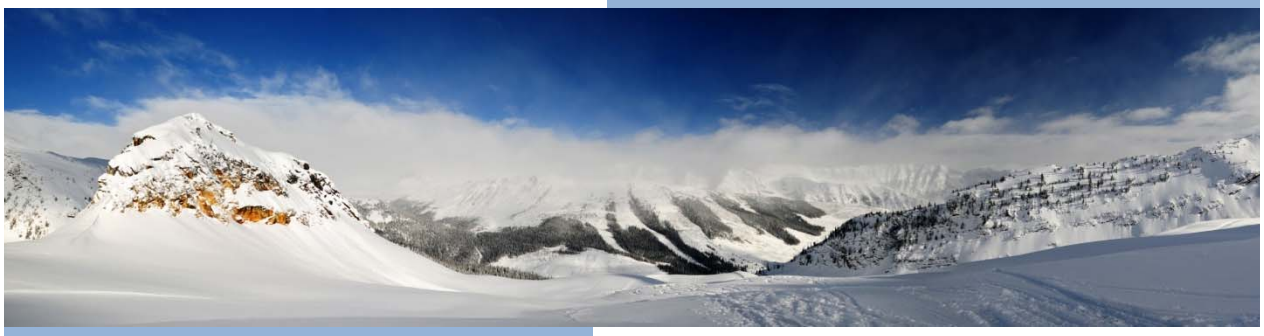
Whitewater
Hydrogeology Ltd.



2015 COMPLIANCE GROUNDWATER MONITORING REPORT.

SHELBURNE NORTH PIT

Prepared for:
Strada Aggregates

Whitewater Hydrogeology Ltd
Phone: 705.888.7064
Email: tecia@white-water.ca

Date: January 2016

Whitewater
Hydrogeology Ltd.

80 Chamberlain Cres
Collingwood, ON L9Y 0C8
Phone: 705-888-7064
Email: tecia@white-water.ca

January 14, 2016

Strada Aggregates Inc.
30 Floral Parkway
Concord, Ontario
L4K 4R1

Attention: Mr. Grant Horan
Controller

Re: 2015 Compliance Report: Strada Aggregates: Shelburne North Pit

Dear Sir:

Whitewater Hydrogeology Ltd. (Whitewater) is pleased to present the 2015 Compliance Groundwater Monitoring Report for the Shelburne North Pit. The findings indicate that the extraction of aggregate from above the water table has had no measurable influence on the groundwater regime.

If you have any questions or concerns, please do not hesitate to call at any time.

Yours truly,

Tecia White, M.Sc. P.Geo.
Senior Hydrogeologist
Whitewater Hydrogeology Ltd.

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1.0 INTRODUCTION

Strada Aggregates Inc. (Strada) owns and operates the Shelburne North Pit, which is located on Lot 13, Concession, 3, Township of Melancthon, Dufferin County. This Class A pit above water is licensed to extract sand and gravel to an elevation of no less than 488.55 masl or to within 1.5 m of the water table, or within 1m of the bedrock surface where no water is encountered.

Whitewater Hydrogeology Ltd. (Whitewater) has been retained by Strada to monitor and report on the groundwater conditions and the impact, if any, on the influence of the aggregate extraction on this regime. The compliance monitoring has been completed to comply with the site license, which is regulated under the Aggregate Resources Act (ARA).

2.0 GROUNDWATER COMPLIANCE MONITORING PROGRAM

The 2015 groundwater monitoring program was carried out under the existing Operations Plan. A summary of the compliance program is provided on Table 1. Monitoring locations are provided on Figure 1.

Table 1: Groundwater Monitoring Program

Regulation	Requirement	Frequency
Aggregate Resources Act		
Operations Plan		
G3	Groundwater levels of all on-site monitoring wells and local domestic water wells (i.e., Nelson/Arnold, Banks (MW6), Garner)	Quarterly
G4	Groundwater quality sampling (general chemistry, TPHs, and VOCs)	Annually

Note:

1. The Garner well is inaccessible and therefore no water levels are collected from this location.
2. Nelson/Arnold has been removed from the monitoring program. It was determined that this well is not representative of the overburden conditions at the site.

Copies of all water well records are provided in Appendix A.

