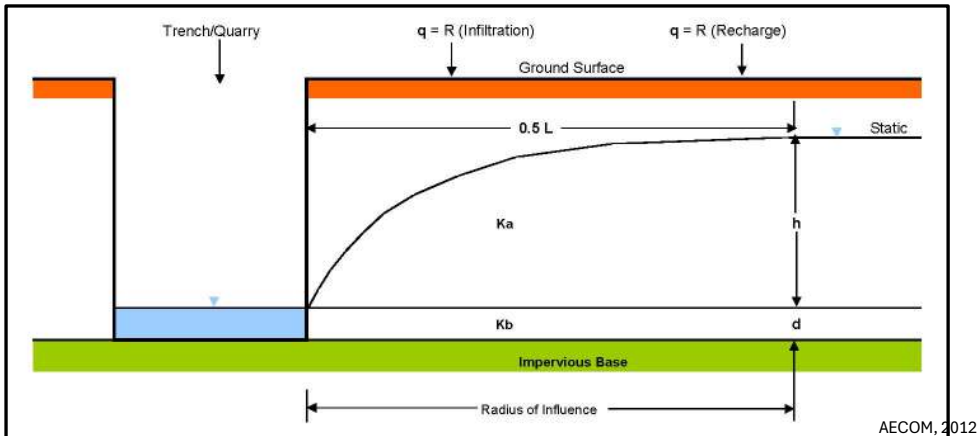
T =	17,280 m ² /day
S =	2.91E+00
Q =	6480.00 m ³ /day
r =	0.200 m
t =	260.00 days
u =	6.48E-09
W(u) =	1.83E+01
Drawdown (s) =	0.545

The following table shows the predicted drawdown for various radial distances

Distance from Pond (m)		Pumping Rate (m ³ /day)		6480.00
		u	W(u)	Drawdown (m)
0.2	At edge of McGee Pit pond	6.48E-09	1.83E+01	0.545
25		1.01E-04	8.62E+00	0.257
50		4.05E-04	7.24E+00	0.216
100		1.62E-03	5.85E+00	0.175
150		3.64E-03	5.04E+00	0.150
200		6.48E-03	4.47E+00	0.133
250		1.01E-02	4.03E+00	0.120
300		1.46E-02	3.67E+00	0.109
400		2.59E-02	3.10E+00	0.093
500		4.05E-02	2.67E+00	0.080
1000		1.62E-01	1.40E+00	0.042
2000		6.48E-01	4.13E-01	0.012



Calculation of Radius of Influence in Unconfined Aquifer using Hooghoudt (1936) for Trench Drains



Input

- R - recharge/infiltration rate per unit surface area (m/day)
- q - trench discharge rate per unit surface area (m/day)
- K_a - hydraulic conductivity of the layer above drain level (m/day)
- K_b - hydraulic conductivity of the layer below drain level (m/day)
- d - trench level height above impervious base of trench m
- h - water table height above trench level at midway between two trenches m
- L - trench spacing m

$$L^2 = \frac{8K_b d h + 4K_a h^2}{q}$$

In steady state, the level of the water table remains constant and the discharge rate (Q) equals the rate of groundwater recharge (R), i.e. the amount of water entering the groundwater through the watertable per unit of time.

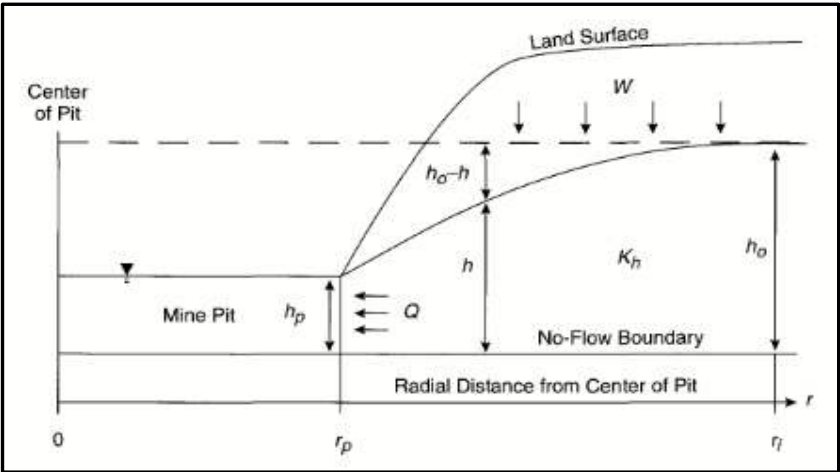
R = q	226.7	mm/yr	(from water balance)
K_a	1.33E-05	m/s	
K_b	1.33E-05	m/s	
h	4.9	m	
d	4.4	m	
L^2	496,077	m	
L	704	m	
0.5L	352	m	

After Martinelli and Niccoli (2000)

Units: consistent

Input

Final Pond Elev (Wrobel)	117.9 mASL
drawn down level (from DTM)	115.3 mASL
Base of Unit (=Pit Floor)	113 mASL
Average GW Drawdown	2.6



h_p	2.3 m	saturated thickness above pit base at pit wall
W	0.2095 m/yr	recharge (= infiltration)
K_h	1.33E-05 m/s	average from site investigation
	4.33E+02 m/yr	
r_p	325 m	effective pit radius
h_o	4.9	pre-mine saturated thickness at r_p , average across lake area

iterate to find r_i , radius of influence
set $h = h_o$

Radius of Influence (from center of pit)

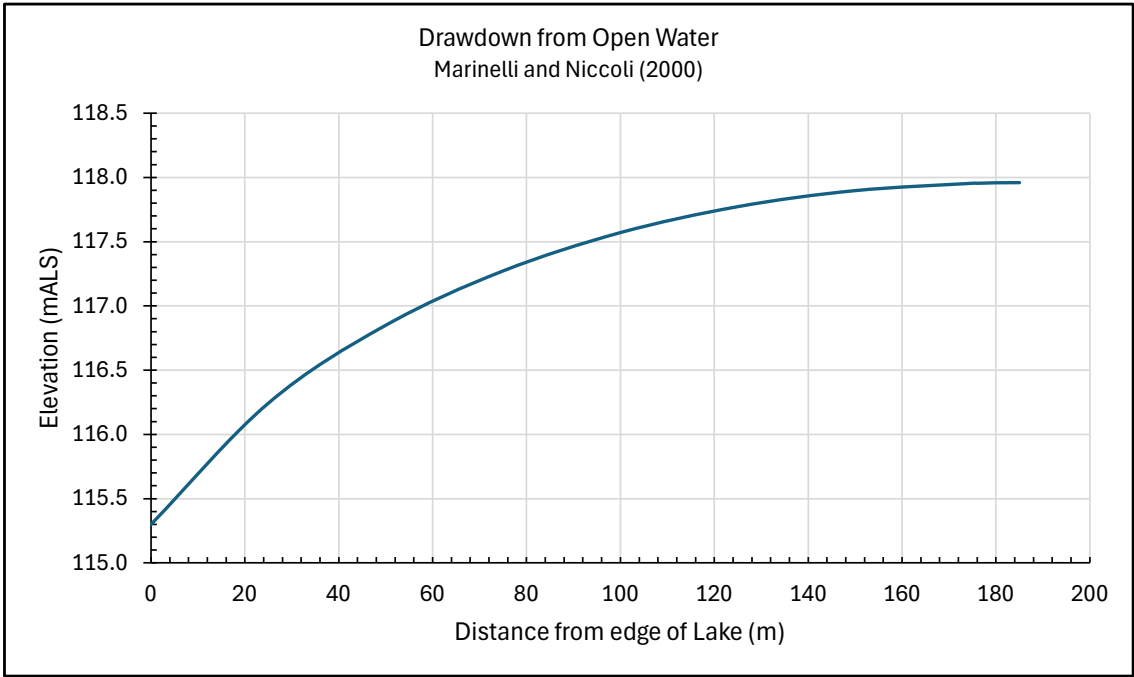
W/K_h	4.83E-04
h_p^2	5.29

iterate $r = r_i$ to solve for h_o

h	r	r_i	r_i^2	$\ln(r/r_p)$	$(r^2 - r_p^2)/2$	h	
		500	500	250000	0.430783	72187.5	1.72E+01 4.738548
		510	510	260100	0.450586	77237.5	1.93E+01 4.960405

Plot drawdown curve

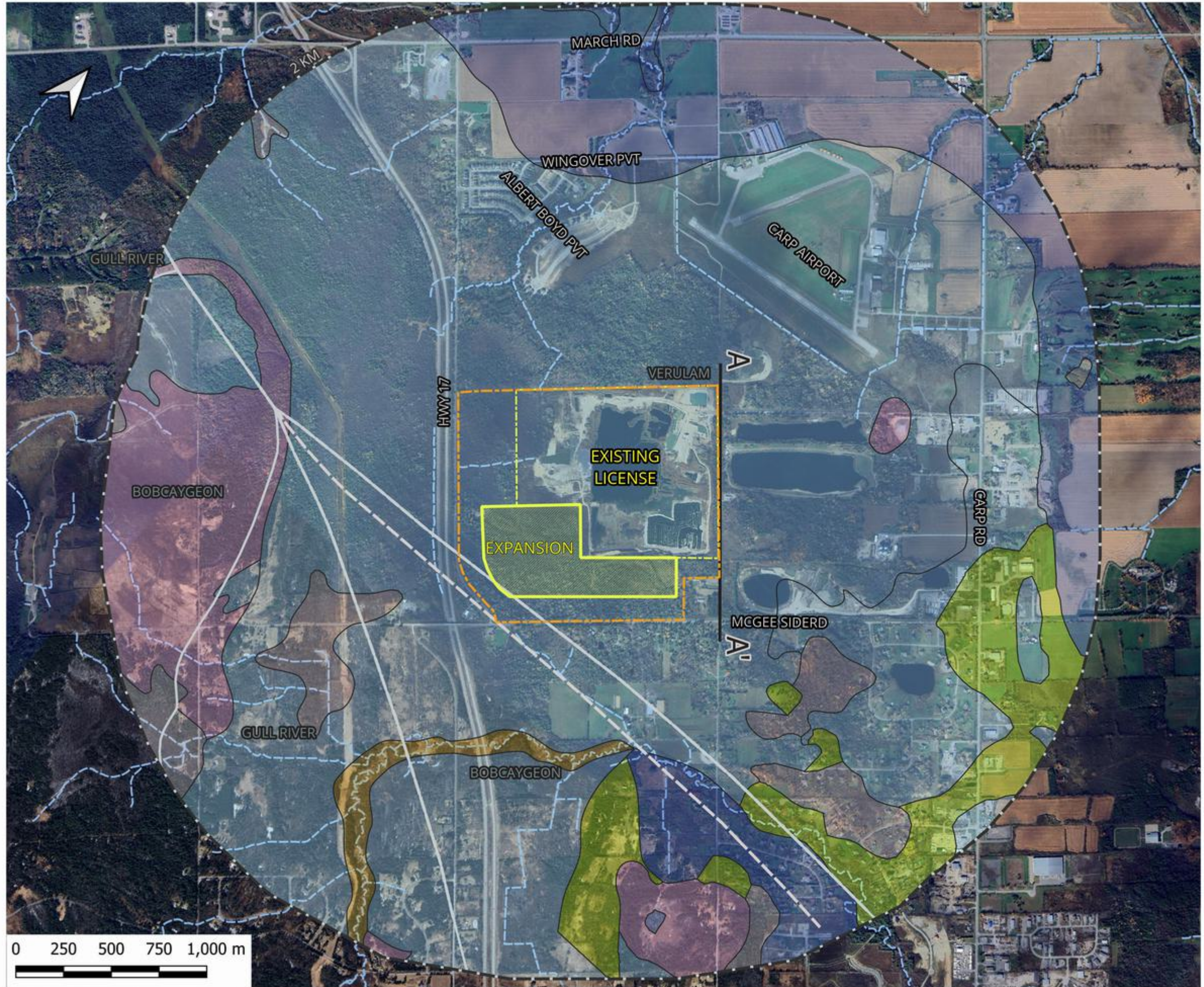
	r	r _i	r _i ²	ln(r/r _p)	(r ² -r _p ²)/2		h
set r > r _p	325	510	260100	0	0	0.00E+00	2.30
	350	510	260100	0.074108	8437.5	5.24E+00	3.24
	375	510	260100	0.143101	17500	9.53E+00	3.85
	400	510	260100	0.207639	27187.5	1.30E+01	4.27
	425	510	260100	0.268264	37500	1.56E+01	4.57
	450	510	260100	0.325422	48437.5	1.75E+01	4.77
	475	510	260100	0.37949	60000	1.87E+01	4.90
	500	510	260100	0.430783	72187.5	1.93E+01	4.96
	501	510	260100	0.432781	72688	1.93E+01	4.96
	510	510	260100	0.450586	77237.5	1.93E+01	4.96



Oversize Figures



2025-07-03



LEGEND

PROPERTY BOUNDARIES

- PROPERTY BOUNDARY
- EXISTING LICENSE
- A-A' LOCATION
- PROPOSED EXPANSION

STUDY AREA

- COMBINED 2km
- Roads

OGS GEOLOGY

- BEDROCK FORMATION
- FAULTS

SURFICIAL GEOLOGY

- ORGANIC DEPOSITS
- OFFSHORE MARINE DEPOSITS
- NEARSHORE SEDIMENTS
- TILL
- BEDROCK

SURFACE WATER AND WATERSHEDS

- WATERCOURSES
- ONTARIO WATERSHED BND

GOOGLE SATELLITE 06.03.25



OS FIGURE 1

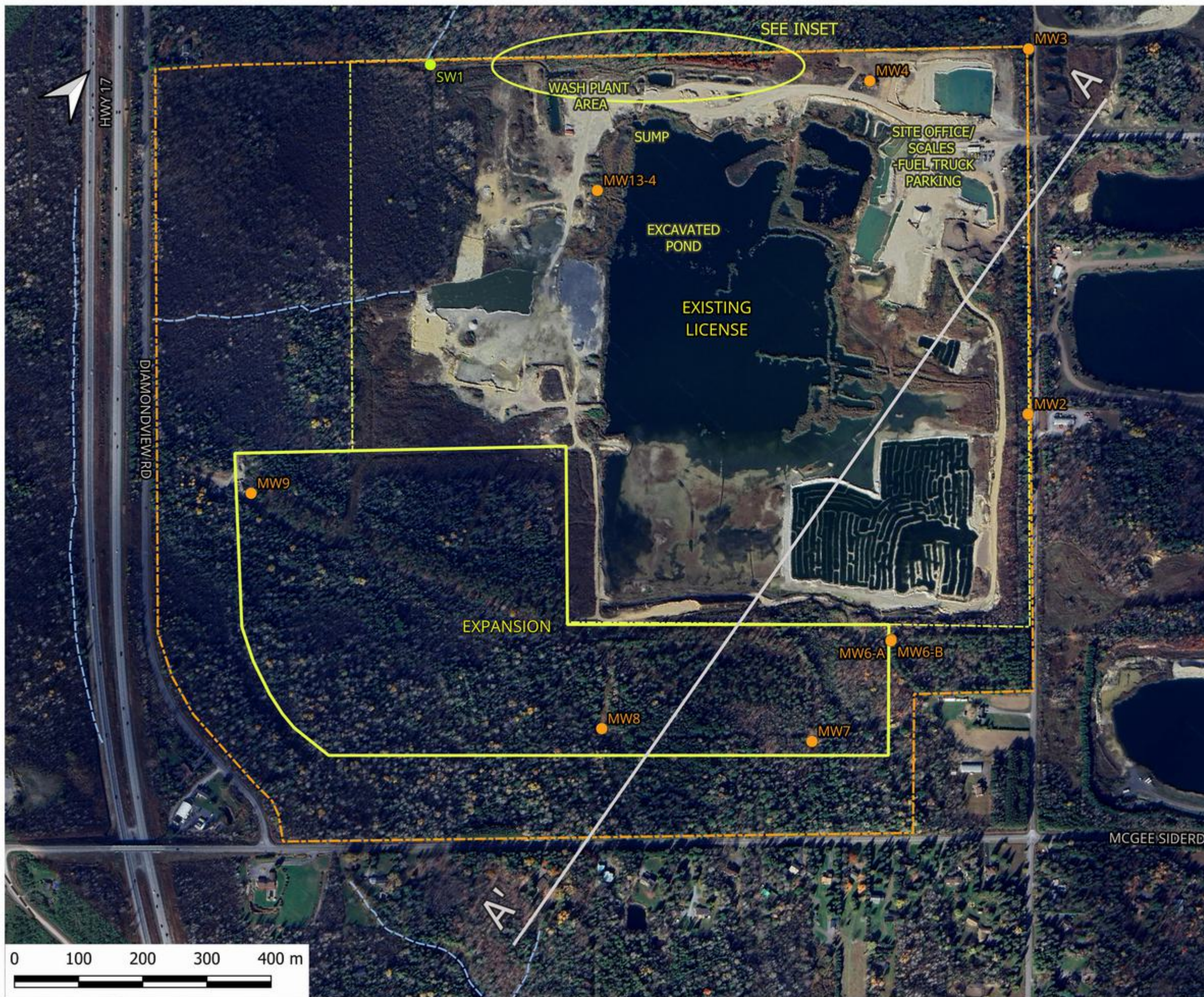
SITE AND SURROUNDING AREA

CLIENT: KARSON HOLDINGS INC.

PROJECT NO: 21-021

DATE: JUNE 2025

GRI Inc.
Oxford Mills, ON K0G 1S0
T - (613) 258-2954



LEGEND

MONITORING LOCATIONS

- SW Stations
- Monitoring Wells

FOR PROFILE

- A-A' LOCATION

PROPERTY BOUNDARIES

- ▭ PROPERTY BOUNDARY
- ▭ EXISTING LICENSE
- ▭ PROPOSED EXPANSION

STUDY AREA

- ▭ COMBINED 2km
- ▭ COMBINED 500m

Roads

SURFACE WATER AND WATERSHEDS

- WATERCOURSES
- ▭ ONTARIO WATERSHED BND

GOOGLE SATELLITE 06.03.25

INSET: SEWAGE WORKS DETAIL

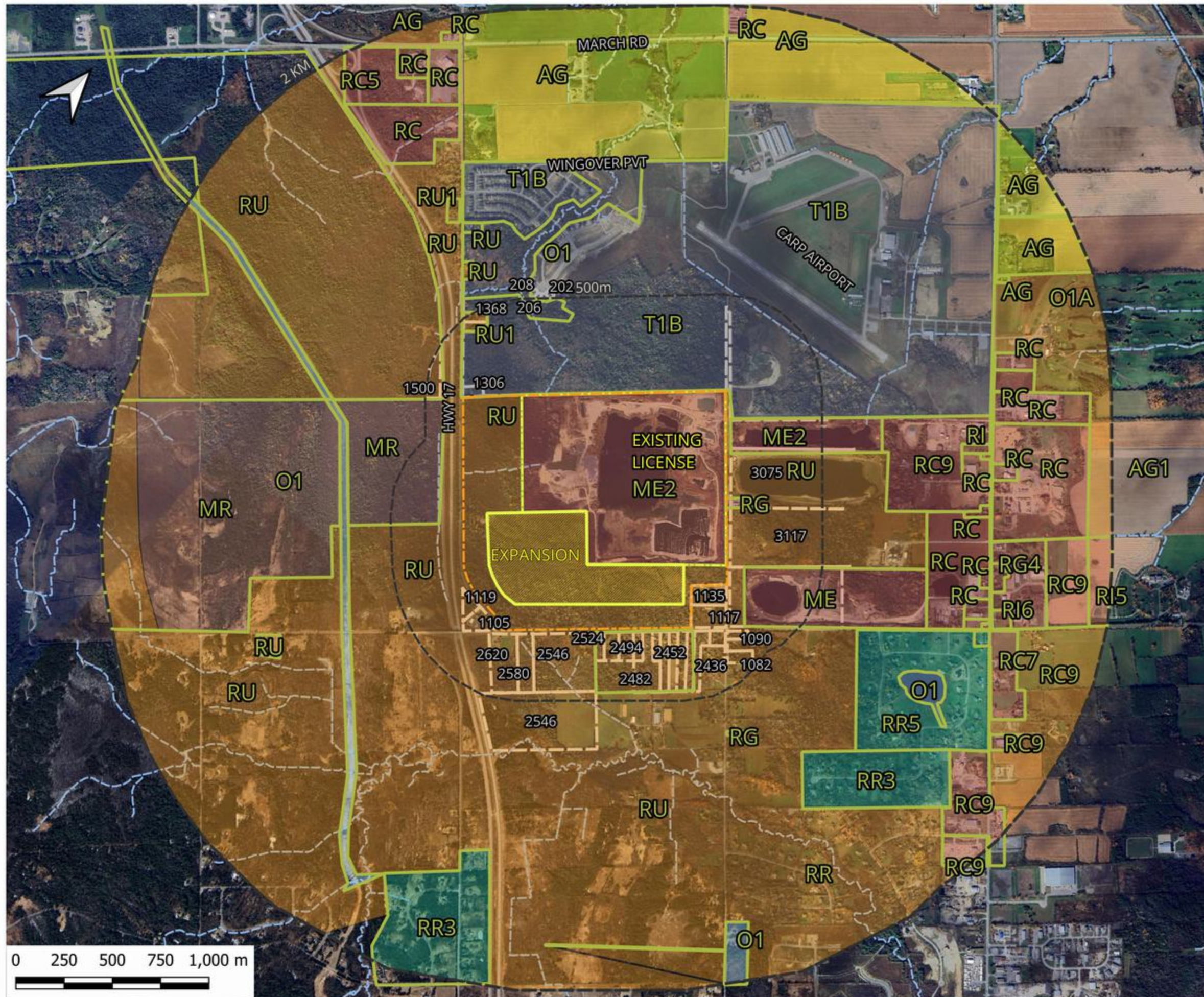


NOTE: Boundary locations and measurements are approximate

OS FIGURE 2

SITE DETAILS

CLIENT: KARSON HOLDINGS INC.	 GRI Inc. Oxford Mills, ON K0G 1S0 T - (613) 258-2954
PROJECT NO: 21-021	
DATE: JUNE 2025	



- LEGEND**
- PROPERTY BOUNDARIES**
- PROPERTY BOUNDARY
 - EXISTING LICENSE
 - PROPOSED EXPANSION
- STUDY AREA**
- COMBINED 2km
 - COMBINED 500m
- Roads**
- ZONING**
- ZONING
 - ZONNG LABELS
- CATEGORIZED ZONNG, EXTENDED STUDY AREA**
- AG
 - O1
 - MR
 - RR3
 - RR5
 - T1B
 - RU
- SURFACE WATER AND WATERSHEDS**
- WATERCOURSES
- SURROUNDING PROPERTIES**
- PROPERTY BND (500m)
 - misc prop lines
 - misc civic nos
- GOOGLE SATELLITE 06.03.25

- Boundary locations and measurements are approximate
- Source: GeoOttawa, accessed February 2025

OS FIGURE 3

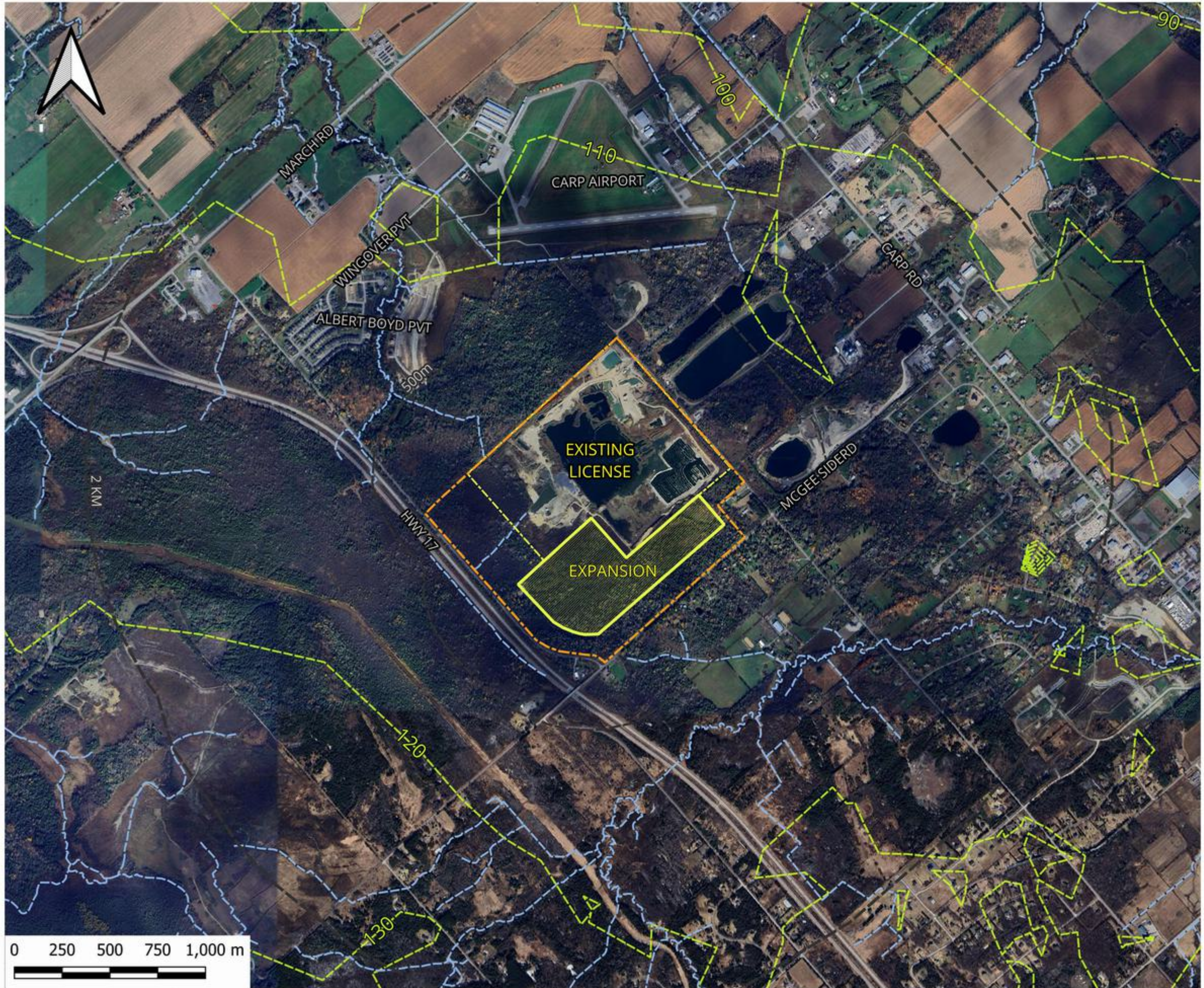
AREA ZONING AND PROPERTY BOUNDARIES

CLIENT: KARSON HOLDINGS INC.

PROJECT NO: 21-021

DATE: JUNE 2025





LEGEND

PROPERTY BOUNDARIES

- EXISTING LICENSE
- PROPOSED EXPANSION
- PROPERTY BOUNDARY
- COMBINED 2km Roads

SURFACE WATER AND WATERSHEDS

- WATERCOURSES
- Regional Groundwater Flow

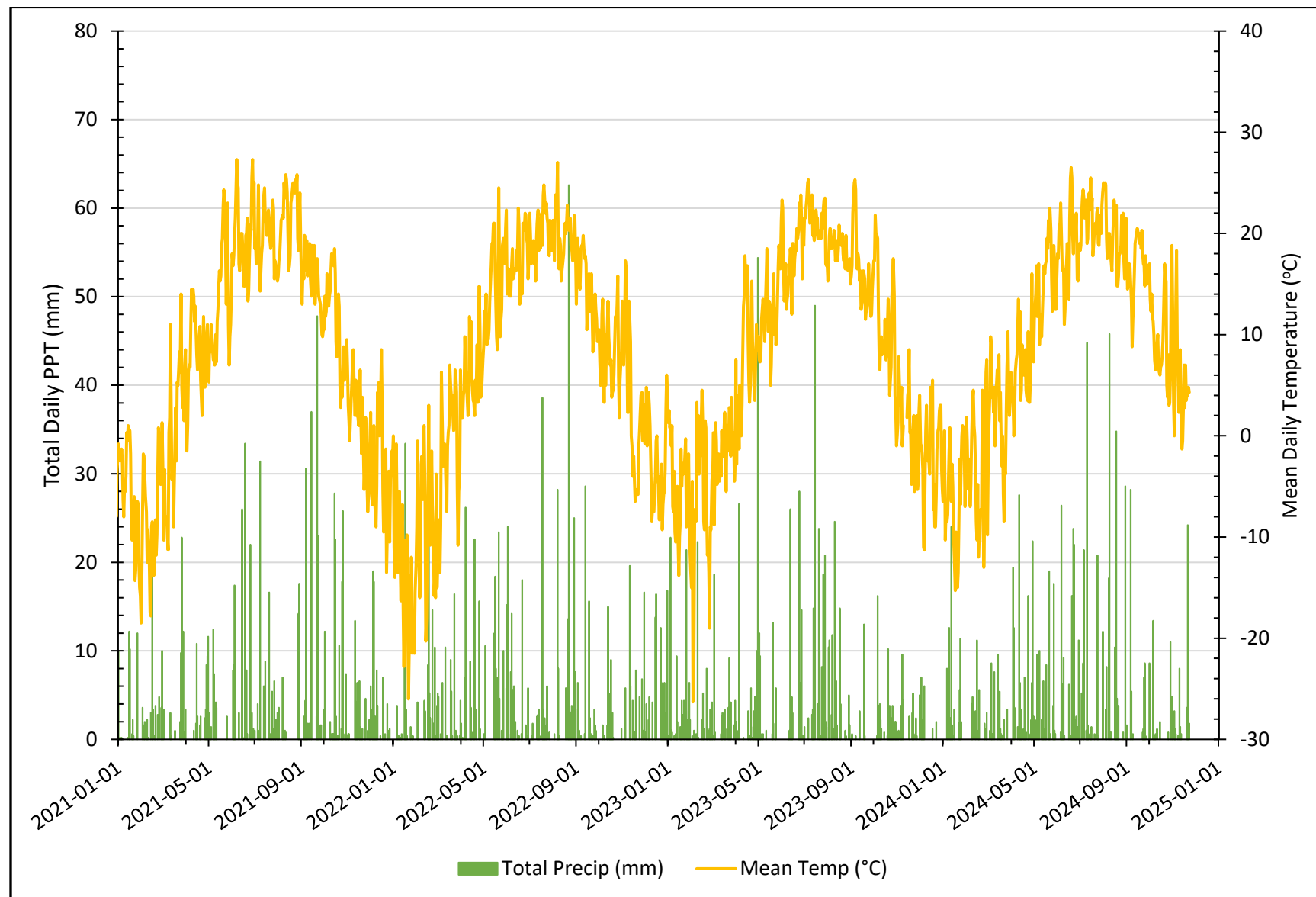
GOOGLE SATELLITE 06.03.25

NOTE: Boundary locations and measurements are approximate

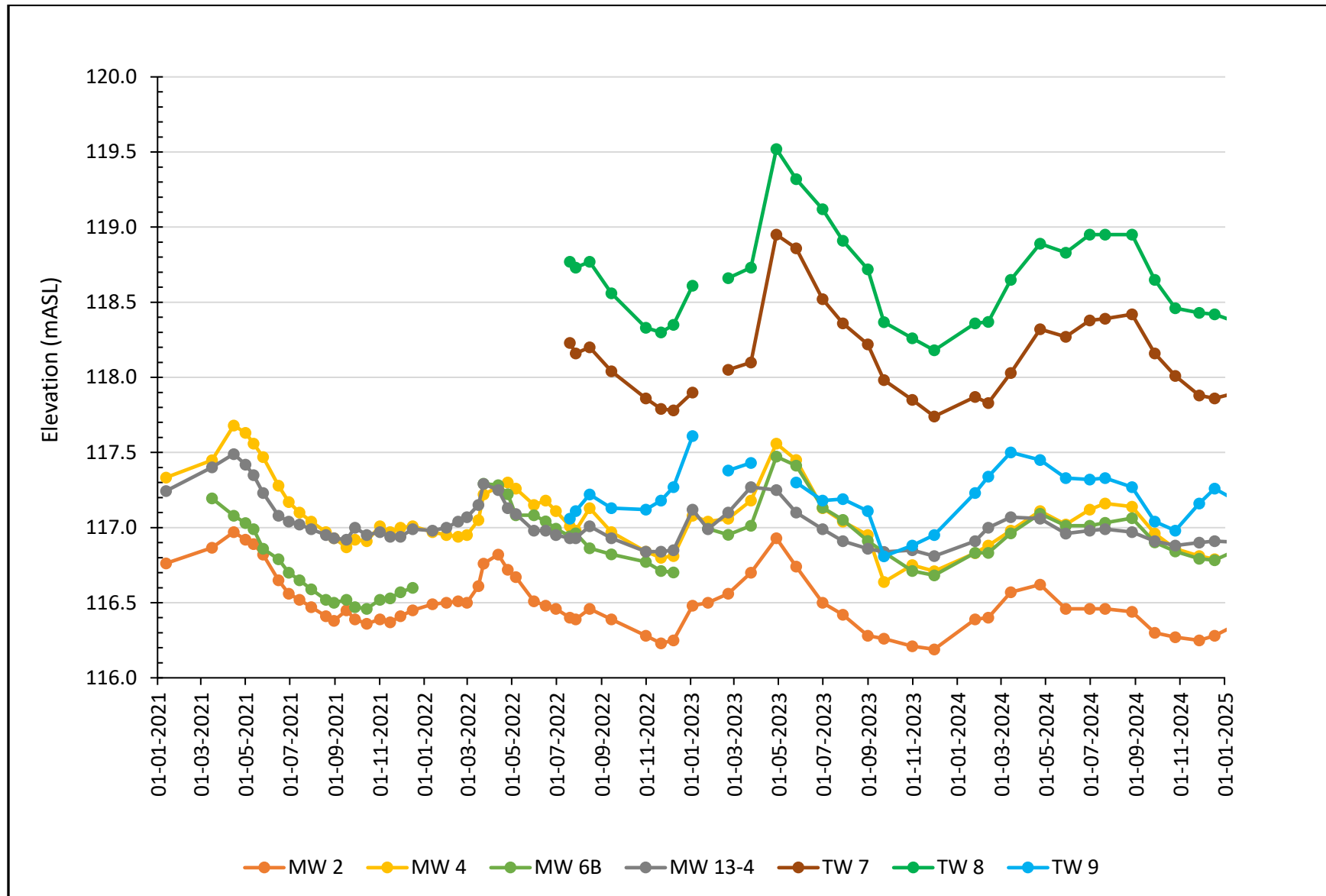


OS FIGURE 5
REGIONAL BEDROCK
GROUNDWATER FLOW

OS Figure 5: Daily Precipitation and Mean Daily Temperature, 2018 to 2023 Drummond Centre Climate Station



OS Figure 6: Historic Groundwater Elevations





LEGEND

- PROPERTY BOUNDARIES
- EXISTING LICENSE
 - PROPOSED EXPANSION
 - PROPERTY BOUNDARY
 - COMBINED 2km
- Roads

- SURFACE WATER AND WATERSHEDS
- WATERCOURSES
 - ONTARIO WATERSHED BND

GOOGLE SATELLITE 10.18.24

OS FIGURE 7

GROUNDWATER ELEVATION

JULY 27, 2022

CLIENT: KARSON HOLDINGS INC.

PROJECT NO: 21-021

DATE: JUNE 2025





LEGEND

- PROPERTY BOUNDARIES
- EXISTING LICENSE
 - PROPOSED EXPANSION
 - PROPERTY BOUNDARY
 - COMBINED 2km Roads

- SURFACE WATER AND WATERSHEDS
- WATERCOURSES
 - ONTARIO WATERSHED BND

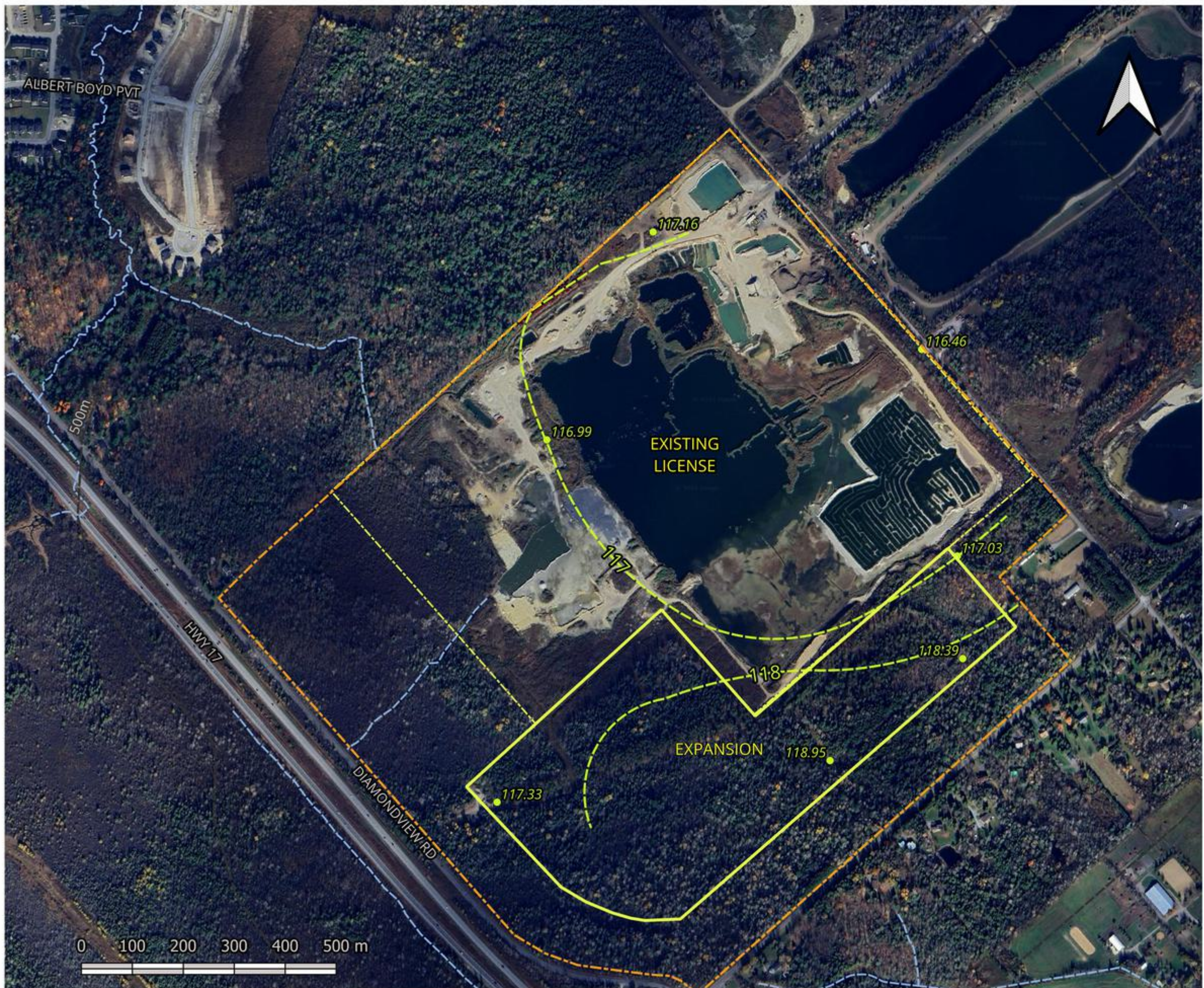
GOOGLE SATELLITE - 10.18.24

OS FIGURE 8
GROUNDWATER ELEVATION
DECEMBER 8, 2022

CLIENT: KARSON HOLDINGS INC.
PROJECT NO: 21-021
DATE: JUNE 2025

GRI Inc.
Oxford Mills, ON K0G 1S0
T - (613) 258-2954

2025-07-16



LEGEND

PROPERTY BOUNDARIES

- EXISTING LICENSE
- PROPOSED EXPANSION
- PROPERTY BOUNDARY

GROUNDWATER CONDITIONS

JULY 2024

WATER LEVELS

GW Elevation

COMBINED 2km
Roads

SURFACE WATER AND WATERSHEDS

- WATERCOURSES
- ONTARIO WATERSHED BND

GOOGLE SATELLITE 10.18.24

OS FIGURE 9

GROUNDWATER ELEVATION
JULY 21, 2024

CLIENT: KARSON HOLDINGS INC.

PROJECT NO: 21-021

DATE: JUNE 2025

gri GRI Inc.
Oxford Mills, ON K0G 1S0
T - (613) 258-2954



LEGEND

PROPERTY BOUNDARIES

- EXISTING LICENSE
- PROPOSED EXPANSION
- PROPERTY BOUNDARY

GROUNDWATER CONDITIONS

- DECEMBER 2024

WATER LEVELS

- GW Elevation
- COMBINED 2km Roads

SURFACE WATER AND WATERSHEDS

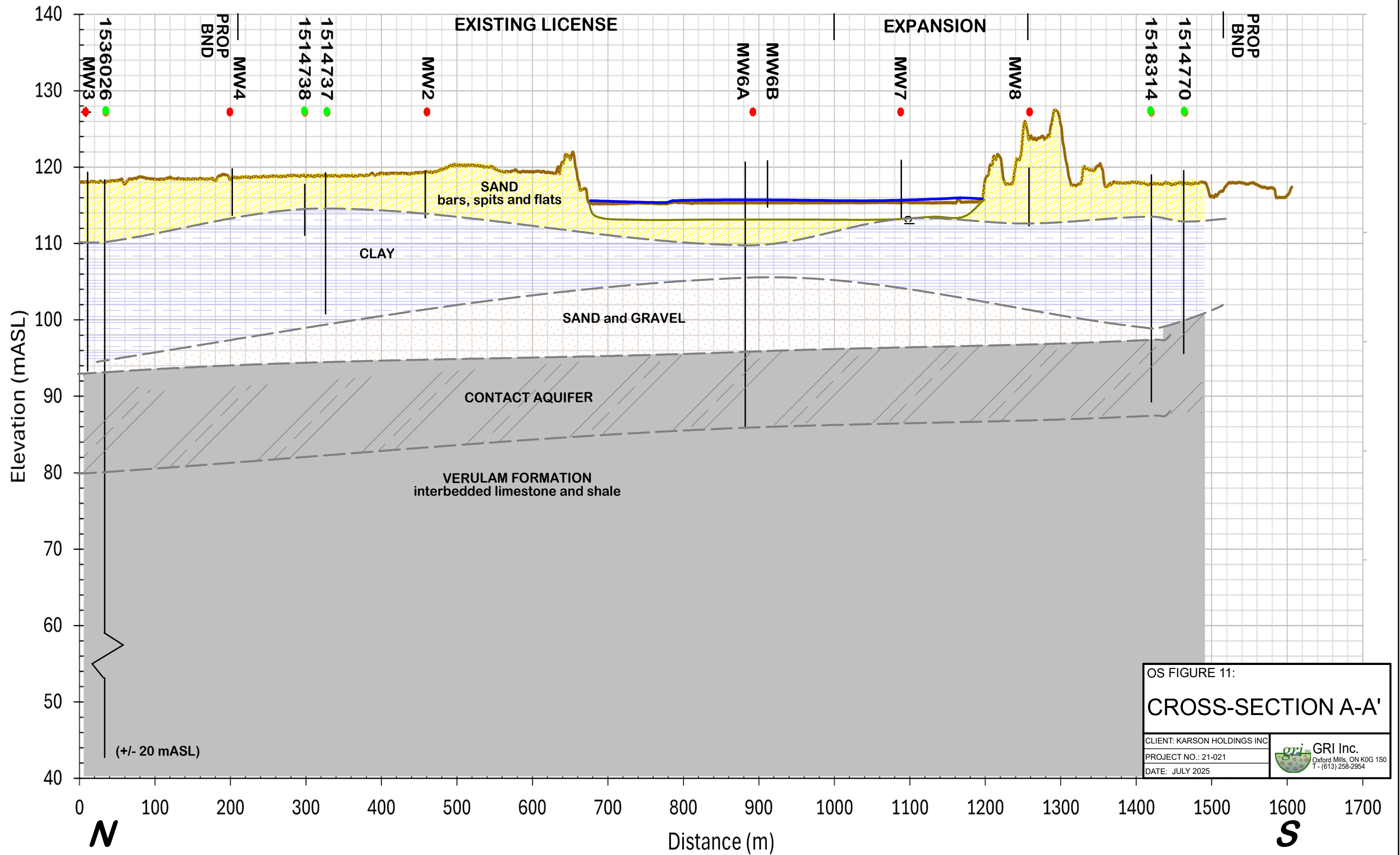
- WATERCOURSES
- ONTARIO WATERSHED BND

GOOGLE SATELLITE - 10.18.24

OS FIGURE 10
GROUNDWATER ELEVATION
DECEMBER 18, 2024

CLIENT: KARSON HOLDINGS INC.
PROJECT NO: 21-021
DATE: JUNE 2025





OS FIGURE 11:

CROSS-SECTION A-A'

CLIENT: KARSON HOLDINGS INC	 GRI Inc. Oxford Mills, ON K0G 1S0 T - (613) 258-2954
PROJECT NO.: 21-021	
DATE: JULY 2025	

Oversize Tables



OS Table 1: Summary of Monthly Precipitation Data and Analysis, Drummond Centre

	1981-2010 Normal	2017	2018	2019	2020	2021	2022	2023	2024	5-Year Average 2019 to 2023
January	67.7	73.8	67.0	72.4	107.2	48.2	65.6	88.0	75.2	76.3
February	51.3	90.2	67.2	74.4	40.2	62.6	93.0	60.5	35.8	66.1
March	55.1	74.8	52.2	62.0	79.0	59.6	66.0	53.6	40.6	64.0
April	64.2	126.2	133.4	149.0	76.4	58.6	93.8	114.6	140.0	98.5
May	77	164.8	33.0	87.8	34.2	32.4	106.2	49.4	97.0	62.0
June	82.4	166.2	62.8	120.4	46.2	135.2	108.6	87.2	133.2	99.5
July	83.5	175.0	106.2	42.0	64.6	87.2	65.8	167.6	119.8	85.4
August	75.3	131.6	82.2	52.4	248.0	45.0	167.0	97.0	170.8	121.9
September	91.8	28.4	98.6	105.6	60.0	161.2	62.0	17.6	53.8	81.3
October	78.5	142.8	86.6	179.4	76.4	134.6	40.2	61.6	45.4	98.4
November	83.6	78.2	108.2	57.2	52.6	54.0	74.4	36.6	50.4	55.0
December	65.9	60.0	80.8	58.0	84.0	71.0	104.8	25.6	NA	68.7
Annual	876.3	1,312.0	978.2	1,060.6	968.8	949.6	1,047.4	859.3	962.0	977.1



OS Table 2: Summary of Mean Monthly Temperature Data and Analysis, Drummond Centre

	1981-2010 Normal	2017	2018	2019	2020	2021	2022	2023	2024	5-Year Avg 2019 to 2023
January	-9.8	-5.2	-9.0	-10.7	-5.5	-6.2	-13.9	-5.2	-6.1	-8.3
February	-8.5	-4.3	-4.5	-8.4	-6.3	-7.8	-8.7	-6.8	-3.4	-7.6
March	-2	-4.7	-1.5	-3.7	1.2	0.3	-1.2	-1.3	2.5	-0.9
April	6	7.8	2.7	5.2	5.0	8.1	5.8	7.7	6.7	6.4
May	12.7	12.2	15.5	11.5	12.6	13.7	15.0	12.4	15.5	13.0
June	17.8	17.5	17.6	17.5	18.8	20.0	17.3	18.0	18.8	18.3
July	20.3	19.6	22.3	22.2	23.7	19.2	20.0	21.2	21.6	21.2
August	19.1	18.5	20.9	19.2	19.7	21.7	19.9	18.3	19.8	19.8
September	14.4	16.9	16.7	11.0	13.9	15.1	14.5	16.4	16.8	14.2
October	7.8	11.6	7.4	7.3	7.5	11.3	8.2	11.0	9.8	9.1
November	1.6	0.6	-1.0	-7.0	4.1	1.2	3.2	0.9	5.3	0.5
December	-5.8	-9.4	-5.6	0.5	-2.7	-3.4	-2.5	-1.9	NA	-2.0
Annual	6.1	6.8	6.8	5.4	7.7	7.8	6.5	7.5	9.7	7.0



OS Table 3: Water Surplus, Drummond Centre

	1981-2010 Normal	2017	2018	2019	2020	2021	2022	2023	2024	5-Year Average 2019 to 2023
January	67.7	73.8	67.0	72.4	107.2	33.2	67.4	88.0	75.2	88.00
February	51.3	90.2	67.2	74.4	40.2	53.0	108.0	60.5	35.8	60.50
March	55.1	74.8	52.2	62.0	74.4	56.2	77.6	53.6	32.2	53.60
April	32.5	85.8	121.3	120.7	52.5	34.0	51.5	75.3	110.4	75.35
May	-3.0	90.2	-63.2	14.0	-42.4	-56.7	30.1	-26.4	7.7	-26.36
June	-33.7	53.5	-49.5	5.4	-75.0	-67.3	-29.1	-28.3	17.9	-28.29
July	-51.0	46.3	-41.0	-106.2	-93.2	-26.7	-15.0	28.2	-19.9	28.26
August	-41.3	20.0	-44.3	-65.8	129.1	-96.9	-23.3	-12.5	52.6	-12.46
September	18.1	-57.8	14.7	48.9	-9.2	60.9	-38.7	-65.1	-30.7	-65.12
October	43.7	91.6	56.1	145.8	44.9	56.5	30.8	13.4	4.6	13.49
November	78.1	76.6	108.2	57.2	39.2	44.6	72.7	34.0	33.8	34.05
December	65.9	60.0	80.8	56.3	84.0	79.0	105.8	25.6	NC	25.60
Annual	283.4	705.0	369.6	485.2	351.7	169.8	437.9	246.3	319.6	246.6



OS Table 4: Water Surplus, Infiltration and Runoff for Various Climate Data Sets and Study Areas

	Area	Water Surplus (million m³)			Infiltration			Runoff		
Existing										
Climate Data Set -->		Normal	High	Low	Normal	High	Low	Normal	High	Low
Property	159	450.6	699.4	391.6	337.7	524.2	293.5	112.9	175.2	98.1
Existing license	80	226.7	351.9	197.0	160.4	249.0	139.4	66.3	102.9	57.6
Amendment Parcel	33	93.5	145.2	81.3	73.9	114.7	64.2	19.6	30.5	17.1
Amended License	113	320.2	497.1	278.3	234.3	363.7	203.6	85.9	133.4	74.7
500m Study Area	351.7	996.7	1,547.1	866.2	847.2	1,315.1	736.3	149.5	232.1	129.9
Carp River Basin	30,783.40	87,240.2	135,416.2	75,819.5	42,041.7	65,258.1	36,538.0	45,198.4	70,158.1	39,281.5
Post Development										
Climate Data Set -->		Normal	High	Low	Normal	High	Low	Normal	High	Low
Property	159	450.6	699.4	391.6	327.3	508.1	284.5	123.3	191.4	107.2
Existing license	80	226.7	351.9	197.0	158.9	246.6	138.1	67.9	105.3	59.0
Amendment Parcel	33	93.5	145.2	81.3	65.5	101.6	56.9	28.1	43.6	24.4
Amended License	113	320.2	497.1	278.3	224.3	348.2	195.0	95.9	148.9	83.4
500m Study Area	351.7	996.7	1,547.1	866.2	847.2	1,315.1	736.3	149.5	232.1	129.9
Carp River Basin	30,783.40	87,240.2	135,416.2	75,819.5	42,041.7	65,258.1	36,538.0	45,198.4	70,158.1	39,281.5

OS Table 5: Monitoring Well Stratigraphy and History (SNC Lavalin Environment 2013)

Well ID	Former Well ID	Year Installed	Well Depth	Construction Details	Notes
MW-1A	TW-3 (StanCon)	1989	32 m (105')	15.9 cm (6.25") casing to 23.5 m (77'), open from 23.5 m to 32.0 m (77' to 105') in limestone bedrock	- South-central portion of site, - abandoned September 2009 - replaced by MW 6A
MW-1B		2003	6.1	limestone bedrock 5.1 cm (2") PVC well, slotted screen from 3.0 m to 6.1 m (10' to 20')	- South-central portion of site, - abandoned September 2009 - replaced by MW 6B
MW-2		2003	6.1	5.1 cm (2") PVC well, slotted screen from 3.0 m to 6.1 m (10' to 20')	East perimeter of site
MW-3	TW-4 (StanCon)	1994	25.6m (84')	15.9 cm (6.25") casing to 25.6 m (84'), well terminated in overburden at clay-bedrock interface, not drilled into bedrock	Northeast corner of site
MW-4		2003	6.1 m (20')	5.1 m (2") PVC well, slotted screen from 3.0 m to 6.1 m (10' to 20')	North-central portion of site
MW-5	DH-1 (GRI)	2000	3.0 m (10')	3.2 cm (1.25") PVC well, slotted screen from 1.5 m to 3.0 m (5' to 10') (estimated)	- Central portion of site - Removed May 2005
MW-6A WWR #7137597		2009	35.1 m	3.0 m (5' to 10') (estimated) 15.24 cm (6") steel casing to 25.5 m (83.5'), open from 25.5 limestone bedrock m to 35.1 m (83.5' to 115') in	Southwest portion of site
MW-6B		2009	6.1 m (20')	5.1 cm (2") PVC well, slotted screen from 3.0 m to 6.1 m (10' to 20')	Southwest portion of site
MW-13-1		2013	6.1 m (20')	5.1 cm (2") PVC well, slotted screen from 3.0 m to 6.1 m (10' to 20')	Northeast portion of site
MW-13-2		2013	5.8 m (19')	5.1 cm (2") PVC well, slotted screen from 2.7 m to 5.8 m (9' to 19')	Northwest portion of site

Well ID	Former Well ID	Year Installed	Well Depth	Construction Details	Notes
MW-13-3	-	2013	5.8 m (19')	5.1 cm (2") PVC well, slotted screen from 2.7 m to 5.8 m (9' to 19')	Northwest portion of site
MW-13-4	-	2013	4.3 m (14')	5.1 cm (2") PVC well, slotted screen from 1.2 m to 4.3 m (9' to 19'). Well installed slightly at lower elevation within the pit and equivalent to a 3.1-m (20') deep well outside of pit. 5.1 cm (2") PVC well, slotted screen from 1.2 m to 4.3 m (4' to 14')	Northwest portion of site

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	12-01-2021	16-03-2021	15-04-2021	01-05-2021	12-05-2021
MW 2	119.22	108.55	116.76	116.87	116.97	116.92	116.89
MW 3	118.94	108.27	116.40	116.40	116.26	116.45	116.43
MW 4	119.44	113.34	117.33	117.45	117.68	117.63	117.56
MW 6A	120.34	85.29		118.18			
MW 6B	120.56	114.87		117.20	117.08	117.03	116.99
MW 13-1	destroyed						
MW 13-4	119	119.00	117.24	117.40	117.49	117.42	117.35
TW 7	120.4	112.78					
TW 8	119.7	110.56					
TW 9	118.8	112.70					

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	25-05-2021	15-06-2021	29-06-2021	14-07-2021	30-07-2021
MW 2	119.22	108.55	116.82	116.65	116.56	116.52	116.47
MW 3	118.94	108.27	116.43	116.43	116.41	116.44	116.43
MW 4	119.44	113.34	117.47	117.28	117.17	117.10	117.04
MW 6A	120.34	85.29					
MW 6B	120.56	114.87	116.86	116.79	116.70	116.65	116.59
MW 13-1	destroyed						
MW 13-4	119	119.00	117.23	117.08	117.04	117.02	116.99
MW 7	120.4	112.78					
MW 8	119.7	110.56					
MW 9	118.8	112.70					

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	19-08-2021	30-08-2021	16-09-2021	28-09-2021	14-10-2021
MW 2	119.22	108.55	116.41	116.38	116.45	116.39	116.36
MW 3	118.94	108.27	116.44	116.42	116.38	116.36	116.35
MW 4	119.44	113.34	116.97	116.93	116.87	116.92	116.91
MW 6A	120.34	85.29					
MW 6B	120.56	114.87	116.52	116.50	116.52	116.47	116.46
MW 13-1	destroyed						
MW 13-4	119	119.00	116.95	116.93	116.92	117.00	116.95
MW 7	120.4	112.78					
MW 8	119.7	110.56					
MW 9	118.8	112.70					

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	01-11-2021	15-11-2021	29-11-2021	16-12-2021	12-01-2022
MW 2	119.22	108.55	116.39	116.37	116.41	116.45	116.49
MW 3	118.94	108.27	116.34	116.33	116.33	116.34	116.45
MW 4	119.44	113.34	117.01	116.97	117.00	117.01	116.97
MW 6A	120.34	85.29					
MW 6B	120.56	114.87	116.52	116.53	116.57	116.60	
MW 13-1	destroyed						
MW 13-4	119	119.00	116.97	116.94	116.94	116.99	116.98
MW 7	120.4	112.78					
MW 8	119.7	110.56					
MW 9	118.8	112.70					

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	31-01-2022	16-02-2022	28-02-2022	16-03-2022	23-03-2022
MW 2	119.22	108.55	116.50	116.51	116.50	116.61	116.76
MW 3	118.94	108.27	116.34	116.33	116.33	116.33	116.34
MW 4	119.44	113.34	116.95	116.94	116.95	117.05	117.22
MW 6A	120.34	85.29					
MW 6B	120.56	114.87					117.29
MW 13-1	destroyed						
MW 13-4	119	119.00	117.00	117.04	117.07	117.15	117.29
MW 7	120.4	112.78					
MW 8	119.7	110.56					
MW 9	118.8	112.70					

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	12-04-2022	25-04-2022	06-05-2022	31-05-2022	16-06-2022
MW 2	119.22	108.55	116.82	116.72	116.67	116.51	116.48
MW 3	118.94	108.27	116.36	116.37	116.38	116.40	116.41
MW 4	119.44	113.34	117.27	117.30	117.26	117.15	117.18
MW 6A	120.34	85.29					118.17
MW 6B	120.56	114.87	117.28	117.22	117.08	117.08	117.04
MW 13-1	destroyed						
MW 13-4	119	119.00	117.25	117.13	117.09	116.98	116.98
MW 7	120.4	112.78					
MW 8	119.7	110.56					
MW 9	118.8	112.70					

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	30-06-2022	19-07-2022	27-07-2022	15-08-2022	14-09-2022
MW 2	119.22	108.55	116.46	116.40	116.39	116.46	116.39
MW 3	118.94	108.27	116.43	116.43	116.43	116.43	116.44
MW 4	119.44	113.34	117.11	117.01	116.98	117.13	116.97
MW 6A	120.34	85.29	118.07	117.80	117.90	118.02	117.94
MW 6B	120.56	114.87	116.99	116.94	116.96	116.86	116.82
MW 13-1	destroyed						
MW 13-4	119	119.00	116.95	116.93	116.93	117.01	116.93
MW 7	120.4	112.78		118.23	118.16	118.20	118.04
MW 8	119.7	110.56		118.77	118.73	118.77	118.56
MW 9	118.8	112.70		117.06	117.11	117.22	117.13

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	31-10-2022	21-11-2022	08-12-2022	03-01-2023	24-01-2023
MW 2	119.22	108.55	116.28	116.23	116.25	116.48	116.50
MW 3	118.94	108.27	116.44	116.44	116.43	116.44	116.44
MW 4	119.44	113.34	116.84	116.80	116.81	117.08	117.04
MW 6A	120.34	85.29	117.86	117.47	118.03	121.07	118.20
MW 6B	120.56	114.87	116.77	116.71	116.70	121.21	116.99
MW 13-1	destroyed						
MW 13-4	119	119.00	116.84	116.84	116.85	117.12	116.99
MW 7	120.4	112.78	117.86	117.79	117.78	117.90	121.12
MW 8	119.7	110.56	118.33	118.30	118.35	118.61	120.54
MW 9	118.8	112.70	117.12	117.18	117.27	117.61	119.55

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	21-02-2023	24-03-2023	28-04-2023	25-05-2023	30-06-2023
MW 2	119.22	108.55	116.56	116.70	116.93	116.74	116.50
MW 3	118.94	108.27	116.47	116.48	116.53	116.46	116.55
MW 4	119.44	113.34	117.06	117.18	117.56	117.45	117.13
MW 6A	120.34	85.29	118.29	118.34	118.33	118.19	117.99
MW 6B	120.56	114.87	116.95	117.01	117.47	117.41	117.13
MW 13-1	destroyed						
MW 13-4	119	119.00	117.10	117.27	117.25	117.10	116.99
MW 7	120.4	112.78	118.05	118.10	118.95	118.86	118.52
MW 8	119.7	110.56	118.66	118.73	119.52	119.32	119.12
MW 9	118.8	112.70	117.38	117.43	119.55	117.30	117.18

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	28-07-2023	31-08-2023	22-09-2023	31-10-2023	30-11-2023
MW 2	119.22	108.55	116.42	116.28	116.26	116.21	116.19
MW 3	118.94	108.27	116.55	116.54	116.52	109.04	109.56
MW 4	119.44	113.34	117.04	116.95	116.64	116.75	116.71
MW 6A	120.34	85.29	118.03	117.87	117.75	117.81	117.90
MW 6B	120.56	114.87	117.05	116.91	116.84	116.71	116.68
MW 13-1	destroyed						
MW 13-4	119	119.00	116.91	116.86	116.84	116.85	116.81
MW 7	120.4	112.78	118.36	118.22	117.98	117.85	117.74
MW 8	119.7	110.56	118.91	118.72	118.37	118.26	118.18
MW 9	118.8	112.70	117.19	117.11	116.81	116.88	116.95

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	25-01-2024	12-02-2024	14-Mar-24	23-Apr-24	28-May-24
MW 2	119.22	108.55	116.39	116.40	116.57	116.62	116.46
MW 3	118.94	108.27	110.42	110.68	111.11	111.63	112.05
MW 4	119.44	113.34	116.83	116.88	116.98	117.11	117.02
MW 6A	120.34	85.29	118.06	118.15	118.26	118.24	118.14
MW 6B	120.56	114.87	116.83	116.83	116.96	117.09	117.01
MW 13-1	destroyed						
MW 13-4	119	119.00	116.91	117.00	117.07	117.06	116.96
MW 7	120.4	112.78	117.87	117.83	118.03	118.32	118.27
MW 8	119.7	110.56	118.36	118.37	118.65	118.89	118.83
MW 9	118.8	112.70	117.23	117.34	117.50	117.45	117.33

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	30-Jun-24	21-Jul-24	27-Aug-24	27-Sep-24	25-Oct-24
MW 2	119.22	108.55	116.46	116.46	116.44	116.30	116.27
MW 3	118.94	108.27	112.43	112.72	112.98	113.24	112.08
MW 4	119.44	113.34	117.12	117.16	117.14	116.96	116.86
MW 6A	120.34	85.29	118.14	118.13	118.15	117.90	117.82
MW 6B	120.56	114.87	117.01	117.03	117.06	116.90	116.84
MW 13-1	destroyed						
MW 13-4	119	119.00	116.98	116.99	116.97	116.91	116.88
MW 7	120.4	112.78	118.38	118.39	118.42	118.16	118.01
MW 8	119.7	110.56	118.95	118.95	118.95	118.65	118.46
MW 9	118.8	112.70	117.32	117.33	117.27	117.04	116.98

OS Tabel 6: Groundwater Elevations

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	27-Nov-24	18-Dec-24	27-Jan-25	27-Feb-25	26-Mar-25
MW 2	119.22	108.55	116.25	116.28	116.38	116.42	116.66
MW 3	118.94	108.27	112.39	112.59	112.93	113.15	113.35
MW 4	119.44	113.34	116.81	116.79	120.18	120.18	120.18
MW 6A	120.34	85.29	118.05	118.07	117.95	NA	118.34
MW 6B	120.56	114.87	116.79	116.78	121.21	121.21	121.21
MW 13-1	destroyed						
MW 13-4	119	119.00	116.90	116.91	116.90	116.90	117.12
MW 7	120.4	112.78	117.88	117.86	117.91	117.83	118.00
MW 8	119.7	110.56	118.43	118.42	118.35	118.24	118.57
MW 9	118.8	112.70	117.16	117.26	117.15	117.01	117.55

	Surface Elevation (m asl)	Elevation Base of Hole (mASL)	28-Apr-25	30-May-25
MW 2	119.22	108.55	116.88	116.68
MW 3	118.94	108.27	113.61	113.84
MW 4	119.44	113.34	120.18	120.18
MW 6A	120.34	85.29	118.28	118.14
MW 6B	120.56	114.87	121.21	121.21
MW 13-1	destroyed			
MW 13-4	119	119.00	117.27	117.11
MW 7	120.4	112.78	118.78	118.50
MW 8	119.7	110.56	119.34	119.00
MW 9	118.8	112.70	117.53	117.28

Appendix A

PTTW and ECA, Existing License





PERMIT TO TAKE WATER

Surface Water & Groundwater

NUMBER P-300-5229047655

Version: 1.0

Effective Date: December 5, 2023

Expiry Date: December 1, 2033

Pursuant to Section 34.1 of the Ontario Water Resources Act, Revised Statutes of Ontario (R.S.O.) 1990 this Permit To Take Water is hereby issued to:

KARSON HOLDINGS INC

3725 Carp Road

Ottawa

ONTARIO

Canada

K0A 1L0

For the water taking from

Pond

Located at:

3175 CARP Road , CARP, OTTAWA, ONTARIO, CANADA, K0A 1L0

This Permit cancels and replaces Permit Number 2341-BM8KPD, issued on March 2, 2020.

