

July 31, 2023 (Revision 01)

Our File Ref.: 210341

Al Roberts 61 Strachan St, Box 1305 Richmond, Ontario K0A 2Z0

Subject: Hydrogeological Assessment and Terrain Analysis - Proposed Mixed Use Dog

Kennel and Dwelling, 5969 Ottawa Street, Richmond, Ontario

Dear Mr. Roberts,

LRL Associates Ltd. (LRL) has conducted a Hydrogeological Assessment and Terrain Analysis Study for a proposed change in land use that would allow development on private water and wastewater services for a portion of the property located at 5969 Ottawa Street. The proposed development is a two-storey prefab building. The first floor would include a kennel to shelter up to four (4) dogs for service training. The second floor would include a two (2) bedroom caretaker's residence. The development is proposed to be constructed on the portion of the property located east of Marlborough Creek at 5969 Ottawa Street, Richmond (herein referred to as the "Site").

The proposed development intends to operate on a private, on-site supply well for drinking water, as well as a private, on-site sewage system.

The assessment was carried out to determine if the proposed development:

- Has soil conditions that are suitable for onsite water supply and sewage disposal; and
- Will not impair the use of groundwater resources on the Site or on adjacent lands.

The assessment involved a desktop review of available information on the geology and hydrogeology of the Site and adjacent lands in addition to an intrusive subsurface investigation (test pitting program), and hydrogeological pumping test of the drinking water well on the subject site.

An initial Hydrogeological Assessment and Terrain Analysis report was prepared and dated September 22, 2021. The City of Ottawa technical reviewers provided comment after a formal evaluation of the deliverable, discussed further in their October 14, 2022, first submission comments, included in **Attachment I**. This report revision has been prepared to address the City of Ottawa comments related to the Hydrogeological Assessment and Terrain Analysis report previously submitted. The findings included herein are based on the work completed from between July 20, 2021, and May 29, 2023.

1 SITE AND AREA DESCRIPTION

The property is situated at the southeastern extent of Richmond at 5969 Ottawa Street, shown in **Figure 1**. For the purpose of this report, Ottawa St direction will be inferred as east-west.

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The totality of the property is triangular in shape and approximately 2.22 hectares (5.44 acres). The portion being assessed for development (the Site) is irregularly shaped, approximately 0.90 hectares (2.22 acres), and bounded by Ottawa Street on the south, the Smith Falls rail corridor on the north, an industrial lot to the east, and the Marlborough Creek to the west. The Site is vacant, approximately two thirds treed with a flat, grassed section in the southeast corner which is the proposed location of the new development. Site is zoned as RG3 – Rural General Industrial Zone (RG), Subzone 3.

The topography of the land is generally flat ranging from 94 to 95 m asl. The creek causes a slight dip in topography along the west side of the Site. GeoOttawa shows the majority of the treed portion of the Site is within a flood plain, and the grassed portion of the Site is outside of this floodplain.

These existing site features are shown in the Figure 2.

2 PROPOSED DEVELOPMENT

It is understood that the development will be constructed within the grassed portion of the Site between the site boundaries and the flood plain of Marlborough Creek. The associated septic system will be to the south of the proposed building; the well will be to the north. The estimated proposed building footprint is 453 m²; being approximately 18.5 m wide (east – west) by 24.5 m in length (north – south). The building will be slab on grade and supplied by a private water well and sewage disposal system. An asphalted parking and circulation area will extend from Ottawa Street along the western extent of the development area, and will include six (6) parking spaces, encompassing an overall area of approximately 620 m².

As mentioned, the Site will be serviced by a private sewage disposal system, which is proposed to be located at the southeastern extent of the property. The sewage disposal system will be a pressurized shallow buried trench bed construction, with a Norweco 3780-3M treatment unit. The Ottawa Septic System Office has approved the proposed design, and the corresponding permit is included in **Attachment II**.

In June 2021, the client retained a provincially licensed well installer (Air-Rock Drilling Co Ltd., Richmond, Ontario) to install a test well at the general northeastern portion of the Site. LRL was not present during the installation process, nor was LRL consulted on the location of the test well. This test well, referred to as TW-1 (Well Tag # A320977), was used to perform the initial aquifer evaluation on the Site, as documented in the Hydrogeological Assessment and Terrain Analysis report was prepared and dated September 22, 2021. The details of the TW-1 are summarized further herein in later sections.

Based on the results of the initial TW-1, in comparison to the applicable provincial regulations and guidelines, it was established that a new, better suited supply well (TW-2) be constructed on the Site. This newly installed proposed supply well for the development is located immediately north of the proposed building footprint, maintaining a 15 m setback from the proposed sewage disposal system location. Further details pertaining to the supply well details are included in the remaining body of this report.

The proposed development plan, including the proposed lot features are shown in Figure 3.

3 FIELDWORK

The fieldwork discussed herein includes the overall activities related to the hydrogeological assessment and terrain analysis completed from between July 20, 2021, and May 29, 2023. The subsequent sections provide details related to the fieldwork completed to date as part of this mandate, and are outlined in chronological order.

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3.1 Potable Water Sample Collection – July 2021

3.1.1 5969 Ottawa Street

A sample of untreated water was collected from the supply water well at 5969 Ottawa Street, on July 20, 2021 to confirm the quality of the proposed supply aquifer prior to proceeding with the hydrogeological pumping test. The water was allowed to run for ten minutes before collection. The samples were collected using laboratory prepared bottles and were submitted for a subdivision package analysis.

The laboratory Certificates of Analysis are included in **Attachment III**.

3.2 Terrain Analysis Test Pit Advancement – July 2021

On July 20, 2021, three (3) test pits were completed across the proposed severed lot to determine the general upper soil and groundwater conditions, as well as to establish the depth of overburden in the area over bedrock. The test pits were advanced using a backhoe operated by Landraulics Equipment (Richmond, Ontario). LRL was present to supervise and document the advancement of the test pits. The locations of the test pits are presented in **Figure 4** with the Test Pit Logs included in **Attachment IV**.

An open tube piezometer was installed in test pits TP21-1 through TP21-3 to allow for the elevation measurement and sampling of the perched water found in the overburden, herein referred to as groundwater. Groundwater samples could not be collected from the piezometers at the time of sampling on August 11, 2021, as they were found to be dry at the time of the sampling event. The piezometers have also since been removed from the Site.

Soil samples TP21-1-3, TP21-2-4, and TP-21-3-3 were submitted to LRL's geotechnical testing laboratory for grainsize analysis. The laboratory certificates of analysis are included in **Attachment V**.

3.3 Pumping Tests

3.3.1 August 2021 - TW-1

LRL conducted an initial pumping test on the drilled test well TW-1 on August 11, 2021, in order to assess the quality and quantity of the aquifer. The test well was pumped for a total of 360 minutes (approximately 6 hours) at an average pumping rate of 40 L/min for the duration of the test.

The drawdown was measured during the pumping and recovery periods using an electronic water level tape. Following the pump's cessation, the pumping well's recovery was monitored until a minimum of 95% recovery was achieved.

3.3.2 January 2023 – TW-1

Following the technical consultation with the City of Ottawa on November 16, 2022, and as further discussed in Section 6, LRL returned to 5969 Ottawa Street to attempt a second pumping test of the existing test well, TW-1, on January 24 and 25, 2023. The test was initiated to further develop

and assess the quality and quantity of the aquifer intercepted by TW-1 prior to exploring alternative solutions to previous water quality concerns.

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The test well was commenced on January 24, 2023, at a pumping rate of 40 L/min for a duration of 240 minutes (approximately 4 hours), at which time the pump being used malfunctioned, resulting in the test terminating. LRL returned on January 25, 2023, to proceed with the pumping test. The test well was pumped for a total of 480 minutes (approximately 8 hours) at an average pumping rate of 40 L/min for the duration of the test.

The drawdown was measured during the pumping and recovery periods using an electronic water level tape. Following the pump's cessation, the pumping well's recovery was monitored until a minimum of 95% recovery was achieved.

3.4 Potable Water Sample Collection – March 2023

Subsequent to the initial Hydrogeological Assessment and Terrain Analysis report submission on September 22, 2021, the City of Ottawa returned comments pertaining to the quality of the aquifer assessed at 5969 Ottawa Street. As discussed in Section 6, during a technical consultation with the City of Ottawa on November 16, 2022, held to collectively review the comments provided, it was recommended that an alternative supply aquifer be examined with respect to water quality. More specifically, one encountered at a shallower depth.

On March 15, 2023, LRL visited the property located at 5949 Ottawa Street, located immediately east of the subject site, to collect a representative water sample of their supply well, confirmed to extend to a shallower depth in comparison to the test well installed at 5969 Ottawa Street. The water was allowed to run for ten minutes before collection. The samples were collected using laboratory prepared bottles and were submitted for a subdivision package analysis.

The laboratory Certificates of Analysis are included in **Attachment III**.

3.5 Secondary Test Well Installation – May 2023

On May 8, 2023, Air-Rock Drilling Co Ltd. returned to the site, upon request by the client, to advance a second test well, TW-2. The test well was located beyond the flood plain to address concerns by the City of Ottawa. LRL visited the site at the time of the well grouting to confirm the initial construction details. At the time of the site visit, the casing extended to a depth of 58.5 m and the well was extended 51.2 m into bedrock, with bedrock encountered at 6.7 m below grade. LRL witnessed the grouting of the well, and based on the well record provided, the installation continued into bedrock (open-hole construction) to a depth of 70.1 m. Adequate grouting was completed to comply with O. Reg. 903 which generally specified a 6.0 m seal depth for a bored well. Furthermore, upon further site visits, the top of casing of the test well was measured to extend 0.63 m above ground surface, which exceeds the minimum stick up requirement of 0.4 m.

3.6 Pumping Test TW-2 - May 2023

On May 29, 2023, the recently installed test well, TW-2, was pumped for a duration of 360 minutes (approximately 6 hours) at an average pumping rate of 40 L/min for the duration of the test. The drawdown was measured during the pumping and recovery periods using an electronic water level tape. Following the pump's cessation, the pumping well's recovery was monitored until a minimum of 95% recovery was achieved.

4 Topography, Geology and Hydrogeology

4.1 Geology

4.1.1 Mapping

Surficial soil deposit mapping¹ indicates that the overburden consists of fine-textured glaciomarine deposits of massive to well laminated silt and clay, minor sand and gravel; with low permeability.

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Records from the Ontario Division of Mines² indicates that the underlying bedrock is Lower Ordovician period dolomite and sandstone from the March and Oxford Formation of the Beekmantown Group.

4.1.2 Test Pitting

The test pits completed across the Site were found to have a thin layer of topsoil over clay with varying sand and silt contents that extends to 3.0 m below ground surface (bgs) where the test pits were terminated. A 0.3 m thick layer of boulders and cobbles is present between approximately 1.8 and 2.1 m bgs across all three test pits. Neither bedrock or groundwater were encountered during test pitting activities.

Representative overburden samples of the clay material encountered on the Site were collected from each test pit during the test pitting activities and submitted for sieve and hydrometer analysis. The results are summarized as follows:

- Sample TP1-3, collected from a depth of between 0.9 and 1.8 m below grade, was reported to include 6.3% gravel, 17.3% sand (generally fine to medium grained), 63.5% silt and 12.9% clay. Based on the reported values, the material is considered as silt loam;
- Sample TP2-4, collected from a depth of between 1.8 and 2.7 m below grade, was reported to include 6.7% gravel, 36.7 % sand (generally fine to medium grained), 46.4% silt and 10.2% clay. Based on the reported values, the material is considered as loam; and
- Sample TP3-3, collected from a depth of between 1.8 and 2.7 m below grade, was reported to include 13.4% gravel, 24.1% sand (generally fine grained), 45.5% silt, and 17.0% clay. Based on the reported values, the material is considered loam.

These results are presented in the sieve and hydrometer certificates of analysis that are included in **Attachment V.** Clay loam will be used to define the soil infiltration factor and fine sandy loam will be used for moisture surplus.

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¹ The Ontario Geological Survey 2010. *Surficial geology of Southern Ontario;* Ontario Geological Survey, Miscellaneous Release—Data 128-REV

² Hewitt D.F., 1972. *Paleozoic Geology of Southern Ontario*; Ontario Div. Mines, GR105, 18p. Accompanied by Map 2254, scale 1 inch to 16 miles.

4.1.3 Water Well Records

Within the Rideau Valley Conservation Authority, 27,459 wells are recorded³. Of these, 4.2% are overburden wells, indicating that bedrock aquifers are the more significant water sources. The specific capacities of the 1,156 recorded overburden wells are as follows: 222 (19.2%) have no specific data, 27 (2.3%) have less than 1 L/min/m, 136 (11.8%) have between 1.0 - 5.0 L/min/m, 161 (13.9%) have between 5.0 - 10.0 L/min/m, 382 (33.1%), the greatest fraction, have between 10.0 - 50.0 L/min/m, and 228 (19.7%) have specific capacities that exceed 50.0 L/min/m.

A search was conducted of the MECP Water Well Information System (WWIS). Searching by UTM coordinates within a 500 m radius from the site returned information for eighty-eight (88) wells; locations are presented in **Figure 5**. Available well records are included in **Attachment VI**, including those of both test wells installed on the subject site (A320977 and A342311). Geological cross section of the area, generally with 500 m of the Site, are presented in **Figure 5A** and **Figure 5B**.

A review of the records within 500 m reveals that wells are drilled and extend into the bedrock, with an average depth of 33.6 ± 14.3 m (n = 86), ranging from 10.7 to 73.2 m. The reported geological conditions are relatively similar indicating an average overburden depth of 6.9 ± 2.9 m (n = 86) of mostly clay, underlain by limestone bedrock with occasional descriptions of sandstone. The general subsurface conditions reported for the twenty-five (25) wells in closest proximity to the site are found in the table below.

MECP	Distance and	Depth		Overburden Deta	ails	Bedrock Details	Groundwater	Static Water	Type of
Well Number	Direction from Site (m)	(m)	Gravel (m)	Clay/ Hardpan (m)	Sand (m)	Bedrock	Encountered (m)	Level (m)	water
A320977 (TW-1)	On-site	48.7			0 - 6.4	6.4 – 48.7 (Limestone)	14.6, 46.9	2.77	Unspecified
A342311 (TW-2)	On-site	70.1		0 – 6.7		6.7 – 50.2 (Limestone) 50.2 – 70.1 (Limestone & Sandstone Mix)	68.2	2.52	Unspecified
1531908	48 (WSW)	64		0 – 10.7	10.7 – 12.5	12.5 – 48.8 (Limestone) 48.8 – 64.0 (Sandstone)	64.0	3.0	Unspecified
7121463	151 (WNW)	45.1		4.3 – 8.8 (Hardpan)	0 – 4.3 (Topsoil)	8.8 – 45.1 (Limestone)	43.3	4.0	Unspecified
7123927	157 (SSW)	25.6		0 – 4.6		4.6 – 25.6 (Limestone)	16.7, 21.0, 22.3	3.4	Unspecified
7123924	158 (SSW)	73.2		0 – 17.1		17.1 – 53.6 (Limestone)	17.7, 27.1, 70.7	3.4	Unspecified
7115740	162 (WNW)	45.1		0 – 6.1		6.1 – 45.1 (Limestone)	42.4	4.6	Unspecified

³ Singer S.N., 2003, *The Hydrogeology of Southern Ontario* – Second Edition; Environmental Monitoring and Reporting Branch, Ministry of the Environment, 2003.

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MECP	Distance and	Depth		Overburden Deta	ails	Bedrock Details	Groundwater	Static Water	Type of
Well Number	Direction from Site (m)	(m)	Gravel (m)	Clay/ Hardpan (m)	Sand (m)	Bedrock	Encountered (m)	Level (m)	water
7123245	162 (WNW)	45.1		0 – 5.5		5.5 – 45.1 (Limestone)	43.6	4.9	Unspecified
1535453	171 (NW)	22.3		0 – 2.4 (Clay) 2.4 – 4.3 (Hardpan)		4.3 – 22.3 (Limestone)	8.5, 12.5, 16.2	4.0	Unspecified
7121464	172 (NW)	45.1		4.3 – 7.0 (Hardpan)	0 – 4.3 (Topsoil)	7.0 – 45.1 (Limestone)	43.3	3.7	Unspecified
7123247	178 (WNW)	45.1		0 – 5.8		5.8 – 45.1 (Limestone)	42.7	4.0	Unspecified
7139891	184 (NW)	37.5		0 – 4.3		4.3 – 37.5 (Limestone)	34.4	4.0	Unspecified
7127126	190 (WNW)	51.8		0 – 6.1		6.1 – 43.0 (Limestone) 43.0 – 51.8 (Sandstone)	50.6	4.3	Unspecified
7112996	194 (WNW)	45.1		0 – 6.1		6.1 – 45.1 (Limestone)	41.8	4.0	Unspecified
7123244	198 (WNW)	45.1			0 - 5.8 (Topsoil)	5.8 – 45.1 (Limestone)	43.9	4.0	Unspecified
7112957	205 (NW)	29.9		0 – 6.1		6.1 – 29.9 (Limestone)	27.7	4.6	Unspecified
1535994	205 (SSW)	29.6		0 – 3.7		3.7 – 29.6 (Limestone)	24.4, 27.4	1.8	Unspecified
7119244	211 (WNW)	48.8		0 – 5.8		5.8 – 48.8 (Limestone)	46.6	4.3	Unspecified
7127128	213 (W)	29.9			0 - 6.1 (Topsoil)	6.1 – 29.9 (Limestone)	25.9	3	Unspecified
7127131	216 (W)	45.1			0 - 6.1 (Topsoil)	6.4 – 45.1 (Limestone)	35.1, 43.3	4	Unspecified
7139854	225 (NW)	45.1		0 – 4.3		4.3 – 45.1 (Limestone)	43.6	4	Unspecified
7115738	229 (NW)	45.1			0 – 5.5	5.5 – 45.1 (Limestone)	42.4	4.3	Unspecified
7112965	232 (WNW)	37.5		0 – 5.5		5.5 – 37.5 (Limestone)	35.7	4	Unspecified
7139835	235 (NW)	45.1		0 – 6.4		6.4 – 45.1 (Limestone)	43.6	3.7	Unspecified

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MECP	Distance and	Depth		Overburden Details		Bedrock Details	Groundwater	Static Water	Type of
Well Number	Direction from Site (m)	(m)	Gravel (m)	Clay/ Hardpan (m)	Sand (m)	Bedrock	Encountered (m)	Level (m)	water
7112983	240 (W)	29.9		0 – 4.6		4.6 – 29.9 (Limestone)	12.2, 27.4	2.7	Unspecified
7119251	242 (W)	47.2		0 – 4.6		4.6 – 47.2 (Limestone)	44.8	4	Unspecified
7139902	245 (W)	45.1			0 – 4.9 (Topsoil)	4.9 – 45.1 (Limestone)	27.4, 43.3	4.6	Unspecified

Notes

BOLD

On-site test well

4.2 Hydrology

An un-named watercourse bisects the subject site in a general north-south direction. As confirmed through the Government of Canada, *The Atlas of Canada – Toporama*, the watercourse flows generally north into the Jock River, approximately 1.1 km north of the Site. Local topography of the site indicates that local overburden groundwater flow direction is most likely north/northeast following that of the un-named watercourse which bisects the site.

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The Jock River flow in a northernly direction for a distance of approximately 7 km north of the site, where it intersects the Mahoney Creek and continues east to the Rideau River.

As indicated in the Plan of Survey prepared by H.A. Ken Shipman Surveying Ltd., dated July 19, 2021, and included in **Attachment VII**, the northern extent of the Site is identified as a floodplain. It is worth noting that although Ontario Regulation 903 doesn't specifically prohibit the installation of a well in the floodplain, the City of Ottawa does not recommend such practice. Further shown in the plan of survey, TW-1 is located within the identified floodplain area, and therefore the City of Ottawa requires the following specifications for installations in floodplains should they exist:

- The casing (and air vent) of the well must be 40 cm above the potential flood level; and
- The well installation cap, and vent, must be floodproof.

4.2.1 Groundwater from Test Pits

Standpipe piezometers were installed in the bottom of each of the three (3) test pits. Groundwater samples were to be collected from the piezometers. At the time of sampling on August 11, 2021, all three (3) piezometers were found to be dry.

The test pits were advanced such that it was anticipated that the local shallow groundwater would be intercepted, based on the water levels observed in the bisecting un-named watercourse, approximately 1.5-2.0 m below grade. The silty conditions in conjunction with the excavation methodology may have influenced groundwater infiltration conditions. LRL did not return to the site to verify if levels have changed thereafter.

4.3 Topography

The topography of the land is generally flat ranging from 94 to 95 m asl. The creek causes a slight dip in topography along the west side of the Site. GeoOttawa shows the majority of the treed portion of the Site is within a flood plain, and the grassed portion of the Site is outside of this floodplain.

5 WATER SUPPLY ASSESSMENT – AUGUST 2021 (TW-1)

The supply well of 5969 Ottawa Street (A320977) used as part of this assessment was installed by the client in June 2021 within the limestone bedrock aquifer. The location of the newly installed supply is shown in **Figure 2**. This well was installed to serve as the drinking water well for the Site and was tested directly as part of the assessment.

5.1 Quality

The chemistry of the water was determined by the sampling of untreated water from the supply water well at 5969 Ottawa Street (A320977) which was installed in June 2021 by the client for future drinking water supply at the proposed development.



Table 1A summarizes the water analysis and also includes the relative Ontario Drinking Water Standards (ODWS) (O. Reg. 169/03) for the parameters tested. The analytical results for the six (6) hour sample meet the ODWS for the parameters tested except for the following:

 Hardness was reported to be 509 mg/L in the six (6) hour sample, above the Operational Guideline (OG) of 100 mg/L and D-5-5 guideline of 500 mg/L. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water.

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- The Langelier Saturation Index (LSI) is used to determine the calcium carbonate stability of water and the pH at which water is saturated with calcium carbonate (pHs). The Ryznar Stability Index (RI) is used to determine the aggressiveness of water which can indicate the scale and corrosion potential. The calculations for RI and LSI for the six (6) hour sample are shown in Table 2. Using a water temperature of 10°C, the LSI was calculated to be 0.66 which indicates the water is scale forming but non-corrosive. The RI was calculated to be 6.47 which indicates light scale or corrosion.
- Colour with a value of 30 TCU at the 6 hour samples, above the AO of 5 TCU and the
 level considered reasonably treatable of 7 TCU. Although the level of colour is above
 the value considered reasonable treatable, color can be reduced by use of an AC filter
 or a water softener.
- TDS was reported at 814 mg/L after six (6) hours, above the ODWS AO of 500 mg/L.
 TDS can be reduced through the use of a water softener; however, the use of sodium
 chloride as a regenerant for the resins can increase the sodium content of the water.
 For individuals with sodium restricted diets, potassium chloride can be substituted for
 sodium in the ion-exchange system to lower the TDS in the water supply.
- Turbidity was reported to be 4.9 NTU after six (6) hours, below the AO of 5 NTU but above the MAC of 1.0 NTU if the treatment system is required to provide filtration. Turbidity measures the suspended solids and the relative clarity of the water. Turbidity can reduce the aesthetics of water and also reduce the efficiency of disinfection of microbiological parameters, such as in treatment processes requiring filtration.
- Chloride was reported to be 264 mg/L after six (6) hours, above the ODWS AO and D-5-5 level considered reasonably treatable of 250 mg/L. Chloride can cause a salty taste in the water. Chloride is found in nature in various forms, including salts such as sodium (NaCl), potassium (KCl) and calcium (CaCl₂) chloride. A reverse osmosis treatment system can be used to lower level of chloride in drinking water.
- Iron exceeded the 0.3 mg/L ODWS value with a level of 0.5 mg/L. This is below the MECP D-5-5 level considered reasonable treatable of 5 mg/L. Iron can be reduce through the use of a water softener or a manganese greensand filter.
- Sodium was reported to be 111 mg/L after six (6) hours, which is above the ODWS AO but within the level considered reasonably treatable in Procedure D-5-5 of 200 mg/L. The concentration is above the 20 mg/L warning level notification limit for those on a sodium restricted diet. The local Medical Officer of Health should be notified of these levels so that this information may be communicated to local physicians with regards to homeowners who follow a sodium-restricted diet. Sodium can be reduced through the use of a point-of-use reverse osmosis system, if required.

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Throughout the duration of the pumping test, field measurements, in addition to water levels, were collected. These measurements included pH, Conductivity, total dissolved solids, colour, turbidity and residual chlorine. PH, Conductivity and total dissolved solids values were recorded using a Hanna Instruments HI98129 pen, and colour, turbidity and residual chlorine were measured using a LaMotte TC-300e tri-meter. The meters were calibrated and refenced to available solution standards prior to use. The measurements collected are summarized in the included **Table 3A**.

It should be noted that chlorine residuals were measured prior to obtaining a water sample for lab submission and free chlorine was measured to be 0.03 mg/L at the time of the 3-hour and 0.00 mg/L at the 6-hour sample collection. The machine detection limits of the Lamotte TC-3000 Trimeter are as follows:

- Turbidity of 0.01 NTC, with an accuracy of +/- 0.05 (or 2%, whichever is greater);
- Colour of 0.1 CU, with an accuracy of +/- 0.5 (or 2%, whichever is greater); and
- Chlorine of 0.01 ppm, with an accuracy of +/-0.02 (or 2%, whichever is greater).

For the purposes of this report, values read as less than the corresponding limits will be reported as <0.01, or <0.1.

The following calibration, or zeroing techniques performed as part of this assessment, during the filed investigations is summarized in the following Table:

Parameter	Equipment Used	Calibration and Zeroing Techniques
Turbidity	Lamotte TC- 3000 Trimeter	Prior to use, the equipment was calibrated using the 'two-point' method, following manufacturer instructions. Standard calibration solutions of 0.0 NTU and a 1.0 NTU were used to calibrate the machine.
		The solutions were pre-made by a supplier.
Colour	Lamotte TC- 3000 Trimeter	Prior to the use of the equipment, and periodically during the pumping test, colour measurements were first zeroed by following the manufacturer's instructions and using Deionized Water (prepared and supplied by Hanna Instruments – HI7040-2).
Chlorine	Lamotte TC- 3000 Trimeter	Prior to each chlorine reading, a blank sample, including Deionized Water (prepared and supplied by Hanna Instruments – HI7040-2) was screened to zero the machine.
Conductivity	HI98129 Hanna Instruments	Prior to each event, where the meter is used (typically daily), the instrument was calibrated using the Hanna Instrument prepared 1413 µs/cm conductivity solution (HI7031).
рH	HI98129 Hanna Instruments	Prior to each event, where the meter is used (typically daily), the instrument was calibrated using the 'two-point' method, following manufactures specifications. As the pH readings are anticipated to be within the neutral to slightly acid range based on our knowledge of the area and past experience, solutions of 7.01 pH Units (Hanna Instruments HI7007) and 4.01 pH Units (Hanna Instruments HI7004) were used.

5.2 Quantity

5.2.1 6-Hr Pump Test

The initial static water level was measured as 2.96 m btc. The drawdown after six (6) hours of pumping was 2.17 m (final static water level of 5.13 m btc). This represents approximately 5% of the available drawdown in the well. The specific capacity of the well after six (6) hours of pumping was calculated to be 0.307 L/s/m. The calculation is presented in **Table 4**. The well achieved approximately 96% recovery within 60 minutes of the end of pumping, at which time further monitoring was ceased as targets had been achieved.

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5.2.2 Aquifer Characteristics

Following the completion of the constant rate pumping test, the data was analysed using the Aquifer Test software package, by Waterloo Hydrogeologic. The data underwent Theis and Agarwal-Theis Recovery analysis, the results of which are shown in the table below. Graphical analyses are provided for reference purposes in **Attachment VII**.

Based on the information gathered from the pump test, the wells' transmissivity and coefficient of storage were calculated using the average of the Theis logarithmic approximation for the drawdown and Agarwal/Theis for the recovery. The specific yield of the well was calculated using the information obtained from the pump test, the transmissivity and coefficient of storage. The yield takes into account a minimum safety factor of 3. The characteristics of the well are summarized in the table below. The yield was calculated using the safety factor; therefore the theoretical yields can be higher.

Parameter	Test Well TW-1
Parameter	6 Hour Test
Transmissivity (m²/day)	25.4
Coefficient of Storage	5.2 x 10 ⁻³
Pumping Rate (L/min)	40
Available Drawdown (m)	27.1
Maximum Drawdown (m)	2.13
% Drawdown	5%
Maximum Pumping Rate (L/min)	189.4
Long Term Availability (m³/day)	272.7

6 CITY OF OTTAWA – TECHNICAL REVIEW COMMENTS AND CORRESPONDENCE

The information and data indicated above in Section 5 was present in the initial Hydrogeological Assessment and Terrain Analysis report prepared and dated September 22, 2021. The City of Ottawa technical reviewers provided comment after a formal evaluation of the deliverable, discussed further in their October 14, 2022, first submission comments, included in **Attachment** I. The findings discussed below in Section 7 are primarily to address the concerns presented by the City of Ottawa, as well as to demonstrate that an adequate water supply is available for the Site and the indented uses.

A summary of the comments presented by the City of Ottawa, limited to the September 22, 2021, Hydrogeological Assessment and Terrain Analysis report, and water quality and quantity concerns are as follows. Note that general comments and discussion points are excluded from the following list, although are included in **Attachment I** for reference, and corresponding revisions to the report have been completed:

As discussed in section 5.1 (September 2021 submission) of the report, the water quality sampling showed that the D-5-5 Maximum Concentration Considered Reasonably Treatable was exceeded for hardness, colour, and chloride. In addition, there was a ODWO exceedance for TDS, which doesn't have a Maximum Concentration Considered Reasonably Treatable. Given the exceedances of the D-5-5 Maximum Concentration Considered Reasonably Treatable, it hasn't been demonstrated that the proposed supply well is capable of supplying water of adequate quality for the proposed development. Consultation with a City Hydrogeologist and the City Senior Engineer on the file is required to discuss the hydrogeological concerns.

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- As displayed on the Plan of Survey prepared by H.A. Ken Shipman Surveying Ltd., and dated July 19, 2021, the well is located within the floodplain. Although Ontario Regulation 903 doesn't specifically prohibit the installation of a well in the floodplain, it's not recommended. The following items are required:
 - The casing height (and air vent) must be 40cm above the potential flood level.
 - The well cap and vent must be floodproof.
- As per section 5.2.4 v) of the City's Hydrogeological and Terrain Analysis Guidelines, the minimum required water quality sampling parameters for a Site Plan application are the Subdivision Package, as well as trace metals, and VOCs. Given that the pre-application consultation meeting occurred prior to when the City's Guidelines came into effect, testing for trace metals and VOCs weren't required for the Hydrogeological Assessment and Terrain Analysis dated September 22, 2021. Please note that this exception isn't intended to set a precedent. Any additional hydrogeological assessment on this Site Plan Control application, and on future applications, are subject to the requirements of the City's Hydrogeological and Terrain Analysis Guidelines, including the minimum water quality sampling parameters for Site Plans.

7 FURTHER INVESTIGATION

7.1 Subsequent January 2023 Pumping Test – TW-1

To address the water quality concerns raised by the City of Ottawa following their review of the initial Hydrogeological Assessment and Terrain Analysis submission, September 21, 2021, it was decided that an additional pumping event of the on-site TW-1 (Well # A320977) be performed. The additional pumping was intended to extend over a period of over 24 hours consecutively, at a rate of 40 L/minute to (28,800 L/day) to further develop the well and provide a more accurate representation of the aquifer quality conditions. The test commenced on January 24, 2023, using a submersible pump, powered by a generator, and supplied by Air-Rock Drilling Co Ltd.

The pump test was set at a pumping rate of 40 L/min for a duration of 240 minutes (approximately 4 hours), at which time the pump being used malfunctioned, resulting in the test terminating. A groundwater sample was collected immediately prior to the pump test being terminated at 4 hours of pumping, and the well was permitted to recover to a water level within 95% of the initial column level.

LRL returned the following day, on January 25, 2023, to proceed with the pumping test. Using the same equipment as previously, the test well was pumped for a total of 490 minutes (approximately 8 hours) at an average pumping rate of 40 L/min for the duration of the test. Representative samples were collected at 4 hour, and at the eight (8) hour elapsed time interval. Following the collection of the eight (8) hour sample, the pumping was seized and the well was permitted to recover to at least 95% of the initial water level.

7.1.1 Quality

Further evaluation, in addition to that of the August 2021 pumping test data, was performed on the TW-1 aquifer through chemical analysis of representative water samples collected from the 5969 Ottawa Street test well (A320977). **Table 1A** summarizes the water analysis and also includes the relative Ontario Drinking Water Standards (ODWS) (O. Reg. 169/03) for the parameters tested at both four (4) hour intervals, and the eight (8) hour interval. The analytical results for the January 25, 2023 eight (8) hour sample meet the ODWS for the parameters tested except for the following:

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- Dissolved Organic Carbon (DOC) was reported above the ODWS of 5 mg/L with a value of 8.9 mg/L. This value is below the MECP D-5-5 level considered reasonably treatable of 10 mg/L through available technologies including ion exchange units like water softeners. DOC was noted to be elevated in comparison to the August 2021 sample results;
- Hardness was reported to be 524 mg/L in the eight (8) hour sample, above the Operational Guideline (OG) of 100 mg/L and D-5-5 guideline of 500 mg/L. This value is comparable to those collected in the August 2021 pumping test. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water.
- TDS was reported at 836 mg/L after eight (8) hours, above the ODWS AO of 500 mg/L. TDS can be reduced through the use of a water softener; however, the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water. For individuals with sodium restricted diets, potassium chloride can be substituted for sodium in the ion-exchange system to lower the TDS in the water supply. The levels encountered at this time are comparable to those retrieved in the August 2021 sampling event;
- Chloride was reported to be 299 mg/L after eight (8) hours, above the ODWS AO and D-5-5 level considered reasonably treatable of 250 mg/L. Chloride can cause a salty taste in the water. Chloride is found in nature in various forms, including salts such as sodium (NaCl), potassium (KCl) and calcium (CaCl₂) chloride. A reverse osmosis treatment system can be used to lower level of chloride in drinking water;
- Iron exceeded the 0.3 mg/L ODWS value with a level of 0.5 mg/L. This is below the MECP D-5-5 level considered reasonable treatable of 5 mg/L. This value is comparable to the August 2021 six (6) hour pumping test sample result also of 0.5 mg/L. Iron can be reduce through the use of a water softener or a manganese greensand filter; and
- Sodium was reported to be 112 mg/L after eight (8) hours, which is above the ODWS AO but within the level considered reasonably treatable in Procedure D-5-5 of 200 mg/L. The concentration is above the 20 mg/L warning level notification limit for those on a sodium restricted diet. The local Medical Officer of Health should be notified of these levels so that this information may be communicated to local physicians with regards to homeowners who follow a sodium-restricted diet. Sodium can be reduced through the use of a point-of-use reverse osmosis system, if required.

As mentioned, the water quality results encountered in the January 25, 2023, eight (8) hour pumping samples, in comparison to the August 11, 2021, six (6) hour pumping sample, were generally comparable, with select variances. Notable decreases in previously encountered parameters of concern include colour which was reported less than the detection limit (<2 CU) in

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the eight (8) hour sample, and turbidity which was reported less than the ODWS limit, and MECP D-5-5 value of 5 NTU.

Although significant improvement in select parameters were encountered, the majority of those identified as a concern by the City of Ottawa, including hardness, chloride and TDS, as well as the most recent elevated concentrations of DOC detected, the upper Limestone aquifer on the site is not considered an adequate supply source for the proposed development.

7.1.2 Quantity

Although the water quality was established to be not acceptable in accordance with applicable provincial guidelines, LRL proceeded to evaluate the demand potential of the aguifer based on the January 2023, pumping data results.

The initial static water level was measured as 3.32 m btc on January 24, 2023 (with the pump installation) and 3.29 m btc upon returning to the site on January 25, 2023 (with the pump installation). The drawdown after eight (8) hours of pumping on January 25, 2023, was calculated to be 1.93 m (final water level at the end of pumping was measured as 5.22 m btc). This represents approximately 4% of the available drawdown in the well. The pumping test details, and corresponding measurements are included Table 3B and Table 3C. The well achieved approximately 99% recovery within 30 minutes of the end of pumping, at which time further monitoring was ceased as targets had been achieved.

The results from the pumping test are found to support the proposed demand requirements in accordance with current provincial guidelines.

Shallow Bedrock Aquifer Characterization

As discussed above, the previously installed test well (TW-1) installed in June 2021 at 5969 Ottawa Street (A320977) was found to have inadequate groundwater quality in comparison to applicable provincial guidelines and standards. It was decided to investigate the conditions of the shallower bedrock aquifer in the area, through the sampling of a neighbouring supply well, 5949 Ottawa Street, immediately east of the Site. The supply well extended to a depth of approximately 30.3 m below grade (measured on Site), and according to the property owner, is not in use, but rather they obtain their supply from a second well on the property, extending to a depth of approximately 51 m below grade. Well records were not retrieved for these respective installations.

The neighbouring well, which extends approximately 30.3 m in depth, was sampled on March 15, 2023. A sample of untreated water was collected. The water was allowed to run for approximately ten minutes before collection. The samples were collected using laboratory prepared bottles and were submitted for a subdivision package analysis. The laboratory Certificates of Analysis are included in Attachment III.

A summary of the results is included in **Table 1A**. The water results were found to be generally comparable as those on the Site in TW-1, with exceedances to the Ontario Drinking Water Standards for TDS, hardness, turbidity and chloride, of which values were encountered above the D-5-5 limits considered reasonably treatable. The shallow bedrock aguifer is not considered a suitable source of water supply for the Site.

8 WATER SUPPLY ASSESSMENT - MAY 2023 (TW-2)

As discussed above, the previously installed test well (TW-1) installed in June 2021 at 5969 Ottawa Street (A320977) was found to have inadequate groundwater quality in comparison to applicable provincial guidelines and standards. Further investigation into shallower bedrock

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applicable provincial guidelines and standards. Further investigation into shallower bedrock aquifer wells, namely that at 5949 Ottawa Street, returned comparable results and conclusions.

The client retained the services of a local well installer (Air-Rock Drilling Co Ltd., Richmond, Ontario) to complete a new test well on the Site. The well was extended to a greater depth (70.1 m) than that of the previously advanced TW-1 and was placed beyond the limits of the identified floodplain. The well construction details are included above in Section 3.5. The location of the newly installed test well is shown in **Figure 2**.

On May 29, 2023, the recently installed test well, TW-2, was pumped for a duration of 360 minutes (approximately 6 hours) at an average pumping rate of 40 L/min for the duration of the test. The test was performed using the existing submersible pump installed in the well, connected to a local power supply. Using a water level measuring tape, the top of the pump was measured to be set at approximately 49.9 m below top of casing.

Throughout the duration of the test, the drawdown was measured during the pumping and recovery periods using an electronic water level tape. Following the pump's cessation, the pumping well's recovery was monitored until a minimum of 95% recovery was achieved.

8.1 Quality

The chemistry of the water was determined by the sampling of untreated water from the newly installed test well at 5969 Ottawa Street (A342311). **Table 1A** and **Table 1B** summarizes the water analysis and also includes the relative Ontario Drinking Water Standards (ODWS) (O. Reg. 169/03) for the parameters tested.

Throughout the duration of the pumping test, field measurements, in addition to water levels, were collected. These measurements included colour, turbidity and residual chlorine, measured using a LaMotte TC-300e tri-meter. The meters were calibrated and refenced to available solution standards prior to use. The measurements collected are summarized in the pumping test measurement **Table 3D**.

Chlorine residuals were measured prior to obtaining a water sample for lab submission and free chlorine was measured to be 0.02 mg/L at the time of the 3-hour and the 6-hour sample collection. The machine detection limits of the Lamotte TC-3000 Trimeter are as follows:

- Turbidity of 0.01 NTC, with an accuracy of +/- 0.05 (or 2%, whichever is greater);
- Colour of 0.1 CU, with an accuracy of +/- 0.5 (or 2%, whichever is greater); and
- Chlorine of 0.01 ppm, with an accuracy of +/-0.02 (or 2%, whichever is greater).

For the purposes of this report, values read as less than the corresponding limits will be reported as <0.01, or <0.1.

Calibration, or zeroing techniques performed as part of this assessment, during the filed investigations is summarized above in Section 5.1.

The analytical results for the six (6) hour sample meet the ODWS for the parameters tested except for the following:

Hardness was reported to be 478 mg/L in the six (6) hour sample, above the OG of 100 mg/L, although less than the D-5-5 guideline of 500 mg/L. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however, the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water.

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TDS was reported at 718 mg/L after six (6) hours, above the ODWS AO of 500 mg/L. Where TDS levels exceed the ODWS AO, it is required that a professional comment regarding treatment include "written rationale that corrosion, encrustation or taste problems will not occur", according to the MECP D-5-5 Guideline. As indicated in the ODWS for TDS parameter "The term total dissolved solids refer to inorganic substances dissolved in water. The principal constituents of TDS are chloride, sulphates, calcium, magnesium and bicarbonates. The effects of TDS on drinking water quality depend on the levels of the individual components. Excessive hardness, taste, mineral deposition or corrosion are common properties of highly mineralized water. The palatability of drinking water with a TDS level less than 500 mg/L is generally considered to be good."

In support of the required rationale with respect to TDS levels in excess of 500 mg/L, the Ryznar Stability Index (RSI) and Langelier Saturation Index (LSI) were calculated for the water sample to determine the corrosivity or scale formation potential of the water. The Langelier Saturation Index (LSI) is used to determine the calcium carbonate stability of water and the pH at which water is saturated with calcium carbonate (pHs). The Ryznar Stability Index (RI) is used to determine the aggressiveness of water which can indicate the scale and corrosion potential. The calculations for RI and LSI for the six (6) hour sample are shown in **Table 2**. Using a water temperature of 10°C, the LSI was calculated to be 0.549 which indicates the water is scale forming but non-corrosive. The RI was calculated to be 6.60 which indicates light scale or corrosion.

Furthermore, it should be noted that parameters which contribute to TDS in a water supply, including sodium, sulphates and chlorides, are noted to be within their corresponding ODSW AO. The ODWS AO for both sodium and chloride are established based on the palatability of the water. Sodium was reported with a level of 70.7 mg/L and a chloride level of 191 mg/L, which are within the AO of 200 mg/L and 250 mg/L, respectively. Therefore, these parameters are considered to be a levels which are unlikely to contribute to taste in the water supply. Additionally, sulphates were reported less than the 150 mg/L ODWS, with a level of 57 mg/L. This is indicative that sulphates will most likely not result in a distinctive or unpleasant taste.

TDS levels are also influenced by concentrations of calcium, magnesium and bicarbonates, which can result in elevated hardness. As noted above, hardness was found to exceed the ODWS OG of 100 mg/L, although less than the D-5-5 guideline of 500 mg/L. Therefore, by improving the hardness of the water, TDS levels should be directly correlated with the improvement of quality and reduce the potential for scale formation associated with TDS. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water.

Turbidity was reported to be 9.0 NTU after six (6) hours, above the AO of 5 NTU, and the D-5-5 of 5 mg/L. Turbidity measures the suspended solids and the relative clarity of the water. Turbidity can reduce the aesthetics of water and also reduce the efficiency of disinfection of microbiological parameters, such as in treatment processes requiring filtration. At the time of sampling, the levels in the field were measured as 1.40 NTU. The holding time from the point of sample collection, and possible chemical reactions with such compounds as iron within the sample likely attributed to the elevated turbidity. The field results are considered representative of the sample, and aquifer conditions.

• Iron exceeded the 0.3 mg/L ODWS value with a level of 0.6 mg/L. This is below the MECP D-5-5 level considered reasonable treatable of 5 mg/L. Iron can be reduce through the use of a water softener or a manganese greensand filter.

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• Sodium was reported to be 70.7 mg/L after six (6) hours, which is above the ODWS AO but within the level considered reasonably treatable in Procedure D-5-5 of 200 mg/L. The concentration is above the 20 mg/L warning level notification limit for those on a sodium restricted diet. The local Medical Officer of Health should be notified of these levels so that this information may be communicated to local physicians with regards to homeowners who follow a sodium-restricted diet. Sodium can be reduced through the use of a point-of-use reverse osmosis system, if required.

Volatile Organic Compounds (VOCs) were also collected as part of the analysis package. VOCs were not detected in the sample submitted, and the results are summarized in **Table 1B**.

8.2 Quantity

8.2.1 6-Hr Pump Test

The initial static water level was measured as 3.19 m btc. The drawdown after six (6) hours of pumping was 2.205 m (final static water level of 5.395 m btc). This represents approximately 4.7% of the available drawdown in the well. The water level was measured to drop to a maximum depth of 5.45 m at the 3-hour pumping duration which accounts for a maximum drawdown of 2.26 m (4.8% of the total available drawdown) but recovered slightly afterwards. The specific capacity of the well after six (6) hours of pumping was calculated to be 0.302 L/s/m. The calculation is presented in **Table 4**. The well achieved approximately 95% recovery within 15 minutes of the end of pumping, and approximately 98% recovery within 60 minutes, at which time further monitoring was ceased as targets had been achieved.

8.2.2 Aguifer Characteristics

Following the completion of the constant rate pumping test, the data was analysed using the Aquifer Test software package, by Waterloo Hydrogeologic. The data underwent Theis and Agarwal-Theis Recovery analysis, the results of which are shown in the table below. Graphical analyses are provided for reference purposes in **Attachment VIII**.

Based on the information gathered from the pump test, the wells' transmissivity and coefficient of storage were calculated using the average of the Theis logarithmic approximation for the drawdown and Agarwal/Theis for the recovery. The specific yield of the well was calculated using the information obtained from the pump test, the transmissivity and coefficient of storage. The yield takes into account a minimum safety factor of 3. The characteristics of the well are summarized in the table below. The yield was calculated using the safety factor, therefore the theoretical yields can be higher.

Darameter	Test Well TW-2
Parameter	6 Hour Test
Transmissivity (m ² /day)	24.6
Coefficient of Storage	1.45 x 10 ⁻³
Pumping Rate (L/min)	40
Available Drawdown (m)	46.75
Maximum Drawdown (m)	2.26
% Drawdown	4.8%
Maximum Pumping Rate (L/min)	184.8
Long Term Availability (m³/day)	266.1

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The required quantity of water is generally based on a per-person requirement of 450 L/day of water per day. However, based on the septic design calculations presented by others, and included in Section 9, the grand total required quantity per day is 3,450 L/day (3.45 m³/day).

Based on the observed drawdown/recovery relationship, it is concluded that the long-term yield of the test well TW-2 is in excess of minimum daily demand of 3,450 L. The maximum pumping rate is also more than sufficient to supply a peak flow demand for a residential/commercial water supply as indicated in MECP Procedure D-5-5.

TERRAIN ANALYSIS

The terrain analysis was conducted to demonstrate that the unconsolidated material on the Site is appropriate for the construction of an on-Site subsurface sewage disposal system. The subsurface conditions indicated for the Site are considered suitable for a Class IV septic sewage disposal system with a fully raised leaching bed depending on the lot specific soil and groundwater conditions at the actual location of the proposed septic system leaching bed. The leaching bed should be constructed to conform to the specifications set out in the Ontario Building Code (OBC).

The client retained the services of a certified sewage disposal system designer (Green Valley Environmental), who prepared the proposed system design and application to the City of Ottawa's, Ottawa Septic System Office (OSSO) for approval and permit issue. A copy of the permit, in addition to the supporting submission package, is included in Attachment II. Green Valley Environmental (GVE) proposed the use of a Class IV shallow buried trench, along with Norweco 3780-3M treatment unit.

GVE has calculated a daily design flow of 3,450 L/day. There assumptions area presented as follows:

	(Values fror	n Table 8.2.1.3.A a	and 8.2.1.3.B)	
Ontario	Building Code	e: 8.2.1.3 - Sewag	e System Design Flo	ows
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Ontario	Building Code	e: 6.2.1.3 - Sewag	e System Design Flo	ws
	(Values fron	n Table 8.2.1.3.A a	and 8.2.1.3.B)	
Use	Design Flow per Unit (L)	Units	Number of Units	Design Flow Subtotal (L) per day
		Warehouse		
Two (2) Washrooms	950	Washroom	2	1,900
Two (2) Loading Bays	150	Loading Bay	2	300
		I	Total	2,200
		Apartment	1	
Two (2) Bedrooms	275	Per Person	4	1,100
1		ı	Total	1,100
	Kenn	nel (Veterinary Cl	inic ⁽¹⁾)	
Employee	75	Employees (2)	1	75
Floor Drain	75	Floor Drain	1	75
		I	Total	150
			Daily Flow Total	3,450

Notes

- (1) Veterinary clinic was the considered the closest applicable property use in the OBC table for animal kenneling. No veterinary services are to be completed on Site.
- (2) Assumes employees work one 8-hr shift per day and spend the rest of the day in the caretaker suite.

Based on a daily design flow of 3,450 L per day, GVE has calculated a total length of pipe required for the shallow buried trench installation, of 52.32 m and an orifice spacing of 0.6 m. The system will include a minimum 3,600 L capacity pretreatment tank with a maximum cover of 300 mm of soil. The actual treatment unit will have a capacity of 3,780 L. Based on the design details proved in the GVE application, the system will require a surface area of approximately 15 m by 15 m, or approximately 230 m². Including a replicate area to account for a replacement area, it is estimated that a total footprint of approximately 460 m² would be required to adequately install and maintain the proposed system. Further details related to the proposed construction are included in Attachment II.

The proposed development property has an area of approximately 9,000 m². Accordingly, it is considered that sufficient area exists at the proposed development for the installation of a septic system in accordance with the OBC, and includes sufficient replacement area in the event it is required. The proposed Site layout, including the anticipated septic location and configuration is shown in **Figure 3**.

The OSSO approved the application, and a permit was issued.

10 GROUNDWATER IMPACT ASSESSMENT

The groundwater impact assessment addresses the ability of the land to attenuate the sewage effluent created by the development. Three methods for conducting the assessment are outlined in MECP's *Procedure D-5-4 Technical Guideline for Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment* (1996):

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- Lot Size Consideration for lot greater than 10 000 m²;
- System Isolation Consideration for areas where the septic system is hydrogeologically isolated from the potable water source; and
- Contaminate Attenuation Consideration for sites that do not meet the above two points.

Based on the review of the available information and site visit (above) the site is not obviously hydrogeologically sensitive (i.e. karstic areas, areas of fractured bedrock at the surface, areas of thin soil over highly permeable soils).

The Site has a total area of 22,200 m². In accordance with Section 22.5.8 of the MECP Design Guidelines for Sewage Works, the Marlborough Creek which intercepts the subject property along the western extent of the proposed development area, must be considered in the extent of the allowable dilution area. Therefore, an area of 8,976 m² has been considered for the proposed development footprint, and septic attenuation areas. Therefore, "*Contamination Attenuation*" was considered in this terrain analysis.

10.1 Contamination Attenuation Method (Predictive Assessment)

The Contaminant Attenuation Method (Predictive Assessment) was used to determine the impact of the individual on-site septic systems to the property boundaries. This procedure assesses the risk that the individual on-site systems will cause the concentration of the nitrate-nitrogen to a property boundary, or in this instances, at the surface water body extents, to exceed 10 mg/L at the property boundaries. Dilution is the only attenuation mechanism considered for nitrate-nitrogen, with precipitation being the only source of infiltration. The following parameters and assumptions were used in the nitrate-nitrogen attenuation calculations:

Infiltration factors for the proposed development property are;

- Total area of 8,976 m²;
- Flat topography;

o <u>Infiltration Factors:</u>

- Based on the soil gradation completed on samples from the test pits showed the soil to be loam to silty loam across the Site. As such clay loam was used for this calculation;
- ii. Based approximate measurements from aerial photos of the property, it was determined that around 6,079 m² of the property is woodland, and the remaining 2,897 m² is cultivated land. Due to most of the forested land being within the floodplain, it is assumed that this ratio will be maintained during the Site development;



o Moisture Surplus:

 The forested portion of the property was considered closed mature forest, and the remaining area was considered moderately rooted crops as the post development ground cover,

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- ii. Silt loam as defined by the sieve and hydrometer testing.
- Groundwater was not encountered in the test pit piezometers. Therefore, it is assumed that background nitrate-nitrogen concentration is 0 mg/L;
- o Impervious areas of 453.25 m² for the building and 620 m² of paved driveway and circulation area; and,
- Moisture surplus values from the Ottawa weather station (Environment Canada, 2011). The moisture surplus printout is included in Attachment IX.

Based on the total proposed sewage volume for the entire Site of 3,450 L/day, the existing available lot size, soil conditions, a nitrate concentration of the sewage of 40 mg/L, the calculated levels of nitrates at the property limits are estimated as 17.53 mg/L as presented in the attached **Table 5A**. This is above the procedure's guideline limit of 10 mg/L at the property line. Based on the "Contaminant Attenuation Method", without tertiary treatment the current lot size and soil conditions are not suitable to attenuate the nitrate impacts generated by the septic systems of the proposed development in accordance with D-5-4 guideline.

The above calculations are based on the current D-5-4 guideline which requires the use of 40 mg/L as the contaminant source as per Section 5.6.2 (a). Therefore, the use of an advanced tertiary treatment system such as Norweco tertiary system is necessary to reduce the levels of nitrates prior to discharge to the disposal field. This particular system is approved by the OBC and the Building Materials Evaluation Commission of the Ontario Ministry of Municipal Affairs and Housing. Furthermore, Section 5.7 of the D-5-4 guideline states that the Ministry recognises "that as research continues, information and technologies may become available which warrant minor or substantial revisions to this guideline".

The Norweco 3780-3M treatment unit is certified for a minimum 50% total nitrogen reduction, and was used in the proposed modification, and proposed development sewage disposal designs. Therefore, a nitrate effluent concentration of 20 mg/L was used for the proposed upgraded system for the existing place of worship building, and the proposed assembly hall in this assessment. A copy of the specifications for the Norweco tertiary system is included in **Attachment X**.

The detailed calculations for the proposed development are presented in **Table 5B**. It is assumed that the level of nitrates in the effluent from the proposed Norweco tertiary systems are 20 mg/L (based on a 50% nitrate reduction as indicated in the corresponding specifications). Based on these assumptions the nitrates at the property limits are estimated as 8.76 mg/L. This is below the procedure's guideline of 10.0 mg/L. Based on the "**Contaminant Attenuation Method**" the current lot size and soil conditions are suitable to attenuate the nitrate impacts generated by the septic systems on the development in accordance with current D-5-4 guidelines, provided an appropriate and maintained tertiary treatment system is used for the proposed building.

11 Conclusions

Based on our review of available information and the results of the groundwater sampling and laboratory analytical program, we conclude the following:

 Based on the information collected through the intrusive investigation completed, the site is not considered to be hydrologically sensitive.

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- Sufficient area exists at the proposed developed lot for a well and the installation of a septic
 system in accordance with the OBC to service the dog kenneling business and the upstairs
 two-bedroom caretaker dwelling with a design sewage flow of up to 3,450 L/day.
- Pre-treatment of the sewage from the proposed sewage disposal systems with Norweco tertiary systems, which have a certified nitrogen reduction of a minimum of 50%, yields a calculated nitrate concentration at the property line of 8.76 mg/L, based on the "Contaminant Attenuation Method".
- Surrounding lands are serviced by private wells and septic/holding tanks sewage systems, including domestic wells within 500 m of the Site. The potable water source of these wells is the bedrock aquifer. A layer of either clay or sand being between 4.3 and 12.5 m thick over bedrock (limestone).
- The proposed development can be adequately and safely supplied with potable water as demonstrated through the installation and corresponding tests of TW-2, which extends to a depth of 70.1 m below grade, into the deeper limestone & sandstone mix bedrock formation. Although, as discussed in Section 12, select parameters encountered are elevated in comparison to the applicable ODWS, but a re considered reasonably treatable through the use of a conventional treatment system.
- TW-2 has been constructed in accordance with O. Reg. 903 and is considered acceptable for use as a supply well for the proposed development on the Site.
- The results of the six (6) hour sample submitted from the May 2023 test well, TW-2, generally met the Procedure D-5-5 and ODWS limits for the tested parameters with the following exceptions:
 - Hardness was reported to be 478 mg/L in the six (6) hour sample, above the OG of 100 mg/L, although less than the D-5-5 guideline of 500 mg/L. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water;
 - TDS was reported at 718 mg/L after six (6) hours, above the ODWS AO of 500 mg/L. Where TDS levels exceed the ODWS AO, it is required that a professional comment regarding treatment include "written rationale that corrosion, encrustation or taste problems will not occur", according to the MECP D-5-5 Guideline. As indicated in the ODWS for TDS parameter "The term total dissolved solids refer to inorganic substances dissolved in water. The principal constituents of TDS are chloride, sulphates, calcium, magnesium and bicarbonates. The effects of TDS on drinking water quality depend on the levels of the individual components. Excessive hardness, taste, mineral deposition or corrosion are common properties of highly mineralized water. The palatability of drinking water with a TDS level less than 500 mg/L is generally considered to be good."

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In support of the required rationale with respect to TDS levels in excess of 500 mg/L, the Ryznar Stability Index (RSI) and Langelier Saturation Index (LSI) were calculated for the water sample to determine the corrosivity or scale formation potential of the water. The Langelier Saturation Index (LSI) is used to determine the calcium carbonate stability of water and the pH at which water is saturated with calcium carbonate (pHs). The Ryznar Stability Index (RI) is used to determine the aggressiveness of water which can indicate the scale and corrosion potential. The calculations for RI and LSI for the six (6) hour sample are shown in Table 2. Using a water temperature of 10°C, the LSI was calculated to be 0.549 which indicates the water is scale forming but non-corrosive. The RI was calculated to be 6.60 which indicates light scale or corrosion.

Furthermore, it should be noted that parameters which contribute to TDS in a water supply, including sodium, sulphates and chlorides, are noted to be within their corresponding ODSW AO. The ODWS AO for both sodium and chloride are established based on the palatability of the water. Sodium was reported with a level of 70.7 mg/L and a chloride level of 191 mg/L, which are within the AO of 200 mg/L and 250 mg/L, respectively. Therefore, these parameters are considered to be a levels which are unlikely to contribute to taste in the water supply. Additionally, sulphates were reported less than the 150 mg/L ODWS, with a level of 57 mg/L. This is indicative that sulphates will most likely not result in a distinctive or unpleasant taste.

TDS levels are also influenced by concentrations of calcium, magnesium and bicarbonates, which can result in elevated hardness. As noted above, hardness was found to exceed the ODWS OG of 100 mg/L, although less than the D-5-5 guideline of 500 mg/L. Therefore, by improving the hardness of the water, TDS levels should be directly correlated with the improvement of quality and reduce the potential for scale formation associated with TDS. High levels of hardness can lead to scale deposits and excessive scum with regular soaps upon heading the water. Hardness can be reduced through the use of a water softener; however the use of sodium chloride as a regenerant for the resins can increase the sodium content of the water;

- Turbidity was reported to be 9.0 NTU after six (6) hours, above the AO of 5 NTU, and the D-5-5 of 5 mg/L. Turbidity measures the suspended solids and the relative clarity of the water. Turbidity can reduce the aesthetics of water and also reduce the efficiency of disinfection of microbiological parameters, such as in treatment processes requiring filtration. At the time of sampling, the levels in the field were measured as 1.40 NTU. The holding time from the point of sample collection, and possible chemical reactions with such compounds as iron within the sample likely attributed to the elevated turbidity. The field results are considered representative of the sample, and aquifer conditions;
- Iron exceeded the 0.3 mg/L ODWS value with a level of 0.6 mg/L. This is below the MECP D-5-5 level considered reasonable treatable of 5 mg/L. Iron can be reduce through the use of a water softener or a manganese greensand filter; and
- Sodium was reported to be 70.7 mg/L after six (6) hours, which is above the ODWS AO but within the level considered reasonably treatable in Procedure D-5-5 of 200 mg/L. The concentration is above the 20 mg/L warning level

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notification limit for those on a sodium restricted diet. The local Medical Officer of Health should be notified of these levels so that this information may be communicated to local physicians with regards to homeowners who follow a sodium-restricted diet. Sodium can be reduced through the use of a point-of-use reverse osmosis system, if required.

- Volatile Organic Compounds (VOCs) were also collected as part of the analysis package.
 VOCs were not detected in the sample submitted.
- The neighbouring land in the area are generally either un-developed, or include low-density residential developments. A train-track boarders the northern extent of the Site, which is followed by un-developed land and a higher-density residential development. Commercial/Light Industrial activities occupy the adjacent land to the east, and the neighbouring property further east. These industries include an automotive repair facility (5949 Ottawa Street) and Quatrosense Environmental Ltd., a hazardous gas detection equipment manufacturer, sales and calibration service provided (5935 Ottawa Street). Based on the types of property uses in the vicinity of the Site, it is anticipated that there would be little interference with respect to water well quantity from neighbouring lands. Furthermore, based on the available well records reviewed as part of this assessment, limited supply wells within 500 m of the Site intercept the same aquifer, or extend to a comparable depth, as that of TW-2, the proposed water well to the anticipated development.

12 RECOMMENDATIONS

- Treatment options should be considered on an individual basis. Conventional treatment options exist for the parameters exceeding the ODWS and D-5-5 guidelines, which include the following:
 - a. Hardness and TDS can be reduced through the use of a water softener; and
 - b. Iron can be reduce through the use of a water softener or an manganese greensand filter.
- 2. The well placement should be located upgradient of any septic field beds. The drilled well should be a minimum distance of 15 m from any septic beds and 15 m from other wells. It is also recommended that a setback of at least 3.0 m from the property boundary be maintained for further mitigation measures related to groundwater impairment from neighbouring land uses.
- 3. Water should be tested on an individual basis and a water treatment specialist be consulted prior to the final design and installation of any water treatment system.
- 4. The water treatment system should be maintained on a regular basis in accordance with the manufacturer's recommendations to ensure that it is properly functioning and providing a safe drinking water.
- 5. The residence is advised to have their water regularly analysed for bacteria and septic indicator parameters, such as chloride, ammonia, nitrates, nitrites, Total Kjeldahl Nitrogen, E. Coli and Total Coliforms.
- 6. The owner should maintain their well as outlined in the Ontario Ministry of Agricultural and Rural Affairs Best Management Series Water Wells.
- 7. The subsurface conditions indicated for the proposed lots are considered suitable for a Class IV septic sewage disposal system. Use of an advanced tertiary treatment system

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such as Norweco tertiary system is necessary to reduce the levels of nitrates prior to discharge to the disposal field.

- 8. TW-1 should be decommissioned in accordance with O. Reg. 903.
- 9. The casing of the proposed supply well, TW-2, must maintain a minimum stickup above the groundsurface of 40 cm, following Site development and grading activities. Consideration to strategic grading to encourage surface water diversion from the supply well is recommended.
- 10. Based on the proposed use of the Site, possible contaminant sources that could be present at the property are identified as: waste storage (dog feces), septic systems, and animal enclosures. The sewage systems and dog waste storage should be at least 15 metres from the well location.

13 LIMITATIONS

The findings contained in this report are based on data and information collected during the Terrain Analysis of the subject property conducted by LRL Associates Ltd. The conclusions and recommendations are based solely on-Site conditions encountered at the time of our fieldwork on July 20, 2021, and May 29, 2023, supplemented by historical information and data obtained as described in this report. The information presented in this report represents the groundwater conditions at the locations sampled. Due to natural variations in geological conditions, no inference is made to the soil or groundwater conditions between sampling points. No assurance is made regarding changes in conditions subsequent to the time of this investigation. If additional information is discovered or obtained, LRL Associates Ltd. should be requested to re-evaluate the conclusions presented in this report and to provide amendments as required.

In evaluating the subject property, LRL Associates Ltd. has relied in good faith on information provided by individuals as noted in this report. We assume that the information provided is factual and accurate. We accept no responsibility for any deficiencies, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation or fraudulent acts of the persons contacted.

Yours truly, LRL Associates Ltd.

Jessica Arthurs

Environmental Engineering Manager/Associate

K. MOHAMMADI 100172155

Jul. 31, 2023

k. Mohamado NCE OF ONT ARIO

Kourosh Mohammadi, Ph.D., P.Eng. Hydrogeological Engineer





5430 Canotek Road I Ottawa, ON, K1J 9G2 www.lrl.ca I (613) 842-3434

A.

ROBERTS

CLIENT

PROJECT

HYDROGEOLOGICAL ASSESSMENT AND TERRAIN ANALYSIS PROPOSED MIX USE DEVELOPMENT 5969 OTTAWA STREET, RICHMOND, ONTARIO

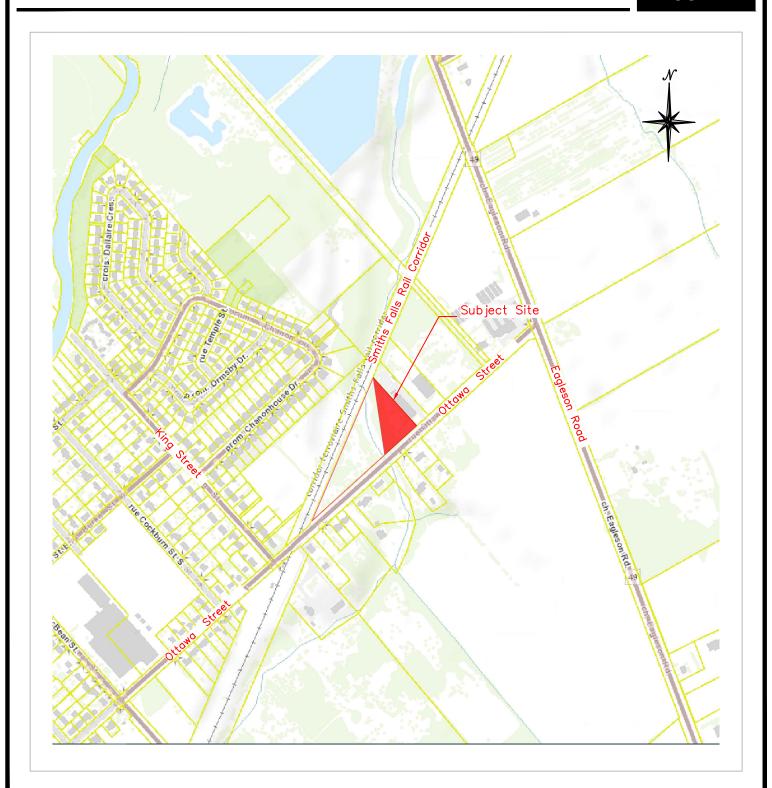
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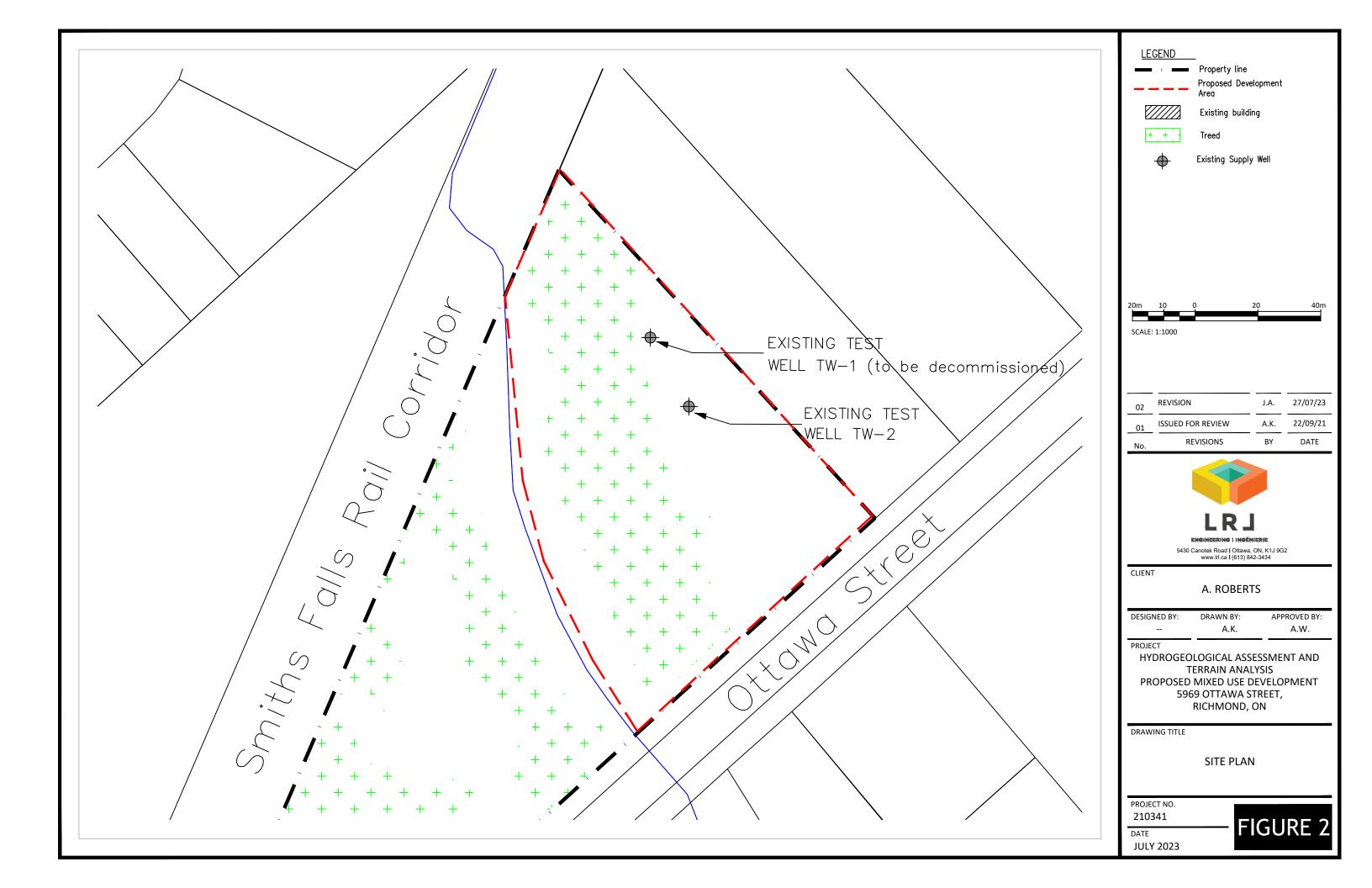
SITE LOCATION (NOT TO SCALE) SOURCE: GEOOTTAWA

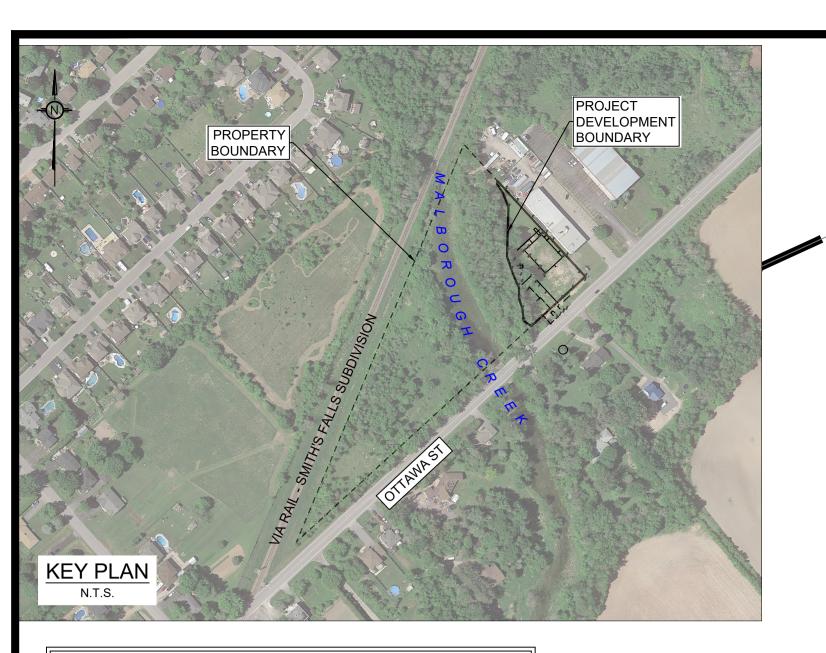
DATE PROJECT

> **JULY 2023** 210341

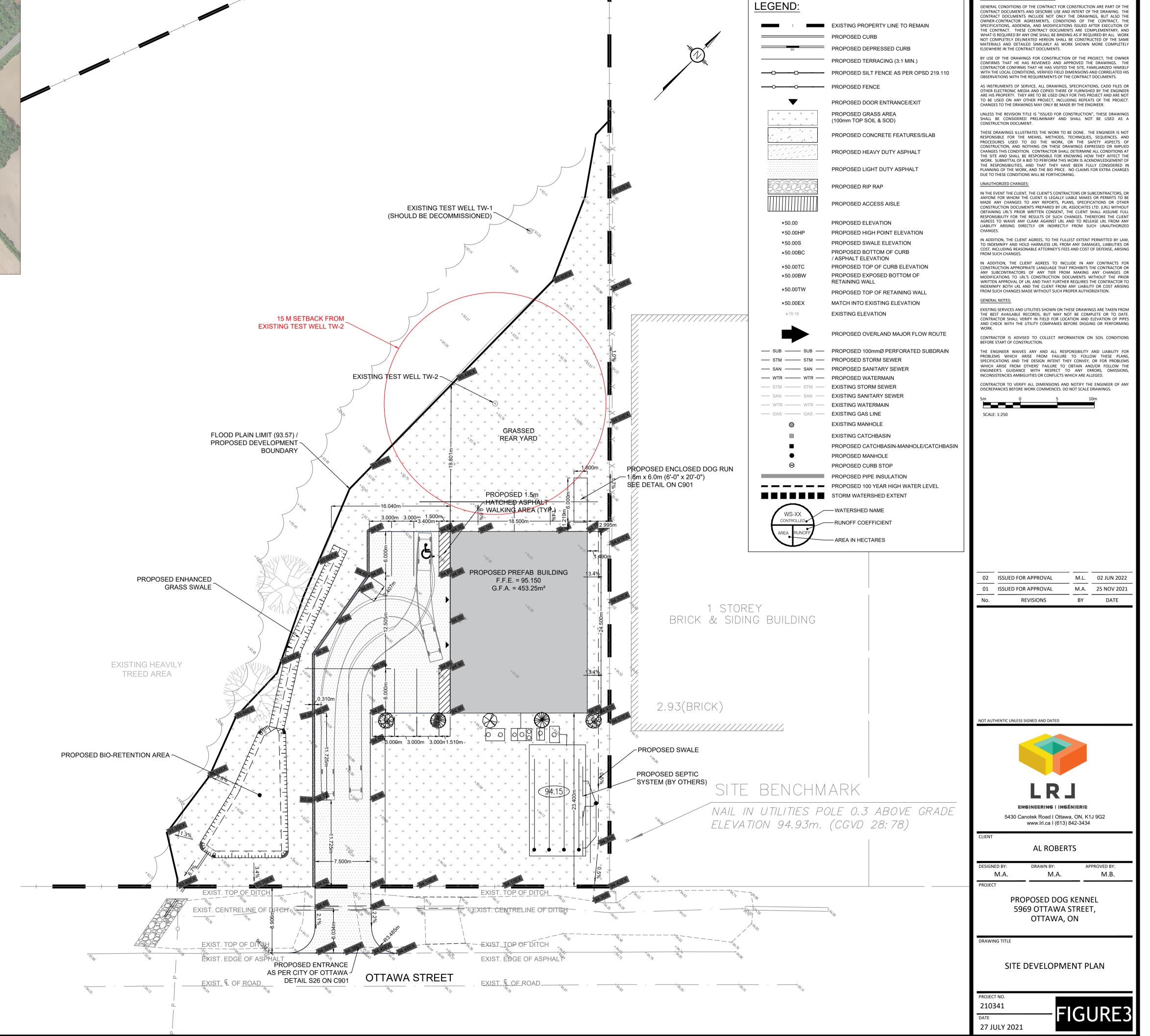
FIGURE 1



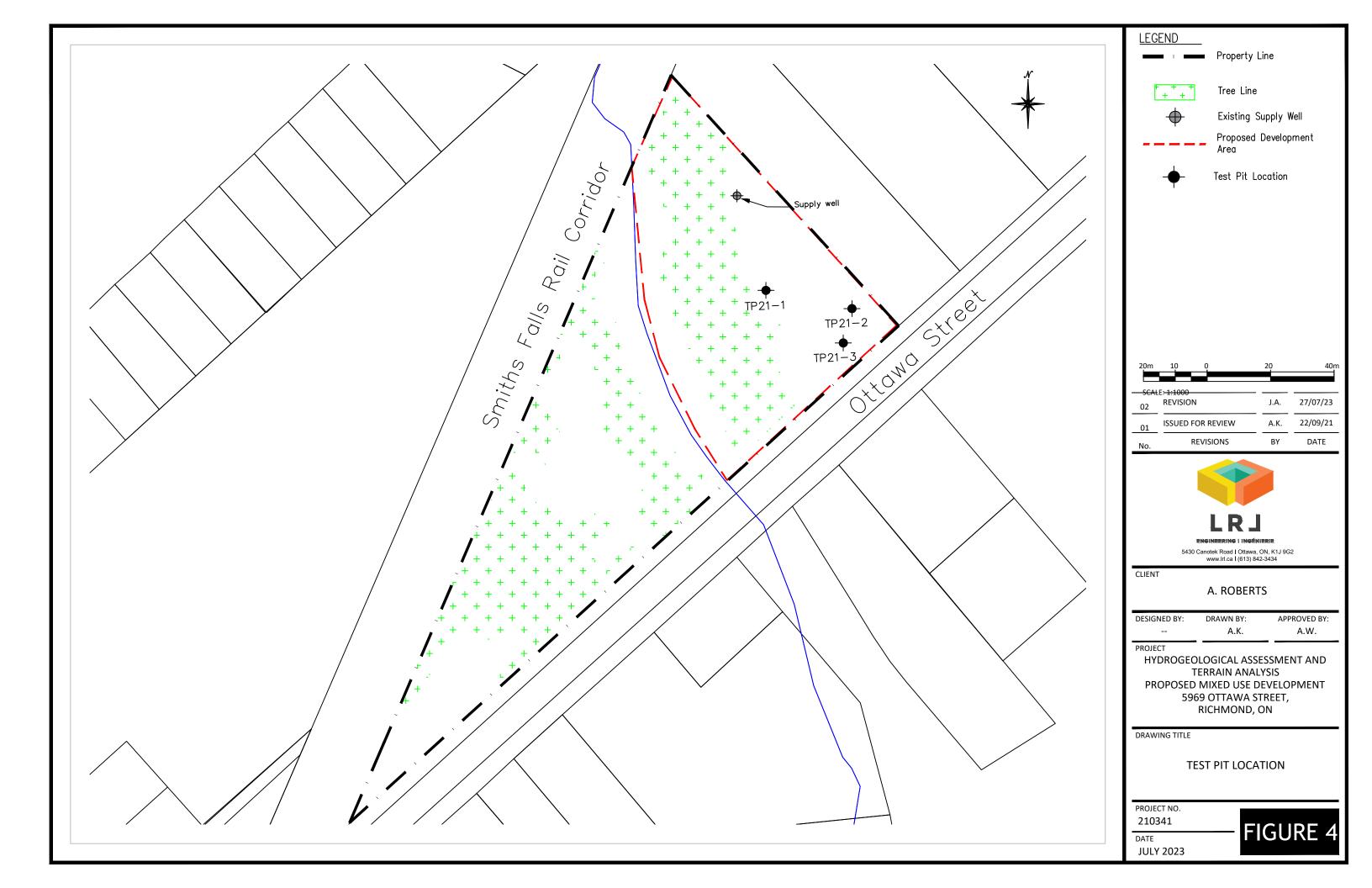


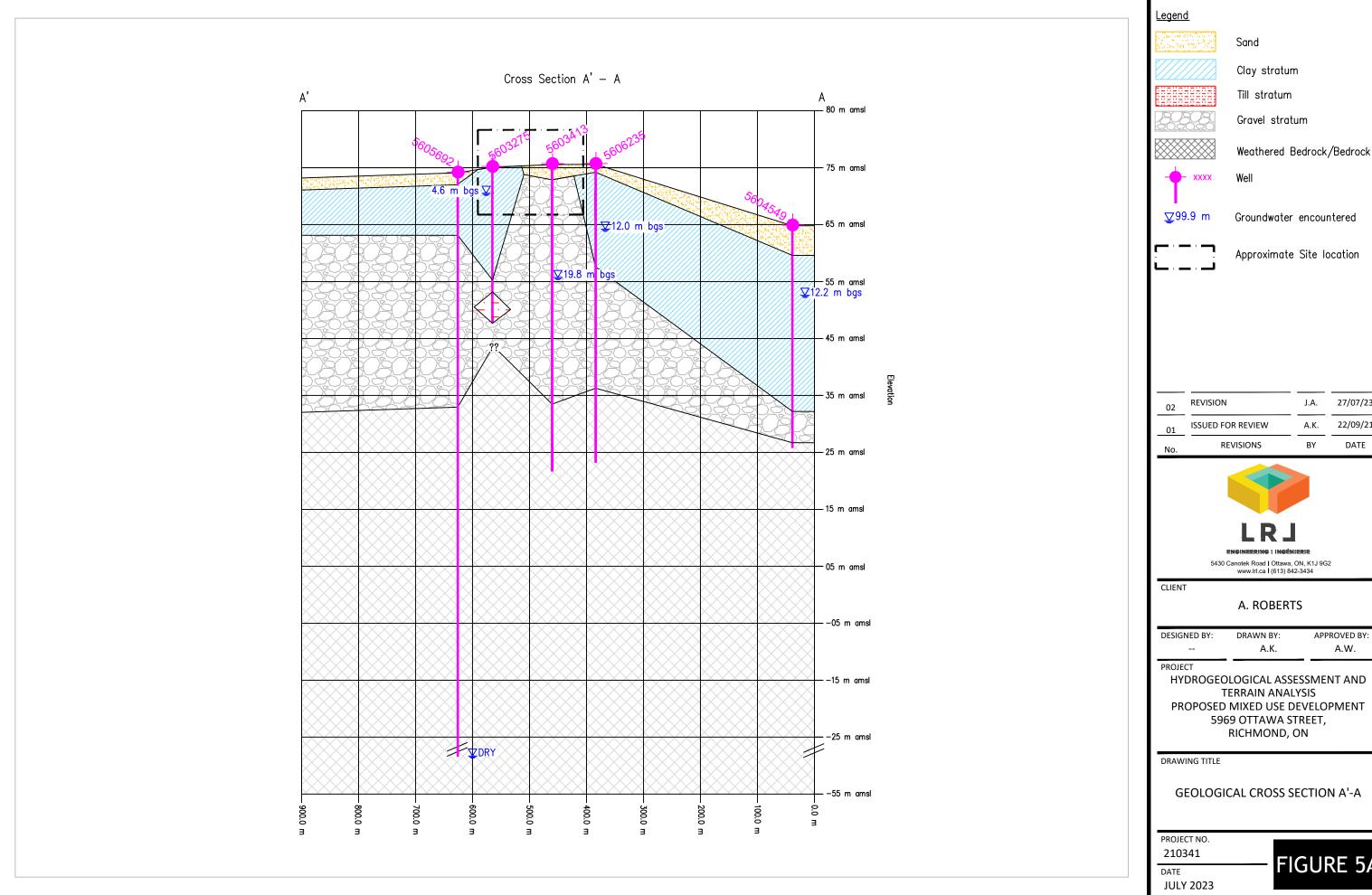


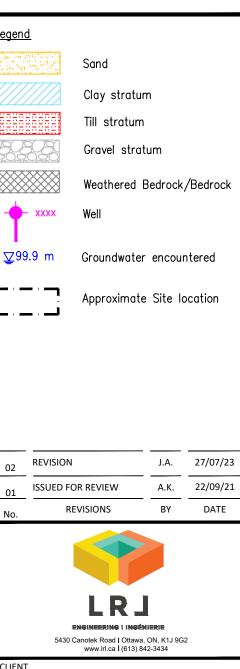
DETAIL	SOF	PEVELOF	PMENT
DA	TA	REQUIRED	PROVIDED
	ZONING	RG3[385r] (RUF	RAL GENERAL)
SETBACKS	FY	15.0m	23.4m
	RY	15.0m	19.8m
	INT.SY	3.0m	16.0m
	EXT.SY	3.0m	3.0m
NET LOT AREA (:	sqm)	3240	sqm
BUILDING COVER	RAGE	50 % (MAX)	14 %
BUILDING HEIGH	Т	15 m (MAX)	7.62 m (25')
GROSS FLOOR A	REA	453.2	5 sqm
No. of UNITS		,	1
LOADING SPACE	S	N/A	N/A
PARKING:		4	5 + 1 HC
No. OF STOREYS			2
OTHER:			



USE AND INTERPRETATION OF DRAWINGS







A.W.