2.1 Compliance Reporting Requirements

An annual compliance report on the groundwater monitoring program is to be prepared and submitted to the Ministry of Natural Resources and Forestry (MNRF) and the Township of Melancthon, for the public record. The Site Plan does not include a reporting deadline. However, Stephen May (the former Aggregates Technical Specialist) indicated that the Ministry expects to have reports available to review in conjunction with the Compliance Assessment Reports. The Compliance Assessment Reports are due at the end of September of the previous monitoring year.

FIGURE 1: SITE LOCATION MAP

3.0 SITE SETTING

3.1 Physiography and Hydrology

The subject lands are within the Nottawasaga watershed, which covers an area of 3,361 km^2. The Shelburne North Pit is located in proximity to the drainage divide between two headwaters systems of the Nottawasaga River (the Pine River and the Boyne River). These rivers rise west of the Niagara Escarpment and flow in an easterly direction

The Shelburne North Pit resides within the physiographic region referred to as the Horseshoe Moraines (Chapman and Putnam, 1984). From Singhampton south to Caledon Village, the moraines lie along the brow and slopes of the Niagara Escarpment. Associated with these moraines is a system of spillways with board gravel and sand terraces. The aggregate operation extracts the sand and gravels from this spillway system referred to as the Orangeville Moraine.

A Digital Elevation Model (DEM) of the region is presented on Figure 2. DEM data files are digital representations of cartographic information in raster format. DEMs consist of a sampled array of elevations for a number of ground positions at regularly spaced intervals (10 m resolution in southern Ontario). The DEM model has been conditioned to be hydrologically correct which simply means, spurious sinks (depressions) within a DEM have been removed and the data are topologically flow corrected.

The most dominant feature on the DEM in this region is the glacial re-entrant valley of the Pine River (Figure 2). This valley extends east of Horning Mills, terminating at Terra Nova. The Boyne River is also obvious on the DEM just north of Primrose. Both re-entrant valley systems cut deeply into the bedrock escarpment from the east. The Shelburne North Pit is located on the plateau formed by the dolostone cap rock, west of the Niagara Escarpment face.

3.2 Geology

3.2.1 Quaternary Geology

The Quaternary materials consist of ice-contact stratified deposits that are incised into the underlying fine grained till. The ice-contact drift materials are described as mainly medium-grained sand with some gravel, pebbly sand, and bouldery sand (Gwyn, 1972). This sand and gravel unit is the material extracted from the Shelburne North Pit. The unconsolidated sand and gravel resource is underlain by a silty clay till deposit at various locations across the pit. This till unit may represent the regionally extensive Tavistock Till sheet, which is a calcareous silty clay to silt till largely derived from glaciolacustrine sediments. This till sheet overlies the Paleozoic bedrock.

3.2.1 Paleozoic Geology

The Paleozoic bedrock beneath the subject property is made up of a sedimentary rock sequence consisting primarily of layered dolostone, shale and sandstones units that were deposited in an ocean environment 400 to 500 million years ago. Brunton and Brintnell (2011) recognitized that the un-subdivided Amabel Formation actually represents the Goat Island, Gasport, and Irondequoit Formation; and the Lions Head Member of the basal Amabel Formation is actually a carbonate equivalent of part of the Rochester Formation. These recent changes in the geological units and nomenclature have been adopted for this hydrogeological assessment to ensure consistency with provincial documentation.