DEFINITIONS

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

- a. "Director" means any person appointed in writing as a director pursuant to section 5 of the OWRA for the purposes of section 34.1 of the OWRA.
- b. "Provincial Officer" means any person designated in writing by the Minister as a provincial officer pursuant to section 5 of the OWRA.
- c. "Ministry" means the ministry of the government of Ontario responsible for the administration of the OWRA, currently named the Ministry of the Environment, Conservation and Parks.
- d. "District Office" means the Ottawa District Office of the Ministry.
- e. "Permit" or "PTTW" means this Permit to Take Water No. P-300-5229047655 including its Schedules, if any, issued in accordance with Section 34.1 of the OWRA, as may amended.
- f. "Permit Holder" means KARSON HOLDINGS INC.
- g. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40.

TERMS AND CONDITIONS

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

1. Compliance with Permit

- 1.1. Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, attested to by William Karson, on May 18, 2023, and all Schedules included in this Permit.
- 1.2. The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3. Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4. This Permit is not transferable to another person without the Director's written consent.
- 1.5. This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6. The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7. The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change.

2. General Conditions and Interpretation

2.1. Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the Environmental Protection Act, R.S.O. 1990, the Pesticides Act, R.S.O. 1990, or the Safe Drinking Water Act, S. O. 2002.

2.2. Other Approvals

The issuance of, and compliance with this Permit, does not:

- (a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the Ontario Water Resources Act, and the Environmental Protection Act, and any regulations made thereunder; or
- (b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

- 2.3. No water taken under the authority of this Permit may be discharged directly to the natural environment without prior treatment in accordance with an OWRA, R.S.O. 1990, Section 53, Industrial Sewage Works Approval.

2.4. Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

- (a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or
- (b) acceptance by the Ministry of the information's completeness or accuracy.

2.5. Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may

have against the Permit Holder, its officers, employees, agents, and contractors.

2.6. Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.7. Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1. Expiry

This Permit expires on December 1, 2033. No water shall be taken under authority of this Permit after the expiry date.

3.2. Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A (litres)

	Source Name / Description	Source Type	Purpose Category	Specific Purpose	Activity	Maximum Taken per minute	Maximum Number of Hours Taken per day	Maximum volume per Day	Maximum days in a year	Zone / Easting / Northing
1	Pond (Pond)	Pond	Mining, quarrying, and oil and gas extraction	Aggregate Extraction	Dewatering	4500	24	6480000	260	18 / 419687 / 5017907
2	Pond (Pond)	Pond	Mining, quarrying, and oil and gas extraction	Aggregate Washing	Washing	4500	12	3240000	25	18 / 419687 / 5017907
Total Taking								6480000		

3.3. Notwithstanding Table A, the combined volume of taking from all sources listed in Table A shall not exceed 6,480,000 Litres/day

4. Monitoring

4.1. The Permit Holder shall maintain a record of all water takings. The daily volume of water taken shall be measured by a flow meter or calculated in accordance with the method described in the application for this Permit, or as otherwise accepted by the Director.

This record shall include the dates and times of water takings, the rates of pumping, and an estimated calculation of the total amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The Permit Holder, unless otherwise required by the Director, shall submit, on or before March 31st in every year, the records required by this condition to the Ministry's Regulatory Self Reporting System.

4.2. The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

4.3. The Permit Holder shall monitor the water levels in the monitoring wells designated as MW2, MW3, MW4, MW6A, MW6B, MW 7, MW 8, MW 9, and MW-13-4. Water level monitoring shall be performed monthly commencing one month prior to the commencement of the annual dewatering activities and terminating no earlier than one month after the cessation of annual dewatering activities.

- 4.4. The data collected under the monitoring program specified in Condition 4.3 shall be analyzed, interpreted and summarized in an annual report by a Qualified Person (P.Geo. or equivalent). The Permit Holder shall provide the annual report to the Ministry's District Office on or before March 31st of the year following the reporting year. The report shall be directed to the attention of the District Manager. The report shall describe any potential and / or observed adverse effects to receptors in the area of the Site and shall provide recommendations on the need for changes to monitoring location and frequency, pumping patterns, and/or the need for mitigation. The annual report shall also document any well interference complaints received by the Permit Holder for the monitoring period.
- 4.5. Any request for an amendment or renewal of this Permit shall be accompanied by a report prepared by a Qualified Person (P.Geo. or equivalent). The report shall include all records required by the conditions of this Permit. The report shall provide interpretation and recommendations on the need for changes to monitoring locations and frequency, pumping patterns and/or the need for mitigation and document all well interference complaints and water supply activities.

5. Impacts of the Water Taking

5.1. Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2. Impacts for Water Situation Type

For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

- 5.3. The Permit Holder shall ensure that the discharge of water shall be controlled in such a way as to avoid flooding, erosion and sedimentation in any receiving watercourse. If necessary, headers to distribute the flow, and filtration devices, such as staked straw bales, shall be used to reduce velocity and eliminate erosion and turbidity during discharge.

- 5.4. The Permit Holder shall adhere to a contingency plan consistent with, but not necessarily limited to, that described by SNC-Lavalin Environment, and included as **Item 1 of Schedule 1** of this Permit.

6. Director May Amend Permit

- 6.1. The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the Ontario Water Resources Act, Section 100 (4).

REASONS

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

APPEAL PROVISIONS

In accordance with Section 100 of the *Ontario Water Resources Act*, you may by written notice served upon me and the Ontario Land Tribunal within 15 days after the service of this notice, require a hearing by the Tribunal. You must also provide notice to, the Minister of the Environment, Conservation and Parks in accordance with Section 47 of the *Environmental Bill of Rights, 1993* who will place notice of your appeal on the Environmental Registry. Section 101 of the *Ontario Water Resources Act* provides that the notice requiring the hearing ("the Notice") shall state:

- I. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
- II. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

- I. The name of the appellant;
- II. The address of the appellant;
- III. The permit to take water number;
- IV. The date of the permit to take water;
- V. The name of the Director;
- VI. The municipality within which the works are located;

This notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto ON
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto, ON
M7A 2J3

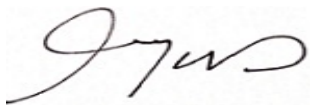
and

The Director, Section 34.1,
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, ON
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights* that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at ero.ontario.ca, you can determine when the leave to appeal period ends.

Dated at Toronto this 4th day of December, 2023



Archana Uprety

Director, Section 34.1

Ontario Water Resources Act, R.S.O. 1990

c: William Karson

Jennifer Gorrell, GRI Inc, for Karson Holdings Inc.

SCHEDULE 1

This Schedule "A" forms part of Permit To Take Water P-300-5229047655 Version Number 1.0, dated December 4, 2023.

1. Contingency Plan, page 25, of report entitled "McGee Pit Expansion, Former Township of West Carleton, City of Ottawa, Ontario, Hydrogeological Study in Support of a Category 3 Permit To Take Water Application" prepared by SNC-Lavalin Environment and dated August 2013.

5. CONTINGENCY PLAN

The following contingency and mitigative measures would be implemented in the event that unforeseen, unacceptable impacts occur:

- 1) Should a neighbouring property owner report a well interference problem, WCSGI would investigate the nature of the complaint to determine if the problem is potentially associated with the pit dewatering. If pit dewatering operations are confirmed to be the source of the problem, WCSGI would report the complaint to the MOE (if not already done so by the homeowner). In the interim, WCSGI would provide the owner with potable water. Permanent remedial measures could include lowering the pump in the well, deepening the existing well or installing a new well.
- 2) Should there be a change in adjacent land use conditions, the impact analysis should be updated.



AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 9363-9FLMDG

Issue Date: January 6, 2015

West Carleton Sand & Gravel Inc.
3232 Carp Road P.O. Box 264, Carp
Ottawa, Ontario
K0A 1L0

Site Location: McGee Pit
Township of West Carleton
Lot 11 and 12, Concession 4
City of Ottawa, Ontario

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

modifications and expansion of the sewage Works for the collection, transmission, treatment and disposal of accumulated stormwater and groundwater from McGee Pit, a licensed sand pit, 82 ha in size of which 74.9 ha is used for extraction, located on the west side of William Mooney Road, north of McGee Side road, in the Township of West Carleton, City of Ottawa, with a revised dewatering pump daily flow rate of up to 4,500 litres per minute for 24 hours per day operation, with the discharge from the on-site settling ponds directed to a drainage ditch that conveys it to a small unnamed creek approximately 275 m northwest of the site, and the creek eventually flows into Carp River approximately 3.5 km north of the site.

The *Proposed Works* consist of the following:

PROPOSED WORKS:

- Pond 4, with approximate dimensions of 61.6 metres long, 19 metres wide and 4 metres deep, with a total effective storage volume of 2,856 cubic metres, discharging to the effluent drainage ditch;

These Proposed Works are to be operated with the following Previous Works:

PREVIOUS WORKS:

- one (1) collection pond/sum located on the west side of the pit, with an estimated total area of 170 square metres and a volume of approximately 1,020 cubic metres, equipped with a dewatering pump rated at 4,500 litres per minute placed within a 6 m deep collection sump, discharging to settling Pond 1 via a 380 millimetre diameter culvert;

- Pond 1, with approximate dimensions of 23.6 metres long, 5.5 metres wide and 1.5 metres deep, with a total effective storage volume of 130 cubic metres, discharging to Pond 2 via a 380 millimetre diameter culvert;

- Pond 2, with approximate dimensions of 53 metres long, 20 metres wide and 4 metres deep, with a

total effective storage volume of 2,807 cubic metres, discharging to Pond 3A via a 380 millimetre diameter culvert;

- Pond 3A, with approximate dimensions of 40.3 metres long, 12.6 metres wide and 2.5 metres deep, with a total effective storage volume of 356 cubic metres, discharging to Pond 3B via a weir with an overflow elevation of 117.32 metres;

- Pond 3B, with approximate dimensions of 38.2 metres long, 13.3 metres wide and 3 metres deep, with a total effective storage volume of 392 cubic metres, discharging to Pond 3C via a weir with an overflow elevation of 117.31 metres;

- Pond 3C, with approximate dimensions of 31.7 metres long, 13.9 metres wide and 3.3 metres deep, with a total effective storage volume of 422 cubic metres, discharging via a 380 millimetre diameter culvert to an onsite ditch to the proposed Pond 4.

MISCELLANEOUS:

- all other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage Works;

all in accordance with the submitted supporting documents in Schedule "A" .

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules attached to it, and the application;

"District Manager" means the District Manager of the Ottawa District Office of the Ministry;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

"Equivalent Equipment" means a substituted equipment, or like-for-like equipment that meets the required quality and performance standards of a named equipment;

"Limited Operational Flexibility" (LOF) means the modifications that the Owner is permitted to make to the Works under this Approval;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

"Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works";

"Owner" means West Carleton Sand & Gravel Inc. and its successors and assignees;

"OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

"Previous Works" means those portions of the sewage Works previously constructed and approved under an Approval;

"Proposed Works" means the sewage works described in the Owner's application, this Approval, to the

extent approved by this Approval; and

"Works" means the sewage works described in the Owner's application, and this Approval, and includes both the Proposed Works, Previous Works and the Limited Operational Flexibility.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITION

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.

(3) Where there is a conflict between a provision of any document in Schedule A referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the documents in the Schedule A, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in Schedule A and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2. CHANGE OF OWNER

(1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within 30 days of the change occurring:

(a) change of Owner or operating authority, or both;

(b) change of address of Owner or operating authority or address of new owner or operating authority;

(c) change of partners where the Owner or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Partnerships Registration Act*;

(d) change of name of the corporation where the Owner or operator is or at any time becomes a

corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O. Reg. 189, R.R.O. 1980, as amended from time to time), filed under the *Corporations Information Act* shall be included in the notification to the District Manager;

(2) In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager.

(3) The Owner shall ensure that all communications made pursuant to this condition will refer to this Approval's number.

3. OPERATIONS MANUAL

(1) The Owner shall prepare an operations manual prior to the commencement of operation of the sewage Works, that includes, but is not necessarily limited to, the following information:

(a) operating procedures for routine operation of the Works;

(b) inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the Works;

(d) contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the District Manager; and

(e) complaint procedures for receiving and responding to public complaints.

(2) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the sewage Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

4. EFFLUENT LIMITS

(1) The Owner shall design, construct and operate the Works such that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the Works.

Table 1 - Effluent Limits	
Effluent Parameter	Concentration Limit (milligrams per litre unless otherwise indicated)
Column 1	Column 2
Total Suspended Solids	25
Total Oil and Grease	15

(2) For the purposes of determining compliance with and enforcing subsection (1), non-compliance with respect to a Concentration Limit is deemed to have occurred when any single sample analyzed for a parameter named in Column 1 of subsection (1) is greater than the corresponding maximum concentration set out in Column 2 of subsection (1).

5. EFFLUENT - VISUAL OBSERVATIONS

Notwithstanding any other condition in this Approval, the Owner shall ensure that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.

6. OTHER JURISDICTIONS

Notwithstanding Conditions 4 and 5, the Owner is also obligated to comply with the requirements of other jurisdictions, such as the City of Ottawa Sewer Use By-Law.

7. SURFACE WATER AND EFFLUENT MONITORING AND RECORDING

The Owner shall, upon commencement of operation of the sewage Works, carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) Samples shall be collected at the sampling points outlined in subsection (5), at the sampling frequency outlined in Table 2 and analyzed for each parameter listed in Table 2:

Table 2 - Surface Water and Effluent Monitoring	
Frequency	SW-1: Once each month during periods of discharge SW-2 & SW-3: Twice each year (April & October), during periods of pump discharge.
Sample Type	Grab
Parameters	Total Suspended Solids, Total Oil and Grease, Total Phosphorus, Total Ammonia Nitrogen, Nitrate, Iron, Manganese, Aluminum, Cobalt, Copper, pH (field), Temperature (field) and Conductivity (field)

(3) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (August 1994), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and

(b) the publication "Standard Methods for the Examination of Water and Wastewater" (22nd edition) as amended from time to time by more recently published editions.

(4) Conductivity, temperature and pH shall be measured and recorded in the field at the time of sampling. The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for ammonia (un-ionized).

(5) The Owner shall establish the following sampling locations as shown on Figure 1 of letter dated December 3, 2014 from SNC-Lavalin Inc.

SW-1: Existing Onsite Ditch, at the Property Limit (Compliance Point)

SW-2: Unnamed Creek at Diamond View Road, Upstream of the Confluence of the Creek and Ditch (Creek Background)

SW-3: Unnamed Creek at March Road, Downstream of the Confluence of the Creek and Ditch (Limit of Study Area).

(6) The measurement frequencies specified in subsection (2) in respect of any parameter are minimum requirements which may, after 12 months of monitoring in accordance with this Condition, be modified by the District Manager in writing from time to time.

(7) The Owner shall measure, record and calculate the volume of water pumped from the quarry sump each week.

(8) The Owner shall measure, record and calculate the flow of water at SW-2 and SW-3 at the time of sampling at these locations.

(9) The Owner shall, each year during the spring runoff period, inspect the condition of the downstream drainage network.

(10) Additional Monitoring:

(a) Increased Discharge Flow Monitoring: The Owner shall collect monthly flow and stage data at sampling locations SW-1, SW-2 and SW-3 for the first operating season pursuant to issuance of this Approval and upon request thereafter.

(b) Culvert Inspection: The Owner shall inspect Culverts 1, 2 and 3 of the unnamed creek on a bi-weekly basis (once every two weeks), during the spring freshet (April 1 to May 31) of each year and after large rainfall events. If overtopping of a Culvert is observed or if the Owner is notified by others of overtopping, quarry dewatering shall stop, and shall be resumed only at a time when sufficient freeboard in the Culvert(s) is available to handle quarry discharge.

(11) The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. LIMITED OPERATIONAL FLEXIBILITY

(1) The Owner may make modifications to the Works in accordance with the terms and conditions of this Approval subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to

Sewage Works ”, included under Schedule B of this Approval, as amended, provided that the approved sewage Works and proposed modification meet the following eligibility criteria:

- (a) The sewage Works operate within the approved quarry Permit To Take Water (PTTW) flow (Maximum taking rate of 4,500 L/min, in accordance with PTTW No. 7732-9DMMVJ issued December 6, 2013);
 - (b) The sewage Works are designed, constructed and operated such that the minimum hydraulic retention time is 24 hours and that the concentration of Total Suspended Solids does not exceed 25 milligrams per litre in the effluent from the Works;
- (2) Sewage Works under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry’s publication “Design Guidelines for Sewage Works 2008”, as amended.
- (3) The Owner shall ensure at all times, the Works and related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all terms and conditions of this Approval.
- (4) For greater certainty, the following are not permitted as part of Limited Operational Flexibility:
- (a) Modifications to the Works that result in an increase of the approved Permit to Take Water (PTTW) or approved flow discharge for the site;
 - (b) Modifications to the Works that may adversely affect compliance with the approved effluent quality criteria or the location of the discharge/outfall;
 - (c) Modifications to the treatment process technology of the Works, or modifications that involve construction of new ponds, sumps and/or other components or alter the treatment train process design;
 - (d) Modifications to the Works approved under s.9 of the EPA, and
 - (e) Modifications to the Works pursuant to an order issued by the Ministry.
- (5) Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.
- (6) If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, as deemed necessary in consultation with the District Manager, provide a copy of the revised plan for approval to the local fire services authority prior to implementing Limited Operational Flexibility.
- (7) For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the *Environmental Protection Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act*, *Lake Simcoe Protection Act* and *Greenbelt Act*.
- (8) At least thirty (30) days prior to implementing Limited Operational Flexibility , the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the District Manager .
- (9) The Owner shall not proceed with implementation of Limited Operational Flexibility until the District

Manager has provided written acceptance of the Notice of Modifications or a minimum of thirty (30) days have passed since the day the District Manager acknowledged the receipt of the Notice of Modifications.

9. REPORTING

(1) The Owner shall report to the District Manager or designate, any exceedance of any parameter specified in Condition 4 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedance.

(2) In addition to the obligations under Part X of the *Environmental Protection Act*, the Owner shall, within 10 working days of the occurrence of any spill, bypass or loss of any product, by product, intermediate product, oils, solvents, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(3) The Owner shall prepare and submit a performance report to the District Manager on an annual basis within ninety (90) days following the end of the period being reported upon. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data collected pursuant to Condition 7 and a comparison to the effluent limits outlined in Conditions 4 and the Provincial Water Quality Objective and/or Ontario Drinking Water Objective for the monitored parameter, including an overview of the success and adequacy of the sewage Works;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of any effluent quality assurance or control measures undertaken in the reporting period; and

(d) a summary of the calibration and maintenance carried out on all effluent monitoring equipment.

(e) a copy of all Notice of Modifications submitted to the District Manager as a result of Schedule B, section (1), with a status report on the implementation of each modification;

(f) a summary of all modifications completed as a result of Schedule B, section (3); and

(g) any other information the District Manager may require from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the

Approval and continue to operate the Works in compliance with it.

3. Condition 3 is included to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the work.
4. Conditions 4 and 5 are imposed to ensure that the effluent discharged from the Works meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
5. Condition 6 is included to advise the Owner that the requirements of this Approval does not relieve them of the responsibility to comply with requirements of other jurisdictions.
6. Condition 7 is included to require the Owner to demonstrate on a continual basis that the quality of the effluent from the approved Works is consistent with the effluent limits specified in the Approval and that the approved Works do not cause any impairment to the receiving watercourse.
7. Condition 8 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with Limited Operational Flexibility provisions as detailed in Schedule B, as well to provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the terms and conditions of this Approval, MOE policies, guidelines, and industry engineering standards and best management practices.
8. Condition 9 is included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

SCHEDULE "A"

The following Items form Schedule "A" of the Approval:

1. Application for Approval of Industrial Sewage Works including all appendices submitted by Cameron Smith, SNC-Lavalin Inc., dated August 21, 2013 and received on August 22, 2013.
2. Report entitled Hydrogeological Study in Support of a Category 3 Permit to Take Water Application, dated August 2013 prepared by SNC-Lavalin Inc.
3. Memorandum from Mr. Dana Cruikshank, Surface Water Scientist, Technical Support Section, Eastern Region to Mr. Kyle Straberger, Sr. Environmental Officer, Ottawa District Office, dated May 5, 2014.
4. Drainage Study Technical Memorandum for SNC-Lavalin Inc. dated September 18, 2014;
5. Memorandum from Mr. Cruikshank, Surface Water Scientist, Technical Support Section, Eastern

Region to Ms. Fariha Pannu, Sr, Wastewater Engineer, Environmental Approvals Branch, dated October 17, 2014.

6. A letter from Mr. Robert Timlin of SNC-Lavalin Inc. to Ms. Pannu, dated November 12, 2014.

7. A letter from Mr. Timlin to Ms. Pannu, dated December 3, 2014 including Figure 1: Surface Water Sampling Locations.

8. Electronic mail from Mr. Timlin to Ms. Pannu, dated December 18, 2014 regarding the collection pond/sump.

Previously submitted Documents

9. Application for Approval of Industrial Sewage Works submitted by Erwin Schulz of West Carleton Sand & Gravel Inc. dated March 21, 2005;

10. Application for Approval for the Operation of an Industrial Sewage Works, West Carleton Sand and Gravel Inc., McGee Pit, Carp, Ontario prepared by Aqua Terre Solutions Inc, dated March 22, 2005, as revised on April 10, 2006;

11. Environmental Compliance Approval Application submitted by Kerry Currie, Property Manager, West Carleton Sand & Gravel Inc. operating as Karson Konstruktion dated August 21, 2013 and all supporting information.

Schedule B

Limited Operational Flexibility Criteria for Modifications to Sewage Works

1. The modifications to sewage works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF Condition in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the conditions in the Approval, the conditions in the Approval shall take precedence.

1.1 Dewatering Sump Pumps

a. Adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sump pump, provided that the facility's PTTW or the approved flow discharge for the site is not exceeded and the existing flow process and/or treatment train are maintained, as applicable.

1.2 Sewage Treatment Process

a. Optimizing existing sewage treatment equipment with the purpose of increasing the efficiency of the existing treatment operations, provided that there are no modifications to the Works that result in an increase of the volume discharged, and may have adverse effects to the effluent quality or location of the discharge.

b. Replacement or refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of equipment is kept the same or exceeded.

1.3 Sewage Discharge Location

a. Replacement of discharge pipe with similar pipe size or diffusers, or modifications to improve the erosion and sediment control on the discharge provided that the outfall location is not changed.

1.4 Sewage conveyance system

a. Pipe relining and replacement with similar pipe size within the quarry site, where the nominal diameter is not greater than 1,200 mm. b. Installation of new oil grit separators.

c. Servicing additional drainage areas not included in the original Approval's site are not eligible.

1.5 Sewage closed-loop systems

a. Installing or replacing closed-loop systems for wash stations, dust-suppression systems or settlement of suspended solids where the closed-loop system is located within the approved site and no possibility of effluent to the environment exist. b. Installing or replacing pumping equipment including pipe replacement or extension with similar pipe size.

2. Sewage Works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility

3. Normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.

4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 5875-6BDFW7 issued on April 28, 2006.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the
purposes of Part II.1 of the
Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor
12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 6th day of January, 2015

Edgardo Tovilla

Director

appointed for the purposes of Part II.1 of
the *Environmental Protection Act*

FP/

c: District Manager, MOE Ottawa.

Robert Timlin, SNC-Lavalin Inc. Environment & Water.

Appendix B

Summary of Water Well Records



Water Well Records

February 5, 2025

4:44:48 PM

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
03 010	18 421578 5017602 W	2008-01 1119	5.99	0256 0270	8/83/5/1:	DO		7104179 (Z61198) A072334	SAND GRVL 0040 GREN LMSN 0280
HUNTLEY TOWNSHIP	18 421642 5017045 W	2015-08 1558	10.6 6.23	UT 0041	13/17/12/1:	DO		7251004 (Z188477) A165028	BRWN LOAM STNS FILL 0005 BRWN CLAY STNS PCKD 0020 GREY CLAY 0037 GREY GRVL ROCK FCRD 0041
HUNTLEY TOWNSHIP	18 417735 5018740 W	2013-11 7241	1.59			MT	0005 10	7213394 (Z180003) A156299	BRWN SILT CLAY SOFT 0006 GREY CLAY SOFT 0010 GREY CLAY SOFT 0015
HUNTLEY TOWNSHIP	18 417725 5018840 W	2008-11 1844						7117077 (M02923) A	
HUNTLEY TOWNSHIP	18 417667 5018607 W	2013-05 1558	6.23	UT 0305 UT 0489	6/52/6/1:	DO CO		7218227 (Z139905) A123421	BRWN LOAM SNDY WBRG 0004 GREY CLAY STKY 0008 GREY CLAY 0064 GREY TILL 0068 GREY LMSN LYRD 0400
HUNTLEY TOWNSHIP	18 422041 5017568 W	2013-09 1558	6.23	UT 0068	16/16/12/1:	DO		7218704 (Z172495) A123465	BRWN SAND 0018 GREY SAND PCKD 0038 GREY LMSN 0072
HUNTLEY TOWNSHIP	18 421860 5017252 W	2013-09 1558	6.23	UT	11/67/6/4:	DO		7218712 (Z172491) A123460	GREY GRVL ROCK FILL 0005 BRWN LOAM 0010 BRWN CLAY PCKD 0019 GREY TILL PCKD 0048 GREY LMSN LYRD 0273
HUNTLEY TOWNSHIP	18 420594 5015613 W	2014-03 4879	6.25 6	UT 0093 UT 0208	6/30/12/1:	DO		7219455 (Z175281) A151643	BRWN SAND CLAY FILL 0004 BRWN CLAY SNDS TILL 0023 GREY LMSN LYRD 0219
HUNTLEY TOWNSHIP	18 420316 5019183 W	2017-05 1844						7290463 (Z213725) A	UNKN 0108
HUNTLEY TOWNSHIP	18 421613 5015174 W	2015-09 4879	6.25 6	UT 0065 UT 0120	12/28/5/1:	DO		7250603 (Z193268) A169268	BRWN CLAY GRVL FILL 0003 BRWN CLAY STNS GRVL 0011 GREY LMSN 0110 GREY LMSN LYRD 0160
HUNTLEY TOWNSHIP	18 421059 5019065 W	2013-03 4879	6.25 6	UT 0140	16/38/5/8:20	CO		7199876 (Z158234) A138229	BRWN GRVL 0001 BRWN SAND MGRD 0016 GREY SAND GRVL 0016 BRWN SHLE 0020 GREY LMSN 0160
HUNTLEY TOWNSHIP	18 421644 5017037 W	2015-06 1558	10.7	UT	8/127/12/:30	DO		7251017 (Z188490) A165043	BRWN CLAY STNS FILL 0006 BRWN CLAY PCKD 0020 GREY TILL 0033 GREY LMSN LYRD 0431
HUNTLEY TOWNSHIP	18 422078 5017501 W	2015-10 1558	10.6 6.23	UT 0060 UT 0090	15/15/12/1:	DO		7254250 (Z188450) A165150	GREY LMSN LOAM FILL 0005 BRWN LOAM SNDY PCKD 0016 GREY TILL 0030 GREY LMSN FCRD LYRD 0097
HUNTLEY TOWNSHIP	18 419025 5015156 W	2016-06 1558	10.6 6.23	UT 0201	8/10/12/1:	DO		7270182 (Z226804) A165039	BRWN SAND ROCK LOOS 0001 GREY LMSN LYRD HARD 0202

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP	18 421812 5017354 W	2016-11 1558	10.6 6.23	UT 0397	15/62/4/1:	DO		7287114 (Z226853) A149006	BRWN LOAM STNS FILL 0006 BRWN CLAY PCKD 0018 GREY CLAY STNS 0030 GREY GRVL PCKD 0036 GREY LMSN LYRD 0405
HUNTLEY TOWNSHIP	18 421850 5017382 W	2017-02 1558	10.6 6.23	UT 0266 UT 0349	12/47/6/1:	DO		7287122 (Z226862) A149014	BRWN CLAY FILL 0007 BRWN CLAY PCKD 0022 GREY TILL PCKD 0032 GREY LMSN 0355
HUNTLEY TOWNSHIP	18 422059 5017419 W	2016-08 1558	10.6 6.23	UT 0105 UT 0135	16/34/10/1:	DO		7287146 (Z226815) A165102	BRWN LOAM STNS PCKD 0016 GREY CLAY STNS LOOS 0038 GREY LMSN LYRD FCRD 0057 GREY LMSN LYRD HARD 0273
HUNTLEY TOWNSHIP	18 422047 5017433 W	2016-08 1558						7287149 (Z226816) A123352 A	
HUNTLEY TOWNSHIP	18 420316 5019195 W	2017-05 1844						7290427 (Z213724) A	
HUNTLEY TOWNSHIP	18 417996 5015118 W	2014-07 1558	6.23	UT 0095	10/15/12/1:	DO		7233555 (Z188593) A149027	BRWN SAND GRVL 0014 GREY LMSN 0100
HUNTLEY TOWNSHIP	18 421630 5018027 W	2010-10 1558	6.23	UT 0093	19/19/12/2:	DO		7156095 (Z115626) A102342	BRWN CLAY STNS PCKD 0016 BRWN SAND PCKD 0033 GREY LMSN 0098
HUNTLEY TOWNSHIP	18 420944 5019366 W	2006-07 7241	2				0005 8	7035379 (Z51855) A046053	BRWN LOAM LOOS 0004 BRWN SAND SILT 0012 GREY CLAY SILT WBRG 0012
HUNTLEY TOWNSHIP	18 419280 5019343 W	2008-07 1844	5.90			NU		7120508 (Z63850) A	
HUNTLEY TOWNSHIP	18 420301 5019145 W	2008-07 1844						7120701 (M04547) A045182 A	
HUNTLEY TOWNSHIP	18 420326 5019172 W	2006-07 1844	2.00				0000 12	1536752 (Z50484) A045182	BRWN SAND FILL FGRD 0003 GREY SAND WBRG 0008 GREY SAND SLTY WBRG 0012
HUNTLEY TOWNSHIP	18 422116 5017160 W	2006-07 1558	6.23	0168	179/13/12/1:30	DO		1536605 (Z47003) A041905	BRWN LOAM STNS 0004 BRWN CLAY 0015 GREY CLAY STNS 0040 BRWN LMSN LYRD 0175
HUNTLEY TOWNSHIP	18 419388 5019409 W	2005-05 1844	1.97				0010 5	1535739 (Z31572) A019094	GREY SAND SLTY 0015
HUNTLEY TOWNSHIP	18 418534 5017942 W	2010-02 4879	48			DO		7143173 (Z106827) A	
HUNTLEY TOWNSHIP	18 420307 5019403 W	2020-01 1844						7372714 (C35526) A251228 P	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP	18 417758 5018764 W	2013-11 7241	1.59			MT	0005 10	7213392 (Z180004) A156297	BRWN SILT CLAY SOFT 0006 GREY CLAY SOFT 0010 GREY CLAY SOFT 0015	
HUNTLEY TOWNSHIP	18 421995 5017833 W	2010-11 1558	6.23	UT 0110 UT 0260	14/135/8/1:	DO		7156079 (Z115651) A102382 A	BRWN LOAM BLDR 0024 GREY LMSN DKCL 0273	
HUNTLEY TOWNSHIP	18 421941 5017942 W	2013-01 6964	5.19	0004		TH	0003 3	7204977 (Z163946) A137237		
HUNTLEY TOWNSHIP	18 421879 5018109 W	2011-08 1558	6.23	UT 0123 UT 0269	22/61/10/1:0	DO		7170957 (Z135444) A102437	BRWN SAND GRVL 0018 GREY LMSN 0273	
HUNTLEY TOWNSHIP	18 421948 5017894 W	2011-06 1558	6.23	UT 0190 UT 0270	12/22/10/1:0	DO		7171005 (Z115728) A102485	BRWN LOAM BLDR 0018 GREY LMSN ---- 0273	
HUNTLEY TOWNSHIP	18 421605 5016556 W	2011-10 1558	6.23	UT 0048 UT 0170	8/32/10/1:0	DO		7176398 (Z139711) A119668	BRWN LOAM STNS 0010 GREY LMSN MUCK 0173	
HUNTLEY TOWNSHIP	18 421781 5018130 W	2012-04 1558	6.23	UT 0140 UT 0242	22/39/8/1:	DO		7187451 (Z139757) A119626	BRWN LOAM STNS BLDR 0020 GREY LMSN LYRD MGRD 0248	
HUNTLEY TOWNSHIP	18 422110 5017253 W	2012-10 4879	6.25 6	UT 0068 UT 0126	11/23/8/1:	DO		7190611 (Z158205) A138236	BRWN CLAY SAND STNS 0004 BRWN SAND 0005 BRWN CLAY DNSE 0016 GREY CLAY SILT 0018 BRWN SAND GRVL 0020 BRWN LMSN FCRD 0030 BRWN LMSN 0138	
HUNTLEY TOWNSHIP	18 421540 5018740 W	2012-10 1844	2.00	0030		MO	0014 20	7193278 (Z153945) A130166	BRWN SAND 0002 BRWN SAND GRVL SILT 0008 GREY SAND GRVL SILT 0021 GREY LMSN FGRD MGRD 0034	
HUNTLEY TOWNSHIP	18 422047 5017433 W	2012-12 1558	6.23	UT 0046	17/21/10/1:	DO		7199589 (Z139874) A123352	BRWN LOAM STNS FILL 0005 BRWN SAND 0014 GREY CLAY 0033 GREY LMSN LYRD 0050	
HUNTLEY TOWNSHIP	18 421786 5017196 W	2013-02 1558	6.23	UT 0273	13/43/8/1:	DO		7218201 (Z139880) A123347	BRWN CLAY STNS 0014 GREY CLAY STNS 0035 GREY GRVL 0044 GREY LMSN 0273 GREY LMSN 0275	
HUNTLEY TOWNSHIP	18 422008 5016761 W	2007-05 1558	6.23	0120 0213	6/138/12/5:	DO		7046998 (Z58651) A051576	BRWN CLAY PCKD 0012 GREY CLAY STNS PCKD 0030 GREY LMSN LYRD SOFT 0220	
HUNTLEY TOWNSHIP	18 417746 5018755 W	2013-11 7241	1.59			MT	0005 10	7213393 (Z180002) A156298	BRWN SILT CLAY DRY 0006 GREY CLAY SOFT 0010 GREY CLAY SOFT 0015	
HUNTLEY TOWNSHIP	18 421735 5018335 W	2020-08 7681						7372176 (Z344007) A295267 P		

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP	18 421745 5015482 W	2020-07 4879						7363397 (Z334344) A296813 P		
HUNTLEY TOWNSHIP	18 418713 5015612 W	2017-08 1558	10.6 6.23	0125		TH MO		7299415 (Z256749) A200013	GREY GRVL FILL 0002 GREY LMSN 0160	
HUNTLEY TOWNSHIP	18 418210 5016165 W	2017-08 1558	10.6 6.23			TH MO		7299416 (Z256748) A200012	GREY STNS LOAM 0002 GREY LMSN SHLE 0004 GREY LMSN HARD 0460	
HUNTLEY TOWNSHIP	18 421505 5015324 W	2020-03 3749	6.25	UT 0246 UT 0297	5/124/4/1:0	DO		7356909 (Z268707) A234406	BRWN SAND GRVL WBRG 0013 GREY LMSN 0324	
HUNTLEY TOWNSHIP	18 418664 5019310 W	6378	6.25		///:	DO		7334932 (Z306620) A264432		
HUNTLEY TOWNSHIP	18 421942 5016537 W	2019-11 3323	6.25	UT 0100	9/9/12/1:	DO		7347877 (Z318713) A276302	GREY CLAY SAND 0008 BRWN CLAY GRVL 0015 BLCK SHLE LMSN 0105	
HUNTLEY TOWNSHIP	18 420491 5019311 W	2019-05 1119	6.25 6	UT 0150	/113/20/1:	DO		7336858 (Z302233) A260891	CLAY 0136 GREY LMSN 0150 GREY LMSN 0160	
HUNTLEY TOWNSHIP 02 012	18 421372 5018928 W	2007-05 6907						7049976 (Z50987) A017504		
HUNTLEY TOWNSHIP 04 010	18 421024 5017177 W	2007-05 6907			///:			7049978 (Z50986) A017503		
HUNTLEY TOWNSHIP CON 01 011	18 421530 5018621 W	1982-06 3504	6	FR 0125	26/120/20/0:30	DO		1517897 ()	BLUE CLAY 0008 BLCK GRNT 0128	
HUNTLEY TOWNSHIP CON 01 012	18 422099 5016971 W	2004-12 1558	6.23	0036	15/17/12/4:	DO		1535479 (Z13789) A013625	BRWN SAND LOAM STNS 0006 BRWN HPAN BLDR PCKD 0012 GREY CLAY STNS 0035 GREY SAND GRVL 0039 GREY LMSN 0040	
HUNTLEY TOWNSHIP CON 02 010	18 421620 5017579 W	2017-02 3323				OT		7287761 (Z242430) A212619 A		
HUNTLEY TOWNSHIP CON 02 010	18 422200 5017868 W	2014-07 4875	6.25	UT 0178	11/43/4/1:	CO		7228811 (Z190180) A142292	BRWN SAND 0005 GREY LMSN SHLE 0190	
HUNTLEY TOWNSHIP CON 02 010	18 421950 5018122 W	1960-03 4832	4 4	FR 0178	20/21/5/0:30	DO		1503064 ()	CLAY LOAM 0004 GREY LMSN 0180	
HUNTLEY TOWNSHIP CON 02 010	18 421930 5018421 W	1980-10 3644	6	FR 0080	25/80/4/1:0	DO		1517377 ()	GREY CLAY STNS 0012 GREY LMSN SHLY 0084	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 02 010	18 421890 5018222 W	1962-04 4825	4 4	FR 0120	16/18/6/1:0	DO		1503065 ()	CLAY 0002 LMSN 0120
HUNTLEY TOWNSHIP CON 02 011	18 421766 5018362 W	1962-05 4825	4 4	FR 0125	20/55/6/1:30	DO		1503069 ()	PRDR 0070 LMSN 0130
HUNTLEY TOWNSHIP CON 02 011	18 421630 5018521 W	1984-06 1558	6 6	SU 0155 SU 0250	20/60/15/1:0	ST		1519074 ()	BRWN SAND PCKD 0004 GREY SAND GRVL PCKD 0008 GREY LMSN SOFT 0012 GREY LMSN MGRD 0260
HUNTLEY TOWNSHIP CON 02 011	18 421726 5018881 W	1988-11 3142	6 6	FR 0090 UK 0158	15/140/7/1:30	DO		1523034 (44875)	BRWN SAND BLDR PCKD 0019 GREY LMSN HARD 0090 GREY LMSN SHLE PORS 0160
HUNTLEY TOWNSHIP CON 02 011	18 421730 5018522 W	1978-06 3644	6	FR 0060	20/50/6/1:0			1516579 ()	GREY HPAN GRVL 0010 GREY SHLE GRVL 0042 GREY LMSN 0064
HUNTLEY TOWNSHIP CON 02 011	18 421830 5018321 W	1977-08 1365	6 6	FR 0041	7/30/20/2:0	DO		1516282 ()	BRWN CSND BLDR 0021 WHIT SNDS CGRD 0050
HUNTLEY TOWNSHIP CON 02 011	18 421670 5018532 W	1968-09 4806	6 6	FR 0063 FR 0129	10/129/6/1:0	DO		1512382 ()	SHLE 0010 GREY LMSN 0129
HUNTLEY TOWNSHIP CON 02 011	18 422111 5018993 L	1988-06 5222	6	FR 0165	48/165/18/3:0	DO		1523225 (32745)	GREY CLAY HARD 0040 BLUE CLAY SOFT 0090 GREY CLAY SAND LYRD 0155 BRWN GRVL PCKD 0169
HUNTLEY TOWNSHIP CON 02 011	18 421780 5018487 W	1964-06 4806	6 6	FR 0071 FR 0105	20/90/8/1:0	DO		1503070 ()	LOAM 0004 GREY LMSN 0105
HUNTLEY TOWNSHIP CON 02 011	18 421942 5018748 W	1974-07 1558	6 6	FR 0044 FR 0060	25/40/30/1:0	DO		1514247 ()	BRWN CLAY SAND PCKD 0006 GREY HPAN BLDR HPAN 0030 GREY LMSN FCRD 0033 GREY LMSN 0062
HUNTLEY TOWNSHIP CON 02 011	18 421630 5018542 W	1972-05 3644	5	FR 0139	22/70/5/1:0	DO		1511759 ()	GREY CLAY GRVL 0011 GREY LMSN 0139
HUNTLEY TOWNSHIP CON 02 011	18 422111 5018993 L	1995-09 1504	6	FR 0030 FR 0060 FR 0100 FR 0140 FR 0280	20/302/4/1:0	DO		1528925 (158976)	
HUNTLEY TOWNSHIP CON 02 011	18 421630 5018548 W	1972-05 1558	6 6	FR 0090 FR 0138	20/75/7/1:0	DO		1511921 ()	BRWN SAND FILL 0003 BRWN SAND STNS 0009 GREY LMSN 0141
HUNTLEY TOWNSHIP CON 02 011	18 421850 5018392 W	1969-07 4806	6	FR 0073 FR 0121	21/80/10/1:0	DO		1510511 ()	GREY SHLE 0009 GREY LMSN 0121

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 02 011	18 421630 5018521 W	1980-10 1558	6 6	UK 0048 UK 0145	20/40/10/1:0	DO		1517526 ()	BRWN SAND STNS FILL 0004 BRWN CLAY BLDR SNDY 0013 GREY LMSN SOFT 0150
HUNTLEY TOWNSHIP CON 02 011	18 421720 5018422 W	1961-05 4833	4 4	FR 0098	10/20/5/0:30	DO		1503068 ()	CLAY LOAM 0014 GREY LMSN 0100
HUNTLEY TOWNSHIP CON 02 011	18 421921 5018437 W	2007-08 1119	5.99	0340 0485	19/115/6/1:	DO		7050820 (Z60149) A049703	SAND GRVL 0014 GREY LMSN 0500
HUNTLEY TOWNSHIP CON 02 011	18 421930 5018521 W	1981-09 1558	6 6	FR 0030 SU 0290	20/125/5/1:0	DO		1517781 ()	BRWN SAND BLDR 0015 GREY LMSN 0250 BLCK LMSN 0298
HUNTLEY TOWNSHIP CON 02 011	18 421743 5018692 W	2016-06 1517	6.25	UT 0030 UT 0065	9/11/10/1:	DO		7266948 (Z232615) A204317	BRWN HPAN SAND GRVL 0008 GREY HPAN SAND GRVL 0020 GREY STNS 0075
HUNTLEY TOWNSHIP CON 02 011	18 421630 5018417 W	2015-10 6574	6.25	UT 0080 UT 0210	20/78/12/1:	CO		7257727 (Z218222) A192653	GREY LOAM PCKD 0003 GREY HPAN 0012 GREY LMSN 0231
HUNTLEY TOWNSHIP CON 02 012	18 421715 5019458 L	5222	6 6	FR 0145 SU 0190	//6/2:0	DO		1524583 (84304)	BRWN SAND SLTY PCKD 0005 BRWN SAND PCKD 0015 GREY HPAN BLDR PCKD 0027 GREY SILT 0030 GREY LMSN HARD 0200
HUNTLEY TOWNSHIP CON 02 012	18 421243 5019125 W	2019-06 7681	6.25 5.94	UT 0190	14/21/3/1:	DO		7340320 (Z302284) A260857	CLAY 0008 GRVL PCKD 0026 GREY LMSN 0137 GREY SNDS LMSN 0190 GREY SNDS LMSN 0200
HUNTLEY TOWNSHIP CON 02 012	18 421451 5019245 W	2019-06 7681	6.25 5.94	UT 0053 UT 0170	4/26/5/1:0	DO		7340319 (Z302285) A260858	CLAY 0007 GRVL PCKD 0025 GREY LMSN 0053 GREY LMSN 0170 GREY LMSN 0175 GREY SNDS LMSN 0200
HUNTLEY TOWNSHIP CON 02 012	18 421715 5019458 L	1988-08 5222	6	FR 0163	/75/25/2:0	DO		1523175 (39009)	BRWN CLAY SNDY PCKD 0018 GREY CLAY PCKD 0050 GREY CLAY SILT 0115 GREY SILT CLAY LYRD 0155 BRWN SAND GRVL CGVL 0165
HUNTLEY TOWNSHIP CON 02 012	18 421096 5018982 W	2005-11 6574	40.1 35.4	FR 0026	21/21/22/1:	CO	0026 2	1536029 (Z28740) A035191	BRWN SAND 0016 GREY CLAY 0026 GREY GRVL 0029 GREY LMSN 0029
HUNTLEY TOWNSHIP CON 02 012	18 421648 5019008 W	2019-03 1119	6.25 6.11	UT 0185	9/30/5/1:0	DO		7334826 (Z302436) A260960	SAND GRVL BLDR 0023 GREY LMSN 0185 GREY LMSN 0200
HUNTLEY TOWNSHIP CON 02 012	18 421446 5018944 W	2019-03 1119	6.25 6.11	UT 0193	13/63/3/1:0	DO		7334825 (Z302437) A260961	SAND STNS 0015 SAND GRVL 0027 GREY LMSN 0187 GREY LMSN 0200
HUNTLEY TOWNSHIP CON 02 013	18 420630 5019702 W	1967-09 1503	5 5	SU 0198	50/58/10/1:0	DO		1503071 ()	CLAY 0110 MSND 0135 LMSN 0200
HUNTLEY TOWNSHIP CON 02 014	18 420600 5019762 W	1969-06 1802	6	SU 0165	32/165/25/1:0	IN IR		1510130 ()	BRWN MSND 0006 GREY MSND CLAY 0035 GREY CLAY 0100 GREY MSND 0112 GREY MSND GRVL 0131 GREY LMSN 0200

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 02 018	18 418830 5018921 W	1983-06 1558	6 6	FR 0180 FR 0210 FR 0230	60/100/6/1:0	DO		1518459 ()	BRWN SAND LOOS 0012 GREY SAND CLAY BLDR 0028 GREY GRNT VERY HARD 0042 RED GRNT MGRD HARD 0060 WHIT SNDS MGRD HARD 0110 GREY SNDS LYRD SOFT 0180 GREY SNDS LYRD HARD 0235
HUNTLEY TOWNSHIP CON 03	18 421680 5017242 W	2018-09 1119	6.25 6	UT 0231	13/89/10/1:	DO		7324280 (Z276773) A252799	CLAY 0024 GRVL 0034 GREY LMSN 0231 GREY LMSN 0260
HUNTLEY TOWNSHIP CON 03 006	18 421648 5017568 W	2009-05 1558	6.23	UK 0150 UK 0251 UK 0269	6/52/8/1:0	DO		7124492 (Z095287) A076853	BRWN LOAM SNDY 0012 GREY SAND BLDR 0020 GREY LMSN LYRD 0273
HUNTLEY TOWNSHIP CON 03 007	18 422183 5016181 W	2017-10 1119	6.25 6	UT 0108	8/21/20/1:0	DO TH		7299195 (Z262257) A229073	SAND GRVL CLAY 0013 BLCK LMSN 0108 BLCK LMSN 0183
HUNTLEY TOWNSHIP CON 03 008	18 422148 5016608 W	2005-09 1558	6.23	0025 0050	8/19/5/1:	DO		1535930 (Z26124) A025622	BRWN CLAY BLDR 0010 GREY CLAY STNS 0018 GREY LMSN 0148
HUNTLEY TOWNSHIP CON 03 008	18 422093 5016301 W	2004-09 6574	1.97 1.97 5.90			NU	0010 280015 5	1535245 (Z03584) A003480	LOAM PCKD 0003 GREY CLAY HARD 0016 GREY GRVL STNS LOOS 0018 GREY LMSN 0020
HUNTLEY TOWNSHIP CON 03 008	18 421935 5016462 W	2004-05 1558	6.23	UK 0030 UK 0096	2/5/12/1:0	DO		1534710 (Z07001) A006944	BRWN CLAY 0008 GREY CLAY STNS 0014 GREY LMSN 0098
HUNTLEY TOWNSHIP CON 03 008	18 421825 5016973 W	2005-09 1558	6.23	0088 0260	8/124/9/2:	DO		1535929 (Z26122) A025628	BRWN SAND DRY 0008 GREY SAND STNS WBRG 0016 GREY CLAY STNS 0037 GREY LMSN LYRD DKCL 0270
HUNTLEY TOWNSHIP CON 03 008	18 422190 5016946 W	2009-03 1558	6.23	UK 0164	12/20/12/1:0	DO		7121469 (Z095330) A076802	BRWN CLAY STNS 0014 GREY CLAY STNS GRVL 0035 GREY LMSN 0165
HUNTLEY TOWNSHIP CON 03 008	18 422164 5017277 W	2008-03 1558	6.23	UK 0039	10/14/12/1:	DO		7105841 (Z77329) A051541	BRWN LOAM SNDY LOOS 0006 BRWN CLAY 0014 GREY HPAN 0030 GREY LMSN 0040
HUNTLEY TOWNSHIP CON 03 008	18 421944 5016999 W	2005-06 1558	6.23	0065 0118	12/29/10/2:30	DO		1535649 (Z27053) A026111	BRWN SAND WBRG 0012 GREY CLAY STNS 0031 GREY LMSN 0122
HUNTLEY TOWNSHIP CON 03 008	18 421921 5016124 W	2003-03 1119	8 6 6			NU		1533702 (248254)	CLAY SNDY 0004 GREY LMSN 0220
HUNTLEY TOWNSHIP CON 03 008	18 422204 5016574 W	2002-06 1558	6 6	UK 0036 UK 0071	1/20/30/1:0	DO		1532910 (238190)	BRWN LOAM WBRG 0003 BRWN CLAY 0007 GREY GRVL 0009 GREY LMSN 0075
HUNTLEY TOWNSHIP CON 03 008	18 421741 5016929 W	2006-04 1558	6.23		4/44/5/1:	DO		1536329 (Z39274) A035403	BRWN SAND LOAM LOOS 0008 BRWN CLAY PCKD 0014 GREY CLAY STNS STKY 0040 GREY LMSN LYRD 0273