PROPOSED MIXED USE DEVELOPMENT

FIGURE 5A

Cross Section B' - B B' В - 80 m amsl 10.4 m bgs**∑** $\mathbf{\nabla}$ 9.1 m bgs -55 m amsl /13.7 m bgs 🛂 - 45 m amsl 44.0 m bgs 🔽 - 15 m amsl - 05 m amsl -05 m amsl -15 m amsl -25 m amsl - -55 m amsl

<u>Legend</u> Sand Clay stratum Till stratum Boulder stratum Gravel stratum Weathered Bedrock/Bedrock **∑**99.9 m Groundwater encountered Approximate Site location Unknown location of transition between stratum 27/07/23 02 ISSUED FOR REVIEW 22/09/21 REVISIONS BY DATE 5430 Canotek Road I Ottawa, ON, K1J 9G2 www.lrl.ca I (613) 842-3434 CLIENT A. ROBERTS APPROVED BY: DESIGNED BY: DRAWN BY: A.K. A.W. PROJECT HYDROGEOLOGICAL ASSESSMENT AND TERRAIN ANALYSIS PROPOSED MIXED USE DEVELOPMENT 5969 OTTAWA STREET, RICHMOND, ON DRAWING TITLE GEOLOGICAL CROSS SECTION B'-B PROJECT NO. 210341 FIGURE 5B DATE JULY 2023

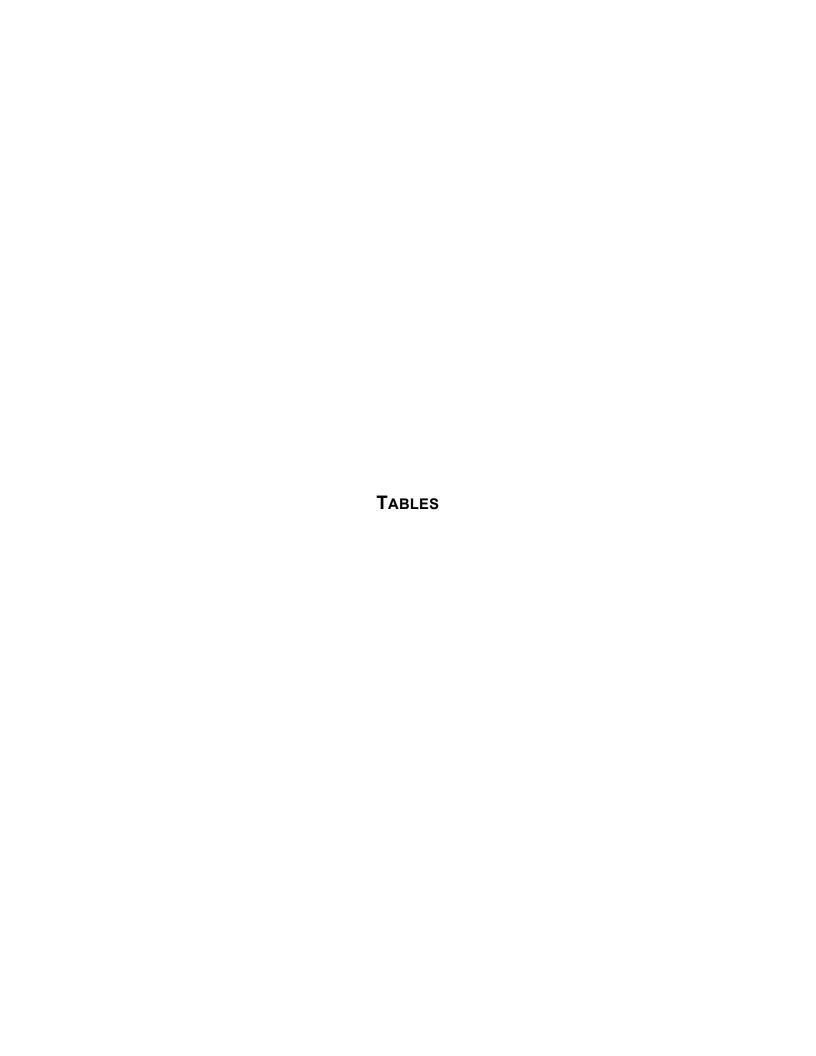


Table 1A Summary of Supply Well Water Quality Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development 5969 Ottawa Street, Richmond, Ontario

Parameter Common Parameter							41	File No. 2103	LRL						
Part	Neighbour's	V-2	TW			V-1	TV								
Marchander Long L	Well	ng Test	Pumpir	lopment	her Well Deve	2023 Furt	sion	nitial Submis	2021		iius	Stanta			
Control part Cont	(5949 Ottawa St.)			8 hr	4 hr	4 hr									
Minor Part Marches Part Part Marches Part	45.00.0000									D-5-5°	Туре	Standard	MRL	Units	
Control Field Mealewanters pom 0.01 1 0 0 0 0 0 0 0 0	15.03.2023	2023	29.05	.2023	25.01	24.01.2023	2021	11.00	20.07.2021						
Ecolar CPU1100 1		0.01	0.01	0.02	0.02	0.02	0.00	0.03					0.01	nnm	
Face Contines	<1											0			· ' '
Memorrande Princ Cart CFUINT 10	<1														
Trait Cardeman	100										MAC				
General Interpretate	<1										MAC				
Maarleys, total mg L S 30 : 500 OS			- 1	×1	- 1	- 1	- 1	-1	10		MAC	0/3		CI O/ 100 IIIL	
Ammorisa N mgt 0.01	259	274	274	267	268	268	269	269	274		OG	30 - 500	5	ma/l	
Designed Chapter Carbon mgl	0.16														
Colore	<0.5									10	AO				
Cardicalidy	<2														
Furtherises	1800														
PH Units	<u>515</u>									500	OG				· · · · · · · · · · · · · · · · · · ·
Pernolicia mgl	7.7														
Telad Dissolved Solids	<0.001														F
Sulphide	946										AO				
Tennis Klypin mgl. 0.1	<0.02														
Total Kjestah Nitrogen mg/L 0.1 -	<0.1														
Organic Nilvogen mg/L 0.15 OG 0.07 0.08 -0.02 - 0.05 -0.03 0.10 0.00 Turbidity NTU 0.1 1.67 MACIAO 5 7.9 5.2 4.9 6.4 4.1 3.8 8.1 2.0 Chioride mg/L 1 250 AO 250 286 284 298 299 192 191 Flooride mg/L 0.1 15/24 MAC 0.3 0.4 0.4 0.0 3.0 0.4 0.4 0.0 3.0 0.4 0.4 0.0 40.1 <0.1	0.2														
Turbidity NTU 0.1 1/5² MAC/AO 5 7.9 5.2 4.9 6.4 4.1 3.8 6.4 2.0 Anions											OG	0.15			
Actions	Z			3.8	4.1	6.4	4.9	5.2	7.9	5	MAC/AO	1/5 ²	0.1		
Fluoride										•					
Fuoride	<u>325</u>	191	192	299	299	298	264	266	267	250	AO	250	1	mg/L	Chloride
Nitride as N mg/L 0.1 10 MAC	0.3	0.4	0.4								MAC	1.5 ³ /2.4	0.1	mg/L	Fluoride
Nitrite as N mg/L 0.05 1 MAC	<0.1														
Sulphate mg/L 1 500 AO 500 99 82 82 77 79 78 57 57	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		MAC	1	0.05		Nitrite as N
Maturinum	75	57	57	78	79	77	82	82	99	500	AO	500	1		Sulphate
Antimony mg/L 0.0005 0.006 MAC -0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005															Metals
Arsenic mg/L 0.001 0.01 MAC -0.001 <0.001 <0.001 <0.001 Barlum mg/L 0.0001 1 MAC <td>-</td> <td>0.005</td> <td>0.007</td> <td>0.014</td> <td>0.012</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td>OG</td> <td>0.1</td> <td>0.001</td> <td>mg/L</td> <td>Aluminum</td>	-	0.005	0.007	0.014	0.012			-			OG	0.1	0.001	mg/L	Aluminum
Barium mg/L 0.001		<0.0005	<0.0005	<0.0005	<0.0005	-		-	-		MAC	0.006	0.0005	mg/L	Antimony
Beryllium mg/L 0.0005		<0.001	<0.001	<0.001	<0.001	-		-			MAC	0.01	0.001	mg/L	Arsenic
Boron mg/L 0.01 5 MAC 0.22 0.22 0.15 0.16		0.137	0.119	0.136	0.14			-	-		MAC	1	0.001	mg/L	Barium
Cadmium mg/L 0.0001 0.005 MAC -0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.		<0.0005	<0.0005			-		-					0.0005	mg/L	Beryllium
Calcium mg/L 0.1 126 125 124 136 132 131 105 122 Chromium mg/L 0.001 0.05 MAC	-	0.16	0.15	0.22	0.22	-			-		MAC	5	0.01	mg/L	Boron
Chromium mg/L 0.001 0.05 MAC	-	<0.0001	<0.0001	<0.0001	<0.0001	-		-	-		MAC	0.005	0.0001	mg/L	Cadmium
Cobalt Mg/L 0.0005	127	122	105	131	132	136	124	125	126				0.1	mg/L	Calcium
Copper mg/L 0.0005 1 OG < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.0005 < 0.00005 < 0.0005 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001 < 0.0001	-	<0.001	<0.001	<0.001	<0.001	-			-		MAC	0.05	0.001	mg/L	Chromium
Iron mg/L 0.1 0.3 AO 5/10 0.7 0.5 0.6 0.6 0.6 0.5 0.5 0.6 0.6 0.6 0.5 0.6 0.0 0.		<0.0005	<0.0005	-				-					0.0005	Mg/L	Cobalt
Lead mg/L 0.0001 0.01 MAC 0.0002 <0.0001 <0.0001 <0.0001 Magnesium mg/L 0.02 52.7 49.4 48.4 50.8 50 47.9 35.8 42.0 Manganese mg/L 0.005 0.05 AO 1 0.018 0.016 0.016 0.016 0.017 0.017 0.014 0.016 Molybdenum mg/L 0.0005		<0.0005	<0.0005	<0.0005	<0.0005	-		-			OG	1	0.0005	mg/L	Copper
Magnesium mg/L 0.2 52.7 49.4 48.4 50.8 50 47.9 35.8 42.0 Manganese mg/L 0.005 0.05 AO 1 0.018 0.016 0.016 0.016 0.017 0.017 0.014 0.016 Molybdenum mg/L 0.0005	0.2	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.7	5/10	AO	0.3	0.1	mg/L	Iron
Manganese mg/L 0.005 0.05 AO 1 0.018 0.016 0.016 0.017 0.017 0.014 0.016 Molybdenum mg/L 0.0005		<0.0001	<0.0001	<0.0001	0.0002	-			-		MAC	0.01	0.0001	mg/L	Lead
Molybdenum mg/L 0.0005	47.8	42.0	35.8	47.9	50	50.8	48.4	49.4	52.7				0.2	mg/L	Magnesium
Nickel mg/L 0.001	0.016	0.016	0.014	0.017	0.017	0.016	0.016	0.016	0.018	1	AO	0.05	0.005	mg/L	Manganese
Potassium mg/L 0.1 9.1 8.5 8.1 8.1 8.4 8.4 6.1 6.9		0.0022	0.0020	-		-	-		-				0.0005	mg/L	Molybdenum
Selenium mg/L 0.001 0 MAC		<0.001	<0.001			-	-		-				0.001	mg/L	Nickel
Silver mg/L 0.0001	8.5	6.9	6.1	8.4	8.4	8.1	8.1	8.5	9.1			-	0.1	mg/L	Potassium
Sodium mg/L 0.2 20 ⁴ /200 AO 200 115 114 111 120 118 112 61.6 70.7 Strontium mg/L 0.01 4.03 4.09 Thallium mg/L 0.001		<0.001	<0.001	0.001	<0.001		-	-	-		MAC	0		mg/L	Selenium
Strontium mg/L 0.01 4.03 4.09 Thallium mg/L 0.001 <t< td=""><td></td><td><0.0001</td><td><0.0001</td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td></td><td></td><td></td><td>0.0001</td><td>mg/L</td><td>Silver</td></t<>		<0.0001	<0.0001				-	-	-				0.0001	mg/L	Silver
Thallium mg/L 0.001 -	129	70.7	61.6	112	118	120	111	114	115	200	AO	20 ⁴ /200	0.2	mg/L	Sodium
Tin mg/L 0.01 <t< td=""><td></td><td>4.09</td><td>4.03</td><td>-</td><td></td><td></td><td>-</td><td></td><td>-</td><td></td><td></td><td></td><td>0.01</td><td>mg/L</td><td>Strontium</td></t<>		4.09	4.03	-			-		-				0.01	mg/L	Strontium
Titanium mg/L 0.005 <0.005 <0.005		<0.001	<0.001			-			-				0.001	mg/L	Thallium
		<0.01	<0.01		-		-	-	-				0.01	mg/L	Tin
		<0.005	<0.005				-		-				0.005	mg/L	Titanium
Tungsten mg/L 0.01 <- <- 0.01 <0.01		<0.01	<0.01		-		-		-				0.01	mg/L	Tungsten
Uranium mg/L 0.0001 0.02 MAC 0.0006 0.0006 0.0006 0.0006		0.0006	0.0005	0.0006	0.0006	-	-	-	-		MAC	0.02	0.0001	mg/L	Uranium
Vanadium mg/L 0.0005 <-0.0005 <-0.0005		<0.0005	<0.0005			-			-				0.0005	mg/L	Vanadium
Zinc mg/L 0.005 5 AO <0.005 <0.005 <0.005 <0.005		<0.005	<0.005	<0.005	<0.005						AO	5	0.005	mg/L	Zinc

MRL Minimum Reportable Limit
MAC Maximum Acceptable Concentration
AA Aesthetic Objective
OG Operational Guideline

[|] Nation | N

Limit at which Local Medical Officer of Health should be notified of Levels.
 MECP D-5-5 guideline, maximum concentration considered reasonably treatable.

Table 1B

Summary of Supply Well Water Quality - Volatile Organic Compounds
Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development
5969 Ottawa Street, Richmond, Ontario

LRL File No. 210341

			Ontario Drin	No. 210341				
		_	Stand	_	TV	V-1	TV	V-2
Parameter	Units	MRL	Standard	Туре	4 hr	8 hr	3 hr	6hr
Sample Date (d/m/y)	Cinto	MICE		71	25.01	.2023	29.05	.2023
Volatiles								
Acetone	mg/L	0.005			<0.005	<0.005	<0.005	<0.005
Benzene	mg/L	0.0005	0.001	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Bromodichloromethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Bromoform	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Bromomethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Carbon Tetrachloride	mg/L	0.0002	0.002	MAC	<0.0002	<0.0002	<0.0002	<0.0002
Chlorobenzene	mg/L	0.0005	0.08	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Chloroethane	mg/L	0.001			<0.001	<0.001	<0.001	<0.001
Chloroform	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Dibromochloromethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Dichlorodifluoromethane	mg/L	0.001			<0.001	<0.001	<0.001	<0.001
Ethylene dibromide (dibromoethane, 1,2	mg/L	0.0002			<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichlorobenzene	mg/L	0.0005	0.2	MAC	<0.0005	<0.0005	<0.0005	<0.0005
1,3-Dichlorobenzene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.005	MAC	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloroethane	mg/L	0.0005	0.005	MAC	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethylene	mg/L	0.0005	0.014	MAC	<0.0005	<0.0005	<0.0005	<0.0005
cis-1,2-Dichloroethylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
trans-1,2-Dichloroethylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloroethylene, total	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloropropane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
cis-1,3-Dichloropropylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
trans-1,3-Dichloropropylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,3-Dichloropropene, total	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	mg/L	0.0005	0.14	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Hexane	mg/L	0.001			<0.001	<0.001	<0.001	<0.001
Methyl Ethyl Ketone (2-Butanone)	mg/L	0.005			<0.005	<0.005	<0.005	<0.005
Methyl Isobutyl Ketone	mg/L	0.005			<0.005	<0.005	<0.005	<0.005
Methyl tert-butyl ether	mg/L	0.002			<0.002	<0.002	<0.002	<0.002
Methylene Chloride	mg/L	0.005	0.05	MAC	<0.005	<0.005	<0.005	<0.005
Styrene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,1,1,2-Tetrachloroethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Tetrachloroethylene	mg/L	0.0005	0.01	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	mg/L	0.0005	0.06	MAC	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-Trichloroethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichloroethane	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Trichloroethylene	mg/L	0.0005	0.005	MAC	<0.0005	<0.0005	<0.0005	<0.0005
Trichlorofluoromethane	mg/L	0.001			<0.001	<0.001	<0.001	<0.001
Vinyl Chloride	mg/L	0.0002	0.001	MAC	<0.0002	<0.0002	<0.0002	<0.0002
m/p-Xylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005
Xylenes, total	mg/L	0.0005	0.09	MAC	<0.0005	<0.0005	<0.0005	<0.0005

NOTES

MRL Minimum Reportable Limit

MAC Maximum Acceptable Concentration

ΑО Aesthetic Objective OG Operational Guideline opws Ontario Drinking Water Standards (2006)

NA Not Analysed

UNDERLINE Parameter level above ODWS Notify Medical Officer of Health Italics

<u>BOLD</u> Parameter level above D-5-5 maximum treatability limits

Table 2

Langelier and Ryznar Calculations
Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development
5969 Ottawa Street, Richmond, Ontario LRL File No. 210341

TW1 - August	2021			TW2 - May 2023				
Analyzed Param	neters			Analyzed Parameters				
TDS (mg/L)	814			TDS (mg/L)	718			
Hardness(mg/L)	509			Hardness(mg/L)	478			
alkalinity(mg/L)	269			alkalinity(mg/L)	274			
pH (pH units)	7.8			pH (pH units)	7.7			
Temperature °C	10			Temperature °C	10			
Langelier				Langelier				
LSI = pH - pHs				LSI = pH - pHs				
pHs = (9.3 +A+B	s) - (C+D) Where A=	(Log10(TDS)-1)/10 =	0.19106244	pHs = (9.3 + A + B) - (C + D)	Where	A= (Log10(TDS)-1)/10	=	0.185612
	B=	(-13.12*Log10(T°C+273)+34.55 =	2.382561966			B= (-13.12*Log10(T°C+273)+34.5	<u> </u>	2.382562
	C=	Log10(Hardness)-0.4 =	2.306717782			C= Log10(Hardness)-0.4	=	2.279428
	D=	Log10(Alkalinity) =	2.42975228			D= Log10(Alkalinity)	=	2.437751
Ryznar				Ryznar				
RI=2pHs-pH				RI=2pHs-pH				
mlla-	7 127154			alla-	7.150000			
pHs=	7.137154			pHs=	7.150996			
LSI=	0.662846			LSI=	0.549004			
RI=	6.474309			RI=	6.601992			

Table 3A
Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development - August 2021 Pumping Test Data
5969 Ottawa Street, Richmond, Ontario
LRL File No. 210341

21/08/2021 Date: Technician: A. Kader Pump Depth (m BTC): Well Number: TW1 Depth of Well (m BTC): 48.80 Start Time: 7:58 AM Ground Surface Elev. (m): TBC End Time: 3:20 PM Top of Casing Elev. (m): TBC Average Pump Rate (L/min): Water Level before Pump In (m BTC) 2.96

						Field Pa	arameters		
Time ¹ (min)	Water Level (Pump In) (m BTC)	Drawdown (m)	Flow Rate (L/min)	Turbidity (NTU)	Residual Chlorine (mg/L)	Colour (TCU)	рН	Conductivity (μs)	Total Dissolved (mg/L)
0.0	2.96	0.00	40.0						
0.5	3.47	0.51	40.0						
1.0	3.83	0.87	40.0						
1.5	4.20	1.24	40.0						
2.0	4.39	1.43	40.0						
2.5	4.52	1.56	40.0						
3.0	3.73	0.77	40.0						
3.5	4.76	1.80	40.0						
4.0	4.79	1.83	40.0						
4.5	4.81	1.85	40.0						
5.0	4.84	1.88	40.0						
6.0	4.87	1.91	40.0						
7.0	4.89	1.93	40.0						
8.0	4.91	1.95	40.0						
9.0	4.93	1.97	40.0						
10.0	4.94	1.98	40.0						
20.0	4.99	2.03	40.0						
30.0	5.05	2.09	40.0	1.73	0.00	<0	7.74	1246	624
60.0	5.07	2.11	40.0	1.04	0.01	15	7.65	1244	619
90.0	5.08	2.12	40.0	1.04	0.01	146	7.67	1237	618
120.0	5.11	2.15	40.0	0.64	0.05	94	7.68	1240	621
150.0	5.11	2.15	40.0	0.40	0.03	134	7.51	1234	622
180.0	5.11	2.15	40.0	0.48	0.03	87	7.44	1235	621
240.0	5.12	2.16	40.0	0.51	0.06	82	7.52	1240	620
300.0	5.13	2.17	40.0	0.73	0.03	85	7.53	1236	617
360.0	5.13	2.17	40.0	0.68	0.00	21	7.49	1241	621
Recovery				% Recovery					
0 (360)	5.13	2.17		0.0					
0.5	4.43	1.47		32.3					
1.0	3.92	0.96		55.8					
1.5	3.67	0.71		67.3					
2.0	3.45	0.49		77.4					
2.5	3.34	0.38		82.5					
3.0	3.31	0.35		83.9					
3.5	3.30	0.34		84.3					
4.0	3.28	0.32		85.3					
4.5	3.26	0.30		86.2					
5.0	3.25	0.29		86.6					
6.0	3.24	0.28		87.1					
7.0	3.23	0.27		87.6					
8.0	3.21	0.25		88.5					
9.0	3.20	0.24		88.9					
10.0	3.19	0.23		89.4					
20.0	3.12	0.16		92.6					
30.0	3.09	0.13		94.0					
60.0	3.05	0.09		95.9					

1 Time elapse from pump turning on or off.

BTC: Below Top of Casing NM: Not Measured TCB: To Be Confirmed

Table 3B
Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development - January 2023 Pumping Test Data
5969 Ottawa Street, Richmond, Ontario

LRL File No. 210341 24/01/2023 Date: Technician: A. Kader Pump Depth (m BTC): Well Number: TW1 44.20 48.80 Start Time: 8:02 AM Depth of Well (m BTC): Ground Surface Elev. (m): TBC End Time: 12:40 PM Top of Casing Elev. (m): TBC Average Pump Rate (L/min): 40.0

					Desident	Field Pa	arameters		Total
Time ¹ (min)	Water Level (Pump In) (m BTC)	Drawdown (m)	Flow Rate (L/min)	Turbidity (NTU)	Residual Chlorine (mg/L)	Colour (TCU)	рН	Conductivity (µs)	Dissolve (mg/L)
0.0	3.32	0.00	40.0						
0.5	4.28	0.96	40.0						
1.0	4.89	1.57	40.0						
1.5	5.08	1.76	40.0						
2.0	5.18	1.86	40.0						
2.5	5.25	1.93	40.0						
3.0	5.30	1.98	40.0						
3.5	5.34	2.02	40.0						
4.0	5.36	2.04	40.0						
4.5	5.39	2.07	40.0						
5.0	5.41	2.09	40.0						
6.0	5.42	2.10	40.0						
7.0	5.44	2.12	40.0						
8.0	5.45	2.13	40.0						
9.0	5.45	2.13	40.0						
10.0	5.46	2.14	40.0						
20.0	5.48	2.16	40.0						
30.0	5.49	2.17	40.0						
60.0	5.49	2.17	40.0	11.27	0.02	236	7.33	1603	804
90.0	5.48	2.16	40.0						
120.0	5.47	2.15	40.0	4.6	0.02	124	7.24	1749	857
150.0	5.44	2.12	40.0						
180.0	5.43	2.11	40.0	2.86	0.02	81	7.25	1497	752
210.0	5.43	2.11	40.0						
240.0	5.42	2.10	40.0	3.23	0.02	52	7.46	1622	811
ecovery				% Recovery					
0 (490)	5.22	1.90		9.3					
0.5	4.13	0.81		61.3					
0.5	4.13	0.01		01.5					

1 Time elapse from pump turning on or off.

BTC: Below Top of Casing NM: Not Measured TCB: To Be Confirmed

Table 3C
Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development - Janaury 2023 Pumping Test Data
5969 Ottawa Street, Richmond, Ontario
LRL File No. 210341

Date: 25/01/2023 Technician: A. Kader Well Number: Pump Depth (m BTC): 44.20 TW1 Depth of Well (m BTC): 48.80 Start Time: 8:00 AM Ground Surface Elev. (m): TBC End Time: 4:10 PM TBC Top of Casing Elev. (m): Average Pump Rate (L/min): 40.0 Water Level before Pump In (m BTC) 3.26

						Field Pa	arameters		Total
Time ¹ (min)	Water Level (Pump In) (m BTC)	Drawdown (m)	Flow Rate (L/min)	Turbidity (NTU)	Residual Chlorine (mg/L)	Colour (TCU)	рН	Conductivity (µs)	Total Dissolved (mg/L)
0.0	3.29	0.00	40.0						
0.5	4.38	1.09	40.0						
1.0	4.62	1.33	40.0						
1.5	4.80	1.51	40.0						
2.0	4.91	1.62	40.0						
2.5	4.99	1.70	40.0						
3.0	5.05	1.76	40.0						
3.5	5.09	1.80	40.0						
4.0	5.12	1.83	40.0						
4.5	5.15	1.86	40.0						
5.0	5.17	1.88	40.0						
6.0	5.20	1.91	40.0						
7.0	5.23	1.94	40.0						
8.0	5.25	1.96	40.0						
9.0	5.26	1.97	40.0						
10.0	5.27	1.98	40.0						
20.0	5.29	2.00	40.0						
30.0	5.30	2.01	40.0						
60.0	5.32	2.03	40.0	4.35	0.01	72	7.64	1484	745
90.0	5.33	2.04	40.0						
120.0	5.33	2.04	40.0	1.43	0.03	33	7.72	1499	753
150.0	5.36	2.07	40.0						
180.0	5.33	2.04	40.0	1.09	0.02	17	7.68	1491	747
210.0	5.34	2.05	40.0						
240.0	5.36	2.07	40.0	0.66	0.02	9	7.53	1527	761
300.0	5.31	2.02	40.0	0.43	0.02	7	7.45	1461	732
360.0	5.26	1.97	40.0	0.31	0.03	9	7.52	1453	725
420.0	5.25	1.96	40.0	0.33	0.02	7	7.53	1467	732
480.0	5.24	1.95	40.0	0.39	0.02	10	7.63	1426	714
490.0	5.22	1.93	40.0						
Recovery				% Recovery					
0 (490)	5.22	1.93		0.0					
0.5	4.13	0.84		56.5					
1.0	3.67	0.38		80.3					
1.5	3.58	0.29		85.0					
2.0	3.54	0.25		87.0					
2.5	3.51	0.22		88.6					
3.0	3.50	0.21		89.4					
3.5	3.48	0.19		90.2					
4.0	3.46	0.17		91.2					
4.5	3.45	0.16		91.7					
5.0	3.44	0.15		92.2					
6.0	3.42	0.13		93.3					
7.0	3.41	0.12		94.0					
8.0	3.40	0.11		94.6					
9.0	3.39	0.09		95.1					
10.0	3.38	0.09		95.3					
20.0	3.32	0.03		98.4					
30.0	3.31	0.02		99.0					
60.0									

1 Time elapse from pump turning on or off.

BTC: Below Top of Casing
NM: Not Measured
TCB: To Be Confirmed

Table 3D Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development - May 2023 Pumping Test Data 5969 Ottawa Street, Richmond, Ontario LRL File No. 210341

Date: 29/05/2023 Technician: J. Arthurs Well Number: TW2 Pump Depth (m BTC): 49.94 Depth of Well (m BTC): Start Time: 7:46 AM 70.10 End Time: 1:48 PM Ground Surface Elev. (m): TBC Top of Casing Elev. (m): TBC Average Pump Rate (L/min): 40 Water Level before Pump In (m BTC) 3.19

					Residual	Field Pa	rameters		Total
Time ¹ (min)	Water Level (Pump In) (m BTC)	Drawdown (m)	Flow Rate (L/min)	Turbidity (NTU)	Chlorine (mg/L)	Colour (TCU)	рН	Conductivity (μs)	Dissolved (mg/L)
0.0	3.19	0.00	40.0						
0.5	4.15	0.96	40.0						
1.0	4.32	1.13	40.0						
1.5	4.43	1.24	40.0						
2.0	4.46	1.27	40.0						
2.5	4.67	1.48	40.0						
3.0	4.70	1.51	40.0						
3.5	4.83	1.64	40.0						
4.0	4.84	1.65	40.0						
4.5	4.90	1.71	40.0						
5.0	4.86	1.67	40.0						
6.0	4.94	1.75	40.0						
7.0	4.95	1.76	40.0						
8.0	4.95	1.76	40.0						
9.0	5.05	1.86	40.0						
10.0	5.00	1.81	40.0						
15.0	5.01	1.82	40.0						
20.0	5.11	1.92	40.0	1.08					
25.0	5.23	2.04	40.0	0.70		20			
30.0	5.26	2.07	42.0	0.78		80			
40.0	5.30	2.11	40.0	4.00	0.00	22			
50.0	5.31	2.12	40.0	1.08	0.00	63			
60.0	5.33	2.14	40.0	0.48	0.00	16			
120.0	5.37	2.18	40.0	1.53	0.00	50			
180.0	5.45	2.26	40.0	2.55	0.01	2			
240.0	5.38	2.19	40.0	0.48	0.01	0.0			
300.0 360.0	5.40 5.40	2.21 2.21	40.0 40.0	0.60 1.40	0.01 0.01	0.0 0.0			
	3.40	2.21	40.0		0.01	0.0			
Recovery	F 40	2.21		% Recovery					
0 (360) 0.5	5.40 3.66	0.47		-0.2 78.7					
1.0	3.79	0.60		72.8					
1.5	3.63	0.44		80.0					
2.0	3.51	0.32		85.5					
2.5	3.47	0.28		87.3					
3.0	3.45	0.26		88.2					
3.5	3.42	0.23		89.6					
4.0	3.41	0.23		90.2					
4.5	3.39	0.20		90.9					
5.0	3.85	0.66		70.1					
6.0	3.36	0.00		92.3					
7.0	3.35	0.16		92.7					
8.0	3.34	0.15		93.2					
9.0	3.33	0.14		93.7					
10.0	3.32	0.13		94.1					
15.0	3.29	0.10		95.5					
20.0	3.27	0.10		96.4					
25.0	3.25	0.06		97.3					
30.0	3.25	0.06		97.3					
40.0	3.24	0.05		97.7					
50.0	3.23	0.04		98.2					
60.0	3.22			98.6					

1 Time elapse from pump turning on or off.

BTC: Below Top of Casing NM: Not Measured TCB: To Be Confirmed

Table 4

Specific Capacity and Longterm Availability

Hydrogeological Assessment and Terrain Analysis - Proposed Mix Use Development 5969 Ottawa Street, Richmond, Ontario LRL File No. 210341

Tested By: LRL Associates Ltd.
Test Date TW-1: 11-Aug-21
Test Date TW-2: 29-May-23

Well	Cs - Static mTOC	Cp - Pump* mTOC	Cp - Cs	Drawdown (m)	Pumping Rate L/min		Qsc -Maximum Pumping Rate L/min	Long Term Availability m³/day	Qsc GPM (US)	Qsc GPM (IMP)
TW-1	3.29	44.20	40.9	1.93	40.0	0.345	189.4	272.7	50.0	41.7
TW-2	3.19	49.94	46.8	2.26	40.0	0.295	184.8	266.1	48.8	40.6

Notes:

$$Qsc = 0.67 \frac{(C_p - C_s)S_c}{SF}$$

Qsc Pumping rate with safety factor (SF) of 3 (L/min);

 $C_p - C_s$ Difference between pump level and static water level (m);

Specific capacity (L/min/m); and

0.67 Is a factor that compensates for the variation of the static water level due to

SF 3

Minimum Demand 3.450 m³/day

* Assumed

Greater than Minimum Demand
Less than Minimum Demand

TOC Top of Casing

Table 5A Nitrate Attenuation Calculations

Hydrogeological Assessment and Terrain Study - Proposed Mix Use Development 5969 Ottawa Street, Richmond, Ontario LRL File No. 210341

1. Potential Infiltration

Weather Station Ottawa

				Infiltra	ation Fact	or (IF) ¹			Moist	ture Surplus (MS)			Potential Infi (IF*MS)	
No.	Section Area (m²)	Topography	Value	Soil	Value	Cover	Value	Total	Ground Cover	Soil Type	Moisture Retention ² (mm)	Moisture Surplus ³ (mm)	Section	Weighted
1	6,079		0.3	Clay Loam	0.2	Woodland	0.2	0.7	Closed Mature Forest	3 Silt Loam	400	301	210.7	142.7
2	2,897	Flat	0.3	Clay Loam	0.2	Cultivated Land	0.1	0.6	Moderately Rooted Crops	3 Silt Loam	200	318	190.8	61.6

Total 8,976 **Total** 204.3

2. Area Available for Infiltration

Number of Lots		n	1
Approximate footprint of	house/garage	Н	453 m ²
Approximate area of pay	ed driveways	d⁴	620 m ²
Approximate Length of F	Road	L	0 m
Approximate Width of R	oad	w	0 m
Total Area of Property			8976 m ²
Impervious Area			1073.3 m ²
Ro	ads Ixw	0 m ²	
Dri	iveway n x d	620 m ²	
Ho	ouses n x H	453 m ²	
Area available Infiltrati	ion	A	7,903 m ²

3. Nitrate Diluation Calculations

Nitrate Concentration of Infiltration	C _i	0 mg/L
Site Infiltration	Q _i = A*PI	1614 m ³
Daily Sewage Volume per Lot ⁵	Q_d	3.45 m ³
Maximum Yearly Sewage Volume (water)	Q _e =365*n*Q _d	1259 m ³
Nitrate Concentration in Sewage ⁵	C_e	40 mg/L
Maximum Allowable Nitrate Concentration at Boundary	C _m	10.0 mg/L
Increase in Nitrate Concentration at Boundaries	$C = (Q_e C_e + Q_i C_i)/(Q_e + Q_i)$	17.53 mg/L

NOTES

- Table 2: Infiltration Factors, Hydrogical Technical Information Requirements for Land Development Applications, Ministry of the Energy and Environment, April 1995.
- Thornthwaite and Mather's (1957) Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance.
- Moisture surplus for data for Ottawa ON (Environment Canada Meteorological Service of Canada, 2010).
- 4 Area based on 10m long and 3m wide driveways
- As per Technical Guideline for Individual On-Site Sewage Systems: Water Quality and Impact Risk Assessment, Ministry of the Energy and Environment, August 1996.

Table 5B Nitrate Attenuation Calculations

Hydrogeological Assessment and Terrain Study - Proposed Mix Use Development 5969 Ottawa Street, Richmond, Ontario LRL File No. 210341

1. Potential Infiltration

Weather Station Ottawa

				Infiltra	ation Fact	or (IF) ¹			Moist	ure Surplus (MS)			Potential Infi (IF*MS)	` '
	Section										Moisture Retention ²	Moisture Surplus ³		
No	/ 7 ti Ou (iii)	Topography	Value	Soil	Value	Cover	Value	Total	Ground Cover	Soil Type	(mm)	(mm)	Section	Weighted
1	6,079	Flat	0.3	Clay Loam	0.2	Woodland	0.2	0.7	Closed Mature Forest	3 Silt Loam	400	301	210.7	142.7
2	2,897	Flat	0.3	Clay Loam	0.2	Cultivated Land	0.1	0.6	Moderately Rooted Crops	3 Silt Loam	200	318	190.8	61.6

Total 8,976 **Total** 204.3

2. Area Available for Infiltration

Number of Lots			n	1
Approximate footprint of	of house/ga	arage	Н	453 m ²
Approximate area of pa	aved drivev	vays	d ⁴	620 m ²
Approximate Length of	Road		L	0 m
Approximate Width of F	Road		W	0 m
Total Area of Property				8976 m ²
Impervious Area				1073.3 m ²
R	oads	lxw	0 m ²	
D	riveway	n x d	620 m ²	
Н	ouses	n x H	453 m ²	
Area available Infiltra	tion		A	7,903 m ²

3. Nitrate Diluation Calculations

Nitrate Concentration of Infiltration	C _i	0 mg/L
Site Infiltration	$Q_i = A*PI$	1614 m ³
Daily Sewage Volume per Lot ⁵	Q_d	3.45 m ³
Maximum Yearly Sewage Volume (water)	Q_e =365*n* Q_d	1259 m ³
Nitrate Concentration in Sewage ⁵	C_e	20 mg/L
Maximum Allowable Nitrate Concentration at Boundary	C _m	10.0 mg/L
Increase in Nitrate Concentration at Boundaries	$C = (Q_e C_e + Q_i C_i)/(Q_e + Q_i)$	8.76 mg/L

NOTES

- Table 2: Infiltration Factors, Hydrogical Technical Information Requirements for Land Development Applications, Ministry of the Energy and Environment, April 1995.
- Thornthwaite and Mather's (1957) Instructions and Tables for Computing Potential Evapotranspiration and the Water Balance.
- Moisture surplus for data for Ottawa ON (Environment Canada Meteorological Service of Canada, 2010).
- 4 Area based on 10m long and 3m wide driveways
- As per Technical Guideline for Individual On-Site Sewage Systems: Water Quality and Impact Risk Assessment, Ministry of the Energy and Environment, August 1996.

ATTACHMENT I
City Comments – October 2022

Application D07-12-22-0046, 5969 Ottawa St

First submission comments October 14, 2022

Planning Comments

- Fencing of the rail corridor seems to be required. Can you please confirm that there is currently no fencing? Alternative fencing may be needed as the EIS would not be supportive of that fencing.
- Please look to add trees to the grassed areas at the rear of the building and along
 Ottawa Street
- Confirm garbage will be kept in the building as no exterior areas are shown
- Lot area on zoning chart on Site Plan should identify the 1 ha plus not the lot area to be developed.

Cheryl McWilliams

Parks Planning -

Parkland Dedication:

- a. The amount of parkland dedication that is required is to be calculated as per the City of Ottawa Parkland Dedication By-law No 2022-280.
- b. For Commercial or Industrial purposes the parkland requirement is calculated as 2% of the gross land area; "gross land area" means, for the purposes of this by-law, the lesser of the area defined as: c) For industrial or commercial redevelopment, the portion of property that is impacted by the proposed development; But not including any hazard lands or natural heritage features identified in the official plan, an approved Secondary Plan, or through an environmental impact study accepted by the City.
- c. A survey or plan will be required identifying the portion of the site being developed for commercial uses (including parking, and interior roads servicing the commercial uses). Based on the survey details provided in the Planning Rationale the developable area is 3,240 m2 (0.8 acres).
- d. Parks & Facilities Planning will be requesting Cash in lieu of parkland for this proposal, to be collected at registration of the site plan agreement.
- **e**. The value of the land will be determined by the City's Realty Services Branch. The owner is responsible for any appraisal costs incurred by the City.
- f. Please note that the park comments above are preliminary and subject to change. Should the proposed land use changes during the course of the Site Plan Approval process, then the parkland dedication requirement be re-evaluated accordingly.

Anissa McAlpine

Environmental Comments

After reviewing the provided documentation for 5969 Ottawa Street, I have no further concerns about potential environmental impacts from the proposed development.

The major concern from the preconsultation notes was the presence of Blanding's Turtle habitat. However, the applicant has sought out and acquired approval from the Ministry of the

Environment, Conservation and Parks (see email dated November 8th, 2021, from Brooke Michell).

The provided EIS clearly demonstrates that applicable setbacks will be followed and that there will be enhanced grass swales and fencing to limit the impacts of a large number of dogs on site. I accept its conclusion that there are likely to be no negative impacts from this development.

While the site's location in a heavily vegetated area obviates concerns about the urban that island effect I would still encourage the applicant to consider the addition of tree plantings in the enclosed dog run to help create a cooler microclimate and provide shade on hot days.

Mark Elliott

Engineering Comments

A. <u>List of Drawing(s):</u>

General

Comments:

- A1. Please include a reference on the drawings to the Plan of Survey and include a note that references the horizontal and vertical datums that were used and tied into to complete the project.
- A2. The drawing included with the provided OSSO Septic Permit No. 21-035 shows a different tank and treatment unit location than the Civil drawings. Please confirm which layout is correct and update the drawings or Septic Permit, as required.

General Notes, C001, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 01, dated November 25, 2021.

Comments:

A3. Section 5.2 of the Geotechnical Investigation dated October 2021, provides an allowable grade raise restriction. Please make note of the allowable grade raise restriction in the C001 notes or on C301.

Erosion and Sediment Control Plan, C101, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

- A4. Drawing C001 references a mud mat, and a gravel entrance is referenced in the 'During Construction' notes on C101. Please show the location of mud mat/gravel entrance on C101.
- A5. Please remove references to any items not applicable to the site from the notes on the drawing. For example, references to ESC measures which aren't proposed and references to infrastructure not existing or proposed on the site should be removed from the drawing notes.

Demolition Plan, C102, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

No Comments.

Site Development Plan, C201, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

No Comments.

Grading and Drainage Plan, C301, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

- A6. Please display the benchmark location.
- A7. Please indicate the elevations of the underside of footing and top of foundation for the proposed building.
- A8. Section 5.1 of the Geotechnical Investigation dated October 2021, states that it is anticipated that the footings for the proposed building will be founded below the frost penetration depth on the native, undisturbed glacial till material. Based on the Borehole Logs for BH1, BH2, and BH3 provided in Appendix B of the Geotechnical Investigation, the glacial till material starts at 1.45m below ground surface. Section 6.1 of the Geotechnical Investigation notes that it's anticipated that the max depth of excavation for the building will not extend below 1.5-1.8m. Please confirm that the applicant is aware of the extent of excavation required and the limitations on the re-use of the excavated overlying material.
- A9. Please display the limits of the stormwater retention/ponding for the 5-year and 100-year storm events.
- A10. Please include the pavement structure design information provided in the Geotechnical Investigation dated October 2021.
- A11. Adjacent to the west side of the building there are two rectangular hatched areas which are labelled on C201 as asphalt walking areas. The hatch used in these areas isn't on the legend or labelled on C301. Please identify the hatch used in the legend or with a label. If the light duty asphalt is intended to extend into these two areas, please indicate that on C301.
- A12. Does the 'Typical Stormwater Bio-Swale Cross-Section' apply to the proposed new swale along the eastern property line? If so, please update the label on the swale along the eastern property line. If not, please provide a cross-section detail for that swale.
- A13. The drawing included with the provided OSSO Septic Permit No. 21-035 doesn't appear to reflect the proposed Grading and Drainage Plan. Please confirm that the proposed grading and drainage in the vicinity of the proposed septic system have been accounted for in the design of the septic system, and that the proposed grading and drainage has accounted for the proposed septic system. For example, the proposed new swale along the eastern property line runs close

- to the proposed septic system distribution chamber and some of the pipes (C301). Please confirm that there's no grading conflict at this location, and that the swale doesn't impact the septic system frost protection at this location.
- A14. Please indicate the proposed slope away from the north, east, and south sides of the building.
- A15. Please indicate the proposed slopes in the grass area south of the building/parking lot.
- A16. Please indicate the proposed slope between the gravel diaphragm and the enhanced grass swale/bioretention facility.
- A17. Please verify the proposed slopes shown west and south of the bioretention facility. A spot check found different slopes than indicated.
- A18. For the proposed driveway, please include a reference to City of Ottawa Standard Detail Drawing S26, 'Private Entrance Detail Rural'.
- A19. As per the City of Ottawa Private Approach By-Law 2003-447, the maximum width of a private approach is 9m. It appears that the entrance exceeds 9m at the roadway edge. Please confirm and revise as required.
- A20. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the proposed septic system leaching bed.
- A21. Please indicate the top of casing elevation for the well to confirm that the casing height (and air vent) are 40cm above the potential flood level.

 Note that a comment has been also made on the Hydrogeological Assessment and Terrain Analysis about this well casing requirement.
- A22. Please provide grading information in the vicinity of the well to confirm that the surface drainage will not collect or pond in the vicinity of the well (as per O.Reg. 903, section 12.3).

Stormwater Management & Servicing Plan, C601, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

- A23. Under the 'Project Notes' on the first drawing in the Robertson 'Building Drawings Combined Set', it's noted that there will be downspouts for the roof drainage. Please indicate the downspout locations on the drawing.
- A24. Where the bioretention area outlets to the ROW, there is an existing hydro pole and guywire located near the proposed storm outlet pipe and associated rip rap. Please confirm that the stormwater outlet pipe and rip rap can be constructed while meeting any applicable setbacks from the hydro infrastructure.
- A25. The outlet invert of the proposed storm pipe discharging to the ROW is 93.33. It's a 200mm diameter pipe, so the lowest pipe overt would be approximately 93.53 at the outlet. Where the pipe crosses the property line, the ground elevation is shown as 93.49. Therefore, it appears the storm outlet pipe would be partially above the ground surface. Please confirm and revise as required.
- A26. The SWM Report and Site Servicing Brief includes specifications for the type and size of stone to be used in the gravel diaphragm border (e.g., washed stone between 3 and 10 mm in diameter) and specifications for each of the

- bioretention facility materials. Please note the specifications for the material on a drawing or include a reference to where the information can be found in the SWM Report and Site Servicing Brief.
- A27. Please indicate the snow storage location.
- A28. There's a label pointing to the eastern property line indicting an 'Existing Natural Swale'. The Plan of Survey doesn't appear to show an existing swale at this location. Please confirm.

Pre-Development Watershed Plan, C701, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

No Comments.

Post-Development Watershed Plan, C702, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

No Comments.

Construction Detail Plan, C901, prepared by LRL Engineering, LRL Project No.: 210341, dated July 27, 2021, revision 02, dated June 2, 2022.

No Comments.

B. <u>List of Report(s):</u>

Geotechnical Investigation, prepared by LRL Engineering, LRL File No.: 210341, dated October 2021.

- A1. Section 2 of the report states that the site is approximately 800m² in size. This doesn't appear to match other project documents. Please confirm that this is correct.
- A2. Table 1 indicates the BH2 sample submitted for lab gradation analysis had 0% fine gravel. The Particle Size Analysis in Appendix D shows 8.9% fine gravel. Please confirm.
- A3. Table 3 indicates the USCS Group Symbol is CL for BH3, SS2. The Appendix D results indicate it is ML. Please clarify.
- A4. Section 4.8 states that the groundwater was measured upon completion of drilling and all boreholes were found to be dry. As per section 2.7 of the Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa, in lower permeability soils or rock, the groundwater level could take a week or more before stabilizing and shouldn't not be recorded prematurely. Given the silt and clay content of the soil, please provide the rational for the decision to not install a piezometer and allow the groundwater level to stabilize before taking the groundwater level measurement.
- A5. Section 4.8 notes that groundwater levels can fluctuate with seasonal weather conditions and due to construction activities at or near the vicinity of the site.

The proposed bioretention facility requires a minimum clearance of 1 m between the bottom of the LID measure and the seasonally high groundwater elevation (refer to the Stormwater Management Report and Servicing Brief, dated November 25, 2021). Please provide sufficient information to confirm that the seasonally high groundwater elevation is not expected to be within 1m of the bottom of the bioretention area.

- A6. Section 5.2 states that the bearing capacity limits the allowable grade raise to 2.5m. Is the bearing capacity this is based on specific to the undisturbed glacial till material? If so, what's the allowable grade raise where the silt layer remains in place over the glacial till?
- A7. Section 5.9 provides the recommendations for whether permanent perimeter foundation drainage is required. Is foundation drainage proposed for this building? Section 5.4 states that the lateral earth pressure expression assumes that perimeter drainage system prevents the build-up of any hydrostatic pressure behind the foundation wall. If no foundation drainage is proposed, please make any required updates to the assumptions provided in section 5.4.
- A8. Table 4 indicates that the resistivity of the BH2 sample was 1,160 Ohm.cm. The Appendix D laboratory results indicate a resistivity of 116 Ohm.m. It appears there is a typo or conversion error. Please update Table 4.
- A9. Section 5.12 states that the measured soil resistivity falls within the "corrosive" range. Please include the recommendations associated with this finding.
- A10. Section 7.2 states that a typical value of 75 kPa for residential construction was assumed for the design load for the building. Do the Robertson 'Building Drawings Combined Set' included with the Site Plan Control application include the actual design load for the building? If not, please confirm that the 75 kPa for typical residential construction provides a conservative approximation for the proposed building use, given that it's not only residential.
- A11. Please discuss in the report how the soil parameters presented in Table 5 were established.
- A12. Please provide a scaled plan showing the location of the slope, the significant features of the planned development (e.g., structures and paved areas), the locations of the cross-sections used to establish the slope geometry, and the locations of the cross-sections where the slope stability has been assessed.

Hydrogeological Assessment and Terrain Analysis, prepared by LRL Engineering, LRL File No.: 210341, dated September 22, 2021.

Comments:

A13. As discussed in section 5.1 of the report, the water quality sampling showed that the D-5-5 Maximum Concentration Considered Reasonably Treatable was exceeded for hardness, colour, and chloride. In addition, there was a ODWO exceedance for TDS, which doesn't have a Maximum Concentration Considered Reasonably Treatable. Given the exceedances of the D-5-5 Maximum Concentration Considered Reasonably Treatable, it hasn't been demonstrated that the proposed supply well is capable of supplying water of adequate quality

- for the proposed development. Consultation with a City Hydrogeologist and the City Senior Engineer on the file is required to discuss the hydrogeological concerns. Please contact Damien.Whittaker@ottawa.ca to set up a meeting.
- A14. As displayed on the Plan of Survey prepared by H.A. Ken Shipman Surveying Ltd., and dated July 19, 2021, the well is located within the floodplain. Although O.Reg. 903 doesn't specifically prohibit the installation of a well in the floodplain, it's not recommended. The following items are required:
 - The casing height (and air vent) must be 40cm above the potential flood level.
 - The well cap and vent must be floodproof.

Note that a comment has been also made on the Grading and Drainage Plan to indicate the top of casing elevation of the well.

- A15. Please provide the Well Record for the supply well.
- A16. Please include a discussion of the Hydrogeologist's assessment of whether the existing well is in conformance with O.Reg. 903.
- A17. Now that there are additional details about the proposed development available, please update section 2 of the report and Figure 3, as well as any other sections or figures which require updates based on available information.
- A18. In section 4, it's stated that the inferred groundwater flow direction is east towards the North Castor River, and that the nearest open water body that flows into the North Castor River is approximately 1.1. km east of the site. It appears that this description doesn't apply to this site. Please update.
- A19. Section 4 states that test pits found a thin layer of topsoil over clay with varying sand and silt contents. The Appendix C Particle Size Analysis results indicate that silt is the primary material in all three samples submitted, with varying amounts of sand, clay, and gravel. Please confirm and update the soil descriptions as required.
- A20. Please include a discussion about any well quantity interference with neighbouring properties.
- A21. Please include a discussion of the field parameters tested.
- A22. In the table in section 5.2.2, is the 'Maximum Drawdown' value supposed to be 2.17m instead of 2.13m? Please confirm and update as required.
- A23. In section 6, the calculated daily sewage flow (1,550 L/d) is different than the daily design flow (5,250 L/day) calculated in the provided OSSO Septic Permit Application number 21-035. However, it appears that the daily design flow calculated for the Septic Permit may not reflect the currently proposed development. Please confirm and revise if required.
- A24. The current version of the plans indicates a building footprint of 453.25m² and a paved driveway/parking area larger than the area noted in section 7.1. Please confirm the impervious areas, and update section 7.1 and the calculations as required.
- A25. The Table 4 Nitrate Attenuation Calculations use a daily sewage volume per lot of 1m³. Please provide an explanation of why the daily sewage design flow calculated in section 6 of the report (1.55m³/day) isn't use in the calculation.

- A26. In the Appendix A Test Pit Logs, the soil descriptions of the layers where samples were collected don't appear to reflect the results presented in the Appendix C Particle Size Analysis. Please confirm and update as required.
- A27. As per section 5.2.4 v) of the <u>City's Hydrogeological and Terrain Analysis</u> <u>Guidelines</u>, the minimum required water quality sampling parameters for a Site Plan application are the Subdivision Package, as well as trace metals, and VOCs. Given that the pre-application consultation meeting occurred prior to when the City's Guidelines came into effect, testing for trace metals and VOCs weren't required for the Hydrogeological Assessment and Terrain Analysis dated September 22, 2021. Please note that this exception isn't intended to set a precedent. Any additional hydrogeological assessment on this Site Plan Control application, and on future applications, are subject to the requirements of the <u>City's Hydrogeological and Terrain Analysis Guidelines</u>, including the minimum water quality sampling parameters for Site Plans.

Stormwater Management Report and Servicing Brief, prepared by LRL Engineering, LRL File No.: 210341, dated November 25, 2021.

- A28. Section 5.3.1, item 6), states that it is anticipated that a clearance exceeding 1m is achieved between the bottom of the LID measures and the expected groundwater level. Please note that Section 4.8 of the Geotechnical Investigation dated October 2021, notes that groundwater levels can fluctuate with seasonal weather conditions and due to construction activities at or near the vicinity of the site. Although groundwater wasn't observed during the hydrogeological or geotechnical investigations, they were both completed August. Higher groundwater levels are typically expected during wet periods of the year, such as early spring. As per the bioretention facility fact sheet provided in Appendix C, a minimum of 1m separating the seasonally high water table and the bottom of the bioretention facility is required. Note that a comment has been also made on the Geotechnical Investigation to include the seasonally high groundwater elevation to be used for design.
- A29. Section 5.3.1 states that the proposed LID approaches will likely result in the targeted 80% TSS removal. It needs to be demonstrated that 80% TSS removal is achieved. Please provide additional information to demonstrate that the proposed LID approaches provide 80% TSS removal.
- A30. Based on the existing and proposed grades shown on the Grading and Drainage Plan, it appears that some of the runoff from 5949 Ottawa Street would flow southwest onto the site both pre and post development. In the report, please discuss how the proposed development will affect the runoff from the neighbouring property and how the existing stormwater runoff from the adjacent site that crosses the property will be accommodated by the proposed stormwater management design.
- A31. Please make note of the calculated water demands and sanitary daily design flow in the report.

A32. The proposed septic system design provided in Appendix E shows a different tank and treatment unit location than the drawing included with the provided OSSO Septic Permit No. 21-035. Please confirm which layout is correct and update as required.

Rail Safety Study – VIA Rail Corridor Proximity, prepared by Hatch, dated June 28, 2021. Comments:

- A33. As per section 3.7.1 of the Guidelines for New Development in Proximity to Railway Operations, all new residential developments in proximity to railway corridors must include a 1.83m high chainlink fence along the entire mutual property line. Figure A2 shows that there is an existing fence along the rail corridor at the at-grade crossing at the south end of the property. Does this existing fence continue along the entire mutual property line? If not, please discuss if the requirement for a fence is applicable to this site. Note that the mutual property line is within the floodplain, and any work proposed within the floodplain is subject to approval from RVCA and would also need to be addressed in the EIS which is subject to MECP approval. Depending on VIA Rail and floodplain regulatory requirements, it may be preferable to propose any required fencing outside of the floodplain.
- A34. As per section 3.2 of the Guidelines for New Development in Proximity to Railway Operations, consultation with the railway is required. Please provide confirmation that the railway has been consulted and has concurred with the findings of the Rail Safety Study.
- A35. The Rail Safety Study must be stamped and sealed by a Professional Engineer.

C. Additional Comments:

- C1. Fire routes are to be designated by By-law for Fire Services to establish them as a legal fire route. Please complete the attached **Application for a Fire Route Designation** form and send to fireroutes@ottawa.ca in order to add the fire route to the By-law. The form must be filled out by the applicant/agent of the property as well as the property owner. Please cc the file lead (Cheryl.McWilliams@ottawa.ca) and Damien.Whittaker@ottawa.ca as confirmation that the form has been submitted.
- C2. Due to the industrial zoning of the site, an ECA application is required for the proposed stormwater management works, even without a proposed direct discharge to a watercourse. It may be possible for the proposed stormwater management works to be approved under the City's Transfer of Review (ToR) ECA, instead of a direct submission ECA. A ToR ECA has a quicker approval time than a direct submission ECA. A request can be made to the City (Damien.Whittaker@ottawa.ca) to consider a Transfer of Review (ToR) ECA for stormwater works for this private property, instead of the direct submission ECA. This is subject to approval by the City and MECP. If proceeding with a direct

- submission ECA, after all comments are resolved, please provide the draft ECA application for the City to review prior to submission to MECP.
- C3. Please note that as per section 4.4.2 of MECP's Procedure D-5-5, warning clauses will need to be registered on title due to the water quality exceedances of the ODWO for sodium and hardness: "In cases where raw water sodium levels exceed 20 mg/L, warning clauses should be addressed to people on sodium restricted diets and should be registered on title. In addition, if water softening is utilized to reduce hardness, a warning should be registered on the title with a recommendation that a separate tap, which by-passes the softener, be installed to supply un-softened drinking water.".
 - Warning clauses will also need to be registered on title for any other water treatment equipment required due to exceedances of the ODWO.
- C4. Please note that later in the Site Plan Control process (prior to Site Plan approval), information on the proposed exterior lighting design will need to be provided. The location of the fixtures, fixture types (make, model, and part number), and the mounting heights will need to be submitted. A Site Lighting Certificate prepared by a qualified Professional Engineer, licensed in the Province of Ontario, will be also required. The Certificate must state that the exterior site lighting has been designed to meet the following criteria:
 - It must be designed using only fixtures that meet the criteria for full cutoff (sharp cut-off) classification, as recognized by the Illuminating Engineering Society of North America (IESNA or IES).
 - and it must result in minimal light spillage onto adjacent properties. As a guideline, 0.5 fc is normally the maximum allowable spillage.
- C5. Mapping of the 1 in 350-year floodplain is not yet available for this property (http://ottawa.ca/floodplainmaps), but it is anticipated that portions of this proposed development will be within the 1 in 350-year floodplain. The area between the 1 in 100-year floodplain and the 1 in 350-year floodplain is defined as the climate change flood vulnerable area. Unlike the 1 in 100-year floodplain maps, the 1 in 350-year floodplain maps are not presently used to define or control limits of development. This comment is provided for information purposes to provide advance notice that once the 1 in 350-year floodplain mapping is available, it may show that this proposed development is within the climate change flood vulnerable area.

Please consider these comments in combination with comments you receive from other technical groups, agencies, and the public.

Chris Reist

<u>ViaRail Comments</u> – link for contact/submisisons is https://railrequest.viarail.ca/

The Applicant must submit engineering drawings signed and sealed by a certified professional. The engineering drawings will be reviewed by an engineering firms designated by VIA at the Applicant's expenses.

The Applicant must also submit locates to VIA. The locates must be submitted to VIA electronically and physically.

The Applicant must meet the following requirements:

- Transport Canada:
- Railway Safety Act, Part III, Sections 24 and 25.
- For Clearance:
- Railway Right of Way Access Control Policy;
- Wire Crossings and Proximities Regulations C.R.C., c. 1195;
- Standards Respecting Railway Clearances TC E-05;
- Notice of Railway Works Regulations, a copy of the notice must be sent to VIA.
- For pipelines or other utilities crossings under railways:
- Standards Respecting Pipeline Crossings Under Railways TC E-10.
- Traffic control near a railways:
- Circular 13 Railway Association of Canada
- For Grade Crossings:
- Grade Crossings Regulations;
- The provisions that must be adhered to with respect to the creation of new entrance ways or intersecting roads from the nearest rail. Reference GCR Sub-Section 101(1) and Grade Crossings Standards Article 11.
- Grade Crossings Standards;
- Transport Canada Standard for LED Signals Modules at Highway/Railway Grade Crossings – TC E-14;
- Minimum Railway/Road Crossing Sightline Requirements for All Grade Crossings Without Automatic Warning Devices G4-A.
- The requirements surrounding sightlines, of which any construction or activities (Duplex development) on the property or new properties must ensure they do not obstruct the required minimum grade crossing sightlines. (reference Section 21 of the GCR).
- Canadian Standards Association:
- CAN/CSA C22.3 No. 1 Overhead Systems;
- CAN/CSA C22.3 No. 7 Underground Systems;
- CAN/CSA Z662 Oil and Pipeline Systems;
- CAN/CSA-B137.4 Polyethylene Piping Systems for Gas Services.
- VIA:
- Buried Signal and Communication Guidelines;
- Guidelines for New Development;
- guidance which the Federation of Canadian Municipalities (FCM) has created on this topic specifically, you can find their guidance within the following link: Guidelines for New Development in Proximity to Railway Operations.

- Adjacent landowners, buildings and overhead structures are not allowed to drain or modify existing drainage ways to divert water onto railway property without a hydraulic study and approval of the VIA Rail Infrastructure Department;
- All loads must be in compliance with Cooper E90;

• The Federation of Canadian Municipalities and the Railway Association of Canada:

- Guidelines for New Development in Proximity to Railway Operations.
- Other:
- Proper fencing must be included or planned to be installed in order to avoid any trespassing or intrusions into the VIA right-of-way;
- All fence maintenance will be done on the Applicant expense. In addition, the Applicant must comply with the following areas of concern for which VIA request information, reassurances and/or commitments with regards to the application:

Utilities:

Electrical and Gas Supply

VIA would like assurances from the City and the Applicant that the new development will not negatively impact on the capacity, availability, stability of the supply and future growth capability thereof.

Communications

VIA would like assurances from the City and the Applicant, that the new development will not impact VIA's operations as a result of potential alterations to the existing cellphone towers or any other fibre-optic infrastructures supplying the VIA station and property.

Water & Wastewater:

Drainage Sanitary/Storm

VIA would like assurances that the new development will not limit or interfere with its operations, specifically the main sanitary drainage that runs South-to-North from the Train Yards, through VIA's property towards the proposed development. Refer to the blue dashed line of Exhibit A, attached to this letter.

Water supply

VIA would like assurances that the new development will not affect the supply and water pressure that is provided for the station.

Construction Disturbances:

- VIA requests a copy of the Pedestrian study (from New Development to LRT).
- VIA is concerned by the flow of people that will go through our premises (either interior or exterior) to access the LRT station.

• <u>Station access (vehicle traffic)</u>

Confirmation that the New Development access/exits, and traffic volumes will not affect or interfere VIA traffic circulation between Tremblay Rd and the Station parking. VIA also needs confirmation that Avenue L (yellow dotted line shown on Exhibit A), as well as the access to it, will be kept for our operations and upcoming growth.

Neighbour Relationships:

- VIA requests the Applicant's monitoring and management plan of the impacts of its construction, including but not limited to:
- Air contaminants / Dust pollution;
- Noise pollution / Working hours;
- Existing conditions;
- and the impacts of vibrations.
- VIA requests the Applicant's communication and management plan for future tenants and or owners of the project with respect to VIA's active train station nearby, that may produce one or more of, but not limited to, the following: emission of noise, dust, vibration, fumes, odours and other gaseous or non-gaseous emissions that may affect the enjoyment of the development for which VIA shall not be held responsible.

VIA requests the Applicant's commitment to making all efforts not to interfere with VIA's operations, VIA's track infrastructure or use of VIA property. When in the vicinity of VIA property or Railway right-of-way, VIA requests the Applicant commitment to comply with and conform to all VIA, Department of Transport and Canadian Transportation Agency rules and regulations, or any other authority having jurisdiction.

When and where the City's or the Applicant's actions, whether direct or indirect, negatively impact any of the above, VIA's operations, and or VIA's property, VIA wants assurances from the City and the Applicant that they will take all necessary and possible steps to mitigate or eliminate those impacts.

In light of our requests, VIA requires the City and the Applicant to indemnify VIA against any and all claims, damages or proceedings (including legal costs and other costs and expenses) that may arise in relation to the non-compliance to any condition contained in this letter.

Should you have any questions or concerns, please feel free to contact the undersigned.

Sincerely,

and.

Paul Charbachi Infrastructure Engineer M: 514-607-5833

Paul Charbachi@viarail.ca

<u>RVCA Comments</u> – The RVCA has reviewed the above noted Site Plan Control application for a kennel, workshop and caretaker's residence on part of the property and have no objections.

Eric Lalande

Enbridge – see separate email

Rogers – from Mohammed Ali Khan Rogers Communications 475 Richmond Rd Ottawa, Ontario, M1P 4Z3

Phone: 416-627-9363

Email: MohammedAli.Khan@rci.rogers.com

Comments received:

Mostly concerned with one aspect of this development proposal: servicing,

Additional comments:

Rogers has no comment or concerns regarding this circulation. Please contact Graham Winn at 613-216-4452 or e-mail at graham.winn@rci.rogers.com for Rogers Site Servicing if approved, or if you require additional information. Regards

ATTACHMENT **II**

Ottawa Septic System Office – Permit and Design Application



JUL 13 2023 Septic Office STO:

STREET/CIVIC INITIAL **EMAIL ONLY**

3889 Rideau Valley Drive Box 599 Manotick, ON K4M 1A5

Phone: 613-692-3571 PRESS "4" for septic office 1-800-267-3504 Fax: 613-692-1507 Email: septic@rvca.ca

Township:OSG-HUN-GLO-FIT-CUM-NEP-GOU-RID-KAN-TOR

CONTACT: 1. (71/1

INFORMATION FOR OWNER/APPLICANT

Attached is your Sewage System Permit. A minimum of two inspections are required before your proposed sewage system can be approved for use (additional inspections may be required for clay soils/bedrock and/or reinspections). Inspections must be requested in writing. Please see attached:

- Inspection fax request form (all inspections MUST be requested in writing)
- As-built components and drawing form
- Copy of the approved application and schedule pages
- Approved Part 8 permit: *Electronic copy only Be sure to INCLUDE in B Plans Examiner at CITY of OTTAWA client services, if NEW or RENO co

NON-RESIDENTIAL

M Commercial

☐ Industrial

☐ Institutional

Special Note

- A permit is valid for 12 months from the original date of issuance noted in "permit date". If lapsed, it may be renewed only once for a period of 12 months from the date of expiry.
- No person shall make a material change or cause a material change to be made to a plan, specification, document or other information on the basis of which a permit was issued without notifying, filing details with and obtaining the authorization of the Chief Building Official. (Building Code Act 1992, c.23, s.8(12))

Sewage System Permit Construction Requirements

1. Clay Soils/Bedrock only (if required per issued Approval)

In clay soils/bedrock, a site preparation inspection is required. The total contact area must be properly prepared. Scarification must be done under dry conditions prior to importing leaching bed fill.

2. Installation Inspection - 2nd inspection

When the sewage system is substantially completed (i.e., before the final fill is placed over the septic tank and leaching bed system) an installation inspection is required. Prior to any inspection request, the following must be submitted:

a) "as-built components" and "as-built drawings" — see attached form

b) "engineer letter" — if the system is engineered

- c) grain size analysis and weight bills for all Filter Media types of septic systems
- d) Weigh bills for washed septic stone, where applicable
- e) Maintenance/service contract for treatment unit installed

3. Final Grading Inspection - 3rd inspection

When construction of the sewage system is complete, a final grading inspection is required. Before a Certificate of Completion can be issued, the following must be complete:

a) The leaching bed and septic tank must be covered with sand fill and topsoil and graded accordingly

b) All conditions of the Sewage System Permit & comments on the installation inspection report must be met

c) The depth of cover & material type must be identified by inspection pipes or holes placed over trenches at 4 corners of bed

d) The 4 corners of the bed must be staked

Application for a Permit to Construct or Demolish This form is authorized under subsection 8(1.1) of the Building Code Act, 1992

I - I O A DECEMENT	For use by	Principal A	Authority		
Application Rumber: A. RECEIVED		Permit nu	mber (if different)	EPTIC FILE;	
JUL 1 3 2023				PILE;	#
Date received:		Roll numb	per:	43-062	
				7.4	
				OTTAWA	
	TTAWA SE	DTICS	VOTEMO	EEICE	
Application submitted to:		9			
(Name of mun	icipality, upper-tier mun	nicipality, boar	d of health or conse	ervation authority)	
A. Project information					
Building number, street name	wa st.			Unit number	Lot/con
					25/3
Municipality youl bown	Postal code Ko A 27	7.0	Plan number/othe		-
Project value est. \$	Kon di	20	04450 Area of work (m²)	- 001 0 LT	
Froject value est. ψ		- '	Alea of Work (III)		
B. Purpose of application					
	dition to an	Alteration	on/repair	Demolition	Conditional
exis	sting building				Permit
Proposed use of building	Curr	rent use of b	1		
Commercial		1	lacant		
Description of proposed work					
1 - 11	unt: w	it.	1.	P	, 0
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building with	multiple	500	Vancilee	proct and	maraa
Install a building with	multiple	. ou	vanciles	iposicy cov	mus cracy
4			*.		
C. Applicant Applicant is:	Owner or Firstname	A	uthorized agent	of owner	
C. Applicant Applicant is:	Owner or	A	uthorized agent	of owner	
C. Applicant Applicant is: Last name Pattl Street address	Owner or First name	A	uthorized agent	of owner	
C. Applicant Applicant is: Last name Patul Street address 6107 Hillsh	Owner or First name Aarr Line Ro	A A	uthorized agent Corporation or pa	of owner Intership Unit number	onnental Inc
C. Applicant Applicant is: Last name Pattl Street address 6107 Hills A	Owner or First name Auru Line Ro Postal code	A A	uthorized agent Corporation or pa Y LUL V Province	of owner Intership Unit number	onnental Inc
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C. Applicant Applicant is: Last name fall Street address 6107 Hillst Municipality North Junes Telephone number	Owner or First name Live Ro Postal code Ky M	A A	uthorized agent Corporation or pa Y LUL V Province	of owner Intership Unit number E-mail LN INLLA Cell humber	onnental Inc Lovcon.
C. Applicant Applicant is: Last name Patul Street address 6107 Hillsh Municipality North Junes Telephone number (613) 692-2616	Owner or First name Auri Postal code Ky M Fax ()	A A	uthorized agent Corporation or pa Y LUL V Province	of owner Intership Unit number E-mail E-mail	onnental Inc Lovcon.
C. Applicant Applicant is: Last name Pattl Street address 6107 Hillsh Municipality North Yelles Telephone number (613) 692-2616 D. Owner (if different from applicant applicant page)	Owner or First name Auri Postal code Ky M Fax ()	i A7	uthorized agent Corporation or pa Y LUL V Province	of owner rinership Cenvih Unit number E-mail Lyinela Cell number (613) 229	onnental Inc Lovcon.
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C. Applicant Last name Patul Street address 6107 Hisst Municipality North Junes Telephone number (613) 692-2616 D. Owner (if different from applicant to the purch of	Owner or First name Postal code Ky M Fax () Pirst name All Postal code KOA 2	i AT	Province Corporation or pa	of owner rinership Cenvih Unit number E-mail Linginelin Cell humber (613) 229 rinership Unit number	onnental Inc Lovcon. ing ogreguer, 1-5890
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E. Builder (optional)											
Last name	First name	Corporation or partners	hip (if applicable)								
BECEIVED	S	EPTIC	48								
Street address V.C.A. RECEIVED		EPTIC FILE #	Unit number	Lot/con.							
Municipality JUL 1 3 2023	Postal code	Provinced 42	E-mail								
Telephone number	Fax	OTTAWA	Cell number								
F. Tarion Warranty Corporation (Ontari	o New Home Warrant	y Program)									
 i. Is proposed construction for a new horn Plan Act? If no, go to section G. 	ne as defined in the Onta	rio New Home Warranties	Yes	No S							
ii. Is registration required under the Ontar	io New Home Warranties	Plan Act?	Yes	Nos							
iii. If yes to (ii) provide registration number	r(s):										
G. Required Schedules											
i) Attach Schedule 1 for each individual who rev	views and takes responsi	bility for design activities									
ii) Attach Schedule 2 where application is to con											
H. Completeness and compliance with											
i) This application meets all the requirements o		o (d) of Division C of the	1. 5								
Building Code (the application is made in the applicable fields have been completed on the schedules are submitted).	correct form and by the	owner or authorized agent	t, all Yes	No							
Payment has been made of all fees that are regulation made under clause 7(1)(c) of the Eapplication is made.	equired, under the applications and equired, under the applications and equipment equipment and equipment equi	able by-law, resolution or to be paid when the	Yes	No							
ii) This application is accompanied by the plans resolution or regulation made under clause 7	and specifications presci (1)(b) of the Building Cod	ribed by the applicable by le Act, 1992.	law, Yes	No							
iii) This application is accompanied by the inform law, resolution or regulation made under clau the chief building official to determine whethe contravene any applicable law.	nation and documents pre	escribed by the applicable	able	No							
iv) The proposed building, construction or demol	ition will not contravene a	any applicable law.	Yes	No							
Declaration of applicant			1.557								
i. Deciaration of applicant											
Davis Pate			do	clare that:							
(print name)			de	ciale tilat.							
The information contained in this applic documentation is true to the best of my If the owner is a corporation or partners	knowledge.			ner attached							
Date July 13, 202	Signature of a	pplicant <u>Ear</u>	S								

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

SEPTIC FILE#

-50	1111		
A. Project Promation Building number, street name	22 2		
BECKIND	23-047	Schedule 1: D	esigner Information
A Resolution for each Addition to the each		oonedate 1. D	coigner information
the one form to each individual who revie	ews and takes responsibility to	or design activities with re-	spect to the project.
A. Projectuatormation			
Building number, street name 5969	ottoma de	Unit no	Lot/con.
	Victoria da.		23/3
Municipality Houlbouhn	Postal code Plan numb	er/ other description +	4
	KOA 2 ZO 046	30-0010LT	
B. Individual who reviews and take		n activities	
Name Davis Patel	Firm	. V. 1100 C.	11000011
	I MW	en vary o	environmental force
Street address 6107 Hill	Live Col	Unit no.	Lot/con.
Municipality / / /	Postal code Province		
Nosth yourer	K4 M IA7	DN E-mail	neering @greghoup.d
Telephone number	Fax number	Cell hun	nher T
(613) 692-2616	()		729-5890
C. Design activities undertaken by	individual identified in C	Total Desire	1 7 11 0 5 0 1
Division C]	individual identified in S	ection B. [Building Co	ode Table 3.5.2.1. of
House	13/40 11		
Small Buildings	HVAC - House		uilding Structural
Large Buildings	Building Services	PI	lumbing – House
Complex Buildings	Detection, Lighting a		lumbing – All Buildings
Description of designer's work	Fire Protection		n-site Sewage Systems
Description of designer's work	into las	01 00010 1 2 .01	la Pa P
Alligh of syptic	system for	orotand uni	achtay
W. 11/1 2 1.71	system for multiple		
building with	anultipal	Occupancis	
D. Declaration of Designer			
1 : 1 1	1		
1 David Pall	4	declare that	(choose one as appropriate):
(print nam	e)		
I rovious and take research like		15 6 6	
C of the Building Code Lam	y for the design work on beha	of a firm registered und	er subsection 3.2.4.of Division
C, of the Building Code. I am	119 685	tered, in the appropriate of	classes/categories.
Individual BCIN:	111 000		
Firm BCIN:	16035		
Tim Don.	10033		
1	2 5 1 1		
I review and take responsibilit	y for the design and am quali	ied in the appropriate cate	egory as an "other designer"
under subsection 3.2.5.of Div	ision C, of the Building Code.		
Individual BCIN:			
Posis for avamatica from	no nictuation.		
basis for exemption from	registration:		
The design work is exempt fro	om the registration and qualifi	ration requirements of the	Building Code
Basis for exemption from	registration and qualification:	battori requirements of the	building Code.
I certify that:	Togistration and qualification.		
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	ith the broaded and the best of	my knowleage.	
I have submitted this application was a submitted this application. 2. **The content of the content of	vitri the knowledge and conse	nt of the firm.	
1 1 17		A ()	
Date July 13 20	23 Signature of	Designer Care	
L V V i			

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) (c).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

R.V.C.A. RECEIVED

JUL 1 3 2023

Schedule 2: Sewage System Installer Information

A. Project Information		
Building number, street name 5969 Ottawa	St.	Unit number Lot/con.
Municipality Julian Postal code KoA 27	Plan number/ other desc	001-11
B. Sewage system installer	0 19 30	SEPTIC FIL
Is the installer of the sewage system engaged in the bus emptying sewage systems, in accordance with Building (iness of constructing on-site, Code Article 3.3.1.1, Division	installing, repairing, servicing, cleaning or C?
Yes (Continue to Section C)	o (Continue to Section E)	Installer unknown at time of application (Continue Section E)
C. Registered installer information (where ans	wer to B is "Yes")	,
	onmental Inc.	BCIN 16035
Street address 6107 First Line A	Ed.	Unit number Lot/con.
Municipality North yours Postal code	Province ON	E-mail Wseabhook @gvegroup.ca
Telephone number (613) 692-2616 ()		Cell number (613) 229-3900
D. Qualified supervisor information (where an	swer to section B is "Yes	3")
Name of qualified supervisor(s)	Building Code Identification	n Number (BCIN)
BILL Seabrook	1123	4
		*
E. Declaration of Applicant:		
Davis Patel		
(print name)		declare that:
I am the applicant for the permit to construct the shall submit a new Schedule 2 prior to construct	e sewage system. If the insta tion when the installer is known	aller is unknown at time of application, I
OR I am the holder of the permit to construct the se		
is known.	mage dyotom, and am subim	tung a new schedule 2, now that the installer
I certify that:		-
1. The information contained in this schedule is tru	e to the best of my knowledge	e.
2. If the owner is a corporation or partnership, I have	ve the authority to bind the co	prporation or partnership.
Date July 13, 2023	Signature of applicant	bare

Ottawa Septic Bureau des systèmes System Office septiques d'Ottawa

R.V.C.A. RECEIVED

Do Not Complete
Permit # ____
Revision # ____
Date ___

Schedule 4

Proposed Services Complete Sections 1 thru 7

1. Engineered Yes	2. Water supply Proposed Existing SEPTIC FILE # 23-042
No	☐ Existing OTTAIN:
3. Type of work proposed New Installation Replacement Alteration	4. Type of Well Dug/bored/Sandpoint well Drilled well Municipal Other
Bedrooms	6. Sewage Design Flow Other Occupancies Design Flow J450 L/day Detailed sewage flow calculations: Class 4 – BMEC Area Bed (Schedule 11)
7. Type of System Treatment Unit Notwice 3780-3M Class 2 - Leaching Pit Class 3 - Cesspool Class 4 - Shallow Buried Trench Class 4 - Trench (schedule 9) Fully raised Partially raised In-ground Class 4 - Filter Media (schedule 10) Fully raised	Fully raised Partially raised In-ground Class 4 – "Type A" Dispersal (Schedule 13) Fully raised Partially raised In-ground Class 4 – "Type B" Dispersal (Schedule 14) Fully raised Partially raised In-ground In-ground In-ground
☐ Partially raised☐ In-ground	☐ Class 5 – Holding Tank (9000L min)☐ Tank/TreatmentUnit/PumpChamber ONLY☐ Effluent Filter/Risers ONLY



R.V.C.A. RECEIVED JUL 1 3 2023

SEPTIC FILE #
23-842
OTTAWA

Allan Roberts(5969 Ottawa St.)

	Warehouse	
2 Washroom	950 Per Washroom	1900 L/day
2 Loading Bay	150 Per Loading Bay	300 L/day
Sub-Total		2200 L/day

	Apartment	
2 Bedrooms	275 Per person	1100 L/day

	Kennel (Vetrinary Clinic)	
1 Employees	75 Per Employee	75 L/day
1 Floor Drain	75 Per Drain	75 L/day
Sub-Total		150 L/day

Total	2450 1/-1-
Total	3450 L/day

SEPTIC FILE# 23-042

Ottawa Septic Bureau des systèmes System Office septiques d'Ottawa

R.V.C.A. RECEIVED

JUL 1 3 2023

Permit No Revision No Schedule 5 Date

Do Not Complete

Sewage System Details

Septic/Holding Tank Size: 3600 Litre Septic Tank Effluent Filter Make:	Make: Machalger Model:
Septic Tank Effluent Filter Make:	Model:
Treatment Unit – Make & Model	100 HK 7780-3M
Number of Units:	Other:
Refer to Typical Drawing # $PC-5-1$	
Mantle Information:	Pump Rate L/15min
Native or imported =15m in direct	
	pumping systems
Slope subgrade	
	direction(s)
Site to be Scarified (If clay) YES	
Clay Seal Required (If bedrock) YES	
□ Trench	Shallow Buried Trench
Distribution Pipe Lengthm	Pipe Length 52.32 m
Loading Aream ²	
Type of Chamber	☐ Filter Media Bed
Length of Chamber m	Stone m ²
☐ Dispersal Bed	Extended Base m²
□ BMEC □ Type A □ Type B	Pipe m
Stone m ²	Weight of Filter Media Kg
Sandm²	Loading Area m
Pipe m ²	
Linear LoadingL/m²	
☐ Tank/Treatment Unit/Pump Chamber	Replacement ONLY
☐ Effluent Filter & Riser ONLY Construction Notes:	

R.V.C.A. RECEIVED

JUL 1 3 2023

23-042 OTTAWA

Do Not Complete
Permit #_____
Revision #_____
Date

Ottawa Septic Bureau des systèmes System Office septiques d'Ottawa

Schedule 6

Soil and Water Table Information (Minimum depth of test pit: 2 metres)

Name of Applicant/Agent: GVE Date: Jan 5, 2021 Time: 8:30 a Applicant/Agent Signature: 6 and	in	Inspector: Date: Inspector Signature:
EG () Soil Description	Т	EG () Soil Description
.5m		.5m
1.0 m Bilty Bound (See Sieve analys,	is)	1.0 m agent
1.0 m		1.5m
2.0 m		2.0 m
EG () Soil Description	Т	EG () Soil Description T
.5m		.5m
+ +		+ +
1.0 m		1.0 m
1.5m		1.5m
2.0 m		2.0 m
LEGEND BR = Bedrock GWT = Ground water table HGWT = High ground w M = metres	vater ta	ble EG = Existing grade T = percolation rate

SEPTIC FILE

23-042

R.V.C.A. RECEIVED

JUL 1 3 2023

Do Not Complete

Ottawa Septit ABVAeau des systèmes System Office septiques d'Ottawa

Schedule 7

Permit #_ Revision # Date

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	-	_	-			-	-				_	_	-	_	_	-	-	_	_	_	_	_	_	1	1	_
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Elevat										-								- 1						syste		
B.M.D			n. 1	r	n H	7	h	(De	M9	et	1		are X ₁	ea (in X	ра	tter	n)	13	_	7				
pad	60	-4	Ra	1	Los	ml	8,	50	ut	6	I	hop	ut	X ₃ X ₅		(1	ton	17	X4						
Exact	Loca	tion_		- (_	0 1	-	1	X ₇		7 N	1	ros	1	X ₈	(toe)				-	

Ottawa Septic Bureau des systèmes System Office septiques d'Ottawa

SEPTIC FILE #

23-042

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JUL 1 3 2023

Schedule 8 Fixture unit count

Do Not Complete	
Permit #	~
Revision #	
Date	

Fixtures OTTAWA	# Existing	z + #	Proposed	X	unit count	==	Fixture Count
Bathroom group (toilet, sink and tub							I I I I I I I I I I I I I I I I I I I
or shower) installed in the same room	.1	+		X	6	=	6
Bathtub with/without overhead shower		+		X	1.5	=	
Shower stall		+		X	1.5	=	
Wash basin (SINK) (1½inch trap)	2	+		X	1.5	=	3
Watercloset (TOILET) tank operated	2	+		X	4	=	8
Bidet		+		X	1	=	
Kitchen							
Dishwasher		+		X	1	=	1
Sink with/without garbage grinder(s), domestic and other small type single, double or 2 single with a common trap	1	+		X	1.5		1.5
Other							10
Domestic washing machine	. (+		X	1.5	=	1.5
Combination sink and laundry tray single or double (Installed on 1½ trap)	I	+		X	1.5	=	1.5

*Insert the TOTAL in section 5 of Schedule 4 (0.Reg 151/13 Table 7.4.9.3)

1. Sump pumps and floor drains are not to be connected to the sewage system. Connection of such fixtures to a sewage system may lead to a hydraulic failure of the said system. The above mentioned fixtures should be discharged separately to an approved Class 2 (leaching pit) sewage system.

2. Where laundry waste is not more than 20% of the total daily design sanitary sewage flow, it may discharge to a sewage system (Part 8, OBC, 8.1.3.1(2)).

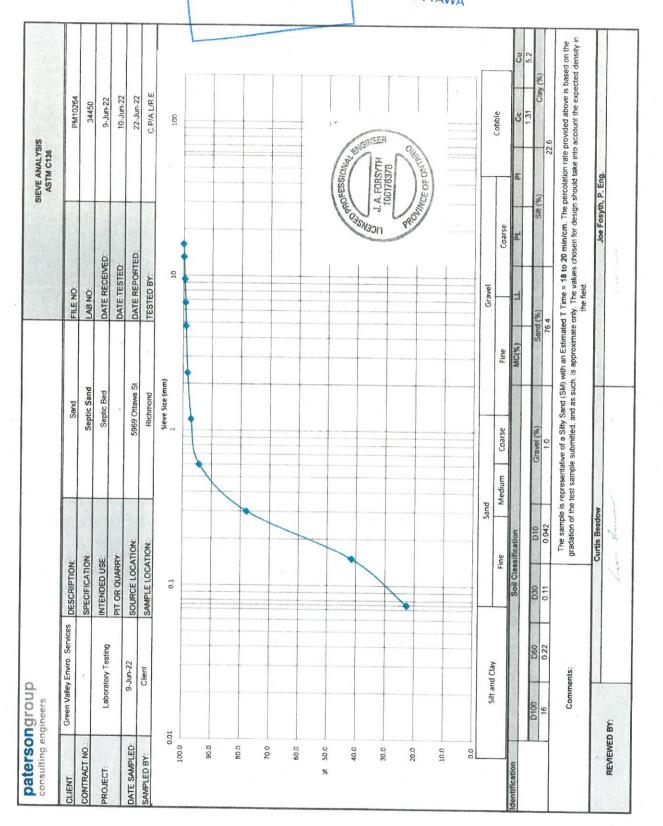
Care	July 13 2023	
Agent/Owner signature	Date	

22.5

*Total:

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JUL 1 3 2023

SEPTIC FILE #
23-042
OTTAWA



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patersor consulting en	ngroup gineers	JUI	L 1 3 2023	,		The state of the s	ANALYSIS M C136
CLIENT:	Green Valley E	nviro Services	DESCRIPTION:	Sa	and	FILE NO.:	PM10264
CONTRACT NO.:			SPECIFICATION:	Seption	c Sand	LAB NO.:	34450
PROJECT:	Laborator	ry Testing	INTENDED USE:		ic Bed	DATE REC'D:	9-Jun-22
	Laborator	y resting	PIT OR QUARRY:		-	DATE TESTED	
DATE SAMPLED:	9-Ju	n-22	SOURCE LOCATI	ON: 59	969 Ottawa St	DATE REP'D:	22-Jun-22
SAMPLED BY:	Cli	ent	SAMPLE LOCATION			TESTED BY:	C.P/A.L/R.I
WEIGHT BEFORE	WASH					896.1	
WEIGHT AFTER V	VASH					706.2	
SIEVE SIZE (mm)	WEIGHT RETAINED	PERCENT RETAINED	PERCENT PASSING	LOWER SPEC	UPPER SPEC		MARK
150				PRESIDENCE INC.			
106						SED-	
75						SEPTICE 23-04	IIE.
63						23-1	TE #
53						0 4	2
37.5						OTTAWA	
26.5							
19							
16	0.0	0.0	100.0				
13.2	1.5	0.2	99.8				
9.5	4.8	0.5	99.5				
6.7	7.4	0.8	99.2				
4.75	9.1	1.0	99.0				
2.36	14.7	1.6	98.4				
1.18	25.6	2.9	97.1				
0.6	51.6	5.8	94.2				
0.3	198.4	22.1	77.9				
0.15	523.4	58.4	41.6				
0.075	693.3	77.4	22.6				
PAN	706.2						
SIEVE CHECK FIN	E	0.00	0.	3% max.		REFERENCE	MATERIAL
THER TESTS					RESULT	LAB NO.	RESULT
		Contin D					
		Curtis Beadov			Joe For	syth, P. Eng.	
REVIEWED BY:	for	Ru		7	Je - 4	i	

R.V.C.A. RECEIVED

JUL 1 3 2023

In preparation on 2020 11 24 at 13:11

nis document has not been submitted and may be incomplete.

yyyy mm dd Page 1 of 2

Properties

4 Transfer

PIN

04430 - 0010 LT

Interest/Estate

Fee Simple

Description

PCL 10-3, SEC 4D-26; PT UNIT 10, PL 4D-26, PT 1, 4R7050; GOULBOURN

Consideration

Consideration

\$30,000.00

Transferor(s)

The transferor(s) hereby transfers the land to the transferee(s).