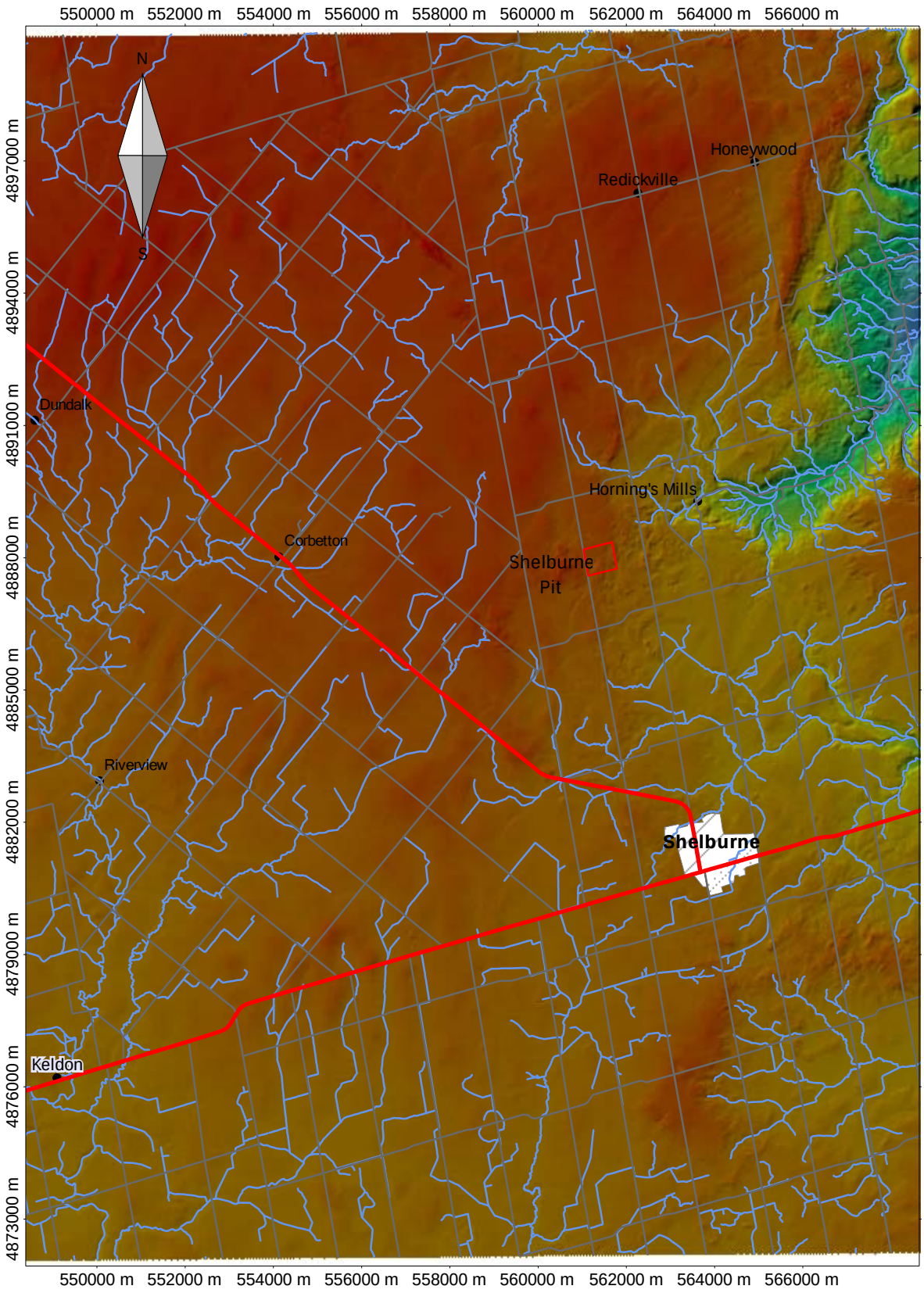


FIGURE 2: DIGITAL ELEVATION MODEL

4.0 HYDROGEOLOGICAL EVALUATION

4.1 Groundwater Elevations

The groundwater monitoring network at the Shelburne North Pit consists of multi-level monitoring wells that are constructed in the overburden and bedrock aquifers. The shallow wells, which are constructed in the sand and gravel aquifer (extraction unit) are identified as monitors "A". The remaining wells are constructed in the bedrock and are identified as monitors "B", as well as OW1, MW6 and OW8 (open-hole monitoring wells).

As stipulated on the Site Plans, quarterly manual water levels shall be collected from the on-site monitoring wells. To supplement this data, Strada collects continuous water levels with automatic transducers, which provides a more comprehensive understanding of the water levels response to climatic conditions, as well as potential impacts associated with the aggregate operations. The manual water level measurements are provided in Table 2. The continuous groundwater level data are provided on Figure 3 and Figure 4.