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 008	18 422217 5016936 W	2005-06 1558	6.23	0044	7/11/12/1:	DO		1535653 (Z27052) A026110	BRWN CLAY PCKD 0012 GREY CLAY STNS 0032 GREY GRVL SAND 0033 GREY LMSN 0047	
HUNTLEY TOWNSHIP CON 03 008	18 421680 5016909 W	2005-07 1558	6.23	0127 0269	4/194/5/4:	DO		1535746 (Z26058) A026103	BRWN CLAY 0012 GREY CLAY BLDR 0033 GREY LMSN 0273	
HUNTLEY TOWNSHIP CON 03 008	18 421967 5016781 W	2004-04 1558	6.23	UK 0075 UK 0176	1/75/8/1:0	DO		1534688 (Z06991) A006989	BRWN CLAY 0012 GREY CLAY 0030 GREY CLAY SNDY BLDR 0035 GREY LMSN LYRD 0180	
HUNTLEY TOWNSHIP CON 03 008	18 421847 5016418 W	2009-09 1558	6.23	UT 0102 UT 0110	6/8/12/1:0	DO		7131153 (Z101719) A082930	BRWN LOAM STNS LOOS 0003 BRWN CLAY 0008 GREY GRVL 0010 GREY LMSN 0123	
HUNTLEY TOWNSHIP CON 03 008	18 421433 5016884 W	2007-08 4875	6.25	SU 0066	9//4/1:0	ST		7054097 (Z69593) A062774	GREY LMSN 0071	
HUNTLEY TOWNSHIP CON 03 008	18 422061 5016966 W	2008-08 1558	6.23	UT 0170	18/25/12/2:30	DO		7112937 (Z84366) A051459	BRWN CLAY STNS FILL 0005 BRWN CLAY PCKD 0014 GREY CLAY STNS LOOS 0038 GREY LMSN LYRD MGVL 0173	
HUNTLEY TOWNSHIP CON 03 008	18 422071 5017113 W	2006-03 1558	6.23	0140	7/55/8/2:	DO		1536295 (Z39266) A025666	BRWN CLAY PCKD 0012 GREY CLAY STNS STKY 0036 GREY LMSN 0148	
HUNTLEY TOWNSHIP CON 03 008	18 422109 5016755 W	2007-04 1558	6.23	0048 0117	9/16/12/1:0	DO		7044854 (Z58627) A051579	BRWN CLAY PCKD 0012 GREY CLAY STNS LOOS 0028 GREY LMSN LYRD 0123	
HUNTLEY TOWNSHIP CON 03 008	18 422047 5016571 W	2004-04 6574						1534726 (Z03568) A003495 P		
HUNTLEY TOWNSHIP CON 03 008	18 422047 5016571 W	2004-04 6574	2.35	SU 0044 SU 0050	6/40/5/1:0	DO		1534725 (Z03567) A003495	GREY CLAY PCKD 0020 GREY HPAN BLDR 0022 GREY LMSN HARD 0054 GREY LMSN HARD 0066	
HUNTLEY TOWNSHIP CON 03 009	18 422208 5017297 W	2009-12 1558	6.23	UT 0195 UT 0271	14/17/12/1:0	DO		7139812 (Z101777) A082860	BRWN LOAM STNS 0014 GREY CLAY 0044 GREY LMSN 0273 GREY LMSN 0276	
HUNTLEY TOWNSHIP CON 03 009	18 421774 5016382 W	2009-09 1558	6.23	UT 0060 UT 0170	9/20/12/1:0	DO		7139865 (Z101734) A076881	BRWN CLAY BLDR PCKD 0007 GREY GRVL WBRG 0010 GREY LMSN LYRD MGRD 0173	
HUNTLEY TOWNSHIP CON 03 009	18 421887 5017154 L	2003-11 1119	6 6	UK 0098 UK 0108 UK 0112	3/110/40/1:	CO		1534467 (265658)	BRWN SAND CLAY 0013 GREY SAND BLDR 0034 BRWN SHLE 0095 GREY LMSN 0121	
HUNTLEY TOWNSHIP CON 03 009	18 421886 5017153 L	2003-08 1119	8 6 6	UK 0038 UK 0114	10/110/30/1:0	DO		1533959 (248419)	GRVL 0003 CLAY 0014 BLCK SAND GRVL BLDR 0023 GREY LMSN 0120	
HUNTLEY TOWNSHIP CON 03 009	18 421891 5017154 L	1990-04 1558	6 6	UK 0037	10/15/30/1:0	IR		1524499 (79417)	BRWN SAND 0025 GRVL 0038	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 009	18 421779 5016729 W	2004-08 1558	6.23	0119	7/68/12/3:	DO		1534969 (Z13736) A013689	BRWN CLAY 0018 GREY LMSN 0123	
HUNTLEY TOWNSHIP CON 03 009	18 422161 5017077 W	2004-09 1558	6.23	0040	10/12/12/1:0	DO	0040 2	1535037 (Z13760) A013769	BRWN CLAY 0012 GREY CLAY 0038 GREY SAND GRVL ROCK 0043 GREY LMSN 0060	
HUNTLEY TOWNSHIP CON 03 009	18 421585 5016634 W	2004-08 1119	6.25	0028 0048	6/7/20/1:	DO		1534910 (Z14659) A014639	CLAY BLDR 0006 SAND GRVL 0016 GREY LMSN 0060	
HUNTLEY TOWNSHIP CON 03 009	18 421595 5016884 W	2011-10 1558	6.23	UT 0166 UT 0270	12/45/10/1:0	DO		7176402 (Z139717) A119664	BRWN LOAM SNDY 0014 GREY LOAM STNS SNDY 0025 GREY LMSN 0273	
HUNTLEY TOWNSHIP CON 03 009	18 420230 5016921 W	1979-10 1365	6	FR 0043 FR 0055	6/58//:	DO		1517139 ()	GREY GRVL BLDR 0023 GREY LMSN MGRD HARD 0061	
HUNTLEY TOWNSHIP CON 03 009	18 422029 5017389 W	2014-03 1558	6.23	UT 0176	11/88/8/1:	DO		7222489 (Z172455) A149059	BRWN CLAY PCKD 0006 BRWN LOAM LOOS 0014 GREY CLAY BLDR LOOS 0035 GREY LMSN LYRD 0273	
HUNTLEY TOWNSHIP CON 03 009	18 422019 5017600 W	2018-07 4879	6.25			NU		7317920 (Z292742) A		
HUNTLEY TOWNSHIP CON 03 009	18 421992 5017617 W	2018-07 4879	6.25	UT 0178	12/33/13/1:0	DO		7317919 (Z292740) A228029	BRWN SAND FSND 0006 BRWN SAND MSND 0014 BRWN MSND FGVL 0028 GREY SAND GRVL STNS 0060 GREY LMSN 0190	
HUNTLEY TOWNSHIP CON 03 009	18 421648 5016882 W	2006-11 1558	6.23	0166	5/17/12/3:0	DO		7039561 (Z58722) A042041	BRWN CLAY STNS 0012 GREY CLAY STNS 0029 GREY LMSN LYRD 0173	
HUNTLEY TOWNSHIP CON 03 009	18 421230 5017121 W	1980-09 3644	6	FR 0057	25/58/5/1:0	ST DO		1517376 ()	GREY CLAY STNS 0018 GREY HPAN GRVL 0026 GREY LMSN SHLY 0060	
HUNTLEY TOWNSHIP CON 03 009	18 421599 5017190 W	2017-05 1558	10.6 6.23	UT 0200	11/16/12/5:	DO		7290738 (Z256718) A200040	BRWN LOAM BLDR 0020 GREY SAND GRVL LOOS 0033 GREY LMSN 0201	
HUNTLEY TOWNSHIP CON 03 009	18 421891 5017154 L	1997-05 1558	6 6	UK 0030 UK 0085 UK 0145	14/150/30/1:0	DO		1529421 (175630)	BRWN SAND DRY 0020 GREY CLAY SNDY LOOS 0025 GREY LMSN HARD 0130 WHIT SNDS HARD 0165	
HUNTLEY TOWNSHIP CON 03 009	18 422101 5017719 W	2020-06 7681	6.25 6	UT 0177	13/16/20/1:0	DO		7364123 (Z316883) A295355	SAND GRVL BLDR 0017 GREY LMSN QTZ 0202	
HUNTLEY TOWNSHIP CON 03 009	18 421927 5017127 W	2006-03 1558	6.23	0217	9/36/10/2:	DO		1536330 (Z39269) A035402	BRWN SAND LOAM 0005 BRWN CLAY PCKD 0014 GREY CLAY STNS 0037 GREY LMSN LYRD 0225	
HUNTLEY TOWNSHIP CON 03 009	18 421753 5017163 W	2011-11 1558	6.23	UT 0275	14/57/5/1:0	DO		7176390 (Z139726) A119655	BRWN LOAM STNS 0013 GREY TILL 0043 GREY LMSN LYRD 0273 GREY LMSN LYRD 0278	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 009	18 421983 5017524 W	2017-09 1558	10.6 6.23		13/102/8/1:	DO		7299401 (Z256763) A200006	BRWN CLAY STNS 0006 BRWN SAND CLAY 0015 GREY TILL 0039 GREY LMSN 0350	
HUNTLEY TOWNSHIP CON 03 009	18 421906 5017289 W	2019-05 1558	10.6 6.23	UT 0210 UT 0269	9/61/10/1:	DO		7344515 (Z256636) A225387	BRWN LOAM 0008 BRWN CLAY PCKD 0023 GREY CLAY STNS 0040 GREY LMSN LYRD 0275	
HUNTLEY TOWNSHIP CON 03 009	18 421878 5017417 W	2011-03 1558	6.23	UT 0110 UT 0269	10/25/12/1:	DO		7162100 (Z115698) A102351	BRWN LOAM STNS FILL 0005 BRWN CLAY PCKD 0016 GREY CLAY BLDR 0033 GREY LMSN HARD 0273	
HUNTLEY TOWNSHIP CON 03 009	18 421887 5017154 L	2000-07 1558	6 6	UK 0025 UK 0095	7/40/10/1:	DO		1531324 (220885)	BRWN LOAM STNS SNDY 0005 GREY LMSN LYRD HARD 0100	
HUNTLEY TOWNSHIP CON 03 009	18 421887 5017154 L	2002-05 1558	6 6	UK 0045 UK 0090	5/40/12/1:0	DO		1532849 (238153)	BRWN CLAY 0008 GREY CLAY 0014 GREY GRVL 0020 GREY LMSN 0100	
HUNTLEY TOWNSHIP CON 03 009	18 422234 5017374 W	2010-10 1558	6.23	UT 0170 UT 0260	13/28/6/1:	DO		7156112 (Z115645) A102378	BRWN SAND CLAY STNS 0013 BRWN SAND 0030 GREY SAND STNS 0054 GREY LMSN LYRD MGRD 0273	
HUNTLEY TOWNSHIP CON 03 009	18 421592 5017162 W	2018-11 1558	10.6 6.23	UT 0190	10/125/4/1:	DO		7338716 (Z256667) A225485	GREY STNS 0003 BRWN CLAY 0020 GREY CLAY STNS GRVL 0033 GREY LMSN LYRD 0450 GREY LMSN LYRD 0460	
HUNTLEY TOWNSHIP CON 03 010	18 421624 5018051 W	2006-02 1558	6.23	0060 0118	///:	DO		1536296 (Z39257) A035418	BRWN LOAM STNS PCKD 0004 BRWN SNDS 0023 GREY SNDS STNS 0044 GREY LMSN 0123	
HUNTLEY TOWNSHIP CON 03 010	18 421901 5017612 W	2006-03 1119	6.25	0073	10/63/15/1:0	NU		1536342 (Z39913) A023024	SAND CLAY GRVL 0042 GREY QTZ LMSN 0080	
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1988-10 1558	6 6	FR 0145 FR 0170	30/100/6/1:0	DO		1523014 (38358)	BRWN LOAM SNDY 0005 BRWN SAND WBRG 0012 GREY SAND 0030 GREY CLAY STNS 0042 GREY LMSN 0175	
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1985-06 3142	6 6	FR 0063	12/25/40/4:0	DO		1519825 ()	BRWN SAND SILT PCKD 0012 BLUE CLAY SAND LOOS 0027 GREY SAND GRVL PCKD 0031 GREY LMSN PORS 0065	
HUNTLEY TOWNSHIP CON 03 010	18 422018 5017602 W	2006-12 1119	6.25	0066 0073	15/15/20/1:0	NU		7040818 (Z55593) A043542	SAND GRVL 0052 GREY LMSN 0080	
HUNTLEY TOWNSHIP CON 03 010	18 420930 5017321 W	1983-06 3142	6 6	FR 0078 FR 0084	17/55/10/1:0	DO		1518256 ()	BRWN SAND PCKD 0016 GREY CLAY STNS SOFT 0036 BLCK LMSN PCKD 0086	
HUNTLEY TOWNSHIP CON 03 010	18 421806 5018216 W	1972-10 1558	6 6	FR 0124	25/75/10/1:0	DO		1512118 ()	GREY GRVL SAND 0015 GREY LMSN 0125	
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1991-08 4879	6 6	FR 0123	6/147/4/1:0	DO		1525580 (108220)	BRWN SAND 0002 GREY SAND 0044 RED GRVL 0047 GREY LMSN 0148	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 03 010	18 421530 5018021 W	1984-09 3142	6 6	FR 0069	4/15/40/4:0	DO		1519233 ()	RED SAND PCKD 0006 BRWN SAND PCKD 0018 GREY SAND CLAY LOOS 0052 GREY SAND GRVL STNS 0063 GREY LMSN 0070
HUNTLEY TOWNSHIP CON 03 010	18 420930 5017321 W	1984-09 3142	6 6	FR 0080 FR 0103	18/55/8/1:0	DO		1519311 ()	BLCK SAND FILL PCKD 0004 BRWN SAND PCKD 0018 GREY SAND CLAY LOOS 0049 GREY LMSN HARD 0070 BLCK LMSN SHLE 0104
HUNTLEY TOWNSHIP CON 03 010	18 421030 5017321 W	1978-10 4847	4	FR 0050	8/11/5/1:0	CO		1517138 ()	BRWN LOAM 0024 GREY LMSN STNS 0088
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1991-06 5222	6 6	FR 0028 FR 0046	4/30/15/2:0	DO		1525531 (095455)	GREY SAND PCKD 0005 GREY CLAY SNDY 0020 GREY GRVL STNS PCKD 0025 GREY LMSN 0052
HUNTLEY TOWNSHIP CON 03 010	18 421129 5017046 W	1975-09 4847	4	FR 0050	13/40/5/0:30	DO		1515295 ()	BLUE CLAY 0025 GREY LMSN 0075
HUNTLEY TOWNSHIP CON 03 010	18 421230 5017621 W	1983-08 3142	6 6	FR 0055	12/21/40/2:0	DO		1518465 ()	RED SAND 0003 GREY SAND BLDR PCKD 0026 GREY LMSN 0057
HUNTLEY TOWNSHIP CON 03 010	18 421030 5017181 W	1974-08 3658	6 6	UK 0072 UK 0136 UK 0301	5/30/30/2:0	DO		1514655 ()	BRWN SAND LOOS 0025 GREY CLAY SAND SOFT 0044 GREY LMSN HARD 0305
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1988-10 3644	6 6	FR 0055	15/40/20/1:0	DO		1523097 (27143)	RED SAND 0009 GREY SAND 0020 GREY CLAY 0035 GREY HPAN STNS 0039 GREY LMSN 0063
HUNTLEY TOWNSHIP CON 03 010	18 421306 5017777 W	1972-11 1558	6	FR 0037	10/20/20/1:0	DO		1512194 ()	BRWN SAND GRVL 0009 GREY HPAN GRVL BLDR 0034 GREY GRVL CSND 0040
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	5222	6 6	FR 0060	8/55/10/2:0	DO		1524267 (39039)	BRWN SAND GRVL LOOS 0016 GREY SILT CLAY WBRG 0036 GREY LMSN MUCK HARD 0067
HUNTLEY TOWNSHIP CON 03 010	18 421230 5017721 W	1983-08 3142	6 6	FR 0068	28/30/30/2:0	DO		1518464 ()	BLCK LOAM LOOS 0002 RED SAND PCKD 0010 GREY CLAY SAND LOOS 0038 GREY LMSN PORS 0072
HUNTLEY TOWNSHIP CON 03 010	18 420823 5017391 W	2001-06 4875	5	UK 0148	6/12/12/1:	DO		1532014 (221765)	GREY LMSN SHLE 0151
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1991-08 4879	6 6	FR 0160	6/297/2/1:0	DO		1525581 (108219)	BRWN SAND 0002 GREY SAND 0046 RED GRVL 0048 GREY LMSN FCRD 0049 GREY LMSN 0298
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1988-10 3644	6 6	FR 0115	18/110/3/1:0	DO		1523098 (27144)	GREY CLAY 0023 GREY CLAY GRVL 0035 GREY LMSN 0143
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1988-10 3644	6 6	FR 0057	4/40/20/1:0	DO		1523099 (27138)	BRWN SAND 0018 GREY GRVL 0040 GREY LMSN 0063

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 010	18 421030 5017221 W	1983-02 3142	6 6	UK 0068 UK 0103	4/55/12/1:0	DO		1518144 ()	BRWN SAND SILT LOOS 0014 GREY CLAY PCKD 0032 GREY HPAN HARD 0035 GREY LMSN PORS 0104	
HUNTLEY TOWNSHIP CON 03 010	18 420930 5017321 W	1983-02 3142	6 6	FR 0065 FR 0101	15/60/10/1:0	DO		1518145 ()	BRWN SAND SILT PCKD 0017 GREY CLAY SAND LOOS 0041 GREY LMSN PORS 0102	
HUNTLEY TOWNSHIP CON 03 010	18 421492 5017616 L	1988-11 3644	6 6	FR 0117	15/80/9/1:0	CO		1523096 (27167)	GREY GRVL 0018 GREY LMSN 0123	
HUNTLEY TOWNSHIP CON 03 010	18 420856 5017387 W	1973-07 4847	4	FR 0030	6/10/5/1:15	DO		1513296 ()	BLUE CLAY 0021 GREY LMSN 0050	
HUNTLEY TOWNSHIP CON 03 010	18 421477 5017754 W	2008-05 1558	6.23	UK 0260 UK 0273	17/102/7/1:30	DO		7112989 (Z77368) A051521	BRWN LOAM SNDY FILL 0005 STNS BRWN LOAM SNDY 0013 BRWN CLAY PCKD HARD 0023 GREY CLAY SNDY STNS 0040 GREY LMSN DKCL LYRD 0273 MGRD	
HUNTLEY TOWNSHIP CON 03 010	18 421612 5017490 W	2010-02 6574	6.25		11/50/4/1:0	DO		7140431 (Z90910) A079929	GREY FILL LOOS 0004 GREY CLAY HARD 0026 GREY SILT WBRG 0032 GREY LMSN HARD 0195	
HUNTLEY TOWNSHIP CON 03 010	18 421900 5017952 W	2010-02 1119	6 6	UT 0152 UT 0186	12/56/20/1:0	DO		7141758 (Z108236) A093679	SAND GRVL BLDR 0017 GREY LMSN 0135 GREY LMSN SNDS 0160 GREY LMSN 0200	
HUNTLEY TOWNSHIP CON 03 010	18 421799 5017557 W	2010-02 1558	6.23	UT 0169	13/47/12/1:0	DO		7145670 (Z101795) A082902	BRWN SAND LOAM STNS 0012 GREY SAND GRVL STNS 0040 GREY LMSN MGRD 0173	
HUNTLEY TOWNSHIP CON 03 010	18 421364 5017842 W	2010-02 1558	6.23	UT 0165	16/42/12/1:0	DO		7145677 (Z101791) A082874	BRWN SAND 0006 RED SAND 0012 BRWN CLAY PCKD 0022 GREY CLAY STNS STKY 0040 GREY LMSN 0173	
HUNTLEY TOWNSHIP CON 03 010	18 421735 5017547 W	2010-06 1558	6.23	UT 0110 UT 0168	10/38/12/1:0	DO		7149236 (Z101843) A082838	BRWN CLAY STNS FILL 0005 BRWN CLAY PCKD 0022 GREY SAND CLAY STNS 0029 GREY LMSN MGRD 0173	
HUNTLEY TOWNSHIP CON 03 010	18 421733 5017565 W	2010-05 1558						7149244 (Z101836) A		
HUNTLEY TOWNSHIP CON 03 010	18 422036 5017874 W	2010-08 1119	6 5.94	UT 0112	16/112/20/1:	DO		7151411 (Z110663) A105394	SAND CLAY GRVL 0015 GREY LMSN 0120	
HUNTLEY TOWNSHIP CON 03 010	18 421966 5017719 W	2010-07 1558						7151491 (Z115575) A		
HUNTLEY TOWNSHIP CON 03 010	18 421718 5018158 W	2010-07 1558	6.23	UT 0230	21/24/10/2:	DO		7151500 (Z115581) A102298	BRWN LOAM 0002 BRWN SHLE SOFT 0018 GREY LMSN LYRD SOFT 0231	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 010	18 422025 5017729 W	2010-09 1558	6.23	UT 0066 UT 0219	18/19/10/2:	DO		7156126 (Z115622) A102341	BRWN SAND LOAM STNS 0012 BRWN SAND CLAY BLDR 0027 BRWN SAND STNS PCKD 0041 GREY LMSN 0223	
HUNTLEY TOWNSHIP CON 03 010	18 422055 5017750 W	2010-09 1558	6.23	UT 0237	16/30/9/1:	DO		7156127 (Z115624) A102392	BRWN GRVL BLDR PCKD 0033 GREY LMSN 0245	
HUNTLEY TOWNSHIP CON 03 010	18 421755 5018048 W	2009-10 1558	6.23	UT 0110 UT 0161	16/20/12/2:0	DO		7139851 (Z101735) A076883	BRWN HPAN BLDR 0008 GREY LMSN LYRD SOFT 0020 GREY LMSN MGRD 0162	
HUNTLEY TOWNSHIP CON 03 010	18 421598 5017921 W	2011-05 1119	6 5.94	UT 0189 UT 0282	14/59/8/1:0	DO		7165287 (Z119868) A113197	BLDR CLAY SAND 0047 GREY LMSN 0189 GREY LMSN 0282 GREY LMSN 0300	
HUNTLEY TOWNSHIP CON 03 010	18 421944 5017706 W	2011-03 1119	6 6	UT 0138 UT 0173	13/78/10/1:0	DO		7162186 (Z119810) A113312	SAND GRVL BLDR 0056 GREY LMSN 0138 GREY LMSN 0173 GREY LMSN 0180	
HUNTLEY TOWNSHIP CON 03 010	18 422071 5017793 W	2010-11 1558						7166860 (Z115668) A		
HUNTLEY TOWNSHIP CON 03 010	18 421518 5017952 W	2011-11 1119	6 5.88	UT 0060 UT 0077 UT 0114	24/25/20/1:	DO		7173853 (Z137113) A105339	SAND BLDR 0044 GREY LMSN 0060 GREY LMSN 0077 GREY LMSN 0114 GREY LMSN 0120	
HUNTLEY TOWNSHIP CON 03 010	18 421987 5018000 W	2011-10 1119	6 6	UT 0113	22/82//1:	DO		7173858 (Z137245) A113150	SAND GRVL BLDR 0026 GREY LMSN 0113 GREY LMSN 0200	
HUNTLEY TOWNSHIP CON 03 010	18 421523 5017641 W	2011-12 1558	6.23	UT 0274 UT 0401	9/55/10/1:0	DO		7176384 (Z139729) A119650	BRWN SAND 0006 BRWN CLAY PCKD 0013 GREY CLAY STNS 0024 GREY LMSN LYRD 0398 GREY LMSN LYRD 0403	
HUNTLEY TOWNSHIP CON 03 010	18 422055 5017952 W	2012-05 4875	6.25	UT 0052 UT 0085 UT 0178	18/66/7/1:	DO		7181766 (Z149061) A117487	BRWN SAND GRVL FILL 0016 GREY LMSN SHLE 0207	
HUNTLEY TOWNSHIP CON 03 010	18 421731 5017607 W	2014-08 3323	2.19	UT 0029 UT 0035	10/43/3/1:	DO		7231976 (Z177171) A153471	GREY CLAY 0031 BRWN GRVL 0036 GREY LMSN 0275	
HUNTLEY TOWNSHIP CON 03 010	18 421689 5017621 W	2017-05 3323	6.11	UT 0076 UT 0193	7/7/10/1:	DO		7287760 (Z242431) A212621	BRWN SAND GRVL 0014 GREY LMSN 0193	
HUNTLEY TOWNSHIP CON 03 010	18 421917 5018088 W	2018-07 2558	6	UT 0110	20/51/15/1:	DO		7316748 (Z281004) A244855	CLAY STNS 0010 GREY LMSN 0180	
HUNTLEY TOWNSHIP CON 03 010	18 421697 5017116 W	2007-02 1119	6.25	0225	5/133/4/1:	NU		7047650 (Z64719) A036118	BLUE CLAY 0030 SAND GRVL BLDR 0050 LMSN SNDS 0115 LMSN 0240	
HUNTLEY TOWNSHIP CON 03 010	18 421731 5017296 W	2007-02 1119	6.25	0220	5/73/4/1:	NU		7047649 (Z64743) A052518	BLUE CLAY 0038 GRVL 0043 SNDS LMSN 0110 LMSN 0240	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 03 010	18 421738 5017608 W	2020-02 7681	6.25 6	UT 0163 UT 0168	13/72/20/1:	DO		7357270 (Z302454) A274311	CLAY SNDY 0030 GRVL 0034 GREY LMSN 0168 GREY SNDS LMSN 0172
HUNTLEY TOWNSHIP CON 03 010	18 421464 5017936 W	2011-03 1119	6 16	UT 0292 UT 0318	20/99/10/1:0			7162182 (Z119816) A105577	SAND GRVL BLDR 0016 SILT SNDY 0045 SAND GRVL BLDR 0052 GREY LMSN 0292 GREY LMSN 0318 GREY LMSN 0325
HUNTLEY TOWNSHIP CON 03 010	18 421558 5017784 W	2009-06 1558	6.23	UT 0169	16/42/12/1:0	DO		7127116 (Z095254) A076826	BRWN LOAM 0007 BRWN CLAY PCKD 0020 GREY CLAY SNDY STNS 0043 GREY LMSN 0173
HUNTLEY TOWNSHIP CON 03 010	18 421805 5017734 W	2009-08 1119	6 5.88	UT 0076 UT 0080	13/40/20/1:0	DO		7131310 (Z102574) A082479	SAND GRVL BLDR 0028 GREY LMSN 0090
HUNTLEY TOWNSHIP CON 03 010	18 421567 5017859 W	2009-10 1119	6 5.88	UT 0231	16/99/15/1:0	DO		7132598 (Z102713) A089342	SAND GRVL BLDR 0052 GREY LMSN 0240
HUNTLEY TOWNSHIP CON 03 010	18 421668 5017988 W	2009-03 1558	6.23	UT 0140	15/15/12/2:0	DO		7123248 (Z095326) A076799	BRWN LOAM ROCK FCRD 0004 BRWN CLAY PCKD 0014 BRWN SAND WBRG 0022 GREY TILL PCKD 0032 GREY LMSN MGRD 0140
HUNTLEY TOWNSHIP CON 03 010	18 421418 5017799 W	2008-12 1558	6.23	UT 0269	18/142/5/2:0	DO		7119248 (Z84466) A076810	BRWN LOAM FILL 0005 BRWN SAND LOOS 0009 GREY SAND WBRG 0015 BRWN CLAY PCKD 0027 GREY CLAY GRVL BLDR 0044 GREY LMSN MGRD 0273
HUNTLEY TOWNSHIP CON 03 011	18 420930 5017821 W	1979-08 1558	6 6	SU 0118	20/50/20/2:0	DO		1517263 ()	BRWN SAND PCKD 0017 GREY SAND STNS PCKD 0045 BLUE CLAY SAND 0072 GREY HPAN HARD 0074 LMSN PORS 0120
HUNTLEY TOWNSHIP CON 03 011	18 421690 5018272 W	1966-03 4824	4 4	FR 0080	15/50/3/1:0	DO		1503127 ()	GRVL 0010 LMSN 0081
HUNTLEY TOWNSHIP CON 03 011	18 421532 5018171 W	5222	6 6	FR 0030	10/30/6/6:0	CO	0030 3	1524587 (84307)	BRWN LOAM PCKD 0001 BRWN CLAY PCKD 0005 BRWN CLAY SNDY FSND 0012 BRWN MSND 0023 BRWN SAND SILT MGRD 0028 BRWN MSND 0037
HUNTLEY TOWNSHIP CON 03 011	18 421740 5018272 W	1961-09 4833	4 4	FR 0100	20/25/5/0:30	ST DO		1503124 ()	CLAY LOAM 0007 GREY LMSN 0101
HUNTLEY TOWNSHIP CON 03 011	18 420854 5018003 W	5222	6 6	FR 0085 FR 0190	13/190/3/6:0	DO CO		1524588 (84306)	BRWN LOAM PCKD 0001 BRWN CLAY SNDY PCKD 0003 GREY LMSN HARD 0200
HUNTLEY TOWNSHIP CON 03 011	18 421370 5018322 W	1959-12 4833	4 4	FR 0122	16/30/7/0:30	ST DO		1503123 ()	CLAY LOAM 0012 GREY LMSN 0124
HUNTLEY TOWNSHIP CON 03 011	18 421088 5018090 L	1983-09 3644	6 6	FR 0075	25/60/20/1:0	DO		1518611 ()	GREY CLAY 0006 GREY SNDS 0080

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 03 011	18 421580 5018292 W	1969-05 4847	4 4	FR 0060	16/28/5/0:30	DO		1510221 ()	LOAM MSND 0008 GREY LMSN 0111
HUNTLEY TOWNSHIP CON 03 011	18 420630 5017712 W	1969-03 1503	8 8	FR 0100 SU 0201	17/27/32/2:0	PS		1510072 ()	GRVL MSND BLDR 0020 GRVL MSND 0026 BLCK LMSN 0029 LMSN 0180 GREY LMSN 0201
HUNTLEY TOWNSHIP CON 03 011	18 422036 5017002 W	2006-03 1558	6.23	0039	11/12/12/1:	DO	0039 4	1536298 (Z39271) A035401	BRWN CLAY PCKD 0008 GREY CLAY STKY 0030 GREY GRVL BLDR 0036 GREY GRVL FCRD ROCK 0043
HUNTLEY TOWNSHIP CON 03 011	18 421418 5018710 W	1972-10 3503	6 6	UK 0071	10/16/20/0:30	DO		1514608 ()	GREY SAND STNS 0029 GREY SHLE SAND 0080
HUNTLEY TOWNSHIP CON 03 011	18 420948 5017761 W	5222	6 6	FR 0025	10/20/5/2:0	DO	0025 3	1524591 (84305)	BRWN FSND 0010 BRWN MSND 0030 GREY SILT CLAY 0040
HUNTLEY TOWNSHIP CON 03 011	18 421630 5018442 W	1964-09 4806	6 6	FR 0071 FR 0108	23/90/6/1:0	DO		1503126 ()	SHLE 0012 GREY LMSN 0108
HUNTLEY TOWNSHIP CON 03 011	18 421430 5018662 W	1962-05 4825	4 4	FR 0125	16/35/6/1:0	DO		1503125 ()	CLAY 0006 LMSN 0127
HUNTLEY TOWNSHIP CON 03 011	18 421596 5018418 W	2019-11 4879	6.25 6	0080	15/47/7/6:0	CO TH		7347647 (Z318973) A276750	GREY LMSN 0180
HUNTLEY TOWNSHIP CON 03 012	18 421844 5016988 W	2006-08 1558	6.23	0220	8/77/10/3:0	DO		1536697 (Z47030) A041967	BRWN CLAY SNDY 0009 GREY CLAY SNDY 0025 GREY HPAN 0035 GREY LMSN 0200
HUNTLEY TOWNSHIP CON 03 012	18 420152 5018314 W	2005-06 6574	5.90	0148	19/51/1/1:			1536026 (Z28727) A029175	BRWN SAND SILT PCKD 0027 BLUE CLAY WBRG 0086 GREY SAND GRVL DNSE 0090 GREY LMSN 0325
HUNTLEY TOWNSHIP CON 03 012	18 420965 5018977 W	2013-06 4879	6.25 6		4/42/12/1:0	DO TH		7205577 (Z158243) A138240	RED SAND 0005 BRWN SAND 0014 GREY SAND 0048 GREY LMSN 0160
HUNTLEY TOWNSHIP CON 03 012	18 421105 5018864 W	2013-06 4879	6.25 6	UT 0147	5/57/6/1:0	DO TH		7205576 (Z158245) A138241	RED SAND 0006 GREY CLAY 0026 GREY SAND GRVL STNS 0036 GREY LMSN 0159
HUNTLEY TOWNSHIP CON 03 012	18 421095 5018561 W	2013-06 4879	6.25 6	UT 0160 0230	11/71/5/1:	DO TH		7205575 (Z158244) A138239	RED SAND 0008 GREY LMSN FCRD 0009 GREY LMSN 0258
HUNTLEY TOWNSHIP CON 03 012	18 420686 5018556 L	1986-10 5222	6 6	FR 0023	7/23/6/3:0	DO	0023 3	1521050 (02025)	BRWN FSND LOOS 0017 BRWN SAND CGVL 0026 GREY CLAY PCKD 0026
HUNTLEY TOWNSHIP CON 03 012	18 420488 5018547 W	1975-04 2801	5	FR 0003	3/11/60/1:0			1514739 () A	RED SAND DRTY LOOS 0002 BRWN SAND LOOS 0018 SAND FGVL LOOS 0023 GREY FSND SILT CLAY 0025 GREY CLAY SOFT 0038

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 03 012	18 420234 5018316 W	1975-04 2801	5	FR 0003	3/8/10/4:0	PS	0010 5	1514738 ()	RED SAND DRTY LOOS 0003 CSND FSND GRVL 0015 GREY CLAY SOFT 0022
HUNTLEY TOWNSHIP CON 03 012	18 420184 5018212 W	1975-04 2801						1514737 () A	RED SAND DRTY LOOS 0003 GREY CSND FSND LOOS 0011 GREY SAND SILT CLAY 0024 GREY CLAY SOFT 0061
HUNTLEY TOWNSHIP CON 03 012	18 421126 5018996 W	1972-12 1558	6 6	SU 0080 SU 0187	10/50/15/2:0	IN		1512197 ()	BRWN GRVL SAND PCKD 0003 BRWN SAND PCKD 0018 GREY SAND PCKD 0032 GREY CLAY LOOS 0042 GREY SAND GRVL STNS 0047 BLCK LMSN 0188
HUNTLEY TOWNSHIP CON 03 012	18 421150 5018922 W	1960-09 4833	4 4	FR 0094	12/14/3/0:30	PS		1503128 ()	CLAY LOAM 0036 GREY LMSN 0096
HUNTLEY TOWNSHIP CON 03 012	18 420686 5018556 L	1985-05 1558	6 5	SU 0220	30/125/5/1:0	DO		1519713 ()	BRWN SAND 0005 GREY SAND GRVL WBRG 0023 GREY CLAY 0089 GREY LMSN 0225
HUNTLEY TOWNSHIP CON 03 012	18 421226 5018949 W	1973-04 1836	6	SU 0256	15/100/8/1:0	DO		1513273 ()	YLLW SAND 0020 HPAN 0032 GREY LMSN 0260
HUNTLEY TOWNSHIP CON 03 013	18 420326 5019170 W	2013-10 1844						7279014 (C23826) P	
HUNTLEY TOWNSHIP CON 03 013	18 420290 5019026 L	1985-09 3142	6	FR 0024	6/15/20/1:0	DO		1520137 ()	GREY CLAY SAND PCKD 0020 GREY GRVL LOOS 0025
HUNTLEY TOWNSHIP CON 03 013	18 420700 5019542 W	1958-06 4832	5 4 3 3	SU 0183	28/45/3/3:0	DO		1503129 ()	PRDR 0140 HPAN 0152 LMSN 0187
HUNTLEY TOWNSHIP CON 03 013	18 420830 5019422 W	1978-11 1558	6 6	FR 0145	40/55/25/1:0	DO		1516828 ()	BRWN CLAY BLDR 0021 GREY HPAN BLDR PCKD 0035 GREY LMSN SOFT 0145
HUNTLEY TOWNSHIP CON 03 013	18 420574 5019292 W	2020-06 7681	6.25 6	UT 0169 UT 0174	29/36/20/1:0	DO		7364122 (Z316886) A295415	GREY CLAY 0158 GREY SHLE LMSN 0180
HUNTLEY TOWNSHIP CON 03 013	18 420813 5019053 W	2005-09 6574	5.90 5.51	0090	19//35/:	MN PS	0086 4	1535787 (Z28731) A029180	BLCK LOAM 0001 BRWN SAND 0015 BRWN SAND 0022 GREY GRVL 0027 GREY SILT 0035 GREY CLAY HARD 0048 BLUE CLAY WBRG 0072 GREY CLAY HARD 0082 GREY GRVL PCKD 0090
HUNTLEY TOWNSHIP CON 03 013	18 420930 5019321 W	1981-11 4006	6 6	FR 0083 FR 0185	8/200/4/1:0	DO		1517689 ()	GREY CLAY PCKD 0015 GREY SILT STNS PCKD 0057 GREY SAND CMTD 0061 GREY TILL STNS PCKD 0079 GREY GRNT MGRD 0215
HUNTLEY TOWNSHIP CON 03 013	18 420326 5019172 W	2013-11 1844						7279016 (C23731) A153993 P	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 03 013	18 420424 5019205 W	2004-09 1119	6.25 2.00 2.00			NU	0133 100002 11	1535240 (Z19014) A018872	CLAY 0127 GREY LMSN 0144	
HUNTLEY TOWNSHIP CON 03 013	18 420284 5019320 W	2017-05 1844						7290426 (Z213723) A011932 A		
HUNTLEY TOWNSHIP CON 03 013	18 419474 5018672 W	2005-06 6574	5.90 5.46	0102	9/14/7/1:	DO	0098 4	1536025 (Z28726) A029179	BRWN SAND PCKD 0026 BLUE CLAY WBRG 0100 GREY GRVL LOOS 0105	
HUNTLEY TOWNSHIP CON 03 013	18 420336 5019172 W	2013-11 1844						7279017 (C23732) P		
HUNTLEY TOWNSHIP CON 03 013	18 420436 5019162 W	1975-02 1558	6 6	SU 0167	18/30/20/2:0	DO		1514573 ()	BRWN SAND SILT PCKD 0030 BLUE CLAY LOOS 0115 GREY SAND CLAY PCKD 0123 BLCK LMSN 0175	
HUNTLEY TOWNSHIP CON 03 014	18 419348 5019323 W	2016-09 1844						7279742 (C35486) P		
HUNTLEY TOWNSHIP CON 03 014	18 419285 5019318 W	2013-10 1844						7279015 (C23728) A147966 P		
HUNTLEY TOWNSHIP CON 03 014	18 419320 5019212 W	1962-06 4824	4 4	FR 0070	/20/10/1:0	PS		1503132 ()	BLUE CLAY 0040 GRVL 0050 HPAN 0060 LMSN 0096	
HUNTLEY TOWNSHIP CON 03 014	18 420370 5019902 W	1952-01 4832	5 5	FR 0070 FR 0090 FR 0130	24/90/7/0:30	DO		1503131 ()	CLAY 0050 HPAN 0095 CLAY MSND 0140	
HUNTLEY TOWNSHIP CON 03 014	18 419270 5019242 W	1943-11 2801	12 8	UK	14/40/42/24:0	PS		1503130 ()	LOAM 0003 MSND 0030 BLUE CLAY 0048 CSND 0058	
HUNTLEY TOWNSHIP CON 03 014	18 419333 5019304 W	2004-11 1844	35.4					1535393 (Z20836) A		
HUNTLEY TOWNSHIP CON 03 014	18 419345 5019390 W	2004-11 1844	19.6	GS GS UK				1535368 (Z20822) A011965		
HUNTLEY TOWNSHIP CON 03 014	18 420155 5019475 W	2004-09 1119	6.25 2.00 2.00			NU	0119 100002 9	1535239 (Z19016) A018880	CLAY 0114 GREY LMSN 0129	
HUNTLEY TOWNSHIP CON 03 015	18 419498 5019430 W	2005-08 6574	5.90	0074	6/47/3/1:	MN		1535788 (Z28732) A029172	BRWN CLAY HARD 0015 GREY CLAY WBRG 0066 GREY SAND GRVL PCKD 0068 GREY LMSN SOFT 0130	
HUNTLEY TOWNSHIP CON 03 015	18 419327 5019365 W	2009-06 1844				MO		7127229 (M04486) A074638	BRWN LOAM 0000 GREY CSND GRVL 0006 GREY ROCK SAND GRVL 0008 GREY SAND GRVL ROCK 0009 GREY SILT CLAY SAND 0012	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 03 015	18 419500 5019942 L	1988-12 3644	6 6	FR 0050 FR 0095	4/70/14/1:0	DO		1523100 (Z7188)	GREY CLAY STNS 0005 GREY GRNT FCRD 0090 BLCK GRNT 0103
HUNTLEY TOWNSHIP CON 03 015	18 419142 5019317 W	2004-09 1119	6.25 2.00			NU	0060 10	1535238 (Z19018) A018871	CLAY 0052 GREY LMSN 0071
HUNTLEY TOWNSHIP CON 03 015	18 419142 5019317 W	2004-09 1119	6.25 2.00 2.00			NU	0066 100003 10	1535237 (Z19019) A018873	CLAY 0058 GREY LMSN 0077
HUNTLEY TOWNSHIP CON 03 016	18 418775 5019778 W	2004-07 1119	6.25		21/193/5/1:	DO		1534847 (Z14623) A014475	ROCK FILL 0005 BRWN LMSN 0220 GREY LMSN 0400
HUNTLEY TOWNSHIP CON 03 018	18 418870 5018642 W	1960-07 1802	6 6	FR 0096	15/90/2/2:0	DO		1503143 ()	CLAY 0075 CLAY MSND 0094 GRNT 0099
HUNTLEY TOWNSHIP CON 04 006	18 422183 5015092 W	2012-01 1119	6 51.9	UT 0161 UT 0234	8/25/15/1:	DO		7178175 (Z128465) A105436	SAND GRVL BLDR 0011 GREY LMSN 0161 GREY LMSN 0234 GREY LMSN 0240
HUNTLEY TOWNSHIP CON 04 006	18 422184 5015245 W	2005-10 1119	6.25	0225	7/138/12/1:	DO		1536009 (Z30826) A022970	SAND 0009 GREY LMSN 0240
HUNTLEY TOWNSHIP CON 04 006	18 422203 5015269 W	2004-08 1558	6.23	0150 0269	5/27/12/2:	DO		1534970 (Z13737) A013684	BRWN LOAM STNS 0010 GREY LMSN LYRD 0275
HUNTLEY TOWNSHIP CON 04 006	18 422092 5015486 W	2005-07 1119	6.25	0272	5/115/4/1:	DO		1535961 (Z23335) A028669	CLAY SNDY 0010 GREY LMSN 0280
HUNTLEY TOWNSHIP CON 04 006	18 421875 5015010 W	2009-11 1119	6 6.11	UT 0065 UT 0266	14/74/10/1:0	DO		7134753 (Z102657) A089415	SAND GRVL BLDR 0015 GREY LMSN 0280
HUNTLEY TOWNSHIP CON 04 006	18 422171 5015058 W	2011-01 1119	6 6	UT 0096 UT 0173	12/56/15/1:	DO		7159019 (Z119908) A105570	CLAY SNDY GRVL 0016 GREY LMSN 0098 GREY LMSN 0173 GREY LMSN 0180
HUNTLEY TOWNSHIP CON 04 006	18 422075 5014993 W	2008-07 1119	6.25 5.86	UT 0068 UT 0089 UT 0168	12/145/57/1:	DO		7109827 (Z80821) A066959	SAND GRVL BLDR 0012 GREY LMSN 0180
HUNTLEY TOWNSHIP CON 04 006	18 421975 5015092 W	2009-09 1119	6 6	UT 0252	10/44/12/1:0	DO		7131544 (Z102580) A089436	SAND CLAY BLDR 0012 GREY LMSN 0260
HUNTLEY TOWNSHIP CON 04 007	18 421766 5015328 W	2004-08 1558	6.23	0038 0111	15/41/4/1:	DO		1534993 (Z13721) A013808	BRWN SAND GRVL LOOS 0007 GREY LMSN LYRD 0145
HUNTLEY TOWNSHIP CON 04 007	18 421648 5015048 W	2006-10 1119	6.25	0170	10/77/8/1:0	DO		1536855 (Z48708) A043472	CLAY SAND 0012 LMSN 0180

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 04 007	18 421971 5015852 W	1951-07 4824	5 5	FR 0052	10///:	DO		1503180 ()	GRVL 0011 ROCK 0052	
HUNTLEY TOWNSHIP CON 04 007	18 421903 5015767 W	2017-05 1119						7287894 (Z237316) A		
HUNTLEY TOWNSHIP CON 04 007	18 421244 5015107 W	2009-01 6574	6.25	FR 0026 FR 0096	13//6/1:0	TH		7139022 (Z90888) A079913	BRWN SAND LOOS 0004 GREY CLAY ---- 0017 GREY LMSN MGRD HARD 0112 GREY LMSN LYRD HARD 0182	
HUNTLEY TOWNSHIP CON 04 007	18 421872 5015792 W	2017-05 1119	6.25 6	UT 0360	18/112/4/1:	DO		7292182 (Z237428) A144859	CLAY BLDR SNDY 0006 GREY LMSN 0360	
HUNTLEY TOWNSHIP CON 04 007	18 421978 5015692 W	2017-11 4879	6.25	UT 0060 UT 0100	5/60/5/1:0	DO		7301669 (Z260730) A227992	BRWN SAND 0006 RED SAND GRVL 0012 GREY LMSN 0060 GREY LMSN CLAY 0060 GREY LMSN SNDS LYRD 0200	
HUNTLEY TOWNSHIP CON 04 007	18 421819 5015554 W	2018-05 1119	6.25 6	UT 0242 UT 0288	8/54/5/1:	DO		7313714 (Z276640) A240669	SAND GRVL 0013 CLAY 0015 GREY LMSN 0300	
HUNTLEY TOWNSHIP CON 04 007	18 421695 5015082 W	2006-10 1119	6.25	0175	13/69/7/1:0	DO		1536856 (Z48707) A043470	SAND GRVL BLDR 0015 LMSN 0180	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1996-05 1558	6 6	UK 0062 UK 0140	22/43/18/1:0	DO		1528963 (167062)	BRWN LOAM 0004 GREY LMSN MGRD HARD 0150 GREY LMSN DKCL HARD 0300	
HUNTLEY TOWNSHIP CON 04 007	18 421520 5015413 W	2018-10 1119	6.25 6	UT 0314	5/60/10/1:	DO		7324291 (Z276799) A252792	SAND GRVL 0017 GREY LMSN 0314 GREY LMSN 0320	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1989-06 4879	6 6	FR 0102	6/109/8/1:0	DO		1523479 (45108)	BRWN SAND GRVL STNS 0011 GREY LMSN 0110	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1998-09 4879	6 6	SU 0080	14/84/40/1:0	DO		1530214 (190334)	BRWN SAND FILL 0003 BRWN SAND 0008 BRWN CLAY 0011 BRWN LMSN 0085	
HUNTLEY TOWNSHIP CON 04 007	18 421401 5015485 W	2019-01 1558	10.6 6.23	UT 0348	15/75/3/1:	DO		7338713 (Z256654) A225491	BRWN SAND PCKD 0006 GREY TILL PCKD 0020 GREY LMSN LYRD 0350 GREY LMSN LYRD 0355	
HUNTLEY TOWNSHIP CON 04 007	18 421953 5015884 W	2017-01 1119	6.25 5.94	UT 0290 UT 0350	8/152/7/1:	DO		7285384 (Z237277) A207821	CLAY STNS SNDY 0010 GREY LMSN 0290 GREY LMSN 0350 GREY LMSN 0360	
HUNTLEY TOWNSHIP CON 04 007	18 421737 5015683 W	2019-06 7681	6.25 6.11	UT 0293	14/95/6/1:	DO		7340318 (Z302268) A260868	SAND CLAY GRVL 0021 GREY LMSN 0180 GREY LMSN 0293 GREY LMSN 0300	
HUNTLEY TOWNSHIP CON 04 007	18 421512 5015147 W	2004-09 1558	6.23	0063 0110	5/25/6/6:0	DO		1535035 (Z13870) A013766	BRWN LOAM STNS 0005 GREY CLAY 0013 GREY CLAY SNDY GRVL 0015 GREY LMSN LYRD 0114	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 04 007	18 421826 5015525 W	2009-03 6574	6.25	0052	4/35/4/1:0	TH		7139020 (Z90891) A079912	BRWN SAND CGRD 0006 GREY HPAN PCKD 0009 GREY LMSN 0060	
HUNTLEY TOWNSHIP CON 04 007	18 421507 5015467 W	2019-06 7681	6.25 6.11	UT 0294	18/114/4/1:0	DO		7346272 (Z302273) A207680	SAND CLAY GRVL 0026 GREY LMSN 0240 BLCK LMSN 0294 GREY LMSN 0300	
HUNTLEY TOWNSHIP CON 04 007	18 421603 5015172 W	2009-03 6574	6.25	FR 0046	8/15/2/1:0	TH		7139019 (Z90890) A079915	BLCK LOAM 0000 BRWN SAND LOOS 0006 GREY HPAN PCKD 0012 GREY LMSN HARD MGRD 0152	
HUNTLEY TOWNSHIP CON 04 007	18 421993 5015496 W	2009-10 6574	6.25	FR 0060	6/38/5/6:0	TH		7139018 (Z90906) A079924	GREY SAND CGRD 0005 GREY HPAN STNS PCKD 0011 GREY LMSN QTZ LYRD 0065	
HUNTLEY TOWNSHIP CON 04 007	18 421858 5015393 W	2020-05 4879						7360566 (Z334332) A286806 P		
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1985-06 1558	6 6	FR 0023 FR 0042	8/17/30/2:0	DO		1519787 ()	BRWN CLAY SAND STNS 0003 BRWN SAND CLAY BLDR 0014 GREY LMSN HARD MGRD 0045	
HUNTLEY TOWNSHIP CON 04 007	18 421621 5015144 W	2009-02 6574	6.25	FR 0045 FR 0140	13/45/4/:	TH		7139017 (Z90889) A079914	BRWN SAND STNS CGRD 0006 GREY HPAN PCKD 0011 GREY LMSN MGRD 0155 GREY LMSN LYRD HARD 0325	
HUNTLEY TOWNSHIP CON 04 007	18 422130 5015226 W	2007-03 1119	6.25	0158 0225	6/85/10/1:	DO		7047639 (Z64766) A054026	FILL SAND 0006 LMSN 0260	
HUNTLEY TOWNSHIP CON 04 007	18 421642 5015450 W	2009-11 6574	6.25	FR 0080 FR 0180	3/45/3/6:0			7139016 (Z90907) A079925	BLCK LOAM 0000 BRWN SAND BLDR CGRD 0007 GREY HPAN PCKD 0014 GREY LMSN MGRD HARD 0170 GREY LMSN LYRD HARD 0265	
HUNTLEY TOWNSHIP CON 04 007	18 422078 5015775 W	2019-03 1119	6.25 6.11	UT 0166 UT 0227	3/93/5/1:0	DO		7331468 (Z302581) A260966	CLAY SNDY 0008 GREY LMSN 0166 GREY LMSN 0227 GREY LMSN 0250	
HUNTLEY TOWNSHIP CON 04 007	18 421934 5015971 W	2014-11 4879	6.25 6	UT 0190 UT 0420	10/112/3/1:	DO		7232751 (Z193217) A169235	BRWN CLAY 0004 GREY LMSN 0360 GREY LMSN SHLE 0420	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1998-05 4879	6 6	SU 0119 FR 0166	0/169/15/1:0	DO		1530027 (190297)	BRWN CLAY 0002 BRWN LMSN 0090 GREY LMSN SHLE LYRD 0170	
HUNTLEY TOWNSHIP CON 04 007	18 422198 5015641 W	1975-10 1558	6 6 6 5	FR 0250	14/150/2/1:0	DO		1515038 ()	BRWN SAND STNS LOOS 0010 BLUE CLAY 0014 GREY HPAN BLDR PCKD 0016 GREY GRVL PCKD 0017 GREY LMSN SOFT 0148 GREY LMSN 0189 GREY LMSN 0300	
HUNTLEY TOWNSHIP CON 04 007	18 421621 5015174 W	2011-02 4879	6.25	FR 0045 FR 0140	6/15/18/1:0			7160392 (Z120592) A079914		

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 04 007	18 421871 5015542 W	1976-11 1558	6 6					1515746 () A	BRWN SAND BLDR 0010 BRWN SAND STNS 0020 GREY LMSN SOFT 0123
HUNTLEY TOWNSHIP CON 04 007	18 421811 5015502 W	1976-11 1558	6 6	FR 0020	7/10/40/1:0	DO		1515747 ()	BRWN SAND BLDR PCKD 0009 BRWN SAND STNS 0018 BLCK GRVL PCKD 0020
HUNTLEY TOWNSHIP CON 04 007	18 421930 5015921 W	1977-08 1558	6 6	SU 0263	30/240/3/1:0	DO		1516210 ()	BRWN SAND CLAY GRVL 0003 BLCK LMSN SOFT 0105 GREY LMSN MGRD 0270
HUNTLEY TOWNSHIP CON 04 007	18 422044 5015827 W	1974-03 3658	6 6	FR 0202 FR 0285 FR 0302	25/280/4/2:0	DO		1514635 ()	BRWN SAND GRVL PCKD 0015 BLCK SHLE 0305
HUNTLEY TOWNSHIP CON 04 007	18 422159 5015502 W	2011-01 4879	6.25 6	UT 0086 UT 0169	9/51/5/1:0	DO		7158588 (Z120586) A106354	BRWN SAND FILL 0003 BRWN SAND CLAY 0008 GREY SAND GRVL 0012 BRWN LMSN 0058 GREY LMSN 0142 GREY SNDS 0180
HUNTLEY TOWNSHIP CON 04 007	18 421642 5015326 L	2000-11 1558	6 6	UK 0062 UK 0111	14/75/5/1:	DO		1531670 (224715)	BRWN CLAY 0003 GREY LMSN 0120
HUNTLEY TOWNSHIP CON 04 007	18 421633 5015389 W	2013-11 4879	6.25 6			TH		7213036 (Z175277) A	
HUNTLEY TOWNSHIP CON 04 007	18 421738 5015256 W	2000-07 4875	6 6	UK 0052 UK 0109	9/21/6/1:	DO		1531737 (221753)	BRWN TILL 0008 GREY LMSN SHLE 0111
HUNTLEY TOWNSHIP CON 04 007	18 421815 5015366 W	1974-05 1558	6 6	FR 0025 FR 0146	6/80/8/1:0	DO		1514078 ()	BRWN SAND GRVL PCKD 0020 BLCK LMSN SOFT 0135 WHIT SNDS HARD 0145 BLCK LMSN 0148
HUNTLEY TOWNSHIP CON 04 007	18 422056 5015152 W	2005-11 1558	6.23	0203 0236	8/66/9/1:30	DO		1536168 (Z39218) A025680	BRWN LOAM STNS 0009 GREY LMSN 0248
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1996-05 1558	6 6	UK 0066 UK 0184	5//7/:	DO		1528964 (167052) A	GREY LMSN LYRD 0002 GREY LMSN MGRD HARD 0200
HUNTLEY TOWNSHIP CON 04 007	18 421441 5015242 W	1962-07 4806	6 6	FR 0060	18/40/20/2:0	DO		1503181 ()	MSND 0004 GREY LMSN 0063
HUNTLEY TOWNSHIP CON 04 007	18 421954 5015392 W	2003-01 1558	6 5	UK 0044 UK 0078	32/65/8/1:0	DO		1533588 (250547)	BRWN LOAM SNDY STNS 0011 GREY LMSN 0085
HUNTLEY TOWNSHIP CON 04 007	18 421929 5015970 W	2014-07 4879	6 6			NU		7225593 (Z193209) A	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	1996-05 1558	6 6	UK 0060 UK 0090 UK 0131	4//20/:	DO		1528965 (167051)	GREY LMSN LYRD 0003 GREY LMSN MGRD HARD 0140

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 04 007	18 421642 5015326 L	2001-02 1558	5		15/47/8/:	DO		1531783 (226606)	GREY LMSN 0140	
HUNTLEY TOWNSHIP CON 04 007	18 421642 5015325 L	2001-08 1558	6 6 5	UK 0095	13/50/7/1:	DO		1532232 (230198)	BRWN SAND DRY 0004 BRWN HPAN 0011 GREY LMSN 0060 GREY LMSN LYRD 0105	
HUNTLEY TOWNSHIP CON 04 007	18 421616 5015409 W	2005-11 1558	6.23	0100 0123	11/39/6/1:	DO		1536172 (Z39225) A025679	BRWN LOAM STNS FILL 0004 BRWN HPAN STNS PCKD 0012 BRWN SHLE 0024 GREY LMSN 0125	
HUNTLEY TOWNSHIP CON 04 007	18 421582 5015553 W	2016-05 1119	6.25 6.05	UT 0152 UT 0273	12/56/10/1:0	DO		7268406 (Z202842) A199897	SAND STNS 0020 GRVL 0026 GREN LMSN 0152 GREN LMSN 0273 GREN LMSN 0280	
HUNTLEY TOWNSHIP CON 04 007	18 421605 5015622 W	2015-12 2558	6	UT	/7/5/1:	DO		7255857 (Z217742) A174562	CLAY STNS 0012 GRVL BLDR 0015 GREY LMSN 0350 GREY LMSN 0375 GREY LMSN 0380 GREY LMSN 0425 GREY LMSN 0450 GREY LMSN 0500	
HUNTLEY TOWNSHIP CON 04 007	18 421646 5015324 L	5222	6 6	FR 0058 FR 0091	/50/10/2:0	DO		1524685 (84337)	BRWN SAND LOOS 0005 GREY CLAY PCKD 0009 GREY TILL PCKD 0016 GREY HPAN PCKD 0018 BLCK LMSN HARD 0100	
HUNTLEY TOWNSHIP CON 04 008	18 420730 5015321 W	1982-10 1558	6 6 6	SU 0082	12/30/30/1:0	DO		1518018 ()	BRWN CLAY SHLE 0006 GREY LMSN 0085	
HUNTLEY TOWNSHIP CON 04 008	18 420651 5015487 W	1973-11 1558	6 5	FR 0073	4/40/15/1:0	DO		1513665 ()	BRWN SAND 0004 BRWN SAND CLAY BLDR 0012 GREY LMSN 0075	
HUNTLEY TOWNSHIP CON 04 008	18 421253 5015788 L	1985-04 5222	6 6	FR 0035 FR 0085	15/90/3/2:0	DO		1519875 ()	BRWN SAND GRVL PCKD 0010 GREY LMSN LYRD 0014 BRWN SAND GRVL PCKD 0017 GREY LMSN MGRD HARD 0100	
HUNTLEY TOWNSHIP CON 04 008	18 421249 5015789 L	2003-11 3323	6.11	SU 0118	10//6/1:0	DO		1534401 (Z01720) A001612	BRWN HPAN 0013 GREY LMSN 0121	
HUNTLEY TOWNSHIP CON 04 008	18 421253 5015788 L	1986-06 5222	6 6	FR 0060 FR 0076	12/75/7/2:0	DO		1520589 (NA)	BRWN SAND STNS PCKD 0001 GREY LMSN SAND VERY 0012 GREY LMSN MGRD SOFT 0080	
HUNTLEY TOWNSHIP CON 04 008	18 422223 5015553 W	2003-09 4879	6 6	SU 0017	6/8/15/1:0	DO		1534246 (255323)	BRWN SAND CLAY STNS 0003 BRWN SAND GRVL STNS 0009 GREY CLAY SAND STNS 0012 GREY SAND GRVL 0014 BRWN LMSN 0045	
HUNTLEY TOWNSHIP CON 04 008	18 421248 5015788 L	2003-07 4879	6 6	SU 0059 SU 0235 SU 0312	6/394/4/2:0	DO		1533882 (255339)	BRWN CLAY SAND STNS 0003 BRWN SAND GRVL STNS 0009 GREY CLAY SAND STNS 0012 GREY SAND GRVL 0015 BRWN LMSN 0058 GREY LMSN CLAY FCRD 0060 BRWN LMSN 0206 GREY LMSN 0370 GREY LMSN 0395	
HUNTLEY TOWNSHIP CON 04 008	18 421253 5015788 L	1987-11 5222	6 6	SU 0181	18/80/12/24:0	DO		1522405 (22055)	BLCK LOAM LOOS 0001 BRWN SAND PCKD 0006 WHIT FSND 0010 GREY CLAY FSND 0012 GREY CLAY WBRG 0153 GREY LMSN MGRD 0182	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1994-06 1558	6 6 6	UK 0040 UK 0070	8/40/5/1:0	DO		1528071 (142313)	BRWN CLAY 0008 GREY CLAY 0019 GREY SAND GRVL 0024 GREY LMSN 0080	
HUNTLEY TOWNSHIP CON 04 009	18 420515 5015657 W	2010-06 1119	6 5.88	UT 0228	6/55/5/1:0	DO		7149339 (Z108401) A095942	CLAY SAND 0008 GRVL 0013 GREY LMSN 0365 GREN LMSN 0400	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1994-10 1558	6 6	UK 0041 UK 0073	1/6/30/1:0	DO		1528328 (147761)	BRWN LOAM SNDY 0004 GREY CLAY STNS 0030 GREY GRVL ROCK 0032 GREY LMSN LYRD 0079	
HUNTLEY TOWNSHIP CON 04 009	18 420853 5016248 L	2003-08 1119	6 6	UK 0190	10/190/30/1:0	DO		1534058 (265554)	GREY CLAY GRVL 0018 GREY LMSN 0200	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1994-06 1558	6 6			DO		1528073 (142314) A	BRWN CLAY 0008 GREY CLAY STNS 0019 GREY GRVL 0024 GREY LMSN 0065	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1987-10 3142	6	FR 0022	2/10/40/3:0	DO		1521903 (18600)	GREY CLAY BLDR 0019 GREY GRVL HPAN 0022	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1992-11 5222	6 6	FR 0072	12/75/3/2:0	DO CO		1527786 (110557)	BRWN FSND 0006 BRWN SAND GRVL BLDR 0013 GREY LMSN HARD MGRD 0085	
HUNTLEY TOWNSHIP CON 04 009	18 421030 5016321 W	1979-05 5411	6 6	SU 0048 SU 0063	7/57/8/1:0	DO		1516947 ()	GREY HPAN BLDR 0010 GREY LMSN 0048 BLCK LMSN 0067	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1988-03 3142	6 6	UK 0085 UK 0112	2/80/5/2:0	DO		1522247 (18624)	BRWN CLAY STNS PCKD 0012 GREY LMSN 0090 BLCK LMSN SHLE 0115	
HUNTLEY TOWNSHIP CON 04 009	18 420858 5016248 L	1986-08 3142	6 6	FR 0087 UK 0103	18/45/30/1:0	DO		1520740 (NA)	GREY LMSN HARD 0070 GREY LMSN PORS 0105	
HUNTLEY TOWNSHIP CON 04 010	18 420730 5017321 W	1983-08 3142	6 6	FR 0068	8/25/15/2:0	DO		1518357 ()	BRWN SAND PCKD 0018 GREY CLAY 0040 GREY GRVL SNDS 0045 UNKN 0070	
HUNTLEY TOWNSHIP CON 04 010	18 420126 5016092 W	1973-09 3504	6	FR 0040 UK 0050	8/25/20/0:30	DO		1513453 ()	SAND 0004 CLAY 0025 GRVL BLDR 0029 LMSN 0065	
HUNTLEY TOWNSHIP CON 04 010	18 420458 5016712 L	1999-10 1119	8 6 6	FR 0106 FR 0171	9/150/5/1:	DO		1530897 (210564)	SAND BLDR 0040 GREY LMSN 0180	
HUNTLEY TOWNSHIP CON 04 010	18 420268 5016903 W	1992-09 3142	6 6	FR 0089	28/34/30/2:0	DO		1526552 (125361)	BRWN SAND PCKD 0018 GREY CLAY PCKD 0028 BLUE CLAY PCKD 0060 GREY CLAY SAND PCKD 0074 GREY LMSN 0090	
HUNTLEY TOWNSHIP CON 04 010	18 420798 5017213 W	1975-10 4847	4	SU 0060	10/18/5/0:30	DO		1515296 ()	RED SAND 0017 GREY CLAY 0050 GREY LMSN 0075	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 04 010	18 420230 5016921 W	1983-06 3142	6 6	SU 0097	15/18/30/1:0	DO		1518314 ()	BRWN SAND PCKD 0018 GREY CLAY SOFT 0070 GREY SAND GRVL PCKD 0078 BLCK LMSN 0098
HUNTLEY TOWNSHIP CON 04 010	18 420730 5017321 W	1983-07 3142	6 6	FR 0058 FR 0062	12/17/40/3:0	DO		1518358 ()	BRWN SAND SILT PCKD 0018 GREY CLAY 0038 GREY GRVL SAND 0046 GREY LMSN 0064
HUNTLEY TOWNSHIP CON 04 010	18 420196 5016725 W	1975-04 5411	6 6	SU 0052	/15/20/2:0	DO		1514607 ()	BRWN SAND 0010 BLUE CLAY 0042 BRWN LMSN 0052 GREY LMSN 0056
HUNTLEY TOWNSHIP CON 04 010	18 420756 5017334 W	2020-03 6907						7367729 (Z299057) A258064 P	
HUNTLEY TOWNSHIP CON 04 010	18 420338 5016848 W	1975-07 5411	6 6	FR 0075	5/66/6/1:0	DO		1514770 ()	BRWN SAND 0022 BLUE CLAY 0065 BLCK LMSN 0079
HUNTLEY TOWNSHIP CON 04 010	18 420456 5016994 W	2007-06 6907			///:			7049969 (Z50988) A017505	0295
HUNTLEY TOWNSHIP CON 04 010	18 420510 5017144 W	1985-09 1558	6 6	FR 0088	8/20/30/1:0	DO		1520280 ()	BRWN SAND LOOS 0005 BRWN SAND GRVL BLDR 0015 GREY CLAY THIK 0043 RED PGVL PCKD 0100
HUNTLEY TOWNSHIP CON 04 010	18 420502 5017004 W	1975-07 5411	6 6	FR 0080 UK 0085	7/77/5/1:0	DO		1514768 ()	BRWN SAND 0022 BLUE CLAY 0067 BLUE LMSN 0087
HUNTLEY TOWNSHIP CON 04 010	18 420458 5016712 L	1985-07 5222	6	FR 0063	4/50/10/2:0	DO		1520031 ()	GREY MUCK SILT SOFT 0026 GREY SILT STNS PCKD 0047 BRWN SAND STNS HARD 0063
HUNTLEY TOWNSHIP CON 04 010	18 420816 5016660 W	1975-07 5411	6 6	SU 0050	7/18/30/1:0	DO		1514771 ()	BRWN CLAY 0010 BLUE CLAY 0027 BRWN LMSN 0050 BLCK LMSN 0055
HUNTLEY TOWNSHIP CON 04 011	18 419650 5016662 W	1992-05 3644	6 6	FR 0055	3/40/40/1:0	DO		1526262 (111998)	GREY CLAY 0038 GREY LMSN 0063
HUNTLEY TOWNSHIP CON 04 011	18 420227 5017530 W	2009-08 1119				NU		7137592 (Z102695) A	0020
HUNTLEY TOWNSHIP CON 04 011	18 419818 5016681 W	1992-06 3644	6 6	FR 0060 FR 0095	4/95/4/1:0	DO		1526285 (111813)	GREY CLAY 0037 GREY CLAY GRVL 0039 GREY LMSN 0100
HUNTLEY TOWNSHIP CON 04 011	18 420060 5017183 L	1988-05 5222	6 6	FR 0075 FR 0092	/90/7/2:0	DO		1523224 (32756)	BRWN FILL SAND GRVL 0006 BLCK LMSN LMSN MGRD 0100
HUNTLEY TOWNSHIP CON 04 011	18 420224 5017527 W	2009-09 1119				NU		7137593 (Z102694) A	0117