Name

QUATROSENSE ENVIRONMENTAL LTD.

Acting as a company

Address for Service

5935 Ottawa Street

Richmond, Ontario,

KOA 2ZO

SEPTIC FILE #

OTTAWA

I, DAVID JENKINS (PRESIDENT), have the authority to bind the corporation.

This document is not authorized under Power of Attorney by this party.

Transferee(s)		Capacity	Share
Name	ROBERTS, ROBERTA ANNE Acting as an individual	Joint Tenants	
Date of Birth	1949 06 17		
Address for Service	61 Strachan Street Richmond, ON K0A 2Z0		
Name	ROBERTS, ALLAN WAYNE Acting as an individual	Joint Tenants	
Date of Birth	1948 12 17		
Address for Service	61 Strachan Street Richmond, ON K0A 2Z0		

Calculated Taxes

Provincial Land Transfer Tax

\$150.00

File Number

Transferee Client File Number:

51248002

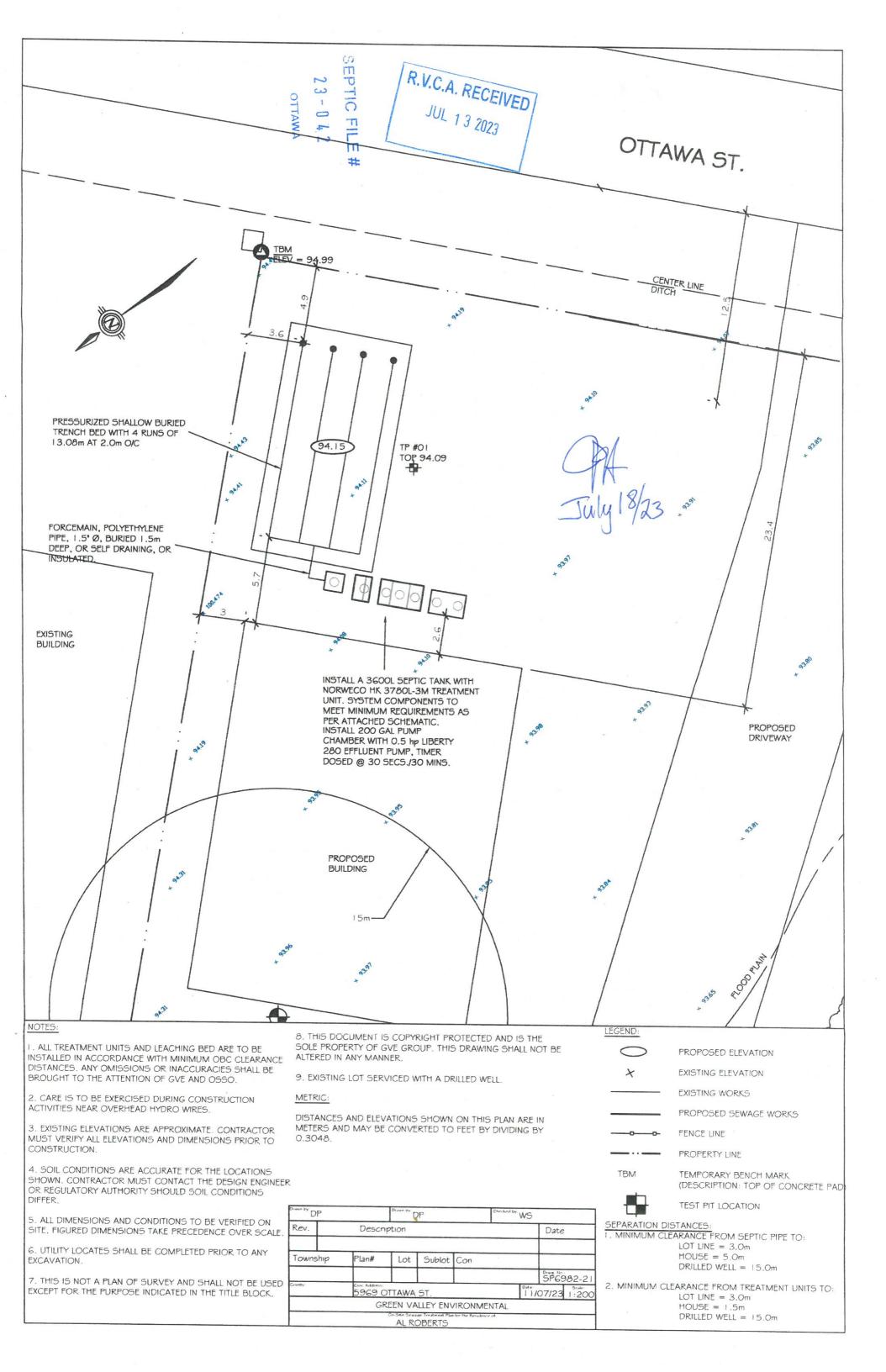


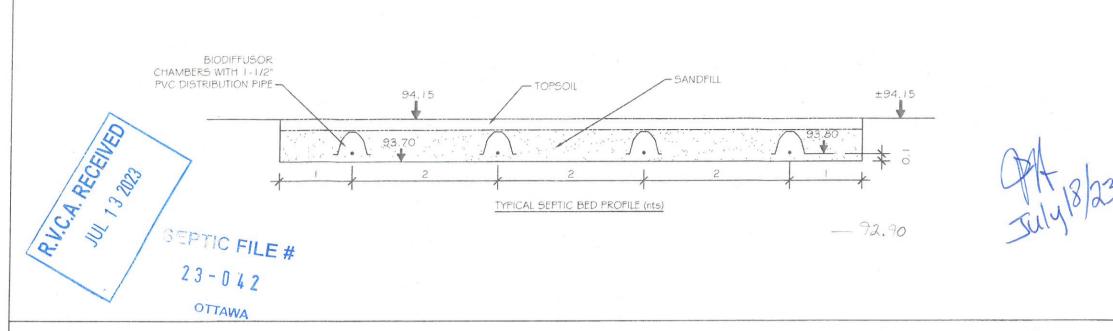
Permit Part 8 – Sewage System Ontario Building Code

A copy of this permit must be posted on the property at all time during construction. OBC, Division C — Part 1, Section 1.3.2.1

Do Not Complete	042
Permit No	042
Revision No	
Date	
Related Application	

This permit verifies that the on-site sewage system was reviewed and approved for construction under the Ontario Building Code and O.Reg. 323/12 as amended by O.Reg. 151/13. Inspected & Recommended by: J.HUTTON Al Roberts Owner: __ Inspection Date & Time: Civic: July 17, 2023 (3:45PM) sun (29C) Weather: __ Address: 5969 Ottawa St Legal: ___ In the former Township/City of Goulbourn Design Flow for Commercial / Institutional / Industrial (as per Table 8.2.1.3.B) L/day septic tank 3600 weigh bills for ☐ yes no no effluent filter ___ grain size analysis required □ yes no no time dosed pump rate _ __ L/15 MIN site to be scarified yes yes □ no treatment unit Norweco HK3780L-3M clay seal inspection ☐ yes no no number of units ___ mantle required yes no no sub-grade inspection □ yes no ELEVATION In Ground Partially Raised Fully Raised TYPE OF SYSTEM □ Trench Shallow Buried Trench OPipe and Stone or OChambers 52.32 pipe length ___ type of chamber ___ 0.6 orifice spacing _____ loading area ____ ☐ Filter Media Bed total trench length __ trench configuration ___ extended base ____ □ Dispersal Bed pipe ___ OBMEC O Type A O Type B weight of filter media ___ loading area ____ sand ___ □ Class 5 Holding Tank pipe _____ ☐ Septic Tank Only weight of sand Manager, Septic System Approvals: _ July 18, 2023 Comments: 1. Refer to RVCA#RV5-21/2 maintenance/pumping required ESA permit # required engineer to verify subgrade squirt height Class 5 Holding Tank approval only valid for three years from date of issue Manager, Septic System Approvals: ___ Revision Date: __





PRETREATMENT TANK

- INSTALL MIN. 3600L PRETREATMENT TANK
- A MAXIMUM OF 300mm OF SOIL SHALL COVER THE PRETREATMENT TANK.
- RISERS AND LIDS SHALL BE INSTALLED FOR EASE OF ACCESS

NORWECO TREATMENT UNIT

- THE TREATMENT UNIT SHALL CONSIST OF A NORWECO HYDRO-KENETIC 3780L-3M TREATMENT UNIT.
- THE TREATMENT UNIT SHALL BE INSTALLED IN SERIES AND DOWN STREAM FROM THE PRETREATMENT TANK.
- THE TREATMENT UNIT SHALL PRODUCE A TERTIARY TREATMENT EFFLUENT QUALITY IN ACCORDANCE WITH COLUMN 2 AND 3 OPPOSITE A LEVEL IV TREATMENT UNIT OF TABLE 8.6.2.2. OF THE ONTARIO BUILDING CODE.
- THE TREATMENT UNIT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS BY A CERTIFIED INSTALLER.
- THE OWNER OF THE TREATMENT UNIT MUST ENTER INTO A MAINTENANCE AGREEMENT WITH THE MANUFACTURER'S REPRESENTATIVE.
- THE TREATMENT UNIT SHALL BE BACKFILLED AND COMPACTED, IN LIFTS, WITH SELECT GRANULAR FILL, SUCH AS SAND OR CLEAR STONE
- THE TOP OF THE TREATMENT UNIT SHALL BE ACCESSIBLE TO THE SURFACE. INSTALL RISERS AND LIDS TO SUIT.

NORWECO FILTER VAULT(S)

- FILTER VAULT(S) SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
- FILTER VAULT(S) SHALL BE INSTALLED IN SERIES AND DOWN STREAM FROM THE TREATMENT UNIT
- FILTER VAULT(S) SHALL BE ACCESSIBLE TO THE SURFACE. INSTALL RISERS AND LIDS TO SUIT.

SHALLOW BURIED TRENCH BED

- THE DISPERSAL BED SHALL CONSIST OF A TOTAL LENGTH EQUAL TO Q/75 = 3450/75 = 46m
- TOTAL LENGTH USED = 52.32m
- SAND FILL SHALL EXTEND 1.0m ON ALL SIDES.
 REMOVE LAYER OF TOP SOIL TO APPROXIMATE FOOT PRINT OF SEPTIC BED AND SIDE SLOPES
- THE PRESSURIZED DISTRIBUTION SYSTEM SHALL HAVE A PRESSURE HEAD OF NOT LESS THAN GOOMM WHEN MEASURED AT THE MOST DISTANT POINT FROM THE PUMP.
- DISPERSAL BED SHALL BE BACKFILLED SO AS TO ENSURE THAT THE SURFACE WILL NOT FORM ANY DEPRESSIONS
- ALL SIDE SLOPES SHALL BE AT 1:4
- AT NO POINT DURING OR AFTER CONSTRUCTION SHALL A WHEELED VEHICLE DRIVE OVER THE SEPTIC BED AREA.
- EACH RUN SHALL CONSIST OF ONLY FULL CHAMBERS.
- SEPTIC DESIGN BASED ON ADS BIO3 CHAMBERS.
- EACH RUN SHALL CONSIST OF 6 FULL ADS BIO3 CHAMBERS WITH A TOTAL OF 24 FULL BIO3 CHAMBERS FOR THE ENTIRE SEPTIC BED.

MINIMUM CLEARANCE DISTANCE FROM LEACHING BED

- 4.0m FROM ANY PROPERTY LINE
- 6.0m FROM ANY STRUCTURE
- 16.0m FROM ANY DRILLED WELL

MINIMUM CLEARANCE DISTANCE FROM TANKS

- 3.0m FROM ANY PROPERTY LINE
- 1.5m FROM ANY STRUCTURE
- 15.0m FROM ANY DRILLED WELL

GENERAL

- THE BACKWASH WATERS FROM ANY HOUSEHOLD TREATMENT SUCH AS WATER SOFTENER SHALL NOT DISCHARGE INTO THE SEWAGE SYSTEM
- CONTRACTOR SHALL BE QUALIFIED AND REGISTERED UNDER PART 8 OF THE ONTARIO BUILDING CODE.
- CONTRACTOR SHALL VISIT THE SITE AND REVIEW ALL DOCUMENTATION TO DETERMINE SUITABLE METHODS OF CONSTRUCTION.
- INSPECTION BY THE REGULATING AUTHORITIES IS A REQUIREMENT BY SOME REGULATING AUTHORITIES AND IS STRONGLY RECOMMENDED BY GREEN VALLEY ENVIRONMENTAL INC.
- IT IS RECOMMENDED THAT ALL TREES WITHIN 5m OF THE BED AREA BE REMOVED TO PREVENT ROOTS FROM INFILTRATING THE SYSTEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UNDERGROUND SERVICES.
- SHOULD THE CONTRACTOR AT ANY TIME DURING CONSTRUCTION ENCOUNTER CONDITIONS THAT DIFFER FROM THE DESIGN CRITERIA IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGNER AND THE REGULATING AUTHORITY.
- GREEN VALLEY ENVIRONMENTAL INC. HAS PROVIDED DESIGNS BASED ON OUR INTERPRETATION OF THE ONTARIO BUILDING CODE AND THE TEST HOLES DUG ON THE PROPERTY.

- THIS CROSS SECTION IS NOT TO SCALE, ALL FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALE
- 2. THIS DOCUMENT IS COPYRIGHT PROTECTED AND IS THE SOLE PROPERTY OF GREEN VALLEY ENVIRONMENTAL INC. THIS DRAWING SHALL NOT BE ALTERED IN ANY MANNER.

DP DP		Design	DP DP			Checked b	ws	
ev.	Des	scription			Date		Approve	ed
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ty.	5969 C	OTTAWA	ST	-			Pate: 13/07/23	NTS
		GREEN	VALLEY E	NVIR	ONME	NTAL		
			AL ROBE		ter Resules	e of		

ATTACHMENT III Laboratory Certificate of Analysis - Water



300 - 2319 St. Laurent Blvd Ottawa, ON, K1G 4J8 1-800-749-1947 www.paracellabs.com

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Devin Clouthier

Client PO:

Project: 210341 Custody: 14477 Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

Order #: 2130209

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID 2130209-01 SA-1

Approved By:



Dale Robertson, BSc Laboratory Director



Order #: 2130209

Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

 Client:
 LRL Associates Ltd.
 Order Date: 20-Jul-2021

 Client PO:
 Project Description: 210341

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	22-Jul-21	22-Jul-21
Ammonia, as N	EPA 351.2 - Auto Colour	21-Jul-21	21-Jul-21
Anions	EPA 300.1 - IC	21-Jul-21	21-Jul-21
Colour	SM2120 - Spectrophotometric	21-Jul-21	21-Jul-21
Conductivity	EPA 9050A- probe @25 °C	22-Jul-21	22-Jul-21
Dissolved Organic Carbon	MOE E3247B - Combustion IR, filtration	22-Jul-21	22-Jul-21
E. coli	MOE E3407	21-Jul-21	22-Jul-21
Fecal Coliform	SM 9222D	21-Jul-21	22-Jul-21
Heterotrophic Plate Count	SM 9215C	20-Jul-21	22-Jul-21
Metals, ICP-MS	EPA 200.8 - ICP-MS	21-Jul-21	21-Jul-21
pH	EPA 150.1 - pH probe @25 °C	22-Jul-21	22-Jul-21
Phenolics	EPA 420.2 - Auto Colour, 4AAP	21-Jul-21	21-Jul-21
Hardness	Hardness as CaCO3	21-Jul-21	21-Jul-21
Sulphide	SM 4500SE - Colourimetric	21-Jul-21	21-Jul-21
Tannin/Lignin	SM 5550B - Colourimetric	22-Jul-21	22-Jul-21
Total Coliform	MOE E3407	21-Jul-21	22-Jul-21
Total Dissolved Solids	SM 2540C - gravimetric, filtration	22-Jul-21	22-Jul-21
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	21-Jul-21	22-Jul-21
Turbidity	SM 2130B - Turbidity meter	21-Jul-21	21-Jul-21



Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

Project Description: 210341

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

	. Г		ı ı		
	Client ID: Sample Date:	SA-1 20-Jul-21 12:30	-	-	-
	Sample ID:	2130209-01	_	-	_
	MDL/Units	Drinking Water	_	-	-
Microbiological Parameters		-			
E. coli	1 CFU/100 mL	ND	-	-	-
Fecal Coliforms	1 CFU/100 mL	ND	-	-	-
Total Coliforms	1 CFU/100 mL	13	-	-	-
Heterotrophic Plate Count	10 CFU/mL	190	-	-	-
General Inorganics	-		· · · · · · · · · · · · · · · · · · ·		
Alkalinity, total	5 mg/L	274	-	-	-
Ammonia as N	0.01 mg/L	0.13	-	-	-
Dissolved Organic Carbon	0.5 mg/L	0.7	-	-	-
Colour	2 TCU	25	-	-	-
Conductivity	5 uS/cm	1560	-	-	-
Hardness	mg/L	532	-	-	-
pН	0.1 pH Units	7.7	-	-	-
Phenolics	0.001 mg/L	<0.001	-	-	-
Total Dissolved Solids	10 mg/L	874	-	-	-
Sulphide	0.02 mg/L	<0.02	-	-	-
Tannin & Lignin	0.1 mg/L	<0.1	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	-	-	-
Turbidity	0.1 NTU	7.9	-	-	-
Anions	-		•		
Chloride	1 mg/L	267	-	-	-
Fluoride	0.1 mg/L	0.3	-	-	-
Nitrate as N	0.1 mg/L	<0.1	-	-	-
Nitrite as N	0.05 mg/L	<0.05	-	-	-
Sulphate	1 mg/L	99	-	-	-
Metals					
Calcium	0.1 mg/L	126	-	-	-
Iron	0.1 mg/L	0.7	-	-	-
Magnesium	0.2 mg/L	52.7	-	-	-
Manganese	0.005 mg/L	0.018	-	-	-
Potassium	0.1 mg/L	9.1	-	-	-
Sodium	0.2 mg/L	115	-	-	-



Order #: 2130209

Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

 Client:
 LRL Associates Ltd.
 Order Date: 20-Jul-2021

 Client PO:
 Project Description: 210341

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									·
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Dissolved Organic Carbon	ND	0.5	mg/L						
Colour	ND	2	TCU						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Calcium	ND	0.1	mg/L						
Iron	ND	0.1	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Sodium	ND	0.2	mg/L						
Microbiological Parameters									
E. coli	ND	1	CFU/100 mL						
Fecal Coliforms	ND	1	CFU/100 mL						
Total Coliforms	ND	1	CFU/100 mL						
Heterotrophic Plate Count	ND	10	CFU/mL						
neterotrophic Plate Count	ND	10	CFU/IIIL						



Order #: 2130209

Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

 Client:
 LRL Associates Ltd.
 Order Date: 20-Jul-2021

 Client PO:
 Project Description: 210341

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	129	1	mg/L	129			0.2	10	
Fluoride	0.74	0.1	mg/L	0.74			1.1	10	
Nitrate as N	ND	0.1	mg/L	ND			NC	10	
Nitrite as N	ND	0.05	mg/L	ND			NC	10	
Sulphate	48.8	1	mg/L	49.0			0.3	10	
General Inorganics									
Alkalinity, total	270	5	mg/L	274			1.4	14	
Ammonia as N	0.306	0.01	mg/L	0.299			2.4	17.7	
Dissolved Organic Carbon	2.0	0.5	mg/L	2.2			7.8	37	
Colour	25	2	TČU	25			0.0	12	
Conductivity	1540	5	uS/cm	1560			1.8	5	
pH	7.6	0.1	pH Units	7.7			0.1	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	80.0	10	mg/L	74.0			7.8	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	0.38	0.1	mg/L	0.40			5.4	16	
Turbidity	8.2	0.1	NTU	7.9			3.6	10	
Metals									
Calcium	9.0	0.1	mg/L	9.1			0.8	20	
Iron	ND	0.1	mg/L	ND			NC	20	
Magnesium	2.0	0.2	mg/L	2.0			0.9	20	
Manganese	ND	0.005	mg/L	ND			NC	20	
Potassium	0.7	0.1	mg/L	0.7			2.3	20	
Sodium	16.9	0.2	mg/L	17.4			2.8	20	
Microbiological Parameters									
E. coli	ND	1	CFU/100 mL	ND			NC	30	
Fecal Coliforms	4	1	CFU/100 mL	6			40.0	30	BAC04
Total Coliforms	ND	1	CFU/100 mL	ND			NC	30	
Heterotrophic Plate Count	ND	10	CFU/mL	ND			NC	30	



Report Date: 23-Jul-2021 Order Date: 20-Jul-2021

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	139	1	mg/L	129	95.5	77-123			
Fluoride	1.63	0.1	mg/L	0.74	88.2	79-121			
Nitrate as N	1.02	0.1	mg/L	ND	102	79-120			
Nitrite as N	1.01	0.05	mg/L	ND	101	84-117			
Sulphate	58.0	1	mg/L	49.0	89.9	74-126			
General Inorganics									
Ammonia as N	0.541	0.01	mg/L	0.299	96.8	81-124			
Dissolved Organic Carbon	11.9	0.5	mg/L	2.2	96.6	60-133			
Phenolics	0.027	0.001	mg/L	ND	107	69-132			
Total Dissolved Solids	94.0	10	mg/L	ND	94.0	75-125			
Sulphide	0.50	0.02	mg/L	ND	101	79-115			
Tannin & Lignin	1.1	0.1	mg/L	ND	105	71-113			
Total Kjeldahl Nitrogen	2.39	0.1	mg/L	0.40	99.1	81-126			
Metals									
Calcium	18700	0.1	mg/L	9100	96.3	80-120			
Iron	2560	0.1	mg/L	17.9	102	80-120			
Magnesium	11400	0.2	mg/L	2050	93.4	80-120			
Manganese	53.6	0.005	mg/L	2.37	102	80-120			
Potassium	10600	0.1	mg/L	740	98.2	80-120			
Sodium	25100	0.2	mg/L	17100	80.3	80-120			



Report Date: 23-Jul-2021 Order Date: 20-Jul-2021 Project Description: 210341

Certificate of Analysis Client: LRL Associates Ltd. Client PO:

Qualifier Notes:

Login Qualifiers:

Sample - Filtered and preserved by Paracel upon receipt at the laboratory - Metals preserved in the lab

Applies to samples: SA-1

Sample Qualifiers:

QC Qualifiers:

BAC04: Duplicate QC data falls within method prescribed 95% confidence limits.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated



Paracel ID: 2130209



Paracel Order Number

Chain Of Custody
Ontario Drinking Water Samples

2130209

Nº 14477

													/ 0 /										
Client	Name:	LRL Associates		Project Ref:	2103	41					Waterwork	Waterworks Name:							Sampl	les Tak	ken By:		
Conta	ct Name:	Devin Clouthie		Quote #:							Waterwork	ks Numbe	1			Name	e:	A	cih	C	lan H	iv	
Addre	ss:	5430 Cquotek Izd. O	Hanu, ON	PO #:							Address:	Address:					ture:	Oun Clouthin					
After I	Hours Contact:	(1 0)		E-mail:	deleuth	de	ابر	·(a	d.c	6.								Pa	ge_	<u>L</u> 0	of	_	
Teleph	ione:	613-842-343	1	Fax:			CON	S S S S S S			Public Heal	lth Unit:		-		Turn Around Time Required: ☐ 1 day ☐ 2 day ☐ 3 day 📓 4 da				day			
000	N REG 170/03 N REG 243/07		☑ Private W			Sou	rce T	ype:	G	≡ Grou	nd Water; S	= Surface	ribution; P = Pl Water egulation - Y = 1			Required Analyses				ses			
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		or human consumption?: n must be completed b		s will be pro	ressed.	R/T/I	e: G /	2. Y / B	ple		SAMPI	LE COLL	CTED	siners	d Chlo	g / Flusher (REG 243)	Coliform/E.	HPC	Lead	THM	Pad		
		ION NAME		SAMPLE ID		Sample Type: R/T/D/P	Source Type: G / S	Reportable: Y / N	Resample		DATE		TIME	# of Containers	Free/Combined Chlorine Residual mg/L	Standing / Flushed: S / F (REG 243)	Total Colife	1	9	H	Subdivision Padrage		
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300 - 2319 St. Laurent Blvd Ottawa, ON, K1G 4J8 1-800-749-1947 www.paracellabs.com

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Abdul Kader Alhaj

Client PO: Project: 210341 Custody: 15679

Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

Order #: 2133418

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID

2133418-01 5969 Ottawa St. - Supply well 3 hr 2133418-02 5969 Ottawa St. - Supply well 6 hr

Approved By:

Mark Froto

Mark Foto, M.Sc. Lab Supervisor



Order #: 2133418

Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

 Client:
 LRL Associates Ltd.
 Order Date: 11-Aug-2021

 Client PO:
 Project Description: 210341

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	12-Aug-21	12-Aug-21
Ammonia, as N	EPA 351.2 - Auto Colour	13-Aug-21	13-Aug-21
Anions	EPA 300.1 - IC	12-Aug-21	12-Aug-21
Colour	SM2120 - Spectrophotometric	12-Aug-21	12-Aug-21
Conductivity	EPA 9050A- probe @25 °C	12-Aug-21	12-Aug-21
Dissolved Organic Carbon	MOE E3247B - Combustion IR, filtration	12-Aug-21	12-Aug-21
E. coli	MOE E3407	12-Aug-21	13-Aug-21
Fecal Coliform	SM 9222D	12-Aug-21	13-Aug-21
Heterotrophic Plate Count	SM 9215C	12-Aug-21	12-Aug-21
Metals, ICP-MS	EPA 200.8 - ICP-MS	12-Aug-21	12-Aug-21
pH	EPA 150.1 - pH probe @25 °C	12-Aug-21	12-Aug-21
Phenolics	EPA 420.2 - Auto Colour, 4AAP	12-Aug-21	12-Aug-21
Hardness	Hardness as CaCO3	12-Aug-21	12-Aug-21
Sulphide	SM 4500SE - Colourimetric	17-Aug-21	17-Aug-21
Tannin/Lignin	SM 5550B - Colourimetric	13-Aug-21	13-Aug-21
Total Coliform	MOE E3407	12-Aug-21	13-Aug-21
Total Dissolved Solids	SM 2540C - gravimetric, filtration	13-Aug-21	16-Aug-21
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	12-Aug-21	12-Aug-21
Turbidity	SM 2130B - Turbidity meter	12-Aug-21	12-Aug-21



Order #: 2133418

Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

 Client:
 LRL Associates Ltd.
 Order Date: 11-Aug-2021

 Client PO:
 Project Description: 210341

	-				,
	Client ID:	5969 Ottawa St	5969 Ottawa St	-	-
	Sample Date:	Supply well 3 hr 11-Aug-21 11:10	Supply well 6 hr 11-Aug-21 14:10	_	_
	Sample ID:	2133418-01	2133418-02	-	-
	MDL/Units	Drinking Water	Drinking Water	-	-
Microbiological Parameters			•	•	-
E. coli	1 CFU/100 mL	ND	ND	-	-
Fecal Coliforms	1 CFU/100 mL	ND	ND	-	-
Total Coliforms	1 CFU/100 mL	ND	ND	-	-
Heterotrophic Plate Count	10 CFU/mL	280	120	-	-
General Inorganics			•		•
Alkalinity, total	5 mg/L	269	269	-	-
Ammonia as N	0.01 mg/L	0.12	0.12	-	-
Dissolved Organic Carbon	0.5 mg/L	1.8	1.9	-	-
Colour	2 TCU	21	30	-	-
Conductivity	5 uS/cm	1550	1530	-	-
Hardness	mg/L	514	509	-	-
pH	0.1 pH Units	7.8	7.8	-	-
Phenolics	0.001 mg/L	0.001	0.001	-	-
Total Dissolved Solids	10 mg/L	796	814	-	-
Sulphide	0.02 mg/L	<0.02	<0.02	-	-
Tannin & Lignin	0.1 mg/L	<0.1	<0.1	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	0.1	-	-
Turbidity	0.1 NTU	5.2	4.9	-	-
Anions					
Chloride	1 mg/L	266	264	-	-
Fluoride	0.1 mg/L	0.4	0.4	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	-	-
Sulphate	1 mg/L	82	82	-	-
Metals			•		
Calcium	0.1 mg/L	125	124	-	-
Iron	0.1 mg/L	0.5	0.5	-	-
Magnesium	0.2 mg/L	49.4	48.4	-	-
Manganese	0.005 mg/L	0.016	0.016	-	-
Potassium	0.1 mg/L	8.5	8.1	-	-
Sodium	0.2 mg/L	114	111	-	-



Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Dissolved Organic Carbon	ND	0.5	mg/L						
Colour	ND	2	TCU						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Calcium	ND	0.1	mg/L						
Iron	ND	0.1	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Sodium	ND	0.2	mg/L						
Microbiological Parameters									
E. coli	ND	1	CFU/100 mL						
Fecal Coliforms	ND	1	CFU/100 mL						
Total Coliforms	ND	1	CFU/100 mL						
Heterotrophic Plate Count	ND	10	CFU/mL						



Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Duplicate

		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Anions									
Chloride	264	5	mg/L	266			0.7	10	
Fluoride	0.35	0.1	mg/L	0.36			3.0	10	
Nitrate as N	ND	0.1	mg/L	ND			NC	10	
Nitrite as N	ND	0.05	mg/L	ND			NC	10	
Sulphate	83.9	1	mg/L	82.4			1.8	10	
General Inorganics									
Alkalinity, total	263	5	mg/L	269			2.3	14	
Ammonia as N	0.267	0.01	mg/L	0.267			0.0	17.7	
Dissolved Organic Carbon	1.9	0.5	mg/L	2.2			16.8	37	
Colour	20	2	TČU	21			4.9	12	
Conductivity	1530	5	uS/cm	1550			1.4	5	
pH	7.7	0.1	pH Units	7.8			0.1	3.3	
Phenolics	0.001	0.001	mg/L	0.001			8.0	10	
Total Dissolved Solids	62.0	10	mg/L	62.0			0.0	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	ND	0.1	mg/L	0.20			NC	16	
Turbidity	5.3	0.1	NTU	5.2			2.1	10	
Metals									
Calcium	29.8	0.1	mg/L	30.0			0.7	20	
Iron	ND	0.1	mg/L	ND			NC	20	
Magnesium	7.9	0.2	mg/L	8.2			3.3	20	
Manganese	ND	0.005	mg/L	ND			NC	20	
Potassium	0.3	0.1	mg/L	0.3			2.7	20	
Sodium	11.8	0.2	mg/L	11.7			0.6	20	
Microbiological Parameters			,						
E. coli	ND	1	CFU/100 mL	ND			NC	30	
Fecal Coliforms	ND	1	CFU/100 mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100 mL	ND			NC	30	



Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	8.70	1	mg/L	ND	87.0	85-115			
Fluoride	1.27	0.1	mg/L	0.36	90.8	79-121			
Nitrate as N	1.03	0.1	mg/L	ND	103	79-120			
Nitrite as N	0.993	0.05	mg/L	ND	99.3	84-117			
Sulphate	90.6	1	mg/L	82.4	81.3	74-126			
General Inorganics									
Ammonia as N	0.522	0.01	mg/L	0.267	102	81-124			
Dissolved Organic Carbon	13.4	0.5	mg/L	2.2	112	60-133			
Phenolics	0.025	0.001	mg/L	0.001	96.5	69-132			
Total Dissolved Solids	94.0	10	mg/L	ND	94.0	75-125			
Sulphide	0.51	0.02	mg/L	ND	101	79-115			
Tannin & Lignin	1.1	0.1	mg/L	ND	106	71-113			
Total Kjeldahl Nitrogen	2.04	0.1	mg/L	0.20	92.1	81-126			
Metals									
Calcium	37600	0.1	mg/L	30000	76.1	80-120		Q	M-07
Iron	2350	0.1	mg/L	6.4	93.8	80-120			
Magnesium	16800	0.2	mg/L	8200	86.1	80-120			
Manganese	49.0	0.005	mg/L	0.448	97.1	80-120			
Potassium	9590	0.1	mg/L	307	92.9	80-120			
Sodium	20500	0.2	mg/L	11700	87.6	80-120			



Report Date: 17-Aug-2021 Order Date: 11-Aug-2021

Project Description: 210341

Qualifier Notes:

Client PO:

Sample Qualifiers:

Certificate of Analysis

Client: LRL Associates Ltd.

QC Qualifiers :

QM-07: The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on

other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery. RPD: Relative percent difference.

NC: Not Calculated



Chain of Custody (Drinking Water).xlsx

TRUSTED.
RESPONSIVE



Chain Of Custody
Ontario Drinking Water Samples

Nº 15679

	_													100000							
Client Name:	LRL Engli	neering	Project Ref:	20	31	11				Waterworks N	ame:						Sample	es Tak	ten By:		
Contact Name:	LRL Engli Abdul Kade 5430 Canote	Alhai	Quote #:							Waterworks N	umber:			Name	à:	A'	bat	1/1	Radi	er All	(2)
Address:	5430 Carote	elr Rd.	PO #:		1	_		1		Address:				Signa	ture:	10	- Au	1	5	· /4 // >	V
After Hours Contact:			E-mail;	atto	de	7 (S	91 91	かし	Ca							Pa	ige	10	of		1
Telephone:	819328	2592	Fax:	CANAC	70-4		· V	· ·		Public Health L	Jnit:								e Requir	red: Regi ⊒4 day	N.
Samples Submitted ON REG 170/0 ON REG 243/0	Under: (Indicate ONLY of 3 ON REG 319/08	one) 8 🛮 Private W	/ell		Sour	ce Ty	ype:	G :	= Ground	Water; S = Su							Requ	uired	l Analys	es	
	en submitted to MOE/M	OHLTC?: □ Yes	□ No □ N/A		1. 1	ortab	le: Re	equir	res AWQI	reporting as	per Regulation - Y = Ye	es; N =	No	_	-				5		
Are these samples f	or human consumption	?: ☐ Yes ☐ No			Type: R/T/D/P	Type: G / S	N/A	e e		SAMPLE (COLLECTED	ners	Chlorin 1g/L	ushed: 243)	m/E. Coli		,	ę	isio		
	TION NAME		SAMPLE ID	cessea.		Source Type	Reportable: Y / N	Resample			· .	# of Containers	ee/Combined Chlori Residual mg/L	Standing / Flushed: S / F (REG 243)	Total Coliform/E.	HPC	Lead	THM	Subalivision		
					Sample	So	Re			DATE	TIME	#	Free/C	Star S,	Tot				3		
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Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Abdul Kader Alhaj

Client PO: Project: 21

Project: 210341 Custody: 18578 Report Date: 30-Jan-2023 Order Date: 24-Jan-2023

Order #: 2304185

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID

2304185-01 Supply Well - 4hr

Approved By:



Dale Robertson, BSc Laboratory Director



Conder #: 2304185

Report Date: 30-Jan-2023 Order Date: 24-Jan-2023 **Project Description: 210341**

Client: LRL Associates Ltd. Client PO:

Certificate of Analysis

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	25-Jan-23	25-Jan-23
Ammonia, as N	EPA 351.2 - Auto Colour	27-Jan-23	27-Jan-23
Anions	EPA 300.1 - IC	25-Jan-23	25-Jan-23
Conductivity	EPA 9050A- probe @25 °C	25-Jan-23	25-Jan-23
Dissolved Organic Carbon	MOE E3247B - Combustion IR, filtration	25-Jan-23	25-Jan-23
E. coli	MOE E3407	25-Jan-23	25-Jan-23
Fecal Coliform	SM 9222D	25-Jan-23	25-Jan-23
Heterotrophic Plate Count	SM 9215C	25-Jan-23	25-Jan-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	25-Jan-23	25-Jan-23
рН	EPA 150.1 - pH probe @25 °C	25-Jan-23	25-Jan-23
Phenolics	EPA 420.2 - Auto Colour, 4AAP	25-Jan-23	25-Jan-23
Hardness	Hardness as CaCO3	25-Jan-23	25-Jan-23
Sulphide	SM 4500SE - Colourimetric	26-Jan-23	26-Jan-23
Tannin/Lignin	SM 5550B - Colourimetric	30-Jan-23	30-Jan-23
Total Coliform	MOE E3407	25-Jan-23	25-Jan-23
Total Dissolved Solids	SM 2540C - gravimetric, filtration	26-Jan-23	27-Jan-23
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	27-Jan-23	30-Jan-23



Order #: 2304185

Report Date: 30-Jan-2023

Client: LRL Associates Ltd.
Client PO:

Order Date: 24-Jan-2023 **Project Description: 210341**

	01:am4 ID.	Supply Well - 4hr			Ī
	Client ID: Sample Date:	24-Jan-23 12:05	_	-	-
	Sample Date:	2304185-01	- -	-	-
	MDL/Units	Drinking Water	_	-	-
Microbiological Parameters	MDL/OIIIts	5			
E. coli	1 CFU/100mL	ND	-	-	-
Fecal Coliforms	1 CFU/100mL	ND	-	-	-
Total Coliforms	1 CFU/100mL	ND	-	-	-
Heterotrophic Plate Count	10 CFU/mL	<10	-	-	-
General Inorganics					•
Alkalinity, total	5 mg/L	268	-	-	-
Ammonia as N	0.01 mg/L	0.13	-	-	-
Dissolved Organic Carbon	0.5 mg/L	5.7	-	-	-
Conductivity	5 uS/cm	1680	-	-	-
Hardness	mg/L	549	-	-	-
рН	0.1 pH Units	7.7	-	-	-
Phenolics	0.001 mg/L	<0.001	-	-	-
Total Dissolved Solids	10 mg/L	898	-	-	-
Sulphide	0.02 mg/L	<0.02	-	-	-
Tannin & Lignin	0.1 mg/L	<0.1	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	-	-	-
Anions	•	•	•		
Chloride	1 mg/L	298	-	-	-
Fluoride	0.1 mg/L	0.3	-	-	-
Nitrate as N	0.1 mg/L	<0.1	-	-	-
Nitrite as N	0.05 mg/L	<0.05	-	-	-
Sulphate	1 mg/L	77	-	-	-
Metals			•		
Calcium	0.1 mg/L	136	-	-	-
Iron	0.1 mg/L	0.6	-	-	-
Magnesium	0.2 mg/L	50.8	-	-	-
Manganese	0.005 mg/L	0.016	-	-	-
Potassium	0.1 mg/L	8.1	-	-	-
Sodium	0.2 mg/L	120	-	-	-



Certificate of Analysis

Client: LRL Associates Ltd.

Order #: 2304185

Report Date: 30-Jan-2023 Order Date: 24-Jan-2023

Project Description: 210341

Client PO:

		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Anions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Dissolved Organic Carbon	ND	0.5	mg/L						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
letals									
Calcium	ND	0.1	mg/L						
Iron	ND	0.1	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Sodium	ND	0.2	mg/L						
licrobiological Parameters									
E. coli	ND	1	CFU/100mL						
Fecal Coliforms	ND	1	CFU/100mL						
Total Coliforms	ND	1	CFU/100mL						
Heterotrophic Plate Count	ND	10	CFU/mL						



Certificate of Analysis

Client: LRL Associates Ltd.

Order #: 2304185

Report Date: 30-Jan-2023 Order Date: 24-Jan-2023

Client PO: Project Description: 210341

Method Quality Control: Duplicate

Analys		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Anions				·		·		·	
Chloride	298	1	mg/L	298			0.1	20	
Fluoride	0.26	0.1	mg/L	0.27			4.2	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Sulphate	76.9	1	mg/L	76.9			0.0	20	
General Inorganics									
Alkalinity, total	265	5	mg/L	268			1.4	14	
Ammonia as N	0.031	0.01	mg/L	ND			NC	17.7	
Dissolved Organic Carbon	4.6	0.5	mg/L	5.7			21.1	37	
Conductivity	1660	5	uS/cm	1680			1.3	5	
рН	7.8	0.1	pH Units	7.7			0.9	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	ND	10	mg/L	ND			NC	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	0.19	0.1	mg/L	0.22			NC	16	
Metals									
Calcium	9.5	0.1	mg/L	9.7			1.7	20	
Iron	0.4	0.1	mg/L	0.4			0.5	20	
Magnesium	2.2	0.2	mg/L	2.3			5.8	20	
Manganese	ND	0.005	mg/L	ND			NC	20	
Potassium	0.6	0.1	mg/L	0.6			1.8	20	
Sodium	17.4	0.2	mg/L	18.3			5.1	20	
Microbiological Parameters									
E. coli	ND	1	CFU/100mL	ND			NC	30	
Fecal Coliforms	ND	1	CFU/100mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100mL	ND			NC	30	
Heterotrophic Plate Count	ND	10	CFU/mL	ND			NC	30	



Report Date: 30-Jan-2023 Order Date: 24-Jan-2023

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	307	1	mg/L	298	89.3	70-124			
Fluoride	1.24	0.1	mg/L	0.27	96.6	70-130			
Nitrate as N	1.00	0.1	mg/L	ND	100	77-126			
Nitrite as N	0.936	0.05	mg/L	ND	93.6	82-115			
Sulphate	86.1	1	mg/L	76.9	91.9	70-130			
General Inorganics									
Ammonia as N	1.04	0.01	mg/L	ND	104	81-124			
Dissolved Organic Carbon	7.9	0.5	mg/L	ND	79.0	60-133			
Phenolics	0.026	0.001	mg/L	ND	105	67-133			
Total Dissolved Solids	92.0	10	mg/L	ND	92.0	75-125			
Sulphide	0.51	0.02	mg/L	ND	102	79-115			
Tannin & Lignin	1.0	0.1	mg/L	ND	97.3	71-113			
Total Kjeldahl Nitrogen	1.20	0.1	mg/L	0.22	97.5	81-126			
Metals									
Calcium	17700	0.1	mg/L	9660	80.7	80-120			
Iron	2440	0.1	mg/L	416	81.1	80-120			
Magnesium	11100	0.2	mg/L	2290	88.4	80-120			
Manganese	49.5	0.005	mg/L	3.75	91.5	80-120			
Potassium	9090	0.1	mg/L	647	84.4	80-120			
Sodium	24900	0.2	mg/L	18300	66.0	80-120		Q	M-07



Report Date: 30-Jan-2023 Order Date: 24-Jan-2023 Project Description: 210341

Client PO: Project

Qualifier Notes:

Sample Qualifiers:

Certificate of Analysis

Client: LRL Associates Ltd.

QC Qualifiers :

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery. RPD: Relative percent difference.

NC: Not Calculated





Blvd. ibs.com Paracel Order Number

Chain Of Custody

Ontario Drinking Water Samples

№ 18578

Client Name:	LRL ASS	ociates	Project Ref:	21	0	341			Waterworks f	Name:	(0		1	100		Cample	es Taken	D	2.25
Contact Name:	Abdul tra	der	Quote #:			-1			Waterworks N	Number:			Name	31	1	Jample	is taken	oy:	2,5
Address:	5430 Canot	ek RJ	PO II:						Address:					-	1	100	<u>W</u>	Saar	4
After Hours Contact:		T My	E-mail;	ak		Va	11	/n			-		Signa	ture:	9				
Telephone:	61331564	02-	Fax:	will	W		11 1	-	Public Health	I facility			-	1	Pa Turn A	ge tround	of _ I Time F	lequired:	
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Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Abdul Kader Alhaj

Client PO:

Project: 210341 Custody: 18578 Report Date: 25-Jan-2023 Order Date: 24-Jan-2023

Order #: 2304200

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID

2304200-01 Supply Well - 4hr

Approved By:

Mark Froto

Mark Foto, M.Sc. Lab Supervisor



Report Date: 25-Jan-2023 Order Date: 24-Jan-2023 Project Description: 210341

Client: LRL Associates Ltd. Client PO:

Certificate of Analysis

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Colour	SM2120 - Spectrophotometric	25-Jan-23	25-Jan-23
Turbidity	SM 2130B - Turbidity meter	25-Jan-23	25-Jan-23



Certificate of AnalysisReport Date: 25-Jan-2023Client:LRL Associates Ltd.Order Date: 24-Jan-2023

Client PO: Project Description: 210341

	Client ID:	Supply Well - 4hr	-	-	-
	Sample Date:	24-Jan-23 12:05	-	-	-
	Sample ID:	2304200-01	-	-	-
	MDL/Units	Drinking Water	-	-	-
General Inorganics	•	•	•		-
Colour	2 TCU	<2	-	-	-
Turbidity	0.1 NTU	6.4	-	-	-



Order #: 2304200

Report Date: 25-Jan-2023 Order Date: 24-Jan-2023

 Client:
 LRL Associates Ltd.
 Order Date: 24-Jan-2023

 Client PO:
 Project Description: 210341

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Colour	ND	2	TCU						
Turbidity	ND	0.1	NTU						



Order #: 2304200

Report Date: 25-Jan-2023 Order Date: 24-Jan-2023

 Client:
 LRL Associates Ltd.
 Order Date: 24-Jan-2023

 Client PO:
 Project Description: 210341

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Colour	ND	2	TCU	ND			NC	12	
Turbidity	6.5	0.1	NTU	6.4			1.5	10	



Report Date: 25-Jan-2023 Order Date: 24-Jan-2023 Project Description: 210341

 Client:
 LRL Associates Ltd.

 Client PO:
 Project

Qualifier Notes:

Sample Data Revisions

Certificate of Analysis

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated





Blvd. Paracel Order Number

ibs.com n Chain Of Custody Ontario Drinking Water Samples

Done

2304185 -19. 230420- Ras

Nº 18578

Client Name:	LRL Asso	acialar	Project Ref:	21	17	,u	1				200	70	0- 10	12	_	1,000	98. 9			
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Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Abdul Kader Alhaj

Client PO: Project: 210

Project: 210341 Custody: 18572 Report Date: 1-Feb-2023 Order Date: 26-Jan-2023

Order #: 2304338

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID

2304338-01 Supply Well - 4hrs 2304338-02 Supply Well - 8hrs

Approved By:



Dale Robertson, BSc Laboratory Director



Certificate of Analysis Client: LRL Associates Ltd.

Order Date: 26-Jan-2023 Client PO: Project Description: 210341

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	27-Jan-23	27-Jan-23
Ammonia, as N	EPA 351.2 - Auto Colour	27-Jan-23	27-Jan-23
Anions	EPA 300.1 - IC	30-Jan-23	30-Jan-23
Colour	SM2120 - Spectrophotometric	26-Jan-23	26-Jan-23
Conductivity	EPA 9050A- probe @25 °C	27-Jan-23	27-Jan-23
Dissolved Organic Carbon	MOE E3247B - Combustion IR, filtration	30-Jan-23	30-Jan-23
E. coli	MOE E3407	26-Jan-23	26-Jan-23
Fecal Coliform	SM 9222D	26-Jan-23	26-Jan-23
Heterotrophic Plate Count	SM 9215C	26-Jan-23	26-Jan-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	27-Jan-23	27-Jan-23
рН	EPA 150.1 - pH probe @25 °C	27-Jan-23	27-Jan-23
Phenolics	EPA 420.2 - Auto Colour, 4AAP	27-Jan-23	27-Jan-23
Hardness	Hardness as CaCO3	27-Jan-23	27-Jan-23
Sulphide	SM 4500SE - Colourimetric	26-Jan-23	26-Jan-23
Tannin/Lignin	SM 5550B - Colourimetric	30-Jan-23	30-Jan-23
Total Coliform	MOE E3407	26-Jan-23	26-Jan-23
Total Dissolved Solids	SM 2540C - gravimetric, filtration	26-Jan-23	27-Jan-23
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	27-Jan-23	30-Jan-23
Turbidity	SM 2130B - Turbidity meter	26-Jan-23	26-Jan-23
VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	28-Jan-23	28-Jan-23

Report Date: 01-Feb-2023



Certificate of Analysis Client: LRL Associates Ltd.

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Project Description: 210341 Client PO:

	Client ID: Sample Date:	Supply Well - 4hrs 25-Jan-23 12:05	Supply Well - 8hrs 25-Jan-23 16:00	- -	- -
	Sample ID:	2304338-01 Drinking Water	2304338-02 Drinking Water	-	-
Microbiological Parameters	MDL/Units	Brinking Water	Brinking Water		
E. coli	1 CFU/100mL	ND	ND	-	-
Fecal Coliforms	1 CFU/100mL	ND	ND	-	-
Total Coliforms	1 CFU/100mL	ND	ND	-	-
Heterotrophic Plate Count	10 CFU/mL	<10	10	-	-
General Inorganics	-		-		-
Alkalinity, total	5 mg/L	268	267	-	-
Ammonia as N	0.01 mg/L	0.15	0.13	-	-
Dissolved Organic Carbon	0.5 mg/L	8.9	8.9	-	-
Colour	2 TCU	<2	<2	-	-
Conductivity	5 uS/cm	1720	1710	-	-
Hardness	mg/L	535	524	-	-
pH	0.1 pH Units	7.9	7.9	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	-	-
Total Dissolved Solids	10 mg/L	892	836	-	-
Sulphide	0.02 mg/L	<0.02	<0.02	-	-
Tannin & Lignin	0.1 mg/L	<0.1	<0.1	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	0.1	-	-
Turbidity	0.1 NTU	4.1	3.8	-	-
Anions	•				•
Chloride	1 mg/L	299	299	-	-
Fluoride	0.1 mg/L	0.2	0.3	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	-	-
Sulphate	1 mg/L	79	78	-	-
Metals					
Aluminum	0.001 mg/L	0.012	0.014	-	-
Antimony	0.0005 mg/L	<0.0005	<0.0005	-	-
Arsenic	0.001 mg/L	<0.001	<0.001	-	-
Barium	0.001 mg/L	0.140	0.136	-	-
Boron	0.01 mg/L	0.22	0.22	-	-
Cadmium	0.0001 mg/L	<0.0001	<0.0001	-	-
Calcium	0.1 mg/L	132	131	-	-
Chromium	0.001 mg/L	<0.001	<0.001	-	-
Copper	0.0005 mg/L	<0.0005	<0.0005	-	-
Iron	0.1 mg/L	0.6	0.5	-	-



Order #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Client PO: Project Description: 210341

	Client ID: Sample Date: Sample ID: MDL/Units	Supply Well - 4hrs 25-Jan-23 12:05 2304338-01 Drinking Water	Supply Well - 8hrs 25-Jan-23 16:00 2304338-02 Drinking Water	- - -	- - -
Lead	0.0001 mg/L	0.0002	<0.0001	-	-
Magnesium	0.2 mg/L	50.0	47.9	-	-
Manganese	0.005 mg/L	0.017	0.017	-	-
Potassium	0.1 mg/L	8.4	8.4	-	-
Selenium	0.001 mg/L	<0.001	<0.001	-	-
Sodium	0.2 mg/L	118	112	-	-
Uranium	0.0001 mg/L	0.0006	0.0006	-	-
Zinc	0.005 mg/L	<0.005	<0.005	-	-
Volatiles	<u> </u>				
Acetone	0.0050 mg/L	<0.0050	<0.0050	-	-
Benzene	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromodichloromethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromoform	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromomethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Carbon Tetrachloride	0.0002 mg/L	<0.0002	<0.0002	-	-
Chlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
Chloroethane	0.0010 mg/L	<0.0010	<0.0010	-	-
Chloroform	0.0005 mg/L	<0.0005	<0.0005	-	-
Dibromochloromethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Dichlorodifluoromethane	0.0010 mg/L	<0.0010	<0.0010	-	-
1,2-Dibromoethane	0.0002 mg/L	<0.0002	<0.0002	-	-
1,2-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,3-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,4-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1-Dichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
cis-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
trans-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloroethylene, total	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloropropane	0.0005 mg/L	<0.0005	<0.0005	-	-
cis-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	<0.0005	-	-
trans-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,3-Dichloropropene, total	0.0005 mg/L	<0.0005	<0.0005	-	-
Ethylbenzene	0.0005 mg/L	<0.0005	<0.0005	-	-



Certificate of Analysis
Client: LRL Associates Ltd.

Client PO: Proje

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023 Project Description: 210341

	Client ID:	Supply Well - 4hrs	Supply Well - 8hrs	-	-
	Sample Date:	25-Jan-23 12:05	25-Jan-23 16:00	-	-
	Sample ID:	2304338-01	2304338-02	-	-
	MDL/Units	Drinking Water	Drinking Water	-	-
Hexane	0.0010 mg/L	<0.0010	<0.0010	1	-
Methyl Ethyl Ketone (2-Butanone)	0.0050 mg/L	<0.0050	<0.0050	-	-
Methyl Isobutyl Ketone	0.0050 mg/L	<0.0050	<0.0050	-	-
Methyl tert-butyl ether	0.0020 mg/L	<0.0020	<0.0020	-	-
Methylene Chloride	0.0050 mg/L	<0.0050	<0.0050	-	-
Styrene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,1,2-Tetrachloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,2,2-Tetrachloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Tetrachloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Toluene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,1-Trichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,2-Trichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Trichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Trichlorofluoromethane	0.0010 mg/L	<0.0010	<0.0010	-	-
Vinyl chloride	0.0002 mg/L	<0.0002	<0.0002	-	-
m,p-Xylenes	0.0005 mg/L	<0.0005	<0.0005	-	-
o-Xylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Xylenes, total	0.0005 mg/L	<0.0005	<0.0005	-	-
4-Bromofluorobenzene	Surrogate	114%	116%	-	-
Dibromofluoromethane	Surrogate	127%	127%	•	-
Toluene-d8	Surrogate	109%	109%	-	-



Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Dissolved Organic Carbon	ND	0.5	mg/L						
Colour	ND	2	TCU						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Aluminum	ND	0.001	mg/L						
Antimony	ND	0.0005	mg/L						
Arsenic	ND	0.001	mg/L						
Barium	ND	0.001	mg/L						
Boron	ND	0.01	mg/L						
Cadmium	ND	0.0001	mg/L						
Calcium	ND	0.1	mg/L						
Chromium	ND	0.001	mg/L						
Copper	ND	0.0005	mg/L						
Iron	ND	0.1	mg/L						
Lead	ND	0.0001	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Selenium	ND	0.001	mg/L						
Sodium	ND	0.2	mg/L						
Uranium	ND	0.0001	mg/L						
Zinc	ND	0.005	mg/L						
Microbiological Parameters			J						
E. coli	ND	1	CFU/100mL						
Fecal Coliforms	ND	1	CFU/100mL						
Total Coliforms	ND	1	CFU/100mL						
Heterotrophic Plate Count	ND	10	CFU/mL						
Volatiles									
Acetone	ND	0.0050	mg/L						
Benzene	ND	0.0005	mg/L						
Bromodichloromethane	ND	0.0005	mg/L						
Bromoform	ND	0.0005	mg/L						
Bromomethane	ND	0.0005	mg/L						
Carbon Tetrachloride	ND	0.0002	mg/L						
Chlorobenzene	ND	0.0005	mg/L						
Chloroethane	ND	0.0010	mg/L						
Chloroform	ND	0.0005	mg/L						
Dibromochloromethane	ND	0.0005	mg/L						
Dichlorodifluoromethane	ND	0.0010	mg/L						
1,2-Dibromoethane	ND	0.0002	mg/L						
1,2-Dichlorobenzene	ND	0.0002	mg/L						
1,3-Dichlorobenzene	ND	0.0005	mg/L						



Certificate of Analysis

Order #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

 Client:
 LRL Associates Ltd.
 Order Date: 26-Jan-2023

 Client PO:
 Project Description: 210341

Method Quality Control: Blank

Analyte	Result	Reporting	Lle 4 -	Source	0/ 050	%REC	DDD	RPD	Notes
, mary to	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
1,1-Dichloroethane	ND	0.0005	mg/L						
1,2-Dichloroethane	ND	0.0005	mg/L						
1,1-Dichloroethylene	ND	0.0005	mg/L						
cis-1,2-Dichloroethylene	ND	0.0005	mg/L						
trans-1,2-Dichloroethylene	ND	0.0005	mg/L						
1,2-Dichloroethylene, total	ND	0.0005	mg/L						
1,2-Dichloropropane	ND	0.0005	mg/L						
cis-1,3-Dichloropropylene	ND	0.0005	mg/L						
trans-1,3-Dichloropropylene	ND	0.0005	mg/L						
1,3-Dichloropropene, total	ND	0.0005	mg/L						
Ethylbenzene	ND	0.0005	mg/L						
Hexane	ND	0.0010	mg/L						
Methyl Ethyl Ketone (2-Butanone)	ND	0.0050	mg/L						
Methyl Isobutyl Ketone	ND	0.0050	mg/L						
Methyl tert-butyl ether	ND	0.0020	mg/L						
Methylene Chloride	ND	0.0050	mg/L						
Styrene	ND	0.0005	mg/L						
1,1,1,2-Tetrachloroethane	ND	0.0005	mg/L						
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L						
Tetrachloroethylene	ND	0.0005	mg/L						
Toluene	ND	0.0005	mg/L						
1,1,1-Trichloroethane	ND	0.0005	mg/L						
1,1,2-Trichloroethane	ND	0.0005	mg/L						
Trichloroethylene	ND	0.0005	mg/L						
Trichlorofluoromethane	ND	0.0010	mg/L						
Vinyl chloride	ND	0.0002	mg/L						
m,p-Xylenes	ND	0.0005	mg/L						
o-Xylene	ND	0.0005	mg/L						
Xylenes, total	ND	0.0005	mg/L						
Surrogate: 4-Bromofluorobenzene	0.0918		mg/L		115	50-140			
Surrogate: Dibromofluoromethane	0.103		mg/L		129	50-140			
Surrogate: Toluene-d8	0.0870		mg/L		109	50-140			



Order #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Client PO: Project Description: 210341

Method Quality Control: Duplicate

A made da	_	Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Anions									
Chloride	255	1	mg/L	255			0.0	20	
Fluoride	0.22	0.1	mg/L	0.22			1.5	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Sulphate	ND	1	mg/L	ND			NC	20	
Seneral Inorganics	ND	ļ	mg/L	ND			NO	20	
<u> </u>	205	_	,,	000					
Alkalinity, total	265	5	mg/L	268			0.9	14	
Ammonia as N	0.031	0.01	mg/L	ND			NC	17.7	
Dissolved Organic Carbon	7.7	0.5	mg/L	8.9			14.2	37	
Colour	ND	2	TCU	ND			NC	12	
Conductivity	1690	5	uS/cm	1720			1.8	5	
pH	7.9	0.1	pH Units	7.9			8.0	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	ND	10	mg/L	ND			NC	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	0.19	0.1	mg/L	0.22			NC	16	
Turbidity	0.2	0.1	NTU	0.2			5.1	10	
letals .									
Aluminum	0.026	0.001	mg/L	0.019			34.2	20	QR-05
Antimony	ND	0.0005	mg/L	ND			NC	20	
Arsenic	ND	0.000	mg/L	ND			NC	20	
Barium	0.104	0.001	mg/L	0.112			8.1	20	
Boron	0.104	0.001	mg/L	0.112			0.3	20	
Cadmium	ND	0.0001	mg/L	ND			NC	20	
Calcium	85.0	0.0001	mg/L	83.0			2.4	20	
Chromium	ND	0.001	mg/L	ND			NC	20	
Iron	2.3	0.001		2.4			4.1	20	
		0.0001	mg/L				4.1	20	
Lead	0.0066 12.2	0.0001	mg/L	0.0064			0.2	20	
Magnesium			mg/L	12.2					
Manganese	0.049	0.005	mg/L	0.050			0.8	20	
Potassium	0.8	0.1	mg/L	0.7			5.4	20	
Selenium	ND	0.001	mg/L	ND			NC	20	
Sodium	17.1	0.2	mg/L	18.4			7.3	20	
Uranium	0.0003	0.0001	mg/L	0.0003			0.2	20	
Zinc	0.024	0.005	mg/L	0.024			1.5	20	
licrobiological Parameters									
E. coli	ND	1	CFU/100mL	ND			NC	30	
Fecal Coliforms	ND	1	CFU/100mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100mL	ND			NC	30	
Heterotrophic Plate Count	ND	10	CFU/mL	ND			NC	30	
olatiles									
Acetone	ND	0.0050	mg/L	ND			NC	30	
Benzene	ND	0.0005	mg/L	ND			NC	30	
Bromodichloromethane	0.0039	0.0005	mg/L	0.0036			6.1	30	
Bromoform	ND	0.0005	mg/L	ND			NC	30	
Bromomethane	ND	0.0005	mg/L	ND			NC	30	
Carbon Tetrachloride	ND	0.0002	mg/L	ND			NC	30	
Chlorobenzene	ND ND	0.0002	mg/L	ND			NC	30	
Chloroethane	ND ND	0.0003	mg/L	ND			NC	30	
Chloroform	0.0234		-				2.5		
		0.0005	mg/L	0.0229				30	
Dibromochloromethane	ND	0.0005	mg/L	ND			NC	30	
Dichlorodifluoromethane	ND	0.0010	mg/L	ND			NC	30	
1,2-Dibromoethane	ND	0.0002	mg/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	



Crder #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Client PO: Project Description: 210341

Method Quality Control: Duplicate

		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
1,4-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloropropane	ND	0.0005	mg/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
Ethylbenzene	ND	0.0005	mg/L	ND			NC	30	
Hexane	ND	0.0010	mg/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	0.0050	mg/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	0.0050	mg/L	ND			NC	30	
Methyl tert-butyl ether	ND	0.0020	mg/L	ND			NC	30	
Methylene Chloride	ND	0.0050	mg/L	ND			NC	30	
Styrene	ND	0.0005	mg/L	ND			NC	30	
1,1,2-Tetrachloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L	ND			NC	30	
Tetrachloroethylene	ND	0.0005	mg/L	ND			NC	30	
Toluene	ND	0.0005	mg/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
Trichloroethylene	ND	0.0005	mg/L	ND			NC	30	
Trichlorofluoromethane	ND	0.0010	mg/L	ND			NC	30	
Vinyl chloride	ND	0.0002	mg/L	ND			NC	30	
m,p-Xylenes	ND	0.0005	mg/L	ND			NC	30	
o-Xylene	ND	0.0005	mg/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	0.0902		mg/L		113	50-140			
Surrogate: Dibromofluoromethane	0.104		mg/L		130	50-140			
Surrogate: Toluene-d8	0.0866		mg/L		108	50-140			



Order #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Client PO: Project Description: 210341

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	265	1	mg/L	255	99.4	70-124			
Fluoride	1.22	0.1	mg/L	0.22	100	70-130			
Nitrate as N	1.01	0.1	mg/L	ND	101	77-126			
Nitrite as N	0.937	0.05	mg/L	ND	93.7	82-115			
Sulphate	10.0	1	mg/L	ND	100	70-130			
General Inorganics									
Ammonia as N	1.04	0.01	mg/L	ND	104	81-124			
Dissolved Organic Carbon	17.2	0.5	mg/L	8.9	82.6	60-133			
Phenolics	0.027	0.001	mg/L	ND	109	67-133			
Total Dissolved Solids	92.0	10	mg/L	ND	92.0	75-125			
Sulphide	0.51	0.02	mg/L	ND	102	79-115			
Tannin & Lignin	1.0	0.1	mg/L	ND	97.3	71-113			
Total Kjeldahl Nitrogen	1.20	0.1	mg/L	0.22	97.5	81-126			
Metals	0			V	55				
	64.7	0.004	me/l	10.6	oe o	00 400			
Aluminum	61.7	0.001	mg/L	18.6	86.2	80-120			
Arsenic	48.9	0.001	mg/L	0.193	97.4	80-120			
Barium	154	0.001	mg/L	112	83.9	80-120		,	QM-07
Boron	147	0.01	mg/L	110	74.4	80-120		(7 N-IVI
Cadmium Calcium	47.7	0.0001 0.1	mg/L	0.0172 ND	95.3	80-120			
	9450		mg/L		94.5	80-120			
Connec	50.6	0.001	mg/L	0.354	100	80-120			
Copper	45.6 4470	0.0005	mg/L	ND 2260	91.1	80-120			
lron	4470	0.1	mg/L	2360	84.4	80-120 80-120			
Lead Magnesium	49.5 20700	0.0001 0.2	mg/L	6.35	86.2				
Magnesium			mg/L	12200	84.7	80-120			
Manganese	99.4	0.005 0.1	mg/L	49.9	99.0	80-120			
Potassium Selenium	10300 39.9		mg/L	717	95.8 70.6	80-120		,	QM-07
		0.001 0.2	mg/L	0.137	79.6	80-120		,	7 N-1 NI K
Sodium	27100 42.4		mg/L	18400	86.8	80-120			
Uranium		0.0001	mg/L	0.339	84.2	80-120			
Zinc	66.0	0.005	mg/L	23.5	85.0	80-120			
olatiles									
Acetone	0.116	0.0050	mg/L	ND	116	50-140			
Benzene	0.0486	0.0005	mg/L	ND	122	60-130			
Bromodichloromethane	0.0458	0.0005	mg/L	ND	114	60-130			
Bromoform	0.0417	0.0005	mg/L	ND	104	60-130			
Bromomethane	0.0431	0.0005	mg/L	ND	108	50-140			
Carbon Tetrachloride	0.0445	0.0002	mg/L	ND	111	60-130			
Chlorobenzene	0.0427	0.0005	mg/L	ND	107	60-130			
Chloroethane	0.0441	0.0010	mg/L	ND	110	50-140			
Chloroform	0.0452	0.0005	mg/L	ND	113	60-130			
Dibromochloromethane	0.0479	0.0005	mg/L	ND	120	60-130			
Dichlorodifluoromethane	0.0435	0.0010	mg/L	ND	109	50-140			
1,2-Dibromoethane	0.0450	0.0002	mg/L	ND	113	60-130			
1,2-Dichlorobenzene	0.0354	0.0005	mg/L	ND	88.6	60-130			
1,3-Dichlorobenzene	0.0357	0.0005	mg/L	ND	89.2	60-130			
1,4-Dichlorobenzene	0.0328	0.0005	mg/L	ND	82.1	60-130			



Crder #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023

Client PO: Project Description: 210341

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloroethane	0.0485	0.0005	mg/L	ND	121	60-130			
1,1-Dichloroethylene	0.0441	0.0005	mg/L	ND	110	60-130			
cis-1,2-Dichloroethylene	0.0417	0.0005	mg/L	ND	104	60-130			
trans-1,2-Dichloroethylene	0.0408	0.0005	mg/L	ND	102	60-130			
1,2-Dichloropropane	0.0490	0.0005	mg/L	ND	122	60-130			
cis-1,3-Dichloropropylene	0.0468	0.0005	mg/L	ND	117	60-130			
trans-1,3-Dichloropropylene	0.0425	0.0005	mg/L	ND	106	60-130			
Ethylbenzene	0.0456	0.0005	mg/L	ND	114	60-130			
Hexane	0.0352	0.0010	mg/L	ND	88.0	60-130			
Methyl Ethyl Ketone (2-Butanone)	0.127	0.0050	mg/L	ND	127	50-140			
Methyl Isobutyl Ketone	0.116	0.0050	mg/L	ND	116	50-140			
Methyl tert-butyl ether	0.120	0.0020	mg/L	ND	120	50-140			
Methylene Chloride	0.0451	0.0050	mg/L	ND	113	60-130			
Styrene	0.0412	0.0005	mg/L	ND	103	60-130			
1,1,1,2-Tetrachloroethane	0.0450	0.0005	mg/L	ND	112	60-130			
1,1,2,2-Tetrachloroethane	0.0302	0.0005	mg/L	ND	75.4	60-130			
Tetrachloroethylene	0.0378	0.0005	mg/L	ND	94.6	60-130			
Toluene	0.0465	0.0005	mg/L	ND	116	60-130			
1,1,1-Trichloroethane	0.0456	0.0005	mg/L	ND	114	60-130			
1,1,2-Trichloroethane	0.0464	0.0005	mg/L	ND	116	60-130			
Trichloroethylene	0.0494	0.0005	mg/L	ND	123	60-130			
Trichlorofluoromethane	0.0486	0.0010	mg/L	ND	122	60-130			
Vinyl chloride	0.0493	0.0002	mg/L	ND	123	50-140			
m,p-Xylenes	0.0811	0.0005	mg/L	ND	101	60-130			
o-Xylene	0.0412	0.0005	mg/L	ND	103	60-130			
Surrogate: 4-Bromofluorobenzene	0.0913		mg/L		114	50-140			
Surrogate: Dibromofluoromethane	0.0904		mg/L		113	50-140			
Surrogate: Toluene-d8	0.0838		mg/L		105	50-140			



Crder #: 2304338

Report Date: 01-Feb-2023 Order Date: 26-Jan-2023 Project Description: 210341

Client PO: Project

Qualifier Notes:

Sample Qualifiers:

Certificate of Analysis

Client: LRL Associates Ltd.

QC Qualifiers :

 ${\sf QM-07} \quad \text{The spike recovery was outside acceptance limits for the MS and/or MSD}. \ \ \text{The batch was accepted based}$

on other acceptable QC.

QR-05 Duplicate RPDs higher than normally accepted. Remaining batch QA\QC was acceptable. May be sample

effect.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated





Laurent Blvd. rio K1G 4J8 1947 aracellabs.com

Paracel Order Number

Chain Of Custody Ontario Drinking Water Samples

Nº 18572

Client Name:	LRL ASS	aciabes Project	Ref: 21	03	11		Waterworks N	ame:		+	- 1	Samp	les Taken i	Av:	
Contact Name:	LRL ASS Abdul Ko	Quote #					Waterworks N	umber:		Name		ر الم	11	-	1
Address:	5430 Cano	tok Rd PO#				. ,	Address:			Signat	ure: 🔏	NPO	W K	cade	1
After Hours Contact:		E-mail:	ak	ager (Q	dica			-	-		Page _	of		
Telephone:	613 315	6602 Fax:					Public Health U	Init:					d Time Ro ay □3 d		
Samples Submitted ON REG 170/0 ON REG 243/0	Under: (Indicate ONLY o 3 ON REG 319/08 7 Other OD			Source T	ype:	G = Ground	Water; S = Su	= Distribution; P = P irface Water per Regulation - Y =					uired An		
	en submitted to MOE/MC		N/A	0.		- Auto	reporting as	per regulation - 1 =	res; N = No	T	Colli				M
	or human consumption? n must be completed		processed.	ve: R/T/D/P	ole: Y / N	mple	SAMPLE (COLLECTED	tainers ed Chlori mg/L	/ Flushed: REG 243)		Lead	THM	5	leta
	TION NAME	SAMPLE		Sample Type: 6 Source Type:	Reportable:	Resample	DATE	TIME	# of Container ree/Combined Chi Residual mg/L	Standing / Flu S / F (REG :	Total Coliform/E	Le	الله المحل ال	NOC	Pace N
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² 5969(94 fawa Street 95 fawa Street	Supply We	U-8hrs	RG	N	202	3.01.25 3.01.25	4:0	10		1		×	X	X
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omments:										Method	of Delive	ane.			C.766.
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300 - 2319 St. Laurent Blvd Ottawa, ON, K1G 4J8 1-800-749-1947 www.paracellabs.com

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Abdul Kader Alhaj

Client PO:

Project: 210341 Custody: 18571 Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

Order #: 2311339

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID 2311339-01 OW-1

Approved By:



Dale Robertson, BSc Laboratory Director



Certificate of Analysis

Order #: 2311339

Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

Client: LRL Associates Ltd. Client PO: Project Description: 210341

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	17-Mar-23	17-Mar-23
Ammonia, as N	EPA 351.2 - Auto Colour	20-Mar-23	20-Mar-23
Anions	EPA 300.1 - IC	20-Mar-23	20-Mar-23
Colour	SM2120 - Spectrophotometric	16-Mar-23	17-Mar-23
Conductivity	EPA 9050A- probe @25 °C	17-Mar-23	17-Mar-23
Dissolved Organic Carbon	EPA 415.2	20-Mar-23	20-Mar-23
E. coli	MOE E3407	16-Mar-23	16-Mar-23
Fecal Coliform	SM 9222D	16-Mar-23	16-Mar-23
Heterotrophic Plate Count	SM 9215C	16-Mar-23	16-Mar-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	16-Mar-23	17-Mar-23
рН	EPA 150.1 - pH probe @25 °C	17-Mar-23	17-Mar-23
Phenolics	EPA 420.2 - Auto Colour, 4AAP	20-Mar-23	20-Mar-23
Hardness	Hardness as CaCO3	16-Mar-23	17-Mar-23
Sulphide	SM 4500SE - Colourimetric	20-Mar-23	20-Mar-23
Tannin/Lignin	SM 5550B - Colourimetric	21-Mar-23	21-Mar-23
Total Coliform	MOE E3407	16-Mar-23	16-Mar-23
Total Dissolved Solids	SM 2540C - gravimetric, filtration	16-Mar-23	17-Mar-23
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	17-Mar-23	20-Mar-23
Turbidity	SM 2130B - Turbidity meter	17-Mar-23	17-Mar-23



Report Date: 21-Mar-2023

Order Date: 15-Mar-2023

Project Description: 210341

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

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	Client ID: Sample Date:	OW-1 15-Mar-23 14:50	-	-	-
	Sample ID:	2311339-01	_	-	-
	MDL/Units	Drinking Water	_	-	-
Microbiological Parameters	in 2 cinto		'		•
E. coli	1 CFU/100mL	ND	-	-	-
Fecal Coliforms	1 CFU/100mL	ND	-	-	-
Total Coliforms	1 CFU/100mL	ND	-	-	-
Heterotrophic Plate Count	10 CFU/mL	100	-	-	-
General Inorganics	-				
Alkalinity, total	5 mg/L	259	-	-	-
Ammonia as N	0.01 mg/L	0.16	-	-	-
Dissolved Organic Carbon	0.5 mg/L	<0.5 [6]	-	-	-
Colour	2 TCU	<2	-	-	-
Conductivity	5 uS/cm	1800	-	•	-
Hardness	mg/L	515	-	-	-
pH	0.1 pH Units	7.7	-	-	-
Phenolics	0.001 mg/L	<0.001	-	-	-
Total Dissolved Solids	10 mg/L	946	-	-	-
Sulphide	0.02 mg/L	<0.02	-	-	-
Tannin & Lignin	0.1 mg/L	<0.1	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	-	-	-
Turbidity	0.1 NTU	7.0	-	-	-
Anions	-				
Chloride	1 mg/L	325	-	-	-
Fluoride	0.1 mg/L	0.3	-	-	-
Nitrate as N	0.1 mg/L	<0.1	-	-	-
Nitrite as N	0.05 mg/L	<0.05	-	•	-
Sulphate	1 mg/L	75	-	-	-
Metals					
Calcium	0.1 mg/L	127	-	-	-
Iron	0.1 mg/L	0.2	-	-	-
Magnesium	0.2 mg/L	47.8	-	-	-
Manganese	0.005 mg/L	0.016	-	-	-
Potassium	0.1 mg/L	8.5	-	-	-
Sodium	0.2 mg/L	129	-	-	-



Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Colour	ND	2	TCU						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Calcium	ND	0.1	mg/L						
Iron	ND	0.1	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Sodium	ND	0.2	mg/L						
Microbiological Parameters									
E. coli	ND	1	CFU/100mL						
Fecal Coliforms	ND	1	CFU/100mL						
Total Coliforms	ND	1	CFU/100mL						
Heterotrophic Plate Count	ND	10	CFU/mL						



Certificate of Analysis

Order #: 2311339

Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

 Client:
 LRL Associates Ltd.
 Order Date: 15-Mar-2023

 Client PO:
 Project Description: 210341

Method Quality Control: Duplicate

		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Anions									
Chloride	332	1	mg/L	325			2.2	20	
Fluoride	0.36	0.1	mg/L	0.33			9.8	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Sulphate	77.3	1	mg/L	75.5			2.3	20	
General Inorganics									
Alkalinity, total	257	5	mg/L	259			0.6	14	
Ammonia as N	0.164	0.01	mg/L	0.163			0.9	17.7	
Colour	ND	2	TCU	ND			NC	12	
Conductivity	1760	5	uS/cm	1800			1.9	5	
рН	7.8	0.1	pH Units	7.7			8.0	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	2380	10	mg/L	2370			0.4	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	0.1	0.1	mg/L	0.1			NC	11	
Total Kjeldahl Nitrogen	0.25	0.1	mg/L	0.16			NC	16	
Turbidity	2.3	0.1	NTU	2.3			1.3	10	
Metals									
Calcium	452	4.3	mg/L	463			2.5	20	
Iron	1.7	0.1	mg/L	1.7			0.4	20	
Magnesium	100	0.2	mg/L	101			0.9	20	
Manganese	0.109	0.005	mg/L	0.110			1.0	20	
Potassium	12.9	0.1	mg/L	13.6			5.7	20	
Sodium	274	8.6	mg/L	283			3.4	20	
Microbiological Parameters									
E. coli	ND	1	CFU/100mL	ND			NC	30	
Fecal Coliforms	ND	1	CFU/100mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100mL	ND			NC	30	
Heterotrophic Plate Count	40	10	CFU/mL	100			86.0		BAC04



Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

Project Description: 210341

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	333	1	mg/L	325	84.3	70-124			
Fluoride	1.28	0.1	mg/L	0.33	94.9	70-130			
Nitrate as N	1.01	0.1	mg/L	ND	101	77-126			
Nitrite as N	0.950	0.05	mg/L	ND	95.0	82-115			
Sulphate	84.5	1	mg/L	75.5	90.3	70-130			
General Inorganics									
Ammonia as N	1.21	0.01	mg/L	0.163	105	81-124			
Phenolics	0.026	0.001	mg/L	ND	104	67-133			
Total Dissolved Solids	102	10	mg/L	ND	102	75-125			
Sulphide	0.51	0.02	mg/L	ND	101	79-115			
Tannin & Lignin	1.1	0.1	mg/L	0.1	98.1	71-113			
Total Kjeldahl Nitrogen	0.99	0.1	mg/L	0.16	82.7	81-126			
Metals									
Calcium	10400	0.1	mg/L	ND	104	80-120			
Iron	4060	0.1	mg/L	1740	92.7	80-120			
Magnesium	9990	0.2	mg/L	ND	99.9	80-120			
Manganese	162	0.005	mg/L	110	103	80-120			
Potassium	24100	0.1	mg/L	13600	105	80-120			
Sodium	9600	0.2	mg/L	ND	96.0	80-120			



Report Date: 21-Mar-2023 Order Date: 15-Mar-2023

Client PO: Project Description: 210341

Qualifier Notes:

Login Qualifiers:

Certificate of Analysis

Client: LRL Associates Ltd.

Container(s) - Labeled improperly/insufficient information - One general chemistry bottle is missing the time of collection.

Applies to samples: OW-1

Sample - Not submitted in the correct container - The sulphide bottle was decanted from an unpreserved plastic bottle. The phenols and DOC bottles were decanted from an unpreserved amber glass bottle.

Applies to samples: OW-1

Sample preserved upon receipt at the lab.

sulphide & phenols

Applies to samples: OW-1

Sample Qualifiers:

6: Subcontracted analysis - Caduceon

QC Qualifiers :

BAC04 Duplicate QC data falls within method prescribed 95% confidence limits.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery. RPD: Relative percent difference.

NC: Not Calculated





Laurent Blvd. rio K1G 4J8 -1947 paracellabs.com

labs.com

Paracel Order Number

Chain Of Custody Ontario Drinking Water Samples

Nº 18571

Client Name:	IDI ACC	وممامات و	Drainet Dat	71	• "	7 U	1	-		1				15					KEG.
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	2420 Canoby	r Rd	PO#:							Address:				Signat	ure:				
After Hours Contac Telephone:	61331566		E-mail: Fax:	at	rado	eve	2	d	ca	Public Health I	Jnit:					urn A	round	of\ Time Required y □ 3 day 🔊	
ON REG 170	/07 D, Other OD	Private W			Sour	rce Ty	/pe:	G =	Ground	d Water; S = Su	= Distribution; P = Pl urface Water per Regulation - Y =		No					ired Analyses	
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	s for human consumption?: ion must be completed b		s will be proc	essed.	e: R/T/D/P	pe: G / S	le:Y/N	apple		SAMPLE	COLLECTED	ainers	d Chlorir mg/L	hushed: 243)		Q.	p	IN SION	
LOC	ATION NAME	9	SAMPLE ID		Sample Typ	Source Type: G / S	Reportable:	Resample	100	DATE	TIME	# of Containers	ee/Combined Chil Residual mg/L	Standing / Flushed S / F (REG 243)	Total Coliform/E	HPC	Lead	Pack.	
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300 - 2319 St. Laurent Blvd Ottawa, ON, K1G 4J8 1-800-749-1947 www.paracellabs.com

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road Ottawa, ON K1J 9G2 Attn: Jessica Arthurs

Client PO: Project: 210341 Custody: 19086

Report Date: 2-Jun-2023 Order Date: 29-May-2023

Order #: 2322119

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID Client ID

2322119-01 5969 Ottawa St. - 3 HR 2322119-02 5969 Ottawa St. - 6 HR

Approved By:



Dale Robertson, BSc Laboratory Director



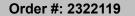
Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023 Project Description: 210341

Client PO: Project

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	31-May-23	31-May-23
Ammonia, as N	EPA 351.2 - Auto Colour	30-May-23	30-May-23
Anions	EPA 300.1 - IC	31-May-23	31-May-23
Colour	SM2120 - Spectrophotometric	30-May-23	31-May-23
Conductivity	EPA 9050A- probe @25 °C	31-May-23	31-May-23
Dissolved Organic Carbon	MOE 3247B - Combustion IR	31-May-23	1-Jun-23
E. coli	MOE E3407	30-May-23	30-May-23
Fecal Coliform	SM 9222D	30-May-23	30-May-23
Heterotrophic Plate Count	SM 9215C	30-May-23	30-May-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	30-May-23	30-May-23
рН	EPA 150.1 - pH probe @25 °C	31-May-23	31-May-23
Phenolics	EPA 420.2 - Auto Colour, 4AAP	30-May-23	30-May-23
Hardness	Hardness as CaCO3	30-May-23	30-May-23
Sulphide	SM 4500SE - Colourimetric	31-May-23	1-Jun-23
Tannin/Lignin	SM 5550B - Colourimetric	1-Jun-23	1-Jun-23
Total Coliform	MOE E3407	30-May-23	30-May-23
Total Dissolved Solids	SM 2540C - gravimetric, filtration	31-May-23	1-Jun-23
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	30-May-23	31-May-23
Turbidity	SM 2130B - Turbidity meter	30-May-23	31-May-23
VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	1-Jun-23	1-Jun-23



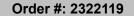


Client PO:

Report Date: 02-Jun-2023 Order Date: 29-May-2023

Project Description: 210341

	0114 15-1	5000 0# 04 0	5969 Ottawa St 6		1
	Client ID:	5969 Ottawa St 3 HR	1 5969 Ollawa St 6	-	-
	Sample Date:	29-May-23 10:46	29-May-23 13:46	-	-
	Sample ID:	2322119-01	2322119-02	-	-
	MDL/Units	Drinking Water	Drinking Water	-	-
Microbiological Parameters	4.0511/400		ı		ı
E. coli	1 CFU/100mL	ND	ND	-	-
Total Coliforms	1 CFU/100mL	ND	ND	-	-
Fecal Coliforms	1 CFU/100mL	ND	ND	-	-
Heterotrophic Plate Count	10 CFU/mL	80	50	-	-
General Inorganics					
Alkalinity, total	5 mg/L	274	274	-	-
Ammonia as N	0.01 mg/L	0.10	0.10	-	-
Dissolved Organic Carbon	0.5 mg/L	1.6	1.8	-	-
Colour	2 TCU	<2	<2	-	-
Conductivity	5 uS/cm	1290	1290	-	-
Hardness	mg/L	409	478	-	-
рН	0.1 pH Units	7.8	7.7	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	-	-
Total Dissolved Solids	10 mg/L	718	718	-	-
Sulphide	0.02 mg/L	<0.02	<0.02	-	-
Tannin & Lignin	0.1 mg/L	<0.1	<0.1	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	0.1	-	-
Turbidity	0.1 NTU	8.1	9.0	-	-
Anions					
Chloride	1 mg/L	192	191	-	-
Fluoride	0.1 mg/L	0.4	0.4	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	-	-
Sulphate	1 mg/L	57	57	-	-
Metals					
Aluminum	0.001 mg/L	0.007	0.005	-	-
Antimony	0.0005 mg/L	<0.0005	<0.0005	-	-
Arsenic	0.001 mg/L	<0.001	<0.001	-	-
Barium	0.001 mg/L	0.119	0.137	-	-
Beryllium	0.0005 mg/L	<0.0005	<0.0005	-	-
Boron	0.01 mg/L	0.15	0.16	-	-
Cadmium	0.0001 mg/L	<0.0001	<0.0001	-	-
Calcium	0.1 mg/L	105	122	-	-
Chromium	0.001 mg/L	<0.001	<0.001	-	-





Report Date: 02-Jun-2023 Order Date: 29-May-2023

Project Description: 210341 Client PO:

	Client ID:	5969 Ottawa St 3 HR	5969 Ottawa St 6 HR	-	-
	Sample Date: Sample ID:	29-May-23 10:46 2322119-01	29-May-23 13:46 2322119-02	- -	
	MDL/Units	Drinking Water	Drinking Water	-	-
Cobalt	0.0005 mg/L	<0.0005	<0.0005	-	-
Copper	0.0005 mg/L	<0.0005	<0.0005	-	-
Iron	0.1 mg/L	0.5	0.6	-	-
Lead	0.0001 mg/L	<0.0001	<0.0001	-	-
Magnesium	0.2 mg/L	35.8	42.0	-	-
Manganese	0.005 mg/L	0.014	0.016	-	-
Molybdenum	0.0005 mg/L	0.0020	0.0022	-	-
Nickel	0.001 mg/L	<0.001	<0.001	-	-
Potassium	0.1 mg/L	6.1	6.9	-	-
Selenium	0.001 mg/L	<0.001	<0.001	-	-
Silver	0.0001 mg/L	<0.0001	<0.0001	-	-
Sodium	0.2 mg/L	61.6	70.7	-	-
Strontium	0.01 mg/L	4.03	4.09	-	-
Thallium	0.001 mg/L	<0.001	<0.001	-	-
Tin	0.01 mg/L	<0.01	<0.01	-	-
Titanium	0.005 mg/L	<0.005	<0.005	-	-
Tungsten	0.01 mg/L	<0.01	<0.01	-	-
Uranium	0.0001 mg/L	0.0005	0.0006	-	-
Vanadium	0.0005 mg/L	<0.0005	<0.0005	-	-
Zinc	0.005 mg/L	<0.005	<0.005	-	-
Volatiles			•		
Acetone	0.0050 mg/L	<0.0050	<0.0050	-	-
Benzene	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromodichloromethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromoform	0.0005 mg/L	<0.0005	<0.0005	-	-
Bromomethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Carbon Tetrachloride	0.0002 mg/L	<0.0002	<0.0002	-	-
Chlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
Chloroethane	0.0010 mg/L	<0.0010	<0.0010	-	-
Chloroform	0.0005 mg/L	<0.0005	<0.0005	-	-
Dibromochloromethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Dichlorodifluoromethane	0.0010 mg/L	<0.0010	<0.0010	-	-
1,2-Dibromoethane	0.0002 mg/L	<0.0002	<0.0002	-	-
1,2-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,3-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-



Certificate of Analysis

Client: LRL Associates Ltd.