4.1.1 Overburden Groundwater Elevations

The water level elevation is the overburden is monitored at 6 locations around the perimeter of the extraction area. The water levels collected over the history of the Shelburne North Pit indicate that the water table fluctuates above and below the geological contact with the bedrock. Groundwater monitoring wells MW1A, MW2A, MW5A, MW9A, and MW10A have all reported to be dry, either seasonally or permanently. Water levels in 2015 remained within overburden in the southern portion of the site (MW1A and M10). At MW1A, water levels ranged between 498.1 masl and 492.5 masl (5.5 m fluctuation). AT MW10A, water levels ranged between 493.8 masl and 490.1 masl (3.7 m fluctuation).

The overburden continues to be perched above the unsaturated bedrock at MW4A. Water levels remain relatively stable and fluctuate approximately 1 m over the course of the monitoring period, which captures several seasonal events. Under the Revision of Policies and Procedures Manual for the administration of the ARA (May 2005) a perched groundwater table is not usually considered the water table for the purpose of establishing the on-site groundwater conditions. Therefore, the water table in the overburden is only found in the south-western portion of the site. To the north and east, the overburden is generally unsaturated, with the exception of the perched system at MW4A, and the shallow water table (potentiometric surface) is reported only the bedrock aquifer.

4.1.2 Bedrock Groundwater Elevations

The bedrock monitoring program includes the monitoring of wells that are either constructed as:

1. discrete screened intervals that allow for the potentiometric surface to be monitored for a fracture zone; or as
2. open-holed wells where the water level corresponds to a composite hydraulic head that represents a weighted average of hydraulic heads based upon the transmissivity of different bedding plane fractures. This composite head is typically dominated by the most permeable fracture intersecting the bedrock well.

The bedrock monitoring wells which discretely monitor a fracture interval (typically 1.5 to 3 m span in the bedrock) include: MW1B, MW2B, MW4B, MW5B, and MW9B. Of these, MW4B and MW9B monitor the upper 3 meters of the bedrock (immediately below the overburden contact). MW4B has remained dry since it was installed in 2004, indicating that the upper portion of the bedrock is unsaturated in this area.

Saturated conditions of discretely monitored portions of the bedrock are reported at MW1B, MW2B, and MW5B, all located along the southern property boundary. The top of the bedrock surface at MW1B is approximately 491 masl. In 2015, water levels in MW1B were reported to be above the geological contact and ranged between approximately 496.0 and 492.0 masl. At MW2B, the bedrock contact is at approximately 483 masl. In 2015, water levels range between approximately 483.4 and 481.7 masl. The drop in elevation of the bedrock surface across the site (from west to east) is reflected in the water level elevations (Figure 5).

Open-hole water levels within the bedrock are measured at MW6 (Scale House Well), OW1, and OW8. The water level in MW6 is relatively constant at 490 masl. In comparison, water levels at OW1 and OW8 report larger seasonal fluctuation (approximately 2m and 4m, respectively). As reported over the years, open-hole water levels must be interpreted with caution in heterogeneous fractured rock aquifers.

4.2 Groundwater Flow

Regionally, groundwater flow in the bedrock regime will be controlled by the glacial re-entrant valley of the Pine River, which begins in the vicinity of Horning Mills (Figure 2). This northwesterly regional flow direction is supported by on-site bedrock water level data. Figure 6 presents the groundwater flow contours for data collected on April 13, 2015 at the Shelburne North Pit. Generally, the groundwater flow direction in the bedrock is north-eastward towards Horning Mills, with a water level high reported at MW1B and a low at MW8.

There is insufficient groundwater in the overburden to map the water table and groundwater flow direction on-site. Groundwater (that isn't perched) in the overburden is present along the southern property boundary. Based on water levels reported in the overburden south of the Shelburne North Pit, the shallow groundwater flow direction is eastward (Whitewater, 2015).

4.3 Groundwater Quality

Groundwater sampling took place on May 12, 2015. Water level measurements were obtained prior to any disturbance of the potentiometric surface/water level within each monitor. Groundwater samples were collected from dedicated monitoring wells following purging of at least three borehole volumes of water from each monitoring well (or until well pumped dry) using dedicated check valve pumps and tubing. Groundwater samples for inorganic analysis were also filtered using disposable 0.45 μm filters (where permissible). The samples obtained for VOC/PHC analyses were obtained from the top of the water column within the well utilizing dedicated bailers prior to any purging.