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 04 011	18 420431 5017489 W	2009-08 1119	6 5.88	UT 0101 UT 0113	9/61/3/1:0	MO		7137597 (Z102693) A082503	SAND 0036 CLAY 0050 GREY LMSN 0115	
HUNTLEY TOWNSHIP CON 04 012	18 419656 5017654 L	1990-10 5222	6	FR 0033 FR 0039	8/20/10/2:0	DO NU		1525125 (095408)	BRWN SAND LOOS 0006 GREY CLAY WBRG 0024 GREY LMSN 0050	
HUNTLEY TOWNSHIP CON 04 012	18 419810 5017427 W	2004-07 1558	6.23	0040 0210	7/25/3/2:	DO		1534979 (Z13698) A013720	BRWN SAND DRY 0008 GREY CLAY WBRG 0014 GREY CLAY PCKD 0030 GREY LMSN 0225	
HUNTLEY TOWNSHIP CON 04 012	18 419656 5017654 L	1990-03 5222	6 6	FR 0028	8/20/12/2:0	DO		1524585 (72082)	BRWN LOAM PCKD 0001 BRWN SAND PCKD 0013 GREY CLAY 0019 GREY LMSN 0035	
HUNTLEY TOWNSHIP CON 04 012	18 419656 5017654 L	1988-10 4875	6 6	SU 0102 SU 0140	3/155/3/1:30	NU		1523015 (40968)	BRWN SAND 0002 GREY SAND GRVL STNS 0016 BLUE CLAY 0093 GREY TILL 0098 GREY SAND GRVL STNS 0102 GREY LMSN SHLE 0155	
HUNTLEY TOWNSHIP CON 04 013	18 418956 5017472 W	1972-10 3705	6	FR 0080 FR 0126	14/45/12/2:0	DO		1512392 ()	BRWN SAND 0024 BLUE CLAY 0043 GREY SAND GRVL 0061 GREY HPAN BLDR 0072 GREY LMSN 0126	
HUNTLEY TOWNSHIP CON 04 013	18 418710 5017707 W	1970-10 1558	5 5	FR 0121	12/100/4/2:0	DO		1510968 ()	RED MSND SILT 0012 GREY CLAY FSND 0055 GREY MSND 0071 BLCK LMSN 0123	
HUNTLEY TOWNSHIP CON 04 013	18 419258 5018108 L	1994-10 3323	6	FR 0147 FR 0135	9/135/4/1:0	DO		1528273 (138503)	GREY CLAY 0007 GREY LMSN SNDS 0140	
HUNTLEY TOWNSHIP CON 04 013	18 419258 5018108 L	1994-08 4875	6			NU		1528132 (126535)	RED SAND 0006 GREY SAND 0018 GREY SILT 0030 GREY SAND GRVL CLAY 0084 GREY LMSN 0084	
HUNTLEY TOWNSHIP CON 04 013	18 418755 5017870 W	2005-06 6574	5.98	SU 0147	3/3/22/1:	DO		1536027 (Z28728) A029176	BRWN SAND SLTY PCKD 0015 BLUE CLAY WBRG 0064 BRWN SAND GRVL LOOS 0067 GREY LMSN 0147	
HUNTLEY TOWNSHIP CON 04 013	18 419258 5018108 L	1994-10 3323	6	FR 0030 FR 0055	4/55/12/1:0	DO		1528274 (138502)	GREY CLAY 0016 GREY LMSN 0060	
HUNTLEY TOWNSHIP CON 04 013	18 419258 5018108 L	1994-12 3323	6	FR 0026 FR 0072	7/75/8/1:0	DO		1528413 (138513)	BRWN FILL 0002 GREY LMSN 0080	
HUNTLEY TOWNSHIP CON 04 014	18 418493 5018031 W	2005-06 6574	5.98	SA 0121 SA 0187	3/43/4/1:	DO		1536028 (Z28729) A029178	BRWN SAND SILT PCKD 0015 BLUE CLAY WBRG 0064 GREY SAND GRVL LOOS 0069 GREY LMSN 0200	
HUNTLEY TOWNSHIP CON 04 014	18 418859 5018564 L	2000-07 3323	6	FR 0110	8/120/10/1:	DO		1531260 (221160)	GREY CLAY 0008 GREY SHLE LMSN 0100 WHIT SNDS 0120	
HUNTLEY TOWNSHIP CON 04 015	18 418460 5019020 L	1985-09 5222	6 6	FR 0020	10/25/20/2:0	DO		1520126 ()	BLCK CLAY WDFR HARD 0006 GREY SAND STNS PCKD 0018 GREY LMSN MGRD HARD 0035	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 04 015	18 418830 5019421 W	1976-11 3504	6	FR 0086	7/22/10/1:0			1515864 ()	BLUE CLAY 0046 SAND 0047 LMSN 0093
HUNTLEY TOWNSHIP CON 04 016	18 417740 5018842 W	1965-08 4806	6 6	SU 0045	/5/15/1:0	DO		1503182 ()	BLUE CLAY 0034 GREY LMSN 0047
HUNTLEY TOWNSHIP CON 04 016	18 418060 5019488 L	1999-09 4875	6 6 6	SU 0380	7/96/6/1:	DO		1530806 (208812)	GREY CLAY 0018 GREY LMSN SHLE 0405
HUNTLEY TOWNSHIP CON 04 016	18 418612 5019663 W	2012-09 6574						7189747 (Z159962) A	
HUNTLEY TOWNSHIP CON 04 016	18 418060 5019488 L	1992-05 5222	6	FR 0480 FR 0568	12/300/3/2:0	DO		1527788 (110485)	PRDR 0180 GREY LMSN MGRD 0475 RED LMSN MGRD SOFT 0560 BLCK LMSN HARD 0575
HUNTLEY TOWNSHIP CON 05 008	18 420686 5015297 W	1972-09 4847	4	FR 0035	15/20/5/1:30	DO		1512086 ()	RED SAND 0007 GREY HPAN 0015 GREY LMSN 0056
HUNTLEY TOWNSHIP CON 05 008	18 420484 5015139 W	2010-10 1119	6 6	UT 0050 UT 0053	6/37/20/1:	DO		7154658 (Z110841) A095996	CLAY 0004 GREY LMSN 0063
HUNTLEY TOWNSHIP CON 05 008	18 420739 5015283 W	2018-10 1119						7321074 (Z276756) A	
HUNTLEY TOWNSHIP CON 05 008	18 420731 5015276 W	2018-09 1119	6.25 6.11	UT 0069 UT 0109 UT 0113	16/30/10/1:	DO		7321131 (Z276728) A252777	GREY SAND 0018 GREY LMSN 0120
HUNTLEY TOWNSHIP CON 05 009	18 419840 5015344 L	1988-01 3142	6 6	FR 0053	12/15/30/1:30	DO NU		1522240 (18613)	BRWN LOAM STNS PCKD 0003 GREY LMSN HARD 0055
HUNTLEY TOWNSHIP CON 05 009	18 419256 5015092 W	1974-10 1558	6 6	FR 0185	12/100/6/1:0	DO		1514411 ()	GREY LMSN 0197
HUNTLEY TOWNSHIP CON 05 009	18 419837 5015344 L	2003-08 1119	8 6 6	UK 0280	40/290/5/1:0	DO		1533960 (248432)	CLAY SNDY GRVL 0044 BLCK SNDS 0301
HUNTLEY TOWNSHIP CON 05 009	18 420381 5015604 W	4875	6.25	UT 0070 UT 0180	4/66/5/1:20	DO		7309076 (Z252108) A192928	GREY CLAY 0007 GREY SAND GRVL BLDR 0013 GREY LMSN SHLE 0194
HUNTLEY TOWNSHIP CON 05 009	18 419840 5015344 L	1989-06 1558	6 6	FR 0080	1/80/6/1:0	DO		1523516 (50782)	BRWN SAND PCKD 0005 GREY SAND PCKD 0016 GREY SAND GRVL PCKD 0030 GREY LMSN MGRD 0300
HUNTLEY TOWNSHIP CON 05 009	18 419840 5015344 L	1989-06 1558	6 6	FR 0063 FR 0089	1/50/17/1:0	DO		1523517 (50783)	BRWN SAND PCKD 0004 GREY SAND PCKD 0023 GREY SAND GRVL PCKD 0034 GREY LMSN MGRD 0100

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 05 009	18 419840 5015344 L	1989-06 1558	6 6	FR 0057	5/40/20/1:0	DO		1523519 (50784)	BRWN SAND PCKD 0004 GREY SAND PCKD 0019 GREY SAND GRVL PCKD 0050 GREY GRVL LOOS 0058	
HUNTLEY TOWNSHIP CON 05 009	18 420430 5015621 W	1983-03 1558	6 6	SU 0235 SU 0255	0/100/5/1:0	DO		1518254 ()	GREY CLAY PCKD 0008 GREY GRVL LOOS 0010 GREY LMSN MGRD HARD 0145 GREY LMSN MGRD SOFT 0260	
HUNTLEY TOWNSHIP CON 05 010	18 418984 5015459 W	1974-06 1558	6 6	SU 0075 FR 0300 FR 0420	10/300/6/1:0	DO		1514139 ()	BRWN SAND BLDR PCKD 0004 GREY LMSN SOFT 0400 GREY SNDS 0410 GREY LMSN 0450	
HUNTLEY TOWNSHIP CON 05 010	18 419130 5015321 W	1982-09 1558	6 6 6	SU 0220 SU 0275	8/90/2/1:0	DO		1517990 ()	BRWN SAND FILL 0007 GREY LMSN MGRD HARD 0050 GREY LMSN MGRD 0225 GREY LMSN LYRD MGRD 0300	
HUNTLEY TOWNSHIP CON 05 010	18 420030 5016021 W	1980-07 1558	6 6	SU 0053 SU 0080 SU 0115	12/70/10/1:0	DO		1517473 ()	BRWN CLAY SAND 0002 RED SAND LOOS 0015 GREY LMSN MGRD HARD 0050 BLCK LMSN MGRD HARD 0118	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1988-12 3142	6 6	FR 0081	18/40/15/1:30	DO		1523271 (44889)	BRWN SAND PCKD 0018 GREY CLAY SOFT 0058 GREY SAND PCKD 0064 GREY LMSN PORS 0085	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1985-12 3644	6 6	FR 0090	3/90//:	DO		1520291 ()	GREY CLAY GRVL 0008 GREY LMSN 0099	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1985-12 3644	6 6	FR 0090	4/95/1/1:0	DO		1520400 ()	GREY CLAY GRVL 0005 GREY LMSN 0100	
HUNTLEY TOWNSHIP CON 05 010	18 418964 5015438 W	1974-05 1558	6 5	SU 0120	/230/1/1:0			1514093 () A	BRWN SAND SOFT 0004 BLUE LMSN SOFT 0018 GREY LMSN VERY HARD 0065 GREY LMSN HARD 0230	
HUNTLEY TOWNSHIP CON 05 010	18 419146 5015914 W	2017-11 4879	6.25	UT 0060	5/82/3/1:	DO		7301097 (Z260731) A227991	BRWN SAND STNS FILL 0007 GREY CLAY SAND 0012 GREY LMSN 0350	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1989-07 3323	6 6	FR 0425	10/425/7/1:0	DO		1526889 (53071)	BRWN SAND 0004 GREY LMSN SHLY 0450	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1990-03 3323	6	FR 0115 UK 0150 FR 0160	12/125/9/1:0	DO		1526903 (53093)	BRWN SAND 0019 GREY LMSN 0165	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1990-03 3323	6	FR 0120 FR 0155	12/140/15/1:0	DO		1526906 (52727)	BRWN SAND 0015 GREY LMSN 0160	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1986-01 3644	6 6	FR 0090 SU 0150	5/100/9/1:0	DO		1520292 ()	GREY CLAY GRVL 0005 GREY LMSN 0150	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1989-08 3749	6	FR 0062 FR 0083 FR 0096 FR 0101	14/45/18/1:0	DO		1523838 (68214)	BRWN SAND STNS 0024 BRWN GRVL 0030 GREY LMSN 0105	
HUNTLEY TOWNSHIP CON 05 010	18 418882 5015565 W	1990-03 3142	6 6	FR 0080 FR 0180	16/140/4/1:30	DO		1524412 (73391)	BRWN SAND STNS PCKD 0007 BLCK LMSN HARD 0085 GREY LMSN HARD 0182	
HUNTLEY TOWNSHIP CON 05 010	18 418830 5015521 W	1983-02 1558	6 6	UK 0147	10/50/10/2:0	DO		1518147 ()	BRWN SAND STNS LOOS 0001 BRWN SHLE FCRD LYRD 0004 GREY LMSN MGRD HARD 0150	
HUNTLEY TOWNSHIP CON 05 010	18 419446 5015808 L	1985-05 5222	6	FR 0155	65/75/50/2:0	DO		1520030 ()	BRWN CLAY SAND PCKD 0065 GREY CLAY SILT DNSE 0138 BRWN FSND GRVL LOOS 0145 GREY CLAY SILT DNSE 0153 BRWN SAND GRVL LOOS 0155	
HUNTLEY TOWNSHIP CON 05 010	18 419648 5016659 W	1995-05 4875	6 5 5	SU 0057	3/7/8/4:30	DO		1528543 (150446)	BRWN SAND 0017 GREY CLAY SILT 0038 GREY SAND GRVL 0040 GREY LMSN SHLE 0065	
HUNTLEY TOWNSHIP CON 05 011	18 419040 5016270 L	1986-07 1558	6 6	FR 0030 FR 0143	15/80/6/1:0	DO		1521162 (NA)	BRWN SAND LOOS 0005 GREY CLAY PCKD 0008 GREY LMSN SOFT MGRD 0150	
HUNTLEY TOWNSHIP CON 05 011	18 418704 5015819 W	1992-08 5222	6 6	FR 0280 FR 0312	11/250/4/2:0	DO		1527806 (110527)	BRWN SAND GRVL LOOS 0003 GREY LMSN FCRD 0005 GREY LMSN MGRD 0280 GREY LMSN QTZ HARD 0325	
HUNTLEY TOWNSHIP CON 05 011	18 419040 5016270 L	1988-02 4006	8 6			NU		1522241 (30460) A	GREY LMSN 0270	
HUNTLEY TOWNSHIP CON 05 011	18 418696 5016255 W	1992-07 5222	6 68	FR 0258 FR 0325	/250/8/2:0	DO		1527808 (110526)	BRWN SAND GRVL LOOS 0014 GREY LMSN MGRD 0200 GREY LMSN SOFT MGRD 0335	
HUNTLEY TOWNSHIP CON 05 011	18 419040 5016270 L	1991-01 5222	6 6	FR 0126 FR 0160 FR	9//2/:	DO		1525534 (095438)	BRWN LOAM PCKD 0001 BRWN SAND STNS GRVL 0004 BLCK LMSN SAND FCRD 0011 BLCK LMSN MGRD 0102 GREY LMSN HARD MGRD 0120 BLCK LMSN HARD MGRD 0175 GREY LMSN HARD MGRD 0300	
HUNTLEY TOWNSHIP CON 05 011	18 418738 5015660 W	1992-07 5222	6 6	FR 0270	30/50/25/2:0	DO		1527807 (110528)	BRWN SAND GRVL LOOS 0002 GREY LMSN MGRD 0135 GREY LMSN QTZ HARD 0165 GREY LMSN SOFT MGRD 0268 GREY LMSN HARD 0272 BLCK LMSN QTZ SOFT 0275	
HUNTLEY TOWNSHIP CON 05 011	18 419040 5016270 L	1988-02 4006	8 6			NU		1522242 (30461) A	BRWN CLAY SAND 0002 GREY LMSN 0430	
HUNTLEY TOWNSHIP CON 05 011	18 419040 5016270 L	1990-12 5222	6 6	FR 0086 FR 0101	7//3/6:0	DO		1525498 (095439)	BRWN SAND PCKD 0004 BRWN SAND GRVL LOOS 0008 BLCK LMSN LYRD HARD 0125	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 05 013	18 418240 5017187 L	1990-03 3142	6 6	FR 0132	15/37/20/1:30	DO		1524414 (73392)	BRWN SAND PCKD 0012 GREY CLAY STNS LOOS 0021 GREY LMSN HARD 0134
HUNTLEY TOWNSHIP CON 05 014	18 417848 5017644 L	1989-10 2307	6 6	FR 0185 FR 0195	25/150/5/1:0	DO		1523910 (NA)	BRWN SAND FILL LOOS 0024 GREY CLAY STNS 0104 GREY LMSN SHLE SOFT 0205
HUNTLEY TOWNSHIP CON 05 014	18 417848 5017644 L	1990-03 3142	6 6	FR 0132	6/70/30/2:0	DO		1524413 (73393)	RED SAND PCKD 0012 GREY CLAY SILT LOOS 0040 GREY GRVL SAND STNS 0092 GREY LMSN PORS 0134
HUNTLEY TOWNSHIP CON 05 014	18 417848 5017644 L	1989-07 3142	6 6	FR 0098 FR 0122	18/55/10/2:30	DO		1523641 (44934)	RED SAND PCKD 0016 GREY CLAY PCKD 0035 BLUE CLAY LOOS 0070 GREY SAND STNS PCKD 0095 GREY LMSN HARD 0125
HUNTLEY TOWNSHIP CON 05 014	18 417848 5017644 L	1999-09 4875	6	FR 0033 FR 0037	30/33/3/1:	DO	0033 4	1530803 (208814)	BRWN SAND 0025 GREY SAND 0038 GREY CLAY 0038
HUNTLEY TOWNSHIP CON 05 014	18 418198 5018175 W	1975-01 1558	6 6 5	FR 0098	12/90/4/1:0	DO		1514571 ()	BRWN SAND SOFT 0020 GREY CLAY SOFT 0050 GREY SAND STNS PCKD 0075 GREY HPAN STNS PCKD 0081 BLCK LMSN HARD 0101
HUNTLEY TOWNSHIP CON 05 014	18 418146 5018242 W	1973-11 1558	6	SU 0101	18/35/20/2:0	DO		1513661 ()	RED SAND 0020 BLUE CLAY 0062 GREY SAND 0086 BLCK LMSN 0102
HUNTLEY TOWNSHIP CON 05 014	18 418350 5017952 W	1970-12 3644	5	FR 0135	12/45/8/1:0	DO		1511075 ()	BRWN MSND 0102 GREY LMSN 0135
HUNTLEY TOWNSHIP CON 05 014	18 418208 5018172 W	1971-01 3644	5	FR 0136	9/56/10/1:0	DO		1511080 ()	BRWN MSND 0102 GREY LMSN 0136
HUNTLEY TOWNSHIP CON 05 014	18 418310 5017952 W	1971-12 3644	5	FR 0128	9/45/15/1:0	DO		1511579 ()	GREY CLAY 0089 GREY HPAN 0104 GREY LMSN 0128
HUNTLEY TOWNSHIP CON 05 014	18 417848 5017644 L	1999-09 1119	8 6 6	FR 0156	28/140/10/1:	DO		1530832 (210485)	CLAY SNDY 0006 GREY LMSN 0162
HUNTLEY TOWNSHIP CON 05 015	18 417779 5018704 W	2014-01 1119	6.25 6.11	UT 0151	/52/11/1:	DO		7219592 (Z166821) A144709	BLCK LOAM 0002 GREY CLAY 0056 GREY LMSN 0151 GREY LMSN 0160
HUNTLEY TOWNSHIP CON 05 015	18 417614 5018585 W	2019-07 4879	6.25	UT 0100	4/66/4/1:	CO		7341523 (Z292799) A252422	BRWN CLAY DNSE 0018 GREY CLAY SOFT 0058 GREY LMSN 0300
HUNTLEY TOWNSHIP CON 05 015	18 417442 5018104 L	1999-10 4875	6 6	FR 0028 FR 0032	12/16/12/1:	DO	0028 4	1530805 (208826)	BRWN SAND 0015 GREY SAND 0032
HUNTLEY TOWNSHIP CON 05 015	18 419754 5015238 W	1996-01 3142	6 6	SU 0170	3/125/5/2:0	DO		1528901 (156254)	GREY CLAY PCKD 0004 GREY SAND PCKD 0012 BLUE CLAY LOOS 0060 GREY SAND GRVL 0076 GREY LMSN 0160 BLCK LMSN SHLE 0176

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
HUNTLEY TOWNSHIP CON 05 015	18 419912 5015329 W	1994-02 3142	6 6	SU 0208	18/95/8/2:0	DO		1528902 (156255)	SAND SILT PCKD 0008 BLUE CLAY LOOS 0059 GREY LMSN HARD 0210	
HUNTLEY TOWNSHIP CON 05 015	18 420054 5015494 W	1996-02 3142	6 6	SU 0114	2/35/8/2:0	DO		1528903 (156256)	GREY CLAY SAND PCKD 0010 BLUE CLAY LOOS 0051 GREY LMSN HARD 0116	
HUNTLEY TOWNSHIP CON 05 015	18 417442 5018104 L	1996-10 3142	6 6	SU 0094	1/70/8/3:0	DO		1529198 (139339)	GREY CLAY SAND PCKD 0018 BLUE CLAY LOOS 0055 GREY FSND 0056 GREY LMSN 0095	
HUNTLEY TOWNSHIP CON 05 015	18 417442 5018104 L	1990-08 3142	6 6	FR 0060 FR 0122	18/75/20/2:0	DO		1524804 (73431)	GREY SAND PCKD 0005 GREY LMSN HARD 0124	
HUNTLEY TOWNSHIP CON 05 015	18 417772 5018211 W	2001-12 4875	8 6 6			NU		1532657 (241183)	GREY SAND SILT 0018 BLUE CLAY 0075 GREY TILL 0090 GREY LMSN 0091	
HUNTLEY TOWNSHIP CON 05 016	18 417400 5019012 W	1968-04 4806	6 6	FR 0050 FR 0400	28/200/3/1:0	ST DO		1503199 ()	BLUE CLAY 0033 GREY LMSN 0404	
HUNTLEY TOWNSHIP CON 06 010	18 418970 5015189 W	2018-05 1558	10.6 6.23	UT	5/6/12/1:	DO		7317815 (Z256810) A148993	BRWN LOAM 0003 GREY LMSN 0175	
HUNTLEY TOWNSHIP CON 06 010	18 418742 5015628 W	1989-01 5222	6 6	FR 0115	/120/3/2:0	DO		1523313 (55263)	BRWN CLAY SAND GRVL 0002 GREY LMSN MGRD 0029 BLCK LMSN QTZ MGRD 0115 GREY LMSN QTZ MGRD 0130	
HUNTLEY TOWNSHIP CON 06 010	18 418803 5015350 W	2010-05 1119	6 6.11	UT 0172	9/14/20/1:	DO		7147366 (Z108331) A095953	SAND GRVL BLDR 0008 GREY LMSN 0180	
HUNTLEY TOWNSHIP CON 06 011	18 418058 5015371 L	1986-04 1558	6 6	FR 0036 FR 0062	2/20/20/1:0	DO		1520878 (NA)	BRWN CLAY SAND PCKD 0002 GREY LMSN FCRD 0003 GREY LMSN 0065	
HUNTLEY TOWNSHIP CON 06 011	18 417953 5015121 W	2018-05 7148			///:	MO		7328098 (Z217435)		
HUNTLEY TOWNSHIP CON 06 011	18 418058 5015371 L	1986-06 5222	6	FR 0086	30/105/4/2:0	DO		1520573 (NA)	BRWN SAND ROCK PCKD 0003 GREY LMSN SAND VERY 0010 GREY LMSN MGRD SOFT 0160	
HUNTLEY TOWNSHIP CON 06 011	18 418713 5015612 W	2018-05 7148			///:	MO		7328096 (Z217433) A200013		
HUNTLEY TOWNSHIP CON 06 012	18 418210 5016105 W	2018-05 7148			///:	MO		7328097 (Z217436) A200012		
HUNTLEY TOWNSHIP CON 06 013	18 417254 5016284 L	1990-12 3142	6 6	FR 0088	8/70/20/2:0	DO		1525210 (73454)	BRWN SAND STNS PCKD 0008 GREY SAND GRVL PCKD 0020 GREY LMSN HARD 0090	

TOWNSHIP CON L	UTM	DATE CN	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
HUNTLEY TOWNSHIP CON 06 013	18 417254 5016284 L	1990-12 3142	6 6	FR 0083	10/60/20/2:0	DO		1525209 (73455)	BRWN SAND PCKD 0008 GREY SAND STNS PCKD 0024 GREY LMSN HARD 0085
MARCH TOWNSHIP	18 421835 5016303 W	2004-05 1517	2.35	UK	7/19/7/1:0	DO		1534664 (Z12474) A012413	BRWN CLAY 0039 GREY HPAN STNS 0085 GREY SHLE ROCK 0108 GREY ROCK 0820
MARCH TOWNSHIP	18 422005 5016699 W	2004-05 1517	2.35	UK UK	5/19/7/1:0	DO		1534665 (Z12475) A012412	BRWN CLAY 0056 GREY HPAN STNS 0089 GREY SHLE ROCK 0115 GREY ROCK 0197 BRWN ROCK 0427 GREY ROCK 0623
OTTAWA CITY	18 420263 5019179 W	2009-06 1844						7127228 (M04487) A	
OTTAWA CITY	18 418524 5017933 W	2010-01 4879	6.25 6	UT 0102 UT 0166	3/57/4/1:0	DO		7138956 (Z106825) A092606	RED SAND 0008 GREY SAND 0031 GREY SAND CLAY STNS 0091 BRWN LMSN LYRD 0200

Notes:
UTM: UTM in Zone, Easting, Northing and Datum is NAD83; L: UTM estimated from Centroid of Lot; W: UTM not from Lot Centroid
DATE CNTR: Date Work Completedand Well Contractor Licence Number
CASING DIA: .Casing diameter in inches
WATER: Unit of Depth in Fee. See Table 4 for Meaning of Code

PUMP TEST: Static Water Level in Feet / Water Level After Pumping in Feet / Pump Test Rate in GPM / Pump Test Duration in Hour : Minutes
WELL USE: See Table 3 for Meaning of Code
SCREEN: Screen Depth and Length in feet
WELL: WEL (AUDIT #) Well Tag . A: Abandonment; P: Partial Data Entry Only

1. Core Material and Descriptive t

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
BLDR	BOULDERS	FCRD	FRACTURED	IRFM	IRON FORMATION	PORS	POROUS	SOFT	SOFT
BSLT	BASALT	FGRD	FINE-GRAINED	LIMY	LIMY	PRDG	PREVIOUSLY DUG	SPST	SOAPSTONE
CGRD	COARSE-GRAINED	FGVL	FINE GRAVEL	LMSN	LIMESTONE	PRDR	PREV. DRILLED	STKY	STICKY
CGVL	COARSE GRAVEL	FILL	FILL	LOAM	TOPSOIL	QRTZ	QUARTZITE	STNS	STONES
CHRT	CHERT	FLDS	FELDSPAR	LOOS	LOOSE	QSND	QUICKSAND	STNY	STONEY
CLAY	CLAY	FLNT	FLINT	LTCL	LIGHT-COLOURED	QTZ	QUARTZ	THIK	THICK
CLN	CLEAN	FOSS	FOSILIFEROUS	LYRD	LAYERED	ROCK	ROCK	THIN	THIN
CLYY	CLAYEY	FSND	FINE SAND	MARL	MARL	SAND	SAND	TILL	TILL
CMTD	CEMENTED	GNIS	GNEISS	MGRD	MEDIUM-GRAINED	SHLE	SHALE	UNKN	UNKNOWN TYPE
CONG	CONGLOMERATE	GRNT	GRANITE	MGVL	MEDIUM GRAVEL	SHLY	SHALY	VERY	VERY
CRYS	CRYSTALLINE	GRSN	GREENSTONE	MRBL	MARBLE	SHRP	SHARP	WBRG	WATER-BEARING
CSND	COARSE SAND	GRVL	GRAVEL	MSND	MEDIUM SAND	SHST	SCHIST	WDFR	WOOD FRAGMENTS
DKCL	DARK-COLOURED	GRWK	GREYWACKE	MUCK	MUCK	SILT	SILT	WTHD	WEATHERED
DLMT	DOLOMITE	GVLV	GRAVELLY	OBDN	OVERBURDEN	SLTE	SLATE		
DNSE	DENSE	GYPS	GYP SUM	PCKD	PACKED	SLTY	SILTY		
DRTY	DIRTY	HARD	HARD	PEAT	PEAT	SNDS	SANDSTONE		
DRY	DRY	HPAN	HARDPAN	PGVL	PEA GRAVEL	SNDY	SANDYOAPSTONE		

2. Core Color

Code	Description
WHIT	WHITE
GREY	GREY
BLUE	BLUE
GREN	GREEN
YLLW	YELLOW
BRWN	BROWN
RED	RED
BLCK	BLACK
BLGY	BLUE-GREY

3. Well Use

Code	Description	Code	Description
DO	Domestic	OT	Other
ST	Livestock	TH	Test Hole
IR	Irrigation	DE	Dewatering
IN	Industrial	MO	Monitoring
CO	Commercial	MT	Monitoring TestHole
MN	Municipal		
PS	Public		
AC	Cooling And A/C		
NU	Not Used		

4. Water Detail

Code	Description	Code	Description
FR	Fresh	GS	Gas
SA	Salty	IR	Iron
SU	Sulphur		
MN	Mineral		
UK	Unknown		

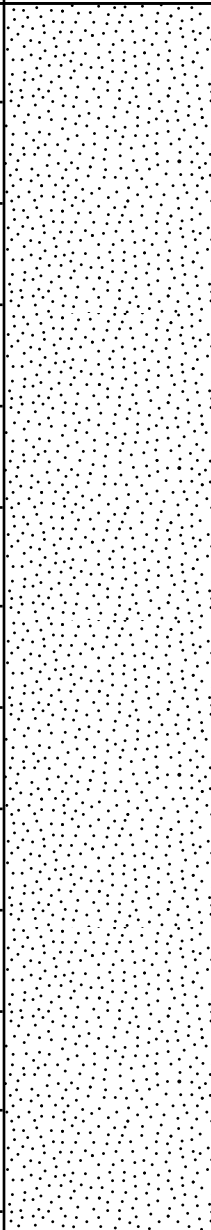
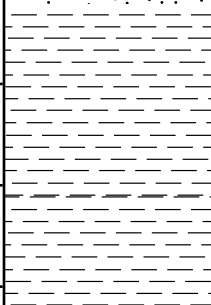
Appendix C

Test Well Logs, Expansion Study

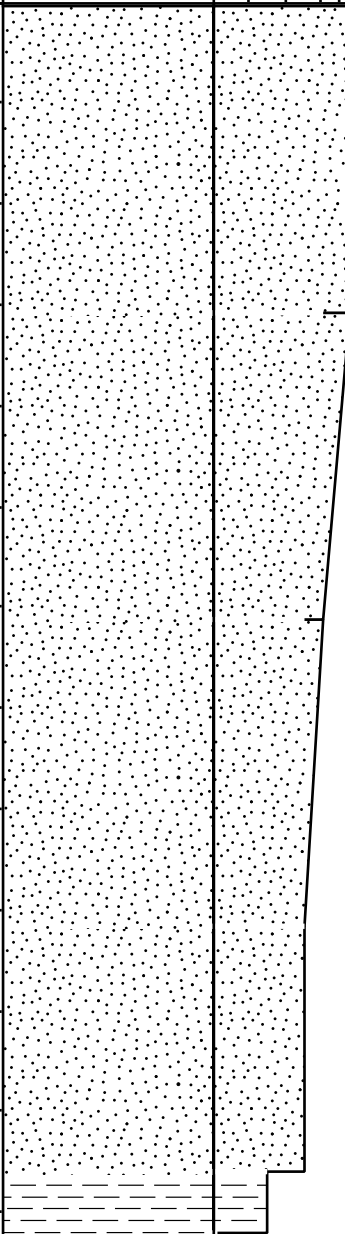


June 13, 2022, Karson Sand & Gravel, MW 7, 420414 5017264

SCALE (m)	LITHOLOGY	LIMESTONES								Sample No.	Blow Count	Notes	Installation
		MUD				SAND		GRAVEL					
		clay	silt	vf	m	vc	gran	pebb	cobb				
1													
2													
3													
4													
5													
6													
7													
				</									

June 13, 2022. Karson Sand & Gravel. MW 8, 420153 5017083													
SCALE (m)	LITHOLOGY	LIMESTONES								Sample No.	Blow Count	Installation	
		mud	wacke	pack	grain	rud &	bound						
		MUD		SAND		GRAVEL							
		clay	silt	vf	m	vc	gran	pebb	cobb	boul			
1										6	3-8-10-13		
2													
3										7	4-9-10-13		
4													
5										8	4-6-7-4		
6													
7										9	0-1-1-3		
										10	2-3-1-1		

June 13, 2022. Karson Sand & Gravel. MW 9, 419504 5016996

SCALE (m)	LITHOLOGY	LIMESTONES								Sample No.	Blow Count	Notes	Installation
		MUD				SAND		GRAVEL					
		clay	silt	vf	m	vc	gran	pebb	cobb				
1													
2													
3													
4													
5													
6													

Measurements recorded in: ☐ Metric ☒ Imperial

Well Owner's Information

First Name West Carleton Sand & Gravel Inc	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Mailing Address (Street Number/Name) 3175 Camp Rd	Municipality Ottawa	Province Ont	Postal Code
Telephone No. (inc. area code)			

Well Location

Address of Well Location (Street Number/Name) 3175 Camp Rd	Township West Carleton	Lot 11	Concession 4
County/District/Municipality Ottawa Carleton	City/Town/Village Ottawa	Province Ontario	Postal Code
UTM Coordinates NAD 83 18 42 0431 5017489	Municipal Plan and Sublot Number	Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
	Sand.			0	36'
	clay			36'	50'
	Sand			50'	82'
grey	limestone.			82'	115'

Annular Space			Volume Placed (m³/ft³)
Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	
83 1/2'	73 1/2'	neat cement slurry	9.36
73 1/2'	0	bentonite slurry	21

Method of Construction		Well Use		
☐ Cable Tool	☐ Diamond	☐ Public	☐ Commercial	☐ Not used
☐ Rotary (Conventional)	☐ Jetting	☐ Domestic	☐ Municipal	☐ Dewatering
☐ Rotary (Reverse)	☐ Driving	☐ Livestock	☐ Test Hole	☒ Monitoring
☐ Boring	☐ Digging	☐ Irrigation	☐ Cooling & Air Conditioning	
☒ Air percussion		☐ Industrial		
☐ Other, specify		☐ Other, specify		

Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6"	Steel	.188	+2	83 1/2'
5 7/8"	Openhole		83 1/2'	115'

Construction Record - Screen			Status of Well	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To

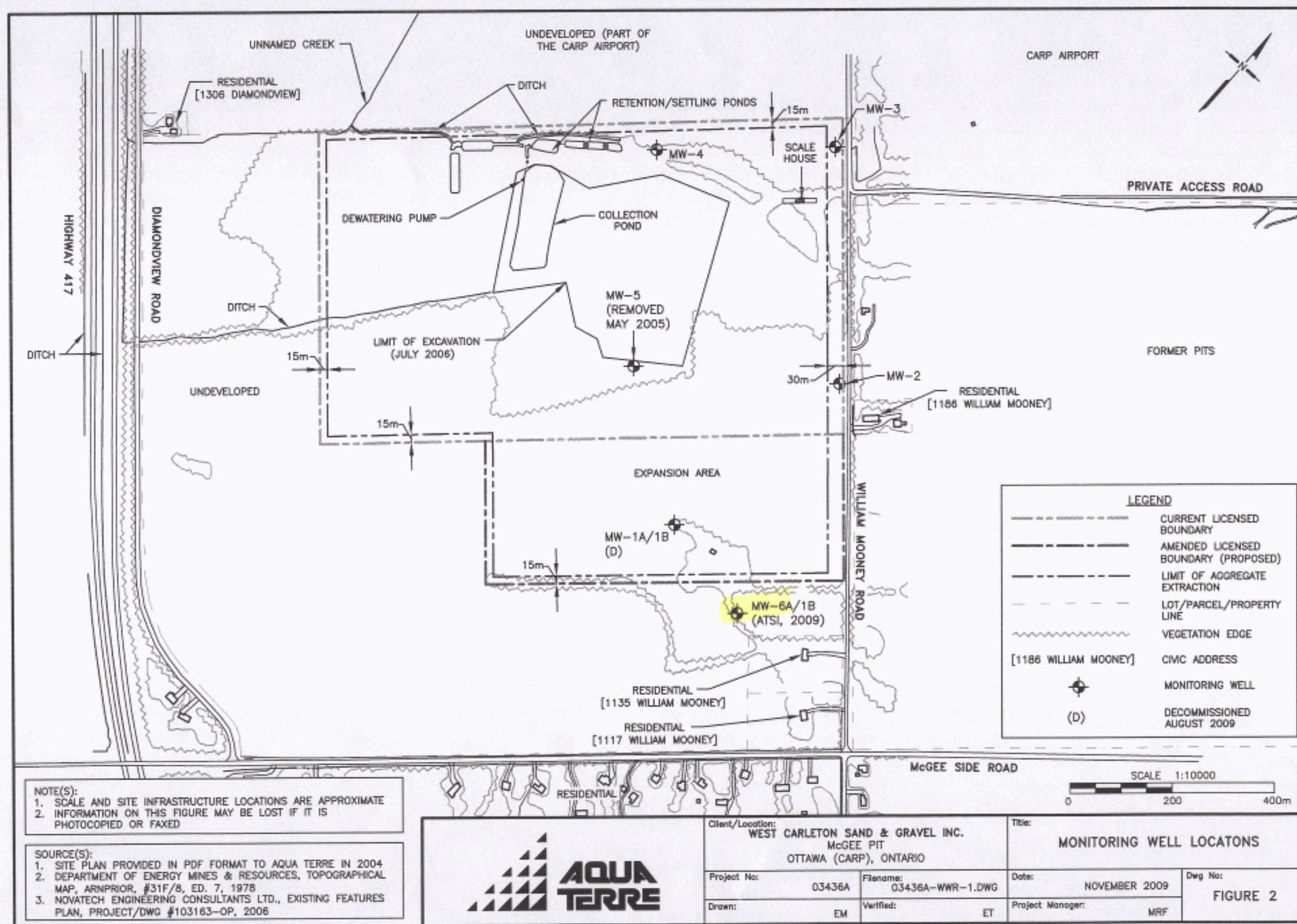
Water Details		Hole Diameter	
Water found at Depth 101' (m/ft)	Kind of Water: ☐ Fresh ☒ Untested	Depth (m/ft) From	To
Water found at Depth 113' (m/ft)	Kind of Water: ☐ Fresh ☒ Untested	0	83 1/2'
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested	83 1/2'	115'
			5 7/8"

Business Name of Well Contractor Air Rock Drilling Co Ltd		Well Contractor's Licence No. 1119
Business Address (Street Number/Name) 6659 Franktown Rd		Municipality Richmond
Province Ont	Postal Code K0A2Z0	Business E-mail Address
Bus. Telephone No. (inc. area code) 613 8382170	Name of Well Technician (Last Name, First Name) Hogan Dan.	
Well Technician's Licence No. 3058	Signature of Technician and/or Contractor Date Submitted 2009/12/23	

Results of Well Yield Testing			
After test of well yield, water was:		Draw Down	
☐ Clear and sand free		Time (min)	Water Level (m/ft)
☒ Other, specify: Not tested.		Static Level	61'
If pumping discontinued, give reason:		1	17'
Pump intake set at (m/ft) 100'		2	19'
Pumping rate (l/min / GPM) 3		3	21'
Duration of pumping 1 hrs + min		4	22'6"
Final water level end of pumping (m/ft) 61'		5	24'5"
If flowing give rate (l/min / GPM)		10	30'9"
Recommended pump depth (m/ft) 100'		15	35'
Recommended pump rate (l/min / GPM) 2.5 gpm		20	40'3"
Well production (l/min / GPM) 2.5 gpm		25	44'
Disinfected? ☒ Yes ☐ No		30	47'2"
		40	52'
		50	56'7"
		60	61'

Map of Well Location
Please provide a map below following instructions on the back.
See attached site map.

TW 6A



C-1119 2-102693

JAN 11 2010

Appendix D

Hydraulic Conductivity Tests and Analysis



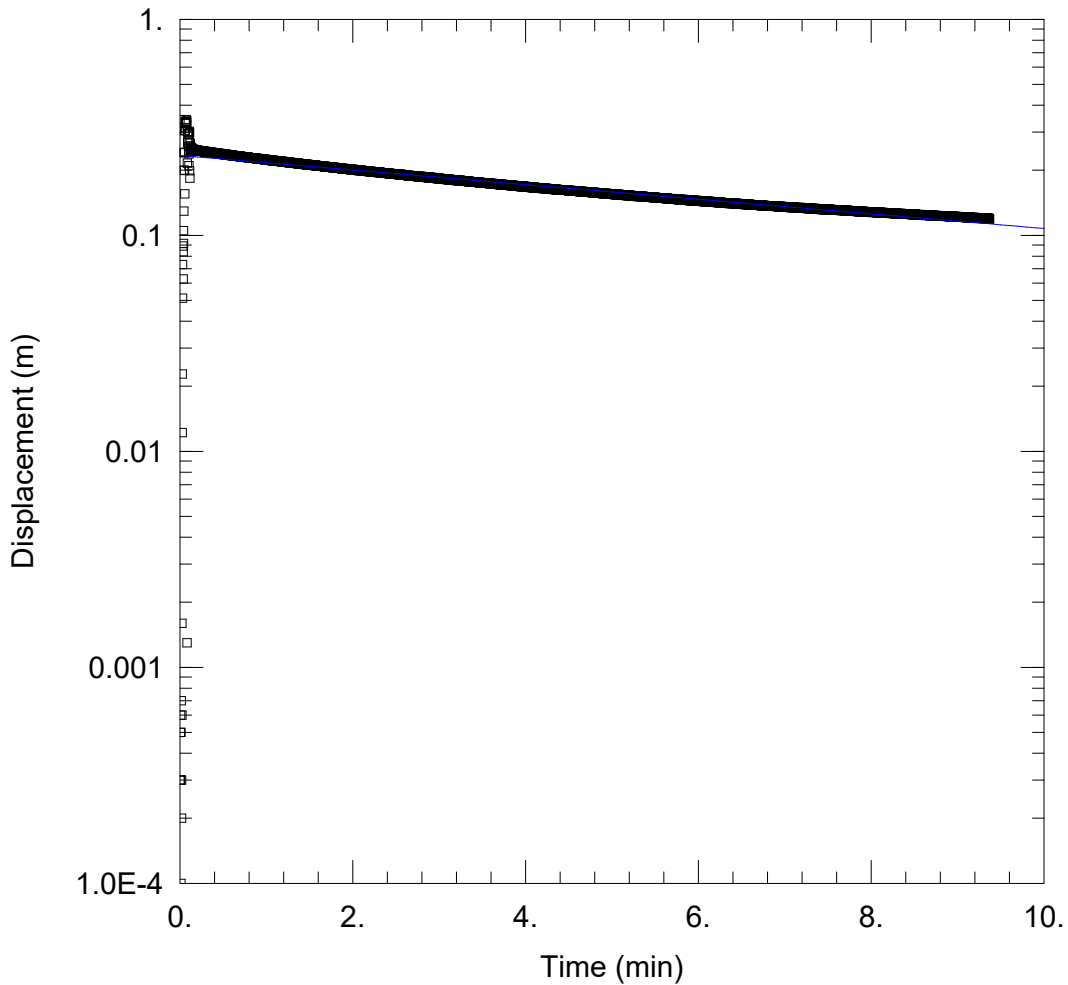
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 1.372E-6$ m/sec $y_0 = 0.2343$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.3429 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

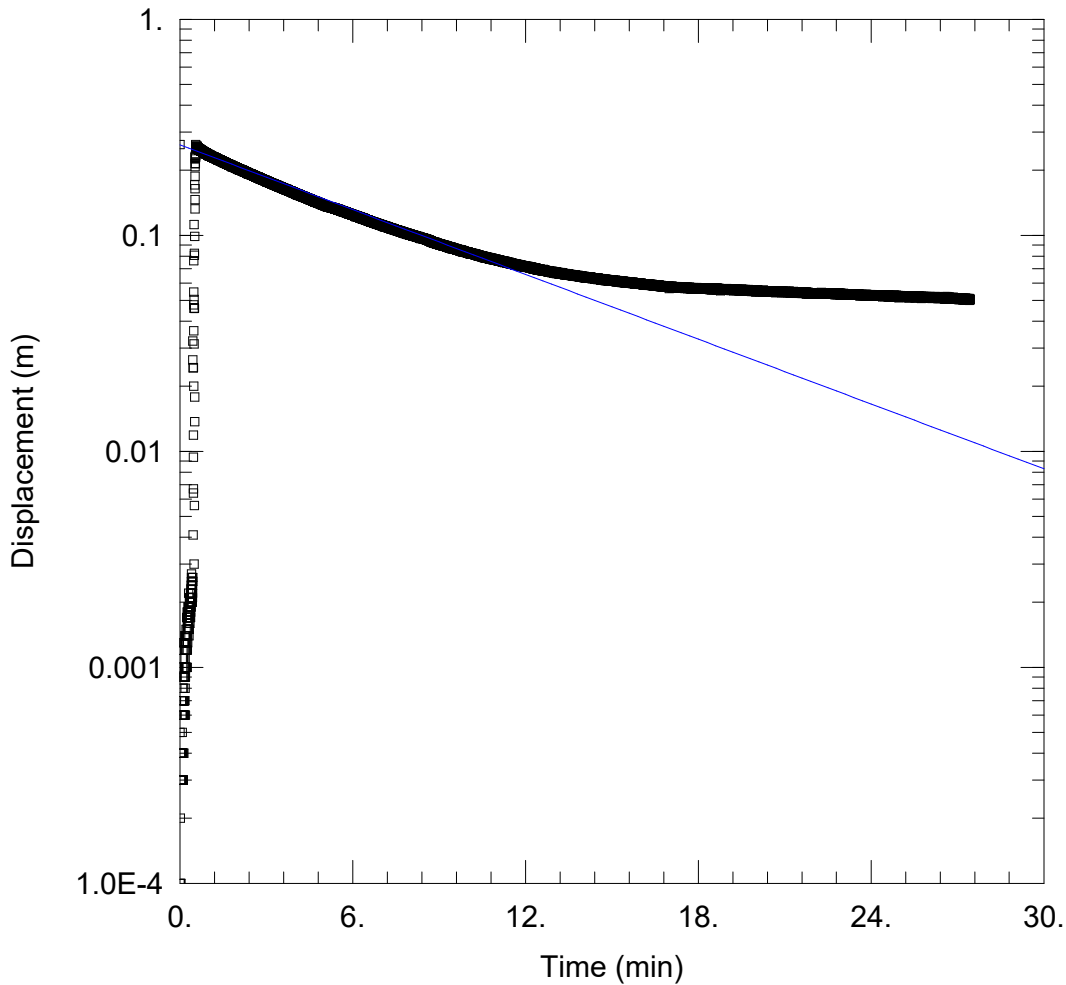
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.03E-6$ m/sec $y_0 = 0.2624$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.263 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

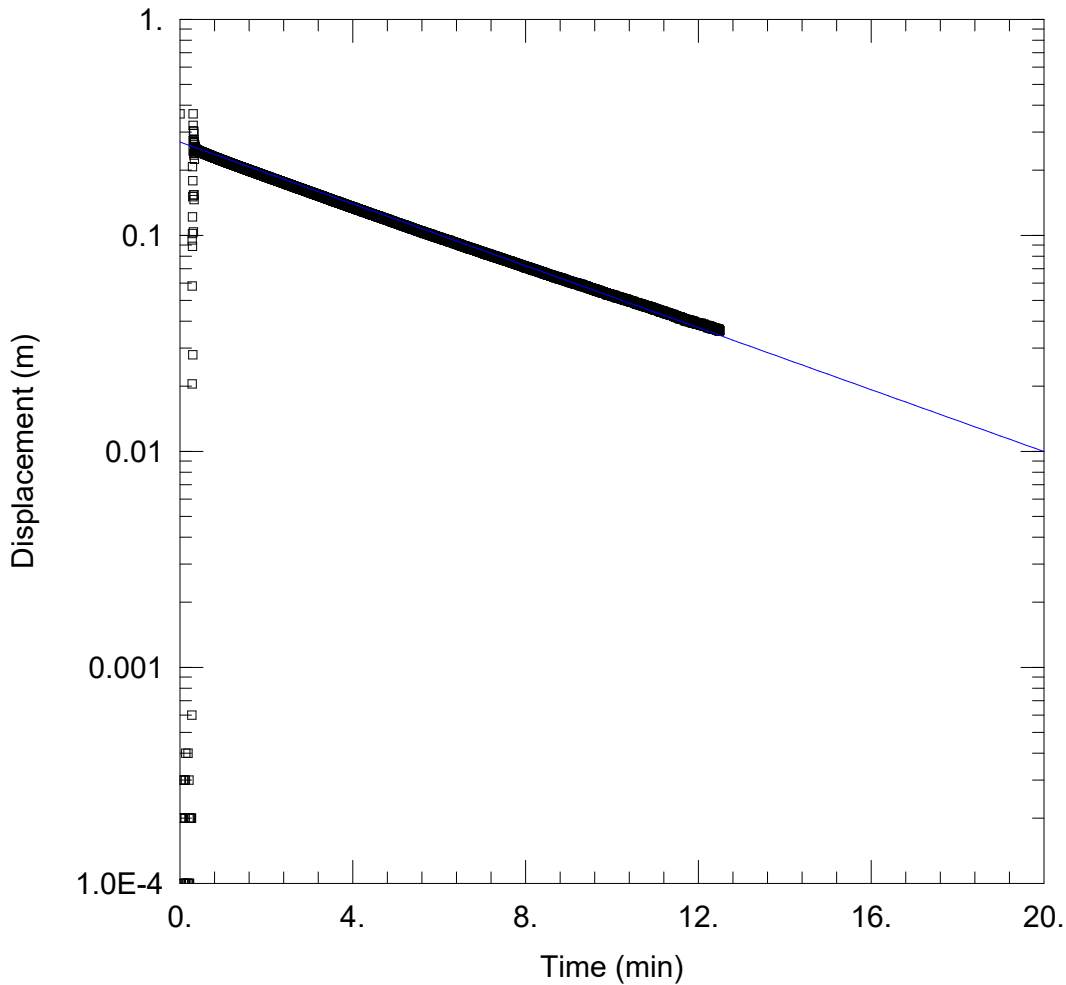
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.907E-6$ m/sec $y_0 = 0.2704$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.3646 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

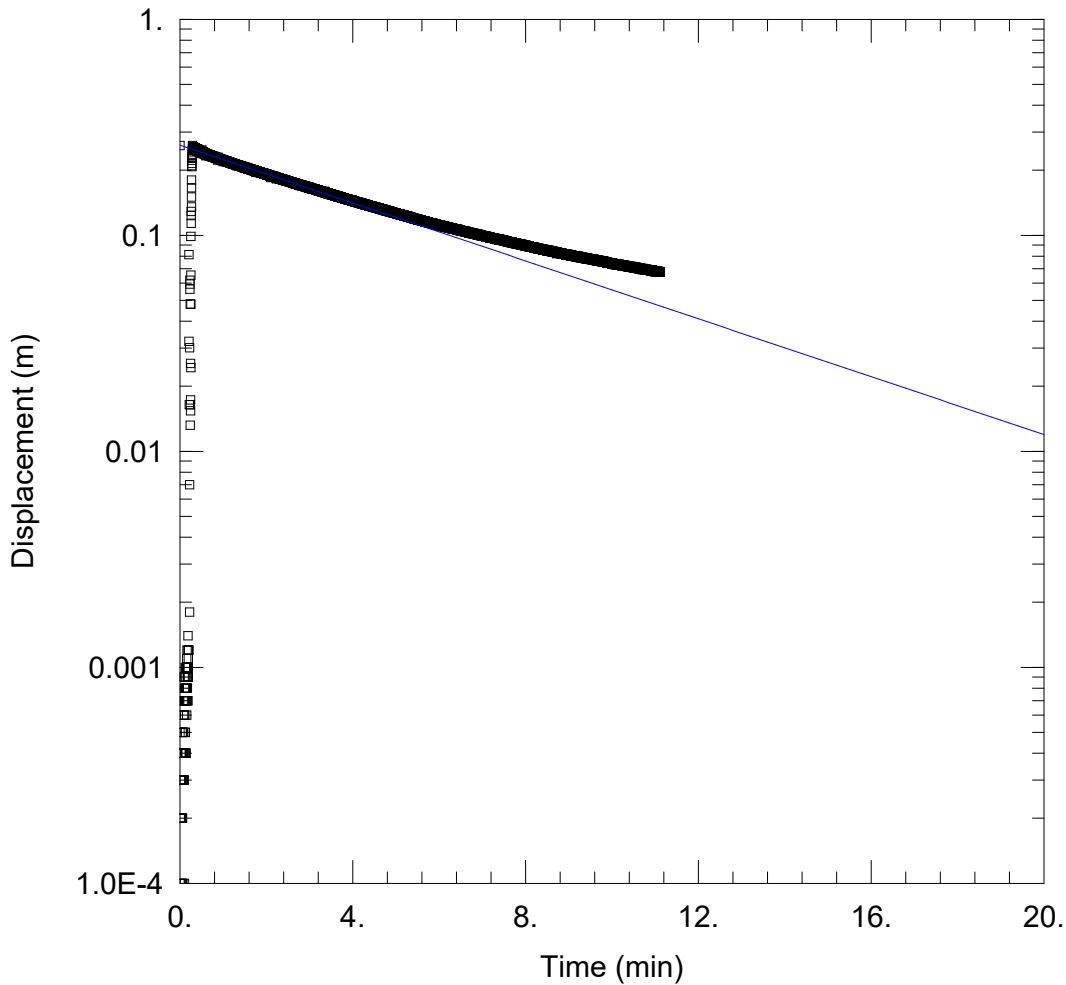
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.718E-6$ m/sec $y_0 = 0.2613$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.2604 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

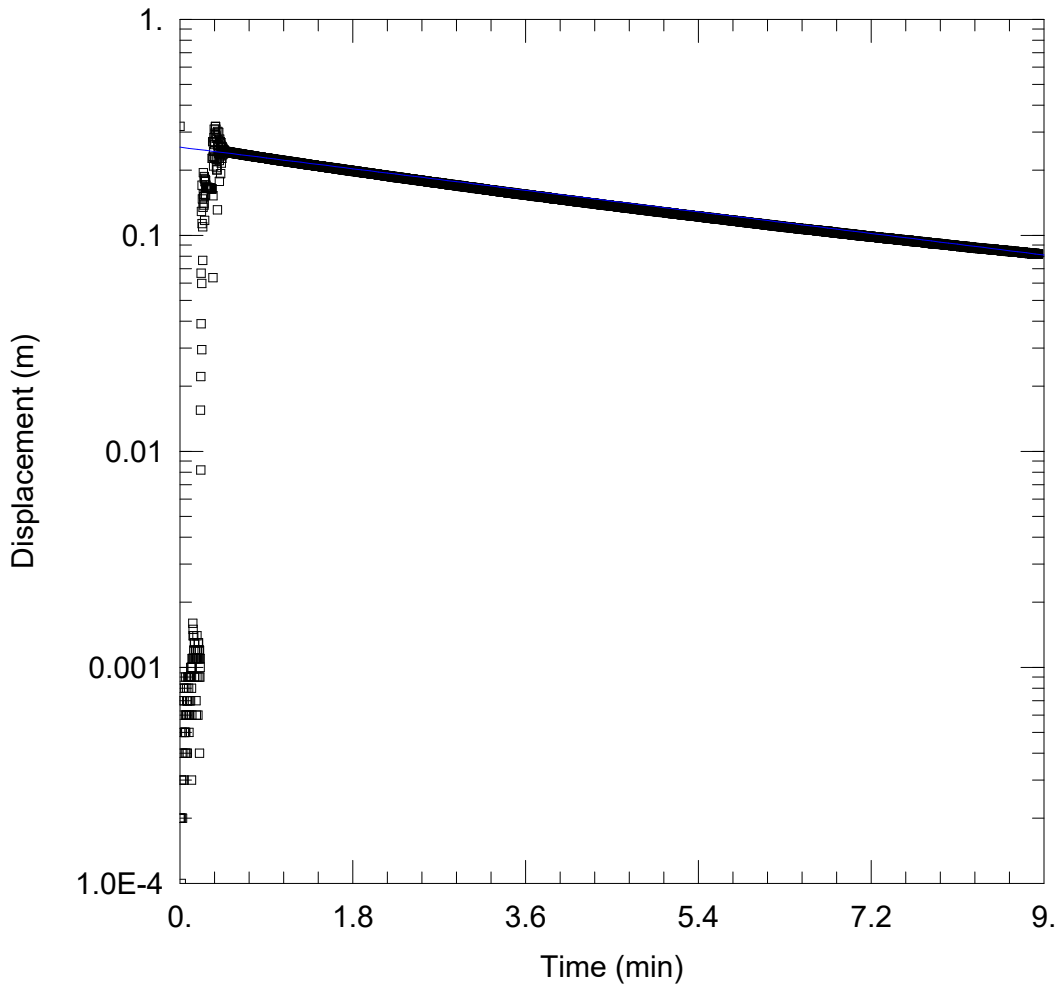
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.25E-6$ m/sec $y_0 = 0.2558$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.3191 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

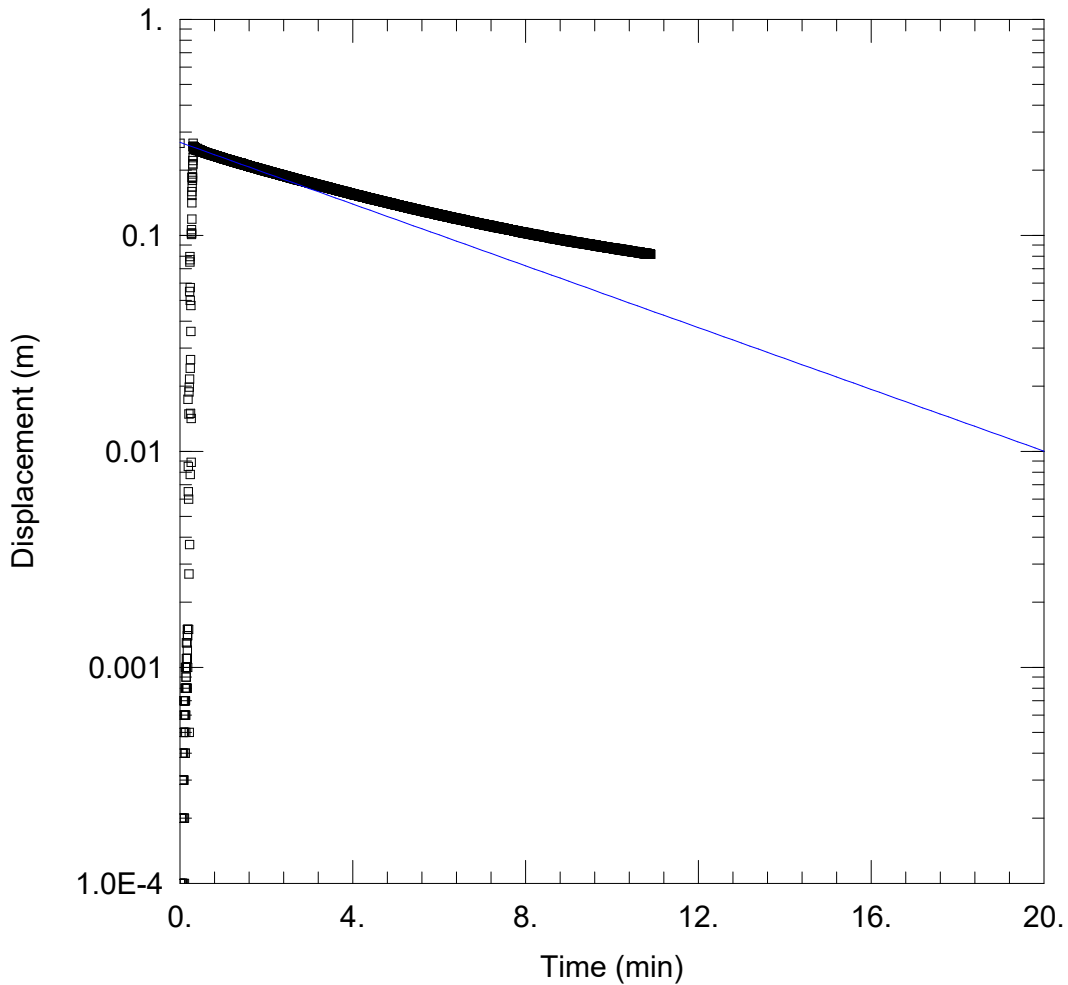
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.9E-6$ m/sec $y_0 = 0.2693$ m

AQUIFER DATA

Saturated Thickness: 32.77 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6A)

Initial Displacement: 0.2664 m
Static Water Column Height: 32.77 m
Total Well Penetration Depth: 35.05 m
Screen Length: 9.45 m
Casing Radius: 0.0762 m
Well Radius: 0.0762 m
Gravel Pack Porosity: 0.