Client PO: Proje

Report Date: 02-Jun-2023 Order Date: 29-May-2023 **Project Description: 210341**

	Client ID:	5969 Ottawa St 3 HR	5969 Ottawa St 6 HR	-	-
	Sample Date: Sample ID:	29-May-23 10:46 2322119-01	29-May-23 13:46 2322119-02	- -	
	MDL/Units	Drinking Water	Drinking Water	-	-
1,4-Dichlorobenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1-Dichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
cis-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
trans-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloroethylene, total	0.0005 mg/L	<0.0005	<0.0005	-	-
1,2-Dichloropropane	0.0005 mg/L	<0.0005	<0.0005	-	-
cis-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	<0.0005	-	-
trans-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,3-Dichloropropene, total	0.0005 mg/L	<0.0005	<0.0005	-	-
Ethylbenzene	0.0005 mg/L	<0.0005	<0.0005	-	-
Hexane	0.0010 mg/L	<0.0010	<0.0010	-	-
Methyl Ethyl Ketone (2-Butanone)	0.0050 mg/L	<0.0050	<0.0050	-	-
Methyl Isobutyl Ketone	0.0050 mg/L	<0.0050	<0.0050	-	-
Methyl tert-butyl ether	0.0020 mg/L	<0.0020	<0.0020	-	-
Methylene Chloride	0.0050 mg/L	<0.0050	<0.0050	-	-
Styrene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,1,2-Tetrachloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,2,2-Tetrachloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Tetrachloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Toluene	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,1-Trichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
1,1,2-Trichloroethane	0.0005 mg/L	<0.0005	<0.0005	-	-
Trichloroethylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Trichlorofluoromethane	0.0010 mg/L	<0.0010	<0.0010	-	-
Vinyl chloride	0.0002 mg/L	<0.0002	<0.0002	-	-
m,p-Xylenes	0.0005 mg/L	<0.0005	<0.0005	-	-
o-Xylene	0.0005 mg/L	<0.0005	<0.0005	-	-
Xylenes, total	0.0005 mg/L	<0.0005	<0.0005	-	-
4-Bromofluorobenzene	Surrogate	113%	112%	-	-
Dibromofluoromethane	Surrogate	102%	103%	-	-
Toluene-d8	Surrogate	102%	101%	-	-



Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023

Client PO: Project Description: 210341

Method Quality Control: Blank

Analyta	5	Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Note
nions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics	ND	'	mg/L						
	ND	5	no a /I						
Alkalinity, total	ND ND	0.01	mg/L						
Ammonia as N Dissolved Organic Carbon	ND ND	0.01	mg/L						
•	ND ND		mg/L TCU						
Colour	ND ND	2	uS/cm						
Conductivity		5							
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Aluminum	ND	0.001	mg/L						
Antimony	ND	0.0005	mg/L						
Arsenic	ND	0.001	mg/L						
Barium	ND	0.001	mg/L						
Beryllium	ND	0.0005	mg/L						
Boron	ND	0.01	mg/L						
Cadmium	ND	0.0001	mg/L						
Calcium	ND	0.1	mg/L						
Chromium	ND	0.001	mg/L						
Cobalt	ND	0.0005	mg/L						
Copper	ND	0.0005	mg/L						
Iron	ND	0.1	mg/L						
Lead	ND	0.0001	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Molybdenum	ND	0.0005	mg/L						
Nickel	ND	0.000	mg/L						
Potassium	ND ND	0.001	mg/L						
Selenium	ND ND	0.001	mg/L						
Silver	ND ND	0.001							
Sodium	ND ND	0.0001	mg/L						
Strontium			mg/L						
	ND	0.01 0.001	mg/L						
Thallium	ND		mg/L						
Tin Titonium	ND	0.01	mg/L						
Titanium	ND	0.005	mg/L						
Tungsten	ND	0.01	mg/L						
Uranium	ND	0.0001	mg/L						
Vanadium	ND	0.0005	mg/L						
Zinc	ND	0.005	mg/L						
licrobiological Parameters									
E. coli	ND	1	CFU/100mL						
Total Coliforms	ND	1	CFU/100mL						
Fecal Coliforms	ND	1	CFU/100mL						
Heterotrophic Plate Count	ND	10	CFU/mL						
olatiles		. •	2. 3/=						
	ND	0.0050	n						
Acetone	ND	0.0050	mg/L						
Benzene	ND	0.0005	mg/L						
Bromodichloromethane	ND	0.0005	mg/L						
Bromoform	ND	0.0005	mg/L						



Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023

Client PO: Project Description: 210341

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromomethane	ND	0.0005	mg/L						
Carbon Tetrachloride	ND	0.0002	mg/L						
Chlorobenzene	ND	0.0005	mg/L						
Chloroethane	ND	0.0010	mg/L						
Chloroform	ND	0.0005	mg/L						
Dibromochloromethane	ND	0.0005	mg/L						
Dichlorodifluoromethane	ND	0.0010	mg/L						
1,2-Dibromoethane	ND	0.0002	mg/L						
1,2-Dichlorobenzene	ND	0.0005	mg/L						
1,3-Dichlorobenzene	ND	0.0005	mg/L						
1,4-Dichlorobenzene	ND	0.0005	mg/L						
1,1-Dichloroethane	ND	0.0005	mg/L						
1,2-Dichloroethane	ND	0.0005	mg/L						
1,1-Dichloroethylene	ND	0.0005	mg/L						
cis-1,2-Dichloroethylene	ND	0.0005	mg/L						
trans-1,2-Dichloroethylene	ND	0.0005	mg/L						
1,2-Dichloroethylene, total	ND	0.0005	mg/L						
1,2-Dichloropropane	ND	0.0005	mg/L						
cis-1,3-Dichloropropylene	ND	0.0005	mg/L						
trans-1,3-Dichloropropylene	ND	0.0005	mg/L						
1,3-Dichloropropene, total	ND	0.0005	mg/L						
Ethylbenzene	ND	0.0005	mg/L						
Hexane	ND	0.0010	mg/L						
Methyl Ethyl Ketone (2-Butanone)	ND	0.0050	mg/L						
Methyl Isobutyl Ketone	ND	0.0050	mg/L						
Methyl tert-butyl ether	ND	0.0020	mg/L						
Methylene Chloride	ND	0.0050	mg/L						
Styrene	ND	0.0005	mg/L						
1,1,1,2-Tetrachloroethane	ND	0.0005	mg/L						
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L						
Tetrachloroethylene	ND	0.0005	mg/L						
Toluene	ND	0.0005	mg/L						
1,1,1-Trichloroethane	ND	0.0005	mg/L						
1,1,2-Trichloroethane	ND	0.0005	mg/L						
Trichloroethylene	ND	0.0005	mg/L						
Trichlorofluoromethane	ND	0.0010	mg/L						
Vinyl chloride	ND	0.0002	mg/L						
m,p-Xylenes	ND	0.0005	mg/L						
o-Xylene	ND	0.0005	mg/L						
Xylenes, total	ND	0.0005	mg/L						
Surrogate: 4-Bromofluorobenzene	0.0888		mg/L		111	50-140			
Surrogate: Dibromofluoromethane	0.0841		mg/L		105	50-140			
Surrogate: Toluene-d8	0.0829		mg/L		104	50-140			



Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023

Client PO: Project Description: 210341

Method Quality Control: Duplicate

		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
nions									
Chloride	192	1	mg/L	191			0.6	20	
Fluoride	0.36	0.1	_	0.35			1.2	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
	ND ND	0.1	mg/L	ND ND			NC NC	20	
Nitrite as N			mg/L						
Sulphate	57.5	1	mg/L	56.8			1.2	20	
General Inorganics									
Alkalinity, total	273	5	mg/L	274			0.1	14	
Ammonia as N	0.098	0.01	mg/L	0.098			0.6	17.7	
Dissolved Organic Carbon	1.4	0.5	mg/L	1.6			15.7	37	
Colour	ND	2	TCU	ND			NC	12	
Conductivity	1250	5	uS/cm	1290			2.7	5	
рН	7.8	0.1	pH Units	7.8			0.4	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	82.0	10	mg/L	82.0			0.0	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	0.17	0.1	mg/L	0.16			2.5	16	
Turbidity	ND	0.1	NTU	8.1			NC	10	
letals									
Aluminum	0.022	0.001	mg/L	0.021			1.8	20	
Antimony	0.022 ND	0.001	mg/L	ND			NC	20	
Arsenic	ND	0.0003	mg/L	ND			NC	20	
		0.001	-				4.4	20	
Barium Baryllium	0.019		mg/L	0.020			4.4 NC	20 20	
Beryllium Boron	ND 0.03	0.0005	mg/L	ND 0.02					
Boron	0.02	0.01	mg/L	0.02			2.1	20	
Cadmium	ND	0.0001	mg/L	ND			NC	20	
Calcium	32.9	0.1	mg/L	32.5			1.3	20	
Chromium	ND	0.001	mg/L	ND			NC	20	
Cobalt	ND	0.0005	mg/L	ND			NC	20	
Copper	0.735	0.0005	mg/L	0.738			0.4	20	
lron	0.2	0.1	mg/L	0.2			4.0	20	
Lead	0.0053	0.0001	mg/L	0.0053			0.1	20	
Magnesium	8.7	0.2	mg/L	8.6			1.1	20	
Manganese	0.005	0.005	mg/L	0.005			1.9	20	
Molybdenum	0.0010	0.0005	mg/L	0.0011			9.1	20	
Nickel	0.003	0.001	mg/L	0.003			4.7	20	
Potassium	1.8	0.1	mg/L	1.7			2.8	20	
Selenium	ND	0.001	mg/L	ND			NC	20	
Silver	ND	0.0001	mg/L	ND			NC	20	
Sodium	16.3	0.2	mg/L	16.0			2.3	20	
Thallium	ND	0.001	mg/L	ND			NC	20	
Tin	ND	0.01	mg/L	ND			NC	20	
Titanium	ND	0.005	mg/L	ND			NC	50	
Tungsten	ND	0.01	mg/L	ND			NC	20	
Uranium	0.0002	0.0001	mg/L	0.0002			2.1	20	
Vanadium	ND	0.0005	mg/L	ND			NC	20	
Zinc	0.196	0.005	mg/L	0.194			0.7	20	
licrobiological Parameters	0.100	0.000	g,∟	0.107			5.1	_0	
•		,	0511/400	NB			NO	00	
E. coli	ND	1	CFU/100mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100mL	ND			NC	30	
Fecal Coliforms	ND	1	CFU/100mL	ND			NC	30	
Heterotrophic Plate Count	10	10	CFU/mL	80			NC	30	
olatiles									
Acetone	ND	0.0050	mg/L	ND			NC	30	
Benzene	ND	0.0005	mg/L	ND			NC	30	
-	0.0023	0.0005	9, ⊏	0.0023				30	



Certificate of Analysis

Client: LRL Associates Ltd.

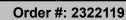
Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023

Client PO: Project Description: 210341

Method Quality Control: Duplicate

A maketa		Reporting		Source		%REC		RPD	
Analyte	Result	Limit	Units	Result	%REC	Limit	RPD	Limit	Notes
Bromoform	ND	0.0005	mg/L	ND			NC	30	
Bromomethane	ND	0.0005	mg/L	ND			NC	30	
Carbon Tetrachloride	ND	0.0002	mg/L	ND			NC	30	
Chlorobenzene	ND	0.0005	mg/L	ND			NC	30	
Chloroethane	ND	0.0010	mg/L	ND			NC	30	
Chloroform	0.0227	0.0005	mg/L	0.0220			2.9	30	
Dibromochloromethane	ND	0.0005	mg/L	ND			NC	30	
Dichlorodifluoromethane	ND	0.0010	mg/L	ND			NC	30	
1,2-Dibromoethane	ND	0.0002	mg/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
rans-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloropropane	ND	0.0005	mg/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
rans-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
Ethylbenzene	ND	0.0005	mg/L	ND			NC	30	
Hexane	ND	0.0010	mg/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	0.0050	mg/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	0.0050	mg/L	ND			NC	30	
Methyl tert-butyl ether	ND	0.0020	mg/L	ND			NC	30	
Methylene Chloride	ND	0.0050	mg/L	ND			NC	30	
Styrene	ND	0.0005	mg/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L	ND			NC	30	
Tetrachloroethylene	ND	0.0005	mg/L	ND			NC	30	
Toluene	ND	0.0005	mg/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
Trichloroethylene	ND	0.0005	mg/L	ND			NC	30	
Trichlorofluoromethane	ND	0.0010	mg/L	ND			NC	30	
Vinyl chloride	ND	0.0002	mg/L	ND			NC	30	
m,p-Xylenes	ND	0.0005	mg/L	ND			NC	30	
o-Xylene	ND	0.0005	mg/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	0.0910		mg/L		114	50-140			
Surrogate: Dibromofluoromethane	0.0835		mg/L		104	50-140			
Surrogate: Toluene-d8	0.0820		mg/L		102	50-140			





Client PO: Project D

Report Date: 02-Jun-2023 Order Date: 29-May-2023 Project Description: 210341

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	199	1	mg/L	191	86.5	70-124			
Fluoride	1.38	0.1	mg/L	0.35	103	70-130			
Nitrate as N	0.98	0.1	mg/L	ND	98.0	77-126			
Nitrite as N	0.855	0.05	mg/L	ND	85.5	82-115			
Sulphate	65.0	1	mg/L	56.8	82.6	70-130			
Seneral Inorganics			· ·						
Ammonia as N	1.15	0.01	mg/L	0.098	106	81-124			
Dissolved Organic Carbon	11.1	0.5	mg/L	1.8	93.6	60-133			
Phenolics	0.028	0.001	mg/L	ND	110	67-133			
Total Dissolved Solids	96.0	10	mg/L	ND	96.0	75-125			
Sulphide	0.50	0.02	mg/L	ND	100	79-115			
Tannin & Lignin	1.1	0.1	mg/L	ND	110	71-113			
Total Kjeldahl Nitrogen	1.12	0.1	mg/L	0.16	95.7	81-126			
Metals	1.12	~. ,	∌, ⊑	0.10		J. 120			
Aluminum	61.7	0.001	ma/l	21.1	81.2	80-120			
Arsenic	49.3	0.001	mg/L mg/L	0.645	97.3	80-120 80-120			
Barium	49.3 64.9	0.001	_	20.1	97.3 89.6	80-120 80-120			
Barium Beryllium	53.0	0.001	mg/L mg/L	0.0312	89.6 106	80-120 80-120			
Boron	68.3	0.0003	mg/L	21.0	94.5	80-120			
Cadmium	45.8	0.001	mg/L	0.0364	91.5	80-120			
Calcium	13400	0.0001	mg/L	5160	82.6	80-120			
Chromium	50.1	0.001	mg/L	0.114	100	80-120			
Cobalt	49.6	0.001	mg/L	0.0377	99.1	80-120			
Copper	51.8	0.0005	mg/L	0.0377	102	80-120			
Iron	2410	0.0003	mg/L	225	87.5	80-120			
Lead	41.6	0.0001	mg/L	ND	83.2	80-120			
Magnesium	32600	0.0001	mg/L	24200	84.7	80-120			
Manganese	54.8	0.005	mg/L	5.22	99.1	80-120			
Molybdenum	46.8	0.005	mg/L	1.05	91.4	80-120			
Nickel	50.8	0.0003	mg/L	2.99	95.6	80-120			
Potassium	11100	0.001	mg/L	1720	94.2	80-120			
Selenium	47.6	0.001	mg/L	0.242	94.2	80-120			
Silver	46.7	0.001	mg/L	0.242	93.2	80-120			
Sodium	9500	0.0001	mg/L	0.0376 ND	95.0	80-120			
Thallium	42.1	0.2	mg/L	0.025	95.0 84.1	80-120			
Tin	46.4	0.001	mg/L	0.023	92.4	80-120			
Titanium	51.4	0.005	mg/L	ND	103	70-130			
Tungsten	41.7	0.003	mg/L	0.26	82.8	80-120			
Vanadium	49.8	0.0005	mg/L	0.192	99.2	80-120			
Zinc	47.7	0.005	mg/L	2.70	90.1	80-120			
/olatiles	11.1	0.000	∌, ⊑			55 ILO			
Acetone	0.121	0.0050	mg/L	ND	121	50-140			
Benzene	0.121	0.0050	mg/L		98.9	60-130			
Bromodichloromethane	0.0396	0.0005	_	ND ND	98.9 96.0	60-130			
Bromoform			mg/L						
	0.0355	0.0005	mg/L	ND	88.7 108	60-130 50 140			
Bromomethane	0.0431	0.0005	mg/L	ND	108	50-140			
Carbon Tetrachloride	0.0332	0.0002	mg/L	ND	83.0	60-130			



Order #: 2322119

Report Date: 02-Jun-2023 Order Date: 29-May-2023 Project Description: 210341

Client PO: Project D

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chloroethane	0.0463	0.0010	mg/L	ND	116	50-140			
Chloroform	0.0414	0.0005	mg/L	ND	104	60-130			
Dibromochloromethane	0.0326	0.0005	mg/L	ND	81.4	60-130			
Dichlorodifluoromethane	0.0477	0.0010	mg/L	ND	119	50-140			
1,2-Dibromoethane	0.0444	0.0002	mg/L	ND	111	60-130			
1,2-Dichlorobenzene	0.0433	0.0005	mg/L	ND	108	60-130			
1,3-Dichlorobenzene	0.0432	0.0005	mg/L	ND	108	60-130			
1,4-Dichlorobenzene	0.0401	0.0005	mg/L	ND	100	60-130			
1,1-Dichloroethane	0.0443	0.0005	mg/L	ND	111	60-130			
1,2-Dichloroethane	0.0402	0.0005	mg/L	ND	101	60-130			
1,1-Dichloroethylene	0.0490	0.0005	mg/L	ND	123	60-130			
cis-1,2-Dichloroethylene	0.0413	0.0005	mg/L	ND	103	60-130			
trans-1,2-Dichloroethylene	0.0416	0.0005	mg/L	ND	104	60-130			
1,2-Dichloropropane	0.0385	0.0005	mg/L	ND	96.3	60-130			
cis-1,3-Dichloropropylene	0.0364	0.0005	mg/L	ND	90.9	60-130			
trans-1,3-Dichloropropylene	0.0402	0.0005	mg/L	ND	100	60-130			
Ethylbenzene	0.0420	0.0005	mg/L	ND	105	60-130			
Hexane	0.0435	0.0010	mg/L	ND	109	60-130			
Methyl Ethyl Ketone (2-Butanone)	0.112	0.0050	mg/L	ND	112	50-140			
Methyl Isobutyl Ketone	0.118	0.0050	mg/L	ND	118	50-140			
Methyl tert-butyl ether	0.136	0.0020	mg/L	ND	136	50-140			
Methylene Chloride	0.0435	0.0050	mg/L	ND	109	60-130			
Styrene	0.0412	0.0005	mg/L	ND	103	60-130			
1,1,1,2-Tetrachloroethane	0.0403	0.0005	mg/L	ND	101	60-130			
1,1,2,2-Tetrachloroethane	0.0499	0.0005	mg/L	ND	125	60-130			
Tetrachloroethylene	0.0462	0.0005	mg/L	ND	115	60-130			
Toluene	0.0432	0.0005	mg/L	ND	108	60-130			
1,1,1-Trichloroethane	0.0433	0.0005	mg/L	ND	108	60-130			
1,1,2-Trichloroethane	0.0394	0.0005	mg/L	ND	98.4	60-130			
Trichloroethylene	0.0395	0.0005	mg/L	ND	98.7	60-130			
Trichlorofluoromethane	0.0480	0.0010	mg/L	ND	120	60-130			
Vinyl chloride	0.0322	0.0002	mg/L	ND	80.4	50-140			
m,p-Xylenes	0.0845	0.0005	mg/L	ND	106	60-130			
o-Xylene	0.0420	0.0005	mg/L	ND	105	60-130			
Surrogate: 4-Bromofluorobenzene	0.0878		mg/L		110	50-140			
Surrogate: Dibromofluoromethane	0.0917		mg/L		115	50-140			
Surrogate: Toluene-d8	0.0791		mg/L		98.9	50-140			



Report Date: 02-Jun-2023 Order Date: 29-May-2023 Project Description: 210341

Client PO: Project

Qualifier Notes:

Sample Qualifiers:

Certificate of Analysis

Client: LRL Associates Ltd.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery. RPD: Relative percent difference.

NC: Not Calculated



Paracel ID: 2322119

Blvd. 4J8

Paracel Order Number

Chain Of Custody Ontario Drinking Water Samples

	Ĺ/	ABORATORII									,	s.com	111	9			N	0	1	90	86	
Client	Name:	LRL		Project Ref:	210	34	1				Waterworks Na	ame:	1					Sampl	les Tak	en By:		
Conta	Contact Name: Jessica Arthurs Quote#:				Waterworks Number:							Name: Jessica Arthurs										
Addre	255:	5430 Canotek R ottawa, on KIJ	δ 962	PO#:							Address:				Signat	ure:	1/2	2100			-	_
After	Hours Contact:	Jessian Arthur		E-mail:	Jarthi	πS	61	دار	.cq	-							Pa	_	1_0	f	_	
Telep	hone:	613 978 0658	(Fax:							Public Health U	Init:								e Requ 3 day		
00	oles Submitted ON REG 170/0 ON REG 243/0		☐ Private W	/ell		Sour	rce Ty	/pe:	G =	Ground	Water; S = Su	= Distribution; P = Pl Irface Water per Regulation - Y = Y					_	Req	uired	Anal	yses	Т
Have LSN forms been submitted to MOE/MOHLTC?: ☐ Yes ☐ No ☐ N/A Are these samples for human consumption?: ☐ Yes ☐ No All information must be completed before samples will be processed.				R/T/D/P	Source Type: G / S	Reportable: Y / N	Resample			COLLECTED	Τ	ee/Combined Chlorine Residual mg/L	Flushed: EG 243)	form/E. Coli	HPC	Lead	THM		Metals	Sion Reg		
	LOCA	TION NAME		SAMPLE ID		Sample Type:	Source T	Reportat	Resai		DATE	TIME	# of Containers	Free/Combin Residua	Standing / Flushed: S / F (REG 243)	Total Coliform/E.		1	F	VOC	Trace	Subdivision
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ATTACHMENT IV

Test Pit Logs



PROJECT NO.: 210341

CLIENT: Al Roberts

DATE: July 20, 2021

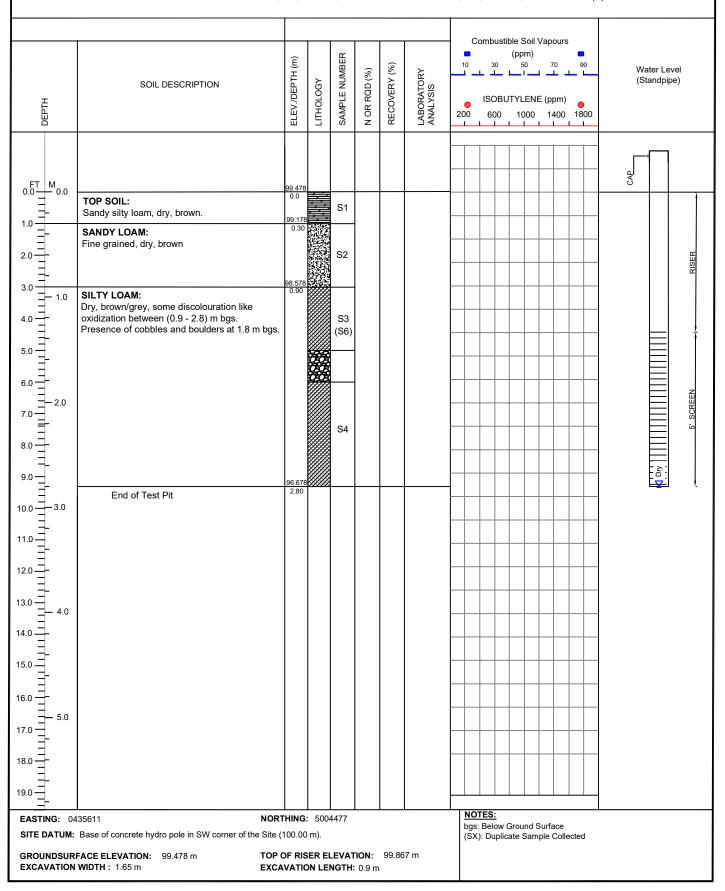
TEST PIT LOG: TP21-1

PROJECT: Hydrogeological Assessment & Terrain Analysis

LOCATION: 5969 OTTAWA STREET, RICHMOND, ONTARIO

FIELD PERSONNEL: DC

EXCAVATION METHOD: BACKHOE KX121-3 EXCAVATION CONTRACTOR: Landraulics Equipment





EXCAVATION WIDTH: 1.6 m

PROJECT NO.: 210341

CLIENT: Al Roberts

DATE: July 20, 2021

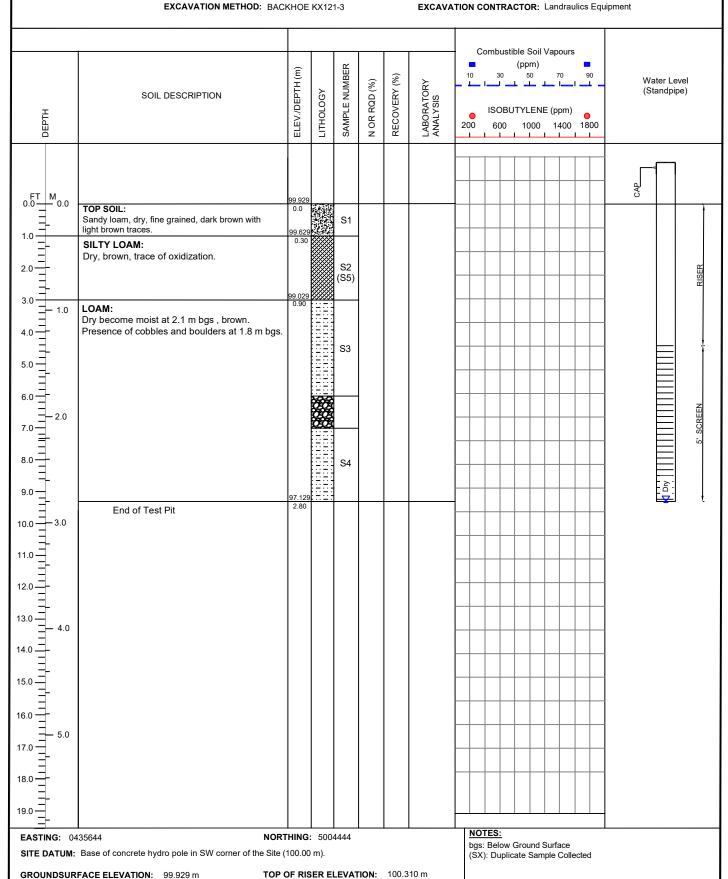
TEST PIT LOG: TP21-2

PROJECT: Hydrogeological Assessment & Terrain Analysis

LOCATION: 5969 OTTAWA STREET, RICHMOND, ONTARIO

FIELD PERSONNEL: DC

EXCAVATION CONTRACTOR: Landraulics Equipment



EXCAVATION LENGTH: 1.1 m



PROJECT NO.: 210341

DATE: July 20, 2021

CLIENT: Al Roberts

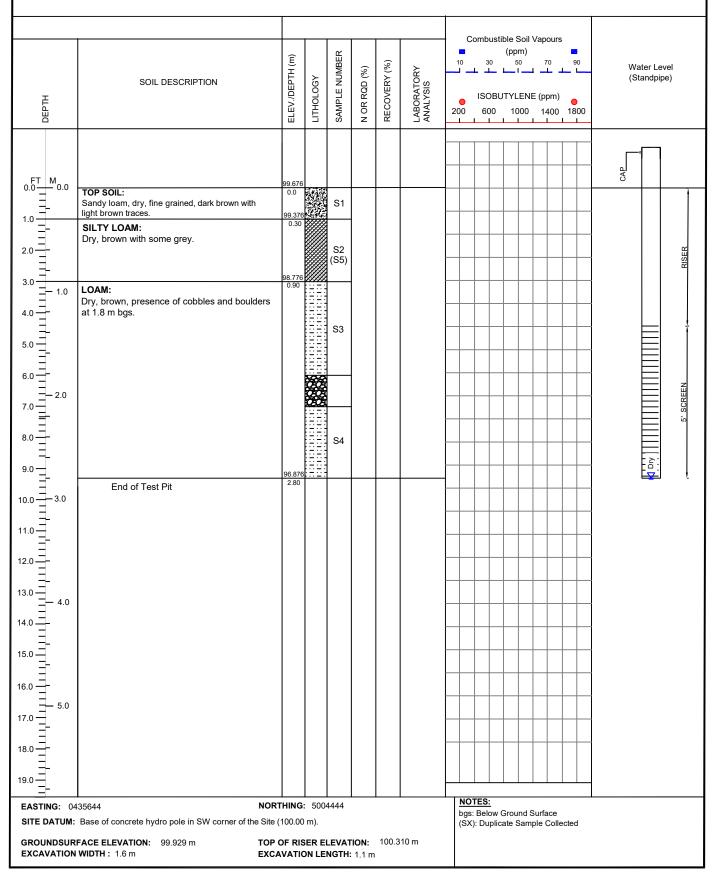
TEST PIT LOG: TP21-3

PROJECT: Hydrogeological Assessment & Terrain Analysis

LOCATION: 5969 OTTAWA STREET, RICHMOND, ONTARIO

FIELD PERSONNEL: DC

EXCAVATION METHOD: BACKHOE KX121-3 EXCAVATION CONTRACTOR: Landraulics Equipment



ATTACHMENT VI
Water Well Records

1		Control State of Contro	7.000	E-rigil Address	Pageofof	acted ar
10	Matry Address (Street S		Municipality	ON KQA 22	Takaphone for (inc. area)	eded .
	Well Location	entired Boy 180	5 Richmond	THE RESERVE		na
	5969 Ottawa	s Street	Goulteum	Prunitis	9. 4D-26	
	Ottawa Car	Seton	Richmond Municipal Plan and Studen S	10		Linkel
	NO 8 3 15	435625 5004457	48-7050	Raret 1 PCL10	See the land	0
	General Colour	Most Convent Material Sand	ed Clay	4 Garel	0 ' 21 '	21
	Grey	Limestone			40 /	154
	Grey	Limestone Limestone		State of the last	164 1	160 '
		-		MINE P		
					Mail York Tealing	
		Armelia Space	Volume Placed	After lead of east plats, water sees Clear and earth free Disear, specify Not test		Vigine Level
	Court Set at (1997)	Type of Season's Used (Material and Type) Neat coment	7.8	Dear, specify Hot test	in less 9'1"	57.7
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	The state of			Turno rouse set at the	2 24.3 2	A STATE OF THE PARTY.
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	Cable Total Rotary (Conventional)	Domina Maria	Commented Not used Municipal Deveatoring Seed Hotel	Duration of pumping 4 tons • Q com	The same of the sa	5. 9.1
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3	Other specify	Cherrien	L' Garres of West	Charles and the Contract	10.	20 9.1
	Inside Open Hole O	R Mauriel Hat Depth (19)	None stan	Too'	2	25 9.1
	Daniele School County, Pa	100 12'	27' Reparement that	Recommended pump rate	30 58.3	The second second
-	64 Open H	1000	160 Desetting Yell Observation and/or Municipal Hole	Wed production from the	40 57.2 50 57.5	The second second
	6	SAME REPORTED TO	Construction .	100	60 57.7	The second second
TO THE REAL PROPERTY.			Abandoned, traufficent Bugsty	(A) (100	p of Well Location	-
E	Cunsts Union	traction Record - Screen Ough in	Notes Quality So Absorbined, other	Please provide a map below		CAD
	(profe) (Plantic, Galvan	and their grant from	specify	00	aakm	1
-	-	A	Cities, specify	1 2	-	77
=		Water Details	Hole Drameter Depth (ma) Drame	342, F		- Jag
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Wa	48 (ngh Gas Dayth Kin 184 (ngh Gas D	of of Villabor. Printers Accounts	27' 160 6		76 1	18
W	ser found at Depth Kin	d of Water: Fresh Universited	1 100 0	W 20 1 63	WH	13
=	(m/E) (Das () Well (Contractor and Well Technician I	nformation	STE	PEET	18
Page 1	ness Name of Well Co Air Rock Drilling (Co. Ltd.	C7081			12
But	DEDG FFEFFERNIN F	Read Name)	W/Richithond	3/4110-K	=Cons	100°
	-	Onde DA 220 Business E-mail Active air-rocks	Poymostico ca	Front server Date Park	age Delivered	Ministry Use Onl
	ON K	Water of West Sectoricism (Lat	at Name, First Name)	pegage y 20	21 06:10	~ Z3551
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Onta		Co	onserva	of the Envi		V		A34231 42311	11 Pri	int Below)	Regulation	n 903 (Record sources Act of
Well Ov	vner's l	nformat	ion								_				
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Mailing Ad	idress (S	treet Num	ber/Nam		1011 040	7.10 0	Municipa	lity		vince	Postal Code	9	Telephone I	-	
		han Si	reet	Box 13	05		Ri	chmond		ON	KOA	270			
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General C	Colour	Mos	st Comm	non Material			Other Mate		-	Ge	neral Description	1		From	oth (mat)
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Grey					stone									22	165
Grey					stone (while	e+Gr		Par.	ux.				165	224
Grey				Lime	stone N	white	4 G	Sandsto	ne M	ix				224	230 ′

					1										
Depth S	et at (m/4)	100, 7000 p	Annular Type of Sea			Vol	ume Placed	After tes	st of well viel	Results of W d, water was:	PURA INTERNATION	d Testing aw Down	R	ecovery
From 190	To 180	_ 0		(Material an		,		(m ³ 12.48	☐ Cle	ear and sand	free	Time	Water Level	Time	Water Level
		"							11	ner, specify	Not teste ued, give reason:	Static	8'3'	(min)	77.4°
180	0.	8	enton	ite slurry				25.2	II pump	II IG GISCOTIBIT	ded, give reason.	Level	17.5		61.4
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								* **	Pumpir	nake set at (i		2	23.8	2	50.7
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Rotary (F	•		Ortving Digging	Imig	estock gation	☐ Test H	g & Air Con	☐ Monitoring ditioning	Final wa	ter level end	of pumping (m/ft)	10	52.3	10	9.8
Air percu				☐ Indi	ustrial er, specify		- /		4.	77.4 "		15	61	15	8.3
		Construc	tion Re	cord - Cas			Stat	tus of Well	If flowing	g give rate (l/i	nin/GPM)		66.2		8.3
Inside	Open I	Hole OR Ma	aterial	Wall		h (m/ft)	Wat	er Supply	Recom	hended pum	p depth (n/ft)	20		20	
Diameter (cm/ter)	Concre	nized, Fibres te, Plastic, S	glass, Steel)	Thickness (cm/in)	From	To	☐ Rep	lacement Well		40F	4	25	69.6	25	8.3
04	Stee	el		.188	- +2 '	190	Rec	harge Well	Recomp (I/min/GI		p rate	30	72	30	8.3
10	Ope	n Hole			190	230		vatering Well ervation and/or		10		40	75.3	40	8.3
64						-	- Mor	itoring Hole	vveii pro	duction (Vmir	(CPM)	50	76.8	50	8.3
						-		nstruction)	Disinfect	1 -		60	77.4	60	8/3 4
and participation and	,						Insu	ndoned, fficient Supply	(See	/ No		1		00	
Outside		postinere re-	tion Re	cord - Scre		h (m/ft)	_ L Aba	ndoned, Poor er Quality	Please	provide a ma	Map of Wap below following			e baek.	
Diameter (cm/in)	(Plastic,	Material Galvanized,	Steel)	Slot No.	From	To		ndoned, other,						(4	(Na
	_)		Spec	A1.y		(`		1	
	,				/		Othe	er, specify		W		. ~		-	
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Water found	at Dept	h Kind of	er Deta Water:	THE COLOR PORTS	Intested	-	Hole Dian	Diameter	10	20			7	1	g
224 (m	ரி ⊟ Ga	as Oth	er, speci	fy	<u> </u>	From	To	(cm/in)	1	1				10	4
Water found				Fresh [Untested		0 19	70, 17	(1)		-010)			\geq
(m Water found	/ft) ☐ Ga		er, speci Water:	Fresh	Untested		190 2:	30 6a		₩ .	76				6
	/ft) Ga		er, speci							OST	AUA			-	agle sav
42330				and Well	Technicia	n Informa	tion	(1) (1) (1) (1) (1)		- 00	Stilf	75	7		<i>ž</i> .
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WATER RESOURCES DIVISION JB 05 1 31C4f UTM/1/8/2 4131519175 E AGG 21/1965/63/72 / | 5 | R | 540 | 0 | 4 | 3 | 8 | 5 | N Ontario Water Resources Commission Act ONTARIO WAT RESOURCES COMPISSION Township, Village, Town or City Date completed **Pumping Test** Casing and Screen Record Static level 2.0 Inside diameter of casing Test-pumping rate G.P.M. Total length of casing Pumping level Type of screen Duration of test pumping Length of screen Water clear or cloudy at end of test Depth to top of screen Diameter of finished hole Recommended pumping rate G.P.M. with pump setting of ______ feet below ground surface **Water Record** Well Log Depth(s) at Kind of water From (fresh, salty, sulphur) which water(s)
found Overburden and Bedrock Record BOOVEL 0 20 ~ 3 APSE J. 🗭 30 FINE For what purpose(s) is the water to be used? Location of Well In diagram below show distances of well from fl 1:56 road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm....

1300°

(Signature of I

Address

Licence Number

Name of Driller or Borer

Form 7 15M-60-4138

OWRC COPY

UTM 116 2 4131512151018 5 R 5003191015 N

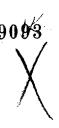
Elev. 4 R 0131/10

Basin 2 5



RECEIVED DEC 21 1949

GEOLOGICAL BRANCH DEPARTMENT OF MINES



The Well Drillers Act

	Ric	Con	Acres	Pt. Lot	
Date Completed June 20 J. a Cost of v	ven (not meludir	ng pump)	1605		
Pipe and Casing Record			Pumping Test		
Casing diameter(s) Length(s) of casing(s) Length of screen Type of screen Type of pump Capacity of pump Depth of pump setting	Developed C Duration of Pumping Ra Drawdown Static level of	Test	Ly 20/48. 250. G. hu. well20	F.H.	
	Water Record				
Kind (fresh or mineral)	lean:		Depth(s) to Water Horizon(s)	Kind of Water	No. of Fee Water Rise
How far is well from possible source of contamination What is source of contamination?	rech :				
Well Log	<u> </u>		Loca	tion of Well	
Drift and Bedrock Record Gravel Limestone Rock	From O ft. 2.5	76 25.ft. 28	In diagram below from road and los		onces of well
Situation: Is well on upland, in valley, or on hillsi Drilling Firm Address Recorded by Date Situation: Is well on upland, in valley, or on hillsi Drilling Firm Address	racks	Address		Taville	

UTM 1/18 2 413 14 19 15 1515

5R 5003181015 N

Elev. 4 R 0131018 Basin 25 | | |

The Well Drillers Act Department of Mines, Province of Ontario DEPARTMENT OF MINES

Water Well Record

P L P O K	√			.*	
County or Territorial District County Carlet	. T. Vil	lage, Town	FOR CALL	HMON	'D
Connection. Lot Street and Number (if in	Village, Town	or City).	Richmon	of Pond	£
Owner Country Coult High School	Address.	ussin	and Com	#	
Date Completed (day) (month) (year)	of Well (exclud	ing pump).	.W.L.C. only	e. r. . Z.750.0	2.0
Pipe and Casing Record			Pumping Test		
Casing diameter(s)	Date	• • • • • • • • • • • • • • • • • • • •			
Length(s) of casing(s). 26.	Static level.	<i></i>		• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •
Type of screen	Pumping leve	el		,	• • • • • • • • •
Length of screen	Pumping rate	e	5000 g.	phi	• • • • • • • • • • •
Distance from top of screen to ground level					
Is well a gravel-wall type? Lay. 26	Distance from	n cylinder	or bowls to ground	level	
W	ater Record				
Kind (fresh or mineral).	• • • • • • • • • • • • • • • • • • • •		Depth(s)	Kind of	No. of Feet
Quality (hard, soft, contains iron, sulphur, etc.). 720	••••••		to Water Horizon(s)	Water	Water Rise
Appearance (clear, cloudy, coloured).	···(:-/ // ······	٠٠٠٠٠٠٠	ground	Lesk	1461
For what purpose(s) is the water to be used?.	neckeds	lchva	level		
· · · · · · · · · · · · · · · · · · ·			120		120
How far is well from possible source of contamination?.		`	• •		-
What is the source of contamination? According.		• • • • • • • • • •	••	· · · · · · · · · · · · · · · · · · ·	
Enclose a copy of any mineral analysis that has been ma	de of water	• • • • • • • • •	• •		
Well Log Overburden and Bedrock Record	T		Loca	tion of Well	V
Overburden and Bedrock Record	From 0 ft.	To			
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117 Bearver Simon		790	dicate north		
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			to pay the		
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Situation: Is well on upland, in valley, or on hillside?	lla F	· · · · · · · · · · · · · · · · · · ·	····		
Drilling Firm			• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
Address Stationalle On f.					• • • • • • • •
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Date			•	396	
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FORM 5			Signature of	Licensee	

18 2 14 13 15 12 12 15 P 5R 500318110N APR 17 1953 Elev. 12 0 3 10 GEOLOGICAL BRANCH DEPARTMENT OF MINES Basin | 2 | 5 | | | The Well Drillers Act Department of Mines, Province of Ontario Water Well Record p, Village, Town or City. Richmond own or City)... . Cost of Well (excluding pump)..... Date Completed... Pipe and Casing Record Pumping Test Casing diameter(s)..... Date..... Length(s) of casing(s)... $\cancel{\sim}$... $\cancel{\sim}$. Static level..... Type of screen..... Pumping level Length of screen..... Pumping rate.... Distance from top of screen to ground level.... Duration of test... Is well a gravel-wall type?..... Distance from cylinder or bowls to ground level..... Water Record Kind (fresh or mineral)...... Depth(s) to Water Horizon(s) Kind of Water No. of Feet Water Rises Quality (hard, soft, contains iron, sulphur, etc.). Appearance (clear, cloudy, coloured)..... For what purpose(s) is the water to be used?... How far is well from possible source of contamination?. What is the source of contamination?..... Enclose a copy of any mineral analysis that has been made of Well Log Location of Well Overburden and Bedrock Record From To 0 ft. ft. In diagram below show distances of well from road and lot line. Indicate north by arrow. Situation: Is well on upland, in valley, or on hillside?...upland E. Vohusten Vally fulle Drilling Firm...., Name of Driller...Licence Number nature of Licensee FORM 5

31G/af. A' UIM / 8 2 435121615 F 15 R 5003191210 N APR 17 1953 Elev. 4 R 0 3 1 C GEOLUGICAL BRANCH DEPARTMENT OF MINES The Well Driffers Act Basin 215 Department of Mines, Province of Ontario Water Well Record Date CompletedCost of Well (excluding pump)..... Pipe and Casing Record Pumping Test Casing diameter(s).... Length(s) of casing(s).... Static level. Type of screen..... Pumping level. Length of screen.... Pumping rate.. Ø. Distance from top of screen to ground level. Is well a gravel-wall type?.... Distance from cylinder or bowls to ground level..... Water Record Kind (fresh or mineral)..... Depth(s) to Water Horizon(s) Kind of Water No. of Feet Water Rises Quality (hard, soft, contains iron, sulphur, etc.) Appearance (clear, cloudy, coloured)..... For what purpose(s) is the water to be used?.... How far is well from possible source of contamination? What is the source of contamination?... Enclose a copy of any mineral analysis that has been made of water... Well Log Location of Well Overburden and Bedrock Record From 0 ft.ft. In diagram below show distances of well from road and lot line. Indicate north by arrow. Situation: Is well on upland, in yalley, or on hillside? A D. M. 1.1.Licence Number.... FORM 5

UTM 4:8 2 4351105 P

Elev. 4 R 0131/10

Basin 215



RECEIVED

No

9115

APR 17 1953

The Well Drillers AcDEPARTMENT OF MINES

Department of Mines, Province of Ontario

Water V				icamond	
	, V il	or City)	City City	luno-el	···········
Date Completed Soft Cost (day) (month) (year)	of Well (exclud		p)		
Pipe and Casing Record			Pumping Test		·
Casing diameter(s). Length(s) of casing(s). Type of screen. Length of screen. Distance from top of screen to ground level.	. Static level Pumping lev . Pumping rat . Duration of	el	o prhr		
Is well a gravel-wall type?	· · · · · · · · · · · · · · · · · · ·	m cylind	er or bowls to groun	d level	
Kind (fresh or mineral)	Vater Record		Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
Appearance (clear, cloudy, coloured)	eo 7 usehald	· · · · · · · · · · · · · · · · · · ·	140	fresh	1/2 /22
How far is well from possible source of contamination?. What is the source of contamination?					
Well Log			_		_
Overburden and Bedrock Record	From	То	Loc	cation of Wel	1
Clay & Balders The Line attend	0 ft.	25ít. 15/	well from	below show dis road and lot li h by arrow.	
			H.Brownie-		-Biscope
			Ý	i	
Situation: Is well on upland, in valley or on hillside?. Drilling Firm Vally. Drilling	lep	lano			
Address	· · · · · · · · · · · · · · · · · · ·	Addre	e Number	of Licensee	······································



FEB - 3 1954 15
GEOLOGICAL BRANCH
DEPARTMENT of MINES

RECEIVE

Nº 123

Elev. 4 0 3 0 8

Basin 215

The Well Drillers Act
Department of Mines, Province of Ontario

Department	of Mines, Prov	ince of Ont	ario		
Water County or Torritorial Discourse (A) leter	Well	Rec	ord A	ichmo	nd.
Country or Torritorial District AN AN ANA	100	illage, Town	or City	oult	1000
	and the second s	n or City).	mona	l On	
Date Completed	ost of Well (exclu	-			••••••
Pipe and Casing Record			Pumping Test		<u> </u>
Casing diameter(s). Length(s) of casing(s). Type of screen. Length of screen. Distance from top of screen to ground level. Is well a gravel-wall type?	Static level Pumping le Pumping ra Duration of	vel ./ 2 te / . 5 test 2	feet	nutes	
	Water Record	<u> </u>			
Kind (fresh or mineral)Quality (hard, soft, contains iron, sulphur, etc.)	· · / / / / · ·	• • • • • • • • • • • • • • • • • • • •	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rise
Appearance (clear, cloudy, coloured)	rate s	home	45	fresh	371
How far is well from possible source of contamination What is the source of contamination? Enclose a copy of any mineral analysis that has been	vor clo	sit			
Well Log Overburden and Bedrock Record			Loc	ation of Well	
Overburden and Bedrock Record	From 0 ft.	To		below show dist	
gry liestort	30	40		oad and lot lir	ne. In-
Situation: Is well on upland, in valley, or on hillside Drilling Firm. Address. Name of Driller Date. 3. 1.4.5.3 FORM 5	and Infi	Address Licence Nu	Stillsvy imber Sp	Ag Or	aTa.

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Elan	1110		



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Province Village verses	Recof Onto	Pumping Test	ptar.	
Province Village verses	Recof Onto	Pumping Test	ptar.	
c level ping leve	nge, Town	Pumping Test	ptar.	
c level ping leve	nge, Town	Pumping Test		
ress	ng pump)	Pumping Test		
ress	ng pump)	Pumping Test		
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c level ping leve	ng pump)	Pumping Test		
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ping rate			eet	
	.		240 gal	har he
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ince fron	n cylinder	r or bowls to ground	d level	
Record				
		Depth(s)	Kind of	No. of Feet Water Rises
oft.		Horizon(s)	// //	1
ar		185 feet	fresh	182 feet
aure	٠		0	
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water	.×			
			notion of Wal	MW
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0 ft.	<u> </u>			
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		14	•	•
	1/9	9		
		No.		
		otter	o street	<i>‡</i>
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	_	8	4	
	_	1500		
	-	8	55	NFR
)	
		-		-
<u></u>		-		
	11.11	land	***************************************	
	- July			
	water	water	Action of test	ation of test

1870 barling 6 Harea 8 July 1954 Address 232 St Joseph blvd Hull
Licence Number 394

Signature of Licensee Date..

FORM 5

UIM 18 2 4351100 F APR - 3 1956 9 R 500371810 N GEOLULIUM DIANCH REPARTMENT OF INCS Elev. 9 R 0131/10 The Water-well Drillers Department of Mines Basin 25 Water-Well Record Richmond County or Territorial District. Township, Village, Towns, Git n Village, Town or City) Luchum and Address Luli mond (month) (year) Pipe and Casing Record **Pumping Test** 4 Static level Casing diameter(s) Pumping rate 200 4P2 Length(s) Pumping level Type of screen Duration of test Length of screen Well Log Water Record Depth(s) Kind of water From No. of feet To at which Overburden and Bedrock Record (fresh, salty, or sulphur) vater(s) ft. water rises found 46. For what purpose(s) is the water to be used? Location of Well tione In diagram below show distances of well from Is water clear or cloudy? road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling firm 200 200 2000 Address & 39 Howah wood we Mawa Name of Driller M Cagh Address Licence Number I certify that the foregoing statements of fact are true. Date Man Q & M Signature of Licensee Form 5



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Basin | 2 | 5 | | | |

The Water-well Drillers Act, 1954

Department of Mines



Water-Well Record (1/04/1004)

County or Territorial District	Carleto	⊢≫∖ πown	nahin Vi	illaga Town on	cu. Lan	Moon	
Con. I.a. Lot 2 4	Street and	Number (if	isnip, vi in Ville	mage, fown or	ity)	i an on d	
Owner Ellas Home	Bldus	Ltd.	Addres	38	mond	K.K.K.K	
Date completed Due g		ブ				***************************************	
(day)	(month)	(year)					
Pipe and Casin					Pumping Test		
Casing diameter(s)			Static	level //			
Length(s)28	4		Pumpi	ng rate 2	50 YP.	<u> </u>	
Type of screen	NONE	**********	Pumpi	ng level	Ż		
Length of screen			Duratio	on of test		•••••	
		<u> </u>					
Well Log	•				Water Record		
Openhander and Dataset David	From To		Depth(s)		No. of foot	Kind of water	
Overburden and Bedrock Record	ft.	ft.	1	at which water(s) found	No. of feet water rises	(fresh, salty or sulphur)	
$ \rho_0$				10426			
tlay	1	29	1				
	-						
Lime stone	27'	30	-	300	39.	1.00	
						June	
		 					
For what purpose(s) is the water	to be used?			·].		ــــــــــــــــــــــــــــــــــــــ	
12 A A A A A A A A A A A A A A A A A A A				Loca	ation of Well	J.	
Is water clear or cloudy?	//				show distances of		
Is well on upland, in valley, or on		lley	roac	and lot line.	Indicate north	by arrow.	
	f						
Drilling firm 200 Mg ce	glo			1		- 1	
Address 139 August	wood	lie			Joch	Ri _	
Name of Dalla	1 4				- Jack	·hon	
Name of Driller Address		· · · · · ·			Jehmond	2001	
	***************************************	**********		0		7"	
Licence Number / 7	***************************************	•••••		7	1		
I certify that the i			IE				
statements of fact	are true.		1/	1	1-1		
Date Pug 17 m W			0//		F		
Date Rug 17 77 818	nature of Licensee	<u></u>		127			
V	-			7	m 3		
rm 5				P	124		
				lus/	n 3 1 2 4 ill mr 4		
				5		•	



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The Water-well Drillers Act, 1954

Department of Mines

GROUNNWAIER BRANCH
NOV 2 6 1957
ONTARIO WATER
RESOURCES COMMISSION

Water-Well Record

County or Territorial District	lacketor	Toy	enghin Wille	go Torres on	ou Hari	they !	
County or Territorial District Con	Street and	Number (if in Village Address .	town or C	ity)	ent d	
(day)/	(month)	(year	-				
Pipe and Casin	_				Pumping Test		
Casing diameter(s) Length(s)	140775	**************	Pumping	level	60 4. P. 9		
Well Log	3			,	Water Record		
Overburden and Bedrock Record	From ft.	To ft.	*	epth(s) t which ater(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)	
DD							
theldy	1	27	<i>′</i>				
Time slon	27'	5.1	,	3/1	40.	Jush	
For what purpose(s) is the water					tion of Well	1.	
Is water clear or cloudy?	lear		In diagr	ram below sl nd lot line. Al	now distances of a Indicate north b	well from by arrow.	
Drilling firm Mula Address 639 Mayork	gues	De			Joch . A	2'.	
Name of Driller	eaghin			Ma.	Joch Brichmon	400 Proposition	
Licence Number / / / / I certify that the fe		••••••	. R	Ju-sur	1/		
statements of fact a	re true.	,	STER	Luch			
Sign	asture of Licensee		/	A	¥ 3		
m 5				Po	~ - 24		

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The Water-well Drillers Act, 1954 Department of Mines

ONTARIO WATER RESOURCES COMMISSION

Water-Well Record

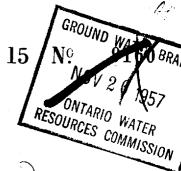
County or Territorial District	Parleton	Ն. Մ ոա	mahin Wil	lago Torres		
Con Lot J. Lot J. J. Owner Date completed	Street and 1	Yumber (i	f in Villa	oe Town or	City	
Owner L. Can Idame	Bldin I	7d	Addres	se, 1994 or	CILLY	hatta.h.ta.
Tare completed		57		······································	w.K.lih.kt.t	
(days)	(month)	(year)				
Pipe and Casir					Pumping Test	
Casing diameter(s)	••••		Statia 1	evel	/	
Length (s)			Domenia	evei	60 11.11	Z/
Type of screen	MONE		Pumnin	g lave		***************************************
Length of screen	******************	••••••		n of test		******************
Well Log			ı		Water Record	
			 1	Depth(s)	7 200024	
Overburden and Bedrock Record	From ft.	To ft.		at which water(s) found	No. of feet water rises	Kind of wate (fresh, salty, or sulphur)
May	11	28	, 			
		0	 			
P						
from totane	28'	50		100	40	-hua
		··		~		
For what purpose(s) is the water	to be used?	1				4
J. D. M. K.					ation of Well	7.
Is water clear or cloudy?	ear		In dia	agram below	show distances of	well from
Is well on upland, in valley, or on I	hillside?	lex	road	and lot line.	Indicate north	by arrow.
•••••••• ••••••••••••••••				• •		1.42
Drilling firm	film			1	a 1/2	Mor
Address 39	wood be	<i>e</i> .		İ	Joeh Brichmond B	Barry
allawa	·····				retimond ()	· .0 Y
Name of Driller						30° V
Address	•••••••••••			1/4		/
Tierre Name (7)	***************************************		ĸ		/	
Licence Number			16	₹	/	
I certify that the for statements of fact a			χV//		1/	
	4		S//	. 1	400	
Date Lug 36 M	cea she			4.0	*	<u> </u>
Sign	ature of Licensee	•••••		7	A 24	
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m 5				Co	n 3	
		•		m	pe // o	



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The Water-well Drillers Act, 1954
Department of Mines



Water-Well Record

•	w die	r- w	em '	Kecor	d , V/	CHUM
County or Territorial District ConLot	Lock To	⁄ ?ЛТо	wnship, Vi	illage. Town or	City Line	Lhour
ConLot.	Street and	Number	(if in Villa	age. Town or C	Hv) Luch	nord
Owner	Blur	Ild.	Addres	18 Land	mord	(************************************
Date completed	(month)	(70a	i			
Pipe and Casin	ng Record				Pumping Test	
Casing diameter(s)	4"		Statio	1.2	/	
Length(s)	8	*************	Dumi	level		······································
Type of screen	NoNo		Pumpi	ng lavel		·
Length of screen	*******************	••••••	Duratio	on of test		
Well Log	3		<u> </u>		Water Record	
_		1	1	Depth(s)	······································	7
Overburden and Bedrock Record	From ft.	To ft.	9	at which water (s) found	No. of feet water rises	Kind of wat (fresh, salt; or sulphur)
Of.						
ray	 	128				
0						
Francis land	28'	5:2	,	32'	10'	Tres
·						
		 				
			" - 			
		-				
						
or what purpose(s) is the water	A. I. 10	-1				·
what purpose (s) is the water	to be used?	}		Loca	tion of Well	
water clear or cloudy?	ear.	•••••••	In d	iagram below s	how distances of	well from
well on upland, in valley, or on			road	and lot line.	Indicate north	by arrow.
	*********************			1 '	U	
rilling firm Daniel	Last				Butmone	Dr
ddress 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					goen	
	ewe				B town	1 Bi
ame of Driller				ls.	Lum	
idress	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•••••	R	X	•	:
cence Number	******************	••••••				
I certify that the f			()"//		ļ	
statements of fact a			0//	H		
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ate		••••••		13		
/ Big	ngiare of License			[,	9 2 1500	
					200 2003 2484 Vell No 11	
***	·			17	0887	
e.v				' W	rell no 11.	•

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ONTARIO WATER COMMISSION

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The Water-well Drillers Act, 1954

Department of Mines

Water-Well Record

·	() / (- AA 6	n vec	ord A	14 / 2013
County or Territorial District	Tolleton	Town	ship, Village, Tow	n or City.	1-Bown
Owner Completed	Street and N	umber (if	in Village, Town	or City)	mond.
Owner	Mac	Zlol	Address	uhma d	
Date completed(day)	(month)				
Pipe and Casing	Record .		•	Pumping Test	
Casing diameter(s)		T	Static level	***************************************	-
Length(s) 25		••••••	Static level	250 4. P.	
Type of screen	NONE	••••••	Pumping rate	1 2 1	A
Length of screen		*************	Dunction of toot	12	
			Duration of test		14*************************************
Well Log				Water Record	
Overburden and Bedrock Record	From	То	Depth(s) at which	No. of feet	Kind of water
	ft.	ft.	water(s) found	water rises	(fresh, salty, or sulphur)
Chris					
- Cay	-/	28'			
					
Limenston.	28	5-/1	5%	400	
					Just
					
		4			
					
For what purpose(s) is the water to	be used?			Location of Well	X
To make a large of the large of		•••••		ow show distances of	
Is water clear or cloudy?			road and lot l	ine. Indicate north	hy arrow
Is well on upland, in valley, or on h	illside?	Les .		N	oy uniow.
Drilling firm			1.	/	n.
Address 39 Land and Address	and III			Dichmond	<u>u. </u>
L. Company of the Com	love	×		of to	B'
Name of Driller	************	•••••		Lichem	
Address		•••••	0	·	
••••••		•••••	J.B. J.		
Licence Number		\ \ \ \ \			3° Harris
I certify that the for	egoing	1 ()	//		John John Janes
statements of fact ar		"	13		2017
Date 10, 4.5' 22 202	P		Ę,	1	r I
	ture of Licensee		13	P+24	
SIRIN	TICEUS66		1	7 4 20	

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The Water-well Drillers Act, 1954 Department of Mines



				ord Ric	
County or Territorial District	Torleton.	Town	ishin. Village, Town	or City	Hour
Con Lot Owner College	Street and 1	Number (if	in Village, Town	or City)	mond.
Owner Eller Janes	Blder	Hd.	Address	chmond.	
Date completed	<u> 6</u>	<u>5.7.</u>	•		•••••••••••
(day)	(month)	(year)			
Pipe and Casing				Pumping Test	
Casing diameter(s)	••••••		Static level	4'	
Length(s)	***************		Pumping rate	250-91.5	<u>.</u> .
Type of screen	NONE		Pumping level	13.1.,	
Length of screen			Duration of test	1 ds.	
Well Log				Water Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
- Class		76			-
- Cay		75			<u> </u>
/2 - /					
Timesterne	28	52	5.2'	40'	fush
					<u> </u>
					-
					
For what purpose(s) is the water		1		Location of Well	P!
J. Dury			In diagram he	low show distances of	well from
Is water clear or cloudy?	and the same			line. Indicate north	
Is well on upland, in valley, or on	hillside ?	lley		N	
1 1 7 1			1	10	y
Drilling firm	Pakatakan janga			Joen 10	
Address / John John John John John John John John	1800 00	Le	4		
TI	ud d	z		Joek R Deihmon	dri
Name of Driller	,	I	k J	y Carrier	
Address			180		
	*************************	••••••	X1 // 1		
Licence Number			0// /		
I certify that the f			W.		
statements of fact		,	K ,		l ić.
Date Syll Will	lonal.				FI
	nature of Licensee		*	fot 24 7600	·,
,	_			To a	

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ONTARIO WATER
RESOURCES CUMMISSION

GROUND WATER BRANCH

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The Water-well Drillers Act, 1954

Department of Mines

Water-Well Record

County or Territorial District	Street and	Tow	nship, Vil	lage, Town or	City.	Hobows
Con Lot 2	Bldin	Number (1	I in Villa:	ge, Town or (City)	KI FILL
Date completed	(month)	<u> </u>	•	····jhihadadada	ed. Luci beskil vi dile i tish	······································
Pipe and Casi	ng Record				Pumping Test	
Casing diameter(s)	•••••		Static 1	evel 14	/	
Length(s)	*******	••••••	Pumpin	g rate	, 40 S.P.	<i>3</i> .
Type of screen	MONE	•••••••••••	Pumpin	g level 12.	······	••••
Length of screen	******************************	*************************	Duratio	n of test	h.	••••
Well Lo	g				Water Record	
Overburden and Bedrock Record ft.		To ft.	,	Depth(s) at which water(s) found	No. of feet water rises	Kind of wate (fresh, salty, or sulphur)
		-00				-
- P						
Jim son	28	54		58'	40'	fush
		-				
		<u> </u>				
For what purpose(s) is the water		1		Too	ation of Well	,
- Internet			In di		ation of well show distances of	wall from
Is water clear or cloudy?					Indicate north	
Is well on upland, in valley, or on	hillside?	elle.			V	-
Drilling firm W. Miles	de	•••••		1		
Address 39 January	wood	luc.			goed Di	
a chain	······				John Co	113'
Name of Driller	ed gleen.	••••••	¥	12	redi umon on	
Address		••••••	160			
Licence Number	***************************************	•••••	N	3		,
I certify that the			(y)	14		
statements of fact				7		
Data Pet 8 7 mm				13	·	7 -
Date Signature	nature of Licensee			21	24 700	from St.
				Pour	3	
m 5				1/25.01	71-14	
				mu		

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The Water-well Drillers Act, 1954 Department of Mines

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ı	M	W 2)	1958	1
	C	INTARIO URCES C	WATER OMMIS	1001
1	SEG.	Uillian.		

Basin | 2 | 5 | | | | Water-Well Record PRICHMOND. College Township, Village, Town or City. County or Territorial District. n Village Town or City) Address Andrews (day) (month) (year) Pipe and Casing Record **Pumping Test** Casing diameter(s) Static level Pumping rate Type of screen Pumping level Length of screen Duration of test Well Log Water Record Depth(s) From Overburden and Bedrock Record To at which No. of feet ft. water rises found CLAYABOULDERS 25 30 For what purpose(s) is the water to be used? Location of Well TOUSE In diagram below show distances of well from Is water clear or cloudy? road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside?..... Drilling firm Address Name of Driller Address Licence Number..... I certify that the foregoing statements of fact are true.

Kind of water

(fresh, salty or sulphur)

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VIM 1/18 2 413141915 15 1-5 R 50041120 N Elev. 4R 03 C8

Basin 25

The Water-well Drillers Act, 1954 Department of Mines



V	Vatei	:-We	ell	Recor	d RICHN	1017
County or Territorial District	arleton	Тот	mahin	Village Town or		
ConLot	Street and	Number (i	if in T	Village Town or C	Richmon Richmon	d Ont.
Owner Coady Constructi	on	ramber (, III 1	drage, 2I2 Ell	endale Cresc	ent
Date completed Sept. 17,				ness		
	(month)	(year)				
Pipe and Casing	Record				Pumping Test	
Casing diameter(s)5"			Sto	tic levelI4	ft.	
Length(s) 2I ft.		***************	Pur	nping rate30		
Type of screennone				mping level2I		
Length of screen				ration of testI		
	***************************************			ation of test		
Well Log	,				Water Record	
Overburden and Bedrock Record	From ft.	To ft.		Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Clay	0	16				
limestone	16	2 7I		71	57	fresh
	h					
						
				*···		
		 				
		-				
		-		·		
For what purpose(s) is the water t	to be used?			Loc	cation of Well	, and
	••••••	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		In diagram below		well from
Is water clear or cloudy?clear	<u> </u>			road and lot line.		~ m \ .
Is well on upland, in valley, or on l	hillside?					
upland	••••••		٠	•		
Drilling firmF.A. McLean &	Son		~ ,			£
Address	***************************************					4
•••••••••••••••••••••••••••••••••••••••	*****************					s **
Name of Driller W. Kavanagi	1					
Address		ı				
Licence Number						
I certify that the fo	oregoing	-				
statements of fact a						
0	111 69					
Date Sept 30	VI Lea		i		"	

Signature of Licensee

5 R 5003191415 N



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Form 5 15M-58-4149

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The Ontario Water Resources Commission Act, 1957

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ONTARIO WATER RANCH

RESCURCES CUMANISSION

RICH FOLLOWS

WATER WELL RECORD

County or District CA to the India	Z	Township	Village, rown or	City Joh	o HANN
		com	pleted 3	- 7 -	5-9 year)
		ess	ALUERA	<u> </u>	
Casing and Screen Reco	rd		Pur	nping Test	
Inside diameter of casing	2 desiglance	Static le	vel		5 feet
Total length of casing	26 feet	Test-pur	mping rate		, ,
Type of screen	more		g level		
Length of screen		1	n of test pumping		
Depth to top of screen	none		elear or cloudy at		
Diameter of finished hole	2 where	Recomn	nended pumping		
		with	pumping level o	f	18 feet
Well Log			Wo	iter Record	
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Grey line hock	25	25	44	29	1 2
Grey Line HOCK		//	77	- 	green
					_
					_
For what purpose(s) is the water to be use	d?		Loca	tion of Well	4/
HOUSE]	In diagram below	show distances	of well from
·]	road and lot line	e. Indicate nort	h by arrow.
Is well on upland, in valley, or on hillsid		0			
upland		1/2			
Drilling Firm Granel Correct	Œ				
Address 20 11 Mark		11		11.	
EASTRIE		The Committee College	•	well	
		10	<u>'</u> 2 °		
Licence Number 257					
Name of Driller		3	- 40		
Address dans			*	and the second s	
			an word	\$1.	
Date 20/6/57			V		
(Signature of Licensed Drilling Contra	etor)				
(



GROUND WATER BRANCH SEP 7 1980

The Ontario Water Resources Commission Act, 1957

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$\mathbf{W}\mathbf{A}^{\prime}$	TER W	ELL	RECOR	BESOUPCES O	numission		
County or District Cateleton	<u> </u>	P e co	p, Village, Town o	lines	hmono 60		
		ress	Richn	month w	year)		
Casing and Screen Rec	ord	<u></u>	Pu	mping Test			
Inside diameter of casing. Total length of casing. Type of screen. Length of screen. Depth to top of screen. Diameter of finished hole.			Static level Test-pumping rate C.P.M. Pumping level Duration of test pumping Water clear or cloudy at end of test Recommended pumping rate C.P.M. G.P.M. G.P.M.				
Well Log		wit	h pumping level o		ar 30ft		
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)		
broken limeston	u /3	20					
limestone	20	59	55	50	fresh		
For what purpose(s) is the water to be used	1		Location diagram below road and lot line.				
Drilling Firm Address Licence Number 483 Name of Driller Berkelman		OTTAL	VA 57 7	5'/ 100'			
Address Date Cueg 23/60 (Signature of Licensed Drilling Contractors)	a ko	me	191 Bollo Chery				

Form 5 15M-58-4149

8 1 N. S.

GROUND WATER BRANCH 1 8 2 4 3 5 3 1 5 E 5 R 5003980 N The Ontario Water Resources Commission Act ONTARIO WATER RESOURCES COMMISSION .Township (Village, Town or City... Date completed Casing and Screen Record **Pumping Test** Inside diameter of casing 2 Static level Total length of casing 28. Test-pumping rate Type of screen Pumping level / 7 Length of screen Duration of test pumping 5 hu Depth to top of screen Water clear or cloudy at end of test CCEDIC Diameter of finished hole Recommended pumping rate / O G.P.M. with pump setting of 50" feet below ground surface Well Log **Water Record** Depth(s) at Kind of water From To ft. Overburden and Bedrock Record which water(s) (fresh, salty, sulphur) found 0 For what purpose(s) is the water to be used? Location of Well In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm..... Address / 2 4 3 Licence Number..... Name of Driller or Borer. Date. Form 7 5M-61-3852 OWRC COPY **CSS.S8**

GROUND WATER BRANCH UIM 1 8 2 4 3 4 9 5 5 F 5 R 50041175 N Ontario Water Resources Commission Act OHITARIO MATER man washing be well and Township, Village, Town or City..... Date completed. Casing and Screen Record **Pumping Test** Inside diameter of casing..... Static level. Total length of casing Test-pumping rate Type of screen Pumping level... Length of screen Duration of test pumping Depth to top of screen Water clear or cloudy at end of test Diameter of finished hole Recommended pumping rate with pump setting of..... feet below ground surface Well Log Water Record Depth(s) at Kind of water From Overburden and Bedrock Record which water(s) (fresh, salty, sulphur) found 0 For what purpose(s), is the water to be used? Location of Well In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm Capital Licence Number Name of Driller or Borer..... Address (Signature of Licensed Drilling or Foring Contractor) Form 7 10M-62-1152 OWRC COPY

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OWRC COPY



5 R 50041130 N Ontario Water Resources Commission Act

Elev. 4 R 0131019 WATER WELL RECORD

WATER RESOURCES

VOICE IN 19 1965

ONTAGE WATER

ONTARIO WATER
RESOURCES COMMISSION

asimity 2 15 District Carl	Townsh	ip Village, To	wn or City R	ichmond 1964	
Con Lot	Date co	Metcalf	day Ont	month ario	уеат)
Casing and Screen Record			Pumping	g Test	
Inside diameter of casing 5"	Sta	tic level		18	
Inside diameter of casing 23 t		st-pumping rat	e	5	G.P.M
Total length of casing 23 t	_	mping level		30	
Type of screen				lhr.	
Length of screen				test clo	
Depth to top of screen				5	
Diameter of finished hole				feet belo	
Well Log		1 1			r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay		0	12	66	fresh
limestone		12	68		
For what purpose(s) is the water to be used?	X			of Well	,
new house		In diagram	n below show	v distances of wo dicate north by	ell from
Is well on upland, in valley, or on hillside? upland		proad and	lot line. In	dicate north sy	
Drilling or Boring Firm APITAL WATER SUPPLY		41			160
		A	O	0.	12
Address 1245 Heron Rd.,		{ 	12 m	Re	
Ottawa 733-0600		3 -		_ 1	·
Licence Number 1223				20'	(A)
Name of Driller or Borer M Kavanagh		75		``	W Y
Address 17 19 14					
Date, Now 17 1964 Halter Kavanagh (Signature of Licensed Drilling or Boring Contractor))	8			
Form 7 15M-60-4138					
		1			

316/af. 7". UIM 118 2 413 15 1019 10 PE

OWRC COPY



5 R 50041130 N Ontario Water Resources Commission Act

Elev. 4 R 0131019 WATER WELL RECORD

WATER RESOURCES

VOICE IN 19 1965

ONTAGE WATER

ONTARIO WATER
RESOURCES COMMISSION

asimity 2 15 District Carl	Townsh	ip Village, To	wn or City R	ichmond 1964	
Con Lot	Date co	Metcalf	day Ont	month ario	уеат)
Casing and Screen Record			Pumping	g Test	
Inside diameter of casing 5"	Sta	tic level		18	
Inside diameter of casing 23 t		st-pumping rat	e	5	G.P.M
Total length of casing 23 t	_	mping level		30	
Type of screen				lhr.	
Length of screen				test clo	
Depth to top of screen				5	
Diameter of finished hole				feet belo	
Well Log		1 1			r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay		0	12	66	fresh
limestone		12	68		
For what purpose(s) is the water to be used?	X			of Well	,
new house		In diagram	n below show	v distances of wo dicate north by	ell from
Is well on upland, in valley, or on hillside? upland		proad and	lot line. In	dicate north sy	
Drilling or Boring Firm APITAL WATER SUPPLY		41			160
		A	O	0.	12
Address 1245 Heron Rd.,		{ 	12 m	Re	
Ottawa 733-0600		3 -		_ 1	·
Licence Number 1223				20'	(A)
Name of Driller or Borer M Kavanagh		75		``	W Y
Address 17 19 14					
Date, Now 17 1964 Halter Kavanagh (Signature of Licensed Drilling or Boring Contractor))	8			
Form 7 15M-60-4138					
		1			

WATER RESOURCES DIVISION5 No UIM 1/8 4315121/10 P DEC 1 6 1966 5 R 5 0 0 4 0 5 5 Pre Ontario Water Resources Commission Act PITARIO WATER Town or City..... Township! Date completed..... **Pumping Test** Casing and Screen Record 18 Static level Inside diameter of casing.... G.P.M. Test-pumping rate Total length of casing Pumping level. Type of screen Duration of test pumping / hr Length of screen Water clear or cloudy at end of test Depth to top of screen..... Recommended pumping rate Diameter of finished hole with pump setting of 60 feet below ground surface **Water Record** Well Log Kind of water Depth(s) at To ft. (fresh, salty, sulphur) From which water(s)Overburden and Bedrock Record found 0 751 Location of Well For what purpose(s) is the water to be used? In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm... Licence Number Name of Driller or Borer. Address town Licensed Drilling or Boring Contractor) Form 7 15M-60-4138

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31G/4f. "A" WATER RESOURCES DIVISION $I = 15 \, \mathrm{The}^{\mathrm{N}}$ Ontario Water Resources Commission Act ONTARIO WATER RESOURCES COMMISSION 0131015Township, Village, Town or City. Date completed **Pumping Test** Casing and Screen Record Static level.... Inside diameter of casing.... 10 Test-pumping rate Total length of casing Pumping level... Type of screen Duration of test pumping Length of screen. Water clear or cloudy at end of test..... Depth to top of screen. G.P.M. Recommended pumping rate Diameter of finished hole 30 feet below ground surface with pump setting of.... Water Record Well Log Depth(s) at which water(s) found Kind of water To ft. From ft. (fresh, salty, Overburden and Bedrock Record sulphur) Location of Well For what purpose(s) is the water to be used?... In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland in valley Drilling or Boring Firm. Licence Number. 240 Name of Driller or Borer. Address Date (Signature of Licensed Drilling or Boring Co Form 7 15M-60-4138 (126.58 OWRC COPY

15.... 18 435110 CODED WATER RUSDUADIR DIVISION Ontario Water Resources Commission Act NOV 1 4 1968 County or District ... Township, Village, Town or Cit Con. Date completed Casing and Screen Record **Pumping Test** Inside diameter of casing. 5 Static level..... Total length of casing Test-pumping rate Type of screen Pumping level Length of screen Duration of test pumping Water clear or cloudy at end of test Depth to top of screen Diameter of finished hole Recommended pumping rate 5 G.P.M. with pump setting of 60 feet below ground surface Well Log **Water Record** Depth(s) at which water(s) Kind of water (fresh, salty, sulphur) From ft. To ft. Overburden and Bedrock Record found 0 For what purpose(s) is the water to be used? **Location of Well** neur In diagram below show distances of well from road and lot line. Indicate note by arrow. Is well on upland, in valley or on hillside? Drilling or Boring Firm Name of Driller or Borer. Address. Date. Form 7 5M 60-20912 OWRC COPY CSS.S8

12v. 50 0 4 3 5 0 8 5 CODE The Ontario Water Res County or District Carlo to Lot 24	Sources Commission LL REC Township, Village, T	ORD	RESOURCE	ARIO WATER ES COMMISSION
Casing and Screen Record		Pumpin	g Test	
Inside diameter of casing	Static level	5 ′		
Total length of casing	Test-pumping ra	ite / 0		G.P.M.
Type of screen	Pumping level	5		
Length of screen	Duration of test p	oumping	1 hr	······›
Depth to top of screen.	Water clear or cle	oudy at end of	test clo	udy
Diameter of finished hole	Recommended p		_	G.P.M.
	with pump settin	g of	O feet below	w ground surface
Well Log			+	Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay	0 '	14 1	69'	fresh
sand & boulders	141	191		
limestone)	191	70'		
For what purpose(s) is the water to be used?	T 1.	Location (. 1
			distances of well cate north by a	
Is well on upland, in valley or on hillside? Drilling or Boring Firm Capital Haden Address / 4 Capital Haden Address 6 Licence Number 285 Name of Driller or Borer B. Cares	B	mhe d	\$ \$ P	
Address Date 26 1968 Colden Local Description of Boring (Gontractor)		25	50'	
Form 7 15M-60-4138				
OWRC COPY			CSS.\$3	

Elev. 435015 The Ontario Water Resord County or District Carleton Con. H. Lot 24	Γownsh	REC(DRDON-RESOURCE	1500	1 B
	dress	Ric	hmon	donth Or	£.
Casing and Screen Record		-	Pumping	ı Test	
Inside diameter of casing	Stat	ic level	1	****	
Total length of casing 22	ı				G.P.M.
Type of screen		ping level			
Length of screen		ation of test p		, 1	
Depth to top of screen	Wat	ter clear or clo	udy at end of	test Llo	udez
Diameter of finished hole 5		ommended pi		4	G .P.M.
,	with	n pump setting	g of 3	O feet belo	w ground surface
Well Log	1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Wate	r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay		0 /	151	58'	fresh
a di di di di di di di di di di di di di		15'	17		0
1 Sana + Woulder		, ,			
limestone		17	60		
For what purpose(s) is the water to be used?			Location	of Well	
Is well on upland, in valley, or on hillside? Drilling or Boring Firm apital Hater Supply Hate Address /4 Cashford Dr Ottawa 6				distances of we cate north by	(X 1
Name of Driller or Borer Address Date Capa 29 1968 (Signature of Licensed Drilling or Boring Gontractor) Form 7 15M-60-4138				200	P
O W R C COPY					Contraction of the Contraction o

DIVISION OF 18-434980 WATER RESOURCES MAY 5 1039 The Ontario Water Resources Commission Act ONTARIO WATER County or District Lot 23Date completed Casing and Screen Record **Pumping Test** Inside diameter of casing... Static level Test-pumping rate Total length of casing Pumping level..... Type of screen Duration of test pumping Length of screen Water clear or cloudy at end of test Depth to top of screen..... Diameter of finished hole Recommended pumping rate G.P.M. with pump setting of ______ feet below ground surface Well Log **Water Record** Kind of water Depth(s) at From To Overburden and Bedrock Record which water(s) (fresh, salty, found sulphur) 1 Location of Well For what purpose(s) is the water to be used?...... In diagram below show distances of well from road and lot line. Indicate north by arrow. Is well on upland, in valley, or on hillside? Drilling or Boring Firm

Form 7 5M 60-20912

Signature of Licensed Drilling or Boring Contractor)

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IM 182414830 4R 50294110 ev. 5R 03165 The Ontario Water Res			Act	DIVISION OF TER RESOURCES AY 5 1.39	M
County or District Carlesan	Towns	REC(ship, Village, T	own or City	JRCES COMMISSIO	1969
Con			(dav	month 7	year) Gen 3/69
Casing and Screen Record			Pumpin	g Test	
Inside diameter of casing Total length of casing Type of screen Length of screen Depth to top of screen Diameter of finished hole	Te Pu De W Re	est-pumping raumping level umping level uration of test prater clear or cle	22 ' bumping at end of bumping rate	2 HRS. test Clé 3009p1,	HR. G.P.M. AR AFR HRG.P.M. ow ground surface
Well Log	_1			Wate	r Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
SAND.		Ö	//		
BLACK. GRANITE		//	88'	88.	FRESH
For what purpose(s) is the water to be used? HOUSE		•		of Well distances of we	
Is well on upland, in valley, or on hillside? Drilling or Boring Firm Address Add		* GELYS	FARM,	of Manner	YOUNGHUSBARD. JOUNROSIN, ON

TM 1/18 2 4/3/5/1/4/0		316/	46	1510064
4 5 0 0 4 0 Wester menegemen				3
ev 5 R 013115 MATED WATER				R
	L REC	UKD		n
County or District Que DIVISION OF CONTROLS	ownship, Village,	Down or City	Lichm	ond
Con. Lot 34 WATER RESOURCE	ate completed	(day	menth	year)
	dress 2 18	monte	rey Dr	<u></u>
Casing and Screen Record RESOURCES COMM	SSION	Pumping	g Test	wa
Inside diameter of casing	Static level			
Total length of casing 38'	Test-pumping	rate 10		G.P.M.
Type of screen	_		4	
Length of screen				
Depth to top of screen				
Diameter of finished hole 5 "				G.P.M.
	with pump sett	ing of		w ground surface
Well Log	From	To	Depth(s) at	Kind of water
Overburden and Bedrock Record	ft.	ft.	which water(s) found	(fresh, salty, sulphur)
clay	0	151	84'	
sandy gravel with boulders	15'	29'		
3 0	191	851		
limestone)	27	8 5		
For what purpose(s) is the water to be used?	In diagr	Location	of Well distances of we	ll from
new house	road an	d lot line. Inc	licate north by	arrow.
Is well on upland, in valley or on hillside? Drilling or Boring Firm apital Hater				
Drilling or Boring Firm applied States			rational and the second	
Address 14 Ashford De				* * *
Ottowa 6	1/0	7	ا س	\bigcup
Licence Number 3216	1. 4	•	58	4
Name of Driller or Borer Maranagh	4 X X X	80		*
Address // /9/9	1 De 3		·	. 3
Date Upr 7				N. C.
(Signature of Licensed Drilling or Boring Contractor)				
Form 7			į.	•
OWRC COPY			C 35.	3 3



The Ontario Water Resources Commission Act

WATER WELL RECORD

	Water management in O	ntario 1. PRINT ONLY IN S 2. CHECK ⊠ CORRE	PACES PROVIDED CT BOX WHERE APPLICABLE	11	1510301	MUNICIP. 151701	CON.	22 63 24
	COUNTY OR DISTRICT	en	TOWNSHIP BOROUGH CITY, TO	A	3 9	CON., BLOCK, TRACT, SURVEY,	ETC:	LOT 21927
			689	Do	l f	011	ATE COMPLETED.	319-69
			3937	RC. ELE	EVATION RI	C. BASIN CODE		N. T
		lC	G OF OVERBURDEN A			·		47
	GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIA	ALS	GE	NERAL DESCRIPTION	DE FROM	PTH - FEET TO
	brown	clay	stones				0	21
	grey.	Linkdon					21	_//_
								