The laboratory provided all sample bottles, which were prepared with preservatives for consistency, as required. Samples were maintained in coolers with freezer packs and were delivered to the required laboratory within 24 to 36 hours of collection. The raw results from Testmark Laboratories are provided in Appendix B.

The groundwater geochemistry at the site is characterized by relatively low concentrations for most parameters. This is illustrated by the fact many inorganic parameters have a concentration that is below laboratory detection limits. The 2015 data was compared to historical site data, which correlate well. In addition to the inorganic sampling discussed above, several petroleum hydrocarbon parameters were analyzed. There was no detection of petroleum hydrocarbons in 2015.

Table 2: 2015 Groundwater Measurements

Monitor Location	Base of Well (masl)	08-Jan	05-Feb	09-Mar	13-Apr	12-May	25-Jun	15-Jul	17-Aug	02-Sep	02-Oct	02-Nov	04-Dec
MW1A	492.1	494.92	497.05	492.64	497.93	497.55	498.1	493.36	492.98	492.58	492.58	493.80	494.92
MW1B	487.5	493.82	495.26	492.42	495.48	495.48	495.97	493.18	492.68	492.12	491.99	493.07	493.82
MW2A	484.1	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW2B	476.8	482.26	483.15	481.42	483.14	483.38	483.36	482.75	482.31	481.45	481.71	481.8	482.26
MW4A	495.2	496.68	497.56	496.81	497.56	496.76	497.25	497.08	496.87	496.71	496.62	496.56	496.68
MW4B	489.4	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW5A	488.9	DRY	489.34	DRY	489.06	489.32	489.82	DRY	DRY	DRY	DRY	DRY	DRY
MW5B	479.8	488.69	489.28	488.41	489.03	489.28	489.72	488.8	488.56	488.32	488.2	488.37	488.69
MW6	N/A	490.03	490.19	490.01	490.14	490.2	490.26	490.08	490.04	490.01	490	490	490.03
MW8	469.9	478.58	479.48	Frozen	479.57	479.67	480.38	479.29	478.85	478.14	477.8	477.66	478.58
MW9A	489.9							NA					
MW9B	486.9							NA					
MW10	490.2	491.61	492.94	490.35	492.68	493.11	493.83	491.15	490.56	DRY	DRY	490.79	491.61
OW1	455.3	484.32	Buried	Buried	484.92	484.83	485.18	484.7	484.48	484.1	483.93	483.82	484.32