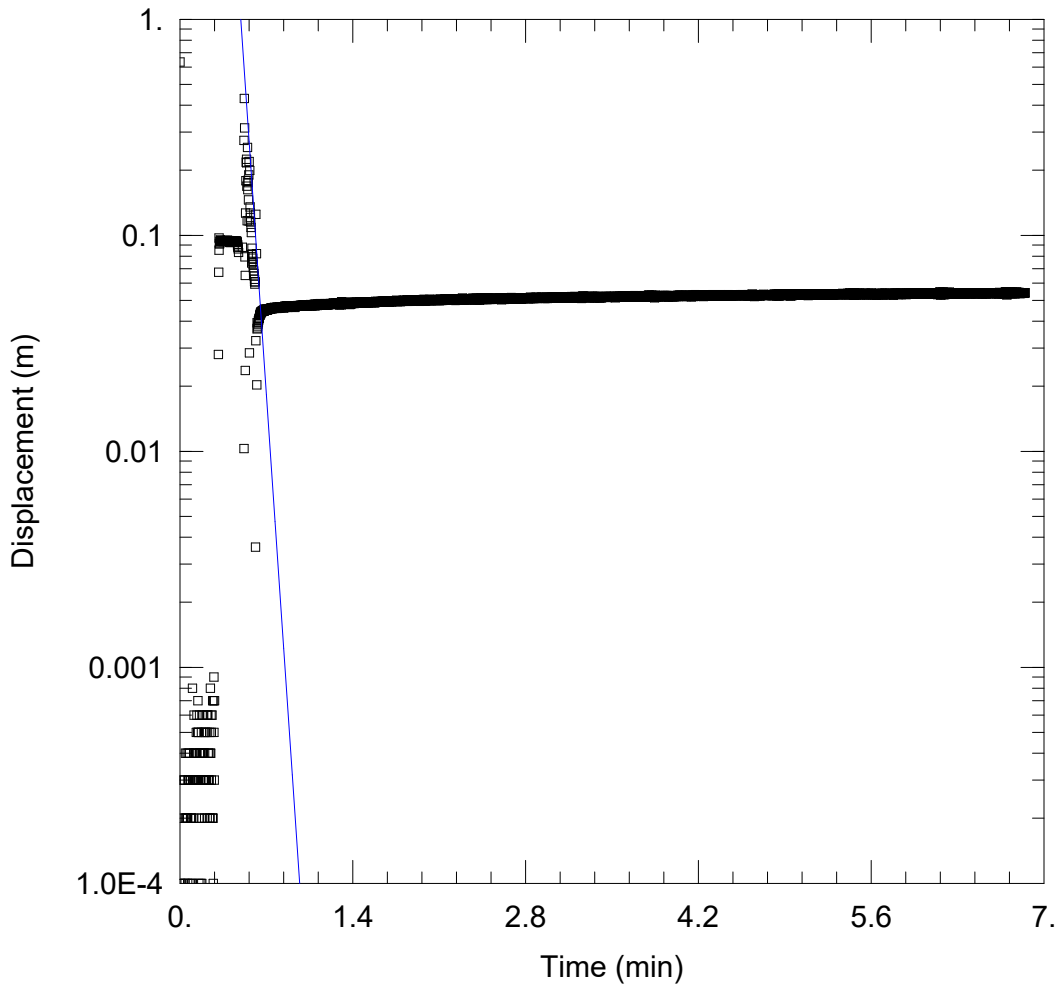
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 9.28E-5$ m/sec $y_0 = 1.348E+4$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.6339 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

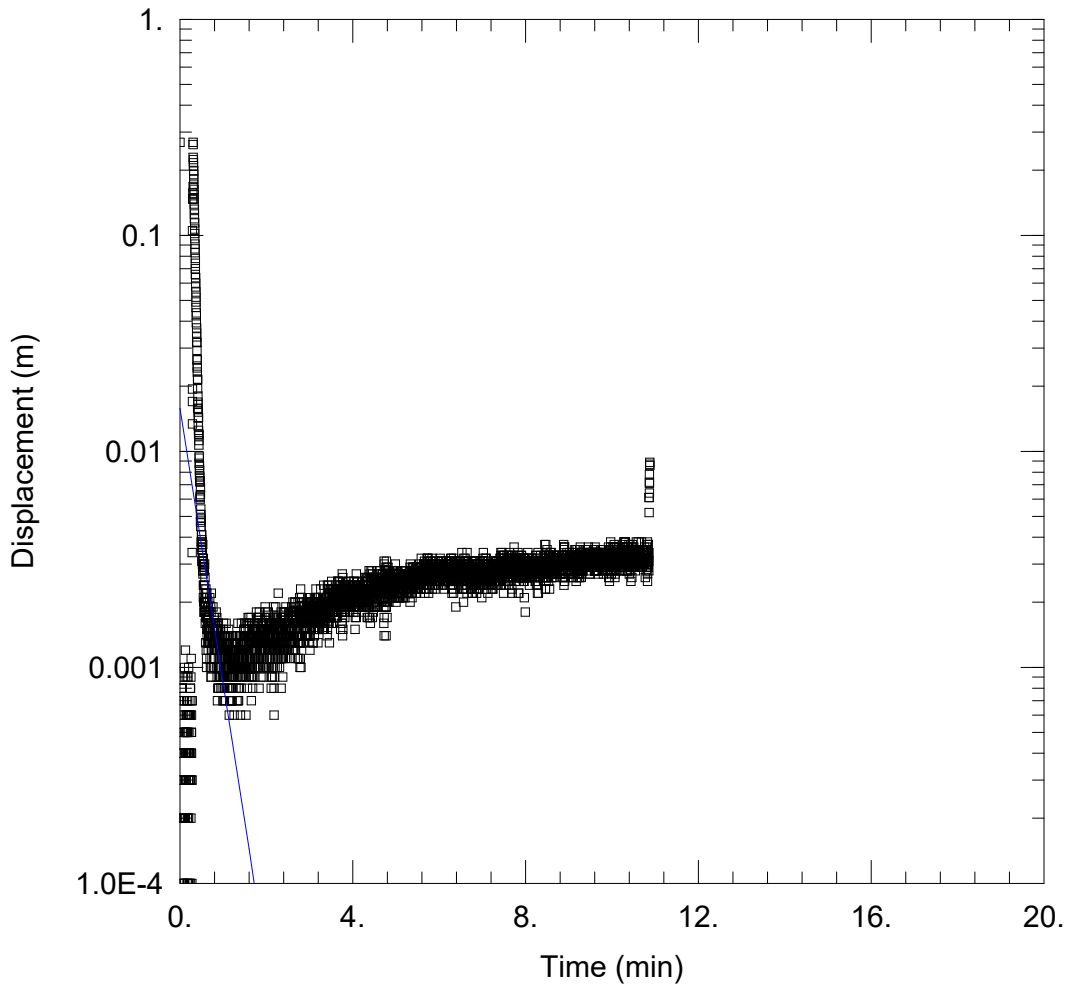
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 1.412E-5$ m/sec $y_0 = 0.01582$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.2695 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

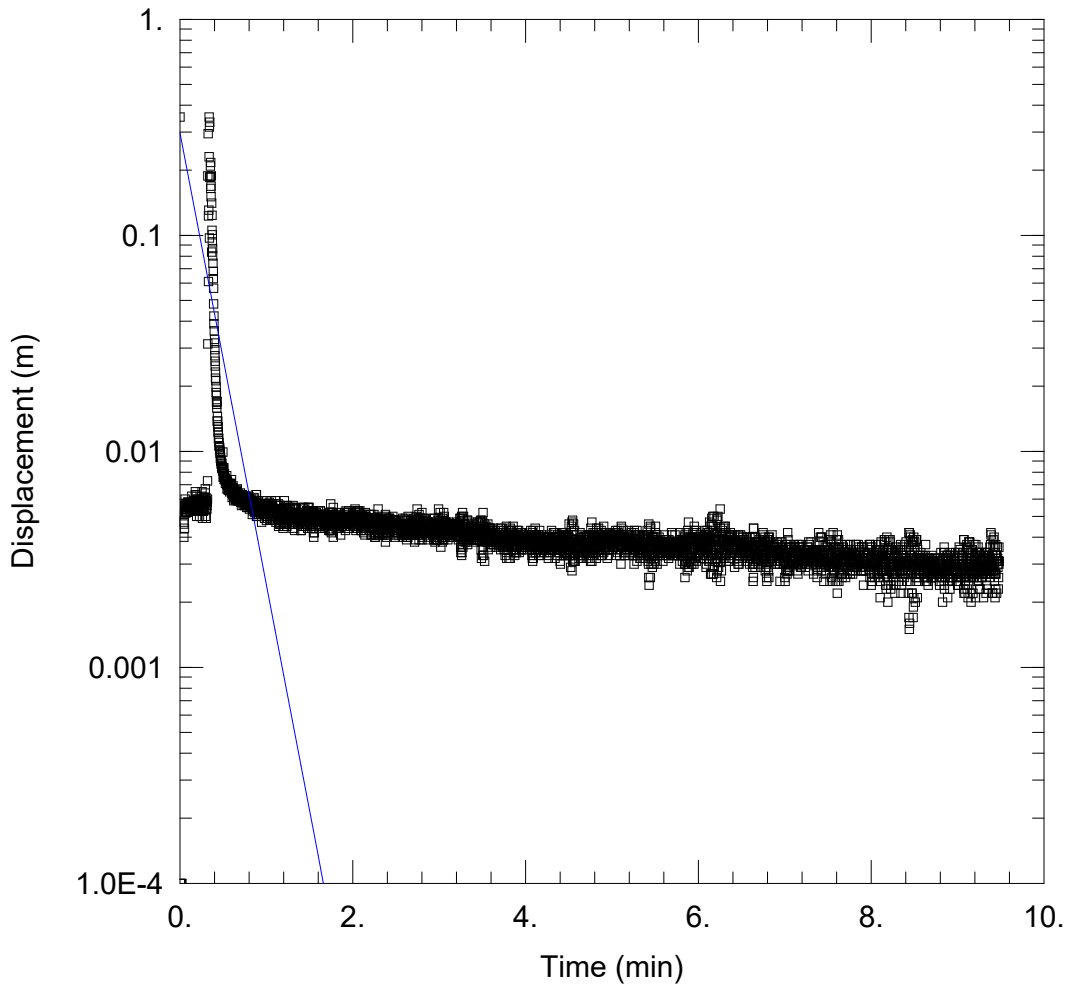
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 2.315E-5$ m/sec $y_0 = 0.2975$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.3533 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

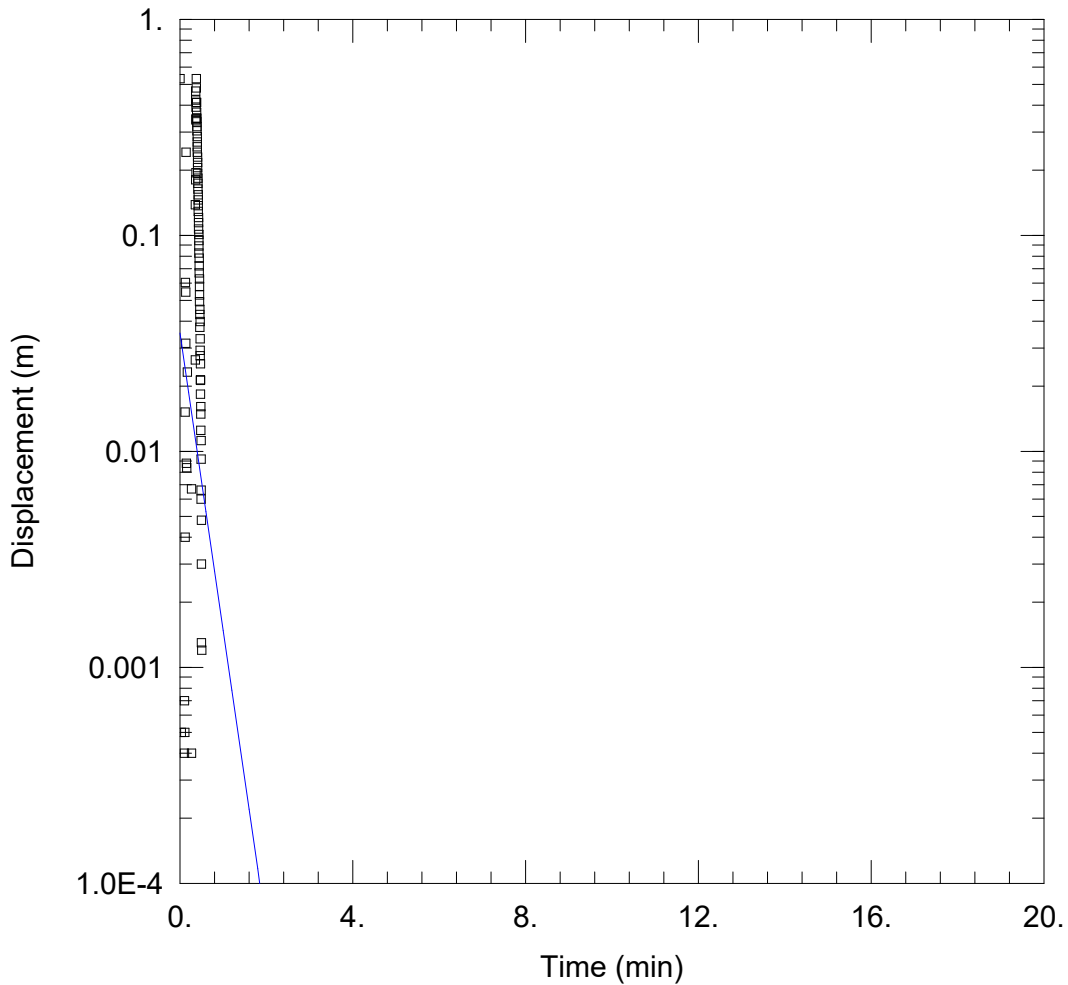
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 1.526E-5$ m/sec $y_0 = 0.03531$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.5312 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

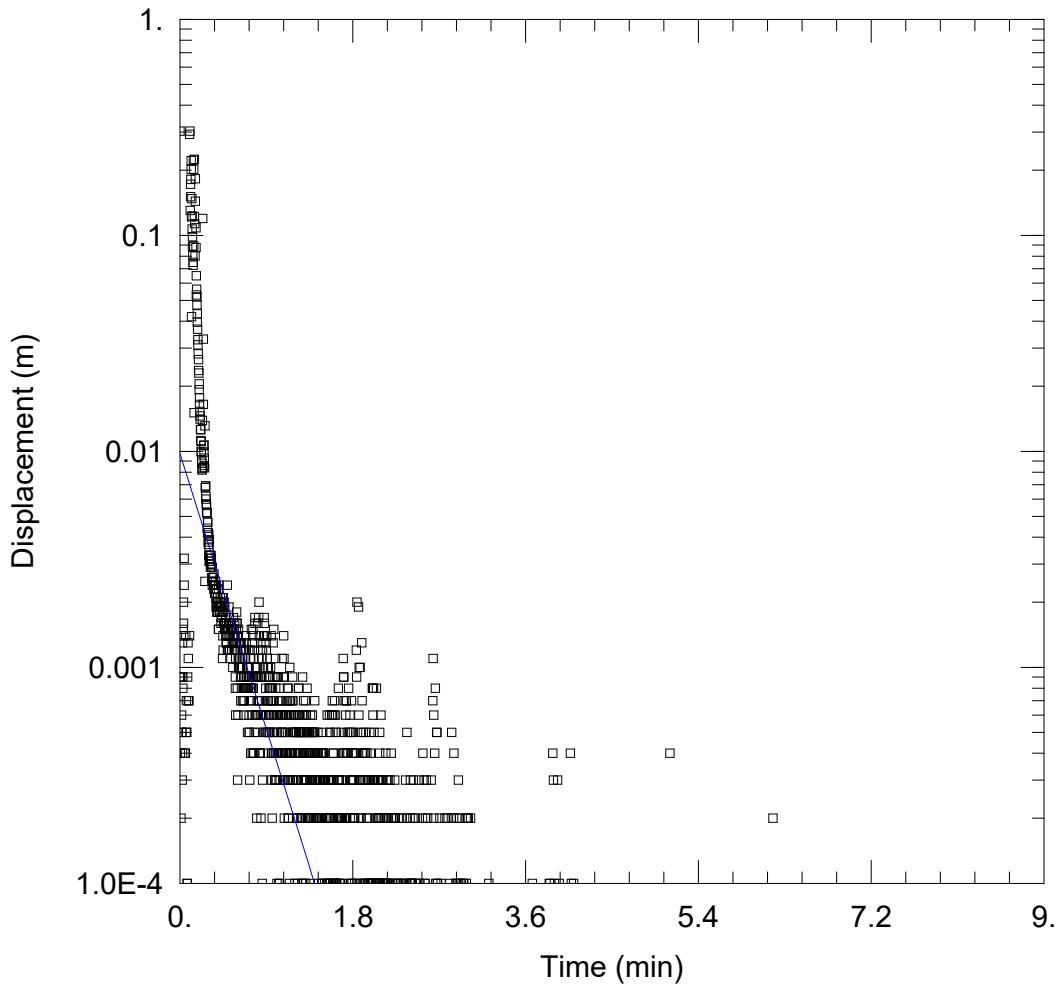
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 1.57E-5$ m/sec $y_0 = 0.009762$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.3035 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

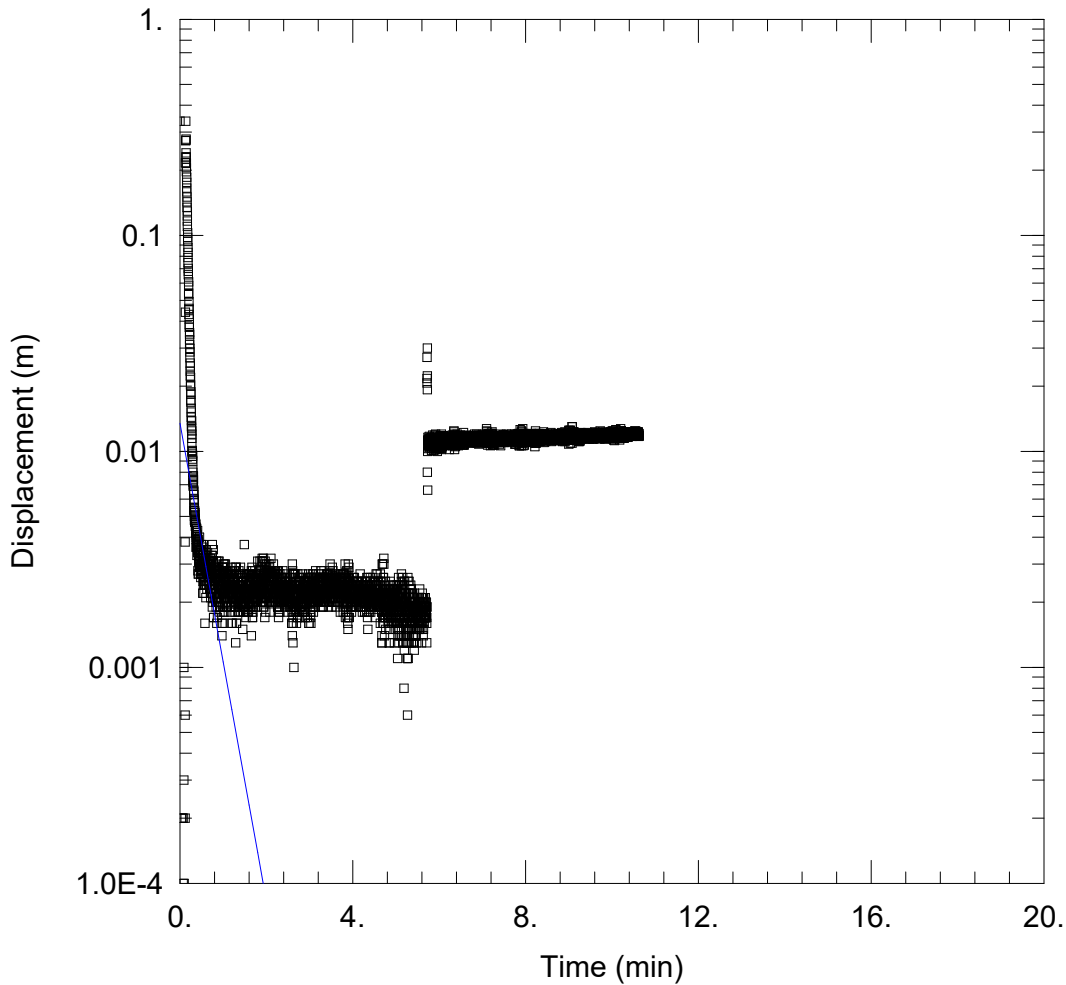
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
Karson Holdings Inc.

Project:
21-021

Location:
McGee Pit



SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

$K = 1.223E-5$ m/sec $y_0 = 0.01346$ m

AQUIFER DATA

Saturated Thickness: 1.96 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW 6B)

Initial Displacement: 0.3377 m
Static Water Column Height: 1.96 m
Total Well Penetration Depth: 5.7 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

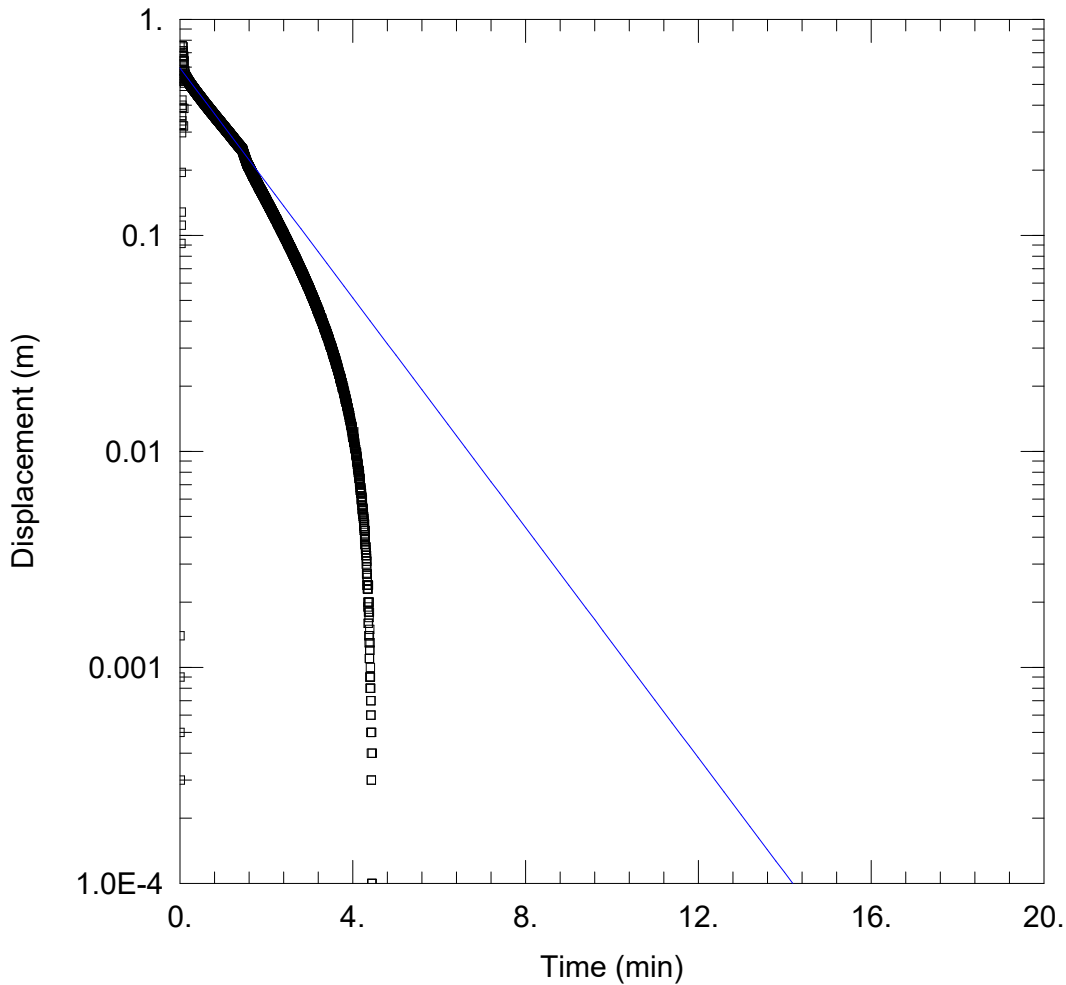
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 5.747E-6 m/sec y0 = 0.5949 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 7)

Initial Displacement: 0.7545 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

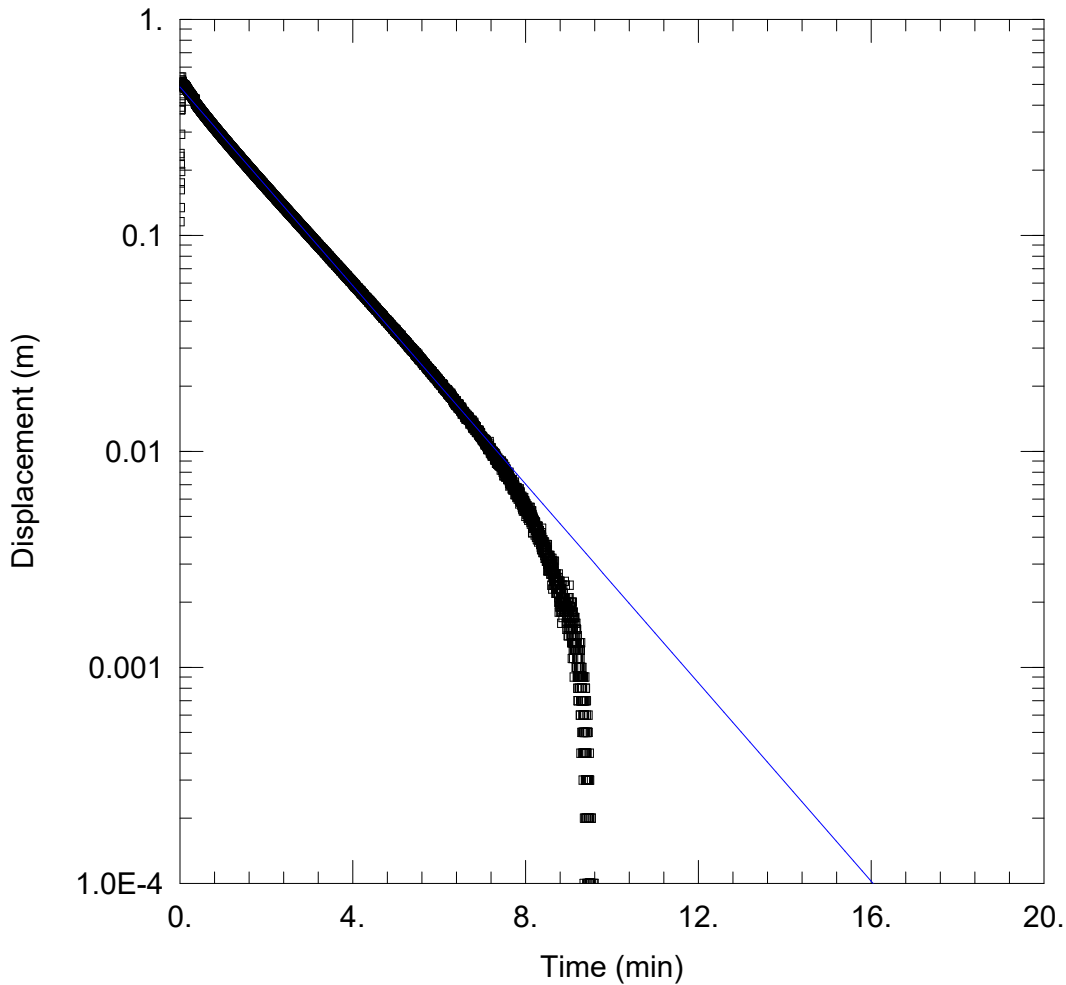
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.962E-6$ m/sec $y_0 = 0.4853$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 7)

Initial Displacement: 0.5404 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

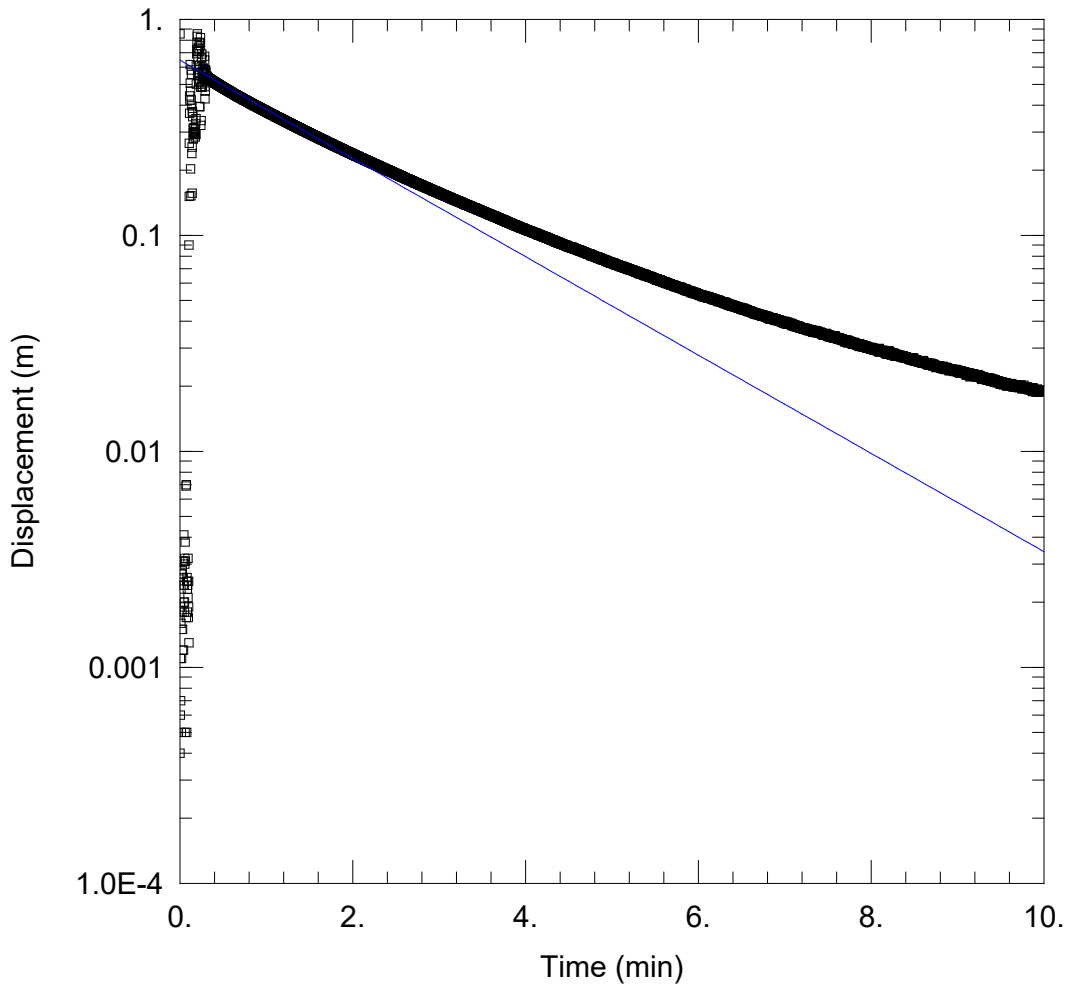
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.914E-6$ m/sec $y_0 = 0.6464$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 7)

Initial Displacement: 0.855 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

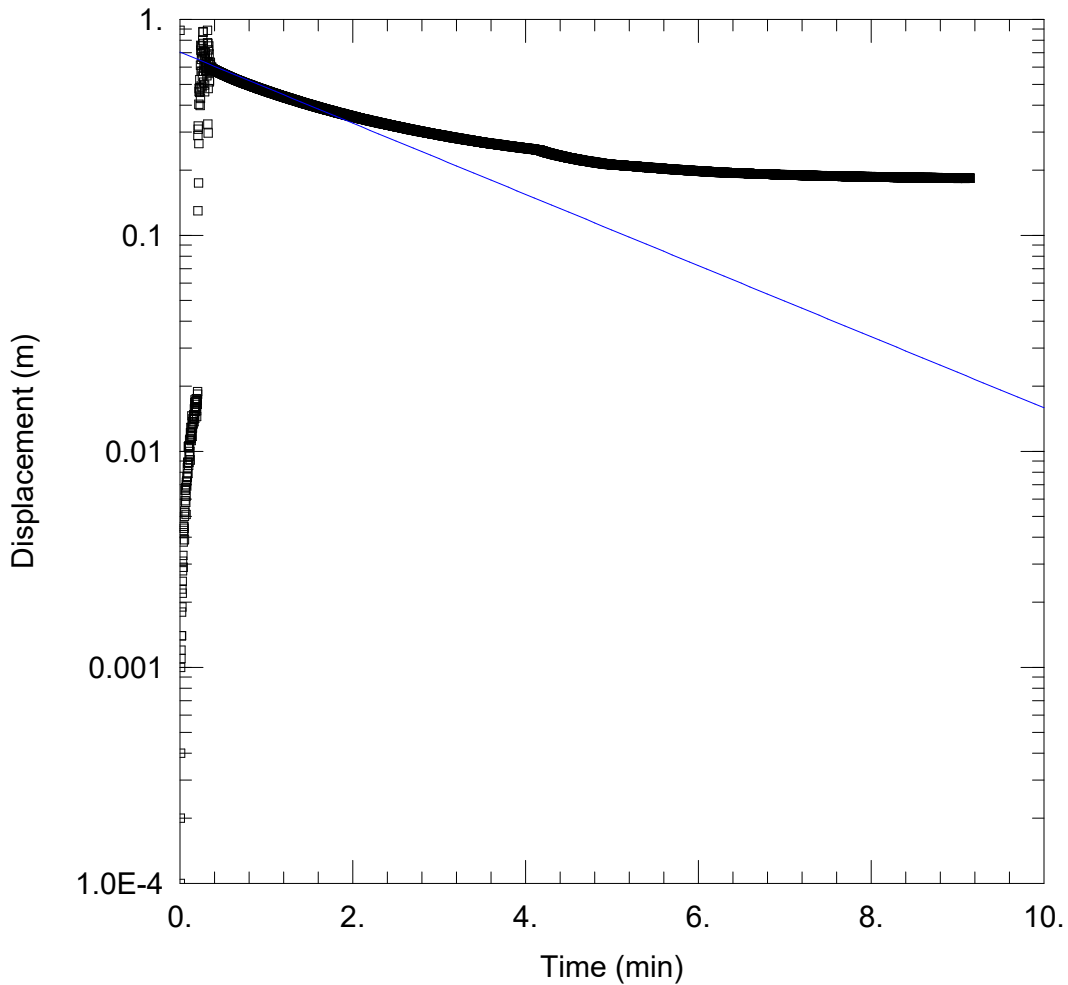
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 3.557E-6 m/sec y0 = 0.7047 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 7)

Initial Displacement: 0.8891 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

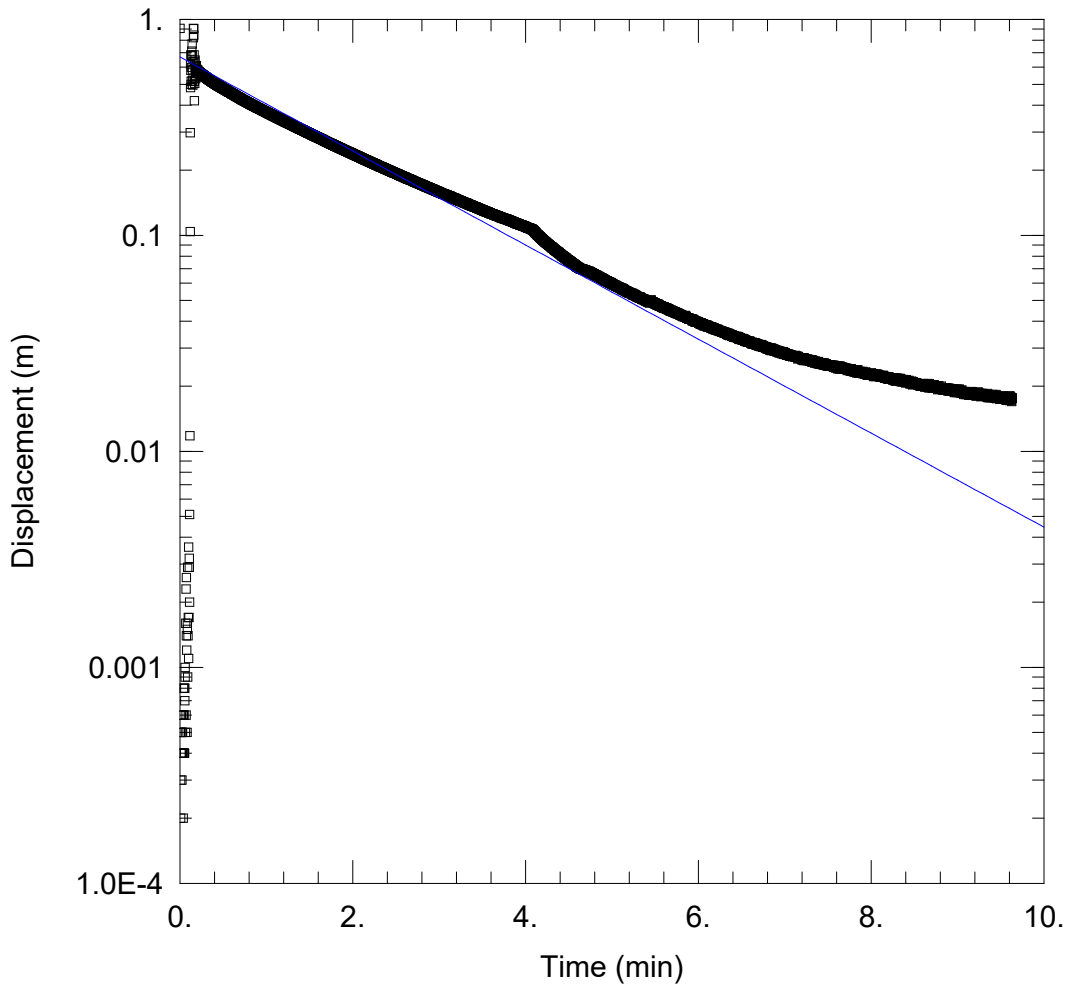
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.701E-6$ m/sec $y_0 = 0.6688$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 7)

Initial Displacement: 0.9061 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

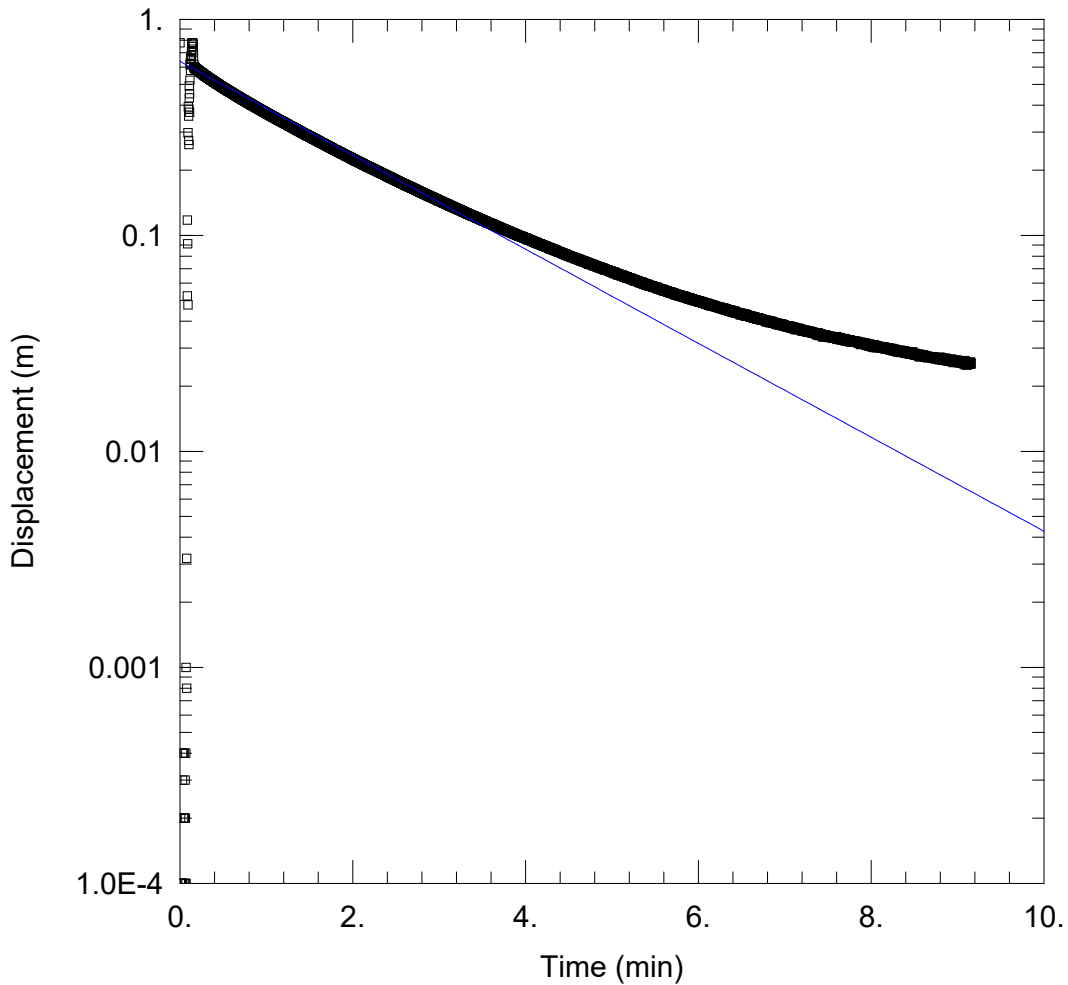
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.698E-6$ m/sec $y_0 = 0.6388$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 7)

Initial Displacement: 0.7794 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

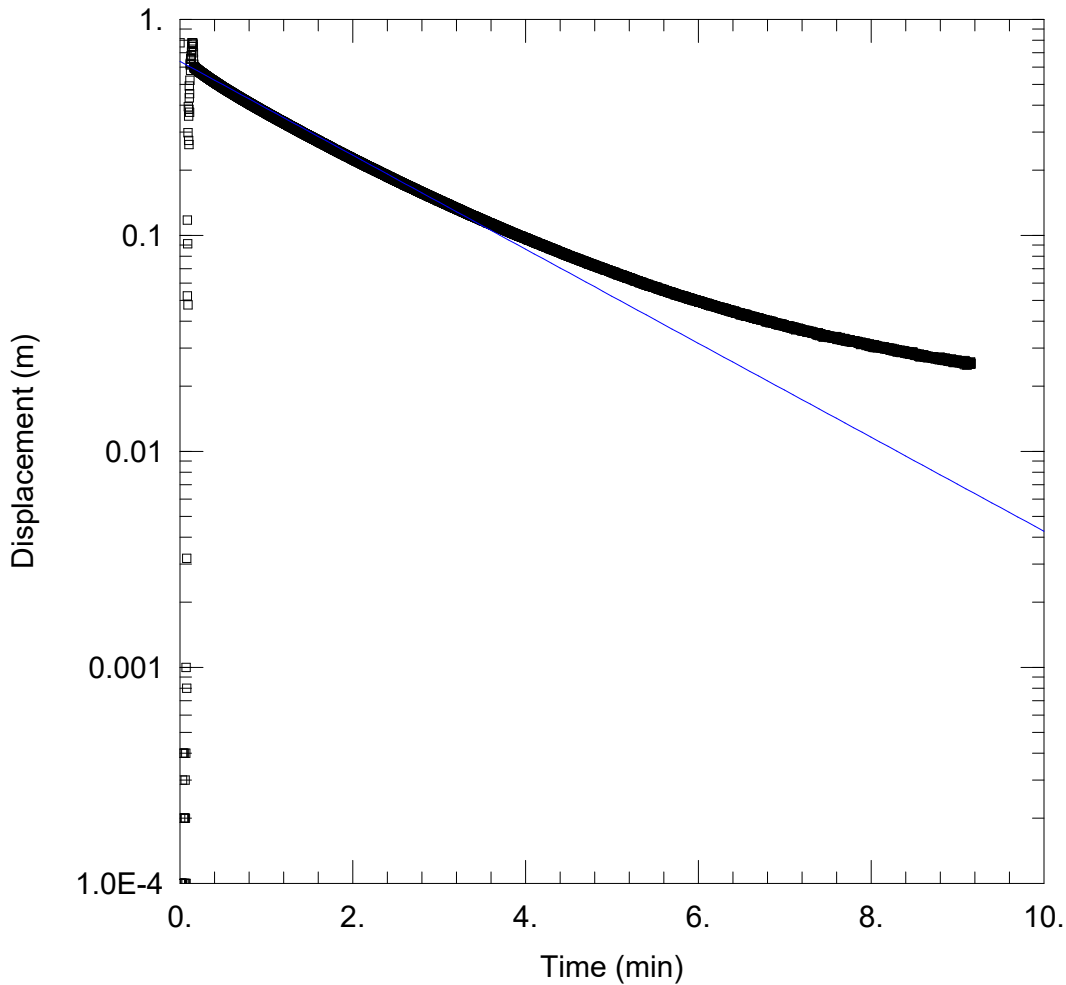
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.698E-6$ m/sec $y_0 = 0.6388$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 7)

Initial Displacement: 0.7794 m
Static Water Column Height: 5.3 m
Total Well Penetration Depth: 7.61 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

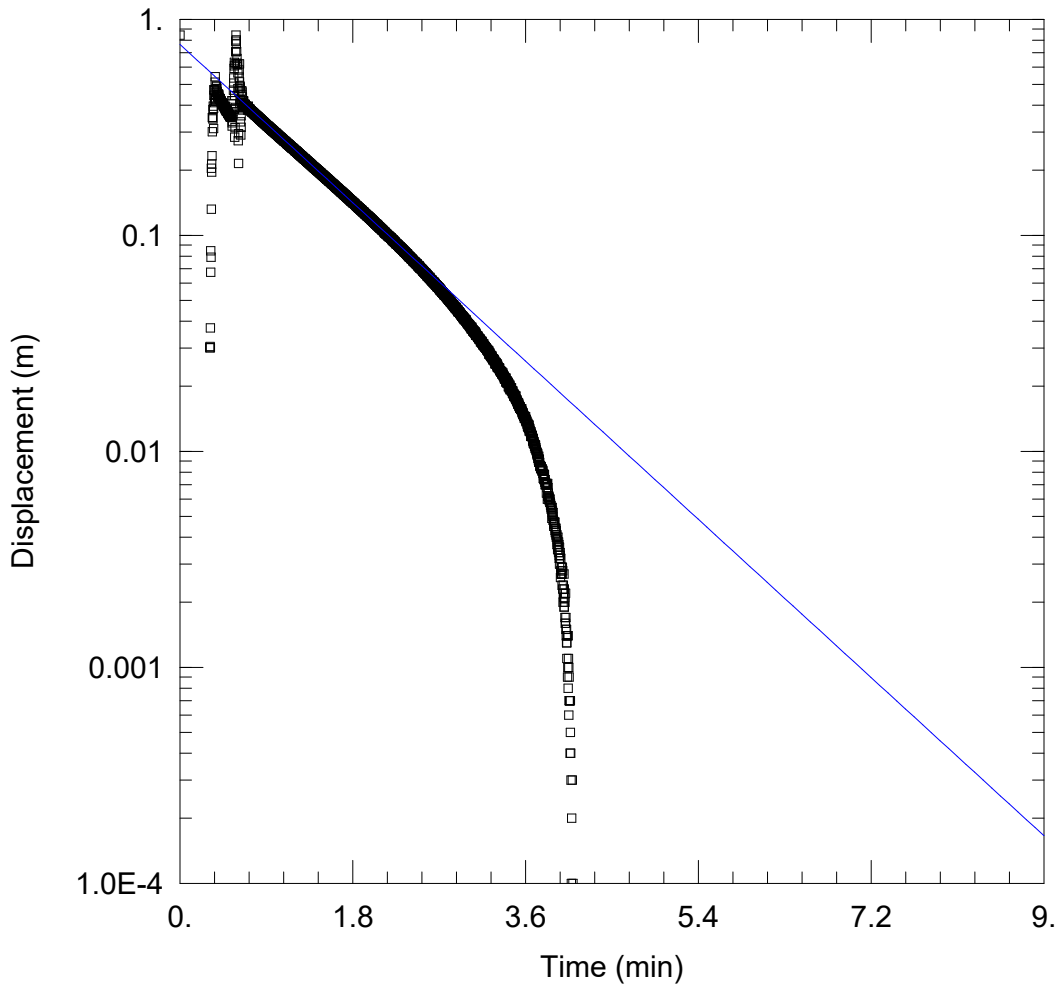
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 8.793E-6 m/sec y0 = 0.7648 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 8)

Initial Displacement: 0.8434 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

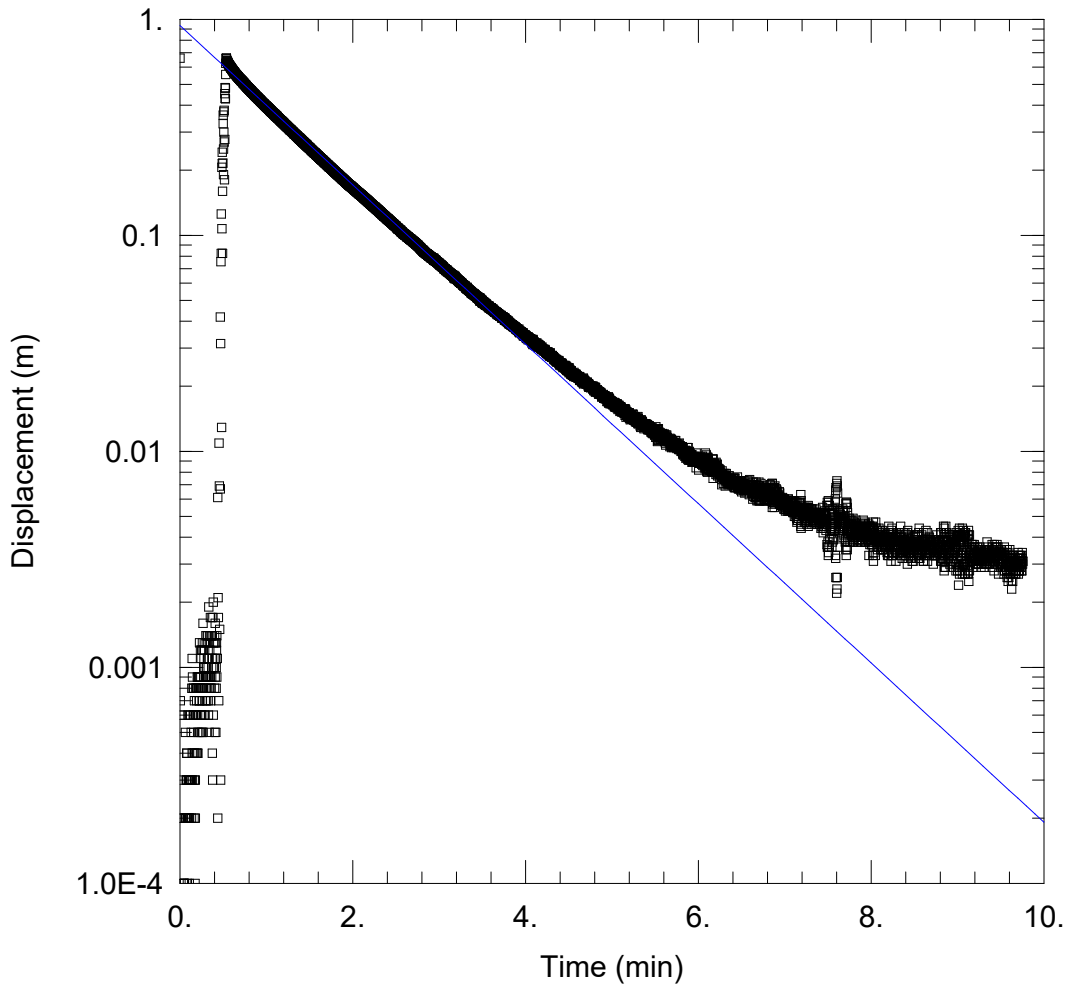
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 7.968E-6$ m/sec $y_0 = 0.9356$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 8)

Initial Displacement: 0.6615 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