		*						
		* *			·			*
	4	· · · · · · · · · · · · · · · · · · ·						1
						<i>y</i>		
		i		1 1 1 1		1 1 1 100 100 1		
	31 002/1	60151/12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]	
1	1 2 10 14	R RECORD	51 CASING & OPE	N HOLE RE	CORD Z	SIZE(S) OF OPENING 31-S (SLQT NO.)	65 65 3 DIAMETER 34-	75 - 780 38 LENGTH 39-40
(10-12	KIND OF WATER	DIAM. MATERIAL TH	WALL DEPTH -	- PEET 141	MATERIAL AND TYPE	DEPTH TO T OF SCREE	OP 41-44 80
4	0070 2 5/	ALTY 4 MINERAL	10-11 STEEL 12 2 GALVANIZED 3 CONCRETE	244	(3-16) (N)			FEET
	1	ALTY 4 MINERAL	4 OPEN HOLE 17-18 1 STEEL 19	2 17 U a		PTH SET AT - FEET MATE	DIAL AND TYPE	(CEMENT GROUT, EAD PACKER, ETC.)
	1	ALTY 4 MINERAL	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		007/	10-13 14-17	t	
	2	ALTY 4 MINERAL	24-25 1 STEEL 26 2 GALVANIZED 3 CONCRETE		27-30	18-21 22-25 26-29 30-33 80		The state of the s
7	2 S	ALTY 4 MINERAL	4 OPEN HOLE	NG 1				
	71 PUMP 2	Bailer 0005	GPM. 0/ 15-16 HOURS	17-18 MINS.	IN DIAGRAI	LOCATION OF M BELOW SHOW DISTANCES OF		IND .
S	STATIC LEVEL	WATER LEVEL 25 END OF WATER PUMPING 22-24 15 MINUTES	LEVELS DURING 1 PUM 2 PREC		LOT LINE.	INDICATE NORTH BY ARROW.		
	U FEET PEET	FEET S8-41 PUMP INTAKE	1 + + 1	EST 42	* ;			
	Z IF FLOWING, GIVE RATE RECOMMENDED PUMP	GPM.	FEET 1 CLEAR	2 € CLOUDY	۸		. 4	
	SHALLOW	MEDEEP PUMP SETTING	65 FEET RATE COO	GPM.				
	54	GPM./FT. SPECII	5 ABANDONED, INSUFFICE	ENT SUPPLY		÷	•	.
	FINAL STATUS OF WELL	2 OBSERVATION WE						
, ·	55-56		5 COMMERCIAL			Ottowa	st	
	WATER USE O	3 ☐ IRRIGATION 4 ☐ INDUSTRIAL	7 D PUBLIC SUPPLY 8 COOLING OR AIR CONDITION		410'			
	51	1 K CABLE TOOL	9 □ NOT USE	:D			, s .	
i i	METHOD OF DRILLING	2 ☐ ROTARY (CONVENT 3 ☐ ROTARY (REVERSE 4 ☐ ROTARY (AIR)			i		v •	
	NAME OF WELL CON	5 AIR PERCUSSION		NUMBER	LERS REMARKS:	58 CONTRACTOR 59-62 DAT	E RECEIVED	63-68 80
•	o Henry	Mains We	U Drilling 33	>	DATE OF INSPECTION	3644 INSPECTOR	10126	9
• •	A NAME OF DRILLER	OR BORER DE	1 Ont	띯	REMARKS:		hilly	<i>∴ [][?</i>]
•	O SIGNATURE OF CON	my Ma	SUBMISSION DATE			, ,		
	Den	y Man	DAY 27 MO OU	1 69 6				

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Work make the Ontario a pol	WATER	R WELI	15 1 1 1 1 1 MUI	NICIP. CON.	146	7
	NT ONLY IN SPACES PROVIDED ECK CORRECT BOX WHERE APPLIC TOWNSHIP, BORO	CABLE 1 1 2 L	10	7.5.70.1 14 15 T, TRACT, SURVEY, ETC.	LO	22 23 2 T 25-27
OWNER (SURNAME FIRST)	28-47 RADDRESS	mond		DATE COMP	LETED 48-	53
Star Quali	ty Hones	& Tettsvel	LO OLT. ELEVATION RC. BASIN	DAY 3		
21 1 2 10 10	243 ₁ 5 ₁ 0 ₁ 2 ₁₀ 5 ₁₀	0 4 1 8 0 4	ELEVATION RC. BASIN 2 5 2 5 30 31			1 1 4
CENERAL COLOUR MOS	T .	JRDEN AND BEDROCK	GENERAL DES		DEPTH	
GENERAL COLOUR COMMON	MATERIAL OTT	.O Jana	Octobe	. ما	O'	18
WWW Y	9					
cycy lime	stone		haro	(18	6 C
						· · · · ·
31 00/8605/3 32 10 14 15 41 WATER RECO	INSIDE	ERIAL THICKNESS INCHES FROM	TO MATERIAL A		TER 34-38 LE INCHES DEPTH TO TOP OF SCREEN	41-44
15-18	MINERAL	VANIZED CRETE 20 EL 19 VANIZED CRETE N HOLE EL 26 VANIZED CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE CANDER CRETE	20-23 DEPTH SET AT FROM 10-13 18-21 26-29	GGING & SEA - FEET	TYPE (CEMI	CORD ENT GROUT, ACKER, ETC
		ATION OF PUMPING	LOCA	ATION OF WEI	.L	
STATIC LEVEL STATIC END OF PUMPING 19-21 22-2 011 FEET 013 FEET 38- IF FLOWING. GIVE RATE EXAMPLE OF PUMPING FEET 013 FEET 38- GP RECOMMENDED PUMP TYPE SHALLOW DEEP	WATER LEVELS DURING 15 MINUTES 30 MINUTES 29-31 17 0/3 FEET 0/3 FEET 0 41 PUMP INTAKE SET AT WATI	PHG /	IN DIAGRAM BELOW SI LOT LINE. INDICATE N	HOW DISTANCES OF WELL FR	OM ROAD AND	F
2 08 3 TE 10 10 10 10 10 10 10 1	SERVATION WELL 6 ABANDOI ST HOLE 7 UNFINISH CHARGE WELL MESTIC 5 COMMERCIAL OCK 6 MUNICIPAL	-		2		
USE 0/ 4 INI METHOD 57 1 DA CA 2 RO OF 3 RO DRILLING 4 RO	BLE TOOL 6 COLING OR OTHER COL	AIR CONDITIONING 9 NOT USED BORING DIAMOND JETTING DRIVING	ORILLERS REMARKS:	8 (4)	2	
NAME OF WELL CONTRACTOR ADDRESS NAME OF DRILLER OR BOILER O SIGNATURE OF CONTRACTOR	ater Supple	LICENCE NUMBER 3216	DATA 58 CONTRAC	STOR 59-62 DATE REQUE	9126	8 9 3-61 7

UNTOR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	MUNICIP. CON., BLOCK, TRACT, SURVEY, ETC.	22 23 LOT 25-
Star o	Quality &	ones I tittsville	e Ont	15 MO 10 YR.6
21	U 1 8 EASTING 5 0	NORTHING 0 4 2 4 4 1 17 18 24 25	RC. BASIN CODE	<u> </u>
	,	G OF OVERBURDEN AND BEDROCK	(MATERIALS (SEE INSTRUCTIONS)	DEPTH - FEET
SENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM TO
brown	clay	lioulders	packed	0 /
<u> </u>	limis Tono		land	17 5
29	2007K2AAAN KE2			
20-23 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	KIND OF WATER FRESH 3 SULPHUR 14 FRESH 3 SULPHUR 19 SALTY 4 MINERAL FRESH 3 SULPHUR 29 SALTY 4 MINERAL FRESH 3 SULPHUR 29 SALTY 4 MINERAL FRESH 3 SULPHUR 34 MATERIAL THICKNESS INCHES THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCHESS THE THICKNESS INCH	SIZE(S) OF OPENING SIZE(S) OF OPENING 31-33 DIA SIZE(S) OF OPENING 31-33 DIA MATERIAL AND TYPE 61 PLUGGING & SE DEPTH SET AT - FEET FROM TO 10-13 14-17 10-13 14-17 18-21 22-25 26-29 30-33 80 LOCATION OF W IN DIAGRAM BELOW SHOW DISTANCES OF WELL LOT LINE. INDICATE NORTH BY ARROW.	ND TYPE (CEMENT GROUND TYPE LEAD PACKER, E	
	1 WATER SUPPLY 2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL 1 DOMESTIC 2 STOCK	5 ABANDONED, INSUFFICIENT SUPPLY 6 ABANDONED, POOR QUALITY 7 UNFINISHED 5 COMMERCIAL 6 MUNICIPAL	0x16 3)
WATER USE METHOD	3 IRRIGATION 4 INDUSTRIAL OTHER 57 CABLE TOOL 2 ROTARY (CONVENTIC	7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED 6 BORING	\$ 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1	
WEILIN	3 ROTARY (CONVENTIC 3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR PERCUSSION	8 JETTING 9 DRIVING	RILLERS REMARKS:	IVEQ 0 0 0 63-0
OF DRILLING	CONTRACTOR	Supply 3216	DATA 58 CONTRACTOR 59-62 DATE RECE	MATOCO ""

	CODED	The Ontario Water Resource	es Commission Act	31648	
The state of) W	TER WELL	RECORD	_	
ater management in (Ontario 1. PRINT ONLY IN SPA	CES PROVIDED CODED	1510783 . MUNICIP. CON.		22 23 2
NTY OR DISTRICT	2. CHECK X CORRECT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	10 14 15 3 9 CON., BLOCK, TRACT, SURVEY, ETC.	LOT	25-27
CARL NER (SURNAME FIR:		Kichmond	DATE CO	OMPLETED 48-5	
ulia	Constr 3	tel. Kichmone	DAY DAY DAY	9 MO. /O	_yr. <u>7</u>
	U ZONE EASTING 419	The state of the s	0 3 0 8 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		111
	LOC	G OF OVERBURDEN AND BEDROCK	MATERIALS (SEE INSTRUCTIONS)	DEPTH -	FEET
NERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM	TO
ROWN	CLAY	SAND YSTUNES	PACKED	0	8
KÉ V	CLAY	BOYLDERS	PACKED	8	12
KEY	LIMESTONE		HAKD		55
LACK	LIMESTON		HARD	55	65
rey	limistore		hard	63	241
nen	sandston	ė,	hard	207	21
9					
			<u> </u>		
<u> </u>				55	75
2 10	ER RECORD	51 CASING & OPEN HOLE R	ECORD Z SIZE(S) OF OPENING 31-33 D		
ATER FOUND AT - FEET	KIND OF WATER	INSIDE WALL DEPT DIAM. MATERIAL THICKNESS FROM	H - FEET TO MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-4
	FRESH 3 SULPHUR 14 SALTY 4 MINERAL	NCHES NCHE	65°-16		FEET
A ⁶⁻¹⁸ 15	FRESH 3 SULPHUR 19 SALTY 4 MINERAL	3 CONCRETE 8 48 OPEN HOLE	7) 7 61 PLUGGING & SI		COR
20-23	FRESH 3 SULPHUR	2 GALVANIZED	DEPTH SET AT - FEET MATERIAL FROM TO 10-13 14-17		ACKER, ET
25.28	SALTY 4 MINERAL FRESH 3 SULPHUR STATEST SULPHUR	3 ☐ CONCRETE 4 ☐ OPEN HOLE 24-25 1 ☐ STEEL 26	27-30 18-21 22-25		
20-33	SALTY 4 ☐ MINERAL ☐ FRESH 3 ☐ SULPHUR 34 B	2 CALVANIZED	26-29 30-33 80		
2 [SALTY 4 MINERAL	4 OPEN HOLE			
PUMPING TEST ME	THOD 10 PUMPING RAT	E 11-14 DURATION OF PUMPING 15-16 17-18 GPM. HOURS MINS.	LOCATION OF V		
STATIC	WATER LEVEL 25 END OF PUMPING	R LEVELS DURING 1 PUMPING 2 RECOVERY	LOT LINE. INDICATE NORTH BY ARROW.	,	-1
19-2		MNUTES 29-34 60 MINUTES 32-34 35-37	1 1		关
FEE IF FLOVING,	FEET SE STATE WYAKE	FEET FEET FEET SET WATER AT END OF TEST 42			
RECOMMENDED PL	GPM. RECOMMENDE	FEET 1 CLEAR 2 CLOUDY D 43-45 RECOMMENDED 46-49	42		
☐ SHALLON	PUMP	PUMPING RATE GPM.	7. 0		
\$ 0-53	GPM./FT. SPEC		- Gorpe		
FINAL	1 water supply 2 observation we				
STATUS OF WELL	3 TEST HOLE 4 RECHARGE WELL	7 UNFINISHED	, PP Q	5	
WATER	1 DOMESTIC 2 STOCK	5 COMMERCIAL 6 MUNICIPAL	[5]		
USE	3 ☐ IRRIGATION 4 ☐ INDUSTRIAL	7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING 9 NOT USED	1) - 1	-> o	
	57 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0		40'		
METHOD OF	1 CABLE TOOL 2 ROTARY (CONVE	NTIONAL) 7 🗆 DIAMOND			
DRILLING	4 🗆	9 DRIVING	DRILLERS REMARKS:		
NAME OF WELL	CONTRACTOR	LICENCE NUMBER	DATA 58 CONTRACTOR 59-62 DATE R	RECEIVED	63-
ADGRESSIA.	tal Hate		O DATE OF INSPECTION INSPECTOR		·
14 (Johand	Ottowa Million	REMARKS:	<u> </u>	- Thi
NAME OF DRIE	2			-	<u> </u>
O STANDING OF	CONTRACTOR	SUBMISSION WITE		. 3	N1 //
Mal	LEW XOVO	nage			

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Richmond 1968 year)

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The Ontario Water Resources Commission Act

RECORD

				2 /
	T 6 wnship, Village,			
Con. 11 Lot - 34	Date completed	14th	June	1968
Casing and Screen Record				
Inside diameter of casing 6 3/16	G: 1		ng Test	
Total length of casing 29	1			
				CXXXXXX
Type of screen				
Length of screen			1/2 hr.	
Depth to top of screen			f test clear	
Diameter of finished hole 6			3	
	with pump sett	ing of 100	feet belo	w ground surface
Well Log			Water	Record
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay, sand, gravel mix	0	26	100	fresh
limestone	26	104		
For what purpose(s) is the water to be used? house		Location	of Well	
Is well on upland, in valley, or on hillside? valley Drilling or Boring Firm J.B. DUFRESNE & CO. LIMITED Address 1014 Maitland Ave.,	road and	lot line. Ind	distances of well	
Ottawa 5, Ont. Licence Number 2999	C.	<u> </u>	, -	Z
	0 0 0		, _	· i
Name of Driller or Borer R. Laniel	9	1 25	1 30	· /
Address 6 Bellevue Cr Lucerne, Que.		<u> </u>		_
Date June 14th 1968		TTAU'I		
(Signature of Licensed Drilling or Boring Contractor) for: J.B. Dui resne & Co. Limited Form 7 5M 60-20912	VILLA	GE OF	RICHMI	ONDIK

CSS.S8

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TER WELL RECORD

in 2 5 County or District Grenville CAKLE	. WELL			enter og skalender. Anter og skalender	, ,
Con. Lot +	24 Date	completed	Town or City 14th	June]	968
				Ont.	
Casing and Screen Record			Pump	ing Test	
Inside diameter of casing 6 3/16	St	tatic level	·····		
Total length of casing 29	. [O GPH	
Type of screen —	I				
Length of screen	i			1/2 hr.	
Depth to top of screen	ľ			of test cles	
Diameter of finished hole 6	į			e 2	
				feet belo	
Well Log				<u> </u>	Record
Overburden and Bedrock Record		From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Clay, sand, grave		0	26	35-68	fresh
limestone		26	80		
For what purpose(s) is the water to be used?hous	.0	T. J'.		of Well	
Is well on upland, in valley, or on hillside? valle Drilling or Boring Firm J.B. DUFRESNE & CO. LIMITE Address 1014 Maitland Ave. Ottawa 5, Ont. Licence Number 2999 Name of Driller or Borer R. Laniel Address 6 Bellevue Cr Lucerne, Quate June 14th 1968	D D	road and	lot line. In	40' A ST.	Lot
for: J.B. Dui resne & Co. Linkte form 7 5M 60-20912	(gr)	rilla	GE OF	FRICHM	ONDP

WATER WELL RECORD

	2. CHECK X CORREC	CT BOX WHERE APPLICABLE 1 2	15111	10 14 15		22 23 24
CARLE	TON	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	3	9 CON., BLOCK, TRACT, SURVEY, ETC.		LOT 25-27
OWNER (SURNAME FIRST	T) COINST.	ADDRESS	, An	t. DAY	سرد مستورز	48-53 YR. 71
21		225 SO045120 F	ELEVATION DE 26	RC. BASIN CODE [1]	<u>III</u>	i <u>v</u>
JULIA	J	G OF OVERBURDEN AND BEDRO				47
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	- Neg	GENERAL DESCRIPTION	DEPTH FROM	- FEET
BROWN	CLAY	SAND & STONES		LUUSE	0	8
GREY	CLAY	SAND & BOYLDER		PACKED	8	12
GREY	LIMESTONE			HARD	12	164
GREY S	SANDSTONE			HARD	164	190
WHITE	SANDSTONE			HARD	190	200
		A				
		AH				
						,
	·					
	6951091/2 100/6	22asta9/13 la/164/2/15 1	9/190/2/8	11 02901181111		
32	14 15 21	32	43	54 65	METER 34-38	75 B0
WATER FOUND	(1	51 CASING & OPEN HOLE	RECORD	Z SIZE(S) OF OPENING 31-33 DIA	METER 34-38	
10-13 1	RESH 3 SULPHUR	DIAM. MATERIAL THICKNESS FRO		MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-44 80
0080 2 s	- 10	2 ☐ GALVANIZED 3 ☐ CONCRETE	0064	61 PLUGGING & SEA	ALING B	FEET
0/03 2 S	ALTY 4 MINERAL	17-18 1 STEEL 19	20-23	DEPTH SET AT - FEET MATERIAL AN	ID TYPE (CE	MENT GROUT,
2 2 s		2 ☐ GALVANIZED 3 ☐ CONCRETE 45€FEN HOLE	0200	FROM TO 10-13 14-17		
0189 20 5	SALTY 4 MINERAL	24-25 1 ☐ STEEL 26 2 ☐ GALVANIZED	27-30	18-21 22-25		
1 □ F 2 □ S	_	3 CONCRETE 4 OPEN HOLE		26-29 30-33 80		· · · · · · · · · · · · · · · · · · ·
PUMPING TEST METHO	DD 10 PUMPING RATE	15-16 (7) 17-18		LOCATION OF WE	ELL .	
STATIC	WATER LEVEL 25	GPM. HOURS MINS.	IN I LOT	DIAGRAM BELOW SHOW DISTANCES OF WELL I LINE. INDICATE NORTH BY ARROW.	FROM ROAD AND	
S LEVEL 05 19-21	PUMPING 22-24 15 MINUTES	2 RECOVERY 8 30 MINUTES 45 MINUTES 60 MINUTES 32-34 35-37				
JIF FLOWING, GIVE RATE	FEET FEET	FEET FEET FEET 42		7		
Z GIVE RATE RECOMMENDED PUMP	GPM.	FEET 1 CLEAR 2 CLOUDY 43-45 RECOMMENDED () 265 46-49				
SHALLOW	DEEP PUMP	PUMPING ATE GPM.	Tork	mysin		
50-53	<u> </u>	IC CAPACITY		1095	$\overrightarrow{\cdot \cdot \cdot}$	115
FINAL STATUS	1 WATER SUPPLY 2 OBSERVATION WEL					•
OF WELL	3 TEST HOLE 4 RECHARGE WELL	7 UNFINISHED		7		
WATER	1 DOMESTIC 2 STOCK 3 RIGATION	5 COMMERCIAL MUNICIPAL 7 PUBLIC SUPPLY		TY		
USE OG	4 INDUSTRIAL OTHER	8 COOLING OR AIR CONDITIONING 9 NOT USED		120		
	CABLE TOOL	6 ☐ BORING		18		
METHOD OF	7 ROTARY (CONVENT CONVENT ROTARY (REVERSE CONVENT ROTARY (AIR)			×		
DRILLING	5 AIR PERCUSSION	→ □ DRIVING	DRILLERS REMAR			
NAME OF WELL CO	NTRACTOR OF TO	LICENCE NUMBER	DATA SOURCE DATE OF INSPE	58 CONTRACTOR 59-62 DATE RECEI	40471	63-68 80
ADDRESS (all &	7	<u></u>			
NAME OF DRILLER	OR BORER	LICENCE NUMBER	REMARKS:	1/16		PX
O SIGNATURE OF COM	M O O	SUPPLISSION DATE	OFFICE			W I
Walt	en Jova	neigh MOYR	0		.]	T T
OWRC CC	OPY TO THE PROPERTY OF THE PRO					



WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED	UNICIP. CON.
COUNTY OR DISTRICT: TOWNSHIP, BOROUGH, OTY, TOWN, VOLLAGE CON., ROCK CON., ROCK CON.	0 14 15 22 23 24 K, TRACY, SURVEY, ET(.) 7 15-27
Pichan ()	DATE COMPLETED 18.53 7/
16 RC ELEVATION RC. BASIN 10 4 Z	CODE II VIII IV
LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTR	47
GENERAL COLOUR COMMON MATERIAL OTHER MATERIALS GENERAL DES	SCRIPTION DEPTH - FEET
	FROM TO
prey day	0 15
grey karapan stones	13 20
very limestere	20 100
(31) 19915295 1 1992021412 1 2199215 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
32 10 14 15 21 32 43 54	65 75 80
41 WATER RECORD 51 CASING & OPEN HOLE RECORD (SLOT NO.) WATER FOUND KIND OF WATER WALL DEPTH - FEET WALL DEPTH - FEET	PENING 31-33 DIAMETER 34-38 LENGTH 39-40 INCHES FEET
10-13 10-13 INCHES INCHES FROM TO MATERIAL AN INCHES INCHES FROM TO WATERIAL AN INCHES INCHES FROM TO WATERIAL AN INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND INCHES INCHES FROM TO WATERIAL AND	ND TYPE DEPTH TO TOP 41-44 80 OF SCREEN
15-18 1 GRESH 3 G SULPHUR 19 5 3 G CONCRETE 7 61 PLUG	GING & SEALING RECORD
2 SALTY 4 MINERAL 7 OPEN HOLE 20-23 DEPTH SET AT STEEL 19 20-23 DEPTH SET AT FROM FROM FROM FROM PROM P	
2 SALTY 4 MINERAL 3 CONCRETE 10-13	14-17
30-33 1 FRESH 3 SULPHUR 34 80 3 CONCRETE 26-29	30-33 80
2 SALTY 4 MINERAL 4 OPEN HOLE 10 PUMPING TEST METHOD 10 PUMPING RATE 11-14 DURATION OF PUMPING A	
TO PUMP 2 BAILER (1/1/25 GPM. HOURS MINS. IN DIAGRAM BELOW SHO	OW DISTANCES OF WELL FROM ROAD AND
LEVEL PUMPING 2 RECOVERY 19-21 22-24 15 MINUTES 30 MINUTES 45 MINUTES 60 MINUTES	ORTH BY ARROW.
of FEET 080 FEET 050 FEET 070 FEET 080 FEET	Inux St
GPM. FEET 1 CLEAR 2 CLOUDY	ALL A
RECOMMENDED PUMP TYPE SHALLOW DEEP SETTING PUMP RATE OF RATE	FM 3
U_GPM./FT. SPECIFIC CAPACITY	
FINAL 1	la n
OF WELL 4 RECHARGE WELL 55-56 DOMESTIC 5 COMMERCIAL	
WATER USE 2 STOCK 6 MUNICIPAL 7 PUBLIC SUPPLY 4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING	*
OTHER 9 NOT USED	
METHOD CABLE TOOL 6 BORING 1 METHOD 2 ROTARY (CONVENTIONAL) 7 DIAMOND 3 ROTARY (REVERSE) 8 JETTING 1 METHOD 1 MET	
OF DRILLING A COTARY (REVERSE) A COTARY (AIR) DRILLING A COTARY (AIR) DRILLERS REMARKS:	
NAME OF WELL CONTRACTOR 1 A 58 CONTRACTO	
ADDRESS O DATE OF INSPECTION	INSPECTOR
NAME OF DRILLER OR BORES	Kon
SIGNATURE OF CONTRACTORY SUBMISSION DATE DAY DAY DAY DAY DAY DAY DAY DA	Phy
	WI

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

316/45

FORM 7 MOE 07-091

Ontario 1. PRINT ONLY IN SP.	ACES PROVIDED 11	11514676	MUNICIP 003	CON. 15	22 23 24
COUNTY OR DISTRICT	TOWNSHIP BOROUGH, CATY TOWN VILLAGE	Richmond	CON., BLOCK), TRACT, SURVEY.		026
	Rich	mond On	1.	DAY 12 MOS	<u> </u>
12292	ING 104435	4 306		JG 04, 1977	303
[G OF OVERBURDEN AND BED	PROCK MATERIALS (S	EE INSTRUCTIONS)	DEPTH	- FEET
GENERAL COLOUR MOST COMMON MATERIAL	OTHER MATERIALS	GE	NERAL DESCRIPTION	FROM	то
		Pan	mul	0	4
grey day					
brown sand				4	10
	——————————————————————————————————————			10	45
grey day	Sloves				75
grey limestone				45	95
64					
31 000420502 0010	1628 1004520SI2	DOPSZIS			
32 10 14 15 21 14 15 WATER RECORD	51) CASING & OPEN HO	DLE RECORD	SIZE(S) OF OPENING (SLOT NO.)	65 31-33 DIAMETER 34-38	75 80 LENGTH 39-40
WATER RECORD WATER FOUND AT FEET KIND OF WATER.	INSIDE MATERIAL THICKNESS INCHES	DEFTH - FEET COND	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-44 80
000 10-13 1 FRESH 3 SULPHUR 14 2 SALTY 4 MINERAL	10-11 1	0048			FEET
9 4 15-18 1 FRESH 3 SULPHUR 19 2 SALTY 4 MINERAL	3 CONCRETE 7/0 0 4 OPEN HOLE 17-18 1 STEEL 19		EPTH SET AT - FEET		ORD IENT GROUT, PACKER, ETC.)
20-23 1 FRESH 3 SULPHUR 24 2 SALTY 4 MINERAL 25-28 - FRESH 3 SULPHUR 29	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		10-13 14-17		
25-28	24-25 1 ☐ STEEL 26 2 ☐ GALVANIZED 3 ☐ CONCRETE	27-30	18-21 22-25 26-29 30-33 80		
2 SALTY 4 MINERAL	4 OPEN HOLE			F WELL 35	طن
71 NMPING TEST METHOD 10 PUMPING RATE	GPM. 0/ 15-16 00	17-18 MINS IN DIAGRA	BELOW SHOW DISTANCE	S OF WELL FROM ROAD	
LEVEL PUMPING		LOT LINE.	INDICATE NORTH BY A	RROW.	1
19-21 05 0 15 MINUTES 9 15 FLOWING. 38-41 PUMP INTAKE	8 5 0 29-31 0 5 0 32-34 5 0 SET AT WATER AT ENO OF TEST	35-37 FEET 42		·	
IF FLOWING. 38-41 PUMP INTAKE GIVE RATE GPM. RECOMMENDED PUMP TYPE RECOMMENDED PUMP TYPE PUMP	FEET 1 CLEAR 2 CLO	0UDY W			<u></u>
SI-53 GPM./FT. SPE	50 FEET PUMPING 00/0	GPM		1	63
SINAL 54 , WATER SUPPLY	5 ABANDONED, INSUFFICIENT SUF	PPLY			C
STATUS OF WELL 2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL	LL 6 ABANDONED POOR QUALITY 7 UNFINISHED		Ittowa St.	3101	0
55-56 (DE DOMESTIC 2 DISTOCK	5 COMMERCIAL 6 MUNICIPAL			•	
WATER 3 IRRIGATION 4 INDUSTRIAL OTHER	7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED				
METHOD 2 ROTARY (CONVEN	6 ☐ BORING TIONAL) 7 ☐ DIAMOND			V.	•
OF DRILLING CONTROL CONTROL					~
NAME OF WELL CONTRACTOR	11 N - 11 LICENCE NUMBE	DRILLERS REMARKS: DATA SOURCE		DATE RECEIVED 7	5 63-68 B
Henry Mains W	M Drilling 369	DATE OF INSPECTION		R. Don	
ADDRESS 26, PURE OF DORRECTOR SIGNATURE OF CONTRACTOR	chinord On -	R REMARKS:	76 6/	1. Voy	P
SIGNATURE OF CONTRACTOR	SUBMISSION DATE	72 2			WI

MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act WEL L RECORI 1514856 1. PRINT ONLY IN SPACES PROVIDED 15701 2. CHECK 🗵 CORRECT BOX WHERE API BORO rchaman 004324 306 4 JUN 28, 26 300 1977 FOR OL AAFURGUREIA WIED DEDUCCH INWI FUIWER 1255 INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS DEPTH - FEET GENERAL DESCRIPTION то 0015205 | 0056215 | | WATER RECORD 51 **CASING & OPEN HOLE RECORD** SCREEN KIND OF WATER MATERIAL 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL MATERIAL AND TYPE DEPTH TO TO 2 GALVANIZED 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL 3 CONCRETE 61 **PLUGGING & SEALING RECORD** 4 - OPEN HOLE 002.5 1 T STEEL DEPTH SET AT . FEET 1 | FRESH 3 🖂 SULPHUR 2 GALVANIZED 3 CONCRETE 2 SALTY 4 MINERAL 1 TRESH 3 SULPHUR 4 D OPEN HOLE 1 ☐ STEEL 27-30 Z GALVANIZED I FRESH 3 SULPHUR 2 SALTY 4 MINERAL 30-33 3 CONCRETE OPEN HOLE PING TEST METHOD ODO LOCATION OF WELL 3504 2 | BAILER WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. RUMPING RECOVERY 006 2 CLOUDY PUMP 0 30 O DEEP FEET GPM. / FT. SPECIFIC CAPACITY 1 4 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY FINAL ■ ABANDONED POOR QUALITY 2 D OBSERVATION WELL **STATUS** 3 TEST HOLE 7 UNFINISHED OF WELL 110 4 | RECHARGE WELL J d DOMESTIC 5 COMMERCIAL STOCK IRRIGATION 6 MUNICIPAL WÅTER Xwe 7 PUBLIC SUPPLY USE O ■ □ COOLING OR AIR CONDITIONING □ OTHER 9 | NOT USED CABLE TOOL CONVENTIONAL CONVENT 6 BORING METHOD 5 7 DIAMOND DRILLING 9 DRIVING OFFICE USE ONLY 1508 16/1976 Lot 25

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MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

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WATER	WEL	L RECO	RD

1515324 🎝 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE 03852 300 308 JUN 28, 1977 26 LUG UF UVERBURDEN AND BEDRUCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL GENERAL COLOUR OTHER MATERIALS - FEET GENERAL DESCRIPTION FROM то 98 0028205 1 0045215 111 41 WATER RECORD 51 **CASING & OPEN HOLE RECORD** SCREEN WALL THICKNESS INCHES 1 TRESH 2 SALTY FROM 3 SULPHUR 4 | MINERAL GALVANIZED 013/ 1 FRESH 3 SULPHUR
4 MINERAL 3 CONCRETE 61 **PLUGGING & SEALING RECORD** AT - FEET 1 | STEEL MATERIAL AND TYPE 3 | SULPHUR Z GALVANIZED FROM 2 SALTY 4 MINERAL 3 CONCRETE FRESH 3 SULPHUR 4 D OPEN HOLE 24-25 1 STEEL 4 | MINERAL 18-21 22-25 Z GALVANIZED

GONCRETE 30-33 1 | FRESH 3 | SULPHUR
4 | MINERAL 30-33 80 4 G OPEN HOLI IPING TEST METHOD 71 LOCATION OF WELL 3504 2 | BAILER IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW. PUMPING RECOVER PUMPING TEST N 2 CLOUDY RECOMMENDED 43-45
PUMP
SETTING FEET
. GPM./FT. SPECIFIC CAPACITY □ DEEP FEET 1 -WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** € ABANDONED, POOR QUALITY 2 D OBSERVATION WELL **STATUS** TEST HOLE 7 UNFINISHED OF WELL 4 RECHARGE WELL 1 DOMESTIC 5 COMMERCIAL 2 STOCK
3 RRIGATION 6 MUNICIPAL WATER D PUBLIC SUPPLY USE () 4 | INDUSTRIAL ■ COOLING OR AIR CONDITIONING ☐ OTHER 221 9 NOT USED 6 D BORING METHOD 2 ROTARY (CONVENTIONAL) 7 DIAMOND 3 0 ROTARY (REVERSE) ROTARY (AIR) OF. JETTING DRILLING 5 9 DRIVING AIR PERCUSSION DATE RECEIVED 0 605 7 OFFICE USE ONLY CONTRACTOR WI

The Ontario Water Resources Act

Env	vironment	V	VATI	ER 1	WELL	RECO	ORD
	1. PRINT ONLY IN 2. CHECK 🗵 CORR	ECT BOX WHERE APPLICABLE		1666	4 MUNICIP	15 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22 23 74 LOT 25-27
COUNTY OR DISTRICT	ton)	Houlbox	wn village		Vellage ?	Chmone DATE COMPLETED	4
		28	Kehoe.	Otte	way BASIN CODE	DAY 15 NO _	8 va]\$
· · ·			24 25	26	31 31	1 1 1 1 1 1 1 1	
GENERAL COLOUR	MOST	OG OF OVERBURDEN A		MATERIAL	GENERAL DESCRIPTION	DE FROM	PTH - FEET
Brown	Rardsan	sand . bo	ulders			0	15-
grey	hardpan	boulder	s)	-	1 1	15	
yrey	limestone				broken	29	35
						: .	
31				111111			
32 10 10 10 10 10 10 10 1	ATER RECORD	[51] CASING & O	PEN HOLE RE	CORD	SIZE(S) OF OPENING	65 31-33 DIAMETER 34-	
WATER FOUND AT - FEET	KIND OF WATER	INCHES	THICKNESS FROM		MATERIAL AND TYPE	INCH DEPTH TO OF SCREEN	
30 '	SALTY 6 MINERAL FRESH 3 SULPHUR	CONCRETE	.188 0	29"		ING & SEALING RE	CORD
20-23 1	SALTY 4 MINERAL PRESH 3 SULPHUR 24	4 ☐ OPEN HOLE 17-18 1 ☐ STEEL 2 ☐ GALVANIZED		20-23	DEPTH SET AT - FEET FRUM 10		CEMENT GROUT. AD PACKER, ETC.)
25-28 1	SALTY 4 HINERAL FRESH 3 SULPHUR SALTY 4 MINERAL	3 [] CONCRETE 4 [] OPEN HOLE 24-25 1 [] STEEL 26	29	35	10-13 14-17 18-21 22-25		
30-33	FRESH 3 SULPHUR 34	7 🗍 GALVANIZED 3 📋 CONCRETE 4 🗍 OPEN HOLE			26-29 30-33	60	
71 PUMPING TEST N	METHOD 10 PUMPING RA	/ 15-16	17-18		LOCATION	OF WELL	
STATIC	WATER LEVEL 25 END OF WATER PUMPING		UMPING ECOVERY	IN DIA	AGRAM BELOW SHOW DISTA INE INDICATE NORTH B		AD AND
TEST 10 %	, is minore.	.28 29-31 32-3		· V	0.1		
UN IF FLOWING. GIVE RATE RECOMMENDED	38-41 PUMP INTAK	FEET 1 CLEAR	² □ CLOUDY		ng 3x.	· 05 mi	
RECOMMENDED SHALL	PUMP TYPE RECOMMEND PUMP OW DEEP SETTING	ED 43-45 RECOMMENDED PUMPING RATE	46-49 GPN		43		3
FINAL	1 WATER SUPPLY	S [] AHANDONED, INSUFF	ICIENT SUPPLY		11'9"	20	13
STATUS OF WELL	- La ital note	7 UNFINISHED	DUALITY			3	
WATER	55-56 1 DOMESTIC	COMMERCIAL MUNICIPAL					EW
USE	IRRIGATION INDUSTRIAL OTHER	7 PUBLIC SUPPLY 8 COOLING OR AIR CONDIT 9 NOT			•	•• .	200
METHO				Ho	145e # 111 King.	14	
OF DRILLING	G POTARY (REVER	9 🗍 DRIVING		DRILLERS REMAR			
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.	The Ontario Water Resources Act	3IG4F
WATE	R WELL RE	CORD
APPLICABLE 157	6664 15.701 15 15 CON., BLOCK, TRACT, SURVEY ETC. 7	22 23 24 LOT 25-27

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COUNTY OR DISTRICT	4	CHECK ES COR		IIP. BOROUGH, CI	TY, TOWN, VIL	LAGE	51666		N., BLOCK, TRA	CT, SURVEY.	ETC.	7-7-1	ZZ Z3 Z LOT 25-27
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010 FEET	025 FEET	26-28	29-3		34 3	5-37 FEET	s /	۸			250	•	
IF FLOWING, GIVE RATE RECOMMENDED PUM	38-41	PUMP INTAKE SE	T AT	WATER AT END C	OF TEST	42	<u> </u>	y 1	ᡮ		796	-	
RECOMMENDED PUM		RECOMMENDED PUMP	FEE 43-45	RECOMMENDED	2 CLOU	DY 5-49		Ų	1	۷,			
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PITAL WATER SUPPLY LID 1558 78

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CONTRACTOR OF STREET

1516764

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL DESCRIPTION OTHER MATERIALS SENERAL COLOUR haselpan 3.2 CASING WATER RECORD OPEN HOLE RECOP 60 LOCATION OF WELL GAA CAOR MORT, TEW TO ALLANDED WORK WOTER MAGNATUR.
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2 C NOT USED USE OHawa □ of ER CARL TOOL METHOD O DIAMONO OF DPULING 271178 3644

The Ontario Water Resources Act

3/G4F ATER WELL RECORD

Ontario 1516764 1. PRINT ONLY IN SPACES PROVIDED 15701 2. CHECK 🗵 CORRECT BOX WHERE APPLICABLE TOWNSHIP, BOROWOH, CITY ickmon LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL COLOUR MOST COMMON MATERIAL OTHER MATERIALS GENERAL DESCRIPTION FROM TO 002820514 0964215 10 14 15 21 32 75 WATER RECORD 51 CASING & OPEN HOLE RECORD SCREEN KIND OF WATER DEPTH - FEET MATERIAL AND TYPE τo FRESH 3 SULPHUR
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4 OPEN HOLE 61 **PLUGGING & SEALING RECORD** 1 GALVANIZED 1 FRESH 3 SULPHUR
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7 | DIAMOND CABLE TOOL **METHOD** ROTARY (CONVENTIONAL) OF ROTARY (REVERSE) JETTING DRILLING > ROTARY (AIR)

AIR PERCUSSION DRIVING 271178 OFFICE USE ONLY 3644 TIMSPECTOR

CONTRACTOR OF STREET

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LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) GENERAL DESCRIPTION OTHER MATERIALS SENERAL COLOUR haselpan 3.2 CASING WATER RECORD OPEN HOLE RECOP 60 LOCATION OF WELL GAA CAOR MORT, TEW TO ALLANDED WORK WOTER MAGNATUR.
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D PUBLIC SUE 2 ☐ STOCK WATER 3 | IRRIGATION
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AIR PERCUSSION DRIVING 271178 OFFICE USE ONLY 3644 TIMSPECTOR



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COUNTY OR DISTRICT	atan		orough, city, towi	N. VILLAGE		- 1	. BLOCK, TRACT, SURV	- 2	A THY	024
			is	C+	Richmond			DATE COM		48-53 QYR. 7
			0.03.9.9	RC.	ELEVATION	<u>*, 0.</u>	BASIN CODE	1 "	1 "	l iv
7	M 10 12	OC OF OVER		24 25	CK MATERIAL	30	31	<u> </u>		
ENERAL COLOUR	MOST	JG OF OVER	OTHER MATERIAL		CKINATERIAL		RAL DESCRIPTION			- FEET
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2 0022	052811 005	0	<u> </u>					┸┸┛┖┸ ┇┇╏┇	 	
41 WAT	TER RECORD	(51) CA	SING & OPE	N HOLE I	RECORD	Z SIZE	54 (S) OF OPENING OT NO)	31-33 DIAM	ETER 34-38	75 LENGTH 3
ATER FOUND AT - FEET	KIND OF WATER	INSTDE DIAM M	TATERIAL THIC	KNESS	DEPTH - FEET	CREEN	ERIAL AND TYPE		INCHES DEPTH TO TOP	41-44
A	FRESH 3 SULPHUR 14 SALTY 4 MINERAL	10-11	STEEL 12 GALVANIZED		13 -16	S			OF SCREEN	FEET
15-18 1	FRESH 3 SULPHUR 19 SALTY 4 MINERAL	06	1	188 (0 0025	61		IG & SEA	LING RECO	ORD
	FRESH 3 SULPHUR 24 SALTY 4 MINERAL		GALVANIZED		20-23	DEPTH	SET AT - FEET	MATERIAL AN		ENT GROUT ACKER ETC)
25-28 1 🗆	FRESH 3 SULPHUR 29		CONCRETE OPEN HOLE	.	27-30		10-13 14-17 18-21 22-25			
30-33 1 🖂	FRESH 3 SULPHUR 34 BC	2 🗆 (GALVANIZED CONCRETE				6-29 30-33 80			
2	SALTY 4 MINERAL HOD 10 PUMPING RATE		OPEN HOLE							
1 PUMP	2 Dailer 00		15-16 HOURS	30_ 17-18 MINS			LOCATION			
STATIC LEVEL	PUMPING	EVELS DURING	! PUMPI	/ERY	IN DIAG		OW SHOW DISTANC DICATE NORTH BY A		FROM ROAD /	AND
ا ا	22-24 15 MINUTES 24-2	29-31	45 MINUTES 6 32-34 PEET 00	0 MINUTES 35-37 8 FEET			, 1			
IF FLOWING. GIVE RATE RECOMMENDED PUM	38-41 PUMP INTAKE		WATER AT END OF TEST	42		7				
RECOMMENDED FUM	GPM RECOMMENDED PUMP		1 CLEAR 2 [RECOMMENDED PUMPING	CLOUDY		ij	200			
SHALLOW 50-53	DEEP SETTING		RATE 000 5	GPM			-0			
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STATUS OF WELL	2 G OBSERVATION WELL	L 6 ABAN	DONED, POOR QUALI NISHED	ΤΥ			1 8			
-	5-56 1 DOMESTIC	5 COMMERC					<u> </u>			
WATER O	2 STOCK 3 IRRIGATION , 4 INDUSTRIAL	6 ☐ MUNICIPA 7 ☐ PUBLIC ST				2 JN	STREET	IZ	ICH AAO	αD
USE	OTHER		NOT USED		1. 1/					
METHOD	1 CABLE TOOL 2 ROTARY (CONVENT		BORING DIAMOND							_
OF DRILLING	# ROTARY (REVERSE 4 MOTARY (AIR)	.) # [DETTING DRIVING		/					
NAME OF WELL O	S AIR PERCUSSION		LICENCE N	UMBER	DRILLERS REMARKS		CONTRACTOR 59-62	DATE BECCHI	,	· ~ .
	n Water Supp	ly Ltd.	į	04	SOURCE	1		15	018	30"
ADDRESS	-		. Ot.		S	TION	INSPECTOR	4		
;	Raven Ave.,		11 LICENCE N	NUMBER	☐ REMARKS		. ,			3
SIGNATURE OF	ONTRECHARI	Sugar	SSION DATE) FFICE			C55.58		
BAINLOTOX	OF THE ENVIR	ON MATERIT	19 MO. /C	YR.Z.S	0				FORM	NO. 0506-4



The Ontario Water Resources Act WATER WELL RECORD

	Ontario	1. PRINT ONLY IN S	PACES PROVIDED	1	51725	 10	MUNICIP.	CON.	/
	Carle		TOWNSHIP, BOROUGH, CITY, TOWN, VIL				BLOCK, TRACT, SURVEY, ET		LOT 25.
	OST.TA	con	Goulbourn				2	ATE COMPLETED	Ch2
			5 Bentley	Ave.	Nepear	i. Or	t. K2E 6T7		48-53 YR
			0.03699	4	0310	4	12,6	11 1 1 1	ıv L
	GENERAL COLOUR		G OF OVERBURDEN AND BE	DROCK	MATERIALS	(SEE IN	STRUCTIONS)		
		COMMON MATERIAL	OTHER MATERIALS			GENERAL	L DESCRIPTION	DEPT FROM	H - FEET
		Clay Limestone						0	7
		Sandstone	Limestone					7	180
						· · · · · · · · · · · · · · · · · · ·		180	200
						·····			
Ļ									
Γ	31 0007	05 0180	15 0200 18/5	يبا لي					<u> </u>
	10 14	RECORD 75						<u> </u>	
Ľ	WATER FOUND KI	ND OF WATER IN	SIDE WALL	E RECO		SIZE(S) OF	OPENING 31-33	DIAMETER 34-38 LE	75 80 NGTH 39-40
	OTOO 2 SAI		THE STEEL 12	FROM		MATERIAL	AND TYPE	DEPTH TO TOP OF SCREEN	FEET 41-44 30
	-200 FRI 2 SAL	ESH ³ SULPHUR ¹⁹ TY ⁴ MINERAL	6 GALVANIZED CONCRETE OPEN HOLE	0	xx 21 61	1	DUUGGUIG		FEET
	20-23 1 FRE	SH 3 SULPHUR 24	17-18 STEEL 19		20-23 DE	PTH SET AT	MAYEDIAL		
	25-28 1 FRE	SH 3 SULPHUR 29	3 ☐ CONCRETE 4 ☐ OPEN HOLE 24-25 1 ☐ STEEL 26	:		10-13	14-17	LEAD PACK	ER. ETC)
	30-33 1 FRE	SH 3 SULPHUR 34 60	CONCRETE		27-30	18-21	22-25		
7	UMPING TEST METHOD	10 PUMPING RATE	6 ☐ OPEN HOLE 11-14 DURATION OF PUMPING			26-29	39-33 80		
_	STATIC WATE	BAILER 0010	GPM			LOC	ATION OF WE	LL	
TEST	I EUE : EN	D OF WATER LEVELS	DURING PUMPING RECOVERY MINUTES 45 MINUTES 60 MINUTES]	IN DIAGRAM B LOT LINE	ELOW SH	OW DISTANCES OF WEL NORTH BY ARROW.	L FROM ROAD AND	
150	O 10 FEET 1	95 FEET FEET	29-31 32-34 35-37 116 1 110 ET 110 ET				ls l	N	
PUMPING	GIVE RATE	38-41 PUMP INTAKE SET AT	WATER AT END OF TEST 42 FEET 1 CLEAR 2 CLOUDY				1-01/2	1	
2	RECOMMENDED PUMP TYPE SHALLOW 50-53	RECOMMENDED PUMP SETTING 160	43-45 RECOMMENDED 46-49 PUMPING				[E] /	•	
_			GPM GPM		OTTAW.	3 - C	ARL #	5	
	STATUS 2	C	ABANDONED, INSUFFICIENT SUPPLY BABANDONED POOR QUALITY			1	1 1	AGE	
	OF WELL (RECHARGE WELL	UNFINISHED		e e	4/0'	P VILL	F	
	WATER ;	U. STOCK € □	COMMERCIAL Municipal Public Supply			1	D RIC	HMOND	
	USE Of		COOLING OR AIR CONDITIONING Do not used			4/8	5		
	METHOD (CABLE TOOL	6 BORING			, 0.	~		
ı	OF \mathcal{H}	ROTARY (CONVENTIONAL) ROTARY (REVERSE) ROTARY (AIR) AIR PERCUSSION	7 ☐ DIAMOND 1 ☐ JETTING 2 ☐ DRIVING						
	NAME OF WELL CONTRACT		- Duising	DRILLERS	REMARKS:		•••		
. I		ter Supply L	tid. 3504	DATA	E i	SOU	OKIE RECEIVED	01 0 A	3-68 80
					F INSPECTION		INSPECTOR	<u>0180</u>	5
1	AL O	OUTTOT T	AWR, Ont	S REMARK	(S		fa		
S	G- 1 CONTRACTO	Land	SUBMISSION DATE	FFICE					
Ī	NISTRY OF T	HE ENVIRONME	DAY 11 NO 7 YR 79	0			Ć.		
•								FORM NO. 0506	4-77

	Ministry
(77)	of the
W	Environment

The Ontario Water Resources Act 3164f WATER WELL RECORD

FORM NO. 0506-4-77 FORM 7

	ORRECT BOX WHERE APPLICABLE TOWNSHIP, BORO OF CITY, TOWN, VILLAGE	1517577 UNISO O S	F	106
	lepean	(inle	OMPLETED C	03
	XP#	ELEVATION RC. BASIN CODE 11	5 .00	YR 1
N 10 / 12 / 12			<u> </u>	
MOST MOST	LOG OF OVERBURDEN AND BEDRO		DEPT	H - FEET
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and limestone			41	125
grey umsion			//	/ ~ ~
		ý (IOF		
		(NF-18)		
	4121412 0125215			البل
32 VATER RECORD	51) CASING & OPEN HOLE	43 54 54 55 55 55 55 55 55 55 55 55 55 55	S IAMETER 34-38	1 75 LENGTH 39.4
WATER RECORD WATER FOUND AT - FEET KIND OF WATER	INSIDE WALL DIAM MATERIAL THICKNESS	DEPTH - FEET	INCHES DEPTH TO TOP	41-44
0/20-13 1 & FRESH 3 SULPHUR 2 SALTY 4 MINERAL	INCHES INCHES FR	MATERIAL AND TYPE	OF SCREEN	FEET
15-18 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	19 CONCRETE	61 PLUGGING & SE		ORD
20-23 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	2 GALVANIZED 3 CONCRETE	FROM TO MATERIAL 10-13 14-17		PACKER, ETC.)
25-28 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	Z4-Z3 1 STEEL Z6	27-30 18-21 22-25		
30-33 1 FRESH 3 SULPHUR 2 SALTY 4 MINERAL	3 □ CONCRETE 4 □ OPEN HOLE	26-29 30-33 80		
71 1 PUMP 2 BAILER OF	- / /)	LOCATION OF W	ELL	
LEVEL PHIMPING	ER LEVELS DURING 2 RECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF WE LOT LINE INDICATE NORTH BY ARROW.	LL FROM ROAD	AND
15 9/51 060 FEET 060 FEET	1753 30 MINUTES 45 MINUTES 60 MINUTES 79-28 00 0 9-31 00 0 32-34 00 0 5-37			N.
FEET FEET FEET FEET FE	AKE SET AT WATER AT END OF TEST 42 FEET 1 CLEAR 2 CLOUDY		RI.	· · · · · · · · · · · · · · · · · · · ·
RECOMMENDED PUMP TYPE RECOMME PUMP SETTING		5,0+	16.	
50-53				
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OF WELL 4 D RECHARGE WE		Lawrence V		
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☐ OTHER	9 NOT USED	7 200.		
METHOD CABLE TOOL POTARY (CON		7		
DRILLING C ROTARY (AIR 5 AIR PERCUSSI	9 DRIVING	DRILLERS REMARKS		
CE NAME DESMELL CONTRACTOR AUNT	Well Drilleren RIOTY	DATA SOURCE 1 S6 CONTRACTOR 59-62 DATE 2	1088	37""
ADDRESS ADDRESS ADDRESS AND AD	Richmond Ont	O DATE OF INSPECTION INSPECTOR	· (<u> </u>
NAME OF DRILLER OR BREE	Mairs LICENCE NUMBER	REHARKS:		
SIGNATURE OF CONTRACTOR	SUBMISSION DATE & 81	OFFICE		

MINISTRY OF THE ENVIRONMENT COPY

The Ontario Water Resources Act WATER WELL RECORD

Ontario		IN SPACES PROV		ا	 15178	53	MUNICIP.	CON.	1 102
COUNTY OR DISTRICT	2. CHECK ⊠ C	ORRECT BOX WHI	ERE APPLICABLE	LLAE		CON.	BLOCK PRACT. SURVEY	CON	LOT 25-27
OWNER (SUPPLAME FIRST	n () () ()	# #	ADDRESS D	W)	$\overline{\Delta}$		Durkes	DATE COMPLETED	024
tea 1	20NE EASTING 43.	Contraction .	NORTHING NORTHING	70 (JM. ELEVATION	/ 0/- RC	BASIN CODE	DATE COMPLETED DAY 27 MO	05 _{YR} 8 A
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AT - TELT	IND OF WATER	INSIDE DIAM INCHES	MATERIAL THICKNESS INCHES	DEP	TH - FEET		AL AND TYPE	DEPTH TO	HES FEET
0/00 2 G SA	RESH 3 SULPHUR 14	06	GSTEEL 12 GALVANIZED		(20 20	Š		OF SCREE	N FEET
2 SA	RESH 3 SULPHUR 19 ALTY 4 MINERAL RESH 1 SULPHUR 24	0 / 4	CONCRETE //// COPEN HOLE STEEL 19		20-23	61 DEPTH SE	T AT - FEET	& SEALING R	ECORD
² □ SA	ALTY 4 MINERAL RESH 3 SULPHUR 29]]	GALVANIZED CONCRETE OPEN HOLE			FROM 10-1:	10	ENIAL AND TIPE	EAD PACKER, ETC
2 🗆 SA	ALTY 4 MINERAL RESH 3 SULPHUR 34	Z4-25 1	[] STEEL 26		27-30	18-2			
2 🗆 SA	LTY 4 MINERAL	4	CONCRETE OPEN HOLE			26-29	30-33 80		
71 PUMPING TEST METHOD 1 PUMP 2 [/	DURATION OF PUMPING 15-16 M HOURS	17-18 _ MINS		LC	CATION OF	WELL	
1	PUMPING	LEVELS DURING	2 RECOVERY	ITES	IN DIAC LOT LII		V SHOW DISTANCES (CATE NORTH BY ARRO		AD AND
120/2 0	70 p80	12 OF 02.	31 0803234 OF)5-37 FEET					N
IF FLOWING. GIVE RATE RECOMMENDED PUMP TY	GPM	E SET AT	WATER AT END OF TEST	42 DUDY				1	71.
SO-53	PUMP		PUMPING AA	46-49 GPM					Į
54 7	1 WATER SUPPLY	5 [] A	BANDONED, INSUFFICIENT SUI						ĺ
FINAL STATUS OF WELL	2 OBSERVATION W 3 TEST HOLE 4 RECHARGE WELL	ELL 6 A	BANDONED POOR QUALITY NEINISHED			Burke	St.	54	
55-56	1 DOMESTIC 2 STOCK	5 COMM 6 MUNIC			15'V		-	12	
USE 0	3 IRRIGATION 4 INDUSTRIAL	7 🔲 PUBLI	C SUPPLY NG OR AIR CONDITIONING				TOKM	7	
\$7	☐ OTHER		9 NOT USED						
OF 5	PROTARY (CONVEING A CONVEING A CONTARY (REVERS A CONTARY (AIR)	E)	7 DIAMOND 8 DETTING 9 DRIVING						
DRILLING	5 E AIR PERCUSSION				RILLERS REMARKS				
MANUEL CONTI	Mais !	Vell D	rifling GG H	¥ >	DATA			9907	82"
NAME OF DRILLER OR	26, Sti	chmort	Ort	, u	1	ION	INSPECTOR		-
ADDRESS ADDRESS NAME OF DRILLERIOR SIGNATURE OF FASANTR	1-11	rois	LICENCE NUMBER	82 3				-	
"		DA.	BMISSION DATE LY 2 MO. S YR	82 6					
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COUNTY OF DISTRICT,	TOWNSHIP, BORDIGH CITY, TOWN, FILLA	AGE	CON. BLOCK, TOAET, SURVI	EX EXCO	LOT 25-27
	0042	121 11	1 1	DATE COMPLETED	19:53 00
	7,40,7	RC ELEVATION	RC BASIN CODE	DAYMO	T 483
	D10/3/8/4/4	4 0,3,10	4 3,6		
GENERAL COLOUR MOST	LOG OF OVERBURDEN AND BED	DROCK MATERIALS			
COMMON MATERIAL	OTHER MATERIALS		GENERAL DESCRIPTION	FROM	H - FEET
grey clay					1
77				$ \cup$	3
ney hardpan	stores			3	18
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grey limestone				18	63
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(31) boostass 100 to	<u> </u>				
32	<u>82/4/2 00632/5 </u>		<u> </u>		44
WATER RECORD	CASING & OPEN HOL	E RECORD -	SIZE(S) OF OPENING	65 31-33 DIAMETER 34-38	75 80 LENGTH 39-40
WATER FOUND KIND OF WATER 10-13	INSIDE DIAM MATERIAL THICKNESS INCHES INCHES	DEPTH - FEET FROM. TO		INCHES DEPTH TO TOP	FEET
SALTY A MINERAL	OG" STEEL 12	13-16		OF SCREEN	41-44 30 FEET
15-18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	GONCRETE 1/88	0(0022	PLUGGING	& SEALING RECO	RD
20-23 1 FRESH 3 SULPHUR 24 2 SALTY 4 MINERAL	17-18 STEEL 19	B 1 1 1 1 1 1 1 1 1 1	10		NT GROUT CKER, ETC)
25-28 1	OO 3 □ CONCRETE 4 □ OFEN HOLE 24-25 1 □ STEEL 26	27-30		ument grow	ted
30-33 1 FRESH 3 SULPHUR 34 00	2 GALVANIZED 3 CONCRETE		18-21 22-25 26-29 30-33 80		
2 SALTY 4 MINERAL PUMPING TEST METHOD 10 PUMPING RATE	OPEN HOLE				
1 DPUMP 2 DBAILER 000	-/-/	s	LOCATION OF		
PUMPING	EVELS DURING 1 PUMPING 2 RECOVERY	IN DIAGRAN LOT LINE	I BELOW SHOW DISTANCES INDICATE NORTH BY ARR	OF WELL FROM ROAD A	ND A
1000 030 030	1030 1030 "1030"	!			
PEET FEET FEET FEET FEET FEET FEET FEET	SET AT WATER AT END OF TEST 42				/ V.
RECOMMENDED PUMP TYPE RECOMMENDED PUMP PUMP	<i>1</i> / 1	,	X		
SHALLOW DEEP SETTINO	FEET PRINCIPO S				
FINAL D WATER SUPPLY	S ABANDONED, INSUFFICIENT SUPPLY	-	is Otta	$\frac{1}{2}$ $\sqrt{1}$	
STATUS OF WELL OF WELL OF WELL OBSERVATION WELS TEST HOLE RECHARGE WELL	L 6 ABANDONED, POOR QUALITY 7 UNFINISHED		3	\rightarrow $$	2m
SS-S6 1 DOMESTIC 2 ☐ STOCK	5 COMMERCIAL 6 MUNICIPAL		13 /3 /s	<i>^</i>	j
WATER USE 0/ IRRIGATION INDUSTRIAL	7 D PUBLIC SUPPLY COOLING OR AIR CONDITIONING		1		
□ OTHER	9 NOT USED				ŀ
METHOD OF CABLE TOOL CONVENTION ROTARY (REVERSE)	BORING ONAL) DIAMOND				
OF O ROTARY (REYERSE) DRILLING DRILLING O ROTARY (AIR) MAIR PERCUSSION	JETTING DRIVING				
NAME OF WELL CONTRACTORY	M - 1/ LICENCE NUMBER	DRILLERS REMARKS:	58 CONTRACTOR 59-62 DAY	E AGO A P	<u> </u>
Denry Mains Wu	W. Lhullery 3644	SOURCE OF INSPECTION	3644	0605	83"
ADDRESS 326, Richal NAME OF DRIVERS OR BORER NAME OF DRIVERS OR BORER O SIGNATURE OF CONTRACTOR	nord Out	S	INSTELLIOR		
SIGNATURE OFFICENTIAGOR	LICENCE NUMBER	D REMARKS			
SIGNATURE OF CONTRACTOR	DAY MO. TRE	OFFICE			
MINISTRY OF THE ENVIRON		I — — — — — — — — — — — — — — — — — — —		FORM NO. 0506	1—77 FORM 7

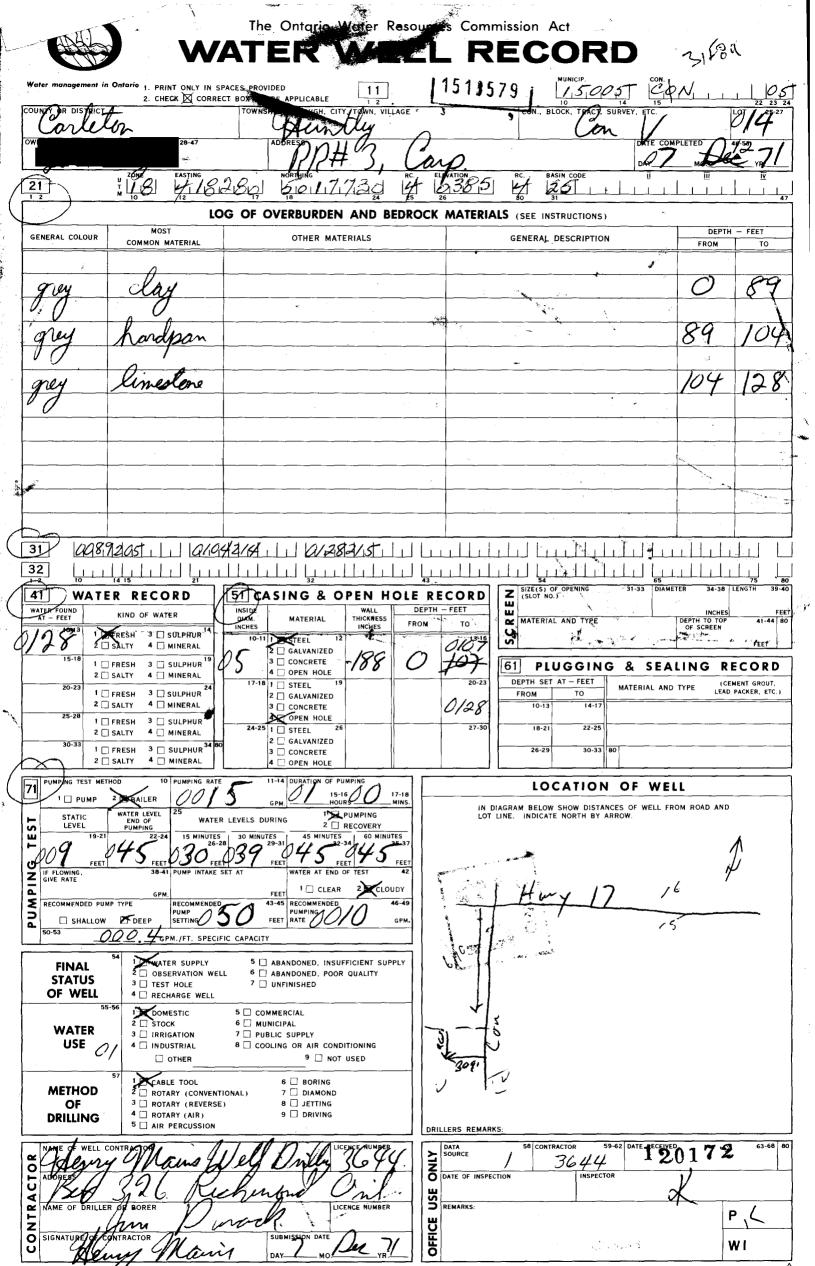
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	Environment

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The Ontario Water Resources Act

WATER WELL RECORD

_	Ontario	1. PRINT ONLY 2. CHECK ⊠ CC	IN SPACES PROVIDED DRRECT BOX WHERE APPL		15	1857	9	MUNICIP.	con.	d _I N _I	0,2
	OUNTY OR DISTRICT	eton	TOWNSHIP, BOR	ichmond	GE		CON	BLOCK, TRACT, SURVEY	ETC	84	LOT 25-27
Ľ	WNER (STRNAME FIF	Construction	ADDRESS	Richmon	10	nt		0,000	DATE COL	PLETED 9	
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L			LOG OF OVERBL	JRDEN AND BEI	DROCK N	ATERIALS	30 (SEE II	NSTRUCTIONS)			
6	ENERAL COLOUR	MOST COMMON MATERIAL	от	HER MATERIALS			GENERA	AL DESCRIPTION		DEPTH	- FEET
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Q WA	TER FOUND	ER RECORD	INSIDÉ	IG & OPEN HOL	E RECOR		SIZE(S) (SLOT N	OF OPENING 31-	33 DIAMET	34-30	75 40 ENGTH 39-40
00	777 :5	FRESH 3 SULPHUR 14	DIAM MATER	IAL THICKNESS INCHES	FRUM	10 S	MATERI	AL AND TYPE		DEPTH TO TOP OF SCREEN	41-44 30
F '	15-18 1 🗆	FRESH 3 SULPHUR 19	2 GALVA 1 CONCE	RETE 758	0		61	PLUGGING 8	& SEAL	ING RECO	RD FEET
	20-23	FRESH 3 SULPHUR 24 SALTY 4 MINERAL	17-18 STEEL	NIZED IS	20			T AT - FEET	ERIAL AND	TYPE ICEMEN	T GROUT KER, ETC)
	25-28 1 🗆	FRESH 3 SULPHUR 29 SALTY 4 MINERAL	3 CONCE 4 COPEN 24-25 1 STEEL	HOLE	x 7 100	27-30	10-13				
	30-33 1 🗆	FRESH 3 SULPHUR 34 00 SALTY 4 MINERAL	2 D GALVA	NIZED RETE			26-29		-		
71	PUMPING TEST METHO			ON OF PUMPING	7		LO	CATION OF	WELL		
	STATIC LEVEL	WATER LEVEL 25	O GPM O	15-16 0 17-1 HOURS MIN		IN DIAGRAM	M BELOW	SHOW DISTANCES O	F WELL F		D
PUMPING TEST	6/0	22-24 15 MINUTES	A9-31	RECOVERY INUTES 60 MINUTES 32-34 35-3	17	COT CINE	INDIC	ATE NORTH BY ARRO	w.		1
ING	FEET IF FLOWING. GIVE RATE	FEET OF FEE		FEET GG FEE	I						λl,
PUMF	RECOMMENDED PUMP		43-45 RECOMM	CLEAR 2 CLOUDY	- -				×		
	SHALLOW	LETEP SETTING O	PUMPINI RATE	GPA GPA	<u>.</u>				٠ ح		
	FINAL STATUS	1 WATER SUPPLY 2 OBSERVATION WELL	5 ABANDONED	. INSUFFICIENT SUPPLY	<u> </u>				'n		
	STATUS OF WELL	3 TEST HOLE 4 RECHARGE WELL	7 UNFINISHED						20		
	SS-S6 WATER	1 DOMESTIC 2 STOCK 3 IRRIGATION	5 COMMERCIAL 6 MUNICIPAL 7 PUBLIC SUPPLY			<u></u>	Ottava		J		
	USE OI	4 INDUSTRIAL OTHER	■ □ COOLING OR AIR	CONDITIONING NOT USED					15m		
_	METHOD 57	1 CABLE TOOL 2 CONVENTI	6 BOR	ING MOND	1						1
	OF DRILLING 5	3 ROTARY (REVERSE) 4 ROTARY (AIR) 5 AIR FERCUSSION	DRIV □ 0 DRIV	TING			<i>_</i>			11	
1	NAME OF WELL CON		100.11	LICENCE NUMBER		S REMARKS	EQS	+ Side of	do		
TOR	ADDRESS	Mains W.	el Urilling	LICENCE NUMBER 3644	Sour			3644	13	10 8	3.1"
CONTRACTOR	NAME OF DRILLER O	Jale, Nec	brond C	LICENCE NUMBER	U REMA			.narec UR	-		
CON	SIGNATURE OF CONT	Herry II	SUBMISSION DA		FFICE	.					
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FORM NO. 0506—4—77 FORM 7

The Ontario Water Resources Act

WATER WELL RECORD

,	Ontario	NVIRONMENT 1. PRINT ONLY II 2. CHECK ⊠ COS	RECT BOX W	HERE APPLICAL)	15 185	80	<u> </u>	ָרָהָי בי	ڗ ٳڎؚۄ؉	<u> </u>	1.0.2
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	32 10 W/	14 15 21 21 ATER RECORD		32	<u></u>	الل	<u> </u>	LI L	OF OPENING	البا	65		<u> </u>
	WATER FOUND AT - FEET	ATER RECORD KIND OF WATER	INSIDE DIAM INCHES	CASING	& OPEN HO		TH - FEET	Z slot	IAL AND TYPE	31-33	DIAMETER	34-38	FEET S9-40
k	2/35/	FRESH 3 SULPHUR 14 SALTY 4 MINERAL	10%	1 STEEL 2 GALVANIZ	INCHES		13-16	MATER			OF S	SCREEN	41-44 30 FEET
	2	FRESH 3 SULPHUR 19 SALTY 4 MINERAL		CONCRET OPEN HO STEEL		0	20.23	61 DEPTH SE	PLUGGII				RD NT GROUT.
-	2	FRESH 3 SULPHUR 24 SALTY 4 MINERAL 29	b / ₀	2 GALVANIZ 3 CONCRET 4 GOPEN HO	£	25	10/60	FROM	10	MATERIAL	L AND TYP		CKER, ETC)
s –	2	SALTY 4 MINERAL FRESH 3 SULPHUR 34 80	1	1 STEEL 2 GALVANIZ 3 CONCRETI			27-30	18-;					
L Æ		SALTY 4 MINERAL	L!	4 OPEN HOL	.Ε			26-2		<u> </u>			
¥	1 PUMP STATIC	WATER LEVEL 25	EVELS DURIN	.PM 0/		17-18 MINS	IN DIAGR	AM BELOV	OCATION W SHOW DISTANC	ES OF W		M ROAD AN	ND ND
	O/()	PUMPING	30 MINUTE	2 S 45 MINU	RECOVERY 60 MINUT		LOT LINE	: INDI	CATE NORTH BY	ARROW.			1
	FEE	FEET PUMP INTAKE S	T F	EET	FEET OF OS	FEET 42				. ,			<i>N.</i>
	IF FLOWING, GIVE RATE	PUMP	O . 43-	45 RECOMMEN	EAR 2 CLOU	6-49				3			
	SHALLO	W DEEP SETTING O	<i>00</i> F1	PUMPI PO		GPM	-			Pu			
	FINAL STATUS	1 WATER SUPPLY 2 OBSERVATION WELL		ABANDONED P	SUFFICIENT SUPP	LY				0			
1	OF WELL	3 TEST HOLE 4 RECHARGE WELL 55-56 1 D DOMESTIC	7 L	UNFINISHED				Λ ι ω	, a	•			,
	WATER USE		6 MUNI 7 PUBL	ICIPAL	INDITIONING				awast.				-
		OTHER		• · ·	NOT USED				-	, 	٦		
	METHOD OF	1 G CABLE TOOL 2 G ROTARY (CONVENT) 3 G ROTARY (REVERSE)	ONAL)	6 BORING 7 DIAMOI 8 JETTIN	ND G				i		_		
Ļ	DRILLING	4 PROTARY (AIR) 5 DAIR PERCUSSION		9 DRIVIN	G		RILLERS REMARKS:	Not 1	side of o	louble	,		
8	NAME OF WELL	///// • / •	W L	rilling	3644	, A	DATA SOURCE	<u> </u>	TRACTOR 59-62	DATE RECE	1VED 7	0 2	3
CONTRACTOR	NAME OF DRIVE	326, Kich	more	10 V	t.	SE	}	N	INSPECTOR	- e	<i>)</i> 4,	- 0	U
NO.	SIGNATURE OF	Juny Ma	eri s	UBMISSION DATE	LICENCE NUMBER	OFFICE U							
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0506 (07/00) Front Form 9

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County or District	1		· vic-	Township	/Borough/City/		ge	101	Con block	tract survey	, etc.	Lot 25-27
Ottawa (arleton				Goulbou	rn			<u>L</u>	3 Date		25 48-53
				Address O Tag	ge Const	ructi	on 3326	5 Limebar	nk Rđ		15ay 1	2nonth OGea
21		<u></u> <u> </u>	. 1 1		Northing			ration , Ontai		3 N3 "	iii	iv
2		т М 10	100 65 6	17 17 NEDOLIO	18	24	25 26	30	31	1 1 1 1		4
Concret asta		ommon mata-		VERBURDEN	er materials	OUR MA	ATERIALS (S		description			pth - feet
General colour		common materi	al .				-		 .		From	То
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	14 15 ED BECORE	21		CACINO C C	DEN USI E			54 Sizes of o	opening 21	-33 Diameter	34-38 Le	75 E
Water found	ER RECORE Kind of w		51 Inside diam	CASING & O Material	Wall thickness		th - feet				inches	feet
at - feet	→ Fresh ³	Sulphur 14	inches	Material 12	inches	From	To 22.165	(Slot No.) Material a	and type			op of screen
55 2 [☐ Salty 6 ☐	Minerals Gas	/	Galvanized Concrete	•100		22.	Ø				feet
	Fresh 4 🖂	Minerals		Open hole Plastic				61	PLUGGING	& SEALING	RECOF	RD
	Fresh 3 0	Sulphur 24 Minerals	:	Steel 19 Galvanized			20-23	Depth set at	Annular space		☐ Abando	
	Salty 6		6	B ☐ Concrete Concrete Concrete Concrete Concrete Concrete Concrete Concrete		22.5	73	From 10-13	To Mater			bentonite, etc.)
	☐ Fresh 4 ☐ ☐ Salty 6 ☐	Minerals	24-25	Steel 26 Galvanized			27-30	18-21	0 Gr	outed -	Cemei	nt (3)
	L riesii 4	Sulphur 34 60 Minerals		Concrete Open hole				26-29	30-33 80			
	⊔ Salty ₆ □	Gas		□ Plastic								
71 Pumping test r		Pumping rate	11-14 15 GPM	Duration of pump 15-16 Hours	oing 17-18 Mins				ATION OF V			
	Water level end of pumping	25 Water levels			2 ☐ Recovery			m below show north by arrow		f well from r	oad and	lot line.
19-21	22-24	15 minutes 26-28	30 minutes 29-31	45 minutes 32-34	60 minutes 35-37					S		
10'34	35 feet	70 feet	50 feet	35 feet	35 feet					¥_		
10 3 3 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	rate 36-41 GPM	Pump intake set	at feet	Water at end of te	st ⁴² <u>≨</u> Cloudy					2		
Hecommended		Recommended pump setting	43-45	Recommended pump rate	46-49		K'*	ia Stre	et	Ŕ		
☐ Shallow	Deep		50 feet		5 GPM				_	24		
FINAL STATU									38'			1
¹ Water sug ² Observati	pply ion well	 Abandoned, Abandoned, Abandoned, 	poor quality	oply ⁹ Unfinis 10 Replac				•		24		1
³ ☐ Test hole⁴ ☐ Recharge		 ⁷ ☐ Abandoned ⁸ ☐ Dewatering 	(Quiet)					1	16		7	i
WATER USE		55-56						i				
1		5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public suppl		9 D Not use				!	# 95)	1	i
3 ∐ Imgation 4 ☐ Industrial		8 Cooling & ai					205	ŀ	10	•		•
METHOD OF	CONSTRUC	TION 57		-		$\parallel \beta$, N°C	Š				
¹ ☐ Cable too ² ☐ Rotary (c	ol conventional)	5 ☐ Air percussi 6 ☐ Boring	on	9 🔲 Driving		\parallel	ه کړو	•				
3 ☐ Rotary (re 4 ☐ Rotary (a		7 ☐ Diamond8 ☐ Jetting		11 🗌 Other			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				228	5588
				T tax-is o						59-62 Date rece		63-68 8
Name of Well Cont		Camma ar F	L.2	Well Contract	or's Licence No.		urce	58 Contractor	58		29	
Address		Supply L				M O E	ate of inspection		Inspector	1 0/11	V	
Box 490 Name of Well Tech	Stitt	sville,	Ontario	K2S 1A6 Well Technici	an's Licence No.	MINISTRY USE	emarks					
s. Mill	er,			TO	097	STR					CSS.	ES1
Signature of Techn				Submission d		ĮĮŽ						
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8	Ontario	Ministry of the
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County or District Ottawa Carleton	Township/Borough/City/T		Con block tract survey	26
		\$35 KOA 2ZO Street, Richmond ON.	completed	16 03 01 day month year
21 T T T T T T T T T T T T T T T T T T T	Northing It is not the control of t	RC Elevation RC	Basin Code ii	iii iv
LOG OF		OCK MATERIALS (see instruction		Depth - feet
General colour Most common material	Other materials	General	description	From To
Brown Hardpan	Boulders			0 11
Grey Limestone	And a state of	hard		11 75
31				
32 10 14 15 21 21 51	CASING & OPEN HOLE R	43 54 Sizes of C	opening 31-33 Diameter	75 80 34-38 Length 39-40
Water found at - feet Kind of water linches	Wall Material thickness inches	Depth - feet Z (Slot No.)	inches feet
10-13 3 Sulphur 14	Steel 12 Galvanized 188	0 21 ¹³⁻¹⁶ S Material	and type	Depth at top of screen 41-44 feet
15-18	3	61	PLUGGING & SEALING	· · · · · · · · · · · · · · · · · · ·
20-23 1	1 Steel 19 2 Galvanized 3 Concrete	Depth set a	t - feet Material and type (Co	Abandonment ement grout, bentonite, etc.)
25-28 1 Fresh 3 Sulphur 29	4 XOpen hole 5 □ Plastic 1 □ Steel 26	21 75 From 21-13 21	To 14-17 O Grouted (
30-33 1 Fresh 3 Sulphur 34 60	3 ☐ Concrete 4 ☐ Open hole	18-21	22-25	
2 Galty 6 Gas	5 Plastic			
71 Pumping test method 10 Pumping rate 11-14 1 X Pump 2 Bailer 8 GPM	Duration of pumping 15-16 17-18 Mins		CATION OF WELL v distances of well from r	road and lot line
Static lovel Water levels during 1 f	Pumping 2 Recovery 45 minutes 32:34 60 minutes 35:37	Indicate north by arrow	<i>I</i> .	11
9'6" 25 73 26-28 30 16ed 173 16ed 16ed	25 25	O+1&wa	Street	
19-21 22-24 15 minutes 30 minutes 29-31 30 minutes 30 minutes 29-31 30 minutes		f A	3	
Recommended pump type Shallow Deep Recommended pump setting Recommended pump setting Get	pump rate		•	0
FINAL STATUS OF WELL 54			i	$\mathcal{S}_{\mathbf{c}}$
1	upply ⁹ ☐ Unfinished 10 ☐ Replacement well	_	•	5
3 ☐ Test hole 7 ☐ Abandoned (Other) 4 ☐ Recharge well 8 ☐ Dewatering		Pillacs		
WATER USE 55-56 1 Domestic 5 Commercial	9 ☐ Not use	Pitless Well in Back For watering animals		
2 ∰ Stock 6 ☐ Municipal 3 ☐ Irrigation 7 ☐ Public supply 4 ☐ Industrial 8 ☐ Cooling & air conditioning	10 🗆 Other	For watering		
METHOD OF CONSTRUCTION 57		animals		
1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 5 ☑ Air percussion 6 ☐ Boring 7 ☐ Diamond	9			000044
4 → Rotary (air) 8 ☐ Jetting			··	230041
Name of Well Contractor	Well Contractor's Licence No.	Data source Contractor	58 59-62 Date reco	eived 63-68 80 2 6 2001
Capital Water Supply Ltd.	1558	Date of inspection	Inspector	L U LUUI
Box 490, Stittsville, ON. K2	Well Technician's Licence No.			000 504
S. Miller Signature of echnician/Contractor	T0097 Submission date	Remarks		CSS.ES1
Havan of	day 16mo 3 yr 01	≥		0506 (07/00) Front Form



Ministry of the Environment

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<u>1533079</u>

Municipality 5003	CON.	_1	ı	03
10 14	16			22 22 2

0506 (07/00) Front Form 9

County or Distri				Township	/Borough/City		je			k tract survey	, etc.	Lot 25-27
Ottawa Owner's sumar	Carletor		t Name	Address	Goulb	ourn			3	Date		23
	Mountain			'''	Box 730	Rich		tario KO		completed 2	21day 8	montf02year
21			one Ea:	sting	Northing	1	RC Elev	ration RC	Basin Code	ii	111	iv I
1 2		M 10		OVERDI IDDES	I AND DED	24	TEDIAL C	inetructic	3;			47
Canada - 1-				OVERBURDEN		NU NOUN	I ENIALS (S				pth - feet	
General colour	Most	common materia	a:	Othi	er materials			General	description		From	То
Brown		Clay		S	tones					****	0	12
Gray		Clay		s	tones						12	26
Gray	1	Limeston	e								26	180
		SAndston									180	240
GLOY W	MILLE											
				·			1					
				·····			-					_
							-					-
						8 - 18						
		N	ote	Casing wa	s left	l foot	above	ground 1	.evel			
				at time o								
31 , , ,	<u> </u>	,	<u> </u>	L. LIME U	_ 	<u>. </u>	. 1 1 . 1 .	1,11	. . .		<u>. </u>	1,1,11
32	11,1,1	 	 			⊷ └─┴─ . , ,			<u> </u>	▗▗ ▗▗ ▗▕▗▗▍▍▗▗		
10	TER RECORD)	51	CASING & O	PEN HOLE	RECORD		Sizes of C		55 31-33 Diameter	34-38 Le	75 B0
Water found at - feet	Kind of w		Inside diam	Material	Wall thickness	Depti	1 - feet			i	nches	feet
10-13	L Flesii	Sulphur 14	inches		inches	From	70 29°	Material a	and type		Depth at to	op of screen 41-44
236 2	☑□Salty 6 ☐	Minerals Gas	"	1 Steel 2 Galvanized 3 Concrete	1200		[<i>ω</i>				feet
	15-18 IOT CEST Gulphur 19 Fresh 4 Minerals 2 Saity 6 Gas		4 Open hole 5 Plastic				61	PLUGGING	& SEALING	RECOR	RD	
20-23	□ Fresh 3 □	Sulphur 24 Minerals	17-18	1 Steel 19 2 Galvanized			20-23	Depth set at	Annular space		Abando	
0F 30	Salty 6 🗆		5 7/	3 ☐ Concrete 3 4 ☎ Open hole 5 ☐ Plastic		29	240	From 10-13	To Mate	erial and type (Ce	ment grout,	bentonite, etc.)
1		Minerals	24-25	¹ ☐ Steel 26	1		27-30	29 18-21		outed -	Cement	t (4)
	□ Fresh ³ □	Sulphur 34 60 Minerals		2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole				26-29	30-33 80			
2	Salty 6			€ □ Plastic	<u> </u>							
Pumping tes		Pumping rate	11-14 CDM	- 16 16	ing 17-18 Mins		· · · · · · · · · · · · · · · · · · ·	LOC	ATION OF	WELL		
Static level	Water level	25 Water levels of	GPM		Mins			n below show	distances	of well from re	oad and	lot line.
Static level	end of pumping 22-24		30 minutes	Α	60 minutes	$ \mathcal{F} $	indicate n	orth by arrow	<i>.</i>			1
5												
If flowing give	75 feet 38-41	225eet Pump intake set	150 fee at	Water at end of tes	75 feet st 42	1						-
Recommende	GPM d pump type	Recommended	fee 43-45		Cloudy 46-49			Otton	sa S	+		
☐ Shallow	Deep Deep	pump setting	100fee	pump rate	5 дрм			1	-		i	
50-53	<u>-</u>					1		1	in S	၁၀'	1	
í	TUS OF WELL supply	54 5 Abandoned,	insufficient s	supply ⁹ Unfinish	med				→ `		ŀ	
1	ole	⁶ ☐ Abandoned, ⁷ ☐ Abandoned (poor quality					, G	,	_	1	9
⁴ ☐ Rechar	rge well	⁸ Dewatering						;			1	Ä
WATER USE		55-56 5 Commercial		9 ☐ Not use)]		1			1 1	59
2 ☐ Stock 3 ☐ Irrigatio	on	6 ☐ Municipal 7 ☐ Public supply	y	10 🗌 Other	-			i		•		
4 🔲 Industri		8 Cooling & air		g							(
	F CONSTRUC					11						
	(conventional)	⁵ Air percussion Boring	on	9 ☐ Driving 10 ☐ Digging								1
3 ☐ Rotary 4 🙀 Rotary	(reverse)	 Diamond Jetting 		11 🗆 Other							250	1384
						J <u> </u>						
Name of Well Co		Commiss F	ج.ء	Well Contracto	or's Licence No.	Dat sou	a Irce	58 Contractor	58	59-62 Date rece	162	2002 63-68 80
Address	al Water						e of inspection		Inspector	<u> </u>		
		Stittsvi	ille,	Ontario K	2S 1A6 an's Licence No.	WINISTRY USE	marks				^^	
	lame of Well Technician S. Miller			Well Technicia		T & Her	Hairis			C	SS	.ES2
Signature of Tecl	hnician/Contactor			Submission da	ate							
Mon	nazl			day 23 mol	3 _y 02	JE				·		



Ministry of the **Environment**

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Municipality 5003	Con.	1 1	. 1	02
10	15		22	23 37