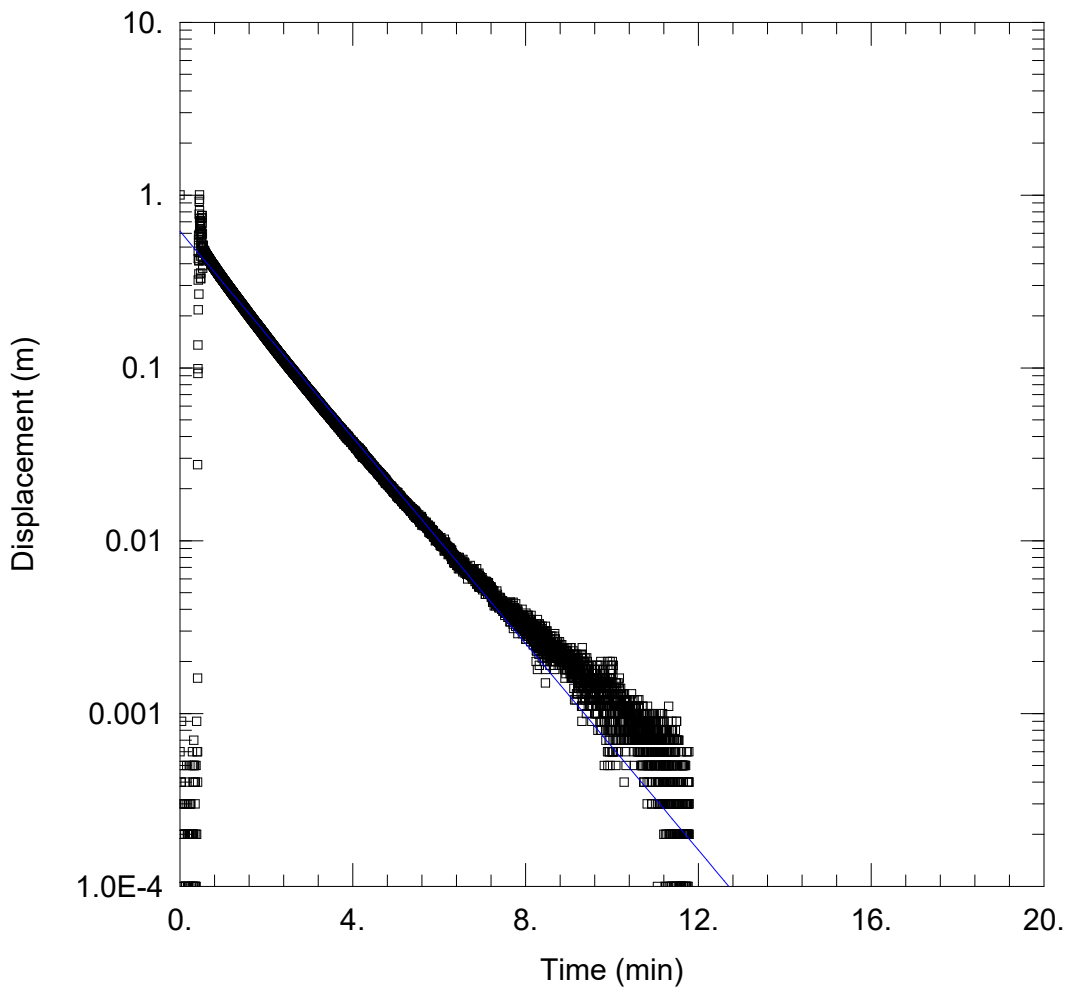
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 6.445E-6$ m/sec $y_0 = 0.6177$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 8)

Initial Displacement: 1.001 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

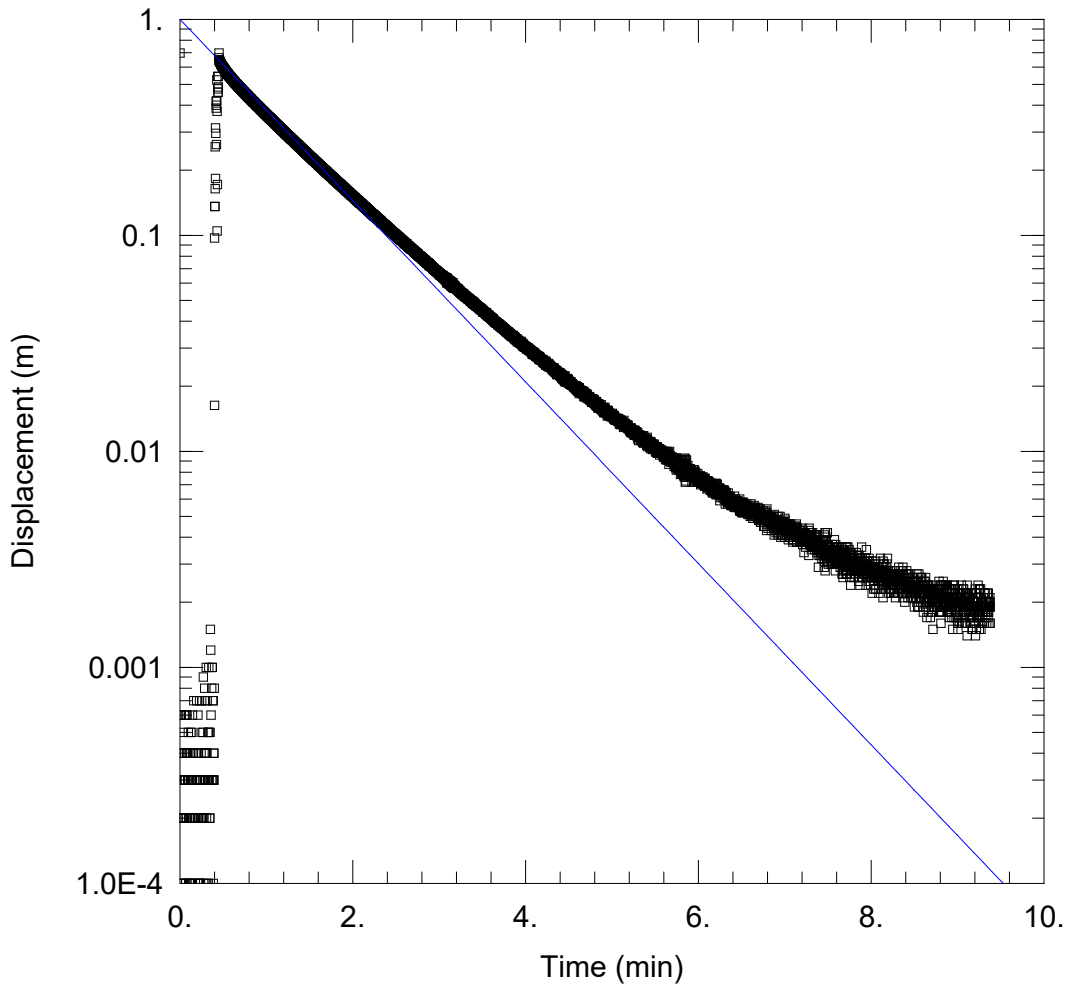
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 9.068E-6 m/sec y0 = 0.9996 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 8)

Initial Displacement: 0.6978 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

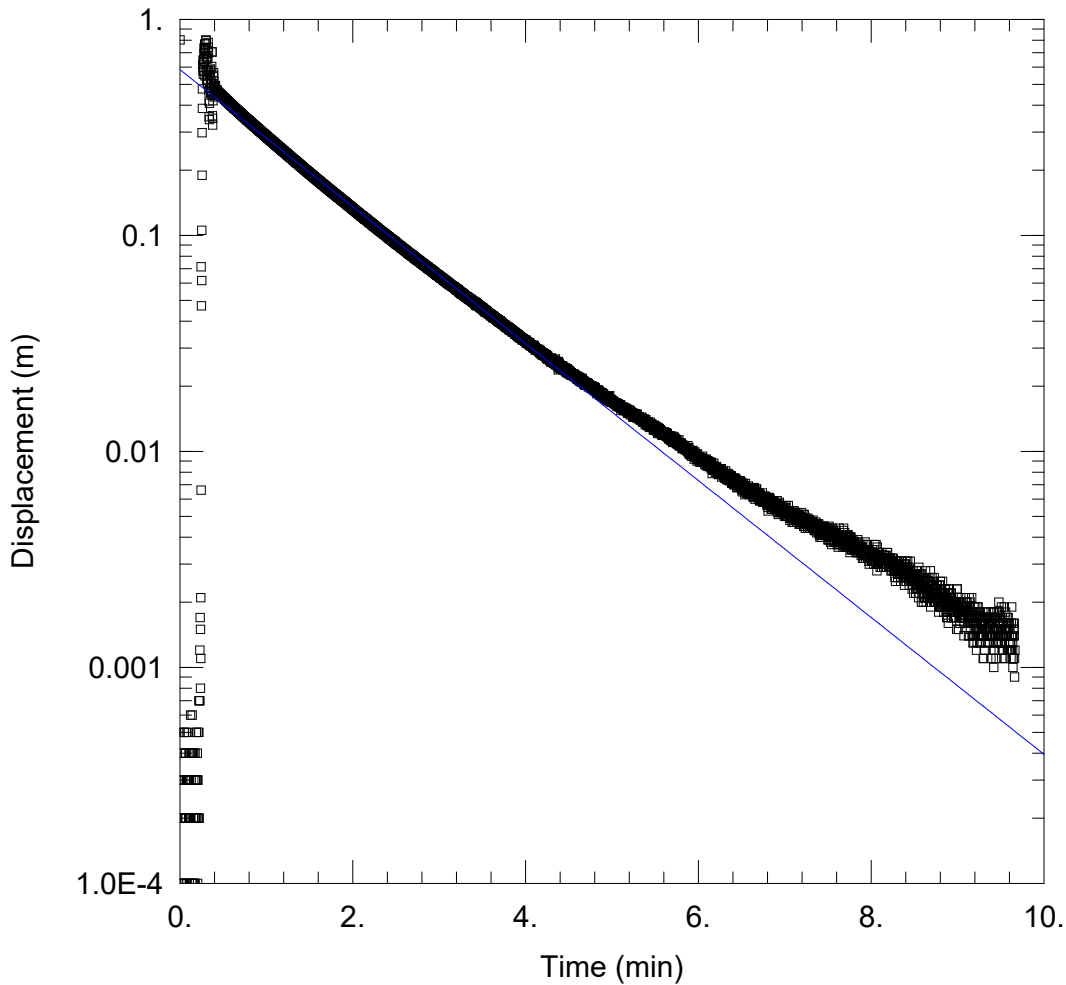
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 6.846E-6 m/sec y0 = 0.5843 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 8)

Initial Displacement: 0.8038 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

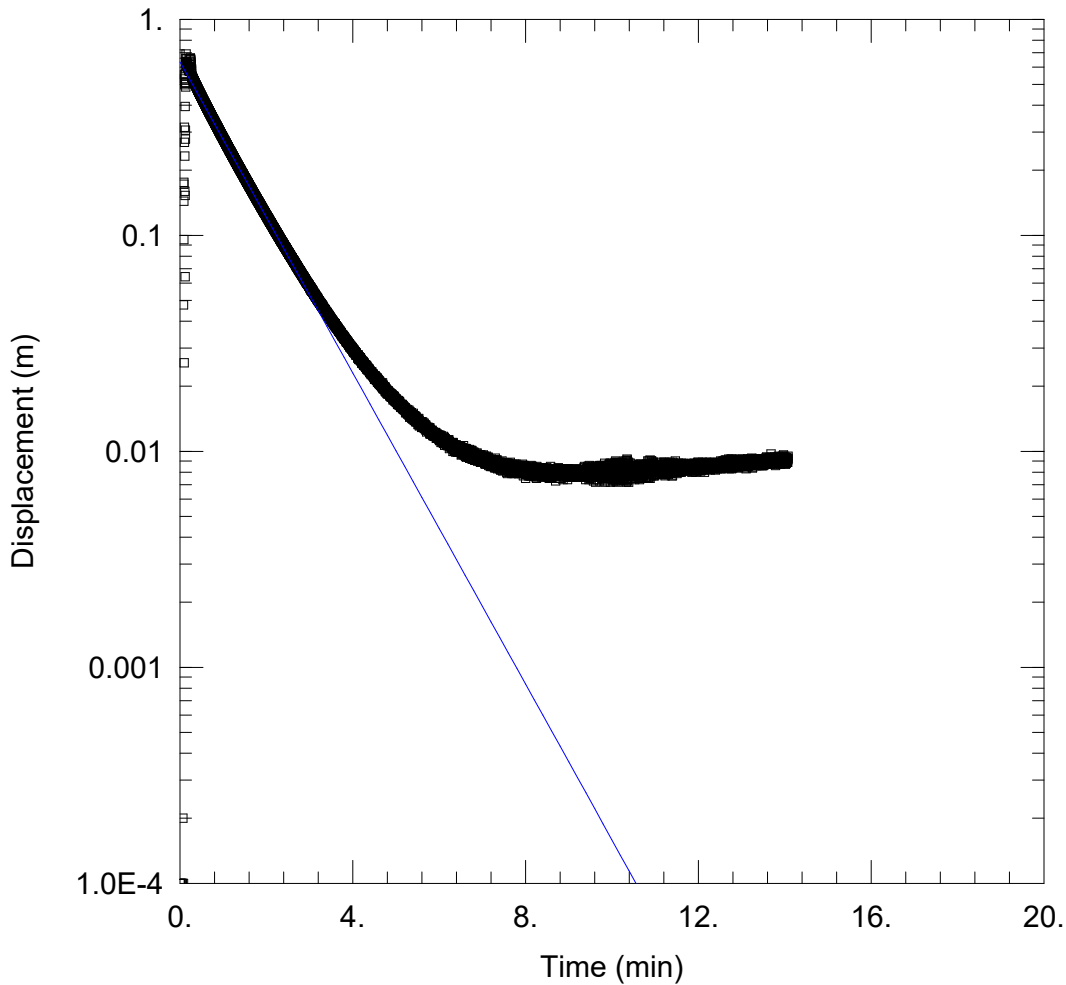
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 7.78E-6$ m/sec $y_0 = 0.635$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 8)

Initial Displacement: 0.6918 m
Static Water Column Height: 6.38 m
Total Well Penetration Depth: 7.62 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

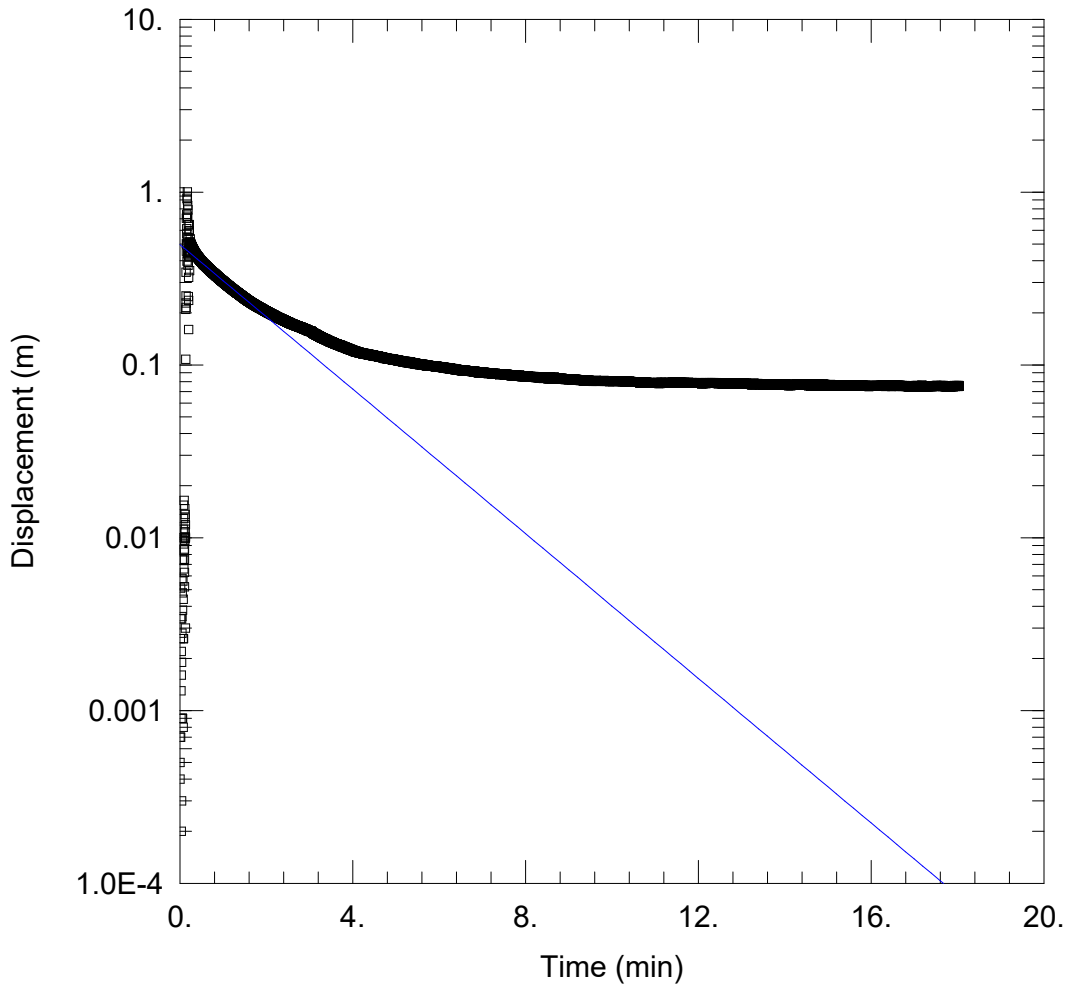
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 4.381E-6$ m/sec $y_0 = 0.4966$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 9)

Initial Displacement: 1.001 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

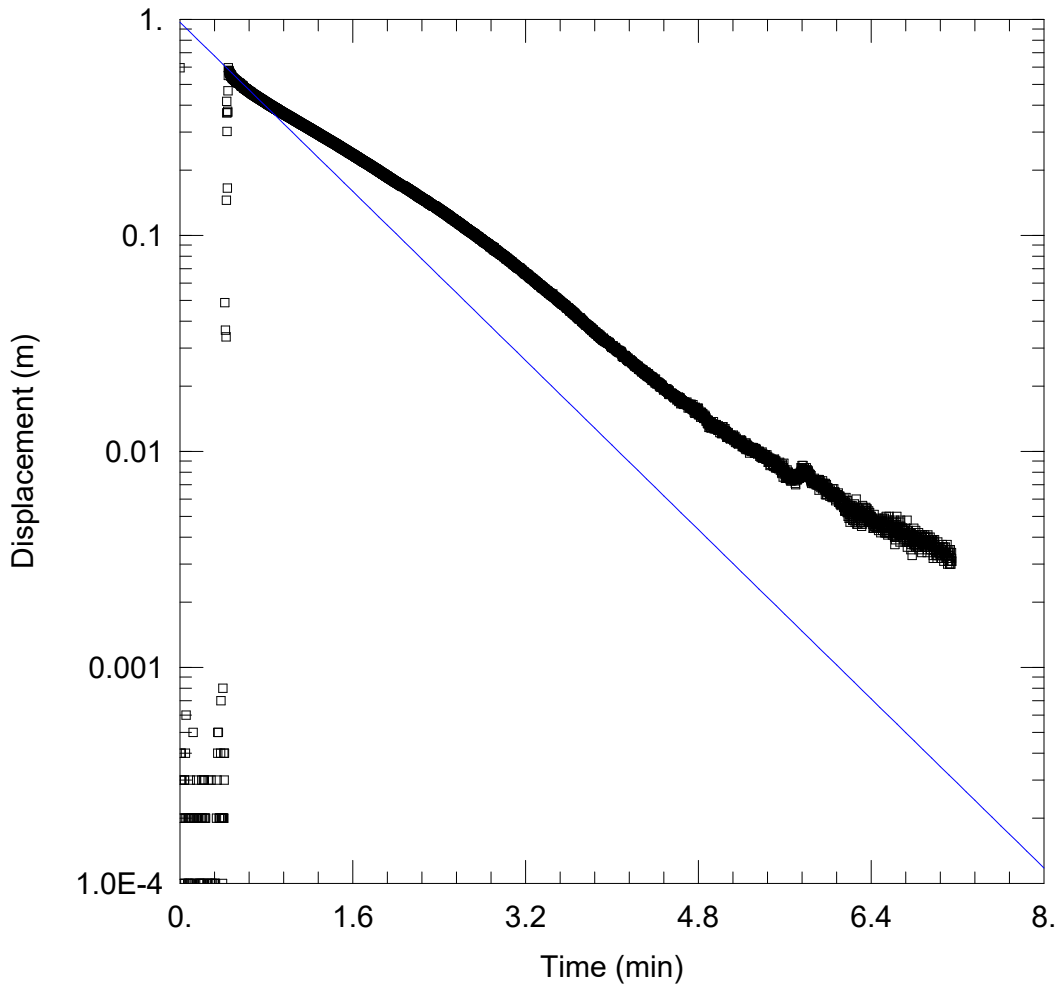
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 1.026E-5$ m/sec $y_0 = 0.9692$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 9)

Initial Displacement: 0.5968 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

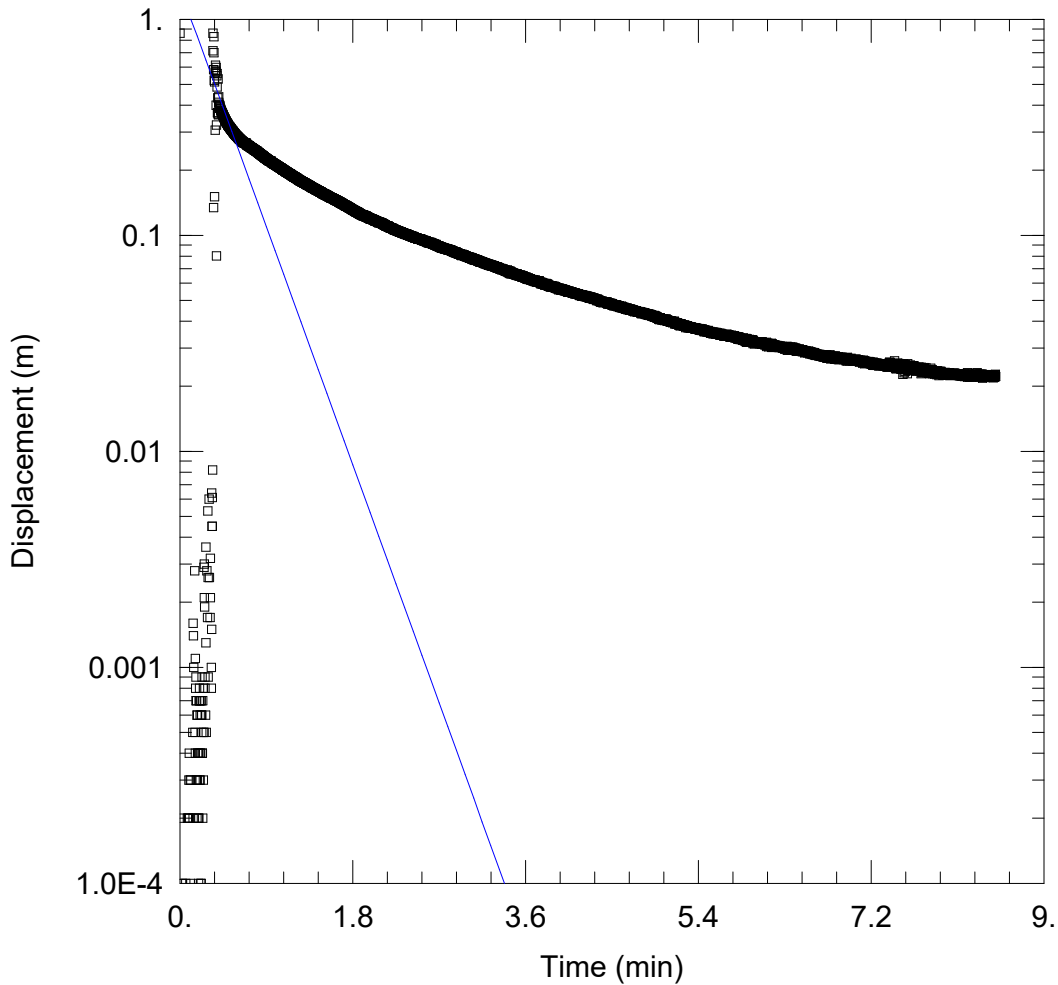
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 2.566E-5$ m/sec $y_0 = 1.387$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 9)

Initial Displacement: 0.8614 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

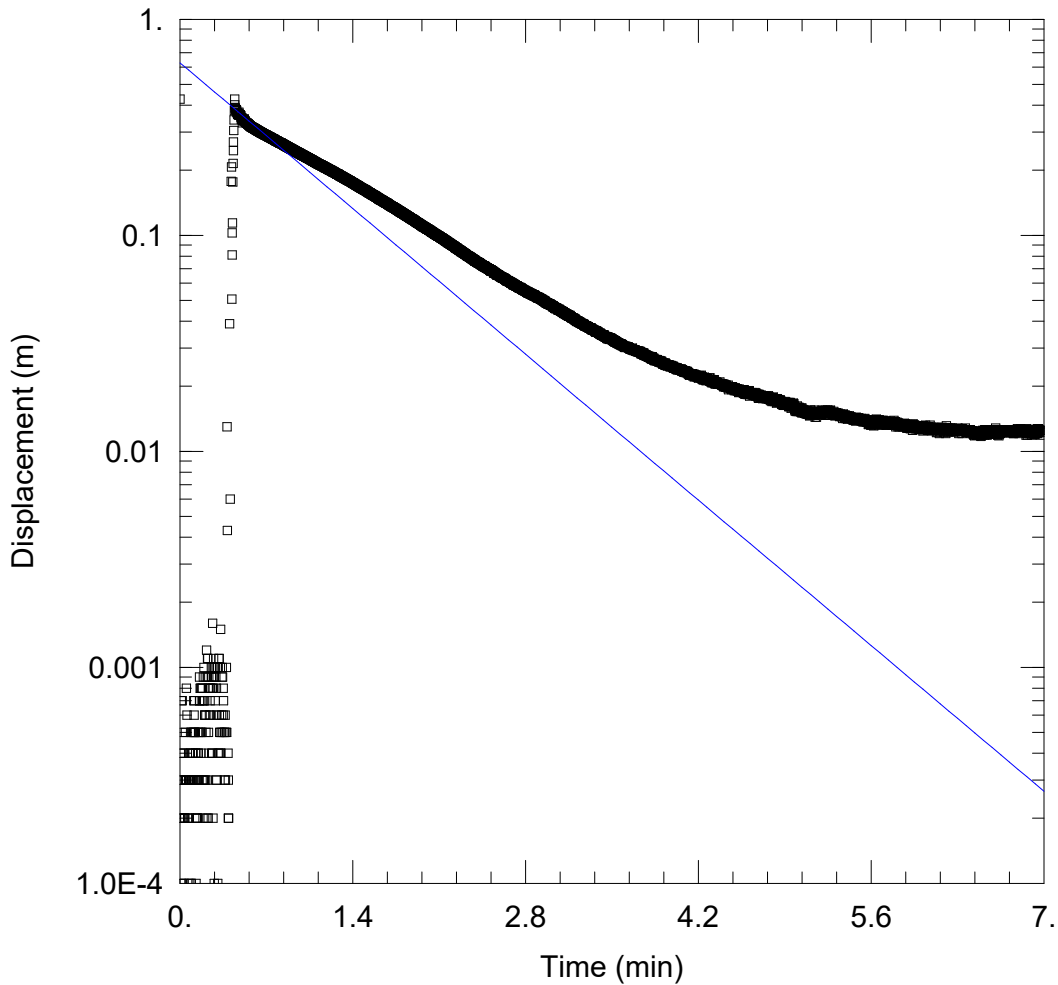
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.01E-5 m/sec y_0 = 0.6287 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 9)

Initial Displacement: 0.4271 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

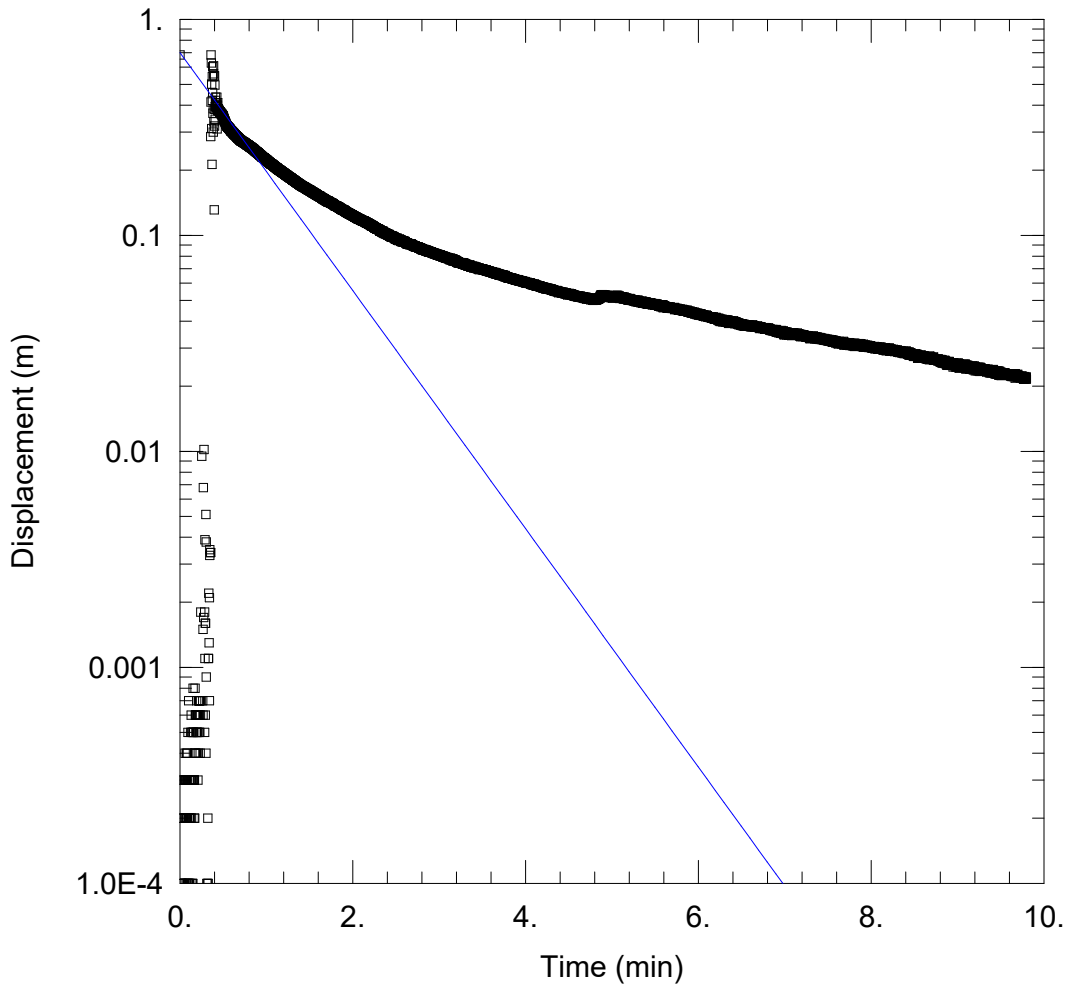
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

$K = 1.155E-5$ m/sec $y_0 = 0.7013$ m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (TW 9)

Initial Displacement: 0.683 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

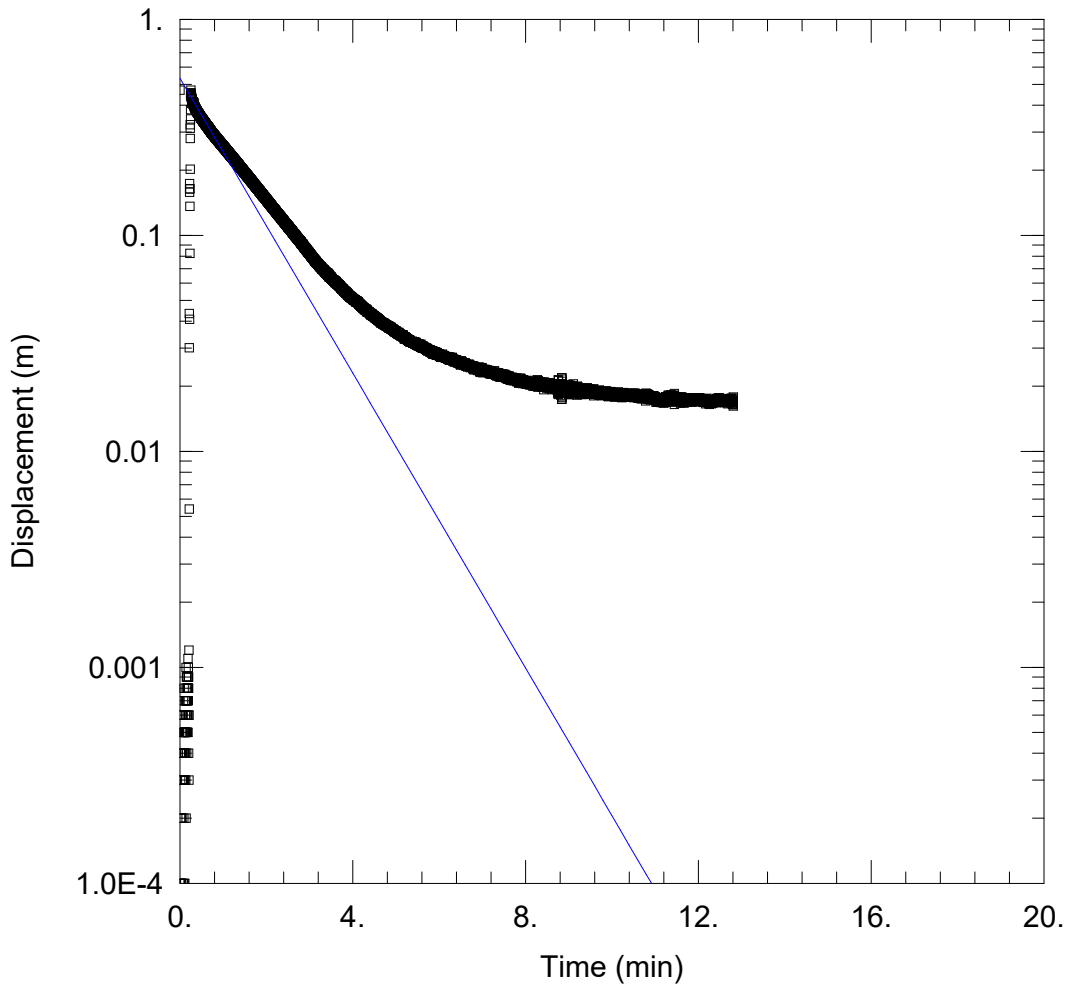
WELL TEST ANALYSIS

Prepared By:
GRI Inc.

Prepared For:
KSG

Project:
21-021

Location:
Casrp



SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.15E-6 m/sec y0 = 0.5328 m

AQUIFER DATA

Saturated Thickness: 1. m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (TW 9)

Initial Displacement: 0.4698 m
Static Water Column Height: 4.12 m
Total Well Penetration Depth: 6.1 m
Screen Length: 3.05 m
Casing Radius: 0.0254 m
Well Radius: 0.0254 m
Gravel Pack Porosity: 0.

Appendix E

Laboratory Reports, Surface Water



Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

Page 1 of 4

Dear Richard Simard:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-
Dawn
Ferguson
2022.05.06
19:47:09
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1622853 Water 2022-04-29 SW1	1622854 Water 2022-04-29 SW2	1622855 Water 2022-04-29 SW3
Group	Analyte	MRL	Units	Guideline				
Anions	N-NO3	0.10	mg/L			<0.10	<0.10	0.65
General Chemistry	Conductivity	5	uS/cm			317	839	783
	Total Suspended Solids	2	mg/L			<2	<2	<2
Metals	Al (dissolved)	0.01	mg/L			0.01	0.01	0.01
	Co	0.0002	mg/L			<0.0002	<0.0002	<0.0002
	Cu	0.001	mg/L			0.002	<0.001	<0.001
	Fe	0.03	mg/L			0.31	0.13	0.18
	Filtration		mg/L			y	y	y
	Mn	0.01	mg/L			0.63	0.02	0.07
	P	0.002	mg/L			0.030	0.011	0.018
Nutrients	N-NH3	0.010	mg/L			0.111	<0.010	<0.010
Oil and Grease	Oil & Grease - Mineral	1	mg/L			<1	<1	<1
	Oil & Grease - Non-mineral	1	mg/L			<1	<1	<1
	Oil & Grease - Total	1	mg/L			<1	<1	<1

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 421300 Analysis/Extraction Date 2022-05-03 Analyst AsA Method SM2320,2510,4500H/F			
Conductivity	<5 uS/cm	101	90-110
Run No 421322 Analysis/Extraction Date 2022-05-05 Analyst SKH Method C SM2540			
Total Suspended Solids	<2 mg/L	98	90-110
Run No 421400 Analysis/Extraction Date 2022-05-05 Analyst R G Method SM 5520B/F			
Oil & Grease - Mineral	<1 mg/L	80	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	105	60-120
Run No 421402 Analysis/Extraction Date 2022-05-05 Analyst AaN Method SM 4110			
N-NO3	<0.10 mg/L	104	90-110
Run No 421435 Analysis/Extraction Date 2022-05-05 Analyst SKH Method EPA 350.1			
N-NH3	<0.010 mg/L	103	80-120
Run No 421475 Analysis/Extraction Date 2022-05-05 Analyst SD Method EPA 200.8			

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Al (dissolved)	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	86	80-120
Copper	<0.001 mg/L	90	80-120
Iron	<0.03 mg/L	95	80-120
Filtration			
Manganese	<0.01 mg/L	93	80-120
P	<0.002 mg/L	94	80-120
Run No 421531 Analysis/Extraction Date 2022-05-06 Analyst SKH Method EPA 350.1			
N-NH3	<0.010 mg/L	114	80-120

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

[illegible]

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-
Dawn
Ferguson
2022.06.01
10:39:34
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

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Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1627506 SURF W 2022-05-26 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		7
Metals	Al	0.01	mg/L		0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.10
	Mn	0.01	mg/L		0.09
	P	0.002	mg/L		0.013
Nutrients	N-NH3	0.010	mg/L		0.038
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 422697 Analysis/Extraction Date 2022-05-29 Analyst ML Method EPA 350.1			
N-NH3	<0.010 mg/L	96	80-120
Run No 422741 Analysis/Extraction Date 2022-05-30 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	104	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 422836 Analysis/Extraction Date 2022-06-01 Analyst SKH Method C SM2540			
Total Suspended Solids	<2 mg/L	92	90-110
Run No 422838 Analysis/Extraction Date 2022-05-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	117	80-120
Cobalt	<0.0002 mg/L	106	80-120
Copper	<0.001 mg/L	112	80-120
Iron	<0.03 mg/L	97	80-120
Manganese	<0.01 mg/L	108	80-120
P	<0.002 mg/L	93	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 422917 Analysis/Extraction Date 2022-05-31 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	80	60-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

Page 1 of 4

Dear George Gorrell:**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:



Emma-
Dawn
Ferguson
2022.06.2
9 13:59:41
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1633421 SURF W 2022-06-23 SW1
Group	Analyte	MRL	Units	Guideline	
Anions	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al (dissolved)	0.01	mg/L		0.07
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.19
	Mn	0.01	mg/L		0.18
	P	0.002	mg/L		0.018
Nutrients	N-NH3	0.010	mg/L		0.019
Oil and Grease	Oil & Grease - Total	1	mg/L		<1

Guideline = *** = Guideline Exceedence**

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

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Oxford Mills, ON
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Attention: Mr. George Gorrell
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Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 424496 Analysis/Extraction Date 2022-06-25 Analyst AaN Method SM 4110			
N-NO2	<0.10 mg/L	105	90-110
N-NO3	<0.10 mg/L	96	90-110
Run No 424517 Analysis/Extraction Date 2022-06-24 Analyst FM Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	95	60-120
Run No 424524 Analysis/Extraction Date 2022-06-26 Analyst ML Method EPA 350.1			
N-NH3	<0.010 mg/L	98	80-120
Run No 424529 Analysis/Extraction Date 2022-06-24 Analyst SD Method EPA 200.8			
Cobalt	<0.0002 mg/L	113	80-120
Copper	<0.001 mg/L	118	80-120
Iron	<0.03 mg/L	115	80-120
Manganese	<0.01 mg/L	116	80-120
P	<0.002 mg/L	102	80-120
Run No 424588 Analysis/Extraction Date 2022-06-28 Analyst CK Method C SM2540			

Guideline =

* = Guideline Exceedence

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Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Total Suspended Solids	<2 mg/L	100	90-110
Run No 424630 Analysis/Extraction Date 2022-06-28 Analyst SD Method EPA 200.8			
Al (dissolved)	<0.01 mg/L		80-120

Guideline = *** = Guideline Exceedence**

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[illegible]

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-Dawn
Ferguson
2022.08.04
12:45:44 -04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1640896 Water 2022-07-28 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		4
Metals	Al	0.01	mg/L		0.03
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.17
	Mn	0.01	mg/L		0.09
	P	0.002	mg/L		0.015
Nutrients	N-NH3	0.020	mg/L		0.047
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

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Certificate of Analysis

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 426503 Analysis/Extraction Date 2022-07-29 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 426605 Analysis/Extraction Date 2022-07-31 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	86	80-120
Run No 426614 Analysis/Extraction Date 2022-08-02 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	103	80-120
N-NO3	<1.0 mg/L	102	80-120
Run No 426740 Analysis/Extraction Date 2022-08-03 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	103	80-120
Copper	<0.001 mg/L	107	80-120
Iron	<0.03 mg/L	106	80-120
Manganese	<0.01 mg/L	109	80-120
P	<0.002 mg/L	92	80-120

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Attention: Mr. George Gorrell
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Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 426774 Analysis/Extraction Date 2022-08-04 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	60-120

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
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Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

Page 1 of 4

Dear George Gorrell:

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Report Comments:



Emma-
Dawn
Ferguson
2022.08.3
1 13:27:19
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1647054 SURF W 2022-08-25 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		5
Metals	Al	0.01	mg/L		0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.06
	Mn	0.01	mg/L		0.05
	P	0.002	mg/L		0.007
Nutrients	N-NH3	0.020	mg/L		0.036
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.57

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Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 428268 Analysis/Extraction Date 2022-08-26 Analyst ML Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	103	80-120
N-NO3	<0.10 mg/L	104	80-120
Run No 428360 Analysis/Extraction Date 2022-08-28 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	87	80-120
Run No 428473 Analysis/Extraction Date 2022-08-30 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	98	90-110
Run No 428546 Analysis/Extraction Date 2022-08-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	95	80-120
Cobalt	<0.0002 mg/L	100	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	101	80-120
Manganese	<0.01 mg/L	101	80-120
P	<0.002 mg/L	90	80-120

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K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 428556 Analysis/Extraction Date 2022-08-31 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	110	60-120

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

Page 1 of 4

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Report Comments:



Emma-
Dawn
Ferguson
2022.10.0
6
16:41:49
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1653770 SURF W 2022-09-29 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		<0.03
	Mn	0.01	mg/L		<0.01
	P	0.002	mg/L		0.006
Nutrients	N-NH3	0.020	mg/L		<0.020
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

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K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 430642 Analysis/Extraction Date 2022-09-30 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	107	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 430662 Analysis/Extraction Date 2022-09-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	119	80-120
Cobalt	<0.0002 mg/L	104	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	116	80-120
Manganese	<0.01 mg/L	106	80-120
P	<0.002 mg/L	116	80-120
Run No 430682 Analysis/Extraction Date 2022-10-02 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	89	80-120
Run No 430760 Analysis/Extraction Date 2022-10-04 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	96	90-110

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Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 430982 Analysis/Extraction Date 2022-10-06 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	110	70-130

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-Dawn
Ferguson
2022.10.25
13:51:34 -04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1657128 SURF W 2022-10-18 SW1	1657129 SURF W 2022-10-18 SW2	1657130 SURF W 2022-10-18 SW3
Group	Analyte	MRL	Units	Guideline				
Anions	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10
	N-NO3	0.10	mg/L			<0.10	0.37	<0.10
General Chemistry	Total Suspended Solids	2	mg/L			<2	<2	<2
Metals	Al	0.01	mg/L			0.03	0.07	0.03
	Co	0.0002	mg/L			<0.0002	<0.0002	<0.0002
	Cu	0.001	mg/L			<0.001	<0.001	<0.001
	Fe	0.03	mg/L			0.06	0.16	0.40
	Mn	0.01	mg/L			0.03	0.03	0.07
	P	0.002	mg/L			0.015	0.022	0.015
Nutrients	N-NH3	0.020	mg/L			0.045	<0.020	<0.020
Oil and Grease	Oil & Grease - Total	1	mg/L			<1	1	<1

Guideline = * = Guideline Exceedence

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 431561 Analysis/Extraction Date 2022-10-19 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 431576 Analysis/Extraction Date 2022-10-20 Analyst AaN Method SM 4110			
N-NO2	<0.10 mg/L	103	90-110
N-NO3	<0.10 mg/L	102	90-110
Run No 431625 Analysis/Extraction Date 2022-10-18 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	113	80-120
Cobalt	<0.0002 mg/L	108	80-120
Copper	<0.001 mg/L	108	80-120
Iron	<0.03 mg/L	108	80-120
Manganese	<0.01 mg/L	105	80-120
P	<0.002 mg/L	119	80-120
Run No 431830 Analysis/Extraction Date 2022-10-24 Analyst SKH Method EPA 350.1			
N-NH3	<0.020 mg/L	109	80-120

Guideline = * = **Guideline Exceedence**

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 431840 Analysis/Extraction Date 2022-10-24 Analyst VMK Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	90	70-130

Guideline = * = **Guideline Exceedence**

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-Dawn
Ferguson
2022.12.01 18:43:45
-05'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1664719 SURF W 2022-11-24 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.33
	Mn	0.01	mg/L		0.73
	P	0.002	mg/L		0.009
Nutrients	N-NH3	0.020	mg/L		0.151
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 433901 Analysis/Extraction Date 2022-11-25 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	95	80-120
Run No 433916 Analysis/Extraction Date 2022-11-25 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	107	80-120
Cobalt	<0.0002 mg/L	104	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	104	80-120
Manganese	<0.01 mg/L	114	80-120
P	<0.002 mg/L	119	80-120
Run No 434052 Analysis/Extraction Date 2022-11-29 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	100	90-110
Run No 434152 Analysis/Extraction Date 2022-11-29 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	90	80-120

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 434319 Analysis/Extraction Date 2022-12-01 Analyst VMK Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	80	70-130

Guideline = * = **Guideline Exceedence**

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Methods references and/or additional QA/QC information available on request.

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[illegible]



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1992523

Date Submitted: 2023-01-12

Date Reported: 2023-01-19

Project: 21-021

COC #: 216628

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.01.1
9 17:09:32
-05'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	<2	1670877 SURF W 2023-01-11 SW1
	Al	0.01	mg/L	<0.01	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	0.25	
	Mn	0.01	mg/L	0.22	
Nutrients	P	0.002	mg/L	0.015	1
	N-NH3	0.020	mg/L	0.066	
Oil and Grease Others	Oil & Grease - Total	1	mg/L	<0.10	
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 436075 Method SM 5520B/F	Analysis/Extraction Date 2023-01-19	Analyst SS	
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 436251 Method C SM2540	Analysis/Extraction Date 2023-01-16	Analyst SKH	
Total Suspended Solids	<2 mg/L	98	90-110
Run No 436258 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-01-13	Analyst SKH	
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	100	80-120
Run No 436284 Method EPA 350.1	Analysis/Extraction Date 2023-01-16	Analyst SKH	
N-NH3	<0.020 mg/L	114	80-120
Run No 436385 Method EPA 200.8	Analysis/Extraction Date 2023-01-17	Analyst SD	
Aluminum	<0.01 mg/L	115	80-120
Cobalt	<0.0002 mg/L	99	80-120
Copper	<0.001 mg/L	101	80-120
Iron	<0.03 mg/L	96	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Manganese	<0.01 mg/L	102	80-120
P	<0.002 mg/L	105	80-120

Guideline = * = **Guideline Exceedence**

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[illegible]



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari
R Zafari 2023.05.0
8 14:13:42
-04'00'
Raheleh Zafari, Environmental Chemist

APPROVAL:

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1684474 SURF W 2023-04-28 SW1	1684475 SURF W 2023-04-28 SW2	1684476 SURF W 2023-04-28 SW3
General Chemistry Metals	Total Suspended Solids	2	mg/L			6	<2	6
	Al	0.01	mg/L			<0.01	<0.01	0.02
	Co	0.0002	mg/L			<0.0002	<0.0002	<0.0002
	Cu	0.001	mg/L			<0.001	<0.001	<0.001
	Fe	0.03	mg/L			0.04	0.10	0.05
	Mn	0.01	mg/L			0.02	0.04	0.02
Nutrients	P	0.002	mg/L			0.018	0.007	0.014
	N-NH3	0.020	mg/L			0.116	0.020	0.115
Oil and Grease Others	Oil & Grease - Total	1	mg/L			<1	<1	<1
	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10
	N-NO3	0.10	mg/L			<0.10	<0.10	0.28

Guideline = * = **Guideline Exceedence**

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 441018 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-05-02	Analyst SKH	
N-NO2	<0.10 mg/L	96	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 441029 Method C SM2540	Analysis/Extraction Date 2023-05-03	Analyst SKH	
Total Suspended Solids	<2 mg/L	97	90-110
Run No 441052 Method C SM2540	Analysis/Extraction Date 2023-05-04	Analyst SKH	
Total Suspended Solids	<2 mg/L	99	90-110
Run No 441098 Method EPA 200.8	Analysis/Extraction Date 2023-05-04	Analyst SD	
Aluminum	<0.01 mg/L	98	80-120
Cobalt	<0.0002 mg/L	97	80-120
Copper	<0.001 mg/L	98	80-120
Iron	<0.03 mg/L	97	80-120
Manganese	<0.01 mg/L	96	80-120
P	<0.002 mg/L	91	80-120

Guideline = * = Guideline Exceedence

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 441182 Method EPA 350.1	Analysis/Extraction Date 2023-05-04	Analyst SKH	
N-NH3	<0.020 mg/L	99	80-120
Run No 441296 Method SM 5520B/F	Analysis/Extraction Date 2023-05-08	Analyst ACN	
Oil & Grease - Total	<1 mg/L	105	70-130

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INVOICE INFORMATION (SAME AS CLIENT INFORMATION): YES ☐ NO ☐

The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. **Note that this COC is not to be used for drinking water samples.** The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

[illegible]



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1997543

Date Submitted: 2023-05-29

Date Reported: 2023-06-05

Project: 21-021

COC #: 216630

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.06.0
5 17:23:30
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

Group	Analyte	MRL	Units	Guideline	1689150 SURF W 2023-05-29 SW1
General Chemistry Metals	Total Suspended Solids	2	mg/L		<2
	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		<0.03
	Mn	0.01	mg/L		0.03
Nutrients	P	0.002	mg/L		0.007
	N-NH3	0.020	mg/L		<0.020
Oil and Grease Others	Oil & Grease - Total	1	mg/L		2
	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 442529 Method SM 5520B/F	Analysis/Extraction Date 2023-06-05	Analyst ACN	
Oil & Grease - Total	<1 mg/L	115	70-130
Run No 442544 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-05-30	Analyst SKH	
N-NO2	<0.10 mg/L	100	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 442704 Method EPA 350.1	Analysis/Extraction Date 2023-06-01	Analyst SKH	
N-NH3	<0.020 mg/L	113	80-120
Run No 442784 Method EPA 200.8	Analysis/Extraction Date 2023-06-02	Analyst SD	
Aluminum	<0.01 mg/L	90	80-120
Cobalt	<0.0002 mg/L	95	80-120
Copper	<0.001 mg/L	96	80-120
Iron	<0.03 mg/L	91	80-120
Manganese	<0.01 mg/L	96	80-120
P	<0.002 mg/L	94	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 442836 Method C SM2540	Analysis/Extraction Date 2023-06-05 Analyst R T		
Total Suspended Solids	<2 mg/L	98	90-110

Guideline = * = Guideline Exceedence

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

INVOICE INFORMATION (SAME AS CLIENT INFORMATION): YES ☐ NO ☐

[illegible]



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari
R Zafari 2023.07.04
16:33:28

APPROVAL: 04:00
Raheleh Zafari, Environmental Chemist

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

Group	Analyte	MRL	Units	Guideline	1692952 Water 2023-06-26 SW1
General Chemistry Metals	Total Suspended Solids	2	mg/L		<2
	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.14
	Mn	0.01	mg/L		0.28
Nutrients	P	0.002	mg/L		0.010
	N-NH3	0.020	mg/L		0.103
Oil and Grease Others	Oil & Grease - Total	1	mg/L		<1
	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 443997 Analysis/Extraction Date 2023-06-27 Analyst R T			
Method C SM2540			
Total Suspended Solids	<2 mg/L	96	90-110
Run No 444623 Analysis/Extraction Date 2023-06-28 Analyst SKH			
Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	95	80-120
N-NO3	<0.10 mg/L	100	80-120
Run No 444695 Analysis/Extraction Date 2023-06-29 Analyst SKH			
Method EPA 350.1			
N-NH3	<0.020 mg/L	95	80-120
Run No 444844 Analysis/Extraction Date 2023-07-04 Analyst SD			
Method EPA 200.8			
Aluminum	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	96	80-120
Copper	<0.001 mg/L	97	80-120
Iron	<0.03 mg/L	82	80-120
Manganese	<0.01 mg/L	99	80-120
P	<0.002 mg/L	97	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 444845 Method SM 5520B/F	Analysis/Extraction Date 2023-07-04	Analyst H S	
Oil & Grease - Total	<1 mg/L	120	70-130

Guideline = * = Guideline Exceedence

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CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)			
Company: GR1 INC				Company:			
Contact: George Correll				Contact:			
Address: 911 County Rd 18, OXFORD, ON				Address:			
Telephone: 613-258-2954				Telephone:			
Email: #1: George Correll @ gr1-inc.com				Email: #1:			
Email: #2: Richard Simard KSG @ gmmc.com				Email: #2:			
Project: 21-021				PO #:			
Quote #: 191452				REGULATION/GUIDELINE REQUIRED			
TURN-AROUND TIME (Business Days)				Table # ☐ O. Reg 153			
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☒ 5-7 Days (Standard)				Table # ☐ Coarse / Fine, Surface / subsurface.			
Please contact Lab in advance to determine rush availability.				Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment			
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.				The sample results from this submission will form part of a formal Record of Site Condition (ROSC) under O. Reg. 153/04 ☐ Yes ☐ No			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				☐ O. Reg 406 Excess Soils			
				☐ TCLP ☐ SPLP			
				Table # ☐ Full depth/ Strat/ Ceiling/ Leachate			
				Type: Com-Ind / Res-Park / Agri/All Other			
				Category: Surface / Subsurface			
The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				RWH (Lab Use Only)			
Sample ID		Date/Time Collected		Sample Analysis Required		RWH	
SW1		6/26/23 12:15 PM		Metals only		169 2952	
				Metals + Inorganic			
				PCBs			
				PAHs			
				VOCs			
				BTEX			
				PHC P1 - P4			
				# of Containers			
				Sample Matrix			
				O. Reg. 153 parameters			
				Field Filtered ->			
				Sample Details			
				Field Filtered ->			
				DATE/TIME		TEMP (°C)	
				6/26/23 12:15 PM		22.3	
				SIGN		COMMENTS:	
				R. Simard			
Sampled By:		Date/Time Collected		DATE/TIME		TEMP (°C)	
Relinquished By:		6/26/23 12:15 PM		6/26/23 12:15 PM		22.3	
Received By:		R. Simard		26 6 22 3 19			
				CUSTODY SEAL: ☐ YES ☐ NO ☐ NO		Ice packs submitted: ☐ Yes ☐ No	



Environment Testing

Certificate of Analysis

Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1999553

Date Submitted: 2023-07-25

Date Reported: 2023-08-01

Project: 21-021

COC #: 223832

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.08.01
13:30:50
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	<2	1696586 SURF W 2023-07-25 SW1
	Al	0.01	mg/L	<0.01	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	<0.03	
	Mn	0.01	mg/L	0.01	
Nutrients	P	0.002	mg/L	0.005	
	N-NH3	0.020	mg/L	<0.020	
	Oil & Grease - Total	1	mg/L	<1	
Oil and Grease Others	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 446030 Analysis/Extraction Date 2023-07-26 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	99	80-120
N-NO3	<0.10 mg/L	102	80-120
Run No 446187 Analysis/Extraction Date 2023-07-27 Analyst AaN Method EPA 200.8			
Aluminum	<0.01 mg/L	103	80-120
Cobalt	<0.0002 mg/L	99	80-120
Copper	<0.001 mg/L	101	80-120
Iron	<0.03 mg/L	92	80-120
Manganese	<0.01 mg/L	93	80-120
P	<0.002 mg/L	97	80-120
Run No 446311 Analysis/Extraction Date 2023-08-01 Analyst R T Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 446366 Analysis/Extraction Date 2023-07-31 Analyst SKH Method EPA 350.1			
N-NH3	<0.020 mg/L	116	80-120

Guideline = * = Guideline Exceedence

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Methods references and/or additional QA/QC information available on request.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 446369 Method SM 5520B/F	Analysis/Extraction Date 2023-08-01 Analyst H S		
Oil & Grease - Total	<1 mg/L	85	70-130

Guideline = * = **Guideline Exceedence**

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Methods references and/or additional QA/QC information available on request.

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CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)			
Company:	GRI INC			Company:			
Contact:	George Correll			Contact:			
Address:	911 County Rd 18, Oxford Mills			Address:			
Telephone:	613-258-2954 / Cell: 647-502-5221			Telephone:			
Email:	#1: george.correll@gri-inc.com			Email:	#1:		
Email:	#2: richard.simard@sgc.com			Email:	#2:		
Project:	21-021			PO #:			
TURN-AROUND TIME (Business Days)				REGULATION/GUIDELINE REQUIRED			
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☒ 5-7 Days (Standard)				☐ O. Reg 153			
Please contact Lab in advance to determine rush availability.				The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only			
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.				Table # _____ Coarse / Fine, Surface / Subsurface			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment			
				☐ O. Reg 347			
				PWQO ☐			
				Other: _____			
				☐ O. Reg 406 Excess Soils			
				Type: _____ Full depth/Strat/Ceiling/msSPL Leachate			
				Category: Surface / Subsurface			
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).							
Sample ID	Date/Time Collected	Sample Details		Metals only		RN# (Lab Use Only)	
SW1	7/25/23 12:45	Field Filtered ->	O. Reg. 153 parameters	Metals + Inorganic	1696586		
		# of Containers	PCBs				
		Sample Matrix	PAHs				
			VOCs				
			BTEX				
			PHC Ft - F4				
PRINT:		SIGN:	DATE/TIME	TEMP (°C)	COMMENTS:		
Sampled By: Richard Simard			7/25/23 12:45	26.8			
Relinquished By:			7/25/23 2:00				
Received By:			7/25/23 2:10	20.9			
CUSTODY SEAL: ☐ YES ☐ NO ☐ NO		for pads submit ☐ Yes ☐ No					



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell
PO#:

Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari
R Zafari 2023.09.07 10:31:26
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

Group	Analyte	MRL	Units	Guideline	1701281 Water 2023-08-30 SW1
General Chemistry Metals	Total Suspended Solids	2	mg/L	7	
	Al	0.01	mg/L	0.10	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	0.32	
	Mn	0.01	mg/L	0.14	
Nutrients	P	0.002	mg/L	0.021	
	N-NH3	0.020	mg/L	<0.020	
Oil and Grease Others	Oil & Grease - Total	1	mg/L	<1	
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	

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Environment Testing

Certificate of Analysis

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 448185 Method C SM2540	Analysis/Extraction Date 2023-09-06 Analyst R T		
Total Suspended Solids	<2 mg/L	97	90-110
Run No 448270 Method EPA 200.8	Analysis/Extraction Date 2023-09-05 Analyst SD		
Aluminum	<0.01 mg/L	118	80-120
Cobalt	<0.0002 mg/L	102	80-120
Copper	<0.001 mg/L	103	80-120
Iron	<0.03 mg/L	101	80-120
Manganese	<0.01 mg/L	103	80-120
P	<0.002 mg/L	98	80-120
Run No 448302 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-09-05 Analyst R T		
N-NO2	<0.10 mg/L	95	80-120
N-NO3	<0.10 mg/L	96	80-120
Run No 448316 Method EPA 350.1	Analysis/Extraction Date 2023-09-05 Analyst SKH		
N-NH3	<0.020 mg/L	114	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 448412 Method SM 5520B/F	Analysis/Extraction Date 2023-09-07 Analyst ACN		
Oil & Grease - Total	<1 mg/L	70	70-130

Guideline = * = **Guideline Exceedence**

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell
PO#:

Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Page 1 of 6

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.09.2
9 12:01:17

-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline	1704068 SURF W 2023-09-22 MW2	1704069 SURF W 2023-09-22 MW4	1704070 SURF W 2023-09-22 MW6a	1704071 SURF W 2023-09-22 MW6B
Anions	Cl	1	mg/L			5	4	194	86
	F	0.10	mg/L			<0.10	<0.10	2.21	<0.10
	SO4	1	mg/L			14	9	<1	50
General Chemistry	Alkalinity as CaCO3	5	mg/L			214	164	387	252
	Conductivity	5	uS/cm			317	254	1270	800
	pH	1.00				7.76	7.77	8.50	7.86
Hardness	Hardness as CaCO3	1	mg/L			200	162	22	276
Indices/Calc	Ion Balance	0.01				0.92	0.94	0.99	0.97
Metals	Ca	1	mg/L			62	45	2	81
	Fe	0.03	mg/L			0.13	0.03	2.78	0.27
	K	1	mg/L			2	1	10	1
	Mg	1	mg/L			11	12	4	18
	Mn	0.01	mg/L			0.02	0.15	0.04	0.12
Oil and Grease	Na	1	mg/L			6	4	289	63
	Oil & Grease - Total	1	mg/L			<1	<1	<1	<1
	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10	<0.10
Others	N-NO3	0.10	mg/L			<0.10	0.77	<0.10	<0.10

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	
				1704072 SURF W 2023-09-22 MW3	1704073 SURF W 2023-09-22 13-6
Anions	Cl	1	mg/L	251	3
	F	0.10	mg/L	1.56	0.81
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
	SO4	1	mg/L	<1	52
General Chemistry	Alkalinity as CaCO3	5	mg/L	373	198
	Conductivity	5	uS/cm	1390	454
	pH	1.00		8.69	7.83
Hardness	Hardness as CaCO3	1	mg/L	13	217
Indices/Calc	Ion Balance	0.01		0.96	0.93
Metals	Ca	1	mg/L	2	67
	Fe	0.03	mg/L	<0.03	<0.03
	K	1	mg/L	12	5
	Mg	1	mg/L	2	12
	Mn	0.01	mg/L	0.03	0.05
	Na	1	mg/L	309	8
Oil and Grease	Oil & Grease - Total	1	mg/L	<1	<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.33

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449358 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-09-25	Analyst SKH	
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	106	80-120
Run No 449480 Method SM 4110	Analysis/Extraction Date 2023-09-27	Analyst S A	
Chloride	<1 mg/L	100	90-110
SO4	<1 mg/L	100	90-110
Run No 449498 Method M SM3120B-3500C	Analysis/Extraction Date 2023-09-27	Analyst Z S	
Calcium	<1 mg/L	99	90-110
Potassium	<1 mg/L	103	87-113
Magnesium	<1 mg/L	97	76-124
Sodium	<1 mg/L	101	82-118
Run No 449539 Method SM2320.2510.4500H/F	Analysis/Extraction Date 2023-09-27	Analyst AsA	
Alkalinity (CaCO3)	<5 mg/L	103	90-110
Conductivity	<5 uS/cm	99	90-110
F	<0.10 mg/L	101	90-110

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
pH		100	90-110
Run No 449575 Analysis/Extraction Date 2023-09-28 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			
Run No 449622 Analysis/Extraction Date 2023-09-29 Analyst ACN Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 449626 Analysis/Extraction Date 2023-09-29 Analyst S A Method SM 4110			
Chloride	<1 mg/L	100	90-110
N-NO2	<0.10 mg/L	106	90-110
N-NO3	<0.10 mg/L	102	90-110
SO4	<1 mg/L	100	90-110
Run No 449630 Analysis/Extraction Date 2023-09-29 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449635 Method EPA 200.8	Analysis/Extraction Date 2023-09-28	Analyst AaN	
Iron	<0.03 mg/L	94	80-120
Manganese	<0.01 mg/L	97	80-120

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



eurofins 223834

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3001608

CLIENT INFORMATION

Company:

GRI INC

Contact:

George D

Address:

911 County Rd 18

Telephone:

6475025224

Cell:

#1:

George.g-11011@grinc.ca

#2:

Project:

21-021

Quote #: 191766

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%)☐ 2 Day** (50%)☐ 3-5 Days (25%)☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID

Date/Time Collected

M42 9/22/23 18:57
 M44 9/22/23 14:11
 M46 9/22/23 11:15
 M48 9/22/23 11:20
 M49 9/22/23 10:20
 M50 9/22/23 13:10

Sample Details

Field Filtered ->

of Containers

Sample Matrix

PHC Ft. F4

BTEX

VOCs

PAHs

PCBs

Metals + Inorganics

Metals only

O.Reg.153 parameters

Metals only

Metals only

Metals only

Metals only

Metals only

Metals only

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Metals only

PRINT

Sampled By: George G-11011

Relinquished By: George G-11011

Received By:

SIGN

DATE/TIME

9/22/23

9/22/23

9/22/23

TEMP (°C)

18.6

18.6

18.6

COMMENTS:

Date 191452 used. #191766

does not watch samples submitted.

SM 9/23/23

CUSTODY SEAL:

YES ☐ NO ☐ice packs submit ☐ Yes ☐ No ☐

CUSTODY SEAL:

YES ☐ NO ☐ice packs submit ☐ Yes ☐ No ☐

OFFICIAL CERTIFICATE OF ANALYSIS : 3729826

WORK REQUEST : 100248924

Report Date : 2023-10-17

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2023-10-11
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 17 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7291931

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-11

Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.09						
Manganese	0.01	mg/L	0.05						
Phosphorus	0.002	mg/L	0.009						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.030						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	<2						

Approved by :



Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-11

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	103	80-120	101	80-120	-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	103	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	107	80-120	92	70-130	0	0-20
Copper	mg/L	0.001	<0.001	110	80-120	80	70-130	1	0-20
Iron	mg/L	0.03	<0.03	100	80-120	91	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	93	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	97	80-120	115	70-130	8	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	101	80-120				
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	100	80-120			-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7291931								Prep Date: 2023-10-17 Analysis Date: 2023-10-17	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	97	93-107			-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

INVOICE INFORMATION (SAME AS CLIENT INFO)

100248924



Printed On: 2023-10-11 17:00:28

REQUIRED

Fig 153

_____ results from this _____ part of a formal _____
_____ (NSC) under _____
_____ analysis of full parameter _____
only

☐ ☐ No ☐

Table # _____ Coarse / Fine, Surface / sub surface

Type: Corn-Ind / Res-Pack / Agri / GW / All Other / Sediment

406 Excess Soils

Full depth/S/strat/Ce/line/m/SPi P Leachate

		RNH (Lab Use Only)	7291931
--	--	-----------------------	---------

A blank grid consisting of 10 columns and 10 rows of squares, intended for drawing a picture.

	YES ☐	NO ☐	fire packs submit ☐	Yes ☐	No ☐

OFFICIAL CERTIFICATE OF ANALYSIS : 3748427

WORK REQUEST : 100253118

Report Date : 2023-11-06

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2023-10-28
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 10 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

7341040 7341041 7341042

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
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Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-28

Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	0.32	0.32	1.34				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.10	<0.1				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01	<0.01	<0.01				
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002				
Copper	0.001	mg/L	<0.001	<0.001	<0.001				
Iron	0.03	mg/L	0.07	0.19	0.04				
Manganese	0.01	mg/L	0.07	0.16	0.03				
Phosphorus	0.002	mg/L	0.013	0.013	0.016				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.064	<0.020	0.136				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1	<1	<1				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	5	<2	5				

Approved by : 
Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-28

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	104	80-120	108	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-06 Analysis Date: 2023-11-06	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	106	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	95	80-120	93	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	85	70-130	-	0-20
Iron	mg/L	0.03	<0.03	90	80-120	90	70-130	1	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	99	70-130	0	0-20
Phosphorus	mg/L	0.002	<0.002	101	80-120	118	70-130	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-03 Analysis Date: 2023-11-06	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	105	80-120	107	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-02 Analysis Date: 2023-11-03	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	110	80-120	104	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-02 Analysis Date: 2023-11-03	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-03 Analysis Date: 2023-11-03	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	93-107			-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-06 Analysis Date: 2023-11-06	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #:

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 ▪ 380 Vansickle Road, Unit #530, St. Catharines, ON, L2S 0B5 - Telephone: 905-660-8887 ▪ 608 Norris Court, Kingston, ON, K7P 2B9 - Telephone: 613-634-9307

Page ____ of ____ AFSTDOOC.9

OFFICIAL CERTIFICATE OF ANALYSIS : 3766132**WORK REQUEST : 100256521****Report Date : 2023-11-23****GRI Inc.**

911 County Rd. 18

Oxford Mills, Ontario

K0G 1S0

Attention : George Gorrell

Reception Date : 2023-11-16

Project : 21-021

Sampler : NA

PO Number : Not Applicable

Temperature : 9 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7372228

Compliant**Notes :**

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-11-16

Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.07						
Manganese	0.01	mg/L	0.12						
Phosphorus	0.002	mg/L	0.009						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.067						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	3						

Approved by : R. Zafari
Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-11-16

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	110	80-120	115	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-18 Analysis Date: 2023-11-18	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	96	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	93	80-120	90	70-130	-	0-20
Copper	mg/L	0.001	<0.001	90	80-120	-	70-130	-	0-20
Iron	mg/L	0.03	<0.03	90	80-120	87	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	90	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	105	80-120	98	70-130	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-21 Analysis Date: 2023-11-22	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	109	80-120	103	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-20 Analysis Date: 2023-11-21	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	108	80-120	101	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-20 Analysis Date: 2023-11-21	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7372228								Prep Date: 2023-11-22 Analysis Date: 2023-11-22	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	94	93-107			17	0-20
Associated Samples : 7372228								Prep Date: 2023-11-22 Analysis Date: 2023-11-23	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

CLIENT INFORMATION

INVOICE INFORMATION (SAME AS C)

Company:

GRI INC

Contact:

George Correll

Address:

911 County Rd 18, Oxford Mills

Telephone:

613-258-2954 Cell: 647-582-5224

Email:

george.correll@agri-inc.co

Email:

eichard.simard@ksgc@gmail.com

Project:

21-021 Quote #: 191452

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID

Date/Time Collected

SW1 11/16/23 9:00 AM

Sample Details

Field Filtered →

of Containers

Sample Matrix

PHC FI - FA

BTEX

VOCs

PAHs

PCBs

O.Reg.153 parameters

Metals + Inorganic

Metals only

191452 ✓

RN#
(Lab Use Only)

7372228

PRINT

Signature

Date/Time

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

Sampled By:

Signature

Date/Time

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

Relinquished By:

Signature

Date/Time

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

Received By:

Signature

Date/Time

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

CUSTODY SEAL: ☐ YES ☐ NO ☐ YES ☐ NOCUSTODY SEAL: ☐ YES ☐ NO ☐ YES ☐ NO



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 3001608

Date Submitted: 2023-09-22

Date Reported: 2023-09-29

Project: 21-021

COC #: 223834

Page 1 of 6

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.09.2

9 12:01:17

-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <https://directory.cala.ca/>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline	1704068 SURF W 2023-09-22 MW2	1704069 SURF W 2023-09-22 MW4	1704070 SURF W 2023-09-22 MW6a	1704071 SURF W 2023-09-22 MW6B
Anions	Cl	1	mg/L			5	4	194	86
	F	0.10	mg/L			<0.10	<0.10	2.21	<0.10
	SO4	1	mg/L			14	9	<1	50
General Chemistry	Alkalinity as CaCO3	5	mg/L			214	164	387	252
	Conductivity	5	uS/cm			317	254	1270	800
	pH	1.00				7.76	7.77	8.50	7.86
Hardness	Hardness as CaCO3	1	mg/L			200	162	22	276
Indices/Calc	Ion Balance	0.01				0.92	0.94	0.99	0.97
Metals	Ca	1	mg/L			62	45	2	81
	Fe	0.03	mg/L			0.13	0.03	2.78	0.27
	K	1	mg/L			2	1	10	1
	Mg	1	mg/L			11	12	4	18
	Mn	0.01	mg/L			0.02	0.15	0.04	0.12
Oil and Grease	Na	1	mg/L			6	4	289	63
	Oil & Grease - Total	1	mg/L			<1	<1	<1	<1
	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10	<0.10
Others	N-NO3	0.10	mg/L			<0.10	0.77	<0.10	<0.10

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	
				1704072 SURF W 2023-09-22 MW3	1704073 SURF W 2023-09-22 13-6
Anions	Cl	1	mg/L	251	3
	F	0.10	mg/L	1.56	0.81
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
	SO4	1	mg/L	<1	52
General Chemistry	Alkalinity as CaCO3	5	mg/L	373	198
	Conductivity	5	uS/cm	1390	454
	pH	1.00		8.69	7.83
Hardness	Hardness as CaCO3	1	mg/L	13	217
Indices/Calc	Ion Balance	0.01		0.96	0.93
Metals	Ca	1	mg/L	2	67
	Fe	0.03	mg/L	<0.03	<0.03
	K	1	mg/L	12	5
	Mg	1	mg/L	2	12
	Mn	0.01	mg/L	0.03	0.05
	Na	1	mg/L	309	8
Oil and Grease	Oil & Grease - Total	1	mg/L	<1	<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.33

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449358 Analysis/Extraction Date 2023-09-25 Analyst SKH			
Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	106	80-120
Run No 449480 Analysis/Extraction Date 2023-09-27 Analyst S A			
Method SM 4110			
Chloride	<1 mg/L	100	90-110
SO4	<1 mg/L	100	90-110
Run No 449498 Analysis/Extraction Date 2023-09-27 Analyst Z S			
Method M SM3120B-3500C			
Calcium	<1 mg/L	99	90-110
Potassium	<1 mg/L	103	87-113
Magnesium	<1 mg/L	97	76-124
Sodium	<1 mg/L	101	82-118
Run No 449539 Analysis/Extraction Date 2023-09-27 Analyst AsA			
Method SM2320.2510.4500H/F			
Alkalinity (CaCO3)	<5 mg/L	103	90-110
Conductivity	<5 uS/cm	99	90-110
F	<0.10 mg/L	101	90-110

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
pH		100	90-110
Run No 449575 Analysis/Extraction Date 2023-09-28 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			
Run No 449622 Analysis/Extraction Date 2023-09-29 Analyst ACN Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 449626 Analysis/Extraction Date 2023-09-29 Analyst S A Method SM 4110			
Chloride	<1 mg/L	100	90-110
N-NO2	<0.10 mg/L	106	90-110
N-NO3	<0.10 mg/L	102	90-110
SO4	<1 mg/L	100	90-110
Run No 449630 Analysis/Extraction Date 2023-09-29 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449635 Method EPA 200.8	Analysis/Extraction Date 2023-09-28	Analyst AaN	
Iron	<0.03 mg/L	94	80-120
Manganese	<0.01 mg/L	97	80-120

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



eurofins 223834

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3001608

CLIENT INFORMATION

Company: GRI INC
 Contact: George D
 Address: 911 County Rd 18, Oxtown, N.Y.
 Telephone: 6475025224
 Cell:
 Email: #1: george.g-11011@grinc.ca
 Email: #2:

Project: 21-021
 Quote #: 191766
 TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☐ 5-7 Days (Standard)
 *Please contact Lab in advance to determine rush availability.
 **For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
 ***For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected
MW2	9/22/23 18:00
MW4	9/22/23 14:11
MW6	9/22/23 11:15
MW6B	9/22/23 11:20
MW3	9/22/23 10:20
MW13-6	9/22/23 13:10

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:
 Contact: Email: #1:
 Address: Email: #2:
 Telephone: PO #:

REGULATION/GUIDELINE REQUIRED

☐ O. Reg 153
 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only
 Yes ☐ No ☐
☐ O. Reg 406 Excess Soils
 Table # _____ Full depth/Strat/Ceiling/mSP/LP Leachate
 Type: Com-Ind / Res-Park / Agri / All Other
 Category: Surface / Subsurface

RN# (Lab Use Only)

500 900-10
 191766

Sample Matrix	# of Containers	PHC Ft. - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only
MW2	4							
MW4	4							
MW6	4							
MW6B	4							
MW3	4							
MW13-6	4							

1704068
 69
 70
 71
 72
 73

PRINT

Sampled By: George Gerni
 Relinquished By: George Gerni
 Received By:

SIGN

9/22/23
 9/22/23
 9/22/23

TEMP (°C)

COMMENTS:

191452 used. #191766
 does not watch samples submitted.
 SM 9/23/23

CUSTODY SEAL:

YES ☐ NO ☐
 ice packs submit ☐ Yes ☐ No ☐

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-880-8887 • 608 Norris Court, Kingston, ON, K7P 2B9 - Telephone: 613-634-3307

315

Approved by :


Emma Dawn Ferguson,
Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-04-26

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	111	80-120	107	80-120	2	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-03 Analysis Date: 2024-05-03	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	105	70-130	7	0-20
Cobalt	mg/L	0.0002	<0.0002	99	80-120	97	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	94	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	100	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	97	80-120	104	70-130	4	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-01 Analysis Date: 2024-05-02	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	100	80-120	118	80-120		
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-04-29 Analysis Date: 2024-04-30	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	91	80-120		
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-04-29 Analysis Date: 2024-04-30	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-01 Analysis Date: 2024-05-01	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	102	90-110			-	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-03 Analysis Date: 2024-05-03	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-04-26

Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1	<0.1	0.54				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.1	<0.1				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	5	<2	6				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	0.05	0.02	0.10				
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002				
Copper	0.001	mg/L	0.001	<0.001	<0.001				
Iron	0.03	mg/L	0.13	0.11	0.18				
Manganese	0.01	mg/L	0.05	0.03	0.05				
Phosphorus	0.002	mg/L	0.034	0.009	0.032				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020	<0.020	<0.020				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1	<1	5				

OFFICIAL CERTIFICATE OF ANALYSIS : 3893330

WORK REQUEST : 100277955

Report Date : 2024-05-03

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-04-26
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 14 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

7658607 7658608 7658609

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



222963

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #:

CLIENT INFORMATION

Company: **GBI INC**
Contact: **George Gossell**
Address: **911 County Rd 1B, OXFORD Mills**
Telephone: **613-258-2954** Cell: **647-502-5224**
Email: #1: **george.gossell@ggi-inc.co**
Email: #2: **richard.sismardksg@gmail.com**
Project: **21-021**
Quote #: **191452**
TURN-AROUND TIME (Business Days)
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☒ 5-7 Days (Standard)
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

INVOICE INFORMATION (SAME AS CI)

Company: _____
Contact: _____
Address: _____
Telephone: _____

Eurofins Workorder #:

100284779



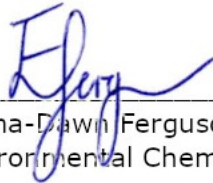
Printed On: 2024-05-27 13:56:56

REGULATION/GUIDELINE REQUIRED

☐ O. Reg 153
The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only
Yes ☐ No ☐
Table # _____ Coarse / Fine, Surface / subsurface
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment
☐ O. Reg 406 Excess Soils
Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate
Type: Com-Ind / Res-Park / Agri / All Other
Category: Surface / Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample Details										Sample Matrix										Field Filtered -->										# of Containers									
																														</									

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-05-27

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	94	80-120	113	80-120	9	0-20
Associated Samples : 7732034								Prep Date: 2024-06-02 Analysis Date: 2024-06-03	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	113	70-130	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-30	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	106	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-120	89	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120			0	0-20
Iron	mg/L	0.03	<0.03	100	80-120	96	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	91	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	101	80-120	110	70-130	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	103	80-120	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	95	80-120	104	80-120	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7732034								Prep Date: 2024-06-03 Analysis Date: 2024-06-03	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	94	90-110			2	0-20
Associated Samples : 7732034								Prep Date: 2024-06-02 Analysis Date: 2024-06-03	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-05-27

Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	<2						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Aluminum (Dissolved)	0.01	mg/L	<0.01						
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	0.03						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.18						
Manganese	0.01	mg/L	0.16						
Phosphorus	0.002	mg/L	0.031						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.121						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						

OFFICIAL CERTIFICATE OF ANALYSIS : 3932787

WORK REQUEST : 100284779

Report Date : 2024-06-03

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-05-27
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 19 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7732034

Compliant

Certificate Comments :

7732034

Cu spike not available due to matrix interference.

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
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Legend :

RL : Reporting limit

QC : Reference material (QC)

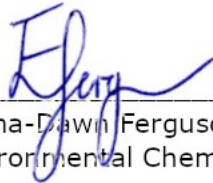
N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

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 380 Vansickle Road, Unit #630, 36 Catharines, ON, L2S 0B5 - Telephone: 905-680-8887
 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-06-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	101	80-120	105	80-120	6	0-20
Associated Samples : 7799483								Prep Date: 2024-06-26 Analysis Date: 2024-06-26	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	116	70-130	-	0-20
Associated Samples : 7799483								Prep Date: 2024-07-02 Analysis Date: 2024-07-02	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	102	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	105	80-120	97	70-130	-	0-20
Copper	mg/L	0.001	<0.001	120	80-120	106	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	109	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	105	80-120	110	70-130	-	0-20
Associated Samples : 7799483								Prep Date: 2024-06-28 Analysis Date: 2024-07-02	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	101	80-120		
Associated Samples : 7799483								Prep Date: 2024-06-27 Analysis Date: 2024-06-28	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	93	80-120	100	80-120		
Associated Samples : 7799483								Prep Date: 2024-06-27 Analysis Date: 2024-06-28	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7799483								Prep Date: 2024-07-02 Analysis Date: 2024-07-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			8	0-20
Associated Samples : 7799483								Prep Date: 2024-06-30 Analysis Date: 2024-07-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-06-25

Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	6						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Aluminum (Dissolved)	0.01	mg/L	0.03						
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.05						
Manganese	0.01	mg/L	0.02						
Phosphorus	0.002	mg/L	0.010						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.032						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						

OFFICIAL CERTIFICATE OF ANALYSIS : 3965484

WORK REQUEST : 100292110

Report Date : 2024-07-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-06-25
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 16 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7799483

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



222965

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

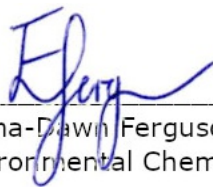
Eurofins Workorder #:

CLIENT INFORMATION		INVOICE INFORMATION (S)	
Company:	GRI INC	Company:	
Contact:	George Garrell	Contact:	
Address:	911 County Rd 18, Oxford Mills	Address:	
Telephone:	613-258-2954 cell: 647-502-5274	Telephone:	
Email:	#1: George Garrell @gri-inc.ca		
Email:	#2: Richard Simard KSG @gri-inc.ca		
Project:	21-021		
TURN-AROUND TIME (Business Days)		REGULATION/GUIDELINE REQUIRED	
☐ 1 Day* (100%)	☐ 2 Day** (50%)	☐ 3-5 Days (25%)	☒ 5-7 Days (Standard)
Please contact Lab in advance to determine rush availability.			
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.			
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).			
Sample ID	Date/Time Collected	RNN (Lab Use Only)	
SW1	7/26/24 3:00 pm	7889472	
PRINT		SIGN	
Sampled By:	R. Simard	7/26/24 3:00	
Relinquished By:	R. Simard	7/26/24 4:30	
Received By:		7/26/24 4:30	
TEMP (°C)		DATE/TIME	
25.3		7/26/24 3:00	
21		7/26/24 4:30	
COMMENTS:		COMMENTS:	
		Filtered metals for all other metals	
		unfiltered for all other metals	
CUSTODY SEAL:		CUSTODY SEAL:	
☐ YES ☐ NO		☐ YES ☐ NO	
Use pack submit		Use pack submit	
☐ Yes ☐ No		☐ Yes ☐ No	

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AFS/DCDC.9

Page ____ of ____

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-07-26

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	95	80-120	102	80-120	3	0-20
Associated Samples : 7889472								Prep Date: 2024-07-31 Analysis Date: 2024-07-31	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	120	70-130	-	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	91	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	107	80-120	107	70-130	-	0-20
Copper	mg/L	0.001	<0.001	110	80-120	111	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	102	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	95	70-130	1	0-20
Phosphorus	mg/L	0.002	<0.002	102	80-120	99	70-130	3	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	98	80-120	107	80-120	10	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	110	80-120	-	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7889472								Prep Date: 2024-08-02 Analysis Date: 2024-08-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	90-110			-	0-20
Associated Samples : 7889472								Prep Date: 2024-08-01 Analysis Date: 2024-08-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-07-26

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Anions	RL	Unit					
Nitrate (as Nitrogen)	0.1	mg/L	<0.1				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
General Chemistry	RL	Unit					
Total Suspended Solids	2	mg/L	5				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Metals	RL	Unit					
Aluminum (Dissolved)	0.01	mg/L	<0.01				
Metals Scan (Water, ICP/MS)							
Aluminum	0.01	mg/L	0.06				
Cobalt	0.0002	mg/L	<0.0002				
Copper	0.001	mg/L	<0.001				
Iron	0.03	mg/L	0.16				
Manganese	0.01	mg/L	0.08				
Phosphorus	0.002	mg/L	0.020				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Oil and Grease	RL	Unit					
Oil and Grease (Total)	1	mg/L	<1				

OFFICIAL CERTIFICATE OF ANALYSIS : 4005781

WORK REQUEST : 100300207

Report Date : 2024-08-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-07-26
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 21 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7889472

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

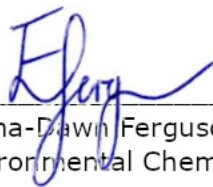
INVOICE INFORMATION (SAT INFORMATION: YES ☐ NO ☐)

PRINT		SIGN	DATE/TIME	TEMP (°C)	COMMENTS:
Sampled By:	Richard S. Sarno				
Relinquished By:	Richard S. Sarno		8/29/24 12:30		
Received By:		SY	8/29/24 17:20	20	

CUSTODY SEAL: ☐ YES ☐ NO ☐ Ice packs submit ☐ Yes ☐ No

COMMENTS: Filtered metons for Aloma
unfiltered for all other metons

[illegible]

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-08-29

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	97	80-120	105	80-120	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-05 Analysis Date: 2024-09-05	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	101	70-130	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-03	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	99	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-120	94	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	93	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	94	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	95	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	104	80-120	106	70-130	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-05	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	99	80-120	1	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-04	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	88	80-120	107	80-120	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-04	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7988082								Prep Date: 2024-09-05 Analysis Date: 2024-09-05	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-04 Analysis Date: 2024-09-05	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-08-29

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Anions	RL	Unit						
Nitrate (as Nitrogen)	0.1	mg/L	<0.1					
Nitrite (as Nitrogen)	0.1	mg/L	<0.1					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
General Chemistry	RL	Unit						
Total Suspended Solids	2	mg/L	3					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Metals	RL	Unit						
Aluminum (Dissolved)	0.01	mg/L	<0.01					
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	<0.01					
Cobalt	0.0002	mg/L	<0.0002					
Copper	0.001	mg/L	<0.001					
Iron	0.03	mg/L	0.08					
Manganese	0.01	mg/L	0.08					
Phosphorus	0.002	mg/L	0.025					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Nutrients	RL	Unit						
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Oil and Grease	RL	Unit						
Oil and Grease (Total)	1	mg/L	<1					

OFFICIAL CERTIFICATE OF ANALYSIS : 4048708

WORK REQUEST : 100308052

Report Date : 2024-09-05

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-08-29
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 20 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7988082

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

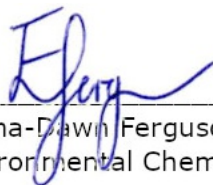
N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION)			
Company:	GFI INC			Company:			
Contact:	George Garrell			Contact:			
Address:	911 County Rd 18, OX FORD MILLS			Address:			
Telephone:	613-258-2954	Cell:	647-502-5274	Telephone:			
Email:	#1: george.garrell@gfi-inc.ca			Email:			
Email:	#2: richard.simard@ksge.com			Email:			
Project:	21-021			Project:			
TURN-AROUND TIME (Business Days)				REGULATION/GUIDELINE			
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)				☐ Sanitary Sewer, City: ☐ O. Reg 153			
Please contact Lab in advance to determine rush availability.				The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only ☐ Yes ☐ No			
*For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				☐ Storm Sewer, City: ☐ O. Reg 347			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				☐ ODWSOG (Use DW Coc if analyzing drinking water) ☐ PWQO			
				☐ Other: _____			
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate Type: Com-Ind / Res-Park / Agri/All Other Category: Surface / Subsurface			
Sample ID				Table # _____ Excess Soils			
Date/Time Collected				Type: Com-Ind / Res-Park / Agri/All Other Category: Surface / Subsurface			
SW1				8070394			
9/30/24 12:45 SW1 5				191452			
Sample Matrix				Metals only			
# of Containers				Metals + Inorganics			
PHC F1 - P4				PCBs			
BTEX				PAHs			
VOCs				O. Reg. 153 parameters			
Field Filtered ->				Field Filtered ->			
Sample Details				Sample Details			
TEMP (°C)				TEMP (°C)			
18°C				18°C			
DATE/TIME				DATE/TIME			
9/30/24 12:45				9/30/24 12:45			
SIGN				SIGN			
Richard Simard				Richard Simard			
SIGNED BY				SIGNED BY			
Richard Simard				Richard Simard			
RECEIVED BY				RECEIVED BY			
R. Simard				R. Simard			
DATE				DATE			
9/30/24				9/30/24			
CUSTODY SEAL				CUSTODY SEAL			
YES ☐ NO ☐				YES ☐ NO ☐			
COMMENTS				COMMENTS			
Filtered Metastore for AL				Filtered Metastore for AL			
unfiltered for the other metatons				unfiltered for the other metatons			

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-09-30

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	107	80-120	118	80-120	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-03 Analysis Date: 2024-10-03	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	115	70-130	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-01	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	111	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	98	80-120	94	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120			1	0-20
Iron	mg/L	0.03	<0.03	90	80-120	99	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	99	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	103	80-120	116	70-130	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-01	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	93	80-120				
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-02	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	105	80-120				
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-02	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	90	70-130				
Associated Samples : 8070394								Prep Date: 2024-10-07 Analysis Date: 2024-10-07	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	93	90-110			-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-07 Analysis Date: 2024-10-07	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-09-30

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Anions	RL	Unit						
Nitrate (as Nitrogen)	0.1	mg/L	<0.1					
Nitrite (as Nitrogen)	0.1	mg/L	<0.1					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
General Chemistry	RL	Unit						
Total Suspended Solids	2	mg/L	4					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Metals	RL	Unit						
Aluminum (Dissolved)	0.01	mg/L	<0.01					
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	0.02					
Cobalt	0.0002	mg/L	<0.0002					
Copper	0.001	mg/L	<0.001					
Iron	0.03	mg/L	0.40					
Manganese	0.01	mg/L	0.47					
Phosphorus	0.002	mg/L	0.041					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Nutrients	RL	Unit						
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.031					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Oil and Grease	RL	Unit						
Oil and Grease (Total)	1	mg/L	<1					

OFFICIAL CERTIFICATE OF ANALYSIS : 4110802

WORK REQUEST : 100316515

Report Date : 2024-10-07

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-09-30
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 17 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

8070394

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

Approved by : 
Patrick Jacques,
Ottawa, Environmental Chemist,

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-10-31

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	102	80-120	105	80-120	9	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-05 Analysis Date: 2024-11-05	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	126	70-130	-	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-01 Analysis Date: 2024-11-01	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	103	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	108	80-120	95	70-130	-	0-20
Copper	mg/L	0.001	<0.001	110	80-120	99	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	97	70-130	1	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	7	0-20
Phosphorus	mg/L	0.002	<0.002	106	80-120	108	70-130	3	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-01 Analysis Date: 2024-11-01	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	90	80-120	17	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-04 Analysis Date: 2024-11-05	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	100	80-120			-	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-04 Analysis Date: 2024-11-05	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	90	70-130				
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-07 Analysis Date: 2024-11-07	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			13	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-06 Analysis Date: 2024-11-07	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-10-31

Eurofins Sample No :			8159260	8159261	8159262				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-10-30	2024-10-30	2024-10-30				
Client Sample Identification :			SW1	SW2	SW3				
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1	0.66	3.84				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.1	<0.1				

Eurofins Sample No :			8159260	8159261	8159262				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-10-30	2024-10-30	2024-10-30				
Client Sample Identification :			SW1	SW2	SW3				
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	8	33	<2				

Eurofins Sample No :			8159260	8159261	8159262				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-10-30	2024-10-30	2024-10-30				
Client Sample Identification :			SW1	SW2	SW3				
Metals	RL	Unit							
Aluminum (Dissolved)	0.01	mg/L	0.01	<0.01	<0.01				
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	0.02	0.04	0.15				
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002				
Copper	0.001	mg/L	<0.001	<0.001	0.002				
Iron	0.03	mg/L	0.18	0.66	0.23				
Manganese	0.01	mg/L	1.20	0.39	0.04				
Phosphorus	0.002	mg/L	0.021	0.027	0.043				

Eurofins Sample No :			8159260	8159261	8159262				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-10-30	2024-10-30	2024-10-30				
Client Sample Identification :			SW1	SW2	SW3				
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.038	0.051	0.048				

Eurofins Sample No :			8159260	8159261	8159262				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-10-30	2024-10-30	2024-10-30				
Client Sample Identification :			SW1	SW2	SW3				
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1	<1	<1				

OFFICIAL CERTIFICATE OF ANALYSIS : 4145659

WORK REQUEST : 100324409

Report Date : 2024-11-07

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-10-31
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 16 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	3	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

8159260 8159261 8159262

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



eurofins

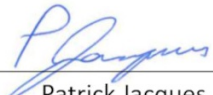
222969

STANDARD CHAIN-OF-CUSTODY

1415 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5592, Fax: 613-727-5222

Eurofins Workorder #:

eurofins		222969		STANDARD CHAIN-OF-CUSTODY		1415 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5592, Fax: 613-727-5222		Eurofins Workorder #:	
CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFO)					
Company: GRI INC				Company: 100329045					
Contact: George Garrell				Contact: 100329045					
Address: 911 Connaught Rd 18, OXFORD MILLS				Address: 100329045					
Telephone: 647-502-5242				Telephone: 100329045					
Email: #1: George.garrell@gri-inc.com				Email: #1: 100329045					
Email: #2: Richard.Simondt@gri-inc.com				Email: #2: 100329045					
Project: 21-021				Project: 100329045					
TURN-AROUND TIME (Business Days)				REGULATION/GUIDELINE REQUIRED					
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 7 Days (Standard)				☐ O. Reg 153					
Please contact Lab in advance to determine rush availability.				The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only					
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.				Type: Coarse / Fine, Surface / Subsurface					
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment					
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Table # _____ Full depth/Strat/Ceiling/mSP/LP Leachate					
Sample ID: SW21				Type: Com-Ind / Res-Park / Agri / All Other					
Date/Time Collected: 11/25/24 15:00				Category: Surface / Subsurface					
Sample Matrix: 5				RN# (Lab Use Only): 8222350					
Field Filtered ->									
O. Reg. 153 parameters									
PHC F1 - F4									
BTEX									
VOCs									
PAHs									
PCBs									
Metals + Inorganic									
Metals only									
DATE/TIME				DATE/TIME					
11/25/24 15:00				11/25/24 15:00					
SIGN				SIGN					
PRINT				PRINT					
Sampled By: Richard Simondt				Sampled By: Richard Simondt					
Relinquished By: Richard Simondt				Relinquished By: Richard Simondt					
Received By: Richard Simondt				Received By: Richard Simondt					
Comments: 21-021 - SW2 - 5242				Comments: 21-021 - SW2 - 5242					
TEMP (°C)				TEMP (°C)					
3.5				3.5					
CUSTODY SEAL: YES NO				CUSTODY SEAL: YES NO					
YES NO				YES NO					
Ice pack submit				Ice pack submit					
Yes No				Yes No					

Approved by : 
Patrick Jacques,
Ottawa, Environmental Chemist,

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-11-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	109	80-120	107	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-28 Analysis Date: 2024-11-28	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-130	124	70-130	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-28 Analysis Date: 2024-11-29	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-130	82	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-130	96	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-130	91	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-130	84	70-130	0	0-20
Manganese	mg/L	0.01	<0.01	100	80-130	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	104	80-120	84	70-130	1	0-20
Associated Samples : 8222350								Prep Date: 2024-11-27 Analysis Date: 2024-11-28	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	100	80-120	98	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-26 Analysis Date: 2024-11-27	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	102	80-120	107	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-26 Analysis Date: 2024-11-27	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 8222350								Prep Date: 2024-12-02 Analysis Date: 2024-12-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	90-110			-	0-20
Associated Samples : 8222350								Prep Date: 2024-12-02 Analysis Date: 2024-12-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-11-25

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Anions	RL	Unit					
Nitrate (as Nitrogen)	0.1	mg/L	<0.1				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
General Chemistry	RL	Unit					
Total Suspended Solids	2	mg/L	445				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Metals	RL	Unit					
Aluminum (Dissolved)	0.01	mg/L	0.01				
Metals Scan (Water, ICP/MS)							
Aluminum	0.01	mg/L	0.04				
Cobalt	0.0002	mg/L	<0.0002				
Copper	0.001	mg/L	<0.001				
Iron	0.03	mg/L	0.21				
Manganese	0.01	mg/L	0.24				
Phosphorus	0.002	mg/L	0.023				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.022				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Oil and Grease	RL	Unit					
Oil and Grease (Total)	1	mg/L	<1				

OFFICIAL CERTIFICATE OF ANALYSIS : 4170780

WORK REQUEST : 100329045

Report Date : 2024-12-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-11-25
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 5 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

8222350

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

N/A : Not applicable

* : Analysis conducted by external subcontracting

QC : Reference material (QC)

1 : Results in annex

^ : Analysis not accredited

Appendix F

Laboratory Reports, Groundwater



Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

Page 1 of 4

Dear Richard Simard:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-
Dawn
Ferguson
2022.05.06
19:47:09
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1622853 Water 2022-04-29 SW1	1622854 Water 2022-04-29 SW2	1622855 Water 2022-04-29 SW3
Group	Analyte	MRL	Units	Guideline				
Anions	N-NO3	0.10	mg/L			<0.10	<0.10	0.65
General Chemistry	Conductivity	5	uS/cm			317	839	783
	Total Suspended Solids	2	mg/L			<2	<2	<2
Metals	Al (dissolved)	0.01	mg/L			0.01	0.01	0.01
	Co	0.0002	mg/L			<0.0002	<0.0002	<0.0002
	Cu	0.001	mg/L			0.002	<0.001	<0.001
	Fe	0.03	mg/L			0.31	0.13	0.18
	Filtration		mg/L			y	y	y
	Mn	0.01	mg/L			0.63	0.02	0.07
	P	0.002	mg/L			0.030	0.011	0.018
Nutrients	N-NH3	0.010	mg/L			0.111	<0.010	<0.010
Oil and Grease	Oil & Grease - Mineral	1	mg/L			<1	<1	<1
	Oil & Grease - Non-mineral	1	mg/L			<1	<1	<1
	Oil & Grease - Total	1	mg/L			<1	<1	<1

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 421300 Analysis/Extraction Date 2022-05-03 Analyst AsA Method SM2320,2510,4500H/F			
Conductivity	<5 uS/cm	101	90-110
Run No 421322 Analysis/Extraction Date 2022-05-05 Analyst SKH Method C SM2540			
Total Suspended Solids	<2 mg/L	98	90-110
Run No 421400 Analysis/Extraction Date 2022-05-05 Analyst R G Method SM 5520B/F			
Oil & Grease - Mineral	<1 mg/L	80	60-120
Oil & Grease - Non-mineral	<1 mg/L		60-120
Oil & Grease - Total	<1 mg/L	105	60-120
Run No 421402 Analysis/Extraction Date 2022-05-05 Analyst AaN Method SM 4110			
N-NO3	<0.10 mg/L	104	90-110
Run No 421435 Analysis/Extraction Date 2022-05-05 Analyst SKH Method EPA 350.1			
N-NH3	<0.010 mg/L	103	80-120
Run No 421475 Analysis/Extraction Date 2022-05-05 Analyst SD Method EPA 200.8			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Karson Sand and Gravel
3175 Carp Rd.
Carp, ON
K0A 1L0
Attention: Mr. Richard Simard
PO#: VISA
Invoice to: Karson Sand and Gravel

Report Number: 1976257
Date Submitted: 2022-04-29
Date Reported: 2022-05-06
Project: McGee Pit
COC #: 216637

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Al (dissolved)	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	86	80-120
Copper	<0.001 mg/L	90	80-120
Iron	<0.03 mg/L	95	80-120
Filtration			
Manganese	<0.01 mg/L	93	80-120
P	<0.002 mg/L	94	80-120
Run No 421531 Analysis/Extraction Date 2022-05-06 Analyst SKH Method EPA 350.1			
N-NH3	<0.010 mg/L	114	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO <input 4"="" type="checkbox/>)</th></tr></thead><tbody><tr><td colspan="/> Company: KARSON SANDS and Gravel <td colspan="4">Company:</td> <td colspan="8">Fax:</td>												Company:				Fax:							
Contact: Richard Simard				Contact:				Email: #1:																			
Address: 3175 CARP ROAD				Address:				Email: #2:																			
Telephone: 613-250-8535				Cell:				Telephone:				PO #:															
Email: #1: richard.simard KS6@Gmail.com				REGULATION/GUIDELINE REQUIRED ☐ Sanitary Sewer, City: _____ ☐ Storm Sewer, City: _____ ☐ ODWSOG (Use DW CoC if analyzing drinking water) ☐ PWQO ☐ O.Reg 347 ☐ Other: _____ ☐ O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐ ☐ O. Reg 406 Excess Soils Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface																							
Email: #2:																											
Project: McGee Pit				Quote #: 191024																							
TURN-AROUND TIME (Business Days)																											
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)																											
Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.																											
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).																											
Sample Details																											
Field Filtered -->																											
O.Reg.153 parameters																											
Sample Matrix # of Containers PHC F1 - F4 BTEX VOCs PAHs PCBs Metals + Inorganics Metals only																											
Sample ID		Date/Time Collected														RN# (Lab Use Only)											
SW1		4/29/22														1622853											
SW2		4/29/22 1230														54											
SW3		4/29/22														55											
PRINT																											
Sampled By: R Simard				SIGN R Simard				DATE/TIME 4/29/22 1230				TEMP (°C) 9.0				COMMENTS: Paid by Credit card											
Relinquished By: R Simard								4/29/22 1524				11.0															
Received By:								29/4/22 1325				14.9															
CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No																											

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-
Dawn
Ferguson
2022.06.01
10:39:34
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1627506 SURF W 2022-05-26 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		7
Metals	Al	0.01	mg/L		0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.10
	Mn	0.01	mg/L		0.09
	P	0.002	mg/L		0.013
Nutrients	N-NH3	0.010	mg/L		0.038
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 422697 Analysis/Extraction Date 2022-05-29 Analyst ML Method EPA 350.1			
N-NH3	<0.010 mg/L	96	80-120
Run No 422741 Analysis/Extraction Date 2022-05-30 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	104	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 422836 Analysis/Extraction Date 2022-06-01 Analyst SKH Method C SM2540			
Total Suspended Solids	<2 mg/L	92	90-110
Run No 422838 Analysis/Extraction Date 2022-05-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	117	80-120
Cobalt	<0.0002 mg/L	106	80-120
Copper	<0.001 mg/L	112	80-120
Iron	<0.03 mg/L	97	80-120
Manganese	<0.01 mg/L	108	80-120
P	<0.002 mg/L	93	80-120

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1977859
Date Submitted: 2022-05-26
Date Reported: 2022-06-01
Project: 21-021
COC #: 213042

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 422917 Analysis/Extraction Date 2022-05-31 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	80	60-120

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

Page 1 of 4

Dear George Gorrell:**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:



Emma-
Dawn
Ferguson
2022.06.2
9 13:59:41
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1633421 SURF W 2022-06-23 SW1
Group	Analyte	MRL	Units	Guideline	
Anions	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al (dissolved)	0.01	mg/L		0.07
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.19
	Mn	0.01	mg/L		0.18
	P	0.002	mg/L		0.018
Nutrients	N-NH3	0.010	mg/L		0.019
Oil and Grease	Oil & Grease - Total	1	mg/L		<1

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 424496 Analysis/Extraction Date 2022-06-25 Analyst AaN Method SM 4110			
N-NO2	<0.10 mg/L	105	90-110
N-NO3	<0.10 mg/L	96	90-110
Run No 424517 Analysis/Extraction Date 2022-06-24 Analyst FM Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	95	60-120
Run No 424524 Analysis/Extraction Date 2022-06-26 Analyst ML Method EPA 350.1			
N-NH3	<0.010 mg/L	98	80-120
Run No 424529 Analysis/Extraction Date 2022-06-24 Analyst SD Method EPA 200.8			
Cobalt	<0.0002 mg/L	113	80-120
Copper	<0.001 mg/L	118	80-120
Iron	<0.03 mg/L	115	80-120
Manganese	<0.01 mg/L	116	80-120
P	<0.002 mg/L	102	80-120
Run No 424588 Analysis/Extraction Date 2022-06-28 Analyst CK Method C SM2540			

Guideline =

* = Guideline Exceedence

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1980060
Date Submitted: 2022-06-23
Date Reported: 2022-06-29
Project: 21-021
COC #: 216636

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Total Suspended Solids	<2 mg/L	100	90-110
Run No 424630 Analysis/Extraction Date 2022-06-28 Analyst SD Method EPA 200.8			
Al (dissolved)	<0.01 mg/L		80-120

Guideline = * = **Guideline Exceedence**

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Methods references and/or additional QA/QC information available on request.

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CLIENT INFORMATION										INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐														
Company: GRI INC										Company:					Fax:									
Contact: George Garrell										Contact:					Email: #1:									
Address: 911 County Rd 18 Oxford Mills										Address:					Email: #2:									
Telephone: 613 258 2954 Cell: 697 502 5224										Telephone:					PO #:									
Email: #1: george.garrell@gri-inc.com										REGULATION/GUIDELINE REQUIRED														
Email: #2: richard.simard KSG@gmail.com																								
Project: 21-021										Quote #: 191952					☐ Sanitary Sewer, City: _____ ☐ Storm Sewer, City: _____ ☐ ODWSOG (Use DW CoC if analyzing drinking water) ☐ PWQO ☐ O.Reg 347 ☐ Other: _____ ☐ O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐ ☐ O. Reg 406 Excess Soils Table # _____ Full depth/Strat/Ceiling/mSPL Leachate Type: Com-Ind / Res-Park / Agri/All Other Category: Surface / Subsurface									
TURN-AROUND TIME (Business Days)																								
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)																								
Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.																								
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).										Sample Details														
										Field Filtered -->										RN# (Lab Use Only)				
										O.Reg.153 parameters														
Sample ID		Date/Time Collected		Sample Matrix	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	600 quote											
SW1		06/23/2022 11:30																1633421						
PRINT				SIGN				DATE/TIME		TEMP (°C)		COMMENTS:												
Sampled By:		Richard Simard				11:30		19																
Relinquished By:		Richard Simard				12:50		20°																
Received By:						06/23/22		19.5		CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit ☐ Yes ☐ No														

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-Dawn
Ferguson
2022.08.04
12:45:44 -04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1640896 Water 2022-07-28 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		4
Metals	Al	0.01	mg/L		0.03
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.17
	Mn	0.01	mg/L		0.09
	P	0.002	mg/L		0.015
Nutrients	N-NH3	0.020	mg/L		0.047
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 426503 Analysis/Extraction Date 2022-07-29 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 426605 Analysis/Extraction Date 2022-07-31 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	86	80-120
Run No 426614 Analysis/Extraction Date 2022-08-02 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	103	80-120
N-NO3	<1.0 mg/L	102	80-120
Run No 426740 Analysis/Extraction Date 2022-08-03 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	103	80-120
Copper	<0.001 mg/L	107	80-120
Iron	<0.03 mg/L	106	80-120
Manganese	<0.01 mg/L	109	80-120
P	<0.002 mg/L	92	80-120

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1982692
Date Submitted: 2022-07-28
Date Reported: 2022-08-04
Project: 21-021
COC #: 216635

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 426774 Analysis/Extraction Date 2022-08-04 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	60-120

Guideline = * = **Guideline Exceedence**

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[illegible]

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

Page 1 of 4

Dear George Gorrell:**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:



Emma-
Dawn
Ferguson
2022.08.3
1 13:27:19
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1647054 SURF W 2022-08-25 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		5
Metals	Al	0.01	mg/L		0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.06
	Mn	0.01	mg/L		0.05
	P	0.002	mg/L		0.007
Nutrients	N-NH3	0.020	mg/L		0.036
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.57

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Certificate of Analysis

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 428268 Analysis/Extraction Date 2022-08-26 Analyst ML Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	103	80-120
N-NO3	<0.10 mg/L	104	80-120
Run No 428360 Analysis/Extraction Date 2022-08-28 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	87	80-120
Run No 428473 Analysis/Extraction Date 2022-08-30 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	98	90-110
Run No 428546 Analysis/Extraction Date 2022-08-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	95	80-120
Cobalt	<0.0002 mg/L	100	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	101	80-120
Manganese	<0.01 mg/L	101	80-120
P	<0.002 mg/L	90	80-120

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Certificate of Analysis

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1984750
Date Submitted: 2022-08-25
Date Reported: 2022-08-31
Project: 21-021
COC #: 216634

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 428556 Analysis/Extraction Date 2022-08-31 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	110	60-120

Guideline = *** = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-
Dawn
Ferguson
2022.10.0
6
16:41:49
-04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1653770 SURF W 2022-09-29 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		<0.03
	Mn	0.01	mg/L		<0.01
	P	0.002	mg/L		0.006
Nutrients	N-NH3	0.020	mg/L		<0.020
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 430642 Analysis/Extraction Date 2022-09-30 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	107	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 430662 Analysis/Extraction Date 2022-09-30 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	119	80-120
Cobalt	<0.0002 mg/L	104	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	116	80-120
Manganese	<0.01 mg/L	106	80-120
P	<0.002 mg/L	116	80-120
Run No 430682 Analysis/Extraction Date 2022-10-02 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	89	80-120
Run No 430760 Analysis/Extraction Date 2022-10-04 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	96	90-110

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Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1987023
Date Submitted: 2022-09-29
Date Reported: 2022-10-06
Project: 21-021
COC #: 216633

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 430982 Analysis/Extraction Date 2022-10-06 Analyst R G Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	110	70-130

Guideline = * = **Guideline Exceedence**

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Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Emma-Dawn
Ferguson
2022.10.25
13:51:34 -04'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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Certificate of Analysis

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1657128 SURF W 2022-10-18 SW1	1657129 SURF W 2022-10-18 SW2	1657130 SURF W 2022-10-18 SW3
Group	Analyte	MRL	Units	Guideline				
Anions	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10
	N-NO3	0.10	mg/L			<0.10	0.37	<0.10
General Chemistry	Total Suspended Solids	2	mg/L			<2	<2	<2
Metals	Al	0.01	mg/L			0.03	0.07	0.03
	Co	0.0002	mg/L			<0.0002	<0.0002	<0.0002
	Cu	0.001	mg/L			<0.001	<0.001	<0.001
	Fe	0.03	mg/L			0.06	0.16	0.40
	Mn	0.01	mg/L			0.03	0.03	0.07
	P	0.002	mg/L			0.015	0.022	0.015
Nutrients	N-NH3	0.020	mg/L			0.045	<0.020	<0.020
Oil and Grease	Oil & Grease - Total	1	mg/L			<1	1	<1

Guideline = * = Guideline Exceedence

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 431561 Analysis/Extraction Date 2022-10-19 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 431576 Analysis/Extraction Date 2022-10-20 Analyst AaN Method SM 4110			
N-NO2	<0.10 mg/L	103	90-110
N-NO3	<0.10 mg/L	102	90-110
Run No 431625 Analysis/Extraction Date 2022-10-18 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	113	80-120
Cobalt	<0.0002 mg/L	108	80-120
Copper	<0.001 mg/L	108	80-120
Iron	<0.03 mg/L	108	80-120
Manganese	<0.01 mg/L	105	80-120
P	<0.002 mg/L	119	80-120
Run No 431830 Analysis/Extraction Date 2022-10-24 Analyst SKH Method EPA 350.1			
N-NH3	<0.020 mg/L	109	80-120

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Invoice to: GRI Inc.

Report Number: 1988311
Date Submitted: 2022-10-18
Date Reported: 2022-10-25
Project: 21-021
COC #: 216631

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 431840 Analysis/Extraction Date 2022-10-24 Analyst VMK Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	90	70-130

Guideline = * = **Guideline Exceedence**

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CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO <input 4"="" type="checkbox/>)</th></tr></thead><tbody><tr><td colspan="/> Company: GRI INC <td colspan="4">Company:</td> <td colspan="8">Fax:</td>												Company:				Fax:							
Contact: George Correll				Contact:				Email: #1:																			
Address: 911 County Rd 18, Oxford Mills				Address:				Email: #2:																			
Telephone: 613-258-2954		Cell: 697-502-5224		Telephone:				PO #:																			
Email: #1: George.gorrell@gri-inc.co				REGULATION/GUIDELINE REQUIRED ☐ Sanitary Sewer, City: _____ ☐ Storm Sewer, City: _____ ☐ ODWSOG (Use DW CoC if analyzing drinking water) ☐ PWQO ☐ O.Reg 347 ☐ Other: _____ ☐ O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐ ☐ O. Reg 406 Excess Soils Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface																							
Email: #2: richard.simard KSG@gmail.com																											
Project: 21-021		Quote #: 191452																									
TURN-AROUND TIME (Business Days) ☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard) Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.																											
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).																											
Sample Details																											
Field Filtered --> _____																											
O.Reg.153 parameters																											
Sample Matrix		# of Containers		PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only					RN# (Lab Use Only)												
Sample ID	Date/Time Collected																										
SW1	10/18/22 12:00		4											1657128													
SW2	10/18/22 1:00		4											29													
SW3	10/18/22 2:00		4											30													
PRINT SIGN DATE/TIME TEMP (°C) COMMENTS:																											
Sampled By:	Richard Simard	SIGN		10/18/22		10°C																					
Relinquished By:	Richard Simard			10/18/22 3:41		136																					
Received By:				10/18/22		136																					
CUSTODY SEAL: ☐ YES ☐ NO Ice packs submit: ☐ Yes ☐ No																											

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

Page 1 of 4

Dear George Gorrell:**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:



Emma-Dawn
Ferguson
2022.12.01 18:43:45
-05'00'

APPROVAL:

Emma-Dawn Ferguson, Chemist

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911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
					1664719 SURF W 2022-11-24 SW1
Group	Analyte	MRL	Units	Guideline	
General Chemistry	Total Suspended Solids	2	mg/L		<2
Metals	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		0.33
	Mn	0.01	mg/L		0.73
	P	0.002	mg/L		0.009
Nutrients	N-NH3	0.020	mg/L		0.151
Oil and Grease	Oil & Grease - Total	1	mg/L		<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = Guideline Exceedence

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Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 433901 Analysis/Extraction Date 2022-11-25 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	95	80-120
Run No 433916 Analysis/Extraction Date 2022-11-25 Analyst SD Method EPA 200.8			
Aluminum	<0.01 mg/L	107	80-120
Cobalt	<0.0002 mg/L	104	80-120
Copper	<0.001 mg/L	106	80-120
Iron	<0.03 mg/L	104	80-120
Manganese	<0.01 mg/L	114	80-120
P	<0.002 mg/L	119	80-120
Run No 434052 Analysis/Extraction Date 2022-11-29 Analyst CK Method C SM2540			
Total Suspended Solids	<2 mg/L	100	90-110
Run No 434152 Analysis/Extraction Date 2022-11-29 Analyst ML Method EPA 350.1			
N-NH3	<0.020 mg/L	90	80-120

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K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1990471
Date Submitted: 2022-11-24
Date Reported: 2022-12-01
Project: 21-021
COC #: 216632

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 434319 Analysis/Extraction Date 2022-12-01 Analyst VMK Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	80	70-130

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[illegible]



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1992523

Date Submitted: 2023-01-12

Date Reported: 2023-01-19

Project: 21-021

COC #: 216628

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.01.1
9 17:09:32
-05'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

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Environment Testing

Certificate of Analysis

Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	<2	1670877 SURF W 2023-01-11 SW1
	Al	0.01	mg/L	<0.01	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	0.25	
	Mn	0.01	mg/L	0.22	
Nutrients	P	0.002	mg/L	0.015	1
	N-NH3	0.020	mg/L	0.066	
Oil and Grease Others	Oil & Grease - Total	1	mg/L	<0.10	
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	

Guideline =

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Attention: Mr. George Gorrell
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Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 436075 Method SM 5520B/F	Analysis/Extraction Date 2023-01-19 Analyst SS		
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 436251 Method C SM2540	Analysis/Extraction Date 2023-01-16 Analyst SKH		
Total Suspended Solids	<2 mg/L	98	90-110
Run No 436258 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-01-13 Analyst SKH		
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	100	80-120
Run No 436284 Method EPA 350.1	Analysis/Extraction Date 2023-01-16 Analyst SKH		
N-NH3	<0.020 mg/L	114	80-120
Run No 436385 Method EPA 200.8	Analysis/Extraction Date 2023-01-17 Analyst SD		
Aluminum	<0.01 mg/L	115	80-120
Cobalt	<0.0002 mg/L	99	80-120
Copper	<0.001 mg/L	101	80-120
Iron	<0.03 mg/L	96	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

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Invoice to: GRI Inc.