			T	/Oib./T- : *****			Can blood	tract	oto II-	25-27	
County or District			Township/Borough Goulbourn	vCity/Town/Villa	ge		Con block	tract survey	, etc. Lo 22 2)L	
Ottawa Ca Owner's surname	20.12	,	Address					Date	1	48-53	
C\$N Elect	ric Ltd.		5640 Manot					completed ₂ (0 day08 m	onth2 year	
21	Zone	Easting	Northin	eg	RC Ele	evation K 4	M Babin Code	# - 	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	iv I I I	
1 2	M 10	12 OF 0''''	DDI IDDEAL AND F	EDROCK MATERIALS (see instruct			ions)			47	
<u> </u>		UF UVE			General description				Depti	h - feet	
General colour	Most common material		Other materi	alS					From	То	
brown cl	clay	stor	nes		packe	<u>d</u>			0	8	
grey	limestone		_		mediu	<u>m</u>	<u> </u>		8	125	
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	Note: Casing was 1	ert l	root above	ground	T6A6T 9	it time c	n orilli	.ng.		<u> </u>	
			·		 					-	
										<u> </u>	
31		 		ـــــــــــــــــــــــــــــــــــــ		ـــا لــلــ		ـــا لـــا	ШШ	البلب	
, 32		اللل		ــــ بيا ليال		 بنا لبل		ـــا لــا		اً لىلىـ	
41 WAT	ER RECORD 51		SING & OPEN HO			Sizes of		-33 Diameter	34-38 Leng	75 ex 1th 39-40	
Water found at - feet	Kind of water	n l	Material Wall thicknoinches	ess	h - feet To	(Slot No.		i	nches	feet	
10-13 1)-11 12 :	Steel 12	- ioiii	13-16	Material	and type		Depth at top	of screen 30	
15.18	ot tested hour 19 6 1	2 0	Galvanized Concrete	3 0	21'6					feet	
" " f	☐ Fresh 4 ☐ Minerals ☐ Salty 5 ☐ Gas	5 🗆	Plastic			61	PLUGGING (-	
20-23 1 [☐ Fresh 3 ☐ Sulphur 24 5 7		Steel Galvanized		20-23		Annular space	(☐ Abandonm	nent	
2 [☐ Salty 6 ☐ Gas	3 U	Concrete Open hole Plastic	21'6	21 6 125 From To Material and type				(Cernent grout, bentonite, etc.)		
	☐ Fresh 3 ☐ Sulphur 29 ☐ Minerals ☐ Salty 6 ☐ Gas ☐ 2	1-25 1 🔲			27-30			ited cen	nent (3	5)	
20.22	□ Grash 3 □ Sulphur 34 60	3 🗆	Galvanized Concrete			18-21 26-29	30-33 80				
	☐ Salty 6 ☐ Gas		Open hole Plastic			20-29	Se-33 80				
Pumping test r			ration of pumping	7-18			CATION OF V	VEI I			
71 X Pump 2	Bailer 12	GPM 1	Hours M	7-18 lins		am below show	w distances of		ad and lot	t line.	
	end of pumping Water levels during	Pur	· -	· 1 1		north by arrov		=			
19-21	26-28	i	minutes 32-34 60 minute	35-37	<u>.</u>		i	ì		1	
Z Teet	50 feet 120 feet 160	1001	feet 50	feet 42	l		l	1		•	
If flowing give	GPM GPM	feet	☐ Clear XX Cloud				لــــــ	, 1	Ì		
Recommended	nump setting	pu	ecommended ump rate	46-49	1	<u>~</u>	<u> </u>	jo i			
Shallow 50-53	Deep 95	feet		GPM	-		25				
FINAL STATU	JS OF WELL 54) 	/ 1	<i>3</i> ₹	1			
¹ ▼ Water su ² □ Observat	pply 5 Abandoned, insufficition well 6 Abandoned, poor qu		9 ☐ Unfinished 10 ☐ Replacement well	, -	<u> </u>	And 24	veet.				
3 ☐ Test hole 4 ☐ Recharge	⁷ Abandoned (Other)		_			J				1	
WATER USE	55-56			$\dashv I$					B	l	
1 Domestic			9 Not use 10 Other						300		
2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial	7 Dublic supply	oning							1		
									4		
METHOD OF ¹ □ Cable too	CONSTRUCTION 57 ol 5 X Air percussion		9 ☐ Driving						1		
² ☐ Rotary (c ³ ☐ Rotary (r	conventional) 6 Boring reverse) 7 Diamond		10 Digging 11 Other						000	200	
4 X Rotary (a		_							250	38U	
Name of Well Cont	tractor		Well Contractor's Licence	ce No.	ta	58 Contractor		59-62 Date rece	ived	63-68 80	
			1558		ra urce	1 Contractor	558	SEP	16 20	702 "	
Address	Water Supply Ltd.				te of inspection		Inspector	·			
Box 490 Name of Well Tech	Stittsville, Ontar:		S 1A6 Well Technician's Licence	ce No.	marks		L				
Name of Well Tech			Well Technician's Licence T0097	Ce No. AHLSINIW	uno			C	SS.	ES2	
Signature of Techn	nician/Contractor		Submission date					•			
Din	and		day 22 mo 08 yr	02 ₹					0506 /07/0	0) Front Form	
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⊗ 0	ntario		Ministry o			(Place sticker and p	print number below)	Regulation 9	903 On		I Reco	
Instructions for Completing Form A013675 page of												
All SectQuestipAll met	tions must be ons regarding o	cor con en t	npleted in opleting th ts shall b	n full to avoid dela nis application car e reported to 1/ 1	ays in proces n be directed	ssing. Further I to the Wate	r instructions ar	Please retain for fut not explanations are a ement Coordinator a Ministry U	availab at 416	ole on the ba 3-235-6203.	ck of this fo	oŗm.
				ation of Well In	formation	MUN		CON			LOT	
First Name	9 17		Last Nar			Mailing Addre	ess (Street Numb	per/Name, RR,Lot,Co	ncessi	ion)	Lange Lange	
County/Distric		(0)3	CORSE	Township/City/Township	own/Village		Coodroffe Province Pos		lephor	ne Number (i	nclude area	code
Ottawa Co Address of Wo	arleton ell Location (Cou	ıntv	/District/M	Ottava unicipality)	· · · · · · · · · · · · · · · · · · ·	Township	Ontario 🗶	2C 3H1		226 672 Conces		
Ottawa Co	arleton					Goulbour	<u> </u>	2	A/25	5 3		
Test Wel	1 3. Hing	St	reet			City/Town/\ Richa Unit Make/	ond		partme	ent/Block/Tra	ct etc.	
GPS Reading	NAD 8 3	Zor 18			orthing 104602	Unit Make/l			Indifferer	ntiated χ	Averaged	
	rburden and	В	edrock N	laterials (see in	structions))						
General Coloui	r Most comn	ion	material	Other I	Materials		Gener	Depti Fron				
brown	clay	**************************************							0	2.4	13	
brown	hardpan limesto			layered		1	hard & lay	2.43 4.26				
grey	limesto			Layered	layered			hard				.59
grey	LIMESCO	116			-					18.5	9 22.	, 25
							,					
					TURNINAMA				NH	-		
	· · · · · · · · · · · · · · · · · · ·	•					THE ALL .					
Hole	Diameter	$\overline{}$		Con	nstruction Re	cord		T.		Well Yield		
Depth N	Metres Diamet	er	Inside		Wall	Depth	Metres	Pumping test metho		raw Down	Recovery	y
From	To Centimet		diam centimetres	Material	thickness centimetres		То		Time min	1 1	Time Water I	
	.40 22.7				Casing			Pump intake set at - (metres)		c		
6.40 2	22.24 15.3	9		Steel Fibreglas	ss			Pumping rate - (litres/min)	1		1	
Wate	er Record	Н	15.86	Plastic Concrete	0.48	+.45	6.40	Duration of pumping	2		2	
Water found at Metres	/ Kind of Water			Steel Fibreglas	ss			hrs + m Final water level end	in			
8 53as	Fresh Sulph			Plastic Concrete	•			of pumpingmetre	-	1	3	
Other:		-		Steel Fibreglas	as			Recommended pump type.	p 4		4	
Gas	Fresh Sulph Salty Miner			Plastic Concrete	•			Shallow Dee			5	
16.95-18.				Galvanized	Screen			depthmetre			10	
NOTGALESTE Other:	Balty Miner		Outside diam	Steel Fibreglas				rate. (litres/min)	15		15	
After test of wel	Il yield, water was		ulam	Plastic Concrete				If flowing give rate - (litres/min)	20		20 25	
Clear and se				Galvanized	Gardinan an G			If pumping discontin- ued, give reason.	30		30	
	· ·			Open hote	Casing or So	creen			40 50		50	
Chlorinated T		╝				6.40	22.24		60		60	
Depth set at - M	Plugging and etres Material and	_		slurry, neat cement slur		Abandonment ume Placed	In diagram belov	Location w show distances of well	from ro		nd building	
From 1	10		;	-	(Cu	bic metres)	Indicate north by	Arrow. Brest Well And		***	.	
1.40	grou		LI DENE	onite slurr	7	198m3	KA-	& Lest				
								, W	3		13	Image: Second content
				-				nd.			OHAWA Street	
		М	ethod of	Construction			Sick				100	
Cable Tool	Rota	ry (a	air)	Diamond		☐ Digging					3	
Rotary (conve			ussion	☐ Jetting☐ Driving		Other	*************	King St.				
▼ Domestic	∏Indu	stria		er Use	only	Other		<u> </u>			ľ	
Stock	Com	mer	cial	☐ Not used	*· -							
Irrigation	∭Mun	cipa		tus of Well	air conditioning		Audit No. Z	13768 P	ate Well	Completed YYYY 200		_{DD}
Water Supply Observation			ll nsufficient s	Unfinished		doned, (Other)	Was the well ov package delivere	The dimentiation	ate Deliv	vered YYY	Y MM	DD
Test Hole	Abandon	ed, p	poor quality	Replacem	ent well		package activere	- Count Card		200	5 3 2	22
Name of Well Co	ontractor			nician Informat	i on Well Contractor's	s Licence No.	Data Source	Ministry Us	se Onl ontracto		· O	·
Capital Buşiness Addres	Water Supl s (street name, nu	1y mbe	Ltd. er, city etc.)		1558	3	Date Received			155 aspection yyy) 0	
Box 490 S	Stittsvill chnician (last nam	e.	Ontar	10 K2S 1A6	Vell Technician's	e Liconos No	V	AY 1 8 2005			· MIVI	DD.
Miller, S	Stephen	o, III	or name)		TOO97	,	Remarks	W	ell Reco	ord Number		
Signature of Tell	hnician/Contractor			D	ate Submitted YYS		N#					
0506E (09/03)		_	Cont	tractor's Copy 📗 N		Well Ow	ner's Copy	Cette	formul	e est disponi	ble en fran	çais

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(A) (O n	tario	M th	Ministry of the Environment Well Tag Number (Place sticker and the Environment)					orint number b	elow)	Regulation 9)03 On			ecoro
Instructi	ions	for Comp	leting Form AO				A013							of	
All SeQues	ectio: stions	ns must be s regarding	comp	oleted ir Ileting th	า full to avoi	id delays on can b	in process e directed	ing. Further to the Wate	r instructio	ns and	lease retain for fut d explanations are a ment Coordinator	vailah	le on the	hackin	f this form.
• Pleas	se pri	int clearly ir	blue	or blac	k ink only.		Aller Agentin				Ministry L	lse On	ily		
Well Ow	ner's	s Informat	ion a	nd Loc	cation of W	Vell Info	rmation	MUN		CC	ON			LOT	
Uttawa					, ,			Goulb	ourn			24/2	g .	100000101 3	
RR#/Stree		ber/Name 1. Kin g	Str	root				City/Town/\	/illage		Site/Com	partme	nt/Block	Tract et	С.
GPS Read	ling	NAD 8 3	Zone 18	East	•	North	-	Unit Make/	Model	Mode	· · · · · · · · · · · · · · · · · · ·	ndifferer		Aver	aged
Log of O	verb			lrock N	5246 Materials (s	see inst	14428 ructions)	Garmin		<u> </u>		ifferentia	ated, specif	у	
General Co	lour	Most com	non m	aterial		Other Ma	terials			Genera	l Description			Depth From	Metres To
brown		clay			ston	es		Di	acked				0		3,65
grey		limesto	ne_					_	edium l	ard				.65	45.11
				-	5				,	T-000					
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	-+-														
				5						***************************************	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
		ameter		ļ		Const	ruction Rec	ord			T	st of	Well Yiel	ld.	
Depth From	Met To		1	Inside diam	Materi	ial	Wall thickness	Depth	Metr	es	Pumping test methò		raw Down Water Le		ecovery Water Leve
0	6.4	0 22.	75 c	entimetres	1		centimetres	From	То		submersible	min	Metres		Metres
6.40		18 15.					Casing				Pump intake set at - (metres)	Statio Leve	. 1		
0.40	97.	10 1.7.	1 11	1	Steel						Pumping rate - (litres/min)	1	-	1	<u> </u>
		Record		13190	Plastic (0.48	+.45	6.40	•	Duration of pumping	2		2	
Water found at Metre		Kind of Wate		en cual carr	Steel	·					hrs + m			3	
43,58		esh Sulpl alty Mine		And the state of t	Plastic Galvanized						of pumpingmetre	es		3	
Other: NOT TES	(H4T)	Lab Toula			Steel						Recommended pum type.			4	
Gas		esh Sulph alty Mine		And the second s	Plastic 0						Shallow Dee			5	
Other: m	 III Fr	esh 🔲 Sulph			Galvanized		Screen				depthmetre			10	
Gas Other:	—	alty Mine		Outside	Steel	ibreglass	Slot No.				rate. (litres/min)	15		15	
	well y	ield, water wa	‡ -	diam	Plastic 0	Concrete	:				If flowing give rate - (litres/min)	20 25	<u> </u>	20 25	
All the same of th		ment free			Galvanized	<u> </u>	···				If pumping discontinued, give reason.	30		30	
Other, sp	+					No Ca	sing or Scr	reen	1			40 50		40 50	
Chlorinated	X Ye	es No	ЦL	<u>15.39</u>	Open hole			6,40	45.	18		60		60	
Depth set at		lugging and	+			Annular		bandonment			Location				
From	To	Material an	d type (bentonite :	slurry, neat cen	nent slurry)		ne Placed c metres)	In diagrai		show distances of well				lding.
6.40	0	groui	ed:	bent	onite s	lurry	.154	im3		\rightarrow	2 Ottav	<u>soc</u>	Stre	et_	
			<u> </u>							X					
				1		e e			1 8	/					+
											•	ð٠			يد
					Constructio				ΚX		R. demon	•	D		King Street
☐ Cable Too ☐ Rotary (co	- 1		ary (air) percus			amond tting		Digging Other			140		- L		, L
Rotary (re	verse)				Dr	iving	\$10						Mell		*
Domestic		Indi	ıstrial	yvate	er Use	iblic Supply	, [Other	X				HISH		
Stock			rmercia nicipal	al 🥻	☐ No	t used	conditioning		A. cellis hi		A ARRA IN	ate Wol	Complete		
			F	ina Sta	tus of Well				Audit No.	Z	13/10		20	YYY .	MM DD
Water Sup Observation Observa	[-	Recharg	1	ufficient s		ifinished watering	Abando	oned, (Other)	Was the package		ioi o il iloi i iladoit	ate Deliv	vered	YYYY	MM DD
Test Hole		Abandor	ed, pod	or quality	Re	placement	***				Ministry U	ee ∩!	20	U3	3 22
Name of Well		actor	<u> </u>		chnician Inf		າ l Contractor's l	Licence No.	Data Sou	rce		ontracto		55	Q
Capital Business Ado	Wa	Ler Sup street name, n	ly mber	cityletc \			1558	·	Date Rec	eived	VVVV 1444 D	ate of In			
					io K2S 1	.46				MA	Y 118 2005			YYYY	MM DD
Name of Well Miller.	i Techi Sta	nician (last nan aphan	ne, first	nanje)		Wel	T0097	Licence No.	Remarks		V	ell Reco	ord Numbe	er	72

Well Technician's Licence No.

T0097

Date Submitted YYYY MM DD
2005 3 22

Contractor's Copy Ministry's Copy Well Owner's Copy Cette formule est disponible en français

Miller, Stephen
Signature of Jechnician (las.

(Ontario	linistry of ne Environment	Well Tag N	04041	below)	Pogulation 992 Onto	Well Record			
		And	2/1	1	Regulation 903 Onta				
Instructions for CompletinFor use in the Province of	-	is document is a ne	rmanent lega] lease retain for future refe	page of				
 All Sections must be com Questions regarding com All metre measurements 	pleted in full to avo	oid delays in proces ation can be directe	sing. Further i d to the Wate	nstructions and	d explanations are available	on the back of this form.			
Please print clearly in blue		a to 1/10 of a filet	NATION 1		Ministry Use Only	/			
V F									
Address ht Wall agation (County)	District/Municipality)		a a a a a a a a a a a a a a a a a a a		f (t l fo)t	Concession			
Address of Well Location (County				bour	n fan	4R-18509			
RR#/Street Number/Name	ske s	Heed	City/Town/Vi	hmore	Site/Compartmen	SUAL FORTA			
GPS Reading NAD Zon	Easting 21	Northing SOO423	Unit Make/M	odel Mode	of Operation: Undifferenti	W			
Log of Overburden and Be		·		>		Depth Metres			
General Colour Most common	material	Other Materials		Genera	ll Description	From To.			
Ga	I line				,	4.57.54.38			
	((() ()			141-7					
					manus de la companya de la companya de la companya de la companya de la companya de la companya de la companya				
	T				7	/- U.V1-1			
Hole Diameter Depth Metres Diameter	Inside	Construction Re	Depth	Metres	Test of W	aw Down Recovery			
From To Centimetres	diam Mat			To	Subfure Time	Water Level Time Water Level Metres min Metres			
0 24 0 491		Casing			Pump intake set at Static (metres) Static	1,10			
	(<u> </u>	Fibreglass	***	171	Pumping rate - 1	4.82 1 11.80			
Water Record	Plastic Galvaniz	Concrete 4	50	6.11	Duration of pumping 2	572 2 8,70			
Water found at Metres Kind of Water	Steel	Fibreglass Concrete			Final water level end	816 3 632			
Gas Salty Minerals Other:	Galvaniz				of pumping metres Recommended pump 4	740 4453			
Fresh Sulphus	L	Fibreglass Concrete			type. Shallow Deep				
Other: Salty Minerals	Galvaniz	_			depth 3 metres				
Gas Salty Minerals	Outside Stool	Screen	T		Recommended pump 10 rate. (litres/min) 15	105 / 10 l. 70 3.07 15			
Other: After test of well yield, water was	diam Steel	Fibreglass Slot No. Concrete			If flowing give rate - 20	13.56 20			
Clear and sediment tree	Galvaniz	ed			(litres/min) 25 If pumping discontinued, give reason.	14 45 25 15 35 30			
Other, specify	(m-1)	No Casing or S		24 38	40 50	15.76 40 16.12 50			
Chlorinated Yes No	S open ho	le	6.10	24.00	60	648 60			
Plugging and Sealing Record Annular space Abandonment Depth set at - Metres Material and type (bentonite slurry, neat cement slurry) etc. Volume Placed (white restree) In diagram below show distances of well from road, lot line, and building.									
From To Waterial and typ	e (bentonite sturry, rieat c	ement sidiry) etc. (ct	Indicate north by	arrow. 18050					
3,05 0 Besto	nte sim		6	35					
				8	N. A.	Madeller			
M	ethod of Construc	tion		30		. Le			
Cable Tool Rotary (Diamond Jetting	☐ Digging ☐ Other	3	-1 676	wke			
Rotary (reverse) Boring		Driving -		and C	1 5	Heer			
	Water Use			\$					

A043482

Well Record

Regulation 903 Ontario Water Resources Act

aue.	of	

Address of Well L	ocation (Street Numl	oer/Name, RR		Township	11		Lot	Concession	on	
County/District/M	lunicipality	311	ees	City/Town/Villag	je	own		Province	Postal (Code
UTM Coordinates	Zone Easting	Northin	1g 4-7/20	GPS Unit Make	Model	Mode of O		Ontario Undifferentiated	Aver	aged
	Bedrock Material			1920120120120120101201010101010101010101	Vor	Differen	itiated, specify			
General Colour	Most Common N	laterial	Other M	aterials		General De	escription		From	(Metres) To
	Grei	Lo	nd s	be					610	349
									· · ·	
						The state of the s			THE RESERVE OF THE PARTY OF THE	
4-10-10-10-10-10-10-10-10-10-10-10-10-10-				A			PROFEST TO SECURITION AND ADMINISTRATION AND ADMINI			
	- A	0.	,							
	- W	Pan	AR.	-106	42	Past 1-2	2-3-5	3-9-12		
Depth Set at (Meth	res) T	ype of Sealant		Volume		Check box if after test water was:		ell Yield Testing Draw Down	Red	covery
Trom To	Neat	Material and T	-5(w	(Cubic N	netres)	Glear and cand for		Time Water Lev (Min) (Metres) Static	el Time V (Min)	Vater Level (Metres)
				1		If pumping discontinue	•	Static 8 1	Level	, 09
						Pumping test method		2 563	2	187
Method of	f Construction		Water	Use		Pump intake set at (A	(etres)	3 5,66	3	
Cable Tool Rotary (Convent		Public			ot used watering	Pumping rate (Litrest)	(<u>(</u>	4 5,69 5 C 7(5	
Rotary (Reverse	Digging	Livesto	n 🔲 Cooli	Hole	onitoring ng	Duration of pumping		10 5 76	, 10	
Air percussion Other, specify	Boring	☐ Industri ☐ Other, Status of W	specify			hrs + On		15 5, 79	15	
Water Supply Replacement W	Dewatering		Obse	rvation and/or Monito	-	Recommended pump	type	20 5 80		
Test Hole Recharge Well	Abandoned	i, Poor Water C i, other, <i>specify</i>	uality 🗌 Other	, ,	, J. A.	Recommended sump		25 5,8 3 30 5 8 2		
Please provide a m		Location of	Well			Recommended pump	ocate	40 5,83	\$ 40	
- all property bound - an arrow indicating	aries, and measureme g the North direction can be provided as att				nts,	If flowing give rate		50 5 83	50	4
	f inside of well can also		ger than legal siz		'	(Litres/min)		60,5,84	- 60	<u> </u>
世	8	40	700			Water found at Dept	th Kind o	Details of Water osh Salt	n Substant	Minerals
#10 Kir	9	F		^^		Water found at Dept	th Kind o	of Water		
Q+	(est		a SH	V .	M-Colomocol distribution	Water found at Dept	th Kind o	sh Salty S	TO STATE OF THE PARTY OF THE PA	
31)		55H1	eest		Casing Used	Gas Used	Casing a	ind Well D	etails
· ·		Thou				Steel	Oalvanized Steel	Diameter of the		metres)
Date Well Comple	ted Was the well ow package delivered			ll Record and Pack Well Owner (yyyydd		Plastic	Fibreglas	Depth of the Ho	- 71	***************************************
201-08	Well Contractor	Yes N	<u>් උරු (</u>	-08-0		Concrete No Casing and	Concrete Screen Used	Wall Thickness Inside Diamete	SCW	
Business Name of	Well Contractor	: 16	AND ASSESSMENT OF THE PROPERTY	Vell Contractor's Lice	nce No.	Open Hole Disinfected?	-24.9		>88	
Business Address	(Street No./Name, nu	mber, RR)	Marici	pality Cufmon		Yes No	Wat	Depth of the Ca	38	٠,
Province	Postal Code	Business E-n	nail Address		- Land	Audit No.		Use Only Well Contractor No	•	
Bus.Telephone No.	(inc. area code) Name	of Well Techni	cian (Last Name	First Name)	RN	Date Received (yyyy/mr OCT 1 5 2007	n/dd)	Date of Inspection (yyyy/mm/dd)
Well Technician's Lic	ence No. Signature of		45	ate Submitted (yyy	y/mm/dd)	Remarks				
1010	10 Por	vij_	\sim 0	407-10-	10		1000			

(V) Or	ntario Ministry of the Environr	Well Tag I	No. (Pli A 06	8479				Record
			A-069	179	- Regulation	<i>n</i> 903 Ontario V Pag	,	ources Act
Well Owner's	s Information					nut til Etter i gesett		
6041	OTTAWA STR	ET	COUL	XURN.	24	·	3.	
County/District/I	Municipality ARLETEN	Cir	ty/Town/Village RKHN	1000		Province Ontario	Postal	Code
UTM Coordinates	Zone Easting 107 N	orthing GPS	Unit Make Model	Mode of	Operation:	Undifferentiated	Ave	eraged
NAD 8 3	nd Bedrock Materials (see inst			Differ	entiated, specify			
General Colour	Most Common Material	Other Materia	als	General	Description		Depth	(Metres)
u	TILL	STORES					3/25	5.10
CRET	WINESTEN	our s					5.08	H23
CAC.	7 4 7 6 6 7 6						0,0	Laras
Depth Set at (Ma	Annular Space/Abando	the same of the sa	Volume Pleand	Check box if after te		ell Yield Testin		
From To	, , , , , , , , , , , , , , , , , , , ,		(Cubic Metres)	water was:		Time Water Le	evel Time	Water Level (Metres)
WW 62	0000		0.14	Cannot develo	p to sand-free	Static 27		(Metres)
				If pumping disconting	nued, give reason:	1 4.10	1	17.78
				Pumping test meth	od	2 4.91	2	16,98
	of Construction	Water Us	0	Pump intake set at	(Mglres)	3 5,80	3	512
Cable Tool Rotary (Conver	Diamond Pu	blic Commercomestic Municipal		Pumping rate (Litre	es/miny_	5 77	4	15.69
Rotary (Revers	se) Driving Liv	vestock Test Hole	☐ Monitoring Air Conditioning	Duration of pumpir	(5gm).	1000	5	1737
Air percussion Other, specify	_	dustrial her, specify		/ hrs + O	min d of pumping	15 11.87	15	1012
Water Supply	Status Dewatering Well		on and/or Monitoring Hole	(Metres) R.L	8.	20 134	20	8.37.
Replacement V	Well Abandoned, Insufficie Abandoned, Poor Wa		(Construction)	Recommended pu	mp type Deep	25 456	25	741
Recharge Well		ecify		Recommended pu	mp depth (461)	30 15.4	30	6,48
	Location map below showing: adaries, and measurements sufficie		on to fixed points	Recommended pur (Litres/min)	pp rate /5	40 17-12	40	1.93
 an arrow indicating detailed drawing 	ng the North direction s can be provided as attachments	no larger than legal size (8.	/^/	If flowing give rate (Litres/min)	1/4	50 18,2	50	3.11
- vidigital pictures	of inside of well can also be provid			^	Water	r Details	60	3067
	6041 Ottal		4	Water found at Do	epth Kind	of Water	Culabur	- Adinocala
	1.1	12017	#	Water found at Do	epth Kind	of Water		
	l H		#	Water found at De	epth Kind	esh Salty of Water		
] 🍇		Metres		esh Salty		
	/		F 7	Casing Used Galvanized	Galvanized //	Diameter of	and Well herHole (Ce	Details
	Others St &	,	*	Steel Fibreglass	Steel Fibreglass	Depth of the	Hole (Metres	1521
Date Well Compl	leted Was the well owner's inform package delivered ?	Date the Well Re	ecord and Package	Plastic Concrete	Plastic Concrete	Wall Thickne	ss (Metres)	(30)
Lugar	Well Contractor and Wel		on		nd Screen Used	Inside Diame	eter of the Ca	sieg Wetres
Business Name o	of Well-Sontractor		Zontradigr's Licence No.	Open Hole 6	.55 AL. 3	Santia di	(647
Business Address	(Street No./Name, number, RR		10 HAN	Yes No		7.63	n asing (Ne	51)
Province /	Postal Code Busines	s E-mail Address	1.	Audit No. 77		Well Contractor	No.	
Bus Telephone Ne	(inc. arga code) Name of Well To	PNEN-ANGEC echnician (Last Name, Fig	YDONS, Ca	Date Received (yyyy	591	Date of Inspection	n (www/mm/	dd)
(Q15)/024	15629 SRA	UTON, PETER	Submitted	AUG 2			assymmet.	
008	6 KULL	<i>t</i> t	18/08/25	Remarks				
0506E (11/2006)			Mistry's Cop	У		© Que	n's Printer for	r Ontario, 2006

Well Tag No. (Place Sticker and/or Print Below)

Well Record

Measurements	TIO the Er	nvironment	Imperial		A065692	A 065692	ılation	903 C			ources Act
Well Owner's	A	mana			United the second			111111	HIMIHAI	Hilli	
First Name	L	ast Name / (Organization	1		E-mail Address		110211		Well	Constructed
	stom Home (Street Number/Nar			M	lunicipality	Province	Postal Code		Telephone N		ell Owner area code)
5509 Can	otek Rd,	Unit 1			Ottawa	Ontario H	(1J 9J8		13 74		
Well Location	Location (Street Nur	nher/Name\	manna	T.	ownship		Lot	HH	Concession		
	Richmond			'	Goulbourn		25		3		
County/District/N	Junicipality	- 01 000		С	ity/Town/Village		25	Provin	ce	Posta	Code
Ottawa C JTM Coordinates		, No	orthing	M	Richmond Iunicipal Plan and Suble	ot Number		Onta Other	irio		
	18 43524	3 5	004413	3							
					rd (see instructions on the		Description		ome i	Dec	th (<i>m/ft</i>)
General Colour		non Material		Otne	er Materials	General	Description			From	То
Brown	Sandy C	lay		Bou1d	ers	Packed				0	6.70
Gray	Limesto	ne				Medium			6	.70	37.48
											-
	151571011112111111111	Annular	Space	.21914123131		Po	cults of Wo	II Vial	d Tostina	V 1.0 8 1 3 N	121212222222
Depth Set at (n		Type of Sea	lant Used	44724311223	Volume Placed	After test of well yield, wa			aw Down	R	ecovery
	Го	(Material an			(m³/ft³)	Clear and sand free Other, specify	•	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
3.83	O Grouted	l Bent	onite	Slurr	y .21m ³	If pumping discontinued,	give reason:	Static		V	1
								Level 1	4.40	1	6 00
						Pump intake set at (m/fi	t)	2	5.80	2	6.28
						22.85			6.51	2	5.19
Method o	of Construction			Well Use	9	Pumping rate (Vmin / GF	PM)	3	6.99	3	4.74
Cable Tool Rotary (Conver	☐ Diamond ntional) ☐ Jetting		blic mestic	☐ Commer ☐ Municipa		54.6 Duration of pumping		4	7.31	4	4.62
Rotary (Revers	e) Driving	Liv	estock	Test Hole	e Monitoring	_1hrs +min		5	7.53	5	4.59
☐ Boring XAir percussion	☐ Digging	☐ Irriq		☐ Cooling (& Air Conditioning	Final water level end of p	umping (m/ft)	10	7.95	10	4.53
Other, specify	n I I	Oth	ner, specify _			8.30 If flowing give rate (Vmin	·/ GPM)	15	8.13	15	4.50
Inside Ope	Construction Re en Hole OR Material	ecord - Cas Wall		(m/ft)	Status of Well Water Supply	Recommended pump d	ooth (m/ft)	20	8.20	20	4.48
Diameter (Ga	Ivanized, Fibreglass, norete, Plastic, Steel)	Thickness (cm/in)	From	То	Replacement Well	22.85	epui (mm)	25	8.22	25	4.47
15.86				0.00	Test Hole Recharge Well	Recommended pump ra	ate	30		30	
13.00	Steel	.48	+	8.83	Dewatering Well	45.5		40	8.24	40	4.46
					Observation and/or Monitoring Hole	Well production (l/min /	GPM)	50	8.25	50	4.45
					Alteration (Construction)	Disinfected?			8.27	-	4.44
					Abandoned, Insufficient Supply	Yes No		60	8.30	60	
Outside	Construction R	ecord - Scre	Depth	(m/ft)	Abandoned, Poor Water Quality	Please provide a map be	Map of We low following i			ack.	^
Diameter (cm/in) (Plas	tic, Galvanized, Steel)	Slot No.	From	То	Abandoned, other, specify						\mathcal{J}
							1 Lot	3	1		
					Other, specify		1		1		
ilinia a tri ilinia	Water Det	ails	17771294519	Н	ole Diameter		1				
	Depth Kind of Water		Untested	Depti From	h (m/ft) Diameter To (cm/in)	2					
	Gas Other, spe Depth Kind of Water		7 Untested	0	8.8315.86	あ		X			
35.3(5n/ft)			Contostod			gh .	1		i		
	Depth Kind of Water		Untested	8.83	37.4815.23	* Char	nonhoi	se	Drive	ح	
(m/ft)	Gas Other, spe		Technicis	n Informat	ion				Ric	ne	nd
	of Well Contractor				Contractor's Licence No.				Kic	10	est
	Water Sup		d.	1	. 5 5 8	Commonster				70.	
Box 490	s (Street Number/Na	me)			ittsville	Comments:					
rovince	Postal Code		E-mail Add	ress							
Ontario Bus Telephone No	K2S 1A6 o. (inc. area code) Na	offi	ce @	capita	lwater.ca	information	kage Delivered		Minist Audit No. 7	try Use	Only
and the second					-	Date Wor	08 08/1	9	OOT	84	1379
Well Technician's Li	icence No. Signature	of Technicia	n and/or Co			Yes				142	UU8.
0 0 9 0506E (12/2007)	7	yours		3	0 0 8 0 8 22	2 0 0	8 0 8	19	Received © Queen's	Printer fr	or Ontario, 2007

Well Tag No. (Place Sticker and/or Print Below)

A051482 A 051482

Well Record gulation 903 Ontario Water Resources Act

Well Owner's	Information			AND SECTION				291 2414	rage		JI
First Name		ast Name		E-m	ail Address	3				Vell Cor	nstructed
Talos Cus Mailing Address	tom Homes (Street Number/Name,	RR)	Municipa	lity		Province	Postal Code	Т	elephone N	,	
5509 Cano	tek Rd. Unit 1	l		tawa		Ontario	K1 J 95	8 6	1 3 7	4 7 3	3 9 9 3
	uction and/or Major Location (Street Numbe			Township			Lot	(Concession		
Lot 33 Ri	chmond Forest			Gou1bo			25	Province		3 Postal	Codo
Ottawa Ca:				City/Town/Villag				Onta		Postal	Code
UTM Coordinates	Zone Easting	Northing		S Unit Make	Model			Undiffer	rentiated	Ave	raged
NAD 8 3	1 8 4 3 5 4	3 0 5 0 0 (see instructions o	n the back of thi	is form)	Garm	in Dim	erentiated, specify _				
General Colour	Most Common Mat	terial	Other Mate	erials		Genera	l Description			Depth From	(Metres) To
Brown	Clay	S	tone			Packed				0	6.09
Gray	Limestone					Broken					8.22
Gray	Limestone					Medium		8.22	29.86		
					-						
	Annular Space/						Results of We				
Depth Set at (Me From To		pe of Sealant Use laterial and Type)		Placed Metres)	Check box if after water was: Clear and sa		Time		Time	Water Level	
9.14 0	Grouted I	Bentonite	Slurry	2m3	☐ Cannot deve	elop to sand-free	(Min) Static	(Metres)	(Min) Static	(Metres)	
						If pumping discor	ntinued, give reason:	Level 1	3.87	Level	
						Pumping test me	athod	2	5.13	2	4.42
						,	ersible	3	5.54	3	4.15
	of Construction		Water U			Pump intake set	at (Metres) .28	4	5.71	4	4.09
Cable Tool Rotary (Conve		☐ Public ☐ Domestic	Comme	pal 🔲 C	Not used Dewatering	Pumping rate (L	itres/min)	5	5.81	5	4.05
Rotary (Rever	se) Driving Digging	Livestock Irrigation	☐ Test Ho	ole	Monitoring ning	54 Duration of pum	-	10	5.86	10	4.02
Air percussion Other, specify	Boring	☐ Industrial ☐ Other, spec	ifv			_1hrs +	min	15	5.96	15	3.96
		Status of Well				Final water level (Metres)	end of pumping	20	6.01	20	3.94
Water Supply ☐ Replacement	☐ Dewatering Well ☐ Abandoned,	Well Insufficient Suppl		ation and/or Mon ion (Construction		Recommended		25	6.03	25	3.93
☐ Test Hole ☐ Recharge Wel		Poor Water Quali other, specify	ty Other,	specify		Recommended		30	6.05	30	3.92
	ı	ocation of We	II			15.23 Me	etres	40	6.07	40	3.91
- all property bour	map below showing: ndaries, and measuremen	nts sufficient to loca	ate the well in re	elation to fixed po	oints,	Recommended (Litres/min)	5.5	50	6.08	50	3.90
- detailed drawing	ting the North direction gs can be provided as atta	chments no larger	than legal size	(8.5" by 14")		If flowing give ra (Litres/min)	ite	60	6.09	60	3.90
- vidigital pictures	of inside of well can also	be provided					Wate	r Detai			3.89
~33 /	CY	monhou	se Driv	e,		Water found at		of Wate	Not	Test	ed Minerals
Lot 33 /	*			King Street	,	27 .73 Metro	Depth Kind	of Wate	er		
_ 6 /			_	7	,	Water found at		of Wate		ulphur	Minerals
	- /	Richmo	na	9	7					ulphur	Minerals
	/	Fores	<i>*</i>	1		Casing Use			Casing a		
						☐ Galvanized Steel	Galvanized Steel		15.	39	
Data Wall Com	pleted Was the well own	ons's information	Date the Wel	Record and Pa	okana	Fibreglass Plastic	Fibreglass Plastic	De	epth of the Ho		es)
Date Well Com (yyyy/mm/dd)	package delivered		Delivered to \	Well Owner (yyy		Concrete	Concrete	W	all Thickness)
2008/7/22	Well Contractor		2008/7				and Screen Used	Ins	side Diamete	of the C	Casing (Metres)
	of Well Contractor ater Supply Lt	-d		/ell Contractor's L	icence No.	Open Hole Disinfected?		De	15.3 epth of the Ca		etres)
Business Addres	ss (Street No./Name, nur		Municip	pality		Yes 🗌 I	No		+.45	4-14	
Box 490 Province	Postal Code	Business E-mai		ttsville		Audit No.	Ministr	-	Only Contractor No).	
Ontario	K2 S 1 A6	office@	capitalw				7400				-14-0
Bus.Telephone N 6 1 3 8 3	lo. (inc. area code) Name	of Well Technicia Miller, St		First Name)		Date Received ()	yyy/mm/dd) 4 2008	Date o	f Inspection (yyyy/mn	vda)
Well Technician's	Licence No. Signature of		D	ate Submitted ()		Remarks					
0 0 0506E (11/2006)	9 7 3	yma	1	$\frac{2008}{7}$	ry's Conv	,		SE C.	© Queen	's Printer	for Ontario, 2006

Well Tag No. (Place Sticker and/or Print Below)

A068276 A 068276

Well Record

gulation 903 Ontario Water Resources Act

Measurem	nents recor	ded in:	Metric	Imperial		1100	0270		9		Page	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	of
	ner's Info					Hillian							
First Name Talos	Custom		Last Name /	Organizatio	n			E-mail A	ddress		[Constructed ell Owner
Mailing Ad	dress (Stree	et Number/Na			P	Municipality		Province	Postal Co	de	Telephone		
Well Loc		Road -	Unit 1			Ottaw.	a	Ontari	io K1J	9 J 8	613	747 3	993
Address of	Well Locat	ion (Street Nu			7	ownship			Lot	12147211	Concessio	n	SHARE
Lot 9 County/Dis	 Rich strict/Munici 	mond For	est		(Gou 1 be	nurn		25	Provi	nce 3	Posta	l Code
Ottawa				41.1		Richm	ond				tario	Joseph	
	finates Zone	8 4 3 5		orthing		Aunicipal Pl	an and Subl	ot Number		Other	r		
Overburd	en and Be	drock Materi	ials/Abando	onment Se		rd (see instr	ructions on the	a back of this fon	m)				
General C	olour		mon Materia			er Materials	S		General Description	on		From	th (<i>m/ft</i>) To
Brown Grat		Clay			Stones	3		Sticky	7			0	5.48
Grat		Limest	one									5.48	37.48
Denth Se	et at (m/ft)		Annular Type of Sea			Value	e Placed	After test of w	Results of V ell yield, water was:			MINE	
From	То		(Material an	d Type)		(m	3/163)	Clear and	d sand free	Time		Time	ecovery Water Level
8.53	0	Grouted	Benton	ite S1	urry	.42m	3	Other, sp	continued, give reasor	(min) Static	(m/ft)	(min)	(m/ft)
										Level		1	1 06
								Pump intake	set at (m/ft)	2	5.23	2	4.86
									.85	3	5.39	3	4.70
Meth	nod of Cor	Diamond	i Pul	blic	Well Us Commer		Not used	Pumping rate 54		4	5.46	4	
Rotary (C	Conventional) Jetting	X Do	mestic	Municipa	al 🗆	Dewatering	Duration of po	umping min	5	5.50	5	4.62
Boring	Reverse)Ai	r Driving Digging	☐ Irrig	estock gation	☐ Test Hol	e 🔲 & Air Condition	Monitoring oning		vel end of pumping (m/		5.53	10	4.61
Air percu Other, sp			☐ Ind	ustrial ier, <i>specify</i> _					.69	15	5.55	15	4.57
	Cor	struction R	ecord - Cas	ing	HARRIER	Status	of Well	If flowing give rate (I/min-/ GPM)			5.60	20	4.54
Inside Diameter	(Galvanize	OR Material d, Fibreglass,	Wall Thickness	Depti From	n (<i>m/ft)</i> To	Water S	Supply ement Well	1	ed pump depth (m/ft)	20	5.62	25	4.52
(cm/in)		Plastic, Steel)	(cm/in)		-	Test Ho	ole	Recommende	. 28 ed pump rate	30	5.64	30	4.52
15.86	Stee	eT.	.48	+,45	8.53	☐ Dewate	ring Well	(Vmin / GPM)	. 5	40	5.56	40	4.52
							ing Hole	Well production	on (Vmin / GPM)	50	5.67	50	4.52
						(Constr	uction)	Disinfected?	No	60	5.68	60	4.52
All the same of	Co	onstruction R	ecord - Scre	en	45150515555		ient Supply	X Yes	Map of V		5.69	00	4.52
Outside Diameter	Ma	aterial	Slot No.	MALAURICA L	(m/ft)	Water 0		Please provide	e a map below followin			ack.	2011/21/11/19/19
(cm/in)	(Plastic, Gal	vanized, Steel)		From	То	specify	ned, other,	2 >	ρd				
						Other, s	specify	R.d.mo	rest				
		141							Chanon	no	use		
		Water Det Kind of Water	r: Fresh	X Untested	Depti	ole Diamet	Diameter		×				,
		Other, spe Kind of Water		Untoetod	From	8.53	(cm/in)	l l	ا ا				4
		Other, spe		Ontested		37.48	15.86 15.23						1/2
	d at Depth	Kind of Water Other, spe		Untested	0.03	37.40	13.23	1 Lo	+1 1				.
		ell Contracto		Technicia	n Informat	ion	Minne						
Business Na	ame of Well	Contractor				Contractor's							
Business Ad	ddress (Stree	Supp1y et Number/Na	me)		1 Mur	5 nicipality	5 8	Comments:					
Box 490 Province	_	ostal Code	Rusiness	E-mail Ada	St	ittsvi	11e						
Ontario	o K	2 S 1 A	6 offic	ce 🥝 ca	pitalwa	ater.ca		Well owner's	Date Package Deliver	red		try Use	Only
Bus.Telephor	ne No. (inc. s	area code) Na	me of Well T	echnician (l	ast Name, F	irst Name)		information package delivered	200809	1 7	Audit No. Z	84	400
Well Technicia	an's Licence I	No. Signature	of Technicia	s Step	ntractor Date			X Yes	Date Work Completed	i	OCT	142	000
0 0 0506E (12/200	9	7 July	phonae	1	2	0080		□ No	200809	16	Received	Driets	Outputs Con
(/	,			wiinistry	's Copy				© Queen's	rinter to	Ontario, 2007

Well Tag No. (Place Sticker and/or Print Below)

Well Record

	ritaric		ivironmen			A068281	Α	068281	!egulation	903 (ter Res	sources Act
		ded in: X	Metric	Imperial							Page_		of
First Name	ner's Info		ast Name /	Organization	1		0100	E-mail Address	CHRIST	Hill		Mall	Constructed
	Custom											by W	ell Owner
		Road -			N	Municipality Ottawa		Ontario	Postal Code		Telephone N		
Well Loc	ation					Occawa		Ontal 10	R I O				
		on (Street Nur)	1	Township			Lot		Concession		
	- K1Ch strict/Munici	mond For	est		(Goulbourn City/Town/Village			25	Provin	3	Posta	l Code
	a Carle					Richmond				Ont	ario		
	finates Zone	8 4 3 5 2	1	orthing		Municipal Plan and	Sublot	Number		Other			
						rd (see instructions	on the t	back of this form)			1118 31518		
General C	olour	Most Comm	non Materia	1	Oth	er Materials		Gene	eral Description			Dep From_	oth (<i>m/ft</i>)
Brown		Clay			Stones			Packed				0	4.87
Gray		Limesto	ne		Brown	Layers		Medium			2	.87	37.48
													-
													-
ane a trace		**********	Annular	Snace		ANGEN ANGEL ANGEL	23323	Marie Control	Results of We	II Vial	d Testing		A000
	et at (m/ft)		Type of Sea	alant Used		Volume Place	d	After test of well yield,	water was:	Dr	aw Down	_	ecovery
7.61	0	Crouted	(Material ar			.547m ³		Clear and sand Other, specify	free	(min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
7.01	U	Grouted	bento	iite si	urry	. 547111		If pumping discontinue	ed, give reason:	Static Level	4.76		
							-11			1	6.41	1	8.11
								Pump intake set at (m/ft)	2	7.15	2	6.45
								22.85 Pumping rate (Vmin /	GPM)	3	7.76	3	5.50
Meth ☐ Cable To		nstruction Diamond	□ Pu	blic	Well Us		has	54.6	,	4		4	
Rotary (Conventional) Jetting	X Do	mestic	Municipal Municipal	al Dewa	tering	Duration of pumping	min	5	8.35	5	5.11
☐ Boring	Reverse)Ai	r Driving Digging		estock gation	Cooling	le Monit & Air Conditioning	oring	Final water level end		10	8,57	10	4.99
X Air percu				dustrial her, specify_			-	10.57		15	9.63	15	4.89
Taranta in		nstruction Re			THE STATE OF	Status of W		If flowing give rate (I/	min-/ GPM)		10.08		4.85
Inside Diameter		e OR Material ed, Fibreglass,	Wall Thickness	Depth	(m/ft)	Water Supply Replacement	Manu I	Recommended pum	p depth (m/ft)	20	10.26	20	4.82
(cm/in)		Plastic, Steel)	(cm/in)	From	То	☐ Test Hole		22.85 Recommended pum	p rate	25	10.34	25	4.80
15.86	St	ee1	.48	+.45	7.61	Recharge We Dewatering W	- 11	(I/min / GPM)		30	10.40	30	4.79
						Observation ar Monitoring Hol		Well production (l/mi	n / GPM)	40	10.50	40	4.77
						Alteration (Construction)	- [[Disinfected?		50	10.54	50	
						Abandoned, Insufficient Su		Yes No		60	10.57	60	
Outside		onstruction R	ecord - Scre		(m/ft)	Abandoned, F Water Quality		Please provide a map	Map of We below following	_		ack.	
Diameter (cm/in)		aterial Ivanized, Steel)	Slot No.	From	To	Abandoned, o	ther,		_				
						specify		Zidino	.3				
						Other, specify	- {}	40					
HESSELE .		Water Det	ails		H	lole Diameter		Riduno Ko	000				1
		Kind of Water	r: Fresh	Untested		th (m/ft) Diar	neter vin)		nonhou	X			ğ
		Other, spe Kind of Water		Untested	0	7.61 15.		!	⊗		1		Stre
	n/ft) Gas				7.61	37.48 15.		;			i		K
		Kind of Water		Untested	7.02	07.40		ì	(1		K
[77		Other, spe		Technicia	n Informa	tion	13556	1	Lot2		i		!
	lame of Well	Contractor		- Common		ell Contractor's Licence	- 11						
		r Supply eet Number/Na				l 5 5	8	Comments:					
Box 49		2				Stittsville							
Province	P	ostal Code		s E-mail Add	ress			Well owner's Date I	Packago Doliner	d 7	Minio	tn. He	o Only
Ontari Bus.Telepho		2 S 1 A area code) Na				water.ca First Name)		information package	Package Delivere		Audit No. Z		e Only
			Mille	er, Ste	phen			delivered Date	0 8 0 9 Work Completed	P 7º	ort	100	14UL
vveii Technic	nan's Licence	No. Signature	of Technica	- 11		te Submitted	2 2	No PY O	0 8 0 9	D G	Received	1 11 4	000
0506E (12/20	(07)	gl	yma	-		Ministry's C	ony		0 0 9			Printer fo	or Ontario, 2007



Well Tag No. (Place Sticker and/or Print Belo

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76	Regu	ılation	903	On	ntari					rces Act		
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							10	Ioll Co		le vote d		
								yell Co y Well		tructed wner		
	Postal			1						ea code)		
io	K1J	9J8		(513	7	47	39	93			
	Lot			C	once	essi	on					
	2	5	Prov	inc	0	3		Posta		nda		
			On					rusta		1 1		
	peration		Undif	ffere	entia	ted		Av	era	ged		
Differen	ntiated, sp	ecify_										
eral De	escription	1						Depth	1 (/	Metres) To		
		7.7.1.1						0		4.57		
rd							1	.57		29.86		
							-			27.00		
7.7									1			
									1			
	Results	of We	II Yi	eld	Tes	stin	g		_			
	of well yie		[Orav	w Do	nwc		_	_	overy		
sand f			Tim (Mir	7)	Wate (Me	er Le		Time (Min)		ater Level (Metres)		
	to sand-f		Stat	ic el	3.	95		Static Level				
continue	ed, give re	eason:	1	1		94	1	4	.36			
method	d		2			22		2		.17		
ners			3					3		.11		
set at (/ 22.85	Metres)		4	-				4		10000000		
(Litres/			5	+				5		4.08		
54.6				+	5.	43			4	4.06		
umping 1	min		10		5.	50		10	4	.01		
	of pumpin	9	15	+	5.	51		15	3	.99		
5.58 ed pum	p type		20)	5.	53		20	3	.98		
₩D	eep		25		5.	54		25	3	.97		
	p depth		30)		54		30	3	.97		
Metres ed pum			40)		55		40				
45.5			50)		56		50				
rate			60)		58		60				
		Water	Det	aile		50			_			
at Dep		Kind o		-		ot	T	est	ed			
etres at Dep	Gas	Fre Kind o			salty		Su	lphur	L] Minerals		
	Gas	Fre			Salty		Su	lphur	C	Minerals		
at Dep	pth	Kind o			2 alt		0	labor	_	Minerals		
sed	Gas		_					_	_			
sed	Screen		_	Dian				d Wel		metres)		
İ	Steel			Don	th of	15	.3	9 (Metre	el la	7 7 7		
	Fibregla Plastic	ass	1	Jep	ar of	29			3)			
1	Concre	te	1	Wall		knes	S (/	Metres)				
ng and	Screen	Used		nsid	_	0.4		_	asi	ng (Metres)		
ole					_	15						
No			1	Dep				ing (Me				
	М	inistry	Use	0	_	7.5	-	0 /				
773	389		Well	_	_	tor N	No.	7.5				
(yyyy/n			Date	of I	nsoe	ction	(v	yy/mm	/da)		
4 21	18		-				.33	23				

Well Owner's First Name	Information	Last Name			TE-	nail Addres	e e					IM-II C	note of a
Talos Cust	om Homes			Municipa	nali Addres		inac	Dant-LO	,		by Well	onstructed Owner	
	ek Rd,Unit			Municipa	*		Ont	ario	Postal Code		Telephone 613 7 4		
Part A Constru	uction and/or Ma	jor Alteratio		Vell	Township		, oir	dire					
	mond Forest	iber/Name, Ki	K)		Gou1bou	rn			Lot 25		Concession 3	n	
County/District/N	funicipality			(City/Town/Villa	ge				Ont	ce	Postal	Code
Ottawa Car UTM Coordinates		North	ning	GP	Richmon S Unit Make	Model		Mode of 0	Operation:		rentiated	Ave	eraged
NAD 8 3			4487			Garm	in	Differe	ntiated, specify			_	
General Colour	Most Common N			e back of this Other Mate				General D	escription				(Metres)
Brown	Sandy Clay		Sto	nes		P	acked					From	4.57
Gray	Limestone						Medium Hard					4.57	29.86
Depth Set at (Alat	Annular Spac	Type of Sealar	_	ling Recor		Placed			Results of W t of well yield,	Dr	aw Down	R	ecovery
From To		(Material and				Metres)		ar and sand		Time (Min)	Water Leve (Metres)	el Time (Min)	Water Level (Metres)
7.77 0	Grouted	Bentonit	e Slu	rry	.315	m ³	stat	e	to sand-free	Static Level	3.95	Static	
							If pumpir	ng discontinu	ed, give reason:	1	4.94	1	4.36
							Pumping	g test metho	od	2	5.22	2	4.17
Made	10			Meta-II				dake set at		3	5.35	3	4.11
Cable Tool	f Construction Diamond	Public	0	Comme		lot used		22.8	5	4	5.39	4	4.08
Rotary (Conven		Dome Livest		Municip		Newatering Monitoring	Pumping	g rate (Litres 54.6		5	5.43	5	4.06
Rotary (Air) Air percussion	☐ Digging	☐ Irrigat	tion		& Air Condition			of pumping)	10	5.50	10	4.01
Other, specify_	Boring	Other	, specify_					ter level end	min of pumping	15	5.51	15	3.99
₩ater Supply	☐ Dewaterin	Status of I	Well	Observa	ation and/or Mon	itoring Hole	(Metres)	5.58		20	5.53	20	3.98
Replacement W	/ell	ed, Insufficient S			n (Construction	-	Recomm	nended pun illow 🛣	np type Deep	25	5.54	25	3.97
Recharge Well		d, other, speci						nended pun		30	5.54	30	3.97
Please provide a m	nap below showing:	Location of	f Well					Metre: nended pun		40	5,55	40	
- all property bound	daries, and measurem	ents sufficient t	to locate th	ne well in rela	ation to fixed po	pints,		45.5 g give rate		50	5.56	50	
- detailed drawings	can be provided as a of inside of well can als		larger than	n legal size (8.5" by 14")	1	(Litres/m	in)		60	5.58	60	
									Wate	r Deta	ils		
(hancah	nuse I) rive			to	11	ound at De Metres		of Wate	JON	Teste	ed Minerals
	1	1				Street	Water f	ound at De	pth Kind	of Wate	er		
	1 🚣			Kokm	ond.		-	Metres found at De		of Wate		Sulphur	Minerals
	1	1	R	S'Orn.	\approx	King		Metres	Gas Fr	esh [Salty []	Sulphur	Minerals
	Lot	8		40	es	1	Prints	ng Used	Screen Use	_	Casing a		
	1	i					Galva K Steel		Galvanized Steel		15.	39	
Date Well Comple	eted Was the well o	wner's informat	tion Da	ate the Well	Record and Pa	ckage	Fibre	-	Fibreglass Plastic	De	epth of the He	1220-	98)
(yyyy/mm/dd) 2008/7/8	package deliver		De		ell Owner (yyy)		Conc		Concrete	W	all Thickness	(Metres)	
	Well Contracto	r and Well T	echnicia	an Informa	ation				d Screen Use	Ins		r of the C	asing (Metres)
Business Name of		[+ d		We	Il Contractor's Li	cence No.	Disinfect	en Hole ed?		De	15. apth of the Ca		etres)
Business Address	ter Supply (Street No./Name, n			Municipa	ality	0		s No			+.45		
Box 490 Province	Postal Code	Business E	-mail Add		ttsville		Audit No		Ministr	_	Only ontractor No	0.	
Ontario	K2S 1A6	office	@ cap	italwa				Z / /	389				
Bus.Telephone No. 513 836 17	. (inc. area code) Name	e of Well Tech iller, S			irst Name)		Date Re	ceived (yyyy/	1931.1	Date of	Inspection (yyyy/mm	Vdd)
Well Technician's Li	cence No. Signature		Cephel	Da	te Submitted (y	yyy/mm/dd)	Remarks	3					
0 0 9 0506E (11/2006)	7 Hell	home	1	2	008 / 7	le Com					© Queen	's Printer	for Ontario, 2006
,	,	1	7		Ministry	s copy					2000		10, 2000

Well Tag No. (Place Sticker and/or Print Below)

Well Record

Page____ of ___

A051473 A 051473

ulation 903 Ontario Water Resources Act

Well Owner's Information					
First Name Last Name E-mail Address	dress Well Constructed by Well Owner				
Tatos custom nomes	No. (inc. area code)				
5509 Canotek Rd. Ottawa Ontario K1J 9J8 613 74	47 3993				
Part A Construction and/or Major Alteration of a Well Address of Well Location (Street Number/Name, RR) Township Lot Concession					
Lot 6, Richmond Forest Goulbourn 25 3					
County/District/Municipality City/Town/Village Province	Postal Code				
Ottawa Carleton Richmond Ontario UTM Coordinates Zone Easting Northing GPS Unit Make Model Mode of Operation: Undifferentiated					
VTM Coordinates Zone Easting Northing GPS Unit Make Model Mode of Operation: Undifferentiated NAD 8 3 18 435285 5004463 Garmin Differentiated, specify	Averaged				
Overburden and Bedrock Materials (see instructions on the back of this form)					
General Colour Most Common Material Other Materials General Description	Prom To				
Brown Sandy Clay Stones Packed	0 4.57				
Gray Limestone Medium Hard 4	4.57 33.52				
Annular Space/Abandonment Sealing Record Results of Well Yield Testing					
Depth Set at (Metres) Type of Sealant Used From To (Material and Type) Volume Placed (Cubic Metres) Check box if after test of well yield, water was: Time Water Level	Recovery Time Water Level				
7 77 O Crouted Pontonite (Min) (Metres)	(Min) (Metres)				
state Level 3.88	Static Level				
If pumping discontinued, give reason: 1 5.58	1 5.60				
Pumping test method 2 6,31	2 4.66				
Submersible 3 6.66	3 4.28				
Method of Construction Cable Tool Diamond Public Commercial Not used Pump intake set at (Metres) 22.85 4 6.93	4 4.17				
□ Rotary (Conventional) □ Jetting □ Demestic □ Municipal □ Dewatering □ Pumping rate (Litres/min) 5 7 11	5 4.11				
Rotary (Reverse) Driving Livestock Test Hole Monitoring 54.6 Rotary (Air) Digging Cooling & Air Conditioning Duration of pumping 10 7.47	4.11				
Air percussion Boring Industrial 1 hrs + min	7,00				
Status of Well Final water level end of pumping (Metres)	15 3.98				
Water Supply □ Dewatering Well □ Observation and/or Monitoring Hole □ Recommended pump type □ 7.61	20 3.96				
Replacement Well Abandoned, Insufficient Supply Alteration (Construction) ☐ Test Hole Abandoned, Poor Water Quality ☐ Other, specify ☐ Shallow Deep 25 7.67	25 3.94				
Recharge Well Abandoned, other, specify Recommended pump depth 30 7.69	30 3.92				
Location of Well Please provide a map below showing: Metres Recommended pump rate (items/m/n) 7.70	40 3.89				
- all property boundaries, and measurements sufficient to locate the well in relation to fixed points:	50 3.88				
- detailed drawings can be provided as attachments no larger than legal size (8.5" by 14")	60				
- vidigital pictures of inside of well can also be provided Water Details					
Water found at Denth Kind of Water	Footod				
Chanonhouse Drive 31.08 Metres Gas Fresh Sally	Minerals				
Water found at Depth Kind of Water Metres Gas Fresh Salty State Metres Gas Fresh Salty State Metres Gas Fresh Salty State Salty State Metres Gas Screen Used Casing ar	ulphur Minerals				
Romand Water found at Depth Wetres Gas Fresh Salty So Water found at Depth Metres Gas Fresh Salty So Metres Gas Fresh Salty So					
Locis Metres Gas Fresh Salty Si					
Diameter of the	nd Well Details Hole (Centimetres)				
Lot 6 Steel Steel 15.3	39				
Date Well Completed Was the well owner's information Date the Well Record and Package Plastic Plastic Depth of the Hole					
(yyyy/mm/dd) package delivered? Delivered to Well Owner (yyyy/mm/dd) Concrete Wall Thickness ((Metres)				
2008/7/9 No Casing and Screen Used 0.48	of the Casing (Metres)				
Business Name of Well Contractor Well Contractor's Licence No.					
Capital Water Supply Ltd. 0 0 9 3 Business Address (Street No./Name, number, RR) Municipality Disinfected? Yes No Depth of the Case 1 40 to 1 40 t	sing (Metres)				
Box 490 Stittsville Ministry Use Only					
Province Postal Code Business E-mail Address Audit No. 77200 Well Contractor No.					
Bus. Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) Date Received (yyyy/mny/dd) Date of Inspection (y	yyyy/mm/dd)				
613 836 1766 Miller, Stephen					
Well Technician's Licence No. Signature/of/echgicien Date Submitted (yyyy/mm/dd) Remarks					

Well Tag No. (Place Sticker and/or Print Below)

4068282 A 0600

	1	Well	Reco	ord
Regulation 903	Ontario	Water	Resource	s Act

Measureme	ents recorded	in: 💢 Mo	etric Im	perial		A00020	,,,	. 00828	2		Page_		of
THE RESERVE	ner's Inform		BIR HER	HILLER									
First Name	Custom Ho		st Name / Or	ganization				E-mail Add	ress				Constructed ell Owner
	ress (Street No		e)		M	unicipality		Province	Postal Code	. 1	Telephone N	o. (inc.	area code)
5509 Ca Well Loca	anotek Ro	oad - U	nit 1		()ttawa	2143141515	Ontari	o K1J9	J 8	613 74	7 39	93
	Well Location (Street Num	iber/Name)	191355114	To	ownship	BRIGH		Lot	222222	Concession	ELIGINA	F8.54 F382 F4.72
	- Richmo		est		(ou1bour	n		25	Provin	3	Postal	Code
_	Carletor	-				_	_			Onta	_		
UTM Coordi	nates Zone E	Easting		thing		Cichmond unicipal Plan	and Sublo	t Number		Other			
			S 7 1 5 Is/Abandon			d (see instruc	ctions on the	back of this form)		SHA		9116	
General Co		Most Comm				er Materials			General Description			Dep From	th (m/ft) To
Brown	C1	ay		S	tones							0	3.04
Gray	C1	ay		S	and			Loose				3.04	6.09
Gray	Li	meston	е	Ва	adly Br	oken		Fau1t	in Rock			5.09	10.97
Gray	Li	meston	e						Medium				
				-									
					varatitiese		A 5 (5 (5 (5 (5 (5 (5 (5 (5 (5 (5 (5 (5 (PRESENTATION OF THE PRESEN	Results of We	all Vial	d Toeting	141142	*************
Depth Se	et at (m/ft)		Annular S Type of Seala		111111111111	Volume	Placed		l yield, water was:	Dr	aw Down	_	tecovery
From	То		(Material and	Type)		(m³/	/ft³)	Clear and Other, spe	sand free	Time (min)	Water Leve (m/ft)	Time (min)	Water Level (m/ft)
13.10	0 G	routed	Benton	ite S1ı	ırry	1.05m	3		ontinued, give reason:	Static	4.52		
							<u>. / 1 </u>			1	6.30	1	8.23
								Pump intake s	et at (m/ft)	2		2	
								22.		3	7.38	3	6.70
	nod of Const		MINIM	HILL	Well Us	The second second		Pumping rate 54.		4	8.14	4	5.67
Cable To		☐ Diamond ☐ Jetting	Publ		☐ Commer ☐ Municipa		Not used Dewatering	Duration of pu	mping	-	8.67		5.05
X Rotary (f	Reverse)Air	Driving	Live	stock	Test Hol		Monitoring	1 hrs +	min el end of pumping (m/ft)	5	9.09	5	4.80
Boring X Air percu	ussion	Digging	☐ Indu	strial	Cooling	& All Coliditio	illing	l I	.56	10	10.	10	4.55
Other, sp				er, specify _			- 4 344 - 10		rate (l/min-/ GPM)	15	10.27	15	
Inside	Open Hole O		wall	_	(m/ft)	Status Water S		Recommende	d pump depth (m/ft)	20	10.41	20	
Diameter (cm/in)	(Galvanized, F Concrete, Pla	Fibreglass,	Thickness (cm/in)	From	То	Replace			.85	25	10.47	25	
15.86	Stee	1	.48	+.45	13.10	Recharg	ge Well	Recommende (l/min / GPM)	d pump rate	30	10.50	30	
13.00	5000	_	.40	1.45	13.10	Dewater Observa		Well production	5 n (l/min / GPM)	40	10.53	40	
						Monitorir Alteratio			Tr (armir) Gr my	50	10.55	50	
						(Constru	uction)	Disinfected?	No	60	10.56	60	
	Cons	struction Re	ecord - Scree	en	7711141414		ent Supply	A	Map of W	ell Lo		11111	
Outside Diameter	Mater	rial	Slot No.		(m/ft)	Water C	Quality	Please provide	a map below following	instruc	tions on the l	oack.	
(cm/in)	(Plastic, Galvar	nized, Steel)	0.01.10.	From	То	specify	ned, other,	1 Lot	25				
						Other, s	pecify	11			and		
									i	Ric	Korce	×	
erra de la		Water Det		Unterted		lole Diamet	Diameter		- i		40		
	nd at Depth Ki			Untested	From	To	(cm/in)	×	!				to
Water four	nd at Depth Ki	nd of Water	r: Fresh	Untested	0	13.10	15.86						3
	n/ft) Gas and at Depth Ki			Untested	13.10	45.10	15.23	Cha	manhou	SP			- 5
	n/ft) Gas			OTTOBLOG]	AT (CO) 100	SC			2 >
Military.			or and Well	Technicia			Linears M						*
_	Name of Well C 1 Water S		Ltd		l We	ell Contractor's	Licence No.						
Business A	Address (Street					unicipality	2 0	Comments:					
Box 490		tal Code	Rusinasa	E-mail Adv		Stittsvi	ille						
Ontario		tal Code 2 S 1 A		E-mail Add		vater.ca	1	Well owner's	Date Package Deliver	ed			se Only
Bus.Teleph	one No. (inc. are	a code) Na	ame of Well T	echnician (Last Name,	First Name)		information package delivered	2 0 0 8 0 9	1 7	Audit No.	8	4399
6 1 3 8 Well Technic	8 3 6 1 7 cian's Licence No		Miller,			te Submitted		X Yes	Date Work Completed		007	14.20	108
	0 9 7	KA	1. Mar			0080	922	No No	2/ 0/ 0/ 8/ 0/ 9/	1 6	Received		
0506E (12/20	007)	7.50	/	1		Ministr	y's Copy				© Queen	s Printer	for Ontario, 2007

0 0 0506E (12/2007)

Ministry of Well Tag No. (Place Sticker and/or Print Below)

Well Record

/ Or	ntario	the Env	rironment			A051	455		lation	903 Oı	ntario Wate	r Res	ources Act
Measureme	nts record	ed in: 💢 Me	etric 🗌 In	nperial		AUSI	.433	A 051	455		Page_		of
Well Own	er's Info	rmation	51 (59) (44)	HHHH	111111111111	TOTAL COLUMN		BER BER BER		Rilli	HURSTER	1111	
irst Name	or o mio		st Name / O	rganization				E-mail Add	ress				Constructed
Talos C	Custom	Homes			8.6	nicio elity		Province	Postal Code	Т	elephone No	-,	ll Owner area code)
_		t Number/Nam				unicipality		_		T 0	11111	1.1	111
Nell Locat		Road - U	nit I	Hallisali		ttawa	HERRIE	Ontari	o K1J9	18	613 74	1 3	193
		on (Street Num	ber/Name)	8521111122	То	wnship			Lot	(Concession		
		nond Fore	st			ou1bour			25	Provinc	3	Postal	Code
County/Distr						ty/Town/Villa	_			Onta			
Ottawa JTM Coordin			Nor	thing		ichmond unicipal Plar		t Number		Other			
NAD	8 3 1 8	3 4 3 5 2	6 7 5	0044	4 4 6						44400000000	0.02233	53.22.22.20.22.20.2
				nment Sea		d (see instruer Materials	ctions on the	back of this form)	General Description	111111	10111111111		th (<i>m/ft</i>)
General Co	lour	Most Commo	on Material		Otne	r Materials			General Description		-	rom	To
Brown	Sa	andy Clay			Stones			Packed				0	5.79
Gray	Li	mestone						Medium			- 5	.79	37.48
			Annulas	Canada	e de la companie	CONTRACTOR OF THE	COLUMN TO STREET	12.12.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	Results of We	II Yiel	d Testing	148134	
Depth Se	et at (m/ft)	ENERGH THE	Annular Type of Sea		alasaka	Volume	Placed	II	l yield, water was:	Dra	aw Down	_	ecovery
From	То		(Material an	d Type)		(m ³		Clear and Other, spe		Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
7.61	0	Grouted	Benton	ite Sl	urry	.42n	13		ontinued, give reason:	Static		1	
								,		Level 1	4.59	1	
								Dump intoka s	at at (m/#)		6.20	-	7.64
								Pump intake s		2	6.97	2	6.17
			era recessi	CONTRACTOR OF THE PARTY OF THE	M-11 11-		400 EVENTOR 4	Pumping rate		3	7.52	3	5,32
Cable To	100000000000000000000000000000000000000	nstruction Diamond	Put	olic	Well Us		Not used	54.		4	7.89	4	4.96
Rotary (C	Conventiona	l) Detting	X Do	mestic	Municipa Municipa	al 🗌	Dewatering	Duration of pu	mping min	5		5	
Rotary (F	Reverse)Ai	.r □ Driving □ Digging	Liv		☐ Test Hol	e 🔲 & Air Conditio	Monitoring	-	el end of pumping (m/ft)	10	8.21	10	4.86
Air percu	ussion	□ Digging	☐ Ind	ustrial			9	10.	18		9.15		4.59
Other, sp	pecify		Oth	ner, specify _					rate (l/min-/ GPM)	15	9.56	15	
indiana Par		nstruction R		_	(<i>m/ft</i>)	Status Water S	of Well	Percommende	d pump depth (m/ft)	20	9.79	20	
Inside Diameter	(Galvaniz	le OR Material ed, Fibreglass,	Wall Thickness	From	То		ement Well	22.		25	9.83	25	
(cm/in)		, Plastic, Steel)	(cm/in)			☐ Test Ho		Recommende (l/min / GPM)		30		30	
15.86	Ste	eel	.48	+.45	7.61	☐ Dewate	_	1	5	40	9.95	40	
						Observa Monitori	ation and/or ing Hole	Well production	5 on (Vmin / GPM)		10.01	-	
						☐ Alteration	on	Disinfected?		50	10.10	50	
						(Constr	oned,	X Yes	No	60	10.18	60	
		Construction R	ecord - Scre	en			ient Supply oned, Poor	the second	Map of W			11111	
Outside Diameter	I.	Material .	Slot No.		h (<i>m/ft</i>)	Water	Quality	Please provide	a map below following	instruc	tions on the b	ack.	
(cm/in)	(Plastic, G	alvanized, Steel)	GIOCITO.	From	То	specify	oned, other,		. 7				
						Other	onnoi6:		Ridmond	\sim			. 7
						Other,	specily		400	15			U
1138353077		Water De	tails	annie de	l l	lole Diame	ter	il					
Water four	nd at Depti	Kind of Wate		X Untested	Dep	th (<i>m/ft</i>) To	Diameter (cm/in)		Characas		· D:		1
		s Other, spe					15.86		Chanon	1005	LICI		Street
	-	Kind of Wate		Untested				+	×				100
		h Kind of Wate		Untested	7.61	37.48	15,23						* par
		s Other, spe						_ i		t			12
BBRA		Vell Contract	or and Wel	Technicia			MARK		Lot 5				
		ell Contractor	T + 3		W	ell Contractor's		i		1			
		er Supp1y reet Number/Na			1 M	5 unicipality	5 8	Comments:					
Box 49						tittsvi	ille						
Province		Postal Code		s E-mail Ad	dress			Well owner's	Date Package Deliver	ed	Minis	stry III	se Only
Ontari	io I	C. area code) N	6 off	ice	capital	water.c	ca	information package			Audit No.		1200
								delivered	2 0 0 8 0 9 Date Work Completed		000	8	4390
Well Techni	ician's Licenc	1 7 6 6 se No. Signature	e of Technici	an and/or C				X Yes	2 0 0 8 0 9			14	10.3
0 0	9	7 000	U. Kura	in 1	2	0 0 8	0 9 1	0	A A A A W W	DD	Received	135512	



Well Tag No. (Place Sticker and/or Print Below)

Well Record

Measuren	Measurements recorded in: X Metric Imperial A068310 A 068310 Page of													
Well Ow First Name	vner's Info e	rmation	E-mail Address				1 Well	Constructed						
	Custom ddress (Stree	Homes t Number/Nar	me)			Municipality			Province	Postal Code		Telephone N	by W	Constructed ell Owner
5509 (Road -	Unit 1	G (200) (141)	****	Ottawa		2300	Ontario	K1J 9J8		613 747		
Address of	f Well Location	on (Street Nu				Township				Lot		Concession		
	4 Richmo strict/Municip	ond Fore	st			Gou1bor City/Town/V				25	Provin	3	Posta	l Code
	a Carlet		N	orthing		Richmon	nd lan and Subl	ot Ni	umbor		Ont			
NAD	8 3 1 8	4 3 5 4	4 0 4 5	0 0 4	6 3 1						Other			
General C		Irock Materi Most Comn	als/Abando non Material			ord (see inst ner Material		e bac		al Description				oth (m/ft)
Brown		Sandy S	oil		Sto	nes			Packed				From 0	5.48
Gray		Limesto	ne									5	.48	45.10
			Annular	Space				988	R	esults of We	II Viel	d Testing	44.55(1)	
Depth S	et at (m/ft)		Type of Sea (Material an	lant Used	2121223111		e Placed		er test of well yield, v	vater was:	Dr	aw Down		ecovery
7.77	0	Grouted			urrv	.69n			Clear and sand from Other, specify	ee	(min)	Water Level (m/ft)	Time (min)	(m/ft)
	7.77 0 Grouted Bentonite Slurr						-	If p	umping discontinue	d, give reason:	Static Level	3.63		
								Pu	mp intake set at (m	/ ff)	1	5.18	1	8.37
									30.47	,	2	6.13		5,67
Meti	hod of Con	Struction		alia alia	Well Us		E HILLE	Pu	mping rate (Vmin / 0 54.6	GPM)	3	6.82	3	5.03
Rotary (Apriventional)	Jetting	X Do	mestic	☐ Comme ☐ Municipa	al	Not used Dewatering	и.	ration of pumping	in	5	7.40	5	4.30
Rotary (F		Driving Digging	Liv	gation	☐ Test Ho ☐ Cooling	le & Air Conditi	Monitoring ioning	l	al water level end of		10	8.60	10	3.45
Air percu			Ind	ustrial ner, <i>specify</i>				If fi	11.64 owing give rate (l/m	in:/ GPM)	15	9.40	15	3.65
Inside		struction Re			(m/ft)		of Well				20	10.17	20	
Diameter (cm/in)	(Galvanized	OR Material d, Fibreglass, Plastic, Steel)	Wall Thickness (cm/in)	From	To		ement Well	Re	commended pump 22.85	depth (m/ft)	25	11.05	25	
15.86		Stee1	.48	+.45	7.77		rge Well		commended pump nin / GPM)	rate	30	11.18	30	
							ation and/or	We	45.5 ell production (Vmin	(GPM)	40	11.47	40	
						Alterati	ring Hole ion ruction)	Dis	infected?		50	11.57	50	
						Abando		Ŋ	Yes No		60	11.64	60	
Outside		nstruction Re		en Depth	(m/ft)		oned, Poor	Ple	ase provide a map b	Map of We below following			ack.	
Diameter (cm/in)	(Plastic, Galv	ranized, Steel)	Slot No.	From	То	Abando specify	oned, other,							
						Other,	specify				<u> </u>	i		A
MANAGER ST	250/21112111	Mater Det	alla.			1 0								56
		Water Deta Kind of Water	Fresh X	Untested	Dept	ole Diame	Diameter			1 1 1	-o+	19		nanonhou
		Other, spec		Untested	From 0	7.77	(cm/in) 15.86			'				18
(m	n/ft) Gas	Other, spec	cify		7.77	45.10	15.23							18
		Cind of Water Other, spec		Untested										8
Business Na	Wel	Il Contractor	r and Well	Technicia		ion Contractor's	Licence No.							
Capita	1 Water	Supply			1	5	5 8			ing str	cet			
Business Ad Box 490		t Number/Nar	ne)			nicipality :ittsvi	11e	Cor	mments:					
Province Ontario	Pos	stal Code 2S 1A6		E-mail Addi	ess			Wel		ckage Delivered		Minist	ry Use	Only
Bus.Telepho	one No. (inc. ar	rea code) Nar	ne of Well To	echnician (L	ast Name, I	First Name)		info	rmation kage vered 2/ 0/ 0	8 1 1 0	- II	Audit No. Z	8/	1444
Well Technici	8 3 6 1 ian's Licence N	/ 66 lo. Signature/	Miller, of Technician	Stephen and/or Cor	ntractor Date		, , ,	X	Yes Date Wo	ork Completed		DE	C n	2 2003
0 0 0506E (12/200	0 0 9 7 AMA 2 0 0 8 M M U 0 Ministry's Copy									8 1 1 (6	Received	Milli	r Ontario, 2007

Measurements recorded in: X Metric Imperial

Well Tag No. (Place Sticker and/or Print Below)

A068354 A 068354

Well Record ulation 903 Ontario Water Resources Act

Measurements recorded in: X Metric Imperial													Page		of
Well Ow First Name		Informatio	33033333	Nama /	Organizatio	n		E mail A	2000						
Talos	Cust	om Home	s		Organizatio		Municipality		E-mail A	ddress	Postal Code		T-1h	by V	Constructed Vell Owner
		ek Road	,			IV									c. area code)
Well Loc	77.7	ek koad				10121121111	Ottawa		Ontar	10	K1J 9J8		613 74	/ 39	93
		ocation (Stree)	Т	ownship				Lot		Concessio	n	PATERAGE BALL
Lot 29 County/Dis	trict/Mu	ichmond	Fore	st		C	Gou1bo	ourn			25	Provir	100	3 Boot	al Code
Ottawa							Richmo					Ont		Fosi	al Code
		Zone Eastin			orthing			an and Subl	ot Number			Other			
		1 8 4 3													
General C			Common				ra (see instri er Materials		e back of this for		al Description	11055			pth (m/ft)
Brown		C1.									ar Decomption			From	To
Gray		C1				Stone				acked				0	3.65
-		C1:				Stone	S		S	ticky				3.6	6.09
Gray		Liı	mesto	ne					M	edium				6.09	45.10
					-										
REPORT OF THE SECOND	11111			Annular	Space	Allena	HAMPELL		441141141	R	esults of We	ell Yiel	d Testing	RRE	
Depth Se					alant Used			e Placed	After test of w			_	aw Down		Recovery
								Other, sp		e	(min)	(m/ft)	(min)	Water Level (m/ft)	
8.53 0 Grouted Bentonite Slurry				irry	.69	m	If pumping dis	continued	, give reason:	Static	4.16	5			
											1	6.03		12.05	
									Pump intake	set at (m/	M)	2			
] 3	0.47			7.4		10.35
Meth	nod of	Constructi	on	1323131		Well Use	е		Pumping rate	(Vmin / G	PM)	3	8.49	3	8.73
Cable To			amond	Pu		Commer	_	Not used	Duration of p	4.6		4	9.50) 4	7.38
Rotary (C		onal) ∐Jet Air □Dri			mestic estock	☐ Municipa ☐ Test Hole		Dewatering Monitoring	1 hrs +		n	5	9.99	5	6.10
Boring		Dig			gation	Cooling 8			Final water lev	vel end of	pumping (m/ft)	10			
Air percu					lustrial her, <i>specify</i> .					5.23		15		29 10	4.25
1111111	HHH	Construction	on Reco	rd - Cas	sing	minin	Status	of Well	I If flowing give	rate (I/mi	n-/ GPM)		13.38)	4.16
Inside Diameter		Hole OR Mate		Wall	Depti	n (<i>m/ft</i>)	X Water S		Recommende	ed pump	depth (m/ft)	20		20	
(cm/in)		ete, Plastic, St		ickness cm/in)	From	То	Replace	ement Well ole		2.85		25	14.40	25	
15.86		Steel		.48	+.60	8.53	Rechar		Recommende (l/min / GPM)	ed pump r	rate	30	14.62	30	
							☐ Dewate	ring Well ation and/or		5.5	0014	40	14.95	40	
							Monitori Alteratio	ing Hole	Well production	on (vmm /	GPM)	50			
							(Constr	ruction)	Disinfected?				15.09	,	
EDBOTTSTER							Abando Insuffici	ined, ient Supply	XYes	No		60	15.23	3 00	
Outside	184 10	Constructi Material	on Reco	rd - Scre		n (<i>m/ft</i>)	Abando Water 0		Please provide	a map b	Map of We			badk.	STATE STATES
Diameter (cm/in)	(Plastic	, Galvanized, S	Steel) S	Slat No.	From	То	Abando	ned, other,	v -1						
							specify		\mathcal{N}		4,		LOT *	P -	
							Other, &	specify			Mor.		1		. 1.
art ve to a see		187-1-	D 1 11	WASTERNA TO A						DIC	.51		$\mathcal{V}_{\mathfrak{o}}$		Steps
Water foun	d at De	pth Kind of \	r Details Water:		X Untested		ole Diamet	Diameter		16	onest				Ä
42.36/m	vft) (Gas Other	r, specify			From	То	(cm/in)		- 1					
		pth Kind of V		Fresh	Untested	0	8.53	15.86						_	
	(m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested						45.10	15.07							
(m/ft) Gas Other, specify															
		Well Contr	ractor ar	nd Well	Technicia	n Informati	ion	10.011.0			KING	57	PRET		
		Well Contract		,			Contractor's				11111				
		ter Supp Street Number				1 Mur	. 5	5 8	Comments:						
Box 490		on our Hullion					ittsvi	116	Comments:						
Province		Postal Cod		Business	E-mail Add	Iress	TCCSVI.	116							
Ontario		K 2 S 1		ofi	fice@	capital	water.	ca	Well owner's information	Date Pac	kage Delivered		Minis	try Us	e Only
		inc. area code)			-				package delivered		0 8 4 4	1 3	Audit No. Z	84	4445
Well Technici	Well Technician's Licence No. Signature of Technician and/or Contractor Date Su					XYes	Date Wo	rk Completed		D		2 2008			
0 0	0 0 9 7 1 200811							No	2 0	0 18 M M	1 12	Received	LU U .	2 2000	
0506E (12/200													© Queen's	s Printer f	or Ontario, 2007



Measurements recorded in: X Metric Imperial

Well Tag No. (Place Sticker and/or Print Relow)

A076812 **A076812**

Well Record

tion 903 O	ntario	Water	Resourc	es Act
	Pa	ige	of _	

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W- II O	anda I			C 1 7 5 0 2 12 12 1	0171717111	3 4 4 5 E E E E E	828	22123233	1407963311	1323718193193	ARREST ESTATE	EEETERAFI	111111	192728888331	121723	DERESERVE AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERSON NAM
Well Own First Name	nersii	ntor		ast Name / C	roanization	THEFTH	E E E		31140154613	E-mail Add	dress	2002011000	28/18/2		Mall (Constructed
riist Name	Talos Custom Homes									E-mail Flor	01000					Constructed all Owner
Mailing Add	ress (St	treet	Number/Nam		ustom	Homes	Mun	nicipality		Province	P	ostal Code		Telephone N	o. (inc.	area code)
			Road -	,				ttawa		Ontari	0 1	(1J 9J8		613 747	Rak	33
Well Loca		ек	koad -	Unit i	227931492	or a series of the		LLawa	10111210111	Olicari		(13 330	\$11111	013 747	119131	
		catio	n (Street Nun	nber/Name)	SELDENTIAL STREET	7	Tow	nship	etti tii ittii		L	ot	CHEFFE	Concession	*****	FEED 11 14 F3 E
			nond For					ou1bou	ırn			25		3		
County/Dist				est		(/Town/Villa				23	Provin		Posta	Code
Ottawa							p.	ichmon	d				Onta	ario		
UTM Coordi				, No	rthing	1			n and Sublo	t Number			Other			
NAD	8 3 1	1 8	4 3 5 2	1 6 5	0 0 4	3 8 4										
							ord	(see instru	ctions on the	back of this form	1)	MARKE	Hilli		Ti illi	and the
General Co	olour		Most Comm	on Material		Oth	her	Materials			General	Description			Dep From	th (<i>m/ft</i>) To
D.			01			0.										
Brown			Clay			Stone	es				ked				0_	4.26
Gray			Limest	one						Med	lium			4	.26	47.24
KORREGRE	Eliste LE	STEE:	TELEGRESH S	Annular	Snace	2010000	213	STEERSTEE	11/11/11/11	BHIDDEN	Res	sults of W	ell Yiel	d Testing	Han	Participal Participal
Depth Se	et at (m/l	(t)	771111111111111	Type of Sea		HILLIAN		Volume	Placed	After test of we				aw Down	R	ecovery
From	То			(Material and	d Type)			(m ³	/ft³)	X Clear and			Time			Water Level
7.31	7.31 0 Grouted Bentonite Slur							.46m ³	3	Other, sp	-		(min) Static	(m/ft)	(min)	(m/ft)
. ,	7.31 0 Grouted Bentonite Slur									If pumping disc	continued,	give reason:	Level	3.75		
													1	, 50	1	2.00
										Pump intake :	set at /m/ff	1	-	4.58	-	3.99
										II '		,	2	4.84	2	3.98
							_			Pumping rate	.47	(M)	3	4 02	3	3.83
Meth	nod of	Con	struction	HERMER		Well Us	se	HERE	HIM HE			,	4	4.93		
Cable To			Diamond			Comme			Not used	54 Duration of pu			4	4.98	4	3.80
Rotary (6				X Dor		Municip			Dewatering Monitoring	1 hrs +	min		5	5.01	5	3.79
Rotary (F	1646136)	Air	Digging	☐ Irrig		Cooling				Final water lev	el end of p	umping (m/ft)	10		10	
X Air percu	ussion			□ Ind						5	.25		10	5.10	10	3.76
Other, sp	pecify			_ Oth	er, specify_					If flowing give		/ GPM)	15	5.19	15	
	91591	Con	struction Re	ecord - Cas	ing	Mann		Status	of Well				20		20	
Inside			OR Material	Wall	Depti	n (<i>m/ft</i>)	- 15	X Water S		Recommende	ed pump d	epth (m/ft)	-	5.21	20	
Diameter (cm/in)			d, Fibreglass, Plastic, Steel)	Thickness (cm/in)	From	То			ement Well	19	.81		25	5.22	25	
		_						☐ Test Ho ☐ Rechard		Recommende (l/min / GPM)	ed pump ra	ite	30	F 22	30	
15.86		Ste	eel	.48	+.45	7.31	- 10	Dewate	-		_		40	5.23	10	
							- 1	Observa		Well production	on (I/min / (GPM)	40	5.29	40	
								Monitori Alteration	_				50	5.26	50	
							-1	(Constr	uction)	Disinfected?	b.L.		60		60	
							- 1	☐ Abando	ned, ent Supply	X Yes	No			5.25	00	
		Co	nstruction R	ecord - Scre	en	in and the		Abando		RHEMBE	HHHH	Map of W			HERE	
Outside Diameter			iterial	Slot No.	Depti	h (<i>m/ft</i>)	١,	Water 0		Please provide	e a map be				ack.	
(cm/in)	(Plastic	c, Gah	vanized, Steel)	Olot 140.	From	То		Abando specify	ned, other,	ll .1/		RIC. Fo	HHO	ND		
										N		Fo	RES	57		7
							- 1	Other, s	specify	11 3/				•		2
																B
自然時間		1111	Water Det	tails	HHHH	-0161813	Hol	le Diamet	ter	1						
Water four	nd at De	epth	Kind of Wate	r: Fresh	✓ Untested	Deg From	pth ((m/ft)	Diameter (cm/in)							0
			Other, spe				+	То	1				1		1	2
Water four	nd at De	epth	Kind of Wate	r: Fresh	Untested	0	_	7.31	15.86				1	€	1	6
			Other, spe			7.31		47.24	15.55				, .	77_	1	14
Water four	nd at De	epth	Kind of Wate	r: Fresh	Untested						1	OT			1	
(n	n/ft) [(Gas	Other, spe	ecify							77	1	1			
Hanis			ell Contracto	or and Well	Technicia				SHIRIN				1 -		4	
Business N						W	vell (Licence No.							
			Supply				1		5 8	Comments						
		(Stre	et Number/Na	irne)				cipality		Comments:						
Box 49 Province	rU	P/	ostal Code	Rusinoss	E-mail Ad		St:	ittsvi	11e							
	0						. 1			Well owner's	Date Pac	kage Deliver	ed	Minis	try Us	e Only
Ontari Bus.Telepho			2 S 1 A area code) Na		echnician	capita Last Name	, Fi	water. rst Name)	ca	information package				Audit No.		1.400
ra ra ráti										delivered		k Completed	_	C	EB8	446U
Well Technic	cian's Lic	ence	7 6 6 No. Signature	of Teghnicia	in and/or C	ontractor D	ate	Submitted		X Yes				,	-0	£ 200
0 0	9		7	lynn-					2 0 3	☐ No	200	8 1 2	0 2	Received		
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Measurements recorded in: X Metric Imperial