Report Number: 1992523
Date Submitted: 2023-01-12
Date Reported: 2023-01-19
Project: 21-021
COC #: 216628

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Manganese	<0.01 mg/L	102	80-120
P	<0.002 mg/L	105	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)			
Company:	GRI Inc			Company:			
Contact:	George Garsell			Contact:			
Address:	911 County Rd 18 Oxford Mills			Address:			
Telephone:	613-258-2954			Telephone:			
Email:	#1: george.garsell@gri-inc.co			Email:	#1:		
Email:	#2: richard.simard@ksr@9mml.com			Email:	#2:		
Project:	21-021			PO #:			
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard) *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				REGULATION/GUIDELINE REQUIRED ☐ Sanitary Sewer, City: ☐ Storm Sewer, City: ☐ ODWSOG (Use DW CoC if analyzing drinking water) ☐ PWQO ☐ O. Reg 347 ☐ Other:			
TURN-AROUND TIME (Business Days) The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐ O. Reg 406 Excess Soils Table # _____ Full depth/Strat/Ceiling/mSPLP Leachate Type: Com-Ind /Res-Park /Agri/All Other Category: Surface /Subsurface			
Sample Details Field Filtered --> Sample Matrix # of Containers PHC F1 - F4 BTEX VOCs PAHs PCBs Metals + Inorganic Metals only				COMMENTS: DATE/TIME TEMP (°C)			
Sample ID	Date/Time Collected	Signature		CUSTOMER SEAL: YES ☐ NO ☐ YES ☐ NO ☐ Ice packs submit Yes ☐ No ☐			
SW1	01/11/23 1600	R. Simard		01/11/23 1600 01/11/23 3:30 01/11/23 376			
PRINT Sampled By: R. Simard Relinquished By: R. Simard Received By:				1992523 metals filtered In field 1670877			



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari
R Zafari 2023.05.0
8 14:13:42
-04'00'
Raheleh Zafari, Environmental Chemist

APPROVAL:

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <https://directory.cala.ca/>.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline
General Chemistry Metals	Total Suspended Solids	2	mg/L	1684474 SURF W 2023-04-28 SW1	1684476 SURF W 2023-04-28 SW3
	Al	0.01	mg/L	6	6
	Co	0.0002	mg/L	<0.01	0.02
	Cu	0.001	mg/L	<0.0002	<0.0002
	Fe	0.03	mg/L	<0.001	<0.001
	Mn	0.01	mg/L	0.04	0.05
Nutrients	P	0.002	mg/L	0.02	0.02
	N-NH3	0.020	mg/L	0.018	0.014
	Oil & Grease - Total	1	mg/L	0.116	0.115
Others	N-NO2	0.10	mg/L	<1	<1
	N-NO3	0.10	mg/L	<0.10	<0.10
			mg/L	<0.10	0.28

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 441018 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-05-02	Analyst SKH	
N-NO2	<0.10 mg/L	96	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 441029 Method C SM2540	Analysis/Extraction Date 2023-05-03	Analyst SKH	
Total Suspended Solids	<2 mg/L	97	90-110
Run No 441052 Method C SM2540	Analysis/Extraction Date 2023-05-04	Analyst SKH	
Total Suspended Solids	<2 mg/L	99	90-110
Run No 441098 Method EPA 200.8	Analysis/Extraction Date 2023-05-04	Analyst SD	
Aluminum	<0.01 mg/L	98	80-120
Cobalt	<0.0002 mg/L	97	80-120
Copper	<0.001 mg/L	98	80-120
Iron	<0.03 mg/L	97	80-120
Manganese	<0.01 mg/L	96	80-120
P	<0.002 mg/L	91	80-120

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1996384
Date Submitted: 2023-04-29
Date Reported: 2023-05-08
Project: 21-021
COC #: 216629

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 441182 Method EPA 350.1	Analysis/Extraction Date 2023-05-04	Analyst SKH	
N-NH3	<0.020 mg/L	99	80-120
Run No 441296 Method SM 5520B/F	Analysis/Extraction Date 2023-05-08	Analyst ACN	
Oil & Grease - Total	<1 mg/L	105	70-130

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



216629

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1996384

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO <input 3"="" type="checkbox/>)</th></tr></thead><tbody><tr><td>Company:</td><td colspan="/> GRI INC <td>Company:</td> <td colspan="3">Fax:</td>				Company:	Fax:			
Contact:	George Gorrell			Contact:	Email: #1:							
Address:	911 Cowan Rd 18, OXFORD MILLS			Address:	Email: #2:							
Telephone:	613-258-7954			Telephone:	PO #:							
Email:	#1: george.gorrell@gri-inc.ca			REGULATION/GUIDELINE REQUIRED								
Email:	#2: richard.simard@KSG-mail.com											
Project:	21021											
Quote #:	191452											
TURN-AROUND TIME (Business Days)				☐ O. Reg 153								
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)				The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes ☐ No ☐								
Please contact Lab in advance to determine rush availability.				☐ O. Reg 406 Excess Soils								
*For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				Full depth/Strat/Ceiling/mSP/LP Leachate								
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				Type: Com-Ind / Res-Park / Agri/All Other								
				Category: Surface /Subsurface								
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Sample Details								
				Field Filtered -->								
Sample ID	Date/Time Collected	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	RNH (Lab Use Only)		
SW1	04/28/23	4										
SW2	04/28/23	4										
SW3	04/28/23	4										
PRINT				SIGN				DATE/TIME				TEMP (°C)
Sampled By:	Richard Simard			[Signature]				4/28/23 1:45				8
Relinquished By:	Richard Simard			[Signature]				4/29/23 10:50				
Received By:	Richard Simard			[Signature]				4/29/23				
CUSTODY SEAL: YES ☐ NO ☐				ice packs submit YES ☐ NO ☐								

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 • Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1997543

Date Submitted: 2023-05-29

Date Reported: 2023-06-05

Project: 21-021

COC #: 216630

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.06.0
5 17:23:30
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

Group	Analyte	MRL	Units	Guideline	1689150 SURF W 2023-05-29 SW1
General Chemistry Metals	Total Suspended Solids	2	mg/L		<2
	Al	0.01	mg/L		<0.01
	Co	0.0002	mg/L		<0.0002
	Cu	0.001	mg/L		<0.001
	Fe	0.03	mg/L		<0.03
	Mn	0.01	mg/L		0.03
Nutrients	P	0.002	mg/L		0.007
	N-NH3	0.020	mg/L		<0.020
Oil and Grease Others	Oil & Grease - Total	1	mg/L		2
	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		<0.10

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 442529 Method SM 5520B/F	Analysis/Extraction Date 2023-06-05 Analyst ACN		
Oil & Grease - Total	<1 mg/L	115	70-130
Run No 442544 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-05-30 Analyst SKH		
N-NO2	<0.10 mg/L	100	80-120
N-NO3	<0.10 mg/L	101	80-120
Run No 442704 Method EPA 350.1	Analysis/Extraction Date 2023-06-01 Analyst SKH		
N-NH3	<0.020 mg/L	113	80-120
Run No 442784 Method EPA 200.8	Analysis/Extraction Date 2023-06-02 Analyst SD		
Aluminum	<0.01 mg/L	90	80-120
Cobalt	<0.0002 mg/L	95	80-120
Copper	<0.001 mg/L	96	80-120
Iron	<0.03 mg/L	91	80-120
Manganese	<0.01 mg/L	96	80-120
P	<0.002 mg/L	94	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1997543
Date Submitted: 2023-05-29
Date Reported: 2023-06-05
Project: 21-021
COC #: 216630

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 442836 Method C SM2540	Analysis/Extraction Date 2023-06-05 Analyst R T		
Total Suspended Solids	<2 mg/L	98	90-110

Guideline = * = **Guideline Exceedence**

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Methods references and/or additional QA/QC information available on request.

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INVOICE INFORMATION (SAME AS CLIENT INFORMATION): YES ☐ NO ☐

[illegible]



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari
R Zafari 2023.07.04
16:33:28

APPROVAL: 04:00
Raheleh Zafari, Environmental Chemist

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Environment Testing

Certificate of Analysis

Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	<2	1692952 Water 2023-06-26 SW1
	Al	0.01	mg/L	<0.01	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	0.14	
	Mn	0.01	mg/L	0.28	
Nutrients	P	0.002	mg/L	0.010	1692952 Water 2023-06-26 SW1
	N-NH3	0.020	mg/L	0.103	
Oil and Grease	Oil & Grease - Total	1	mg/L	<1	
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
Others					

Guideline =

* = Guideline Exceedence

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 443997 Method C SM2540	Analysis/Extraction Date 2023-06-27 Analyst R T		
Total Suspended Solids	<2 mg/L	96	90-110
Run No 444623 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-06-28 Analyst SKH		
N-NO2	<0.10 mg/L	95	80-120
N-NO3	<0.10 mg/L	100	80-120
Run No 444695 Method EPA 350.1	Analysis/Extraction Date 2023-06-29 Analyst SKH		
N-NH3	<0.020 mg/L	95	80-120
Run No 444844 Method EPA 200.8	Analysis/Extraction Date 2023-07-04 Analyst SD		
Aluminum	<0.01 mg/L	114	80-120
Cobalt	<0.0002 mg/L	96	80-120
Copper	<0.001 mg/L	97	80-120
Iron	<0.03 mg/L	82	80-120
Manganese	<0.01 mg/L	99	80-120
P	<0.002 mg/L	97	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1998561
Date Submitted: 2023-06-26
Date Reported: 2023-07-04
Project: 21-021
COC #: 212872

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 444845 Method SM 5520B/F	Analysis/Extraction Date 2023-07-04 Analyst H S		
Oil & Grease - Total	<1 mg/L	120	70-130

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)			
Company: GRI INC				Company:			
Contact: George Correll				Contact:			
Address: 911 County Rd 18, OXFORD, ON				Address:			
Telephone: 613-258-2954				Telephone:			
Email: #1: george.correll@gri-inc.com				Email: #1:			
Email: #2: richard.simard@ksgc.com				Email: #2:			
Project: 21-021				PO #:			
Quote #: 191452				REGULATION/GUIDELINE REQUIRED			
TURN-AROUND TIME (Business Days)				Table # ☐ O. Reg 153			
☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☐ 5-7 Days (Standard)				Table # ☐ Coarse / Fine, Surface / subsurface.			
Please contact Lab in advance to determine rush availability.				Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment			
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.				The sample results from this submission will form part of a formal Record of Site Condition (ROSC) under O. Reg. 153/04 ☐ Yes ☐ No			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				☐ O. Reg 406 Excess Soils			
				☐ TCLP ☐ SPLP			
				Table # ☐ Full depth/ Strat/ Ceiling/ Leachate			
				Type: Com-Ind / Res-Park / Agri/All Other			
				Category: Surface / Subsurface			
The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				RWH (Lab Use Only)			
Sample ID		Date/Time Collected		Sample Analysis Required			
SW1		6/26/23 12:15 PM		Metals only			
				Metals + Inorganic			
				PCBs			
				PAHs			
				VOCs			
				BTEX			
				PHC P1 - P4			
				# of Containers			
				Sample Matrix			
				O. Reg. 153 parameters			
				DATE/TIME			
				TEMP (°C)			
				COMMENTS:			
PRINT		SIGN					
Sampled By: R. Simard		6/26/23 12:15 PM					
Relinquished By: R. Simard		6/26/23 12:15 PM					
Received By:		6/26/23 12:15 PM					
CUSTODY SEAL: ☐ YES ☐ NO		Ice packs submitted: ☐ Yes ☐ No					



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 1999553

Date Submitted: 2023-07-25

Date Reported: 2023-08-01

Project: 21-021

COC #: 223832

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.08.0
1 13:30:50
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	<2	1696586 SURF W 2023-07-25 SW1
	Al	0.01	mg/L	<0.01	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	<0.03	
	Mn	0.01	mg/L	0.01	
Nutrients	P	0.002	mg/L	0.005	
	N-NH3	0.020	mg/L	<0.020	
	Oil & Grease - Total	1	mg/L	<1	
Oil and Grease	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
Others					

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 446030 Analysis/Extraction Date 2023-07-26 Analyst SKH Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	99	80-120
N-NO3	<0.10 mg/L	102	80-120
Run No 446187 Analysis/Extraction Date 2023-07-27 Analyst AaN Method EPA 200.8			
Aluminum	<0.01 mg/L	103	80-120
Cobalt	<0.0002 mg/L	99	80-120
Copper	<0.001 mg/L	101	80-120
Iron	<0.03 mg/L	92	80-120
Manganese	<0.01 mg/L	93	80-120
P	<0.002 mg/L	97	80-120
Run No 446311 Analysis/Extraction Date 2023-08-01 Analyst R T Method C SM2540			
Total Suspended Solids	<2 mg/L	99	90-110
Run No 446366 Analysis/Extraction Date 2023-07-31 Analyst SKH Method EPA 350.1			
N-NH3	<0.020 mg/L	116	80-120

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 1999553
Date Submitted: 2023-07-25
Date Reported: 2023-08-01
Project: 21-021
COC #: 223832

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 446369 Method SM 5520B/F	Analysis/Extraction Date 2023-08-01	Analyst H S	
Oil & Grease - Total	<1 mg/L	85	70-130

Guideline = * = Guideline Exceedence

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INVOICE INFORMATION (SAME AS CLIENT INFORMATION): YES ☐ NO ☐

Type: Com-ind /Res-Park /Agri/All Other	Category: Surface /Subsurface

Sample Details													RNH (Lab Use Only)
Field Filtered	Field Filtered -->												
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete													
O.Reg.153 parameters													

PRINT	SIGN	DATE/TIME	TEMP (°C)	COMMENTS:
<i>[Signature]</i>	<i>[Signature]</i>	7/25/23 12:45	26.8	
		7/25/23 2:00		
		7/25/23 2:10	20.9	
Sampled By:				
Relinquished By:				
Received By:				
CUSTODY SEAL:			YES ☐ NO ☐	Yes ☐ No ☐
			Ice packs submit	

Page ____ of ____

AFSTD/COC.9



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 3000882

Date Submitted: 2023-08-30

Date Reported: 2023-09-07

Project: 21-021

COC #: 223833

Page 1 of 4

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari
2023.09.07 10:31:26
-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.
General Chemistry Metals	Total Suspended Solids	2	mg/L	7	1701281 Water 2023-08-30 SW1
	Al	0.01	mg/L	0.10	
	Co	0.0002	mg/L	<0.0002	
	Cu	0.001	mg/L	<0.001	
	Fe	0.03	mg/L	0.32	
	Mn	0.01	mg/L	0.14	
Nutrients	P	0.002	mg/L	0.021	
	N-NH3	0.020	mg/L	<0.020	
Oil and Grease Others	Oil & Grease - Total	1	mg/L	<1	
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 448185 Method C SM2540	Analysis/Extraction Date 2023-09-06 Analyst R T		
Total Suspended Solids	<2 mg/L	97	90-110
Run No 448270 Method EPA 200.8	Analysis/Extraction Date 2023-09-05 Analyst SD		
Aluminum	<0.01 mg/L	118	80-120
Cobalt	<0.0002 mg/L	102	80-120
Copper	<0.001 mg/L	103	80-120
Iron	<0.03 mg/L	101	80-120
Manganese	<0.01 mg/L	103	80-120
P	<0.002 mg/L	98	80-120
Run No 448302 Method C SM4500-NO3-F	Analysis/Extraction Date 2023-09-05 Analyst R T		
N-NO2	<0.10 mg/L	95	80-120
N-NO3	<0.10 mg/L	96	80-120
Run No 448316 Method EPA 350.1	Analysis/Extraction Date 2023-09-05 Analyst SKH		
N-NH3	<0.020 mg/L	114	80-120

Guideline = * = **Guideline Exceedence**

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Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3000882
Date Submitted: 2023-08-30
Date Reported: 2023-09-07
Project: 21-021
COC #: 223833

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 448412 Method SM 5520B/F	Analysis/Extraction Date 2023-09-07 Analyst ACN		
Oil & Grease - Total	<1 mg/L	70	70-130

Guideline = * = **Guideline Exceedence**

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Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 3001608

Date Submitted: 2023-09-22

Date Reported: 2023-09-29

Project: 21-021

COC #: 223834

Page 1 of 6

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.09.2

9 12:01:17

-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline	1704068 SURF W 2023-09-22 MW2	1704069 SURF W 2023-09-22 MW4	1704070 SURF W 2023-09-22 MW6a	1704071 SURF W 2023-09-22 MW6B
Anions	Cl	1	mg/L			5	4	194	86
	F	0.10	mg/L			<0.10	<0.10	2.21	<0.10
	SO4	1	mg/L			14	9	<1	50
	Alkalinity as CaCO3	5	mg/L			214	164	387	252
General Chemistry	Conductivity	5	uS/cm			317	254	1270	800
	pH	1.00				7.76	7.77	8.50	7.86
	Hardness as CaCO3	1	mg/L			200	162	22	276
	Ion Balance	0.01				0.92	0.94	0.99	0.97
Metals	Ca	1	mg/L			62	45	2	81
	Fe	0.03	mg/L			0.13	0.03	2.78	0.27
	K	1	mg/L			2	1	10	1
	Mg	1	mg/L			11	12	4	18
	Mn	0.01	mg/L			0.02	0.15	0.04	0.12
	Na	1	mg/L			6	4	289	63
Oil and Grease	Oil & Grease - Total	1	mg/L			<1	<1	<1	<1
	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10	<0.10
	N-NO3	0.10	mg/L			<0.10	0.77	<0.10	<0.10

Guideline = * = **Guideline Exceedence**

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	
				1704072 SURF W 2023-09-22 MW3	1704073 SURF W 2023-09-22 13-6
Anions	Cl	1	mg/L	251	3
	F	0.10	mg/L	1.56	0.81
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
	SO4	1	mg/L	<1	52
General Chemistry	Alkalinity as CaCO3	5	mg/L	373	198
	Conductivity	5	uS/cm	1390	454
	pH	1.00		8.69	7.83
Hardness	Hardness as CaCO3	1	mg/L	13	217
Indices/Calc	Ion Balance	0.01		0.96	0.93
Metals	Ca	1	mg/L	2	67
	Fe	0.03	mg/L	<0.03	<0.03
	K	1	mg/L	12	5
	Mg	1	mg/L	2	12
	Mn	0.01	mg/L	0.03	0.05
	Na	1	mg/L	309	8
Oil and Grease	Oil & Grease - Total	1	mg/L	<1	<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.33

Guideline = * = Guideline Exceedence

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Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449358 Analysis/Extraction Date 2023-09-25 Analyst SKH			
Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	106	80-120
Run No 449480 Analysis/Extraction Date 2023-09-27 Analyst S A			
Method SM 4110			
Chloride	<1 mg/L	100	90-110
SO4	<1 mg/L	100	90-110
Run No 449498 Analysis/Extraction Date 2023-09-27 Analyst Z S			
Method M SM3120B-3500C			
Calcium	<1 mg/L	99	90-110
Potassium	<1 mg/L	103	87-113
Magnesium	<1 mg/L	97	76-124
Sodium	<1 mg/L	101	82-118
Run No 449539 Analysis/Extraction Date 2023-09-27 Analyst AsA			
Method SM2320.2510.4500H/F			
Alkalinity (CaCO3)	<5 mg/L	103	90-110
Conductivity	<5 uS/cm	99	90-110
F	<0.10 mg/L	101	90-110

Guideline = * = Guideline Exceedence

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Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
pH		100	90-110
Run No 449575 Analysis/Extraction Date 2023-09-28 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			
Run No 449622 Analysis/Extraction Date 2023-09-29 Analyst ACN Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 449626 Analysis/Extraction Date 2023-09-29 Analyst S A Method SM 4110			
Chloride	<1 mg/L	100	90-110
N-NO2	<0.10 mg/L	106	90-110
N-NO3	<0.10 mg/L	102	90-110
SO4	<1 mg/L	100	90-110
Run No 449630 Analysis/Extraction Date 2023-09-29 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449635 Method EPA 200.8	Analysis/Extraction Date 2023-09-28	Analyst AaN	
Iron	<0.03 mg/L	94	80-120
Manganese	<0.01 mg/L	97	80-120

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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eurofins 223834

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3001608

CLIENT INFORMATION

Company: GRI INC
 Contact: George D
 Address: 911 County Rd 18 Oshawa, ON
 Telephone: 6475025224 Cell:
 Email: #1: george.g-11011@grinc.ca
 Email: #2:

Project: 21-021 Quote #: 191766

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected
MW2	9/22/23 18:00
MW4	9/22/23 14:11
MW6	9/22/23 11:15
MW6B	9/22/23 11:20
MW3	9/22/23 10:20
MW13-6	9/22/23 13:10

Sample Details

Field Filtered ->	# of Containers	PHC Ft. - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only
Sample Matrix	4							
	4							
	4							
	4							
	4							
	4							

500 900-10
 191766

RN#
(Lab Use Only)

1704068
 69
 70
 71
 72
 73

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:
 Contact: Email: #1:
 Address: Email: #2:
 Telephone: PO #:

REGULATION/GUIDELINE REQUIRED

☐ O. Reg 153
 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only
 Yes ☐ No ☐
☐ O. Reg 406 Excess Soils
 Table # _____ Full depth/Strat/Ceiling/mSP/LP Leachate
 Type: Com-Ind / Res-Park / Agri / All Other
 Category: Surface / Subsurface
☐ O. Reg 347
 Other: _____

PRINT

Sampled By: George Gerni
 Relinquished By: George Gerni
 Received By:

SIGN

9/22/23
 9/22/23
 9/22/23

TEMP (°C)

COMMENTS:

191452 used. #191766
 does not watch samples submitted.
 SM 9/23/23

CUSTODY SEAL:

YES ☐ NO ☐
 ice packs submit ☐ Yes ☐ No ☐

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-880-8887 • 608 Norris Court, Kingston, ON, K7P 2B9 - Telephone: 613-634-3307

OFFICIAL CERTIFICATE OF ANALYSIS : 3729826**WORK REQUEST : 100248924****Report Date : 2023-10-17****GRI Inc.**

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2023-10-11
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 17 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7291931

Compliant**Notes :**

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-11

Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.09						
Manganese	0.01	mg/L	0.05						
Phosphorus	0.002	mg/L	0.009						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.030						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						
Eurofins Sample No :		7291931							
Matrix :		Surface water							
Sampling Date :		2023-10-10							
Client Sample Identification :		SW1							
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	<2						

Approved by :



Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-11

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	103	80-120	101	80-120	-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	103	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	107	80-120	92	70-130	0	0-20
Copper	mg/L	0.001	<0.001	110	80-120	80	70-130	1	0-20
Iron	mg/L	0.03	<0.03	100	80-120	91	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	93	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	97	80-120	115	70-130	8	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	101	80-120				
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	100	80-120			-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7291931								Prep Date: 2023-10-17 Analysis Date: 2023-10-17	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	97	93-107			-	0-20
Associated Samples : 7291931								Prep Date: 2023-10-16 Analysis Date: 2023-10-17	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

INVOICE INFORMATION (SAME AS CLIENT INFO)

REGULATION/GUIDELINE REQUIRED

☐	O. Reg 153	The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of list parameter list only Yes ☐ No ☐
☐	O. Reg 406	Excess Soils Table # _____ Full depth/Strat/Ceiling/MSP/LP Leachate Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface

AFSTDCOC.9

OFFICIAL CERTIFICATE OF ANALYSIS : 3748427**WORK REQUEST : 100253118****Report Date : 2023-11-06****GRI Inc.**

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2023-10-28
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 10 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

7341040 7341041 7341042

Compliant**Notes :**

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
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Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-28

Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	0.32	0.32	1.34				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.10	<0.1				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01	<0.01	<0.01				
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002				
Copper	0.001	mg/L	<0.001	<0.001	<0.001				
Iron	0.03	mg/L	0.07	0.19	0.04				
Manganese	0.01	mg/L	0.07	0.16	0.03				
Phosphorus	0.002	mg/L	0.013	0.013	0.016				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.064	<0.020	0.136				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1	<1	<1				
Eurofins Sample No :			7341040	7341041	7341042				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2023-10-27	2023-10-27	2023-10-27				
Client Sample Identification :			SW1	SW2	SW3				
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	5	<2	5				

Approved by :



Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-10-28

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	104	80-120	108	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-06 Analysis Date: 2023-11-06	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	106	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	95	80-120	93	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	85	70-130	-	0-20
Iron	mg/L	0.03	<0.03	90	80-120	90	70-130	1	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	99	70-130	0	0-20
Phosphorus	mg/L	0.002	<0.002	101	80-120	118	70-130	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-03 Analysis Date: 2023-11-06	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	105	80-120	107	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-02 Analysis Date: 2023-11-03	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	110	80-120	104	80-120	-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-02 Analysis Date: 2023-11-03	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-03 Analysis Date: 2023-11-03	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	93-107			-	0-20
Associated Samples : 7341040, 7341041, 7341042								Prep Date: 2023-11-06 Analysis Date: 2023-11-06	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #:

[illegible]

OFFICIAL CERTIFICATE OF ANALYSIS : 3766132**WORK REQUEST : 100256521****Report Date : 2023-11-23****GRI Inc.**

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2023-11-16
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 9 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7372228

Compliant**Notes :**

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
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Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-11-16

Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.07						
Manganese	0.01	mg/L	0.12						
Phosphorus	0.002	mg/L	0.009						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.067						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						
Eurofins Sample No :		7372228							
Matrix :		Surface water							
Sampling Date :		2023-11-16							
Client Sample Identification :		SW1							
Solids	RL	Unit							
Total Suspended Solids	2	mg/L	3						

Approved by : 
Raheleh Zafari,
Ottawa, Environmental Chemist, PhD

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2023-11-16

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	110	80-120	115	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-18 Analysis Date: 2023-11-18	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	96	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	93	80-120	90	70-130	-	0-20
Copper	mg/L	0.001	<0.001	90	80-120	-	70-130	-	0-20
Iron	mg/L	0.03	<0.03	90	80-120	87	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	90	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	105	80-120	98	70-130	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-21 Analysis Date: 2023-11-22	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	109	80-120	103	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-20 Analysis Date: 2023-11-21	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	108	80-120	101	80-120	-	0-20
Associated Samples : 7372228								Prep Date: 2023-11-20 Analysis Date: 2023-11-21	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7372228								Prep Date: 2023-11-22 Analysis Date: 2023-11-22	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	94	93-107			17	0-20
Associated Samples : 7372228								Prep Date: 2023-11-22 Analysis Date: 2023-11-23	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

CLIENT INFORMATION

INVOICE INFORMATION (SAME AS C)

Company:

GRI INC

Contact:

George Correll

Address:

911 County Rd 18, Oxford Mills

Telephone:

613-258-2954 Cell: 647-582-5224

Email:

george.correll@agri-inc.co

Email:

eichard.simard@ksg@gmail.com

Project:

21-021 Quote #: 191452

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID

Date/Time Collected

SW1 11/16/23 9:00 AM

Sample Details

Field Filtered →

of Containers

Sample Matrix

PHC FI - FA

BTEX

VOCs

PAHs

PCBs

Metals + Inorganic

Metals only

191452 ✓

O.Reg.153 parameters

RN#
(Lab Use Only)

7372228

PRINT

Sampled By:

George Correll

Relinquished By:

K. Simard

Received By:

SIGN

DATE/TIME

TEMP (°C)

COMMENTS:

11/16/23 9:30

2.5

11/16/23 11:35

9.3

NOV 16 12:30 1140

CUSTODY SEAL:

YES ☐ NO ☐

CUSTODY SEAL:

YES ☐ NO ☐

CUSTODY SEAL:

YES ☐ NO ☐



Client: GRI Inc.

911 County Rd. 18
Oxford Mills, ON
K0G 1S0

Attention: Mr. George Gorrell

PO#:

Invoice to: GRI Inc.

Report Number: 3001608

Date Submitted: 2023-09-22

Date Reported: 2023-09-29

Project: 21-021

COC #: 223834

Page 1 of 6

Dear George Gorrell:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh
Zafari

R Zafari 2023.09.2
9 12:01:17

-04'00'

APPROVAL:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <https://directory.cala.ca/>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	Guideline	1704068 SURF W 2023-09-22 MW2	1704069 SURF W 2023-09-22 MW4	1704070 SURF W 2023-09-22 MW6a	1704071 SURF W 2023-09-22 MW6B
Anions	Cl	1	mg/L			5	4	194	86
	F	0.10	mg/L			<0.10	<0.10	2.21	<0.10
	SO4	1	mg/L			14	9	<1	50
	Alkalinity as CaCO3	5	mg/L			214	164	387	252
General Chemistry	Conductivity	5	uS/cm			317	254	1270	800
	pH	1.00				7.76	7.77	8.50	7.86
	Hardness as CaCO3	1	mg/L			200	162	22	276
	Ion Balance	0.01				0.92	0.94	0.99	0.97
Metals	Ca	1	mg/L			62	45	2	81
	Fe	0.03	mg/L			0.13	0.03	2.78	0.27
	K	1	mg/L			2	1	10	1
	Mg	1	mg/L			11	12	4	18
	Mn	0.01	mg/L			0.02	0.15	0.04	0.12
	Na	1	mg/L			6	4	289	63
Oil and Grease	Oil & Grease - Total	1	mg/L			<1	<1	<1	<1
	N-NO2	0.10	mg/L			<0.10	<0.10	<0.10	<0.10
	N-NO3	0.10	mg/L			<0.10	0.77	<0.10	<0.10

Guideline = * = **Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	
				1704072 SURF W 2023-09-22 MW3	1704073 SURF W 2023-09-22 13-6
Anions	Cl	1	mg/L	251	3
	F	0.10	mg/L	1.56	0.81
	N-NO2	0.10	mg/L	<0.10	
	N-NO3	0.10	mg/L	<0.10	
	SO4	1	mg/L	<1	52
General Chemistry	Alkalinity as CaCO3	5	mg/L	373	198
	Conductivity	5	uS/cm	1390	454
	pH	1.00		8.69	7.83
Hardness	Hardness as CaCO3	1	mg/L	13	217
Indices/Calc	Ion Balance	0.01		0.96	0.93
Metals	Ca	1	mg/L	2	67
	Fe	0.03	mg/L	<0.03	<0.03
	K	1	mg/L	12	5
	Mg	1	mg/L	2	12
	Mn	0.01	mg/L	0.03	0.05
	Na	1	mg/L	309	8
Oil and Grease	Oil & Grease - Total	1	mg/L	<1	<1
Others	N-NO2	0.10	mg/L		<0.10
	N-NO3	0.10	mg/L		0.33

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449358 Analysis/Extraction Date 2023-09-25 Analyst SKH			
Method C SM4500-NO3-F			
N-NO2	<0.10 mg/L	97	80-120
N-NO3	<0.10 mg/L	106	80-120
Run No 449480 Analysis/Extraction Date 2023-09-27 Analyst S A			
Method SM 4110			
Chloride	<1 mg/L	100	90-110
SO4	<1 mg/L	100	90-110
Run No 449498 Analysis/Extraction Date 2023-09-27 Analyst Z S			
Method M SM3120B-3500C			
Calcium	<1 mg/L	99	90-110
Potassium	<1 mg/L	103	87-113
Magnesium	<1 mg/L	97	76-124
Sodium	<1 mg/L	101	82-118
Run No 449539 Analysis/Extraction Date 2023-09-27 Analyst AsA			
Method SM2320.2510.4500H/F			
Alkalinity (CaCO3)	<5 mg/L	103	90-110
Conductivity	<5 uS/cm	99	90-110
F	<0.10 mg/L	101	90-110

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
pH		100	90-110
Run No 449575 Analysis/Extraction Date 2023-09-28 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			
Run No 449622 Analysis/Extraction Date 2023-09-29 Analyst ACN Method SM 5520B/F			
Oil & Grease - Total	<1 mg/L	85	70-130
Run No 449626 Analysis/Extraction Date 2023-09-29 Analyst S A Method SM 4110			
Chloride	<1 mg/L	100	90-110
N-NO2	<0.10 mg/L	106	90-110
N-NO3	<0.10 mg/L	102	90-110
SO4	<1 mg/L	100	90-110
Run No 449630 Analysis/Extraction Date 2023-09-29 Analyst AET Method C SM2340B			
Hardness as CaCO3			
Ion Balance			

Guideline = * = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

Certificate of Analysis

Client: GRI Inc.
911 County Rd. 18
Oxford Mills, ON
K0G 1S0
Attention: Mr. George Gorrell
PO#:
Invoice to: GRI Inc.

Report Number: 3001608
Date Submitted: 2023-09-22
Date Reported: 2023-09-29
Project: 21-021
COC #: 223834

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 449635 Method EPA 200.8	Analysis/Extraction Date 2023-09-28	Analyst AaN	
Iron	<0.03 mg/L	94	80-120
Manganese	<0.01 mg/L	97	80-120

Guideline =

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



eurofins 223834

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 3001608

CLIENT INFORMATION

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company:	GRI INC	
Contact:	George D	
Address:	911 County Rd 18 Oxtown, N.Y.	
Telephone:	6475025224	Cell:
Email:	#1: george.g-11011@grinc.ca	
Email:	#2:	
Project:	21-021	Quote #: 191766
TURN-AROUND TIME (Business Days) ☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☐ 5-7 Days (Standard)		
Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.		

The optimal temperature conditions during transport should be less than 10°C. Samples cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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PRINT		SIGN	DATE/TIME	TEMP (°C)	COMMENTS:
Sampled By:	George G-11011		9/22/23		191766 used. #191766
Relinquished By:	George G-11011		9/22/23		does not watch samples submitted.
Received By:			9/22/23	18.6	SM 9/23/23
CUSTODY SEAL:		YES ☐ NO ☐	CUSTODY SEAL: YES ☐ NO ☐		

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-880-8887 • 608 Norris Court, Kingston, ON, K7P 2B9 - Telephone: 613-634-3307



eurofins

222962

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

CLIENT INFORMATION

Company: GEI INC
Contact: George Gorelli
Address: 911 County Rd 18, Oxford Mills
Telephone: 613-258-2954 Cell: 647-502-5247
Email: #1: george.gorelli@gei-inc.ca
Email: #2: richard.simardks@gei-inc.ca
Project: 21-021

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☒ 5-7 Days (Standard)

*Please contact Lab in advance to determine rush availability.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 100%.

***For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected
<u>SU01</u>	<u>4/26/24 11:00</u>
<u>SU02</u>	<u>4/26/24 11:30</u>
<u>SU03</u>	<u>4/26/24 12:00</u>

PRINT

Sampled By: Richard Simard
Relinquished By: Richard Simard
Received By:

SIGN
[Signature]

DATE/TIME
Apr 26 2024
TEMP (°C)
14

COMMENTS:

254/61-191452
76586027
98
09

INVOICE INFORMATION (SAME AS CLIENT)

Company: 100277955
Contact: 100277955
Address: 100277955
Telephone: 100277955

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City: 100277955
☐ Storm Sewer, City: 100277955
☐ ODWSOG (Use DW CoC if analyzing drinking water)
☐ PWQO
☐ O.Reg. 347
☐ Other: 100277955

☐ O. Reg. 153
The sample results from this submission will form part of a formal Record of Site Condition (ROC) under O.Reg. 153/04. Analysis of full primer list only
Yes ☐ No ☐
☐ O. Reg. 406 Excess Soils
Table # 100277955 Full depth/Strat/Ceiling/msPLP Leachate Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface

Sample Details		O.Reg. 153 parameters						Metals only	
Field Filtered ->	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	
	<u>5</u>								
	<u>5</u>								
	<u>5</u>								

Page 1 of 1

Approved by :


Emma Dawn Ferguson,
Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-04-26

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	111	80-120	107	80-120	2	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-03 Analysis Date: 2024-05-03	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	105	70-130	7	0-20
Cobalt	mg/L	0.0002	<0.0002	99	80-120	97	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	94	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	100	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	97	80-120	104	70-130	4	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-01 Analysis Date: 2024-05-02	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	100	80-120	118	80-120		
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-04-29 Analysis Date: 2024-04-30	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	91	80-120		
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-04-29 Analysis Date: 2024-04-30	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-01 Analysis Date: 2024-05-01	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	102	90-110			-	0-20
Associated Samples : 7658607, 7658608, 7658609								Prep Date: 2024-05-03 Analysis Date: 2024-05-03	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-04-26

Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1	<0.1	0.54				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.1	<0.1				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	5	<2	6				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Metals	RL	Unit							
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	0.05	0.02	0.10				
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002				
Copper	0.001	mg/L	0.001	<0.001	<0.001				
Iron	0.03	mg/L	0.13	0.11	0.18				
Manganese	0.01	mg/L	0.05	0.03	0.05				
Phosphorus	0.002	mg/L	0.034	0.009	0.032				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020	<0.020	<0.020				
Eurofins Sample No :			7658607	7658608	7658609				
Matrix :			Surface water	Surface water	Surface water				
Sampling Date :			2024-04-26	2024-04-26	2024-04-26				
Client Sample Identification :			SW1	SW2	SW3				
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1	<1	5				

OFFICIAL CERTIFICATE OF ANALYSIS : 3893330

WORK REQUEST : 100277955

Report Date : 2024-05-03

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-04-26
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 14 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

7658607 7658608 7658609

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

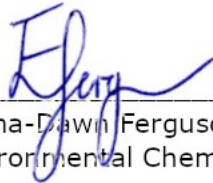
QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-05-27

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	94	80-120	113	80-120	9	0-20
Associated Samples : 7732034								Prep Date: 2024-06-02 Analysis Date: 2024-06-03	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	113	70-130	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-30	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	106	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-120	89	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120			0	0-20
Iron	mg/L	0.03	<0.03	100	80-120	96	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	91	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	101	80-120	110	70-130	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	103	80-120	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	95	80-120	104	80-120	-	0-20
Associated Samples : 7732034								Prep Date: 2024-05-30 Analysis Date: 2024-05-31	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7732034								Prep Date: 2024-06-03 Analysis Date: 2024-06-03	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	94	90-110			2	0-20
Associated Samples : 7732034								Prep Date: 2024-06-02 Analysis Date: 2024-06-03	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-05-27

Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	<2						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Aluminum (Dissolved)	0.01	mg/L	<0.01						
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	0.03						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.18						
Manganese	0.01	mg/L	0.16						
Phosphorus	0.002	mg/L	0.031						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.121						
Eurofins Sample No :		7732034							
Matrix :		Surface water							
Sampling Date :		2024-05-27							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						

OFFICIAL CERTIFICATE OF ANALYSIS : 3932787

WORK REQUEST : 100284779

Report Date : 2024-06-03

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-05-27
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 19 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7732034

Compliant

Certificate Comments :

7732034

Cu spike not available due to matrix interference.

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

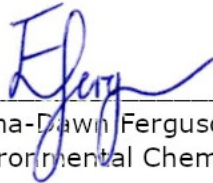
N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

[illegible]

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-06-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	101	80-120	105	80-120	6	0-20
Associated Samples : 7799483								Prep Date: 2024-06-26 Analysis Date: 2024-06-26	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	116	70-130	-	0-20
Associated Samples : 7799483								Prep Date: 2024-07-02 Analysis Date: 2024-07-02	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	102	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	105	80-120	97	70-130	-	0-20
Copper	mg/L	0.001	<0.001	120	80-120	106	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	109	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	105	80-120	110	70-130	-	0-20
Associated Samples : 7799483								Prep Date: 2024-06-28 Analysis Date: 2024-07-02	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	101	80-120		
Associated Samples : 7799483								Prep Date: 2024-06-27 Analysis Date: 2024-06-28	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	93	80-120	100	80-120		
Associated Samples : 7799483								Prep Date: 2024-06-27 Analysis Date: 2024-06-28	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7799483								Prep Date: 2024-07-02 Analysis Date: 2024-07-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			8	0-20
Associated Samples : 7799483								Prep Date: 2024-06-30 Analysis Date: 2024-07-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-06-25

Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Anions	RL	Unit							
Nitrate (as Nitrogen)	0.1	mg/L	<0.1						
Nitrite (as Nitrogen)	0.1	mg/L	<0.1						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
General Chemistry	RL	Unit							
Total Suspended Solids	2	mg/L	6						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Metals	RL	Unit							
Aluminum (Dissolved)	0.01	mg/L	0.03						
Metals Scan (Water, ICP/MS)									
Aluminum	0.01	mg/L	<0.01						
Cobalt	0.0002	mg/L	<0.0002						
Copper	0.001	mg/L	<0.001						
Iron	0.03	mg/L	0.05						
Manganese	0.01	mg/L	0.02						
Phosphorus	0.002	mg/L	0.010						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Nutrients	RL	Unit							
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.032						
Eurofins Sample No :		7799483							
Matrix :		Surface water							
Sampling Date :		2024-06-25							
Client Sample Identification :		SW1							
Oil and Grease	RL	Unit							
Oil and Grease (Total)	1	mg/L	<1						

OFFICIAL CERTIFICATE OF ANALYSIS : 3965484

WORK REQUEST : 100292110

Report Date : 2024-07-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-06-25
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 16 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7799483

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



222965

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

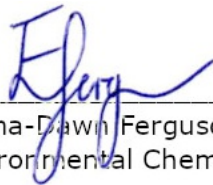
Eurofins Workorder #:

CLIENT INFORMATION		INVOICE INFORMATION (S)	
Company:	GRI INC	Company:	
Contact:	George Garrell	Contact:	
Address:	911 County Rd 18, Oxford Mills	Address:	
Telephone:	613-258-2954 cell: 647-502-5274	Telephone:	
Email:	#1: George Garrell @gri-inc.ca		
Email:	#2: Richard Simard KSG @gri-inc.ca		
Project:	21-021		
TURN-AROUND TIME (Business Days)		REGULATION/GUIDELINE REQUIRED	
☐ 1 Day* (100%)	☐ 2 Day** (50%)	☐ 3-5 Days (25%)	☒ 5-7 Days (Standard)
Please contact Lab in advance to determine rush availability.			
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.			
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.			
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).			
Sample ID	Date/Time Collected	RNN (Lab Use Only)	
SW1	7/26/24 3:00 pm	7889472	
PRINT		SIGN	
Sampled By:	R. Simard	7/26/24 3:00	
Relinquished By:	R. Simard	7/26/24 4:30	
Received By:		7/26/24 4:30	
TEMP (°C)		DATE/TIME	
25.3		7/26/24 3:00	
21		7/26/24 4:30	
COMMENTS:		COMMENTS:	
		Filtered metals for all other metals	
		unfiltered for all other metals	
CUSTODY SEAL:		CUSTODY SEAL:	
☐ YES ☐ NO		☐ YES ☐ NO	
Use pack submit		Use pack submit	
☐ Yes ☐ No		☐ Yes ☐ No	

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

AFS/DCDC.9

Page ____ of ____

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-07-26

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	95	80-120	102	80-120	3	0-20
Associated Samples : 7889472								Prep Date: 2024-07-31 Analysis Date: 2024-07-31	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	120	70-130	-	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	91	70-130	-	0-20
Cobalt	mg/L	0.0002	<0.0002	107	80-120	107	70-130	-	0-20
Copper	mg/L	0.001	<0.001	110	80-120	111	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	102	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	95	70-130	1	0-20
Phosphorus	mg/L	0.002	<0.002	102	80-120	99	70-130	3	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	98	80-120	107	80-120	10	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	110	80-120	-	0-20
Associated Samples : 7889472								Prep Date: 2024-07-29 Analysis Date: 2024-07-30	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7889472								Prep Date: 2024-08-02 Analysis Date: 2024-08-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	90-110			-	0-20
Associated Samples : 7889472								Prep Date: 2024-08-01 Analysis Date: 2024-08-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-07-26

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Anions	RL	Unit					
Nitrate (as Nitrogen)	0.1	mg/L	<0.1				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
General Chemistry	RL	Unit					
Total Suspended Solids	2	mg/L	5				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Metals	RL	Unit					
Aluminum (Dissolved)	0.01	mg/L	<0.01				
Metals Scan (Water, ICP/MS)							
Aluminum	0.01	mg/L	0.06				
Cobalt	0.0002	mg/L	<0.0002				
Copper	0.001	mg/L	<0.001				
Iron	0.03	mg/L	0.16				
Manganese	0.01	mg/L	0.08				
Phosphorus	0.002	mg/L	0.020				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020				

Eurofins Sample No :		7889472					
Matrix :		Surface water					
Sampling Date :		2024-07-26					
Client Sample Identification :		SW1					
Oil and Grease	RL	Unit					
Oil and Grease (Total)	1	mg/L	<1				

OFFICIAL CERTIFICATE OF ANALYSIS : 4005781

WORK REQUEST : 100300207

Report Date : 2024-08-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-07-26
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 21 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7889472

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



eurofins 222966

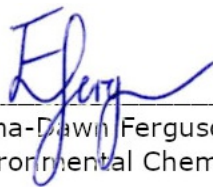
STANDARD CHAIN-OF-CUSTODY

146 Colomade Road, Unit #5, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #:

CLIENT INFORMATION		INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)	
Company:	6RI INC	Company:	
Contact:	George Gorrell	Contact:	
Address:	911 County Rd 18, OXFORD MILLS	Address:	
Telephone:	613-258-2954	Telephone:	
Email:	#1: George.gorrell@gr1-inc.co	Email:	
Email:	#2: richard.swardksg@gmail.com	Email:	
Project:	21-021	Project:	
TURN-AROUND TIME (Business Days)		REGULATION/GUIDE	
☐ 1 Day* (100%)	☐ 2 Day** (50%)	☐ 3-5 Days (25%)	☒ 5-7 Days (Standard)
Please contact Lab in advance to determine rush availability.		The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only.	
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.		Yes ☐ No ☐	
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.		Yes ☐ No ☐	
The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).		Table # ☐ Coarse / Fine, Surface / subsurface Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment	
Sample ID		Table # ☐ O. Reg 153 Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface	
Date/Time Collected		Table # ☐ O. Reg 406 Excess Soils Type: Full depth/Strat/Ceiling/msP/LP Leachate Category: Surface / Subsurface	
8/29/24 10:30 am		7988082	
Sample Matrix		RN# (Lab Use Only)	
# of Containers			
PHC FI - F4			
BTEX			
VOCs			
PAHs			
PCBs			
Metals + Inorganic			
Metals only			
DATE/TIME		TEMP (°C)	
8/29/24 10:30		21.3	
8/29/24 12:20		20	
SIGN		COMMENTS: Filtered Metals for ALONIA unfiltered for all other metals	
PRINT		CUSTODY SEAL: YES ☐ NO ☐ YES ☐ NO ☐	
Sampled By: Richard Sward		CUSTODY SEAL: YES ☐ NO ☐ YES ☐ NO ☐	
Relinquished By: Richard Sward		CUSTODY SEAL: YES ☐ NO ☐ YES ☐ NO ☐	
Received By:		CUSTODY SEAL: YES ☐ NO ☐ YES ☐ NO ☐	

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-08-29

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	97	80-120	105	80-120	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-05 Analysis Date: 2024-09-05	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	101	70-130	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-03	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	99	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-120	94	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120	93	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	94	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	95	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	104	80-120	106	70-130	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-05	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	97	80-120	99	80-120	1	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-04	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	88	80-120	107	80-120	-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-03 Analysis Date: 2024-09-04	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 7988082								Prep Date: 2024-09-05 Analysis Date: 2024-09-05	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			-	0-20
Associated Samples : 7988082								Prep Date: 2024-09-04 Analysis Date: 2024-09-05	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-08-29

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Anions	RL	Unit						
Nitrate (as Nitrogen)	0.1	mg/L	<0.1					
Nitrite (as Nitrogen)	0.1	mg/L	<0.1					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
General Chemistry	RL	Unit						
Total Suspended Solids	2	mg/L	3					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Metals	RL	Unit						
Aluminum (Dissolved)	0.01	mg/L	<0.01					
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	<0.01					
Cobalt	0.0002	mg/L	<0.0002					
Copper	0.001	mg/L	<0.001					
Iron	0.03	mg/L	0.08					
Manganese	0.01	mg/L	0.08					
Phosphorus	0.002	mg/L	0.025					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Nutrients	RL	Unit						
Ammonia (Total, as Nitrogen)	0.02	mg/L	<0.020					

Eurofins Sample No :		7988082						
Matrix :		Surface water						
Sampling Date :		2024-08-29						
Client Sample Identification :		SW1						
Oil and Grease	RL	Unit						
Oil and Grease (Total)	1	mg/L	<1					

OFFICIAL CERTIFICATE OF ANALYSIS : 4048708

WORK REQUEST : 100308052

Report Date : 2024-09-05

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-08-29
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 20 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

7988082

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited



eurofins

222967

STANDARD CHAIN-OF-CUSTODY

146 Colomade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #:

CLIENT INFORMATION

Company: **GEI INC**
Contact: **George Garrell**
Address: **911 County Rd 18, OX FORD MILLS**
Telephone: **613-258-2954** Cell: **647-502-5274**
Email: #1: **george.garrell@gei-inc.ca**
Email: #2: **richard.simard@ksge.comail.com**
Project: **21-021**

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☒ 5-7 Days (Standard)

Please contact lab in advance to determine rush availability.

*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.

**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID

Date/Time Collected

SW1 9/30/24 12:45 PM SW15

Sample Details

Field Filtered →

Sample Matrix

of Containers

PHC/F1 - F4

BTEX

VOCs

PAHs

PCBs

Metals + Inorganic

Metals only

O.Reg.153 parameters

Metals only

Metals + Inorganic

PCBs

PAHs

VOCs

BTEX

PHC/F1 - F4

Metals only

19/452

✓

PRM

Sampled By:

Relinquished By:

Received By:

R Simard

R Simard

S.S.W

SIGN

Signature

TEMP (°C)

18°C

9/30/24 12:45

9/30/24 2:05

9/30/24 14:05

17.2°C

COMMENTS:

Filtered Metars for AL

unfiltered for the other metars

every

CUSTODY SEAL:

YES NO

ice packs w/brt

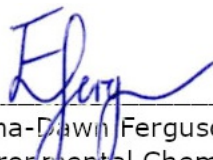
YES NO

Yes No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #90, St. Catharines, ON, L2S 0B5 - Telephone: 905-660-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

AFSTDCCOC.9

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Approved by : 
 Emma-Dawn Ferguson, M.Sc.
 Environmental Chemist

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-09-30

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	107	80-120	118	80-120	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-03 Analysis Date: 2024-10-03	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	115	70-130	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-01	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	111	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	98	80-120	94	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-120			1	0-20
Iron	mg/L	0.03	<0.03	90	80-120	99	70-130	-	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	99	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	103	80-120	116	70-130	-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-01	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	93	80-120				
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-02	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	105	80-120				
Associated Samples : 8070394								Prep Date: 2024-10-01 Analysis Date: 2024-10-02	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	90	70-130				
Associated Samples : 8070394								Prep Date: 2024-10-07 Analysis Date: 2024-10-07	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	93	90-110			-	0-20
Associated Samples : 8070394								Prep Date: 2024-10-07 Analysis Date: 2024-10-07	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-09-30

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Anions	RL	Unit						
Nitrate (as Nitrogen)	0.1	mg/L	<0.1					
Nitrite (as Nitrogen)	0.1	mg/L	<0.1					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
General Chemistry	RL	Unit						
Total Suspended Solids	2	mg/L	4					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Metals	RL	Unit						
Aluminum (Dissolved)	0.01	mg/L	<0.01					
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	0.02					
Cobalt	0.0002	mg/L	<0.0002					
Copper	0.001	mg/L	<0.001					
Iron	0.03	mg/L	0.40					
Manganese	0.01	mg/L	0.47					
Phosphorus	0.002	mg/L	0.041					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Nutrients	RL	Unit						
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.031					

Eurofins Sample No :		8070394						
Matrix :		Surface water						
Sampling Date :		2024-09-30						
Client Sample Identification :		SW1						
Oil and Grease	RL	Unit						
Oil and Grease (Total)	1	mg/L	<1					

OFFICIAL CERTIFICATE OF ANALYSIS : 4110802

WORK REQUEST : 100316515

Report Date : 2024-10-07

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-09-30
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 17 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

8070394

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFO)			
Company: GBI INC		Company: _____		Fax: _____		100324409	
Contact: George Garrell		Contact: _____		Email: #1: _____		Barcode	
Address: 911 County Rd 18 Oxford Mills		Address: _____		Email: #2: _____		Printed On: 2024-10-31 16:51:55	
Telephone: 604-502-5224		Telephone: _____		PO #: _____			
Email: #1: george.garrell@gb-inc.ca		Sanitary Sewer, City: _____		☐ O. Reg 153		Table # _____ Coarse / Fine, Surface / Subsurface	
Email: #2: Richard Simard KSG@gmail.com		Storm Sewer, City: _____		☐ O. Reg 347		Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment	
Project: 21-021		Quote #: 191452		☐ O. Reg 406 Excess Soils		Type: Com-Ind / Res-Park / Agri / All Other	
TURN-AROUND TIME (Business Days) ☐ 1 Day* (100%) ☐ 2 Day** (50%) ☒ 3-5 Days (25%) ☐ 5-7 Days (Standard) Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.				REGULATION/GUIDELINE REQUIRED ☐ O. Reg 153 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O. Reg. 153/04. Analysis of full parameter list only. Yes ☐ No ☐			
Sample Details The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Table # _____ Full depth/Strat/Ceiling/MSR/LP Leachate Type: Com-Ind / Res-Park / Agri / All Other Category: Surface / Subsurface			
Sample ID S001 S002 S003		Date/Time Collected 10/30/24 2:30pm SW 10/30/24 3:00pm SW 10/30/24 4:00pm SW		Field Filtered -> # of Containers Sample Matrix		O. Reg. 153 parameters Metals only Metals + Inorganics PCBs PAHs VOCs BTEX PHC F1 - F4	
COMMENTS: Filtered Mapings for All other methods Unfiltered for all other methods				DATE/TIME 10/30/24 7:00 10/30/24 9:00 10/30/24 11:00			
PRINT Sampled By: R Simard Relinquished By: R Simard Received By: S. S. F.				TEMP (°C) 13 16			
CUSTODY SEAL: ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO				I see packs submit: ☐ Yes ☐ No			

Approved by : 
 Patrick Jacques,
 Ottawa, Environmental Chemist,

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
 Project : 21-021

Reception Date: 2024-10-31

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	102	80-120	105	80-120	9	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-05 Analysis Date: 2024-11-05	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-120	126	70-130	-	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-01 Analysis Date: 2024-11-01	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-120	103	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	108	80-120	95	70-130	-	0-20
Copper	mg/L	0.001	<0.001	110	80-120	99	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-120	97	70-130	1	0-20
Manganese	mg/L	0.01	<0.01	100	80-120	98	70-130	7	0-20
Phosphorus	mg/L	0.002	<0.002	106	80-120	108	70-130	3	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-01 Analysis Date: 2024-11-01	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	99	80-120	90	80-120	17	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-04 Analysis Date: 2024-11-05	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	100	80-120			-	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-04 Analysis Date: 2024-11-05	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	90	70-130				
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-07 Analysis Date: 2024-11-07	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	95	90-110			13	0-20
Associated Samples : 8159260, 8159261, 8159262								Prep Date: 2024-11-06 Analysis Date: 2024-11-07	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-10-31

Eurofins Sample No :			8159260	8159261	8159262			
Matrix :			Surface water	Surface water	Surface water			
Sampling Date :			2024-10-30	2024-10-30	2024-10-30			
Client Sample Identification :			SW1	SW2	SW3			
Anions	RL	Unit						
Nitrate (as Nitrogen)	0.1	mg/L	<0.1	0.66	3.84			
Nitrite (as Nitrogen)	0.1	mg/L	<0.1	<0.1	<0.1			

Eurofins Sample No :			8159260	8159261	8159262			
Matrix :			Surface water	Surface water	Surface water			
Sampling Date :			2024-10-30	2024-10-30	2024-10-30			
Client Sample Identification :			SW1	SW2	SW3			
General Chemistry	RL	Unit						
Total Suspended Solids	2	mg/L	8	33	<2			

Eurofins Sample No :			8159260	8159261	8159262			
Matrix :			Surface water	Surface water	Surface water			
Sampling Date :			2024-10-30	2024-10-30	2024-10-30			
Client Sample Identification :			SW1	SW2	SW3			
Metals	RL	Unit						
Aluminum (Dissolved)	0.01	mg/L	0.01	<0.01	<0.01			
Metals Scan (Water, ICP/MS)								
Aluminum	0.01	mg/L	0.02	0.04	0.15			
Cobalt	0.0002	mg/L	<0.0002	<0.0002	<0.0002			
Copper	0.001	mg/L	<0.001	<0.001	0.002			
Iron	0.03	mg/L	0.18	0.66	0.23			
Manganese	0.01	mg/L	1.20	0.39	0.04			
Phosphorus	0.002	mg/L	0.021	0.027	0.043			

Eurofins Sample No :			8159260	8159261	8159262			
Matrix :			Surface water	Surface water	Surface water			
Sampling Date :			2024-10-30	2024-10-30	2024-10-30			
Client Sample Identification :			SW1	SW2	SW3			
Nutrients	RL	Unit						
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.038	0.051	0.048			

Eurofins Sample No :			8159260	8159261	8159262			
Matrix :			Surface water	Surface water	Surface water			
Sampling Date :			2024-10-30	2024-10-30	2024-10-30			
Client Sample Identification :			SW1	SW2	SW3			
Oil and Grease	RL	Unit						
Oil and Grease (Total)	1	mg/L	<1	<1	<1			

OFFICIAL CERTIFICATE OF ANALYSIS : 4145659

WORK REQUEST : 100324409

Report Date : 2024-11-07

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-10-31
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 16 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	3	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	3	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	3	Modified from EPA 200.8
Nitrate (Water, IC)	3	Modified from SM 4110 B and C
Nitrite (Water, IC)	3	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	3	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	3	Modified from SM 2540 D

Sample status upon receipt :

8159260 8159261 8159262

Compliant

Notes :

- All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated.
- Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>
- Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Legend :

RL : Reporting limit

QC : Reference material (QC)

N/A : Not applicable

1 : Results in annex

* : Analysis conducted by external subcontracting

^ : Analysis not accredited

Approved by : 
Patrick Jacques,
Ottawa, Environmental Chemist,

OFFICIAL CERTIFICATE OF ANALYSIS - QUALITY CONTROL

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-11-25

Parameter	Unit	RL	Blank	QC		Matrix Spike		Duplicate	
				Recovery %	Range %	Recovery %	Range %	RPD %	Range %
Ammonia, Total (Water, Colorimetry)									
Method : Ammonia (Water, Colorimetry). Internal method: OTT-I-NUT-WI46201.									
Ammonia (Total, as Nitrogen)	mg/L	0.02	<0.020	109	80-120	107	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-28 Analysis Date: 2024-11-28	
Metals Scan (Water, Dissolved, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum (Dissolved)	mg/L	0.01	<0.01	100	80-130	124	70-130	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-28 Analysis Date: 2024-11-29	
Metals Scan (Water, ICP/MS)									
Method : Metals (Water, ICP/MS). Internal method: AMMTFQE1.									
Aluminum	mg/L	0.01	<0.01	100	80-130	82	70-130	2	0-20
Cobalt	mg/L	0.0002	<0.0002	101	80-130	96	70-130	-	0-20
Copper	mg/L	0.001	<0.001	100	80-130	91	70-130	-	0-20
Iron	mg/L	0.03	<0.03	100	80-130	84	70-130	0	0-20
Manganese	mg/L	0.01	<0.01	100	80-130	98	70-130	-	0-20
Phosphorus	mg/L	0.002	<0.002	104	80-120	84	70-130	1	0-20
Associated Samples : 8222350								Prep Date: 2024-11-27 Analysis Date: 2024-11-28	
Nitrate (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrate (as Nitrogen)	mg/L	0.1	<0.1	100	80-120	98	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-26 Analysis Date: 2024-11-27	
Nitrite (Water, IC)									
Method : Anions (Water, Ion Chromatography). Internal method: OTT-I-IC-WI45985.									
Nitrite (as Nitrogen)	mg/L	0.1	<0.1	102	80-120	107	80-120	-	0-20
Associated Samples : 8222350								Prep Date: 2024-11-26 Analysis Date: 2024-11-27	
Oil & Grease (Total) (Water, Gravimetric)									
Method : Oil and Grease (Water, Gravimetric). Internal method OTT-O-OG-WI45291.									
Oil and Grease (Total)	mg/L	1	<1	85	70-130				
Associated Samples : 8222350								Prep Date: 2024-12-02 Analysis Date: 2024-12-02	
TSS (Water, Gravimetric)									
Method : Solids, Total Suspended (Water, Gravimetric). Internal method: OTT-I-SOL-WI46259.									
Total Suspended Solids	mg/L	2	<2	96	90-110			-	0-20
Associated Samples : 8222350								Prep Date: 2024-12-02 Analysis Date: 2024-12-02	

Where RPD % is reported as "-" the calculation is not available because one or both of the duplicates is within 5 times the RL.

OFFICIAL CERTIFICATE OF ANALYSIS - RESULTS

Client : GRI Inc.
Project : 21-021

Reception Date: 2024-11-25

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Anions	RL	Unit					
Nitrate (as Nitrogen)	0.1	mg/L	<0.1				
Nitrite (as Nitrogen)	0.1	mg/L	<0.1				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
General Chemistry	RL	Unit					
Total Suspended Solids	2	mg/L	445				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Metals	RL	Unit					
Aluminum (Dissolved)	0.01	mg/L	0.01				
Metals Scan (Water, ICP/MS)							
Aluminum	0.01	mg/L	0.04				
Cobalt	0.0002	mg/L	<0.0002				
Copper	0.001	mg/L	<0.001				
Iron	0.03	mg/L	0.21				
Manganese	0.01	mg/L	0.24				
Phosphorus	0.002	mg/L	0.023				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Nutrients	RL	Unit					
Ammonia (Total, as Nitrogen)	0.02	mg/L	0.022				

Eurofins Sample No :		8222350					
Matrix :		Surface water					
Sampling Date :		2024-11-25					
Client Sample Identification :		SW1					
Oil and Grease	RL	Unit					
Oil and Grease (Total)	1	mg/L	<1				

OFFICIAL CERTIFICATE OF ANALYSIS : 4170780

WORK REQUEST : 100329045

Report Date : 2024-12-02

GRI Inc.

911 County Rd. 18
Oxford Mills, Ontario
K0G 1S0
Attention : George Gorrell

Reception Date : 2024-11-25
Project : 21-021
Sampler : NA
PO Number : Not Applicable
Temperature : 5 °C

Analysis	Quantity	External Method
Ammonia, Total (Water, Colorimetry)	1	Modified from EPA 350.1
Metals Scan (Water, Dissolved, ICP/MS)	1	Modified from EPA 200.8
Metals Scan (Water, ICP/MS)	1	Modified from EPA 200.8
Nitrate (Water, IC)	1	Modified from SM 4110 B and C
Nitrite (Water, IC)	1	Modified from SM 4110 B and C
Oil & Grease (Total) (Water, Gravimetric)	1	Modified from SM 5520 B/F
TSS (Water, Gravimetric)	1	Modified from SM 2540 D

Sample status upon receipt :

8222350

Compliant

Notes :

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