Well Tag No. (Place Sticker and/or Print Below)

Well Record

A076813 A076813 Page____of_

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ion 903 (Ontario	и	/a	te	r	R	es.	o	ш	nce	98	А	ct	

Well Own	ner's li	nfori	nation		HORELL		managa di S			Hilli				
First Name			La	st Name / C	rganization	1			E-mail Addr	ess				Constructed
			Maria de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de		Custom		uniologitu		Province	Postal Code	1	Telephone N	,	ell Owner
			Number/Nam			IV.	Ottawa		Ontario			613 747		
Well Loca		ек	Road - I	Unit i	Same	(FEBRUAR)	ULLawa	anom.	Oiltaile	REG 750	111111		11111	
18-68-628 F 1 20-625 T V	3.3.5.5.5.5.5	cation	(Street Num	ber/Name)	**********	Т	ownship	611161111	N-12-12-12-12-12-12-12-12-12-12-12-12-12-	Lot		Concession	212222	
Lot 10	Ric	hmo	nd Fores	st			Goulbour			25		-	3	
County/Dist	trict/Mu	nicipa	lity			С	ity/Town/Villag				Onta		Postal	Code
Ottawa UTM Coordin				No	rthing	N/	Richmond Junicipal Plan		t Number		Other	4110		
			4 3 5 3				amorpar i iari	aria Gabio						
							rd (see instructi	ons on the	back of this form)				HEE	
General Co	olour		Most Commo	on Material		Oth	er Materials			General Description			Dep From	th (<i>m/ft)</i> To
Brown			Cla	v		Stor	nes		I	Packed			0	5.79
										Medium			5.79	48.76
Gray			Lim	estone						rearum			0.10	40.70
	000000000000000000000000000000000000000	50310	24427254	A	C	12/11/12/12	**********	772337777		Results of We	II Vial	d Taeting	P14534	
Depth Se	et at (m/l	7)		Annular Type of Sea		Hennel	Volume P	laced	After test of well	yield, water was:		aw Down	R	Recovery
From	То			(Material an			(m³/ft	3)	Clear and s	sand free	Time (min)	Water Leve (m/ft)	Time (min)	Water Level (m/ft)
8.83	0		Grouted	Bento	nite S1	urry	.43m	3		ontinued, give reason:	Static		(initi)	(11211)
									III pumping disco	intilitied, give reason.	Level	3,90		
											1	5,10	1	5.18
									Pump intake se		2	5.67	2	4.29
									45.		3		3	
Meth	hod of	Con	struction			Well Us	е	manni	Pumping rate (I			5.99		3.98
Cable To		/leno	Diamond	☐ Pul	olic mestic	Comme Municipa		ot used ewatering	54. Duration of pun	D nping	4	6.24	4	3.94
Rotary (F	Reverse)	Mi -	Driving		estock	Test Ho		onitoring	1_ hrs +	min	5	6.47	5	3.92
□ Boring		AII	Digging	Irrig	,	Cooling	& Air Conditioni	ng	Final water level	end of pumping (m/ft)	10	6.85	10	
Air percu	ussion pecify			Ind	ustrial ier, <i>specify</i> .				6.	98 ate (l/min-/ GPM)	15	6.94	15	
3350111236	SHIE S	Cons	struction Re	cord - Cas	ina	111 (37) 111	Status of	f Well	III llowing give is	ate (vinity Gria)				
Inside	Open	Hole	OR Material	Wall	-	n (<i>m/ft</i>)	Water Sup	pply	Recommended	pump depth (m/ft)	20	7	20	
Diameter (cm/in)			, Fibreglass, lastic, Steel)	Thickness (cm/in)	From	То	Replacem Test Hole		22.		25	7.04	25	
15.86		Ste	0.1	.48	+.45	8.83	Recharge	- 1	Recommended (Vmin / GPM)	pump rate	30	6.97	30	
13.00		bre	E1	•40	7.43	0.03	☐ Dewaterin	~	45.	5	40		40	
							Observation Monitoring		Well production	(I/min / GPM)		6.97	E0.	
							Alteration (Construct		Disinfected?		50	6.97	50	
							Abandone	ed,	X Yes N	10	60	6.98	60	
		Co	nstruction Re	ecord - Scre	en	MICHIGAN	Insufficien Abandone			Map of W			Hilli	AND REAL
Outside Diameter			erial	Slot No.		n (<i>m/ft</i>)	Water Qui		Please provide a	a map below following	instruct	ions on the t	ack.	
(cm/in)	(Plastic	c, Galv	anized, Steel)		From	То	specify	sa, other,	R	ICHMOND FOREST		N/	/	
									F	OREST		.//		5
							Other, spe	ecity				V		18
75 A S L 1 (1 T L 1)	#252454	14713	Water Det	aile	(3.111.111.111.111		lole Diameter							
Water foun	nd at De	epth k	(ind of Water		X Untested			Diameter	1					- 5
46.63(11	n/ft)	Gas	Other, spe	cify		From	То	(cm/in)	1	_		l .		E
			Kind of Water		Untested	0	8.83	15.86				1.		7
			Other, spe- cind of Water		Lintontod	8.83	48.76	15.55)		
			Other, spe		Untested					1		ì		
SECRETARY.	200 92 52 5		I Contracto		Technicis	n Informa	tion	101111010	_			. 410		
Business N	lame of		E	. Grid Ffell	. common		ell Contractor's Li	cence No.			207	#10		
Capita	1 Wa	ter	Supply	Ltd.			1 5 5	8						
Business A	vddress	(Stree	t Number/Ña	me)			inicipality		Comments:					
Box 49 Province	0	Po	stal Code	Rusines	E-mail Ad	dress	Stittsvi	11e						
Ontari	0		2 S 1 A				lwater.ca	9		Date Package Delivere	ed	Minis	try Us	e Only
			rea code) Na					L4	information package	2/ 0/ 0/ 8 1/ 2/	0 2	Audit No. Z	. 0	1161
6 1 3				Mille:	r, Ster	hen				Date Work Completed		1211101010101	ER	2 2009
Well Technic	cian's Lic	ence N	lo. Signature	of Vechnicia	an and/or C			n n n		2 0 0 8 1 2	0 0			- 2003
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Measurements recorded in: XXMetric Imperial

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Well Record 903 Ontario Water Resources Act

Page____ of _

I Tag No. (Place S	ticker and/or Print	Below)	
A0514	92 A O	51492	P~~ulation

Well Own	ner's Info				HIMIN					HIII			
First Name			st Name / Org				E-mail Add	ress				Constructed	
Mailing Add	Irace (Strac	t Number/Nam	Talos Cu	stom Ho	mes	unicipality		Province	Postal Code	Т	elephone No	-	
		Rd. Unit				ttawa		Ontar			613 747		
Well Loca	177 313 177 71	Kd. UIIIL	i	1017351111		LLawa	HIMALL	VIILar	10 113 936		015 747	HHI	
Address of	Well Locati	on (Street Num	ber/Name)		To	wnship			Lot	(Concession		
		ond Fores	t			oulbour			25	Province	3	Postal	Code
County/Dist						ty/Town/Villa				Onta			Code
Ottawa UTM Coordi			North	ing		ichmond unicipal Plar		t Number		Other			
NAD	8 3 1 8	8 4 3 5 2	2 5 4 5 0	0 4 3	9 4								
						d (see instru	ctions on the	back of this form)		4411		Den	th (m/ft)
General Co	olour	Most Comm	on Material		Othe	r Materials			General Description			From	To
Brown		Soil			Stone	s		Pac	ked			0	5.48
Gray		Limest	one					Med	ium		5	.48	29.86
oraș		Dimese	Olic					1100	± diii				
SISTEM		NEED TO	Annular Sp	ace					Results of We	-		HHH	
Depth Se	et at (<i>m/ft)</i> To		Type of Sealar (Material and 1			Volume (m³)	Placed . /ft³)	After test of wel	l yield, water was: sand free		aw Down Water Level	-	ecovery Water Level
								Other, spe		(min)	(m/ft)	(min)	(m/ft)
8.53	0	Grouted	Bentoni	te Slur	ry	.42m ³)	If pumping disc	ontinued, give reason:	Static Level	3.90		
										1	4.06	1	4.15
								Pump intake s	et at (m/ft)	2		2	
								16.	76	-	4.09		4.10
Meth	hod of Co	nstruction			Well Use	9	197533334	Pumping rate (3	4.13	3	4.07
Cable To		Diamond	☐ Public] Commer	cial	Not used	54.	6	4	4.16	4	4.05
	Conventiona	I) Jetting	X Dome		Municipa		Dewatering	Duration of pur	mping	5	4.19	5	4.01
Rotary (F	Reverse) A	ir Driving	Livest		Test Hole Cooling 8	& Air Conditio	Monitoring oning		el end of pumping (m/ft)	10		10	
Air percu			Indust					4.3	4		4.25		3.92
Other, sp			Other,		*****			If flowing give i	rate (Vmin-/ GPM)	15	4.27	15	
Inside		nstruction Re le OR Material	Wall	Depth (r	n/ft)	Y Water S	of Well	Recommende	d pump depth (m/ft)	20	4.29	20	
Diameter (cm/in)	(Galvaniz	ed, Fibreglass, Plastic, Steel)	Thickness (cm/in)	From	To	Replace		16.		25	4.32	25	
(GINIT)	Concrete,	Plastic, Steel)	(GITEIN)			Test Ho		Recommende		30		30	
15.86	St	eel	.48	+.45	8.53	Dewate		(I/min / GPM)	-		4.31		
						Observa Monitori		Well productio	n (Vmin / GPM)	40	4.32	40	
						☐ Alteration	on	Disinfected?		50	4.33	50	
						(Construction (C		X Yes	No	60	4.34	60	
	C	onstruction Re	ecord - Screen	**************************************		Insuffici	ent Supply	100000000000000000000000000000000000000	Map of W	ell Loc		11111	
Outside	_	faterial		Depth (r	n/ft)	Water C	ned, Poor Quality	Please provide	a map below following			ack.	(
Diameter (cm/in)		alvanized, Steel)	Slot No.	From	То	Abando specify	ned, other,	11		1			
									16 -		•		
						Other, s	specify	///		0	1		2
								11/	1 /				2
Water four	nd at Denth	Water Det Kind of Water		Untested		ole Diamet h (m/ft)	Diameter		LO7 16	,	1		A.
		Other, spe		Officested	From	То	(cm/in)		_ 1 # 10)	1		- les
		Kind of Water		Untested	0	8.53	15.86						7
		Other, spe			8.53	29.86	15.55	/	ICHMOND				32
		Kind of Water		Untested -	0.55	29.00	15.55		ICHMONDS	1	ORES		6
(r)		Other, spe			1	1	102/202103						7
Business N		lell Contractor	r and well 10	ecnnician		Il Contractor's	Licence No.	1					
Capita	al Wate	r Supply	Ltd.		1	5	5 8						
		eet Number/Na			Mu	nicipality		Comments:					
Box 49		Postal Code	Puning	molt Artic		tittsvi	11e						
Ontari	io K	2 S 1 A	6 offic		pital		a	Well owner's information	Date Package Deliver	ed	Minis Audit No. Z		e Only
	1 1 2	area code) Na 1766 e No. Signatu re						package delivered X Yes	2Y 0Y 0Y 8' 1M 2/ Date Work Completed			8	4464
0 0) 0	7	///	KING TO I		0.0.8	1 M2 D1 D	No No	200812	0 0	Received	3 1	2 2009
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Measurements recorded in: X Metric Imperial

Well Tag No. (Place Sticker and/or Print Below)

A051593 A 051593 Well Record

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Regulation 903 Ontario Water Resources Act

Well Own	ner's Info		ARIBER	HARITE								HHH	HIII	
First Name		La	ast Name / O				E-mail A	Address					Constructed	
Mailing Add	trose (Stro	et Number/Nam	Talos (Custom		unicipality		Province)	Postal Co	de	Telephon		Vell Owner c. area code)
								Onta		K1J 9		613 7		
Well Loca	2022 22 22 23 24 24 2	Road - I	mit I			Ottawa		Onta	HARRIE	11.10		010 /	., 39	II BUSE
	24170735131	tion (Street Nun	nber/Name)	2512775137	To	ownship				Lot		Concess	on	
		hmond For	rest			Gou1bou				25	5		3	al Code
County/Dist						ity/Town/Villa					Ont	^{nce} tario	Post	al Code
Ottawa UTM Coordi	Carle	ton le Easting	. No	rthing	M	Richmon Junicipal Plan	d n and Sublo	t Number			Othe			
		8 4 3 5 3			4 4 3									
		drock Materia				rd (see instru	ctions on the	back of this fo	nm)				\$715133	
General Co	olour	Most Comm	on Material		Othe	er Materials			Gener	al Descript	tion		From	epth (<i>m/ft</i>) To
Brown		Sandy Ci	lav		Stone	s		P	acked				0	4.57
Gray		Limeston							ledium				4.57	
oray		Linescon	10						ieu I uiii				4.57	47.24
		Heread and the second	Annular	Space		11231212112		44.000	D	esults of	Well Vi	eld Testin	10	3333423246
Depth Se	et at (m/ft)		Type of Seal		100121100	Volume	Placed	After test of				raw Down		Recovery
From	То		(Material and			(m ³	/ft³)	Clear a Contract Contract		ee	Time (min		vel Time	Water Level
7.92	0	Grouted	Bentoni	ite Slu	rry	.52m	3	Other,		d aire saaa	Stati	,	(min) (IIIII)
								If pumping of	discontinue	a, give reas	Leve	4.0	6	-
											1	5.7	8 1	13.10
							ALCO AND AND AND AND AND AND AND AND AND AND	Pump intak		v/ft)	2	7.0	3 2	10.78
						102537			5.71		3		2	
Meth	hod of Co	onstruction		HUMBE	Well Us	е	HURBER	Pumping ra		GPM)		7.8	3	9.02
Cable To		Diamond			Comme		Not used	Duration of	6.40 pumping		- 4	8.6	0 4	7.84
		al) Detting	IX Dor ☐ Live		☐ Municipa ☐ Test Hol		Dewatering Monitoring	1 hrs		nin .	5	9.0	2 5	6.88
Boring	Hereise, A	Digging	☐ Irrig			& Air Conditio		Final water	level end of	f pumping (r	<i>n/ħ)</i> 10		10	
X Air percu			Indi	ustrial er, <i>specify</i>					6.39		10		45	4.38
Ourier, sy		notwestion D			ESSENTINGES	Ctatue	of Well	If flowing gi	ve rate (l/n	nin-/ GPM)	15	12.9	8 15	4.06
Inside	1	onstruction Report Of the OR Material	Wall	Depth	(m/ft)	Y Water S		Recommen	ded pump	depth (m/	20	14.1	1 20	
Diameter (cm/in)	(Galvania	zed, Fibreglass, e, Plastic, Steel)	Thickness (cm/in)	From	То		ement Well		30.47		25	14.6	4 25	
			, , ,			☐ Test Ho		Recommen	nded pump	rate	30		20	
15.86	St	ee1	.48	+.45	7.92	☐ Dewate		(Vmin / GPN				15.2	40	-
						Observa Monitori		Well produ	ction (I/min	/ GPM)	40	15.7	3 40	
						Alteration	_	Disinfected's	2		50	16.1	4 50	
						(Constr		X Yes			60	16.3	g 60	
	,	Construction R	acord Coro	on	TATALBASA	Insuffici	ent Supply	A	GENERAL STREET	Mano	f Well Lo		HERE I	
Outside		Material	ecora - scre	Depth	(m/ft)	Abando Water C		Please prov	ide a map				e back.	
Diameter (cm/in)		Salvanized, Steel)	Slot No.	From	То		ned, other,	,~					10	T# 22
						specify						1		158
						Other, s	specify					7	#	72 4
														Ŋ
HHRIE		Water De		THE PERSON		lole Diamet	_	1 1			•	'		5/
		h Kind of Wate		X Untested	From	th (<i>m/ft)</i> To	Diameter (cm/in)	;						W
		s Other, spe h Kind of Wate		Untested	0	7.92	15.86							Ž
		s Other, spe			7.92		15.39							W
		h Kind of Wate		Untested	7.92	47.24	13.39							7
(n	n/ft) Ga							1 /						
D		Well Contracto	or and Well	Technicia			Liegara	N/						
		ell Contractor	Lad			ell Contractor's		1//						
		r Supply treet Number/Na				1 5 Inicipality	5 8	Comments:						
Box 49						Stittsv	ille							
Province		Postal Code	Business	E-mail Add		120001						1		
Ontari	0	K 2 S 1 A	6 of	fice	capita.	lwater.	ca	Well owner information	's Date P	ackage Del	ivered		nistry U	Ise Only
1		c. area code) Na						package delivered		090		Audit N	2 8	4473
b I 3 Well Technic	8 3 6 cian's Licenc	1 7 6 6 ce No. Signature	Miller,	Stephon and/or Co	en ntractor Da	te Submitted		Yes		Vork Comple		FE	8 1 2	2009
0 0	Q	7 KINI	Know	٨		0090	1/20	□ No	2/10/	0 9 0	1 2 0	0.500.000		
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Well Tag No. (Place Sticker and/or Print Below)

Well Record

		AAGII	Neco	ıu
Pagulation 90	3 Ontario	Water F	Resources	Act

. Ontai		rironment	norial		A068	287	A 068287	Pagulation	903 On	ntario Was Page		ources Act
	corded in: X Me	etric imp	periai [11111111111111		HILLERI		MINIMAN	94671	HAMA	HHIII	
Well Owner's I irst Name		st Name / Org	ganization		148863228514	BRURE	E-mail Address	12 2 3 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10032222			Constructed
Apilina Addrone (S	Street Number/Nam	Talos Cu	istom l		unicipality		Province	Postal Code	Te	elephone I	- ,	area code)
,	ek Rd. Unit				Ottawa		Ontario	K 1J 9J8	6	13 747	399	3
Well Location					Hillian			Lot	C	Concession		
	ocation (Street Num chmond Fore			10	wnship Gou1bou	rn		25			3	
County/District/Mu		.50		Cit	ty/Town/Villag	ge			Provinc	_	Postal	Code
Ottawa Car UTM Coordinates		, North	ning	Mı	Richmon unicipal Plan		t Number		Other	110		
NAD 8 3	1 8 4 3 5 4	3 7 5 0	0 0 4									
	Bedrock Materia		ment Sea		d (see instruct r Materials	tions on the		ral Description	Hitti			th (m/ft)
General Colour	Most Comm					-	Octio	rai Description			From	4.26
Brown	Sandy Soi	11		Stones			D 1 1				4.26	8.83
Gray	Hardpan			Bou1de	ers		Packed				8.83	45.10
Gray	Limestone	9					Medium				0.00	45.10
		Annular S	pace		HIII III			Results of We	ell Yield	d Testing		
Depth Set at (m	,	Type of Seala (Material and	int Used		Volume I		After test of well yield, [X] Clear and sand			w Down Water Levi		Recovery Water Level
		Bentoni		rrv	.84m ³	./	Other, specify		(min)	(m/ft)	(min)	(m/ft)
0.05	Grouted	Deliconi	cc bid	113	.04		If pumping discontinue	ed, give reason:	Static Level	3.99		
-									1	4.74	1	4.27
							Pump intake set at (m/ft)	2	4.90	2	4.11
			* 12.1	147 - 11 - 11		1122212014	30.47 Pumping rate (Vmin /	GPM)	3	4.94	3	4.04
Method o	of Construction Diamond	Publi	ic	Commen		Not used	54.6		4	4.98	4	4
Rotary (Conven	ntional) Detting	X Dom	estic	Municipa Test Hole	-	Dewatering Monitoring	Duration of pumping 1 hrs +	min	5	5.	5	
	e)Air Driving	☐ Irriga	ation		& Air Condition		Final water level end	of pumping (m/ft)	10	5.08	10	
X Air percussion ☐ Other, specify		☐ Indu:	strial r, <i>specify</i> _				5.14 If flowing give rate (l		15	5.09	4.5	
	Construction Re	ecord - Casi	ng	RAMURE	Status	of Well	I nowing give rate (s		20	5.11	20	
	en Hole OR Material Ivanized, Fibreglass,	Wall Thickness	Depth		Water Su Replace		Recommended pum 22.85		25		25	
	crete, Plastic, Steel)	(cm/in)	From	То	Test Hole	e	Recommended pur		30	5.12		
15.86	Steel	.48	+.45	8.83	Recharg Dewater		(Vmin / GPM) 45.5			5.12		
					Observat Monitorin		Well production (l/mi	n / GPM)	40	5.13		
					Alteration (Constru	n	Disinfected?		50	5.13		
					Abandor		XYes No		60	5.14	60	
	Construction R	ecord - Scree		HHUUH	Abandor	ned, Poor	Please provide a ma	Map of W			back.	
Outside Diameter (cm/in) (Plas	Material stic, Galvanized, Steel)	Slot No.	From	(<i>m/ft</i>)	Water Q Abandor	-	1					. //
(0.1111)					specify		1		1	# 30	- 1	y /
		-			Other, s	pecify	1		ro.		I	
0.0000000000000000000000000000000000000	Water De	tails		н	lole Diamet	er		1				<u>(</u>
Water found at 0	Depth Kind of Wate		Untested		th (<i>m/ft</i>)	Diameter (cm/in)	1 1	1				8
	Gas Other, spe Depth Kind of Wate		Untested	0	8.83	15.86		HANNON	Ho	458		ζ,
	Gas Other, spe		Ontootoo	8.83	45.10	15.23						7
	Depth Kind of Wate		Untested									3
(m/ft) _	Gas Other, spe		Technicia	n Informat	tion			de				×
Business Name of	of Well Contractor	or and wen	Commen		ell Contractor's	Licence No.	RICHMO	ST				
	later Supply s (Street Number/Na		,	1	. 5 inicipality	5 8	RICHMO FORE					
Box 490	a (audet Number/Na				tittsvi	11e						
Province	Postal Code		E-mail Add	fress			Well owner's Date	Package Deliver	ed	Min	istry Us	se Only
Ontario Bus.Telephone No	K 2 S 1 A o. (inc. area code) Na				ater.ca First Name)		information			Audit No.	27111111	
6 1 3 8 3	61766	Mil1er	. Ste	ohen			delivered Date	Work Completed			09	5337
	icence No. Signature	of Technician	n and/or Co	ontractor Da	te Submitted	diss in ne	X Yes 2 0	0 9 0 3	0 5	Received	APR	0 6 2009
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Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

A068288 A 068288

Well Record ılation 903 Ontario Water Resources Act

Measureme	nts recorde	ed in: XMe	etric 🗌 Im	nperial		N0002					Page_		of
Well Own	er's Infor		相關關鍵	terieris.				quilling				411116	
First Name			st Name / O					E-mail Addr	ess				Constructed ell Owner
Mailing Addr	ress (Street	Number/Nam	Talos Cu	ustom h		inicipality		Province	Postal Code	7	Telephone I	No. (inc.	area code)
		Rd. Unit			(Ottawa		Ontari	o K1J 9J8		613 74	7 399	3
Well Loca	tion				HIHHE	wnship	HERRIE	HERRICE	Lot	GHA	Concession	0	
		n (Street Num				wnsnip Gou1bour	cn		25		3		
County/Dist	rict/Municip	nond Fore	est			ty/Town/Villag				Provin		Postal	Code
	Carle		Man	thin a		Richmond		Number		Onta	ar10		
UTM Coordin	nates Zone 8 31 8			thing 0 0 4 5		лісіраі гіап	and Subio	Maniper		Outo			
						d (see instruct	tions on the	back of this form)			Mallini	Dor	th (m/H)
General Co	olour	Most Commo	on Material		Othe	r Materials			General Description			From	th (m/ft) To
Brown	Sa	andy Soi	1		Stones							0	4.26
Gray	Ha	ardpan			Boulde:	rs		Pack	ced			4.26	7.01
Gray	L	imestone						Medi	ium			7.01	45.10
SHED IN	III HEELE	HARRINA	Annular	Space					Results of We	_		_	
Depth Se From	et at (<i>m/ft</i>)		Type of Seal			Volume F (m³/f		After test of well	yield, water was: sand free	-	aw Down Water Lev		Recovery Water Level
						.84m ³	.,	Other, spe		(min)	(m/ft)	(min)	(m/ft)
8.83	0	Grouted	Benton	ite Si	ırry	.84m ³		If pumping disc	ontinued, give reason:	Static Level	0 0 5		
										1	5.30	1	5.62
								Pump intake s		2	5.84	2	4.50
								Pumping rate (0.47	3	6.24	3	4.04
7	A COLUMN TO A COLU	nstruction			Well Us				4.6	4	6.53	4	
Cable To		☐ Diamond) ☐ Jetting	☐ Pub		Commer Municipa		Not used Dewatering	Duration of pur	mping	5		5	3.93
X Rotary (F		r Driving	Live		Test Hole	e	Monitoring	1 hrs +	min el end of pumping (m/ft)		6.77		
☐ Boring X Air percu	ussion	Digging	☐ Ind	ustrial	Cooling	a All Cortainor	g		7.78	10	7.17	10	
Other, sp				er, specify_					rate (Vmin / GPM)	15	7.37	15	
Inside		e OR Material	ecord - Cas	_	n (<i>m/ft</i>)	Status of Water Su		Recommended	d pump depth (m/ft)	20	7.49	20	
Diameter (cm/in)	(Galvanize	ed, Fibreglass, Plastic, Steel)	Thickness (cm/in)	From	То	Replacer	ment Well		2.85	25	7.58	25	
		teel		+.45	8.83	Recharge		Recommended (I/min / GPM)	d pump rate	30	7.64	30	
15.86	3	reeı	.48	T.43	0.03	Dewateri Observati			5.5	40	7.68	40	
						Monitorin	g Hole	Well productio	n (l/min / GPM)	50	7.73	50	
						Alteration (Constru	ction)	Disinfected?	N	60	7.78	60	
						Abandon Insufficie	ned, ent Supply	A Yes	Map of W			212122	
Outside		onstruction R	ecord - Scre		h (m/ft)	Abandon Water Q		Please provide	a map below following			back.	14
Diameter (cm/ln)		laterial Ilvanized, Steel)	Slot No.	From	То	Abandon specify	ned, other,	/		31			
									LOTH			1	1/2
						Other, s	pecify	<i>'</i>	/ \				K
	MODELLI SAN	Water Det	aile	111111111111	н	ole Diamete	er		\	SHI	ANNON	Hou	5- 6
Water four	nd at Depth	Kind of Water		Untested	Dept	th (m/ft)	Diameter (cm/in)	`,``•		Ju			60
		Other, spe			From	To							
		Kind of Wate		Untested		8.83	15.86						,
		Kind of Wate		Untested	8.83	45.10	15.23						6
(n	n/ft) Gas	Other, spe	cify					/	RICHI	400	D FOR	EST	2
Business N		ell Contractor	or and Well	Technicia		tion all Contractor's I	Licence No.	₩	10,000	,			
		r Supply	Ltd.				5 8						
Business A	Address (Str	eet Number/Na				inicipality		Comments:					
Box 49 Province		Postal Code	Busines	s E-mail Ad		tittsvi	lle						
Ontari		2 S 1 A	6 off	ice Dc	apitalw			Well owner's	Date Package Deliver	red		istry U	se Only
Bus.Teleph	one No. (inc.	area code) Na	ame of Well	Technician (Last Name,			information package delivered	2/0/0/9 0/3	0 6	Audit No.	09	5338
	8 3 6	1 7 6 6 No. Signature	Mille of Technicis	r, Ste	phen	te Submitted		X Yes	Date Work Completed	d		APP	0 8 9000
0 0	1	7 1	the			0090	306	☐ No	2 0 0 9 0 3	0 5	Received	MILIE	0 9 5008
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Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

A068288 A 068288

Well Record ılation 903 Ontario Water Resources Act

Measureme	nts recorde	ed in: XMe	etric 🗌 Im	nperial		N0002					Page_		of
Well Own	er's Infor		相關關鍵	terieris.				quilling				411116	
First Name			st Name / O					E-mail Addr	ess				Constructed ell Owner
Mailing Addr	ress (Street	Number/Nam	Talos Cu	ustom h		inicipality		Province	Postal Code	7	Telephone I	No. (inc.	area code)
		Rd. Unit			(Ottawa		Ontari	o K1J 9J8		613 74	7 399	3
Well Loca	tion				HIHHE	wnship	HERRIE	HERRICE	Lot	GHA	Concession	0	
		n (Street Num				wnsnip Gou1bour	cn		25		3		
County/Dist	rict/Municip	nond Fore	est			ty/Town/Villag				Provin		Postal	Code
	Carle		Non	thin a		Richmond		Number		Onta	ar10		
UTM Coordin	nates Zone 8 31 8			thing 0 0 4 5		лісіраі гіап	and Subio	Maniper		Outo			
						d (see instruct	tions on the	back of this form)			Mallini	Dor	th (m/H)
General Co	olour	Most Commo	on Material		Othe	r Materials			General Description			From	th (m/ft) To
Brown	Sa	andy Soi	1		Stones							0	4.26
Gray	Ha	ardpan			Boulde:	rs		Pack	ced			4.26	7.01
Gray	L	imestone						Medi	ium			7.01	45.10
SHED IN	III HEELE	HARRINA	Annular	Space					Results of We	_		_	
Depth Se From	et at (<i>m/ft</i>)		Type of Seal			Volume F (m³/f		After test of well	yield, water was: sand free	-	aw Down Water Lev		Recovery Water Level
						.84m ³		Other, spe		(min)	(m/ft)	(min)	(m/ft)
8.83	0	Grouted	Benton	ite Si	ırry	.84m ³		If pumping disc	ontinued, give reason:	Static Level	0 0 5		
										1	5.30	1	5.62
								Pump intake s		2	5.84	2	4.50
								Pumping rate (0.47	3	6.24	3	4.04
7	A COLUMN TO A COLU	nstruction			Well Us				4.6	4	6.53	4	
Cable To		☐ Diamond) ☐ Jetting	☐ Pub		Commer Municipa		Not used Dewatering	Duration of pur	mping	5		5	3.93
X Rotary (F		r Driving	Live		Test Hole	e	Monitoring	1 hrs +	min el end of pumping (m/ft)		6.77		
☐ Boring X Air percu	ussion	Digging	☐ Ind	ustrial	Cooling	a All Cortainor	g		7.78	10	7.17	10	
Other, sp				er, specify_					rate (Vmin / GPM)	15	7.37	15	
Inside		e OR Material	ecord - Cas	_	n (<i>m/ft</i>)	Status of Water Su		Recommended	d pump depth (m/ft)	20	7.49	20	
Diameter (cm/in)	(Galvanize	ed, Fibreglass, Plastic, Steel)	Thickness (cm/in)	From	То	Replacer	ment Well		2.85	25	7.58	25	
		teel		+.45	8.83	Recharge		Recommended (I/min / GPM)	d pump rate	30	7.64	30	
15.86	3	reeı	.48	T.43	0.03	Dewateri Observati			5.5	40	7.68	40	
						Monitorin	g Hole	Well productio	n (l/min / GPM)	50	7.73	50	
						Alteration (Constru	ction)	Disinfected?	N	60	7.78	60	
						Abandon Insufficie	ned, ent Supply	A Yes	Map of W			212122	
Outside		onstruction R	ecord - Scre		h (m/ft)	Abandon Water Q		Please provide	a map below following			back.	14
Diameter (cm/ln)		laterial Ilvanized, Steel)	Slot No.	From	То	Abandon specify	ned, other,	/		31			
									LOTH			1	1/2
						Other, s	pecify	<i>'</i>	/ \				K
	MODELLI SAN	Water Det	aile	111111111111	н	ole Diamete	er		\	SHI	ANNON	Hou	5- 6
Water four	nd at Depth	Kind of Water		Untested	Dept	th (m/ft)	Diameter (cm/in)	`,``•		Ju			60
		Other, spe			From	To							
		Kind of Wate		Untested		8.83	15.86						,
		Kind of Wate		Untested	8.83	45.10	15.23						6
(n	n/ft) Gas	Other, spe	cify						RICHI	400	D FOR	EST	2
Business N		ell Contractor	or and Well	Technicia		tion all Contractor's I	Licence No.	₩	10,000	,			
		r Supply	Ltd.				5 8						
Business A	Address (Str	eet Number/Na				inicipality		Comments:					
Box 49 Province		Postal Code	Busines	s E-mail Ad		tittsvi	lle						
Ontari		2 S 1 A	6 off	ice Dc	apitalw			Well owner's	Date Package Deliver	red		istry U	se Only
Bus.Teleph	one No. (inc.	area code) Na	ame of Well	Technician (Last Name,			information package delivered	2/0/0/9 0/3	0 6	Audit No.	09	5338
	8 3 6	1 7 6 6 No. Signature	Mille of Technicis	r, Ste	phen	te Submitted		X Yes	Date Work Completed	d		APP	n & same
0 0	1	7 /3//	the			0090	306	☐ No	2 0 0 9 0 3	0 5	Received	MILIE	0 9 5008
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Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

Well Record

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ulation 903 Ontario Water Resources Act

Page

Well Ow	ner's l	nformation											
First Name		L	ast Name / C	_				E-mail Add	ress		[Constructed ell Owner
Mailing Add	dress (S	reet Number/Nar		Custom		lunicipality		Province	Postal Code		Telephone		area code)
	,	ek Road -				Ottawa		Ontari			513 74		
Well Loca		.ca noad	01120			0000							
Address of	Well Lo	cation (Street Nur	mber/Name)		T	ownship			Lot		Concessio		
Lot 2 County/Dis		chmond Fore	est		C	Gou1bou			3	Provin	2.		l Code
Ottaw	a Car	1eton Cone Easting	, No	rthing		Richmon lunicipal Plan	d	ot Number		Onta		1 0312	
NAD	8 3 1	. 8 4 3 5 3	3 7 1 5	0 0 4 3	5 1 7								
		Bedrock Materi		nment Sea			tions on the	back of this form)				Dei	oth (m/ft)
General Co	olour	Most Comn	non Material		Oth	er Materials			General Description			From	To
Brown		Sandy So:	il		Sto	ones		Pac	ked			0	3.35
Gray		Sandy So:	il		Sto	ones		Pac	ked			3.35	5.79
Gray		Limeston	e					Med	lium			5.79	45.10
Depth Se	et at (m/f	*)	Annular Type of Sea			Volume P	Placed	After test of wel	Results of We I yield, water was:	-	d Testing aw Down		Recovery
From	To	'/	(Material and			(m³/ft		☐ Clear and	sand free	Time	Water Lev	el Time	Water Level
8.83	0	Groute	d Bentor	nite S1	urry	.42m3		Other, spe		(min) Static	(m/ft)	(min)	(m/ft)
								If pumping disc	ontinued, give reason:	Level	3.32		
										1	4.79	1	4.26
								Pump intake s		2	5.30	2	3.91
								Pumping rate		3	5.64	3	3.46
		Construction			Well Us			54.		4		4	
Cable To		☐ Diamono Diamono Diamono Diamono		olic mestic	Commer Municipa		lot used ewatering	Duration of pu			5.88		3.41
X Rotary (f		Air Driving	Live	estock	Test Hol	le 🗌 M	onitoring	1 hrs +	min	5	5.98	5	3.39
☐ Boring X Air percu	ussion	Digging	☐ Irrig		Cooling	& Air Conditioni	ing		el end of pumping (m/ft)	10	6.24	10	3.33
Other, s				er, specify _					46 rate (I/min / GPM)	15		15	
		Construction R	ecord - Cas			Status o	f Well			20	6.37	20	
Inside Diameter		Hole OR Material Inized, Fibreglass,	Wall Thickness	Depth		Water Sup Replacem			d pump depth (m/ft)	25	0.37	25	
(cm/in)		ete, Plastic, Steel)	(cm/in)	From	То	Test Hole		Recommended					
15.86		Steel	.48	+.45	8.83	Recharge		(I/min / GPM)	a parrip rate	30		30	
						Observation		Well production	5 n (<i>l/min / GPM</i>)	40	6.43	40	
						Monitoring Alteration	·		,	50	6.44	50	
						(Construc	ction)	Disinfected? X Yes	No	60		60	
		C				Abandone Insufficien	nt Supply	IA Tes	Map of W	oll Loc	6.46		
Outside	T	Construction R	ecora - Scre	• Depth	(m/ft)	Abandone Water Qu	,	Please provide	a map below following			back.	
Diameter (cm/in)	(Plastic	Material , Galvanized, Steel)	Slot No.	From	То	Abandone	- 1		1	~ ~		-1	
						specify			1)	1	
						Other, spe	ecify		1	,			
								1 1 th	1			1	
Water four	nd at Do	water De pth Kind of Wate		VIIntested		th (m/ft)	r Diameter	LOT# 26	1			1	27
		as Other, spe		A Officested	From	То	(cm/in)					1	<i>w</i>
		pth Kind of Wate		Untested	0	8.83	15.86				24.15	1	17
		Gas Other, spe			8.83	45.10	15.23	CHA	NON HOUSE		MIOE		
		pth Kind of Wate		Untested									Y
	11/11)	Gas Other, spe		Technicia	Informat	tion							1
Business N	lame of	Well Contractor	or and well	1 commicial		ell Contractor's Li	icence No.	1//					7
		ter Supply			1	5 5	8						
		Street Number/Na	ame)			inicipality	1	Comments:					
Box 49 Province	<i>,</i> 0	Postal Code	Business	E-mail Add	· La La La La La La La La La La La La La	tittsvil	Te						
Ontari	.0	K 2 S 1 A				ater.ca		Well owner's	Date Package Delivere			stry Us	e Only
		(inc. area code) Na						information package	2 4 0 4 0 4 9 6 0 1 3 1		Audit No.	na	5324
		5 1 7 6 6 ence No. Signature	Miller Mi Technicia	r, Step	hen otractor Date	to Submitted		delivered Y	Date Work Completed	Name and Address of the Owner, where	_	03	5524
O O		0///	or recymicia	and/of Co		0 0 9 0	3 3 0	No No	2 0 0 9 0 3	2 4	ReceiMA	Y 2 1	2000



Ministry of the Environment

Measurements recorded in: X Metric Imperial

Well Tag No. (Place Sticker and/or Print Below)

A068297

A 068297

Well Record ılation 903 Ontario Water Resources Act

Page	of	
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Address of \	Well Locati	on (Street Num	nber/Name)		T	ownship	Lot		Concession)	
Lot 27 County/Dist		nhouse Dr	rive		C	Gou1bourn ity/Town/Village	25	Provin	ice	3 Postal	Code
Ottawa	Carle	ton				Richmond		Ont			
UTM Coordin		Easting 8 4 3 5 4	North			lunicipal Plan and Sub	ot Number	Other			
THE RESERVE OF THE PERSON NAMED IN COLUMN 1	and the same of th	the same of the sa	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I		the state of the s	rd (see instructions on th	e back of this form)		,		
General Co	lour	Most Comm	on Material		Oth	er Materials	General Description	1		Dep From	oth (<i>m/ft</i>) To
Brown		Sandy Cla	ay		Stone	S	Packed			0	3.65
Gray		Sandy Cla	iy		Stone	S	Packed		3	3.65	5.48
Gray		Limestone	5				Medium		5	5.48	45.10
			Annular Sp	pace			Results of W	ell Yiel	d Testing		
Depth Set	4 .		Type of Sealar	nt Used		Volume Placed	After test of well yield, water was:	Dr	aw Down	R	ecovery
8.53				urry	(m³/ft³) .63m3	X Clear and sand free ☐ Other, specify	Time (min)	(m/ft)	(min)	Water Level (m/ft)	
0.33		oroacco	Dentoni	ice bi	urry	·OSin	If pumping discontinued, give reason:	Static Level	3.22 4.72	4	5.09
							Pump intake set at (m/ft)	2	5.55		3.92
							22.85 Pumping rate (l/min / GPM)	3	6.15	2	
Meth		nstruction Diamond	☐ Public	. [Well Us		54.6	4		4	3.47
Rotary (C	onventional) Jetting	X Dome	estic	Municipa	Dewatering	Duration of pumping 1 hrs + min	5	6.53	_	3.32
X Rotary (RBoring	teverse) A	ir□ Driving □ Digging	Livesto	1	Test Hol	e	Final water level end of pumping (m/ft		6.82	10	3.27
Air percus Other, spe			☐ Indust	trial , <i>specify</i>			7.73	15	7.47	15	
		nstruction Re				Status of Well	If flowing give rate (I/min / GPM)		7.63	00	
Inside Diameter		e OR Material ed, Fibreglass,	Wall Thickness	Depth	ĺ	Water Supply Replacement Well	Recommended pump depth (m/ft)	20	7.66	05	
(cm/in)	Concrete,	Plastic, Steel)	(cm/in)	From	То	Test Hole	22.85 Recommended pump rate	25	7.66		
15.86	S	teel	.48	+.45	8.53	Recharge Well Dewatering Well	(I/min / GPM)	30	7.67	30	
						Observation and/or Monitoring Hole	45.5 Well production (I/min / GPM)	40	7.72	40	
						Alteration (Construction)	Disinfected?	50	7.72		
						Abandoned, Insufficient Supply	X Yes No	60	7.73	60	
Outside		onstruction Re	cord - Screen	Depth	(m/ft)	Abandoned, Poor Water Quality	Map of W			back.	1
Diameter (cm/in)		aterial Ilvanized, Steel)	Slot No.	From	То	Abandoned, other, specify					
								it	.01 #		
						Other, specify		1			
		Water Det	ails		Н	ole Diameter		1	h		
		Kind of Water	11	Untested	Dept From	h (<i>m/ft</i>) Diameter To (<i>cm/in</i>)	CHANON HOUSE	i Si∆a	ME		133
		Other, spec		Untested	0	8.53 15.86	CHANONTING				7
		Other, spe		Untostad	8.53	45.10 15.23					
		Kind of Water Other, spec		Untested			1 DICHMO	ND			200
		ell Contracto	r and Well Te	echnician			RICHMO	5T			¥
Capital			I + d		We	Il Contractor's Licence No.					
		r Supply eet Number/Na			Mu	5 5 8 nicipality	Comments:				
Box 490 Province		ostal Code	Business E-	-mail Adds		tittsville	-				
Ontario		2 S 1 A				water.ca	Well owner's Date Package Deliver	ed		try Us	e Only
		area code) Na	me of Well Tec	hnician (La	ast Name,		information package delivered 2 0 0 9 0 3	3 0	Audit No.	ngr	5325
Well Technicia	an's Licence	1 7 6 6 No. Signature	Miller Technician	and or Cor	phen tractor Dat	e Submitted	X Yes Date Work Completed	-			
0 0	9	7 HIL	Karin			0090330		2 4	ReceMAY	20	2009

Measurements recorded in: X Metric

Imperial

Well Record

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tion 903 Ontario Water Resources Act

Page

Address of Well Lo	ocation (Street Nun	nber/Name)		To	ownship			Lot		Concession		
	ichmond For			G	ou1bour			25		3		
County/District/Mu					ty/Town/Villa				Onta Onta		Posta	Il Code
Ottawa Car		. No	orthing		ichmond unicipal Plan		ot Number		Other	a1 10		
	1 8 4 3 5 3		0									
Overburden and	Bedrock Materia	ls/Abando	nment Sea			ctions on the					Dec	pth (<i>m/ft</i>)
General Colour	Most Comm	on Material			er Materials		Genera	al Description			From	To
Brown	Clay			Ston	es						0	4.26
Gray	Clay			Ston	ies	,					4.26	5.79
Gray	Limestone	!									5.79	45.10
		Annular	Space				D.	esults of We	all Vial	d Testing		
Depth Set at (m/		Annular Type of Sea	lant Used		Volume		After test of well yield, w	ater was:	Dra	aw Down		Recovery
From To		(Material an			(m³)		Clear and sand fre	ee	Time (min)	Water Leve (m/ft)	Time (min)	Water Level (m/ft)
8.83 0	Grouted	l Bento	nite S1	urry	.42m	3	If pumping discontinued	, give reason:	Static	3.57	1	
									Level		1	0.67
							Pump intake set at (m)	· · · · · · · · · · · · · · · · · · ·		4.49	'	3.67
							30.47	7.07	2	4.65	2	3.58
Method of	Construction			Well Use	3		Pumping rate (I/min / G	iPM)	3	4.70	3	
Cable Tool	Diamond	☐ Pul	olic	Commerc		Not used	54.6		4	4.72	4	
Rotary (Conventi		☐ Liv	mestic	Municipa Test Hole		Dewatering Monitoring	Duration of pumping 1 hrs + m	in	5	4.73	5	
∏ Rotary (Reverse) ☐ Boring	Digging	☐ Irrig			& Air Conditio		Final water level end of	pumping (m/ft)	10	4.75	10	
X Air percussion ☐ Other, specify		☐ Ind	ustrial ner, <i>specify</i>				4.81		15		15	
- Carlon, apaciny	Construction Re				Status	of Well	I If flowing give rate (I/m.	in / GPM)	-	4.77		
	Hole OR Material	Wall	Depth	(m/ft)	X Water S	Supply	Recommended pump	depth (m/ft)	20	4.80	20	
	ranized, Fibreglass, rete, Plastic, Steel)	Thickness (cm/in)	From	То	Replace	ement Well le	22.85		25	4.80	25	
15.86	Steel	.48	+.45	8.83	Recharg	ge Well	Recommended pump (I/min / GPM)	rate	30	4.80	30	
						ring Well ition and/or	45.5 Well production (I/min)	(GPM)	40	4.80	40	
					Monitorir Alteratio	_	Ven production (whim)	Gr Wij	50	4.80	50	
					(Constru	uction)	Disinfected? X Yes No		60	4.81	60	
						ent Supply	A les [No	Map of W				
Outside	Construction Re	ecord - Scre	Depth	(m/ft)	Abandor Water C	ned, Poor Quality	Please provide a map b				ack.	
Diameter (cm/in) (Plastic	c, Galvanized, Steel)	Slot No.	From	То	Abandon	ned, other,	·					V
					ороспу		1			1		1/2
					Other, s	specify)	1		1
	Water Det	aile		Ц	ole Diamet	or			1	1 #		9
Water found at De	epth Kind of Water		Untested	Depth	h (<i>m/ft</i>)	Diameter	1			1L0T#		,
	Gas Other, spe			From	To	(cm/in)				1		
	epth Kind of Water		Untested	0		15.86				,		
	Gas Other, spe epth Kind of Water		Untested	8.83	45.10	15.07	1 CHA	NON HOL	158	1		
(m/ft)	Gas Other, spe	cify										
	Well Contracto	r and Well	Technicia									
	Well Contractor ater Supply (Street Number/Na			1	I Contractor's 5 nicipality	5 8	Comments:					
Box 490 Province	Postal Code		E-mail Add	S	tittsvi	.11e						
Ontario	K 2 S 1 A					ı	Well owner's Date Pa	ckage Delivere			try Us	se Only
6 1 3 8 3	(inc. area code) Na	me of Well 7	echnician (L er, Ste	ast Name, F phen	First Name)		package delivered 2/ 0/ 0	9 0 3 ork Completed	2 4			5328
Well Technician's Lic	ence No. Signature	of Technicia	in and/or Col	ractor Date	O O O O		No 2 0		9 9	Received	Y 2	0 2009
0506E (12/2007)	May	The same of the sa	4	2	Ministr	ry's Copy		0 7 0 3	2	© Queen's	s Printer	for Ontario, 2007

A 066513 Well Record Well T rint Below) Ministry of the Environment Regulation 903 Ontario Water Resources Act 066513 Imperial of Measurements recorded in: Metric Page Soul pour n Postal Code Ontario Municipal Northina 500 425 Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (nvt) General Description Other Materials From rey 0 56 rdstore & Limestore Mix 176 Results of Well Yield Testing Annular Space After test of well yield, water was:

Clear and sand free
Other, specify

If pumping discontinued, give rea Volume Placed Draw Down Recovery Depth Set at (m/ft) Type of Sealant Used (Material and Type ime Water Level Water Level 9,36 (min) (m/ft)(m/ft)(min) Static 23" nued, give reason 76" 1 Pump Intake set at (n(ft) 3 Well Use Method of Construction Duration of pumping Cable Tool Diamond Public Commercial Not used Domestic Jetting Municipal Rotary (Conventional) Dewatering hrs + min 5 Livestock Monitoring Rotary (Reverse) Test Hole Driving Final water level end of pumping (m/ft) Boring
Air percussion Cooling & Air Conditioning Irrigation Digging If flowing give rate (Vmin-/ GPM) Industrial 162" Other, spec 15 Construction Record - Casing 16.80 Status of Well 20 Water Supply Inside Open Hole OR Material (Galvanized, Fibreglass, Depth (m/ft) nded pump depth (m/ft) Wall Diameter (cm/in) Thickness ommended pump rate Replacement Well (00) 168 Concrete, Plastic, Steel) (cm/in) Test Hole .188" ¢, 30 30 Recharge Well 62 Dewatering Well 40 40 Observation and/or Well production (I/min GPM) Monitoring Hole 50 Alteration (Construction) 60 Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Please provide a map below following instructions on the back Depth (m/ft) Outside Water Quality Diameter (cm/in) Slot No. Abandoned, other, From. · DKN specify Other, specify Hole Diameter Water Details Depth (m/ft) Water found at Depth Kind of Water: Fresh Mintested From (cm/in) >ଟ (n(ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Wintested (n(ft)) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested Porth Street Q30 (n(ft)) Gas Other, specify Well Contractor and Well Technician Information Municipality (Comments RICHMONE Postal Code Business E-mail Address KoA220 Well owner's information Ministry Use Only Date Package Delivered Technician (Last Name, First Nam JUN 70 34582 package RAHAM delivered es EDDS B D MUL No Queen's Printer for Ontario, 2007 Ministry's Copy

Well Tag No. (Place Sticker and/or Print Below)

A068291 A 068291

Well Record lation 903 Ontario Water Resources Act

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Measureme	ents recorded in:	X Metric	Imperial		1000271		A 000231		Page_		of
Well Own	ner's Information				HILL		Hilli	LINE:	164121		
First Name		Last Name /	_				E-mail Address				Constructed ell Owner
Mailing Add	ress (Street Number)		Custom		lunicipality		Province Postal Code	1	Telephone N	,	
	anotek Rd				Ottawa		Ontario K1J 9J8		13 747		
Well Loca				HEERIE		HHE					
	Well Location (Street			T	ownship		Lot 25	(Concession	3	
	, Richmond For trict/Municipality	orest		C	Gou1bourn ity/Town/Village		23	Province	ce		I Code
-	Carleton				Richmond			Onta	ario		
	nates Zone Easting	1 N	orthing		lunicipal Plan and	Sublot	Number	Other			
	8 3 1 8 435		500440					11010	12232141121	CERCES	20022127030
General Co	en and Bedrock Ma	terials/Abando mmon Materia			er Materials	on the b	General Description	0230046	22421177333		oth (m/ft)
		Jilliloii Wateria		Stone			00110101			From	6.4
Brown	Soil			Stone	S					6.4	23.46
Gray	Limest	one								0.4	23.40
						-					
***********		Annula	Space				Results of We	ell Yiel	d Testing	11111	
Depth Se	et at (m/ft)	Type of Se	alant Used	**********	Volume Place	d	After test of well yield, water was:	Dra	aw Down	_	Recovery
From	To	(Material a			(m³/ft³)	$-\parallel$		(min)	Water Level (m/ft)	(min)	Water Level (m/ft)
8.83	0 Grout	ed Bentor	ite Sl	ırry	.52m ³		If pumping discontinued, give reason:	Static	3.93		
								Level	4.13	1	4.16
							Pump intake set at (m/ft)				
							16.76	2	4.18	2	4.08
Moth	nod of Construction	n		Well Us	0	3350	Pumping rate (I/min / GPM)	3	4.20	3	4.05
Cable To			ublic	Comme	******	ed	54.6	4	4.22	4	4.03
	Conventional)		omestic	Municipa		ering	Duration of pumping 1 hrs + 30 min	5	4.23	5	4
Boring (€	Reverse∦ir □ Drivi □ Digg		vestock igation	☐ Test Ho	& Air Conditioning		Final water level end of pumping (m/ft)	10	4.28	10	3.96
X Air percu			dustrial				4.35				
Other, s			ther, specify	23341111111	Status of We		If flowing give rate (I/min / GPM)	15	4.31	15	3.93
Inside	Open Hole OR Mater	n Record - Ca	_	h (<i>m/ft</i>)	Water Supply		Recommended pump depth (m/ft)	20	4.31	20	
Diameter (cm/in)	(Galvanized, Fibregla Concrete, Plastic, Ste	ss, Thickness	From	То	Replacement		16.76	25	4.32	25	
15.86	Steel	.48	+.45	8.83	Test Hole Recharge Wel	.	Recommended pump rate (I/min / GPM)	30	4.34	30	
13.00	Steel	.40	1.45	0.03	Dewatering W	- 11	45.5	40	4.33	40	
					Observation an Monitoring Hole		Well production (Vmin / GPM)			50	
					Alteration (Construction)		Disinfected?	50	4.34		
					Abandoned,	II	X Yes No	60	4.34	60	
(BEEDSIL)	Construction	n Record - Scr	een		Insufficient Su Abandoned, P	oor	Map of W			HIEF	
Outside Diameter	Material (Plastic, Galvanized, S	Slot No.	Dept	h (<i>m/ft)</i> To	Water Quality Abandoned, or	- 11	Please provide a map below following	instruct	ons on the b	ack.	.//
(cm/in)	(Flastic, Galvanized, G		From	10	specify		, 1			1	JV.
					Other, specify	- 11	1011	_		i	12
							L 19;			,	,
authors		Details	a de la compansión de l	_	lole Diameter	7110	P			ì	
	nd at Depth Kind of V		X Untested	From Prom		neter vin)	1				
	n/ft) Gas Other		Untested	0	8.83 15	.86	CHANON /	1045	E DR.	1	
	n/ft) Gas Other			8.83	23.46 15						-
Water four	nd at Depth Kind of V	Vater: Fresh	Untested		23.40 13)
(n	n/ft) Gas Other										
Business N	Well Contr lame of Well Contract	actor and Wel	I Technicia		tion ell Contractor's Licenc	e No.					
	1 Water Supp				1 5 5	8					
Business A	ddress (Street Numbe	-			unicipality		Comments:				
Box 49		D. D.	e E mall Ad		Stittsville	9					
Ontari	o K2S 1A				ater.ca		Well owner's Date Package Deliver	ed	Minis	try Us	se Only
	one No. (inc. area code)						information package 2 0 0 9 0 5	0 6	Audit No.	00	
613 83	6 1766	Miller	, Steph	nen			delivered X Yes Date Work Completed			73	5305
Well Technic	cian's Licence No. Signa	ature of Technic	ian and/or C	Total Company	te Submitted	016	No 2 0 0 9 0 5	0 6	JU	N 2	3 2009
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Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

Well Record

Regulation 903 Ontario Water Resources Act

Measurem	ents recor		etric 🗆 I	mperial		A068290	ΑО	682		n 903 O	ntario Wate Page	er Res	ources Act
Well Own			11/11/11/11								Hamba	HH	
First Name	222142424		ast Name / (Organization	1		E-r	mail Add	ress				Constructed
Mailing Add	dress (Stree	et Number/Nam	Talos (Custom	Homes	Municipality	Pro	ovince	Postal Code	1	Telephone N		ell Owner area code)
		Road, Un				Ottawa	Oı	ntari	K1J 9J8	3	613 747	39	93
Well Loca		ion (Street Num	ber/Name)			Township	HIDE		Lot	HHH	Concession	58113	
Lot 20	, Richm	nond Fore				Goulbourn			25	Descrip	3	Doolo	Code
County/Dis Ottawa		,,			(City/Town/Village Richmond				Onta		Posta	Code
UTM Coord	finates Zon	e Easting	. I No	orthing		Municipal Plan and Sublo	ot Numb	er		Other			
	8 31 8		ls/Abando	500442		ord (see instructions on the	back of	this form)					
General C		Most Comm				ner Materials	9 8 8 8 9 9 9 9		General Description	1		Dep From	th (<i>m/ft)</i> To
Brown		Clay			Stones				Packed			0	6.70
Grey		Limesto	ne		Dark L	ayers			Medium		6	.70	25.90
													-
STERIOS	000111111111111111111111111111111111111	7214/54453233	Annular	Space	33100210		Herri		Results of W	ell Yiel	d Testing	34,14,13	
Depth Se	et at (<i>m/ft</i>)		Type of Sea (Material ar	alant Used		Volume Placed (m³/ft³)			yield, water was: sand free		aw Down Water Level	_	ecovery Water Level
8.83	0	Grouted			urrv	.42m ³	0	ther, spe	cify	(min) Static	(m/ft)	(min)	(m/ft)
0.00		oroacea	Delicon	ite bi	ully	. 42m	If pum	ping disc	ontinued, give reason:	Level	3.96		
									(1	4.10	1	4.16
							Pump	intake s	et at <i>(m/ft)</i> 28	2	4.15	2	4.11
Mot	had of Co	onstruction			Well U	se	Pump		Vmin / GPM)	3	4.18	3	4.08
Cable To	ool	Diamond			Comm	ercial Not used	Durati	54.6 ion of pu		4	4.21	4	4.06
	Conventiona Reverse)Ai			mestic restock	☐ Municipal		1	hrs +	min	5	4.24	5	4.04
Boring X Air perci		Digging		gation dustrial	Cooling	g & Air Conditioning	Final v	water leve	l end of pumping (m/lt	10	4.26	10	4.
Other, s				her, specify			If flow		ate (Vmin / GPM)	15	4.32	15	3.97
Inside		onstruction Replacement of the OR Material	ecord - Cas		h (<i>m/ft</i>)	Status of Well Water Supply	Pacor	mmende	d pump depth (m/ft)	20	4.33	20	3.96
Diameter (cm/in)	(Galvaniz	ed, Fibreglass, , Plastic, Steel)	Thickness (cm/in)	From	То	Replacement Well	1	18.2		25	4.34	25	
15.86		teel	.48	+.60	8.83	Test Hole Recharge Well		mmende / GPM)	d pump rate	30	4.35	30	
13.00		reer	.40	7.00	0,03	Dewatering Well Observation and/or	Well	45.5	n (I/min / GPM)	40	4.35	40	
						Monitoring Hole Alteration			(enter / Gr m)	50	4.36	50	
						(Construction) Abandoned,		ected? es	No	60	4.35	60	
21000		Construction R	ecord - Scr	een	HEERIE	Insufficient Supply Abandoned, Poor	20,510		Map of W	ell Loc	cation		this state
Outside Diameter	N.	Material alvanized, Steel)	Slot No.	Dept	h (<i>m/ft</i>)	Water Quality Abandoned, other.	Please	e provide	a map below following	g instruct	tions on the b	ack.	
(cm/in)	(FidSUC, G	aivariizeu, Oveei)		From	То	specify		2	1				
					-	Other, specify		/					1# 20
							╢,					10	1.
Water four	nd at Depth	Water Det		χ Untested	De	Hole Diameter pth (m/ft) Diameter	1 3	3	CHANON	HOU	ISE		
		Other, spe			From	To (cm/in)	1 8		1			1	
		Kind of Water		X_ Untested		8,83 15,86	1 ,	1	i	0		i	
Water four	nd at Depth	Kind of Wate	r: Fresh	X Untested	8.83	25.90 15.55	\parallel 3	70	1			- 1	
24.99(Other, spe		Taskalalı	an Inform	-tion	×	3				1	
Business N		Vell Contractor	or and wei	Technicia		/ell Contractor's Licence No.	1		-				
		r Supply			h/	1 5 5 8 Junicipality	Comn	nents:	1				
Business A Box 49		reet Number/Na	ine)		IV	Stittsville							
Province	1	Postal Code		s E-mail Ad			Wells	owner's	Date Package Deliver	red 7	Minie	try He	e Only
Ontari Bus.Teleph		K2S 1A6 : area code) Na	off	ice @ca Technician	apitaly (Last Name	ater.ca First Name)	inform	ation			Audit No.	O O	E 0 4 0
613 83	6 1766		Miller	Steph	nen		delive	red	2 0 0 9 0 5 Date Work Complete	-	2	09	03TU
Well Technic	ician's Licenc	e No. Signature	of technici	and/or C		ate Submitted 2 Q O 9 NO N5 FO F6			2009 Y Y 05M	050	Received	1. 2	3 2008
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Ministry of the Environment

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Well Tag No. (Place Sticker and/or Print Below)

Well Record

A076823

A076823

tion 903 Ontario Water Resources Act

@ Queen's Printer for Ontario, 2007

Nell Owner's Information irst Name Last Name / Organization E-mail Address ☐ Well Constructed Talos Custom Homes by Well Owner failing Address (Street Number/Name) Province Postal Code Telephone No. (inc. area code) 5509 Canotek Road, Ottawa K1J 9J8 Ontario Unit 613 747 3993 Vell Location ddress of Well Location (Street Number/Name) Township L.ot Concession Lot 17, Chanonhouse county/District/Municipality Goulbourn
City/Town/Village 25 Postal Code Ontario Ottawa Carleton
ITM Coordinates | Zone | Easting Richmond Municipal Plan and Sublot Numbe Other Northing NAD 8 3 1 8 435238 5004404)verburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft) General Colour Most Common Material Other Materials General Description From 3rown Clay Stones 0 4.87 Gray 4.87 Limestone 29.86 Annular Space Results of Well Yield Testing After test of well yield, water was Recovery Depth Set at (m/ft) Type of Sealant Used Volume Placed Draw Down From То (Material and Type) (m^3/ft^3) Time [X] Clear and sand free Water Level Time Water Level Other, specify (min (m/it) (m/\hbar) .92 0 Grouted Bentonite Slurry $42m^3$ Statio If pumping discontinued, give reason: 4.08 Level 1 1 4.27 4.20 Pump intake set at (m/ft) 2 2 4.31 4.07 15.23 3 3 Pumping rate (I/min / GPM) 4.34 Method of Construction Well Use 54.6 4 4 Diamond Public Commercial ☐ Not used 4.35 Duration of pumping Rotary (Conventional) Jetting X Domestic Municipal Dewatering 5 5 1 hrs + min X Rotary (Reverse)Air 4.37 ☐ Monitoring Driving Livestock ☐ Test Hole Digging ☐ Irrigation Final water level end of pumping (m/h) Boring Cooling & Air Conditioning 10 10 4.41 X Air percussion Industrial 4.51 Other, specify Other, specify 15 15 If flowing give rate (Vmin / GPM) 4.45 Construction Record - Casing Status of Well 20 20 4,45 Open Hole OR Material Depth (m/ft) Inside Recommended pump depth (m/ft) (Galvanized, Fibreglass, Concrete, Plastic, Steel) 25 25 From 15.23 (cm/in) (cm/in) 4.46 Test Hole Recommended pump rate Recharge Well 30 30 (l/min / GPM) 4.48 5.86 7.92 Stee1 48 +.45 Dewatering Well 45.5 40 40 Observation and/or 4.49 Well production (I/min / GPM) Monitoring Hole 50 50 Alteration 4.50 Disinfected? (Construction) 🗓 Yes 🗌 No Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Please provide a map below following instructions on the back Outside Depth (m/ft) Water Quality Material Abandoned, other From Tο (cm/in) specify Other, specify Water Details Hole Diameter /ater found at Depth Kind of Water: ☐ Fresh X☐Untested Diameter (cm/in) Depth (m/ft) CHANON HOUSE From Τo 7.73 (m/ft) Gas Other, specify 0 7.92 /ater found at Depth Kind of Water: Fresh Untested 15.86 (m/ft) Gas Other, specify 29.86 15.23 /ater found at Depth Kind of Water: Fresh Untested Other, specify Well Contractor and Well Technician Information usiness Name of Well Contractor Well Contractor's Licence No apital Water Supply Ltd. _5 5 8 Comments usiness Address (Street Number/Name) Municipality ox 490 Stittsville Postal Code rovince Business E-mail Address K2S 1A6 office ocapitalwater.ca Well Technician (Last Name, First Name) Well owner's Date Package Delivered Ministry Use Only information us.Telephone No. (inc. area code) Name of W package delivered 2 0 0 9 0 6 1 z 095262 613 836 1766 Miller, Stephen and/or Contractor Date Submitted Date Work Completed cian's Licence No. Signature o X Yes AUG 10 2009 0 | 0 | ∏ No 20090619 2 0 0 9 0 6 1

Well Tag No. (Place Sticker and/or Print Below)

Well Record

A076822 A076822

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3	Ontario	V	la	ite	r	R	e:	sc	้าน	rc	es	×	act	

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rements recorded in: Metric Imperial Well Owner's Information First Name Last Name / Organization E-mail Address ☐ Well Constructed Talos Custom Homes by Well Owner Mailing Address (Street Number/Name) Municipality Province Postal Code Telephone No. (inc. area code) 5509 Canotek Road, Ottawa Ontario K1J 9J8 613 747 3993 Unit 1 Well Location Address of Well Location (Street Number/Name) Township Lot Concession Lot 12, Chanonhouse County/District/Municipality Goulbourn 25 Province City/Town/Village Postal Code Ontario Ottawa Carleton UTM Coordinates | Zone | Easting Richmond Municipal Plan and Sublot Number Northing Other NAD | 8 | 3 | 1 | 8 435390 5004542 Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft) General Colour Most Common Material Other Materials General Description From Brown Clay Stones 6.09 0 Gray Limestone Medium 6.09 42.97 Gray & White Sandstone 42.97 51.81 Annular Space Results of Well Yield Testing Volume Placed Depth Set at (m/ft) Type of Sealant Used After test of well yield, water was Draw Down Recovery То (Material and Type) (m^3/ft^3) X Clear and sand free Time Water Level Time Water Level (nvR)Other, specify (mîn) (m/it) 9.14 0 Grouted Bentonite Slurry $63m^3$ Static If pumping discontinued, give reason 4.32 Level 1 6.03 13.08 Pump intake set at (m/ft) 2 7.12 11.04 30.47 Pumping rate (I/min / GPM) 8.20 9.35 Method of Construction Well Use 54.6 ☐ Diamond ☐ Jetting 4 Cable Tool
Rotary (Conventional) Public Commercial ☐ Not used 4 8.83 7.70 Duration of pumping Domestic Municipal Dewatering 5 5 hrs + Rotary (Reverse) Air Driving 1 ☐ Test Hole ☐ Monitoring 9.48 6.70 Digging Irrigation Cooling & Air Conditioning Final water level end of pumping (m/h) 10 10 Air percussion
Other, specify 4.31 11.80 Industrial 15.90 Other, specify 15 15 If flowing give rate (I/min / GPM) 13.20 Construction Record - Casing Status of Well 20 Open Hole OR Material 14.19 Inside Depth (m/ft) X Water Supply Wall Recommended pump depth (m/ft) (Galvanized, Fibreglass, Concrete, Plastic, Steel) Diamete 🖺 Replacement Well (cm/in) From То 25 22.85 14.87 (cm/in) Test Hole Recommended pump rate Recharge Well 30 30 15.86 9.14 Steel (I/min / GPM) 15.23 +.45 Dewatering Well 45.5 40 Observation and/or 15.66 Well production (Vmin / GPM) Monitoring Hole 50 50 Alteration 15.83 Disinfected? (Construction) Abandoned, Insufficient Supply X Yes No 60 15.90 Construction Record - Screen Map of Well Location Abandoned, Poor Outside Please provide a map below following instructions on the back Depth (m/ft) Water Quality Material Diameter Slot No (Plastic, Galvanized, Steel) Abandoned, other, From To (cm/in) specify 107 Other, specify Water Details Hole Diameter Water found at Depth Kind of Water: Fresh 🗓 Untested Depth (m/ft) Diameter 50.59m/ft) Gas Other, specify From 0 9.14 | 15.86 Nater found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify 9.14 51.81 15.23 Vater found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Well Contractor and Well Technician Information lusiness Name of Well Contracto Well Contractor's Licence No Capital Water Supply Ltd. 5 1 5 | Jusiness Address (Street Number/Name) Municipality Comments Box 490 Stittsville Postal Code Business E-mail Address Well owner's K2S 1A6 Date Package Delivered office@capitalwater.ca Ministry Use Only information lus.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) package delivered ž095261 20090618 613 836 1766 Miller, Stephen
**Technician and/or Contractor Date Submitted Date Work Completed X Yes Signature of echnician's Licence No. __AUG 1 0 2000 0 | 0 ☐ No 2 |0 |0 |9 |0 |6 |1 | 7 20090619

Ministry of the Environment

Measurements recorded in: 💢 Metric 🗌 Imperial

Well Tag No. (Place Sticker and Carallel Well Record A076818 A076818 tion 903 Ontario Water Resources Act

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First Name)		Last Name /	-		-			E-mail Address		***************************************			I Constructed
Mailing Ad	dress (S	Street Number/Na		Custom		Viunicipality		· · · · · ·	Province	Postal Code		Telenbon		Nell Owner
		ek Road, U			, , , , , , , , , , , , , , , , , , ,	Ottawa	а		Ontario	K1J 9J	3	613		
Well Loc	***************************************	•					-		Olicar 10	1 114 70	<u> </u>	<u> </u>	7/ 3	223
		ocation (Street Nu)	-	Fownship		1,0000000000000000000000000000000000000		Lot		Concess	on	State (1995), version and the control
		chmond For	est	~!##***/\\\\\		Goulbo	ourn			25	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		3	
County/Dis						City/Town/Vi Richmo	-				Provir		Pos	tal Code
Ottawa UTM Coord	l Car dinates	Zone Easting	, N	orthing			lan and Sub	ot Nu	ımber		Other			
NAD	8 3	1 8 43534	8	500448	3									
Overburd	en and	Bedrock Mater				ord (see inst	ructions on th	e back	of this form)					
General C	olour	Most Com	mon Materia	l	Oth	ner Material	s		Gene	ral Description	1		D From	epth (<i>m/ft)</i> To
Brown		Soil		***************************************	Stone	s			Packed				0	6.09
Gray		Limesto	ne			***************************************			Layered &	Broken			6.0	
Gray		Limesto											***************************************	
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-	Medium	VIIII (17,000,071,000,070,07			7.6	
Gray		<u>Limesto</u>	ne						Broken Lay	vers			25.9	0 29.86
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		***************************************	//////////////////////////////////////		W. W. C. C. C. C. C. C. C. C. C. C. C. C. C.							***************************************		
			Annular	Space					F	Results of We	II Viol	d Toetin		Vision State College
Depth Se			Type of Sea	alant Used	ANAZANI 60036 ILOZOVA APOVI		e Placed		er test of well yield, v	vater was:		aw Down	***************************************	Recovery
From	То		(Material ar	······································		1	1 ³ /ft³)		Clear and sand fr Other, specify	ee	Time (min)	Water Le	vel Time	Water Level
9.14	0	Groute	d Bento	nite S	Lurry	.52m	_n 3	l	umping discontinue	d dive reason:	Static	<u> </u>		(1000)
		}						"	an pring discontinue	a, give reason.	Level	4.09		
				er procession of the control					The state of the s		1	5.33	3 1	5.06
								Pur	np intake set at (in	n/ft)	2	5.80) 2	4.53
Nichwestern 272 west to	NAGINA DITA DA	VIII (1900) 1000 10	Alexandria & Marindria (1911)	AAA-AAA I Ja Edensia Vedi	neiskin standardian kile		0201701701.24te.124te.124	Pur	22.85 mping rate (l/min / 0	SPM)	3	5.93	3	4.34
Meth ☐ Cable To		Construction Diamond	d Pu	L II -	Well Us		1	"	54.6	2, 111,	4			
		onal) 🔲 Jetting	Second	mestic	Comme Municipa		Not used Dewatering	Dur	ation of pumping	100000000000000000000000000000000000000	-	6.19	~	4.25
	Reverse)	Air Driving		estock	☐ Test Ho] Monitoring			in	5	6.27	7 5	4.19
☐ Boring Air percu	ssion	Digging	Irrig	-	☐ Cooling	& Air Conditi	oning	Hina	al water level end of	pumping (m/it)	10	6.47	7 10	4.10
Other, sp								If flo	6.60 pwing give rate (1/m	in / GPM)	15	6.52		The second section of the second seco
		Construction R	ecord - Cas	ing		Status	of Well		, , , , , , , , , , , , , , , , , , , ,	_, ,,,	20			
Inside Dîameter	Open (Galva	Hole OR Material inized, Fibreglass,	Wall Thickness	Dept	h (<i>m/ft)</i>	X Water		Red	commended pump	depth (m/ft)		6.54	r]	
(cm/in)	Concr	ete, Plastic, Steel)	(cm/in)	From	То	Test Ho	ement Well ole		22.85		25	6.55	5 25	
15.86	5	Steel	.48	+.45	9.14	Rechar	~		commended pump in / GPM)	rate	30	6.57	7 30	
				***************************************		Dewate	ering Well ation and/or	10/-	45.5		40	6.59	40	
					***************************************	Monitor	ing Hole	vve	Il production (I/min	/ GPM)	50			
		**************************************	^			Alteration (Constr		3	nfected?			6.60	,	
						Abando	oned, ient Supply	X	Yes No		60	6.60) 60	
		Construction R	ecord - Scre	144446		☐ Abando	oned, Poor			Map of We				
Outside Diameter	(Plastic	Material Galvanized, Steel)	Slot No.	Depti From	n (<i>m/ft)</i>	Water (Quality oned, other,	Plea	ase provide a map l	selow tollowing	ınstructi	ons on the	back.	100
(cm/in)		**************************************		FIOIII	То	specify		/	· ,		THE PERSON	tenat	jeght.	
			/ man (Other,	enecîfy	14	* I			1 101	i	N
						Culer,	specify		<i>!</i> —	 !		1 /	,	<i>[\frac{1}{2}</i>]
	((0))(00)(0)	Water Det	tails		Н	ole Diame	ter		1	-1		l		N.
		oth Kind of Wate		∏Untested		h (<i>m/ft</i>)	Diameter		ľ	•		1		N
		ias [] Other, <i>sp</i> e			From	9.14	(cm/in) 15.86					1		
		oth Kind of Wate		Untested		ļ			,			j E		3
TTTT://///////////////////////////////		as Other, spe	A A S A S A S A S A S A S A S A S A S A	Untested	9.14	29.86	15.23		i c	HAWON	100	<u> </u>		K
		as Other, spe	****						1					
		Well Contracto		Technicia	n Informat	ion			parameter .					
		Vell Contractor				l Contractor's	Licence No.							
apital	L Wat	er Supply	Ltd.		1	ATTO A CONTRACT OF THE PARTY OF	5 8					****		TOTAL CONTRACTOR OF THE PARTY O
	-	Street Number/Na	me)		i .	nicipality	,, l	Com	nments:					
lox 490 rovince	<i>J</i>	Postal Code	Business	E-mail Add		ittsvi	тте							
)ntario)	K2S 1A6			pitalwa	iter.ca				ckage Delivered		Mini	stry Us	e Only
1		nc. area code) Na	me of Well T	echnician (I	ast Name, F	irst Name)		pack		9 0 6 1	المند	Audit No.	nn	5268
13 836			Miller,	Steph	en		***************************************	deliv	Date W	ork Completed		4	UÜ	7400
0 0	ыпъ∟ксел 9	nce No. Signature	orgrechniciai	i and/or _f Co	nuactor Date	s Submitted	16 11 2		Yes No 2 0	اعلماماه		AUG	10	2009

Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

A076819

	Well	Record
ation 903 Ontario	Water F	Resources Act

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Nell Ow	SESSOCO HILLOSIONIO	nformation	Last Name /	Organization	า		E-mail Address			2	☐ \A\ali	Constructed
		i	Talos C	-								constructed ell Owner
failing Ad	ldress (St	reet Number/Na				lunicipality	Province	Postal Code		Telephone	No. (inc.	area code)
	Constitution of the Consti	ek Road, U	nit 1		(Ottawa	Ontario	K1J 9J8		613 7	47 39	93
Vell Loc	\$\$\$#\$#\$\$\$\$###\$########################		- (A)					Hot	(8)	Concession	- <u> </u>	
		cation (Street Nu chmond For	·			ownship Goulbourn		25		Concessi	3	
County/Dis	strict/Mur	nicipality	<u> </u>		C	ity/Town/Village			Provin		Postal	Code
Ottawa ITM Coord	a Carl	eton one Easting	Ni	orthina		Richmond Iunicipal Plan and Subl	ot Number		Ont	ario	1 1	
	8 3 1	· ·	1	5004478	Į.	anneipai i ian and oddi	ot Mainbei		Other			
						rd (see instructions on the	a back of this form)					
General C	Colour	Most Com	mon Material		Oth	er Materials	Gene	eral Description)		Dep From	oth (<i>m/ft)</i> To
3rown		Soil			Stones		Packed				0	6.40
Gray		Limeston	.e) I			Layered	& Broken			6.40	7.90
Gray		Limeston	e			77784 1111-0000 VA 170411 VA 17040 VA 17880 VA 17040 VA 1880 VA 17040 VA 1880 VA 17040 VA 17040 VA 17040 VA 1	Medium				7.90	45.10
		-41			***************************************	74,4-14,1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1						
		e e e e e e e e e e e e e e e e e e e			-							
<u></u>												
		***************************************	***************************************									
			A/1/2/2007				<u> </u>					
.A												
Death C	et at (<i>m/ft</i>	1	Annular Type of Sea			Volume Placed	After test of well yield,	Results of Wi		d Testing aw Down	**************************	ecovery
From	To		(Material ar			(m³/ft³)	Clear and sand		Time	Water Lev	/el Time	Water Level
9.44	0	Grouted	Benton	ite Slu	ırry	.63m3	Other, specify		(min) Static	(m/ft)	(min)	(m/ft)
					***************************************		If pumping discontinue	ed, give reason:	Level	4,08		
			**************************************	555541Hammefrefremefres Saméra A74885	**************************************				1	5.93	1	18.15
	<u> </u>	***************************************	CATALOGA COMPANIA MARKATAN				Pump intake set at (71/ft)	2	7.38	2	16.05
	<u> </u>						30.47 Pumping rate (I/min /	GPMI	3	8.68		14.34
DISCONDENTIFICAÇÃO DE COMPANSA O	IDIEATHER RAYGICA PLO	Construction			Well Us	* Part (1292) 1393 (1107) 1300 (1292)	54.6	Gr Wy	4			
Cable To		☐ Diamon nal) ☐ Jetting	1 =	blic mestic	☐ Commer		Duration of pumping			9.77		12.59
Rotary (ir Driving	Liv	estock	Test Hol	e Monitoring		min	5	10.50	5	11.07
☐ Boring ☐ Air perci	ussion	Digging	☐ Irri	gation Iustrial	Cooling	& Air Conditioning	Final water level end of 20.91	or pumping (<i>m/it)</i>	10	14.17	10	6.07
Other, s			_ Cti	her, specify_			If flowing give rate (#	min / GPM)	15	16.24	15	4.31
		Construction F	1	T-W-		Status of Well		\!!#U##################################	20	17.47		4.07
Inside Diameter	(Galvai	Hole OR Material nized, Fibreglass,	Wall Thickness	From	n (<i>m/ft</i>) To		Recommended pum	p depth (m/ft)	25		1 _ 1	
(cm/in)	+	ete, Plastic, Šteel)	(cm/in)			Test Hole	30.47 Recommended pum	p rate		18.53		
15.86	5	Steel	.48	+.45	9.44	Recharge Well Dewatering Well	(l/min / GPM)		30	19.27	30	
						Observation and/or	Well production (I/mi	7 / GPM)	40	20.25	40	
	STO. And December Adult St. A. P. America					Monitoring Hole Alteration	Dining to the second		50	20.55	50	
			S MARLES AND CONTROL VALUE OF THE SECOND STATE	MARKET ALVO CONTRACTOR OF THE STATE OF THE S		(Construction) Abandoned,	Disinfected? X Yes No		60	20.91	60	
		Construction F	 Record - Scre) en		Insufficient Supply		Map of W	ell Loc			
Outside	PARTITION OF THE PROPERTY AND INC.	Material	Annual commission sensual		n (<i>m/l</i> it)	Abandoned, Poor Water Quality	Please provide a map				back.	
Diameter (cm/in)	(Plastic,	Galvanized, Steel)	Siot No.	From	То	Abandoned, other, specify	()		•		\$	
							L'i	,			1	
MAY 1000						Other, specify]	distra-	<u></u>		1	1
		Water De	tails		l H	ole Diameter		•	•		1	1
Vater four	nd at Dep	oth Kind of Wate		X Untested	Dept	h (m/ft) Diameter	LOT 3 !				1	2025
		as Other, <i>sp</i>			From	To (cm/in)	720 1				!	h
	-	oth Kind of Wate		X Untested	0	9.44 15.86		CHANON	HOL	15E 1	1	
		as Other, <i>sp</i> oth Kind of Wate		Untested	9.44	45.10 15.23		The state of the s			The state of the s	7
		as Other, <i>sp</i>										13
975. dei 1782. d		Well Contract		Technicia								an market
		Vell Contractor	т			li Contractor's Licence No.						egypholestore
		er Supply Street Number/Na			1 Mu	5 5 8 nicipality	Comments:			***************************************	***************************************	
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rovince	_	Postal Code	Business	s E-maîl Add		and the second of the second of the						·····
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us.Telephe		nc. area code) N				rrst Name)	package 2 0	0 9 0 6		Audit No.	nar	3266
/ell Technic	oo 1 /6 cian's Licer	io nce No. Signatur	Miller, ¶gf Technicia	ವ೯೬೯ಗಿ an ar l d/or Co	en Intractor Dat	e Submitted		Work Completed				9 3000
0 0	i i	7 15/11	1 Km			0090615		0 9 0 6	ျ ့0	Received	*****	- PANER NEW
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Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. (Place Sticker and/or Drint Relow)

Well Record

A082857

A 082857

on 903 Ontario Water Resources Act

First Name	5:IIIIC		Last Name /	Organiza	tion		E-mail Address							
1 list Name		•	Talos (_				LIIIGII A	301633					Constructed Vell Owner
Mailing Address	(Stree	t Number/Na		Jus con		/unicipality	y	Province		Postal Code	-	Telephone	-	c. area code)
5509 Can	•		,			Ottawa	•	Onta	rio	K1U 9J			747 3	
Well Location								- Olica		419 129	<u> </u>	OTD !	<u> </u>	D)D
Address of Well		on (Street Nu	mber/Name)	10000218005012005011	7	ownship			1110000110001110001	Lot	Sessolvaharovisa	Concessi	on	25615264.05554.0555.79654
Lot 34 R	ichm	ond Fore	est			Gou1b	ourn			25			3	
County/District/	Munici	pality			(City/Town/\	-			:	Provin		Posta	al Code
Ottawa C	ar1e	ton				Richmo					Onta	ario		
UTM Coordinates	- 1			orthing	1	Municipal F	Plan and Subl	ot Number			Other			
NAD 8	- 1	8 43540		50046										
Overburden a	1							back of this fon	***************************************			1 (61 (8) (6)	D-	ath (as (ft)
General Colour		Most Comr	non Material		Oth	Other Materials Genera				I Description			From	pth (<i>m/ft</i>) To
Brown	S	andy Cla	ìV					T.c	ose				0	2.43
Brown Clay						ones		. 1.30	JOGC				2.43	
***************************************					D.L	.ones								
Gray	<u> </u>	imestone	}					M _€	edium				6.40	45.10
														
	-													
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		VIII. SEE SEE SEE SEE SEE SEE	Annular	C Released to Supple	16 (16 (10 (10 (10 (10 (10 (10 (10 (10 (10 (10		(Marie III de la companya de la companya de la companya de la companya de la companya de la companya de la comp	7637500000000000000000000000000000000000		esults of We	II V:-'	атали	91258(V355V733550)	
Depth Set at (m/ft)	<u> </u>	Type of Sea	Color Brown Brown Color		Volum	ne Placed	After test of w			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	a resun aw Down		Recovery
	To		(Material ar		<i>-</i>		/m³/ft³)	Clear an				Water Le		
9.44 ()	Grouted	Benton	ite S	lurry	1 _ 1	15m ³	☐ Other, sp	ecify		(min)	(m/ft)	(min)	(m/ft)
								If pumping dis	continued	, give reason:	Static Level	4.05	;	
		***************************************									1	4.47	, 1	4.15
								Pump intake	eet at (m/	#}				
									30.47	14)	2	4.53	. 2	4.13
								Pumping rate		PM)	3	4.52	3	4.12
Semida-semida-seminatary optionals to a control of the control of					Well Us		_		54.6	,				
				Comme Municip		Not used Dewatering	Duration of p			4	4.54	4	4.11	
Rotary (Conve				estock	☐ Test Ho		Dewatering Monitoring	1 hrs +	mi	n	5	4.55	5 5	4.10
Boring		Digging	☐ Irri		☐ Cooling			Final water lev	vel end of	oumping <i>(m/ft)</i>	10	4.58	3 10	4.09
X Air percussion			☐ Ind						4.60					
Other, specify				ner, <i>speci</i> i	-			If flowing give	rate (l/mi	n / GPM)	15	4.60) 15	4.07
		struction R	1	1			us of Well				20	4.60) 20	
		OR Material d. Fibreglass,	Wall Thickness		pth (<i>m/ft)</i>	X Wate	r Supply acement Well	Recommend		depth (m/ft)	25			
(cm/in) Co	ncrete,	Plastic, Steel)	(cm/in)	From	То	Test I		Recommend	22.85		25	4.59	25	
15.86	Ste	eel	.48	+.4	5 9.44		arge Well	(I/min / GPM)	64 panipi 45 5	ate	30	4.59	30	
		'					atering Well				40	4.60) 40	
						_	rvation and/or oring Hole	Well producti	on (I/min /	GPM)				
						Altera		Disinfected?			50	4.60) 50	
						Aban	struction) doned.	X Yes	No		60	4.60	60	
	· ·	nstruction R	ecord - Scre	on .		Insuff	ficient Supply			Map of W		ation		
Outside		aterial		· · · · · · · · · · · · · · · · · · ·	pth (<i>m/ft</i>)		doned, Poor r Quality	Please provid	e a map b				back.	2941109010111111111111111111111111111111
Diameter (cm/in) (Pla		vanized, Steel)	Slot No.	From	· .` ·	Aban	doned, other,					· [レロブガ	+24
(6)7117						speci	ity		; L				15E T	,
						Other	r, specify		i			1100	15E T	46
							., 5,500,7		ì	۵		1		
		Water De	talls		Н	lole Diam	eter		1					
Water found at	Depth			X Untest		h (<i>m/ft)</i>	Diameter	-	Diam's	CHANON	110 11	<i>5</i> &		
43.58 _{m/ft)} [Gas	Other, spe	ecify		From	То	(cm/in)						\	
Water found at	Depth	Kind of Wate	r: 🗌 Fresh [Untest	ed 0	9.44	15.86						/	
		Other, spe			9.44	45.10	15.23	21						
Water found at	Depth	Kind of Wate	r: Fresh [Untest	ed	13.10	7 13.23	Th .	D	1				
(m/ft) [Gas	Other, spe	ecify						KICHM					
			or and Well	Technic	ian Informat				FORE	2/				1
Business Name							r's Licence No.			V . a	, ,	TREE	م.	1
Capital W					1		5 8		*	15.270	C	INCC.	<u> </u>	
Business Addres	s (Stre	et Number/Na	ame)		1	nicipality	ri 11.	Comments:						
Box 490 Province	1~	netal Code	Direir	1 A		tittsv	rrre							
Ontario	1	ostal Code 12S 1A6	Business		oddress capitalw	o+		Well owner's	Data Day	kage Delivere	d 11	Bain	etm/li~	e Only
Bus.Telephone N			me of Well T	echnicia:	capi taiw i (Last Name	ater.c	.d. e)	information			`	Audit No	\$5 01600AA680	(18/6/02/2010/03/2018/03/2018/03/20
613 8B6 1		- 1	Miller,				-,	package delivered	2 0 C	9 4 4	설 [9]	Z	10	1774
Well Technician's I	icence	No. Signature	7ø/Technicia	n and/or	Contractor Dat	e Submitte	d ,	X Yes	1 .	rk Completed		0.0376	me line bed	1 6 2010
0 0	9	7 / Kol	letters	_ (2	0 0 9	1 1 3 0	☐ No	2 0 0	9 111	2 5	Received	τĽΩ	
		- Just	7/					h						



Measurements recorded in: Well Owner's Information

Ministry of the Environment

Metric Imperial

Well Tag No. (Place Sticker

A082913

A 082913

Well Record

on 903 Ontario Water Resources Act

Talos Custom Homes by Well-	ea code)
Well Location Address of Well Location (Street Number/Name) Township Lot Concession	<u>' </u>
Address of Well Location (Street Number/Name) Lot 16 Richmond Forest County/District/Municipality Ottawa Carleton UTM Coordinates Zone Easting Northing NAD 8 3 1 8 435239 5004376	
County/District/Municipality Ottawa Carleton UTM Coordinates Zone Easting Northing Municipal Plan and Sublot Number 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 From Brown Sand Stones O Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	UNIVERSAL (SEVALSES)
Ottawa Carleton Richmond Ontario UTM Coordinates Zone Easting Northing Northing NAD 8 3 1 8 435239 5004376 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 From Brown Sand Stones O Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	odo.
NAD 8 3 1 8 435239 5004376 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 From Brown Sand Stones 0 Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	
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 From Brown Sand Stones 0 Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	
General ColourMost Common MaterialOther MaterialsGeneral DescriptionDepth FromBrownSandStones0BrownClayStonesPacked1.21GrayLimestoneLayered4.87	
Brown Sand Stones 0 Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	(m/ft) To
Brown Clay Stones Packed 1.21 Gray Limestone Layered 4.87	1.21
Gray Limestone Layered 4.87	4,87
Gray Limestone 7.61	7.61
	45.10
	~~~
Annular Space  Depth Set at (m/ft)  Type of Sealant Used  Volume Placed  After test of well yield, water was:  Draw Down  Recu	очегу
From To (Material and Type) (m³/ft³) 🚨 Clear and sand free Time Water Level Time W	ater Level
8.83 0 Grouted Bentonite Slurry .42m ³ Other, specify (min) (min) (min) (min) (min) (min)	(m/ft)
LC4G1	.12
Fluoro intello and at (m/fl)	
30.47	.10
Method of Construction Well Use 5/, 6	.10
Cable Tool Diamond Public Commercial Not used	.10
Actary (Reverse) Air Driving Livestock Test Hole Monitoring Livestock Test Hole Monitoring Final water level and of purming (m/ft)	.08
☑ Air percussion ☐ Industrial ☐ 4.54 ☐ 4.51 ☐ 4	.05
	.03
Construction Record - Casing Status of Well Inside Open Hole OR Material Wall Depth (m/ft) K Water Supply Recommended pump depth (m/ft) 20 4.54 20 4	.01
Diameter (Galvanized, Fibreglass, Thickness (cm/in) From To Replacement Well 22.85	.99
15.86 Steel .48 +.45 8.83 Recharge Well (   Recommended pump rate    30 4.52    30	
Dewatering Well Observation and/or Well production (//min / GPM) 40 4.53 40	
Monitoring Hole 50 4 56 50	
(Construction) Abandoned, Disinfected? X Yes No 60 4.54 60	
Construction Record - Screen Insufficient Supply Abandoned, Poor Map of Well Location	
Outside Material Depth (m/ft) Water Quality Please provide a map below following instructions on the back.	
(cm/in) (Plastic, Galvanized, Steet) From To Abandoned, Other, specify KINVE STREET	
Other, specify	<u> </u>
101.10	
Water Details  Water found at Depth Kind of Water: ☐ Fresh X Untested Depth (m/ft) Diameter  Depth (m/ft) Diameter	
24.38(m/ft) Gas Other, specify From To (cm/in)	
Water found at Depth   Kind of Water: □ Fresh   Unitested   0   8.83   15.86     43.27 (m/ft) □ Gas □ Other, specify   8.83   45.10   15.07     3	
Water found at Depth Kind of Water: Fresh Untested	
(m/ft) ☐ Gas ☐ Other, specify	
Capital Water Supply Ltd.   Contractor's Licence No.   Capital Water Supply Ltd.   Contractor's Licence No.   Capital Water Supply Ltd.   Ca	
Capital Water Supply Ltd. 1   5   5   8	
Business Address (Street Number/Name)  Box 490  Municipality  Stittsville	<del></del>
Province Postal Code Business E-mail Address	
Ontario K2S 1A6 office@capitalwater.ca  Bus.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name)  Well owner's Date Package Delivered information package Old Name of Well Technician (Last Name, First Name)	nly
613 836 1766     Miller, Stephen     delivered   200 0 47 M 0 3 0   Z LUL	752
Well Technician's Licence No. Signator of Technician and/or Contractor Date Submitted	2010



Measurements recorded in:

Well Owner's Information

Ministry of the Environment

lmperial

Metric

Well Tag No. (Place Sticker and/or Print I

A082914

A 082914 Well Record

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Page_.

First Name	First Name   Last Name / Organization   Talos Custom Hom							_			E-mail Address				_	Il Constructed
Mailing Address	•		me)	Custo	m Homes	1	unicipality Ottawa			Province Ontar	rio	Postal Code		Telephone	No. (ii	Well Owner
Well Location	ı							nysta military sa sa sa sa sa sa sa sa sa sa sa sa sa		60 (60 (6)		-   -   -   -   -   -   -   -	1	P=P 1		9PP
Address of Well Lot 15 -				ne)		1	ownship Goulbou	ırn				Lot 25		Concessi	on 3	
County/District/N			or est				ity/Town/Vil					23	Provir	ice	_	tal Code
Ottawa Ca							Richmor						Ont	ario		
UTM Coordinates			801 I	Northing 5004	607	M	unicipal Pla	an and Subl	ot Nu	ımber			Other			
Overburden an		_				COI	'd (see instru	uctions on the	) back	of this form	1)					
General Colour		Most Com	mon Mate	ial	C	Othe	er Materials				Genera	al Description	1		Fron	epth ( <i>m/ft)</i> 1 To
Brown		Clay			Sto	nes									0	4.26
Gray		Lime	stone							La	yered				4.2	6.09
Gray		Lime	stone							Ме	dium				6.0	9 45.10
Pala angles and the	Maria	1606599 to 2101112 · · ·	nankolini interio	diam'r	Vineavior and	150cm	307.1300.00033371	90000000 as 0	1	714/2000000000000000000000000000000000000	O manufativi i ·	Workston - 1275 - 1	0042-00-	N. S. C. C. C. C. C. C. C. C. C. C. C. C. C.	Million and P. Tr.	
Depth Set at (r	m/ft)			l <mark>ar Space</mark> Sealant Use	ed		Volume	Placed	Afte	er test of we		esults of W aterwas:		d Testing aw Down	3	Recovery
From	To		(Material	and Type)			(m ²	³ /ft ³ )	X	Clear and	sand fre			Water Lev (m/ft)	el Tim	e Water Level
7.31	0 (	Groute	l Bent	onite S	Slurry		.63n	n ³	1 ł	Other, <i>sp</i> umping dis		, give reason:	Static	3.80		7 77079
									"	,		, 9	Level 1			2.06
									Pui	mp intake s	set at (m	<del>/ft</del> )		4.14		3.86
										-	.47		2	4.18		J.02
Method o	of Cons	truction			Well	Use	9		Pui	mping rate		PM)	3	4.19	3	
Cable Tool	N	Diamon		Public Domestic	Comr			Not used Dewatering	Du	54 ration of pu		,,	. 4	4.20	4	
Rotary (Convertible)				Domestic Livestock	☐ Munic ☐ Test l			Monitoring		1hrs +_	m		5	4.21	5	
☐ Boring  Air percussion		☐ Digging		Irrigation Industrial	Cooli	ng 8	& Air Condition	oning	Fin		el end of . 25	pumping <i>(m/ft,</i>	10	4.24	. 10	)
Other, specify				Other, spec	ify				If flo	owing give		n / GPM)	15	4.24	15	5
		truction F	1			W/A		of Well					. 20	4.24	20	)
Diameter (Ga	alvanized,	PR Material Fibreglass, astic, Steel)	Wall Thicknes		epth ( <i>m/ft)</i> I To		X Water S ☐ Replace	, , ,	Re		.85	depth (m/ft)	25	4.23		5
· · · · · · · · · · · · · · · · · · ·			(cm/in)				Test Ho			commende		rate	30	4.24		
15.86	Stee	<u>5</u> ⊤	.48	+.45	7.31	l.	☐ Dewate	ring Well	( <i>vm</i>	nin / GPM) <b>4</b> 5	•5		40			
							Observa  Monitori		We	ell production	n (Vmin)	GPM)	ļ	4.24		
							Alteration (Constru			infected?	****		50	4.23		
							☐ Abando	,	L	Yes 🗌	No		60	4.24	60	}
Outside	***************************************	struction F	Record - S		epth ( <i>m/ft</i> )		l	ned, Poor	Ple	ase provide	a man b	Map of W elow following			back	
Diameter	Mate stic, Galva	rial nized, Steel)	Slot No	From			☐ Abando	ned, other,								FX
							specify 				HAN	א מנסמוא	01/5E			
						_	Other, s	specify		1		ø	i		\	.1
		Water De	fails			Н	ole Diamet	er		H			t		,	RICHMOND FOREST
Water found at D		nd of Wate	er: 🗌 Fres		ted De	eptř	(m/ft)	Diameter (cm/in)		1			ı			FOREST
43.58(m/ft) Water found at E				- 111-4	From 0	1	7.31	15.86		İ		ļ	ł			ľ
		nd of vvate ∃Other, <i>sp</i>		nJontes	7.31		45.10	15.07		ł			1			
Water found at D	Depth K	ind of Wate	r: Fres	n Untes	ted		43.10	13.07		1			- <del>- '</del> DT F	+ 15		
(m/ft)		Other, sp		to a grama Works a state a		10/111 - 4						).	י יפת	,		
Business Name o			or and W	eli i echni	cian Inform		on Contractor's	Licence No.								
Capital W						1	1	5   8								1
Business Address Box 490	s (Street	Number/N	ame)		4		nicipality cittsvi	110	Cor	mments:						
Province	Pos	tal Code	Busin	ess E-mail		اب	-T-C-D-V-T									
Ontario Bus.Telephone No	K2	S 1A6	of	fice@	capital	Wa	ter.ca		info	ll owner's mation		ckage Deliver		Mini Audit No.	stry L	se Only
	-									kage vered		0   9   1   0   ork Completed		Z	10	1753
613 836 1 Well Technician's L		Signatur	Techni	cian and/or					II	Yes	l	•	- 11	F	E8	1 6 2010
0 0 9	9   7	XX	ly hi	~~	;	Ž	9091	030	L	] No	4 4	0 9 1 0	비호	Received	A-N 09-	

Measurements recorded in: 🔲 Metric 🔲 Imperial

Well Tag No. (Place Sticker and/or Print Below)

**Well Record** 

A076840

tion 903 Ontario Water Resources Act

Measurements	recorded in:	Metric 🗌 Imper	ial	<b>A</b> 070040	10768	<b>4</b> 0	Pag	ge	_ of
Well Owner? First Name	s Information	Last Name / Organ		<u> </u>	E-mail Addre			. —	Constructed
Mailing Address	(Street Number/Na	<u>Talos Cu</u>	stom Hom	e.s/lunicipality	Province	Postal Code	Telephor	1	ell Owner area code)
-	notek Road	•		Ottawa	Ontari	о кіј 9.		747 3	
Well Location	ì								
	Location (Street Nu - Chanonho			ownship		Lot	Concess	sion	
County/District/I		ouse Dr.		Goulbourn City/Town/Village		25	Province	3 Posta	l Code
Ottawa	Carleton			Richmond			Ontario		
UTM Coordinates	Zone   Easting     Easting	Northing	4590	lunicipal Plan and Subl	ot Number		Other		
	عرن صديد مدف وحديد والمستحد والمستخد والمستحدث والمستحدث والمستحدث والمستحدث والمستحدث والمستحدث والمستحدث والم			rd (see instructions on the	e back of this form)				
General Colour	Most Com	mon Material	Oth	er Materials	G	eneral Description	1	Der From	oth ( <i>m/ft)</i> To
Brown	Clay		Sto	200				0	4.26
Gray	-	stone			Lavere	l & Broke		4.26	
Gray		stone			Medium	r w DI OVE	<del>- 11</del>		37.48
.uray	L.J.mes	s cone			TIOU LUM				
		Annular Spac	e:			Results of W	ell Yield Testir	າດ	
Depth Set at (		Type of Sealant L	Jsed	Volume Placed	After test of well yi	eld, water was:	Draw Down	R	tecovery
	То	(Material and Typ		(m³/ft³)	Clear and sai		Time Water Le		Water Level (m/ft)
7.31	Groute	d Benton:	<u>ite Slurı</u>	y .84m ³	If pumping discont		Static Level 3.1	7	
							1 3.9		3.93
					Pump intake set a	at (m/ft)			
					18,2		4.1	/	3,66
Method	of Construction		Well Us	е	Pumping rate (I/m	,	3 4.3	1 3	3.51_
Cable Tool	☐ Diamononntional) ☐ Jetting	d ☐ Public ☑ Domestic	Commer		54.6 Duration of pump	ing	4 4.4	1 4	3.47
X Rotary (Rever	ntional) Usetting	Livestock			1hrs+	min	5 4.4	5 5	3.41
☐ Boring ☐ Air percussion	Digging	☐ Irrigation ☐ Industrial	_ •	& Air Conditioning	Final water level en		10 4.5	9   10	3.30
Other, specify		Other, sp			4.7 If flowing give rate		¹⁵ 4.6	4	3.27
		ecord - Casing		Status of Well	l		20 4.6		3.24
Diameter (Ga	en Hole OR Material alvanized, Fibreglass,	Wall Thickness	Depth ( <i>m/ft)</i> om To	Water Supply Replacement Well	Recommended p				
	ncrete, Plastic, Šteel)	(cm/in)	OIII 10	Test Hole	18.2 Recommended p		4.0	0	3.21
15.86	Stee1	.48 +.	.45 7.31	Recharge Well Dewatering Well	(I/min / GPM) 45.5		4.6	9	<u>3.19</u>
				Observation and/or     Monitoring Hole	Well production (I	/min / GPM)	40 4.7	3   40	<u> 3.17</u>
				Alteration (Construction)	Disinfected?		50 4.7	3 50	
				Abandoned,	X Yes No		60 4.7	2 60	
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Outside Diameter (Plas	Material stic, Galvanized, Steel)	Slot No.	Depth ( <i>m/ft)</i> om To	Water Quality Abandoned, other,	Please provide a n	nap below following	instructions on th	e back.	
(cm/in)	, , , , , , , , , , , , , , , , , , , ,	' '	0111	specify					
				Other, specify	CHA	wowHouse	5 DR		
						NONHOUSE	0		
Water found at I	Water De Depth Kind of Wate			ole Diameter h ( <i>m/ft</i> ) Diameter		1			
	Gas Other, spe	41	From	To (cm/in)		1		\	
	Depth Kind of Wate		ested 0	7.31 15.86		LOT	· <i>13</i>		
	Gas Other, spe Depth Kind of Wate		7.31	37.48 15.23		, – –			
	Jeptn Kind of wate ]Gas ☐ Other, <i>spe</i>		ested		•	δ			
11119		or and Well Tech	nician Informat	ion	RICHMON. FOREST	J			
	of Well Contractor		We	Il Contractor's Licence No.	1-0RES1			1	
Capital	Water Sup s (Street Number/Na	ply Ltd.		5 5 8	Comments:		441	1	
Box 490	o (Ouser Muniberilys	ano,		tittsville	Outsinesits.				
Province	Postal Code	Business E-ma	il Address						
Ontario	K2S IA6		O capita	lwater.ca	information	te Package Deliver	14 1 1 1 1 1 1 1 1 1 1	nistry Use	ASSESS ASSESSMENT AND ASSESSMENT OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PART
						00908	<u>න් 7</u>   Z	<u>: 10</u> 1	1702
	1766   licence No. Signature	of Technician and	or Contractor Dat	e Submitted	<u>X</u> Yes	te Work Completed			
	9 7 /	effor ~	1 3	0019018112	No 2	009 Y 08M	04 Rece <b>ll</b>	<u> </u>	2111



Measurements recorded in: 🛛 Metric 🔲 Imperial

Well Tag No. (Place Sticker and/or Print Relow)

Well Record

A076861 **A076861** 

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4401111	LOCOIG
3 Ontario Water Res	ources Act
Page	of

Well Owner	r's Info	rmation		(i)												
First Name			Last Name	-						E-mail Address				☐ Well Constructed		
<b>NATIONAL AUGUST</b>				s Cust	om Homes		- ! !! <b>.</b> .			D	10-4-10-4-		T-1	-	ell Owner	
Mailing Addres							cipality			Province	Postal Code				area code)	
5509 Car		Koad,	Unit I			Ut:	tawa		53463280 AU	Ontario	K1J  9J8		613 74	/ 59'	93	
Well Location Address of We	Warter Straute with the Print	on (Street N	lumber/Nan	in an initial con-	59 / Sir 20 / Sir 24	Town	ehin	ali na na na na na	800/800/40	Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel Samuel	Lot		Concessio	((((((((((((((((((((((((((((((((((((((	G. 315141,0254,1903, 0501	
Lot 21,				,		-	u1bou	ויים			3		2			
County/District	t/Munici	pality	DILLYC			City/Town/Village					<u> </u>	Provin			I Code	
Ottawa (	Carle	et.on				Ri	chmor	nd				Ont	ario			
UTM Coordinate	es Zone	Easting		Northing				n and Subl	ot Nur	mber		Other			·	
NAD 8				5004												
Overburden a									back i			(E) (2) (A)		Dor	oth ( <i>m/ft</i> )	
General Colou	ır	Most Cor	nmon Mate	ial	Ot	her M	laterials	······································	<u> </u>	Gene	ral Description			From	To	
Brown		Soil			Ston	es			Packed					0	4.87	
Gray		Limest	one							Medium				4.87	45.10	
										TIEG Fun				,,,,,	13.10	
,			******		***************************************			***************************************	<u> </u>							
***************************************			****					***********************								
	-															
				ar Space					15/607/00		Results of We					
Depth Set at	: ( <i>m/ft)</i> To			Sealant Us and Type			Volume	Placed /ft³)		er test of well yield, vice of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the c		\$	aw Down	$\rightarrow$	Recovery Water Level	
7.92	0	Canada						/		Other, specify	66	(min)	(m/it)	(min)	(m/ft)	
7.92	<u> </u>	Groute	d Bent	ource	Sturry		.63m	آ	1 1	umping discontinue	d, give reason:	Static	2 00			
												Level	3.90			
									_		- 121	1	5.23	1	5.55	
									Pun	np intake set at <i>(n</i> 24 <b>.</b> 38	νπ)	2	6.	2	4.60	
hande kannannen (2012) eine er Masser er (2	20.00002 A122000	Auto nitricus de distanti di anno consul	6 Charaching Danbardina	0040074.000031.00032.00032.00003	10/00/01/11/04/04/01/12/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14/01/14	900000000000000	sansunalat/Astasu	MB 078619500195 MS MB HT	Pun	nping rate (Vmin /		3	6.38	3	4.16	
	of Co	nstruction		Public	Well U			Not used		54,6	,	4		4		
Cable Tool	ventional	☐ Diamo Jetting	_	Domestic	☐ Municip			Dewatering	Dur	ation of pumping			6.68		4.11	
X Rotary (Reve		r 🗆 Driving	,   🗇	Livestock	Test Ho		_	Monitoring	_1		nin	5	6.90	5	4.05	
☐ Boring  ☐ Air percussion	\n	☐ Diggin		rrigation ndustrial	Cooling	g & Air	r Conditio	ning	Fina	al water level end or	t pumping (m/tt)	10	7.33	10	3.96	
Other, specif				Other, spec	cify				If flo	7,66	nin / GPM)	15	7.46	15	3.93	
	Coi	nstruction	Record - C	asing		编数	Status	of Well		9 9 (	, 2,	20		20		
Inside C	Open Hole	e OR Material d, Fibreglass,	Wall Thicknes		epth (m/ft)		Water S	- / -	Rec	commended pump	depth (m/ft)	20	7.53	20	3.91	
(cm/in)	Concrete,	Plastic, Steel)	(cm/in)	Fror	n To		Replace Test Ho	ement Well le		24.38		25	7.55	25		
15.86	Sto	eel	.48	+.	45 7.92		Recharg			commended pump in / GPM)	rate	30	7.57	30		
			******				Dewater	ring Well tion and/or	<u> </u>	45.5		40	7.60	40		
-							Monitorir	ng Hole	vvei	Il production (I/min	/ GPM)	50		50		
						凵	Alteration (Constru		Disi	nfected?			7.64	+		
							Abando	ned,	LX.	Yes No		60	7.66	60		
	Co	onstruction	Record - S	reen		3/4/21		ent Supply ned, Poor	Man		Map of W		<u> </u>			
Outside Diameter		aterial	Slot No		epth (m/ft)	_	Water C	luality ned, other,	Plea	ase provide a map	below following	instructi	ions on the l	ack.		
(cm/in)	iasiic, Ga	Ivanized, Stee	n/	Fror	n To	_	specify	nea, oaier,				<b>.</b>				
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							Other, s	pecify		#21	L			1		
		Water D	etalle		<u> </u>	Hole	Diamet	er l		1	•			1	۱۸ بر	
Water found at	t Depth			1 X Untes	······································	oth (m/	***************************************	Diameter		;				ŧ	N	
27.43(m/ft)					From		То	(cm/in)						· 	<i>Y</i>	
Water found at				ı X Unte	sted 0	_   7	7.92	15.86		1 3	CHANON	Hous	SE NO. 1		•	
43.27(m/ft)	Gas	Other, s	pecify		7.92	45	5.10	15.23	ا						, , , , , , , , , , , , , , , , , , ,	
Water found at		Other, s		ıonte	stea										1/2/2	
(17/114)				II Tochn	ician Informa	otion				RICI	HMONA					
Business Name	2011-2-2011-2		v. ullu fi	rn Eveliji	,			Licence No.			HMOND FOREST				1	
Capital 1	Water	Suppl	y Ltd.			!		5   8								
Business Addre	ess (Stre	et Number/i	Name)		1	unicip	_	_	Com	nments:						
Box 490 Province	l D	ostal Code	Rusie	ss E-mail		stit	tsvi	Ile								
Ontario	- 1	25 1A6			address capitalw	10+-	vr ee				ackage Delivere	d II	Minis	try Use	e Only	
Bus.Telephone I	No. (inc.	area code)	Name of We	TECHNICI:	r сарт сату an (Last Name,	va ce , First	Name)			mation	0  9  0  6	- 11	Audit No.	X(82) (X(8))		
1 .		1							deliv	Date W	ork Completed				5270	
613 886 : Well Technician's	Licence	No. Signatu	re of techni	dan and/o	r Contractor Da	ate Sul	bmitted	ا ا أمياد		Yes Date W	0 9 0 6	العين	CED	16	2010	
0 0	9   7		HI P		1 2	<u> </u>	<u> ΛΙ/ΘΙν(</u>	) 6 <u>1 5</u> 0		4	Y   Y   M   M	0  <u>7</u>	Received	D.:	0-1 0007	

Measurements recorded in: Metric

Ministry of the Environment

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Well Tad No. (Place Sticker and/or Print Below)

A108946

Well Record

Regulation 903 Ontario Water Resources Act Page

-	7 MCBEA trict/Municipality	IN ST		manufacture in the second second	GOULBOUR ity/Town/Village TRICHMO		Loc	Provin Onta		1 2 2	Code
UTM Coordi	nates Zone Easting	No	orthing		unicipal Plan and Suble			Other		70	11000
Overburde	8 3 18 4 3 4 9		nment Se		rd (see instructions on the	back of this form	)				RESIDE N
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Depth Se	at at (m/ft)	Annular Type of Sea			Volume Placed	After test of we	Results of We	_	d Testing aw Down	F	Recovery
From	To	(Material an	nd Type)		(m²/ft³)	☐ Clear and	sand free	Time (min)	Water Level (m/ft)	_	Water Level
.05	1.45 BEN	INOTI	TE		.36m3		continued, give reason:	Static Level			
						Pump intake s	set at (m/ft)	1 2		1 2	
								3		3	
	nod of Construction	ESS COMMO		Well Us		Pumping rate	(I/min / GPM)	4		4	
Cable To	Conventional) Diamond	Pul		☐ Commer ☐ Municipa		Duration of pu		-			
Rotary (F	Reverse) Driving Digging	Liv	estock gation	Cooling	e Monitoring & Air Conditioning	hrs +	min el end of pumping (m/ft)	5		5	
Air percu	ssion	☐ Ind	lustrial					10		10	
Other, sp	Construction R		ver, specify		Status of Well	If flowing give	rate (Vmin / GPM)	15		15	
Inside Diameter	Open Hole OR Material	Wall		h ( <i>m/ft</i> )	☐ Water Supply	Recommende	d pump depth (m/ft)	20		20	
(cm/in)	(Galvanized, Fibreglass, Concrete, Plastic, Steel)	Thickness (cm/in)	From	То	Replacement Well Test Hole	Recommende	ad pumpa rota	25		25	
15.86	STEEL	840	11.3	1.4	Recharge Well Dewatering Well	(Vmin / GPM)	a pump rate	30		30	
10.0	STEEL	840	1.4	UNKNO	Observation and/or	Well production	on (Vmin / GPM)	40		40	
					Monitoring Hole Alteration	Disinfected?		50		50	
					(Construction)  Abandoned,	Yes 🗆	No	60		60	
O tolds	Construction R	ecord - Scre			Insufficient Supply Abandoned, Poor	Diagon provide	Map of We a map below following		CONTROL OF THE RESERVE	nek	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	From	h ( <i>m/ft</i> )	Water Quality Abandoned, other,	Fiease provide	a map below following	IIISUUGI	ons on the b	diun.	
					Specify  Other, specify		3617		1 11		
	Water Det	tails	Name of the last	Н	ole Diameter	W-		1	18		
(m Water foun	d at Depth Kind of Wate  with Gas Other, special d at Depth Kind of Wate  with Gas Other, special	r; Fresh		From	h (m/ft) Diameter To (cm/in)	N Fr	.7m onl property Property		* 135		
Water foun	d at Depth Kind of Wate	r: Fresh [					PROPLINE		31		
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2383 Province	3 CHURCH Postal Code	ST	No E-mail Add	RTH (	routs	Comments. (	ABOVE	GP	ADE		
ON	KOA2T		Ta akai da da	Lock	First Name )	Well owner's information	Date Package Delivere		Minist Audit No.	ry Us	e Only
61131	ne No. (inc. area code) Na 1893372 ian's Licence No. Signature	WILS	son,	Sco	TT	package delivered Yes	V Y Y M M Date Work Completed		<b>z</b> 1		102
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Well Tag No. (Place Sticker and/or Print Below) A108947

Well Record

Regulation 903 Ontario Water Resources Act

of Page

3619 County/Dis	strict/Munici			7		YOULBOURN ty/Town/Village		Provin		Postal Code		
UTM Coordi	linates Zon			orthing		Unicipal Plan and Suble		Ont			KONIZZO	
						d (see instructions on the	back of this form)					
General Co	olour		non Material		Othe	er Materials	General Descr	ption		Depth (m/ft) From To		
GRE	4	CLA	7		STO	ONES	PACKED			0	1,3	
			Annular		ARIAN			of Well Yie			ecovery	
From . D5	1.3	BEN	Type of Sea (Material an	nd Type)		Volume Placed (m²/ft²)  • 25 m³	After test of well yield, water was  Clear and sand free  Other, specify  If pumping discontinued, give rea	Time (min) Static Level	(m/ft)	Time (min)	Water Level (m/ft)	
							Pump intake set at (m/ft)	2		2		
Moti	had of Co	nstruction			Well Use		Pumping rate (I/min / GPM)	3		3		
Cable To		Diamond	Pu	blic	Commer		Durating of automina	4		4		
	Conventiona	I) Jetting Driving	-	mestic	Municipa		Duration of pumping hrs + min	5		5		
Rotary (F		Digging	□ lmi	gation	Cooling &	& Air Conditioning	Final water level end of pumping	(m/ft) 10		10		
Air percu				lustrial her, specify_				45				
_ Culei, sp		nstruction R				Status of Well	If flowing give rate (I/min / GPM)			15		
Inside	Open Hol	le OR Material	Wall		(m/ft)	☐ Water Supply	Recommended pump depth (n	20 n/ft)		20		
Diameter (am/in)		ed, Fibreglass, Plastic, Steel)	Thickness (am/in)	From	То	Replacement Well Test Hole		25		25		
15,86	ST	EEL	.48	+45	1.3	Recharge Well	Recommended pump rate (l/min / GPM)	30		30		
						Dewatering Well Observation and/or	Well production (I/min / GPM)	40		40		
12.7	STE	CL	84,	1.3	UNKNOW	Monitoring Hole Alteration	Well production (whim / GPW)	50		50		
						(Construction)	Disinfected?	60		60		
						Abandoned, Insufficient Supply	Yes No			00		
Outside		onstruction R	ecord - Scre		(m/ft)	Abandoned, Poor Water Quality	Please provide a map below foll	of Well Lo		ack.		
Diameter (cm/in)		faterial alvanized, Steel)	Slot No.	From	То	Abandoned, other, specify	IRN					
						Other, specify	43	619		7		
Water four	nd at Denth	Water Det		Untested		ole Diameter	4	'				
		Other, spe		Unitested	From	To (cm/in)	2					
		Kind of Wate		Untested			28 5.7 m -	*				
		Other, spe		- I bet steet			81. 2011	4	= 00			
		Kind of Wate		Untested			81	13.5	7111			
		ell Contracto		Technicia	n Informat	ion						
Business N	lame of We	Il Contractor				Contractor's Licence No.				-	_	
NIO.		HT + So		710	6	13 5 7	Comments: 1. C.	AN	SIK	1 to E	1	
238		4URCH	The Charles	No	-	TOWER.	MELL				SION	
Province	F	Postal Code	Business	s E-mail Add			TO ABOU					
Pue Talanh		A OA 2 T		Tochnician (	net Nome	Eiget Name)	Well owner's information Date Package D		Minist Audit No.	try Us	e Only	
		3370			EOR (		package Y Y Y Y M			23	103	
	cian's Licence	No. Signature	of Technicia	an and/or Co	ontractor Date	e Submitted	Yes Date Work Com		DEC			
1 4			998 +	Pall	2	0101129	NO ROTON	1/2/2	Received	-		
USUSE (2007)	12) © Que	en's Imter for Oct	MPD, 2007			Ministry's Copy						

A 094191

Well Record

the Environment Regulation 903 Ontario Water Resources Act Page /ell Location (Street Number/Name) 86 Cockburn St Postal Code City/Town/Village ounty/District/Municipality Ontario KOA 220 OTTAWA RICHMOND UTM Coordinates | Zone | Easting | Northing | NAD | 8 | 3 | 1 | 8 | 4 | 3 | 4 | 9 | 9 | 5 | 5 | 0 | 0 | 4 | 3 | 3 | 4 | Municipal Plan and Sublot Number Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft) General Description General Colour Most Common Material Other Materials From * RAISE WELL CASING ABOVE GROUND, AS PER CODE REQUIREMENTS, WHILE DOING PUMP WORK AND INSTALL VERMON PROOF WELL CAP. * PLUMP TEST NOT PERFORMED DURING REPAIR. REFER TO ORIGINAL WELL RECORD FOR THIS INFORMATION Results of Well Yield Testing Annular Space Type of Sealant Used Volume Placed (m³/ft³) After test of well yield, water was: Draw Down Recovery Depth Set at (m/ft) Time Water Level Time Water Level (Material and Type) Clear and sand free (m/ft) (min) Other, specify (m/ft) If pumping discontinued, give reason: Level 1 1 Pump intake set at (m/ft) 2 2 3 3 Pumping rate (I/min / GPM) Method of Construction Well Use 4 4 ☐ Not used ☐ Dewatering Commercial Cable Tool Diamond Public Duration of pumping Jetting Municipal Rotary (Convention Domestic 5 5 hrs + min Driving Livestock
Irrigation Rotary (Reverse) Monitoring Test Hole Final water level end of pumping (m Boring Digging Cooling & Air Conditioning 10 Air percussion Industrial Other, specif Other, specify 15 If flowing give rate (GPM) Construction Record - Casing Status of Well 20 20 Depth (m/ft) Recommended pump depth (m/ft) Inside Open Hole OR Material Wall Water Supply Thickness (cm/in) Replacement Well 25 25 From Test Hole Recommended pump rate (Vmin / GPM) 30 30 Recharge Well Dewatering Well 40 40 Observation and/or Well-production (Vmin / GPM) Monitoring Hole 50 Alteration Disiprected? (Construction) 60 60 Yes No Abandoned, Insufficient Supply Construction Record - Screen Map of Well Location Abandoned, Poor Depth (m/ft) Water Quality Please provide a map below following instructions on the back Abandoned, other, From (cm/in) specify Other, specify 63 Water Details Hole Diameter Water found at Depth Kind of Water: Fresh Untested Depth (m/ft) Diamete From (cm/in) (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Well Contractor and Well Technician Information Business Name of Well Contractor

+ A) ELECTRIC 6 Business Address (Street Number/Name) Municipality Comments 5640 MANOTICK MAIN ST. OTTAWA Business E-mail Address Well owner's information Date Package Delivered Ministry Use Only Audit No. 2 109048 YYYMMDE package delivered

Yes

No

FEB 0 7 2011

Date Work Completed



Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)

Tag#: A133691

Well	Record
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Regulation 903 Ontario Water Resources Act

Page

Address = \$10/-11	ocation (Street Number/Name)		Township		Lot	Concess	on	
Address of Well L	ocation (Street Number/Name)		TOWNSHIP					
County/District/N	hicipality		City/Town/Village			Province Ontario	Postal	Code
UTM Coordinates	zone Easting Northing		Richmond Municipal Plan and Sub			Other		
	18435132500	4347	•					ete.
Overburden an	d Bedrock Materials/Abandonmen	t Sealing Rec	ord (see Instructions on th	e back of this form)			Don	th ( <i>m/ft</i> )
General Colour	Most Common Material	0	ther Materials		ral Description	1	From	To
*	Raise well co While d Proof we	sing joing 11 cap	above group wi	and, as p	er Ce instal	ode requiling v	ermon	vents,
Depth Set at (n	Annular Space  Type of Sealant Us  (Material and Type)	ed	Volume Placed (m³/ft³)	After test of well yield, \( \subseteq \text{Clear and sand fr} \subseteq \text{Other, } \specify \subseteq \text{If pumping discontinue}	water was: ree	ell Yield Testin  Draw Down Time Water Le (min) (m/ft) Static Level	R	ecovery Water Leve (m/ft)
	N/A			Pump intake set at (n		1 2	1 2	
Cable Tool Rotary (Conventor Rotary (Reverse Boring Air percussion Other, specify  Inside Diameter (Gal	riving Livestock ligging Irrigation Industrial Other, spec	Depth (m/ft)	ercial Not used pal Dewatering	Final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water level end of the final water leve	depth (m/ft) rate / GPM)  Map of W	16 20 25 30 40 50 60 ell Location	4 5 10 15 20 25 30 40 50 60	
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(m/ft)  Water found at D (m/ft)  Water found at D	water Details  epth Kind of Water: Fresh Unter Gas Other, specify  epth Kind of Water: Fresh Unter Gas Other, specify  epth Kind of Water: Fresh Unter Gas Other, specify  Gas Other, specify	sted Der From	Hole Diameter oth (m/ft) Diameter To (cm/in)	76	, <b>4</b> <i>F</i>	4.	ry	VT
Business Name of	Well Contractor and Well Techn Well Contractor (Street Number/Name)	W	ell Contractor's Licence No.	King st				
5640 P	Lanotick Main		ottawa					
Province Ont Bus.Telephone No.	Postal Code    Business E-mail	Address an (Last Name		information package y y	ackage Delivere	Audit No. Z	stry Use	063
Well Technician's Lic	23284 Scoler Frence No. Signature of Technician and/o	<b>√o∩</b> r Con <b>j</b> ractor Da	ate Submitted	Yes Date W	ork Completed	Ι ΙΔ	N 0 4	2013
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**Veasurements recorded in:** 

Ministry of the Environment and Climate Change

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Well Tag No. (Place Sticker and/or Print Below)

Tag#:A 236124

Well Record
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Regulation	903	Ontario	Water	Resources	Act
		P	age	of	

	n (Street Number/Name) <b>ムル</b> Gー		ownship		Lot	Concession	ŀ	
County/District/Municipa			ity/Town/Village		Prov	ince tario	Postal	Code
UTM Coordinates Zone	Easting Northing	<u> </u>	RICHM Iunicipal Plan and Sublo		Othe		KO!	<u> </u>
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			MILLIAM	CANIN	<i>1</i> .			<u> </u>
	· · · · · · · · · · · · · · · · · · ·	MAW			)			
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					-			
	Annular Spa	;e		R	esults of Well Yi	eld Testing		
Depth Set at (m/ft) From To	Type of Sealant I (Material and Typ		Volume Piaced (m³/ft³)	After test of well yield, w	aw. was.	Draw Down e Water Leve	<u></u>	covery Water Level
	(11.0(01.01.01.01.01.01.01.01.01.01.01.01.01.0		.=	Other, specify	(mir	1) (m/ft)	(min)	(m/ft)
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			If pumping discontinued	, give reason: Leve	ું ક્ષુ ગૂ		
							1	
				Pump intake set at (m/fit	2		2	
Method of Cor	rstruction	Well Us		Pumping rate (Vmin / GP	3 3		3	
Cable Tool	☐ Diamond ☐ Public	Comme	rcial Not used	Duration of pumping	4		4	
Rotary (Conventional) Rotary (Reverse)	Driving Domestic			hrs + mi	n 5		5	<del>, ,</del>
☐ Boring ☐ Air percussiog	☐ Digging ☐ Irrigation ☐ Industria	_	& Air Conditioning	Final water level end of	pumping (m/ft) 10		10	
Other, specify	Other, sp			If flowing give rate (I/min	/ <i>GPM</i> ) 15	5	15	
	nstruction Record - Casing	Depth ( <i>m/ft</i> )	Status of Well  Nater Supply	Recommended pump d	enth (m/fi) 20	}	20	
Diameter (Galvanize	e OR Material Wall ed, Fibreglass, Thickness Flastic, Steel) (cm/in) F	rom To	Replacement Well	Trecommended partiple	25		25	
64" STE		1	☐ Test Hole ☐ Recharge Well	Recommended pump ra	ate 30	)	30	
			<ul><li>☐ Dewatering Well</li><li>☐ Observation and/or</li></ul>	Well production (I/min / 0	40	)	40	
			Monitoring Hole  Alteration		50	)	50	
			(Construction)  Abandoned,	Disinfected?  /es  No	. 60	)	60	
Cor	nstruction Record - Screen		Insufficient Supply Abandoned, Poor		Map of Well Lo	ocation		
	aterial Stock Stock Slot No.	Depth (m/ft)	Water Quality Abandoned, other,	Please provide a map	_	structions on	the back	
(cm/in) (Plastic, Ga	Ivanized, Steel)	rom To	specify	1 4.				
			Other, specify		Man			
					JANG JANG	ì		
Water found at Depth	Water Details  Kind of Water: ☐ Fresh ☐ U	- 1 11 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	th ( <i>m/ft</i> ) Diameter					
· ·	Other, specify	From	To (cm/in)	1/4		K-6		
Water found at Depth	Kind of Water: Fresh Ur Other, specify	tested		12				<b>-</b>
	Kind of Water: Fresh Ur	tested					102	2(
	Other, specify		<b>*</b>				<u> </u>	<u> </u>
Business Name of Wel	ell Contractor and Well Tecl I Contractor	<u> </u>	ell Contractor's Licence No.					
THE PUN			03178		Val(IIII)		<u> </u>	
Business Address (Stre	CLYDE AUEUU		Inicipality  77444	Comments:	1 105	To		
11 2001	ostal Code Business E-m	ail Address		Well ourser's Date Re				Carlie Com
Bus. Telephone No. (inc.	<u> </u>	THEPUMP) ician (Last Name,	First Name)	- I information	ickage Delivered	Audit No	stry Use	1821
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Well Technician's Licence	No. Signature of Technician an		te Submitted  0 1 8 0 6 0 5	No QO	180605	Received		4 2018
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ATTACHMENT V
Soil Laboratory Analysis

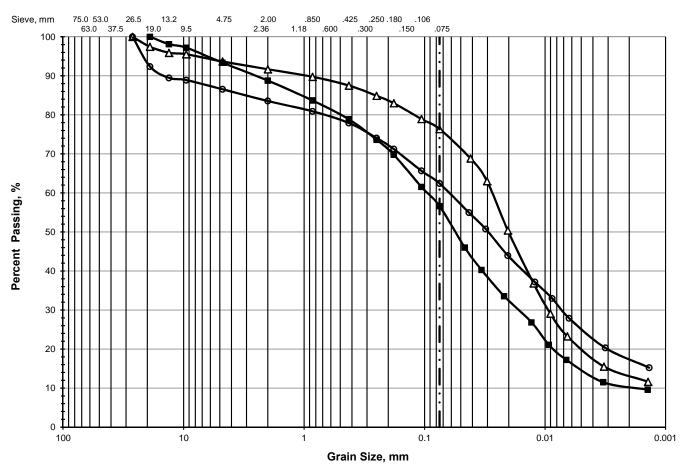




#### **PARTICLE SIZE ANALYSIS**

ASTM D 422 / LS-702

Client:Al RobertsFile No.:210341Project:Hydrogeological AssessmentReport No.:1Location:5969 Ottawa Street, Ottawa, ONDate:July 20, 2021

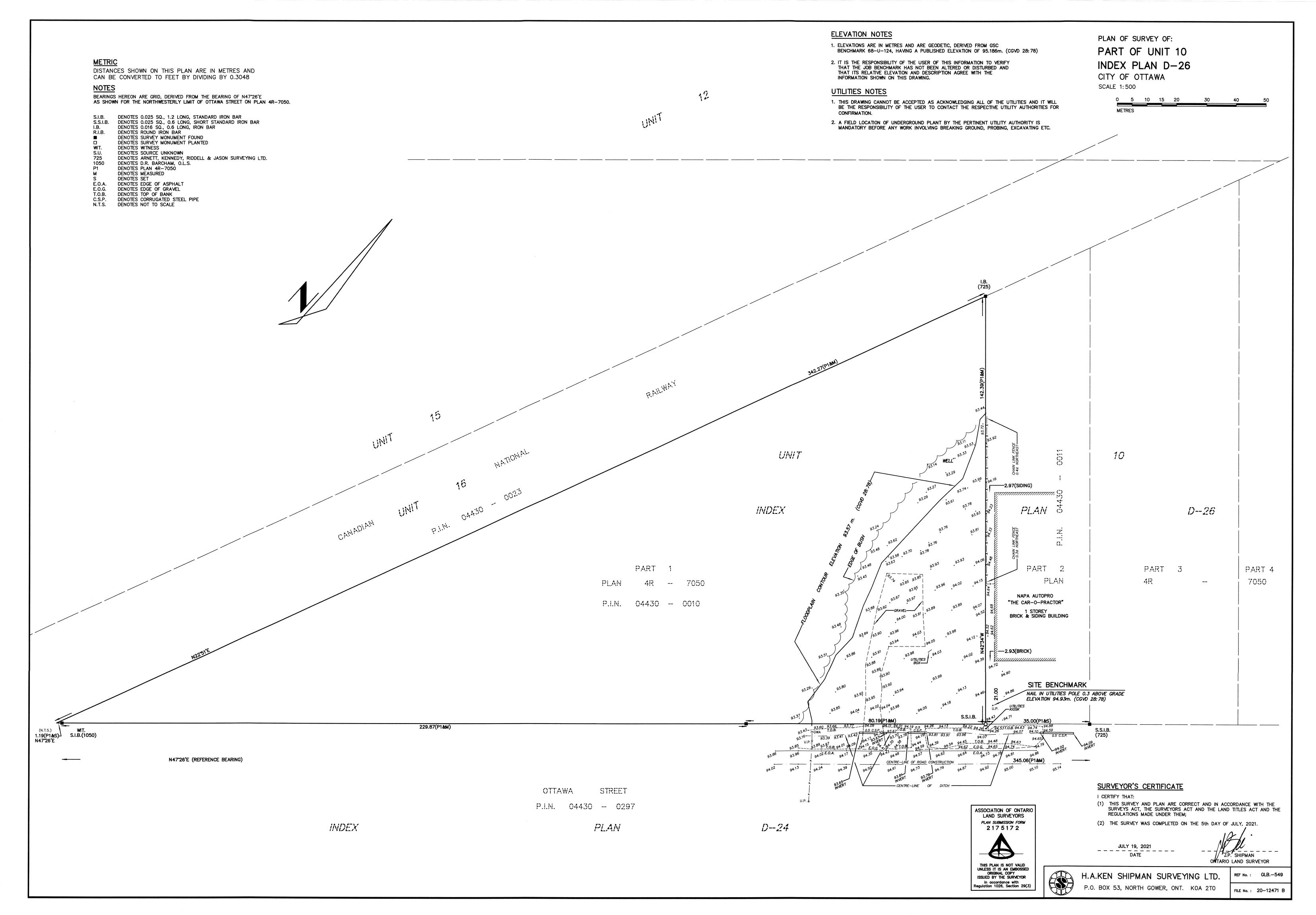


Unified Soil Classification System

	> <b>75</b> mm	% GF	RAVEL		% SAN	D	% FINES	
	- 75 IIIII	Coarse	Fine	Coarse Medium Fine		Fine	Silt	Clay
Δ	0.0	2.2	4.1	2.0	4.2	11.1	63.5	12.9
•	0.0	0.0	6.7	4.6	9.9	22.2	46.4	10.2
0	0.0	6.6	6.8	3.0	5.6	15.5	45.5	17.0

	Location	Sample	Depth, m	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	Cu
Δ	TP 1	3	0.9 - 1.8	0.0279	0.0201	0.0094	0.0030			
•	TP 2	4	1.8 - 2.7	0.0964	0.0571	0.0171	0.0053	0.0018	1.7	53.6
0	TP 3	3	1.8 - 2.7	0.0646	0.0299	0.0073				

ATTACHMENT VI
Survey Plan



# ATTACHMENT VIII Aquifer Test Analysis – Printout



LRL Assocaites Ltd. 5430 Canotek Road Ottawa, ON

Pumping Test - Water Level Data

Page 1 of 1

Project: 5969 Ottawa Street Hydrogeological Assessment

Number: 210341

Client: Al Roberts

Location: 5969 Ottawa Street, Richmond, Pumping Test: 6-Hr Pump Test

Test Date: 2021-08-11

Pumping Well: Well 1

Test Conducted by: AK

Discharge: variable, average rate 0.666 [l/s]

Observation Well: Well 1 Static Water Level [m]: 2.96

Radial Distance to PW [m]: -

1 2	Time [min]	Water Level	Drawdown
		[m]	[m]
2	0	2.96	0.00
	0.5	3.47	0.51
3	1	3.83	0.87
4	1.5	4.20	1.24
5	2	4.39	1.43
6	2.5	4.52	1.56
7	3	4.73	1.77
8	3.5	4.76	1.80
9	4	4.79	1.83
10	4.5	4.81	1.85
11	5	4.84	1.88
12	6	4.87	1.91
13	7	4.89	1.93
14	8	4.91	1.95
15	9	4.93	1.97
16	10	4.94	1.98
17	20	4.99	2.03
18	30	5.05	2.09
19	60	5.07	2.11
20	90	5.08	2.12
21	120	5.11	2.15
22	150	5.11	2.15
23	180	5.11	2.15
24	240	5.12	2.16
25	300	5.13	2.17
26	360	5.13	2.17
27	382	5.13	2.17
28	382.5	4.43	1.47
29	383	3.92	0.96
30	383.5	3.67	0.71
31	384	3.45	0.49
32	384.5	3.34	0.38
33	385	3.31	0.35
34	385.5	3.30	0.34
35	386	3.28	0.32
36	386.5	3.26	0.30
37	387	3.25	0.29
38	388	3.24	0.28
39	389	3.23	0.27
40	390	3.21	0.25
41	391	3.20	0.24
42	392	3.19	0.23
43	402	3.12	0.16
44	412	3.09	0.13
45	442	3.05	0.09



LRL Assocaites Ltd. 5430 Canotek Road Ottawa, ON

**Pumping Test Analysis Report** 

Al Roberts

Project: 5969 Ottawa Street Hydrogeological Assessment

Number: 210341

Location: 5969 Ottawa Street, Richmond, Pumping Test: 6-Hr Pump Test

Test Conducted by: AK

Analysis Performed by: AW

Time-Drawdown

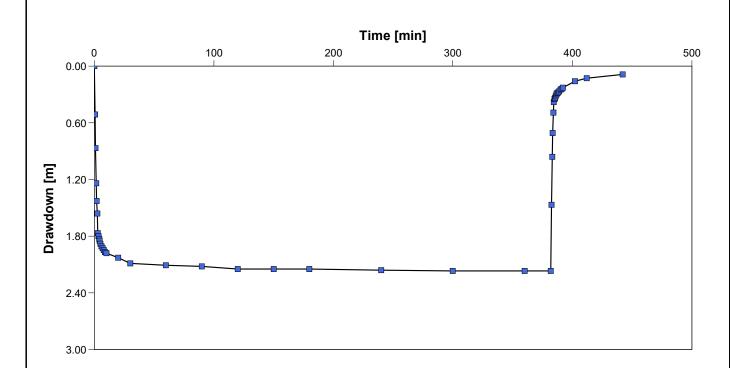
Pumping Well: Well 1

Test Date: 2021-08-11

Analysis Date: 2021-09-13

Client:

Aquifer Thickness: Discharge: variable, average rate 0.666 [l/s]





Test Conducted by: AK

LRL Assocaites Ltd. 5430 Canotek Road Ottawa, ON **Pumping Test Analysis Report** 

Project: 5969 Ottawa Street Hydrogeological Assessment

Test Date: 2021-08-11

Number: 210341

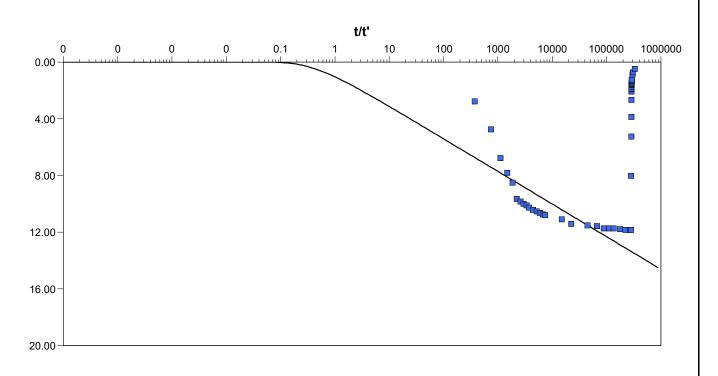
Client: Al Roberts

Location: 5969 Ottawa Street, Richmond, PRumping Test: 6-Hr Pump Test

Pumping Well: Well 1

Analysis Performed by: AW Theis Analysis Date: 2021-09-13

Aquifer Thickness: Discharge: variable, average rate 0.666 [l/s]



#### Calculation using Theis

Observation Well	Transmissivity	Storage coefficient	Radial Distance to PW	
	[m²/d]		[m]	
Well 1	2.50 × 10 ¹	4.39 × 10 ⁻³	0.07	



LRL Assocaites Ltd. 5430 Canotek Road Ottawa, ON

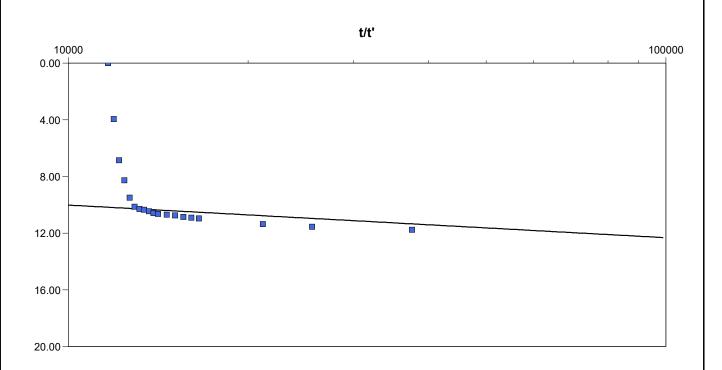
**Pumping Test Analysis Report** 

Project: 5969 Ottawa Street Hydrogeological Assessment

Number: 210341

Client: Al Roberts

Location: 5969 Ottawa Street, Richmond,	Pumping Well: Well 1					
Test Conducted by: AK	Test Date: 2021-08-11					
Analysis Performed by:	Agarwal + Theis Analysis Date: 2021-09-13					
Aquifer Thickness:	Discharge: variable, average rate 0.666 [l/s]					



#### Calculation using AGARWAL + Theis

Observation Well	tion Well Transmissivity		Radial Distance to PW	
	[m²/d]		[m]	
Well 1	2.59 × 10 ¹	6.00 × 10 ⁻³	0.07	



LRL Assocaites Ltd. 5430 Canotek Road Ottawa, ON

**Pumping Test Analysis Report** 

Project: 5969 Ottawa Street Hydrogeological Assessment

Number: 210341

Client: Al Roberts

Location: 5969 Ottawa Street, Richmond, ØRumping Test: 6-Hr Pump Test Pumping Well: Well 1

Test Conducted by: AK Test Date: 2021-08-11

Aquifer Thickness:				harge: variabl	e, average rate 0.666	[l/s]		
	Analysis Name Analysis Performed		d by	Analysis Date	Method name	Well	T [m²/d]	s
1	Theis	AW		2021-09-13	Theis	Well 1	2.50 × 10 ¹	4.39 × 10 ⁻³
2	Agarwal + Theis			2021-09-13	AGARWAL + Theis	Well 1	2.59 × 10 ¹	6.00 × 10 ⁻³



Pumping	Test	Analysis	Report
---------	------	----------	--------

Project: Hydrogeological Assessment

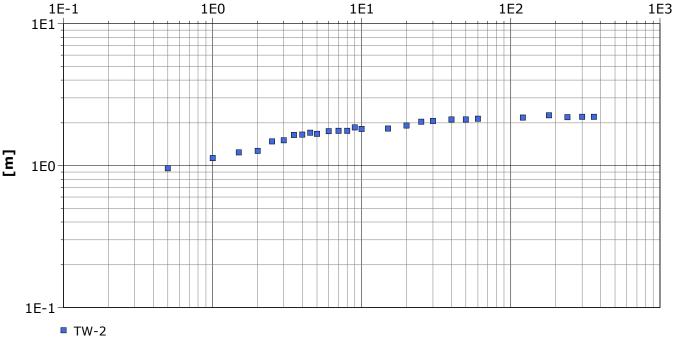
Number: 210341

Client: A. Roberts

Location: 5969 Ottawa Street, Richmond	Pumping Test: TW-2	Pumping Well: TW-2, TW-2R		
Test Conducted by: LRL	Test Date: 2023-07-27			
Analysis Performed by:	Drawdown New 1	Analysis Date: 2023-07-27		

Aquifer Thickness: 1.80 m

# Dimensionless Time tD [min] 1E1



Calculation using Theis with Jacob Correction

Observation Well	Transmissivity	Hydraulic Conductivity	Storage coefficient	
	[m²/d]	[m/d]		
TW-2	1.41 × 10 ⁴	7.86 × 10 ³	1.00 × 10 ⁻⁴	



Pumping	Test	Analysis	Report

Project: Hydrogeological Assessment

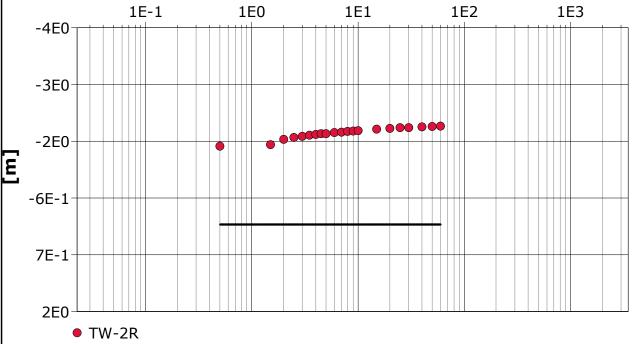
Number: 210341

Client: A. Roberts

Location: 5969 Ottawa Street, Richmond	Pumping Test: TW-2	Pumping Well: TW-2, TW-2R		
Test Conducted by: LRL		Test Date: 2023-07-27		
Analysis Performed by:	Recovery New 1	Analysis Date: 2023-07-27		

Aquifer Thickness: 1.80 m

### **Equivalent Time [min]**



Calculation using Agarwal skin

Observation Well	Transmissivity	Hydraulic Conductivity	Skin factor	
	[m²/d]	[m/d]		
TW-2R	8.64 × 10 ⁵	4.80 × 10 ⁵	-5.00 × 10 ⁰	

### **ATTACHMENT IX**

Moisture Surplus - Ottawa

Ottawa_50mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY... 50 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE..... 30 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 -1 30- 6 -19 18.3 31- 7 20.8 -41 31-8 19.5 -34 30- 9 14.6 -9 31-10 8. 1 -1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -105 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN PΕ DATE RAIN MELT ΑE **DEF** SURP SNOW SOI L ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 1.2 31- 7 31- 8 1.3 7 30- 9 1.5 31-10 1.4 30-11 1.7 31-12 3.0 

Ottawa_75mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY... 75 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE..... 45 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 -10 31- 7 20.8 -32 31-8 19.5 -32 30- 9 14.6 -9 31-10 8. 1 -1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -84 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOI L ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 30- 9 1.5 31-10 1.4 30-11 1.7 31-12 3.0 

Ottawa Airport, C	N			100mm_\ GET MEA		D. txt R THE P	ERI OD	1950-2	010	DC20492
LAT 45.32 LONG 75.67				CAPACI		100 MM 60 MM		AT IND		36. 41 1. 075
DATE TEMP (C)	PCPN	RAIN	MELT	PE	AE	DEF	SURP	SNOW	SOI L	ACC P
04 4 40 /		4.0	4-	_	_	_	~=			

DATE	TEMP (C)	PCPN	RAIN	MELT	PE	ΑE	DEF	SURP	SNOW	SOI L	ACC P
31- 1 28- 2 31- 3 30- 4 31- 5 30- 6 31- 7 31- 8 30- 9 31-10 30-11 31-12 AVE	-10.6 -8.8 -2.7 5.9 13.0 18.3 20.8 19.5 14.6 8.1 1.3 -7.0 5.9 TTL	64 57 66 72 74 82 89 87 84 77 80 78 911	13 12 32 67 74 82 89 87 84 76 63 26 705	15 18 80 69 0 0 0 0 0 8 15 205	0 1 5 32 80 116 135 117 75 36 10 1	0 1 5 32 80 112 115 88 66 35 10 1 545	0 0 0 0 0 -4 -21 -29 -8 -1 0 0 -63	25 28 106 104 13 4 2 1 3 10 34 33 363	83 110 64 0 0 0 0 0 0 0 0 9 47	99 99 100 100 81 47 19 18 32 63 91 97	299 356 422 494 568 651 740 827 912 77 157 236

Ottawa	Airport, 0	N	STAN	DARD [	DEVI ATI	ONS FO	OR THE	PERI OD	1950-	2010	DC20492	
DATE	TEMP (C)	PCPN	RAI N	MELT	PE	ΑE	DEF	SURP	SNOW	SOI L	ACC P	
31- 1 28- 2	3. 0 2. 6	26 29	16 15	18 27	1 1	1 1	0 0	30 37	43 59	5 3	55 59	
31- 3 30- 4	2. 3 1. 7	28 31	22 31	47 84	4 8	4 8	0 0	53 84	83 0	0 2	65 74	
31- 5 30- 6	1. 9 1. 2	32 38	32 38	0	12 9	12 12	0 11	21 17	0	22 34	85 93	
31- 7 31- 8	1. 2 1. 3	42 39	42 39	0	8 8	25 29	26 30	11 5	0	30 30	93 107	
30- 9 31-10	1. 5 1. 4	38 37	38 37	0 2	8 7	14 6	13 2	15 21	0 0	35 36	110 37	
30-11 31-12	1. / 3. 0	27 30	28 22	9 14	4 1	4 1	0	34 30	13 34	19 8	45 56	

Ottawa_125mm_WBNRMSD.txt									
WATER BUDGET MEANS FOR THE PERIOD 1950-2010	DC20492								
NATED HOLDING CADACITY 125 MM HEAT INDEY	26 /11								
Ú									

Uttawa	Airport, o	'IN	WAIL	טעטט א.		ANS FUR	I III E	EKIOD	1930-2	UIU	DC20492
	45. 32 75. 67					TY 1			AT IND		36. 41 1. 075
DATE	TEMP (C)	PCPN	RAI N	MELT	PE	AE	DEF	SURP	SNOW	SOI L	ACC P
31- 1 28- 2 31- 3 30- 4 31- 5 30- 6 31- 7 31- 8 30- 9 31-10 30-11 31-12 AVE	-10. 6 -8. 8 -2. 7 5. 9 13. 0 18. 3 20. 8 19. 5 14. 6 8. 1 1. 3 -7. 0 5. 9 TTL	64 57 66 72 74 82 89 87 84 77 80 78 911	13 12 32 67 74 82 89 87 84 76 63 26 705	15 18 80 69 0 0 0 0 0 8 15 205	0 1 5 32 80 116 135 117 75 36 10 1 608	0 1 5 32 80 115 122 92 67 35 10 1 560	0 0 0 0 -1 -13 -25 -7 -1 0 0	24 28 105 104 13 4 2 1 3 9 27 29 349	83 110 64 0 0 0 0 0 0 0 0 9 47	122 123 125 125 106 69 33 28 41 74 108 119	299 356 422 494 568 651 740 827 912 77 157 236
Ottawa	Airport, O	N	STAN	DARD D	EVI ATI	ONS FO	R THE	PERI OD	1950-	2010	DC20492
DATE	TEMP (C)	PCPN	RAI N	MELT	PE	AE	DEF	SURP	SNOW	SOI L	ACC P
31- 1 28- 2 31- 3 30- 4 31- 5 30- 6 31- 7 31- 8 30- 9 31-10 30-11 31-12	3. 0 2. 6 2. 3 1. 7 1. 9 1. 2 1. 3 1. 5 1. 4 1. 7 3. 0	26 29 28 31 32 38 42 39 38 37 27 30	16 15 22 31 32 38 42 39 38 37 28 22	18 27 47 84 0 0 0 0 0 2 9	1 1 4 8 12 9 8 8 8 7 4 1	1 4 8 12 9 21 26 13 6 4	0 0 0 0 4 23 28 11 2 0	31 37 54 84 21 17 11 5 14 20 32 30	43 59 83 0 0 0 0 0 0 13 34	10 8 0 2 22 39 37 38 42 42 25 14	55 59 65 74 85 93 107 110 37 45 56

Ottawa_150mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...150 MM HEAT INDEX... 36.41 A..... 1.075 LOWER ZONE..... 90 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 31- 3 30- 4 -2.7 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -8 31-8 19.5 -19 30- 9 14.6 -6 31-10 8. 1 -1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -34 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 28- 2 31- 3 2. 6 2. 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

Ottawa_200mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...200 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE.....120 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -3 31-8 19.5 -11 7 30- 9 14.6 -4 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -18 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 30- 9 1.5 

31-10

30-11

31-12

1.4

1.7

3.0

Ottawa_225mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...225 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE.....135 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -2 31-8 19.5 -8 30- 9 14.6 -4 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -14 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 28- 2 31- 3 2. 6 2. 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

Ottawa_250mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...250 MM HEAT INDEX. . . 36.41 LOWER ZONE.....150 MM A. . . . . . . . . . . . 1.075 DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -1 31-8 19.5 -6 30- 9 14.6 -3 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -10 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOI L ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 ģ 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

Ottawa_265mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...265 MM HEAT INDEX... 36.41 A..... 1.075 DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -1 31-8 19.5 -5 30- 9 -3 14.6 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -9 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ **DEF** SURP SNOW SOIL ACC P ΑE 31- 1 3.0 28- 2 31- 3 2. 6 2. 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

Ottawa_275mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...275 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . . . 1.075 DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -1 31-8 19.5 -4 30- 9 14.6 -2 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -7 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 

31- 7

31- 8

30- 9

31-10

30-11

31-12

1.2

1.3

1.5

1.4

1.7

3.0

Ottawa_280mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...280 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE.....168 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 -2.7 31- 3 30- 4 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 -1 31-8 19.5 -4 30- 9 14.6 -2 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -7 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 2. 6 2. 3 28- 2 31- 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

Ottawa_300mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC:											DC20492
	45.32 G 75.67		TER HO					_	AT IND		36. 41 1. 075
DATE	TEMP (C)	PCPN	RAIN	MELT	PE	ΑE	DEF	SURP	SNOW	SOI L	ACC P
31- 1 28- 2 31- 3 30- 4 31- 5 30- 6 31- 7 31- 8 30- 9 31-10 30-11 31-12 AVE	-10. 6 -8. 8 -2. 7 5. 9 13. 0 18. 3 20. 8 19. 5 14. 6 8. 1 1. 3 -7. 0 5. 9 TTL	64 57 66 72 74 82 89 87 84 77 80 78 911	13 12 32 67 74 82 89 87 84 76 63 26 705	15 18 80 69 0 0 0 0 0 0 8 15 205	0 1 5 32 80 116 135 117 75 36 10 1 608	0 1 5 32 80 116 135 114 73 36 10 1 603	0 0 0 0 0 0 0 -3 -2 0 0 0	19 23 95 101 13 4 2 1 3 7 18 20 306	83 110 64 0 0 0 0 0 0 0 0 47	279 285 297 300 281 243 194 167 176 209 252 272	299 356 422 494 568 651 740 827 912 77 157 236

Ottawa	STAN	DARD [	DEVI ATI	ONS FO	OR THE	PERI OD	1950-	2010	DC20492		
DATE	TEMP (C)	PCPN	RAI N	MELT	PE	ΑE	DEF	SURP	SNOW	SOI L	ACC P
31- 1 28- 2 31- 3 30- 4 31- 5 30- 6 31- 7 31- 8	3. 0 2. 6 2. 3 1. 7 1. 9 1. 2 1. 2	26 29 28 31 32 38 42 39	16 15 22 31 32 38 42 39	18 27 47 84 0 0	1 1 4 8 12 9 8	1 1 4 8 12 9 8	0 0 0 0 0 0 2 8	29 36 57 81 21 17 11	43 59 83 0 0 0	37 33 13 2 22 41 52 65	55 59 65 74 85 93 93
30- 9 31-10 30-11	1. 5 1. 4 1. 7	38 37 27	38 37 28	0 2 9	8 7 4	9 7 4	5 1 0	14 19 29	0 0 0 13	71 65 52	107 110 37 45
31-12	3. 0	30	22	14	1	1	Ŏ	28	34	41	56

Ottawa_400mm_WBNRMSD.txt Ottawa Airport, ON WATER BUDGET MEANS FOR THE PERIOD 1950-2010 DC20492 LAT. . . . 45. 32 LONG. . . 75. 67 WATER HOLDING CAPACITY...400 MM HEAT INDEX. . . 36.41 A. . . . . . . . . . 1.075 LOWER ZONE.....240 MM DATE TEMP (C) **PCPN** RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 -10.6 -8.8 28- 2 31- 3 30- 4 -2.7 5. 9 31- 5 13.0 30- 6 18.3 31- 7 20.8 31-8 19.5 -1 7 30- 9 14.6 -1 31-10 8. 1 30-11 1. 3 31-12 -7.0 5.9 TTL AVE -2 Ottawa Airport, ON STANDARD DEVIATIONS FOR THE PERIOD 1950-2010 DC20492 TEMP (C) PCPN DATE RAIN MELT PΕ ΑE **DEF** SURP SNOW SOIL ACC P 31- 1 3.0 28- 2 31- 3 2. 6 2. 3 30- 4 1.7 31- 5 1.9 30-6 1.2 31- 7 1.2 31- 8 1.3 

30- 9

31-10

30-11

31-12

1.5

1.4

1.7

3.0

ATTACHMENT X
Septic System Specifications

# norveco®

HYDRO-KINETIC[↑] GREEN WASTEWATER TREATMENT SYSTEM

WITH SERVICE PRO F CONTROL CENTER

## **SPECIFICATIONS**

#### **GENERAL SPECIFICATIONS**

The contractor shall furnish and install one complete Hydro-Kinetic Green wastewater treatment system with all necessary parts and equipment as described in the following specifications. Treatment of the domestic wastewater shall be accomplished by the extended aeration process with non-mechanical flow equalization, pretreatment of the influent and filtration of the final effluent. The treatment system shall provide primary, secondary and tertiary treatment of the wastewater flow, denitrification, and if required, chlorination/dechlorination or ultraviolet disinfection of the effluent prior to discharge. All treatment processes shall be contained within tankage which shall be manufactured using high density polyethylene resin. The wastewater treatment system shall be a Hydro-Kinetic Green as manufactured by Norweco, Inc., Norwalk, Ohio, USA.



The wastewater treatment system shall include high density polyethylene tankage providing separate pretreatment, anoxic, aeration, clarification and final filtration chambers. The tankage shall be furnished with a Schedule 40 PVC inlet hub, submerged transfer ports, access risers with removable covers, molded plastic vent assembly, molded receiving flange and Schedule 40 PVC outlet hub. Principal items of electro-mechanical equipment supplied with the Hydro-Kinetic Green system shall be an air pump, recirculation pump, UL Listed Service Pro Model 801P electrical control center with MCD technology, flow equalization device and Hydro-Kinetic Bio-Film Reactor for final filtration of system effluent.

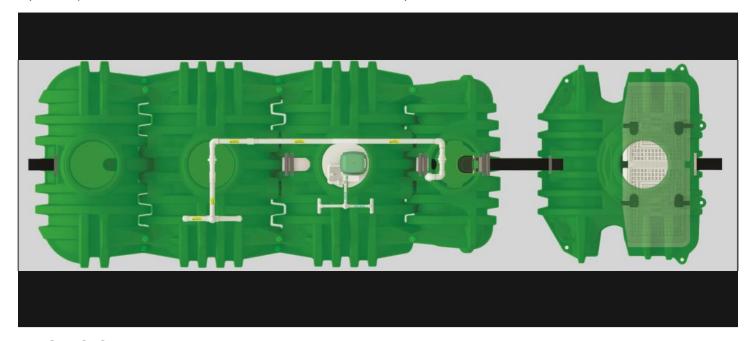
# HYDRO-KINETIC®

#### **OPERATING CONDITIONS**

Total holding capacity of the system shall provide a minimum of 85 hour retention of the daily flow. The pretreatment chamber shall provide at least 18 hour retention, the anoxic chamber shall provide at least 24 hour retention, the extended aeration chamber shall provide at least 24 hour retention, the clarification chamber shall provide at least 7 hour retention and the Hydro-Kinetic Bio-Film Reactor shall provide at least 12 hour retention of the daily flow. The non-mechanical flow equalization device shall increase individual chamber and total system retention time in direct proportion to loading. Design of the system shall include a compartmented tank and non-mechanical flow equalization device to insure successful treatment performance without upset even when the significant runoff period is six hours. Hydraulic design considerations of the system and flow equalization device shall be such that intermittent peak flow factors as high as four shall not upset hydraulic reliability within the system. Capability of the system to perform as outlined, when built by an approved manufacturer, shall be certified by an independent testing laboratory and approved for use by the local governing regulatory agency.

#### PRETREATMENT CHAMBER

The pretreatment chamber shall be an integral part of the wastewater treatment system. All domestic wastewater shall be preconditioned and flow equalized while passing through the pretreatment chamber prior to being introduced to the anoxic chamber. The outlet of the pretreatment chamber shall be equipped with a discharge tee that extends vertically into the liquid so that only the preconditioned flow from the center area of the chamber is displaced to the anoxic chamber. The discharge tee and transfer port shall be of adequate size to handle a peak flow factor of four without restricting the outlet and disturbing hydraulic displacement to the anoxic chamber. A removable inspection cover shall be incorporated into the top of the pretreatment chamber to allow tank and transfer tee inspection.



#### ANOXIC CHAMBER

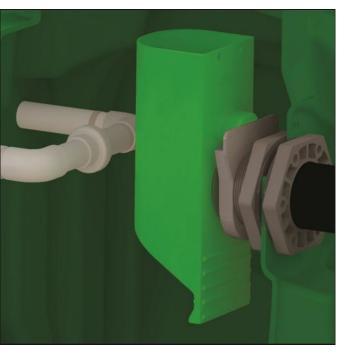
The anoxic chamber shall provide in excess of 24 hour retention of the equalized daily flow. In the anoxic chamber, low oxygen levels shall compel facultative heterotrophic bacteria to use nitrate-bound oxygen in their respiratory process. Nitrified liquid from the clarifier shall enter the chamber in measured doses and nitrogen compounds shall be converted to harmless nitrogen gas which shall escape into the atmosphere. Overall design of the chamber shall insure that effective mixing and suspension of the biomass is maintained in an anoxic condition to insure consistent biological denitrification. Systems that have not been performance certified to reduce Total Nitrogen (TN) more than 50% shall not be considered for this application.

#### **AERATION CHAMBER**

The extended aeration chamber shall provide in excess of 24 hour retention of the equalized daily flow. The chamber shall be of sufficient size to provide a minimum of 80 cubic feet of tank capacity per pound of applied BOD. The aeration chamber shall be an integral part of the system flow path and configured to insure effective mixing of microorganisms, wastewater and fresh air. No area of the chamber shall be isolated from process mixing, thereby eliminating dead or quiescent areas of the treatment chamber which are detrimental to the treatment process. Influent into the aeration chamber shall be preconditioned, equalized flow from the anoxic chamber.

#### FINAL CLARIFICATION CHAMBER

The final clarification chamber shall consist of 5 functionally independent zones operating together to provide satisfactory settling and clarification of the equalized flow. An inlet zone shall be provided and shall dissipate transfer turbulence at the flow inlet of the clarification chamber. Liquid is then displaced into the hopper zone of the clarifier. In this zone, settling by gravity takes place. Three of the four sidewalls are slanted to form a hopper which directs all settled material back to the settled sludge zone. A recirculation pump in the settled sludge zone shall transfer a portion of the wastewater back to the anoxic chamber. Clarified liquid from the hopper zone shall be displaced into the final settling zone to provide additional clarification of the liquid. The liquid is finally displaced to the outlet zone where the treated effluent shall pass through the flow equalization device and be discharged from the final clarification chamber.



#### FLOW EQUALIZATION DEVICE

The system shall include a non-mechanical, demand use, flow equalization device. The device shall be installed with the design flow equalization port located below the normal liquid level of the clarifier. If intermittent flow rates exceed the capacity of the design flow port, flow shall be held upstream until the intermittent flow dissipates. If the intermittent flow continues to increase, the liquid level may reach a sustained flow equalization port. With both ports in use, flow through the system increases while continuing to provide flow equalization to upstream and downstream processes. A peak flow equalization port is supplied but should not be required in a properly sized system. The device shall control normal residential flow rates



and reduce typical residential flow surges. The flow equalization rate shall be dependent upon the specific loading pattern and the duration of flow surges. At the 600 GPD (gallons per day) NSF Standard 40/245 design loading schedule, minimum performance of the device shall equalize daily flow an average of 50%.

#### HYDRO-KINETIC BIO-FILM REACTOR

Significant reduction of organic matter shall occur in the treatment system prior to the Hydro-Kinetic Bio-Film Reactor. The Bio-Film Reactor shall provide final treatment of the effluent to a near pristine state. Flow equalized liquid from the clarifier shall enter the influent chamber, travel down and be evenly distributed beneath the Reactor Elements. The effects of gravity shall cause solids to settle to the bottom of the tank. As liquid travels up through the proprietary attached growth media, further reduction of organic matter shall take place. Additional settling and consolidation of solids shall take place downstream of the filter media. After passing through the filtration media for final polishing, the highly treated liquid shall flow into the final effluent zone before exiting the Bio-Film Reactor through the outlet tee.

# GREEN

#### SERVICE PRO® MODEL 801P ELECTRICAL CONTROL CENTER

The Model 801P control center with MCD technology shall provide Monitoring, Compliance and Diagnostic functions for the treatment system. The pre-wired controls shall be mounted in a lockable NEMA rated enclosure designed specifically for outdoor use. The control center shall be a UL Listed assembly and shall include a time clock, alarm light, reset button, power switch, power light, phone/network light, recirculation pump light, air pump light, high water light and auxiliary alarm light. A pre-programmed time clock shall control the recirculation pump to insure that approximately 400% of the average daily flow is returned to the anoxic chamber. The control center shall monitor recirculation pump current, air pump operation, high water and auxiliary alarm circuitry. In the event of an alarm from the air pump or auxiliary input, the audible and visual alarms shall activate and the optional telemetry system shall report the condition. If abnormal operation of the recirculation pump is detected, a diagnostic sequence shall



begin and the visual alarm shall activate. After a factory programmed recovery interval, an automatic restart attempt shall be initiated. If normal pump operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate and the optional telemetry system shall report the condition to the Service Pro monitoring center.



#### SERVICE PRO! MONITORING CENTER

The Service Pro monitoring center shall include a 256 bit encrypted password protected website for interface with the monitoring center database. Access to the secure website shall be obtained through a unique user name and password that provides tiered access to data from monitored treatment systems. Access level tiers shall include dealers, service providers, regulatory agencies and individual system owners. Dealers and service providers shall be able to create accounts, enter serial numbers for system equipment, maintain service records and grant regulatory agencies access to the information. The monitoring center shall have the capability to schedule future service inspections and provide notification. Individual system owners shall be able to view information regarding their own systems, as well as download instructional information. Integrity of stored data shall be maintained through the use of multiple servers operating in geographically isolated locations.

### **MODEL AT 1500 ULTRAVIOLET DISINFECTION SYSTEM (Optional)**

The Hydro-Kinetic Green system shall be furnished complete with a Model AT 1500 ultraviolet disinfection system. The AT 1500 system shall incorporate a turbulence inducer and dual-pass design to insure bacteria receive maximum exposure to the ultraviolet light source. The ultraviolet disinfection system shall be UL Listed under Standard 979 as a residential treatment device and shall include a disinfection chamber, turbulence inducer, extension riser, quartz tube with Teflon cover, ultraviolet bulb and controls. An interlock switch shall be furnished to automatically disable the ultraviolet light source when the disinfection chamber is accessed. Ultraviolet disinfection systems without a residential UL Listing have not demonstrated compliance with international electrical standards for safety and reliability and shall not be considered for this application.

# SPECIFICATIONS

#### **CERTIFIED PERFORMANCE**

The wastewater treatment system shall be certified to operate for 12 consecutive months at the rated daily capacity without routine service. This performance shall be demonstrated by a continuous 12 month evaluation performed by an independent ANSI accredited, third-party testing facility. The evaluation shall consist of 2 consecutive ANSI/NSF Standard 40 and 245 evaluations, including the stress sequences, with no maintenance allowed in between. The system shall also be certified by a SCC accredited, third-party testing facility to BNQ Standards CAN/BNQ 3680-600 and NQ 3680-910. For the entire certification protocol, the system shall achieve a total test average of less than 5 mg/L Biochemical Oxygen Demand (CBOD), less than 5 mg/L Total Suspended Solids (TSS), and greater than 50% reduction of Total Nitrogen (TN) in the effluent. Systems unable to meet these effluent quality parameters for at least 12 months of continuous testing by independent ANSI and SCC accredited, third-party testing facilities without service do not provide the desired level of effluent quality or service frequency, and shall not be considered for this application.



#### **AIR PUMP**

The air pump shall be configured to allow remote mounting or installation within the mounting riser above the aeration chamber. When installed in the access riser, fresh air shall be supplied through a vented, injection molded, heavy duty, glass-filled polypropylene access cover above the air pump. Fresh air shall enter the air pump through a filter located under the housing cover and be introduced below the liquid surface through a prefabricated diffuser assembly. Only the plastic diffuser assembly and the air piping shall be installed in contact with the liquid. The air pump shall be wired for 115 volt, single phase, 60 cycle operation. The air pump shall include impact-resistant rubber diaphragms and valves which prolong operational life. The



unique design and construction shall provide easy maintenance, excellent cooling and quiet operation. The air pump shall continue aerating and mixing the aeration chamber even during high water conditions. Treatment systems that interrupt air delivery during high water conditions disrupt biological activity and shall not be considered for this application.

#### RECIRCULATION PUMP

The submersible recirculation pump shall be wired for 115 volt, single phase, 60 cycle operation and shall be installed in the clarification chamber. Operation of the submersible recirculation pump shall be controlled by the Service Pro control center. The pump shall periodically recirculate nitrified liquid from the clarification chamber to the anoxic chamber. The pump shall be designed to be non-overloading throughout the entire pump curve and shall draw less than 8 full load amps. The pump motor shall contain moisture resistant windings and shall be securely mounted inside an oil-filled, watertight housing for maximum pump life. The stator housing and casing shall be of high grade cast iron, stainless steel or thermoplastic construction.

### **BLUE CRYSTAL** CHLORINATION SYSTEM (Optional)

The Hydro-Kinetic Green system shall be furnished complete with a tablet feeder and a six month supply of Blue Crystal disinfecting tablets. Blue Crystal tablets shall be specifically formulated for consistent chlorine dosage and effluent disinfection to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. The tablets shall be manufactured from pure calcium hypochlorite and contain a minimum of 70% available chlorine. Each tablet shall be 2% diameter, compressed to a 1" thickness, weigh approximately 5 ounces and be white in color with blue crystals for easy identification. The tablets shall dissolve in direct proportion to the flow rate, releasing controlled amounts of chlorine.

### **BIO-MAX** DECHLORINATION SYSTEM (Optional)

The Hydro-Kinetic Green system shall be furnished complete with a tablet feeder and a six month supply of Bio-Max dechlorination tablets. The dechlorination tablets shall contain 92% sodium sulfite as the active ingredient and shall be specially formulated to chemically neutralize both free and combined chlorine. Each tablet shall be 25% diameter, compressed to a 13/16" thickness, weigh approximately 5 ounces and be green in color for easy identification. The tablets shall dissolve slowly, releasing controlled amounts of chemical for the instantaneous removal of residual chlorine from the system effluent.

#### LIMITED WARRANTY

The wastewater treatment system shall be covered by a two year limited warranty. The air pump, recirculation pump, Service Pro Model 801P control center and any other Hydro-Kinetic components purchased from the manufacturer shall be warranted to be free from defects in material and workmanship, under normal use and service, for a period of two years from the date of purchase. A warranty registration card shall be attached to the system before shipment from the factory. A means to register the wastewater treatment system for warranty protection via the internet shall be provided by the manufacturer for the convenience of the dealer, customer and regulatory agency. The dealer shall provide details of the limited warranty to the regulatory agency, contractor and customer as required.

#### **EQUIPMENT MANUFACTURER**

The equipment specified herein shall be the product of a manufacturer having a minimum of seven years experience in the construction of prefabricated wastewater treatment equipment and systems. Bids shall be prepared on the basis of the equipment and material specified herein for purposes of determining the low bid. This is not done, however, to eliminate other products or equipment of equal quality and efficiency. If equipment is to be substituted, approval of such substitution must be made prior to execution of any order. It is assumed that substitution will result in a reduction of cost to the contractor and that if accepted, these savings will be passed along by a reduction in the base bid.

## PROGRESS THROUGH SERVICE SINCE 1906



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