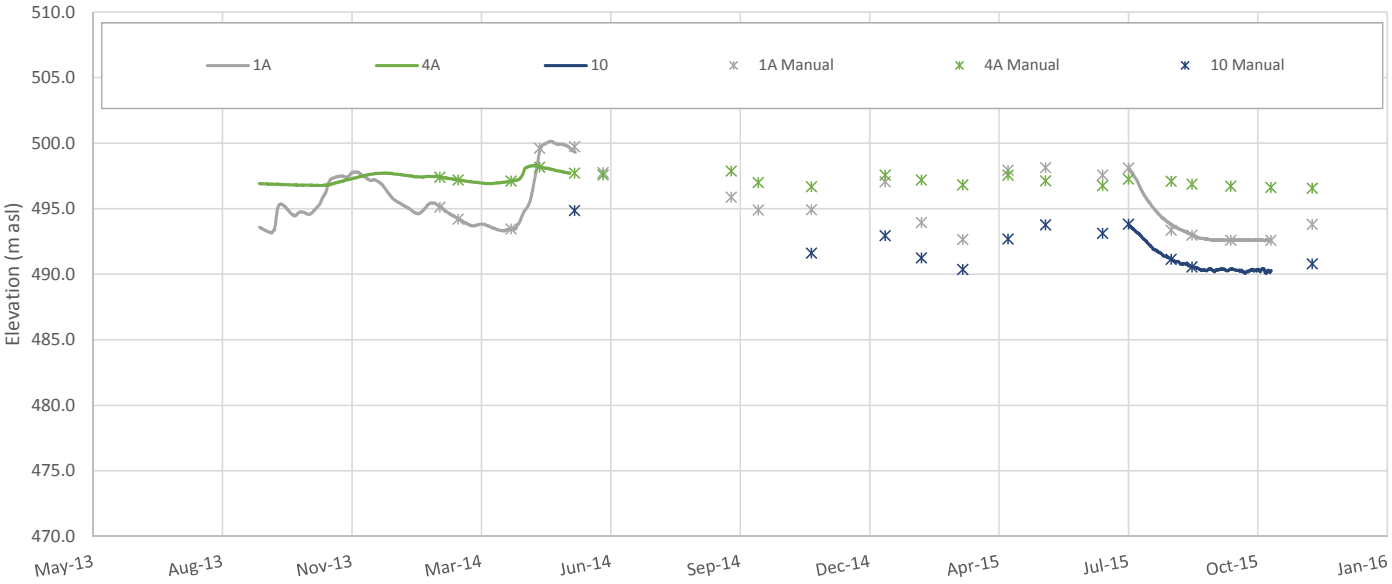


FIGURE 3: OVERBURDEN WATER LEVEL ELEVATIONS

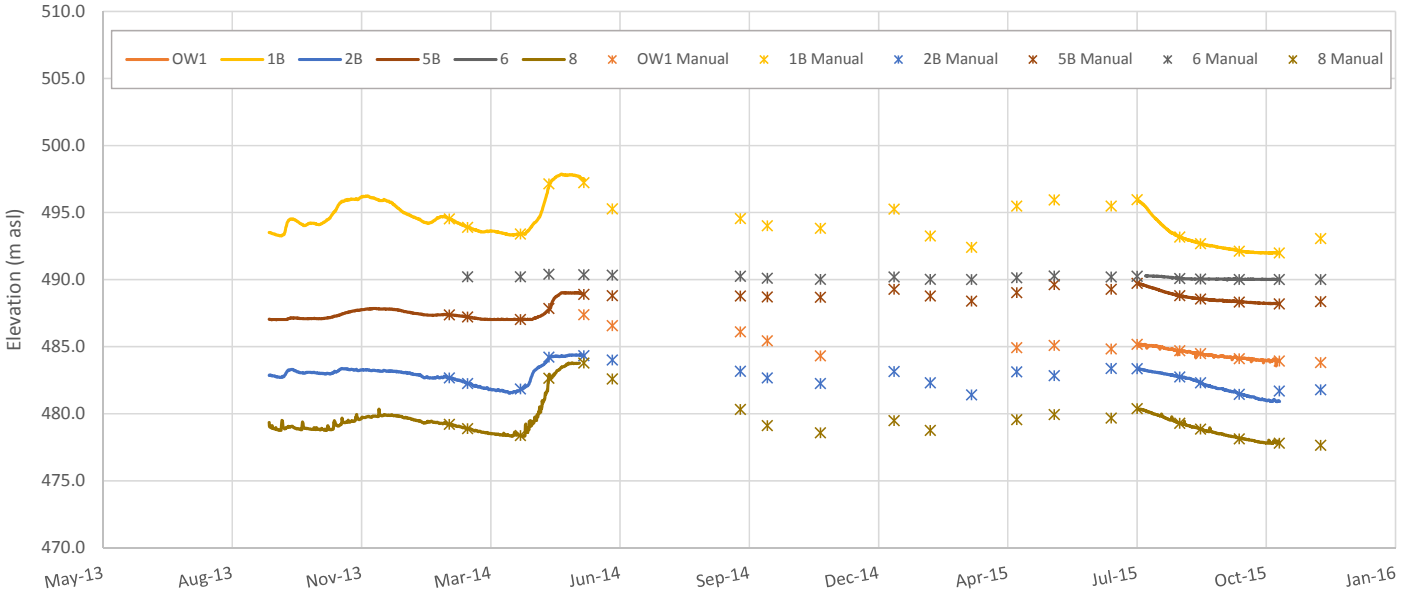


FIGURE 4: BEDROCK WATER LEVEL ELEVATIONS

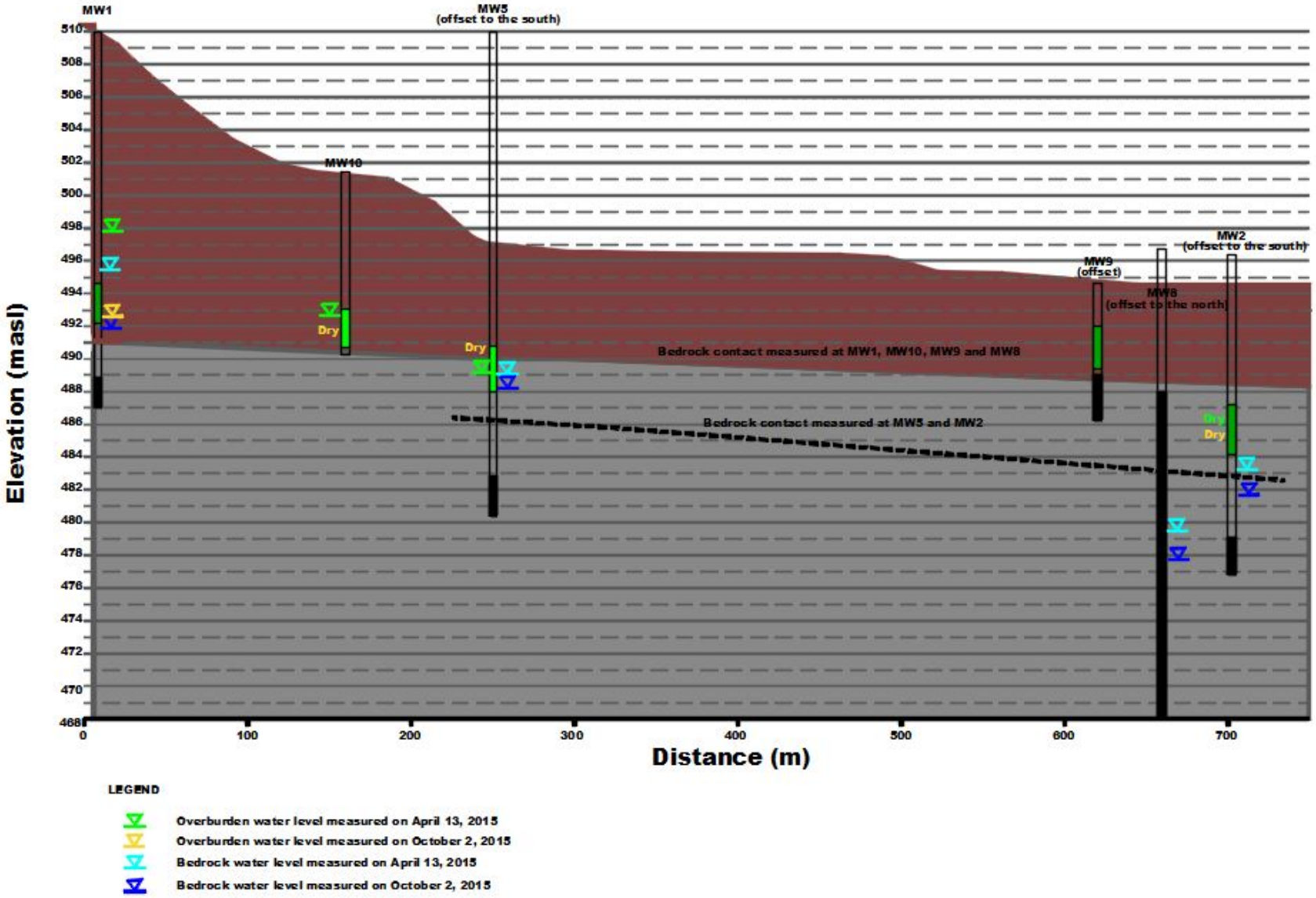


FIGURE 5: GEOLOGICAL AND HYDROGEOLOGICAL CROSS SECTION

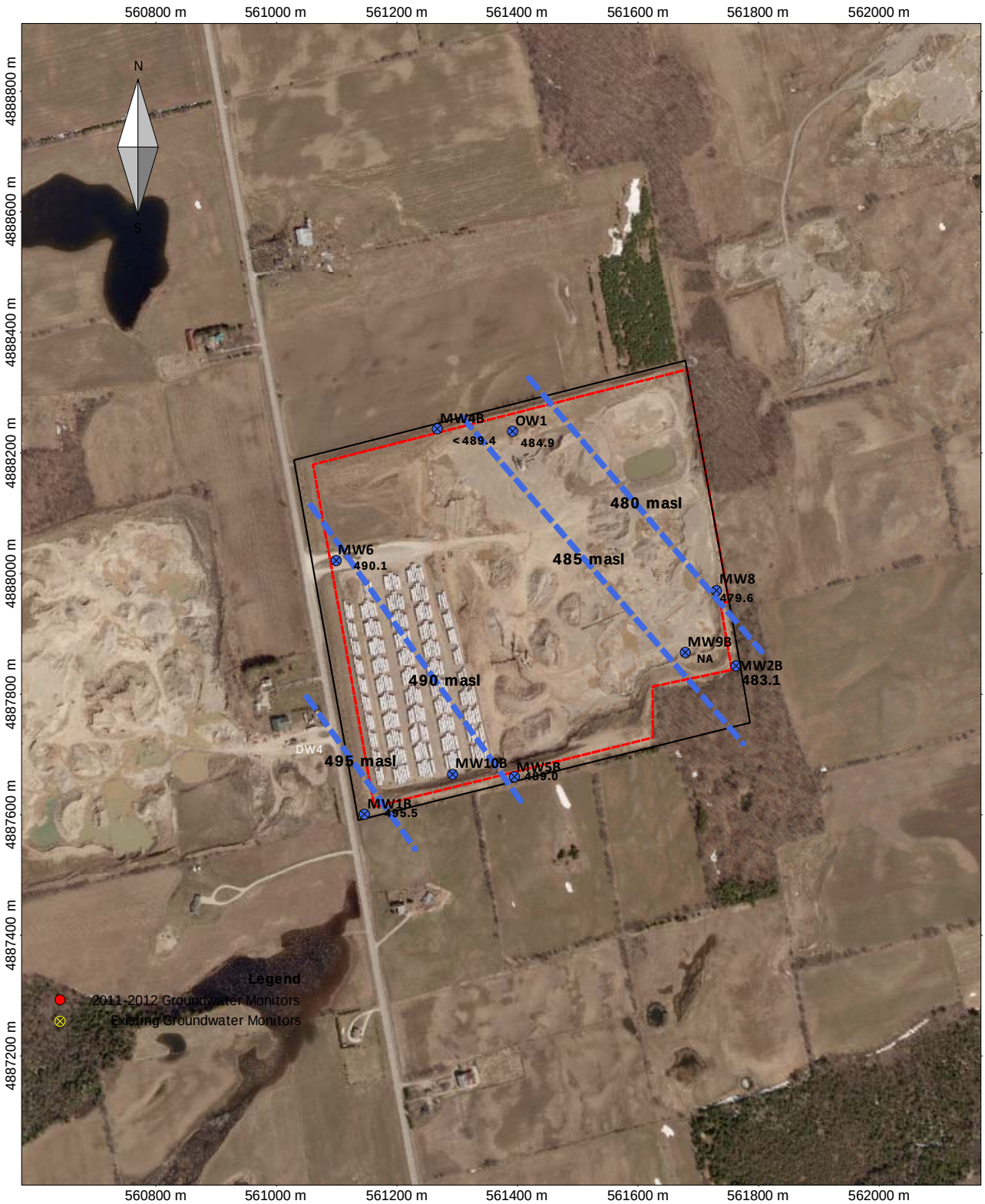


FIGURE 6: GROUNDWATER FLOW CONTOURS

5.0 CONCLUSIONS

1. The operation of the Shelburne North Pit is currently not having any measureable impacts on the groundwater regime.
2. It is recommended that the compliance monitoring program continue as stipulated on the Site Plans in 2016.

6.0 REFERENCES

Brunton, F. R. and C. Brintnell. 2011.
Project Unit 08-004. Final Update of Early Silurian Stratigraphy of the Niagara Escarpment and Correlation with Subsurface Units across Southwestern Ontario and the Great Lakes Basin. Ontario Geological Survey.

Chapman, L.J., and Putman, D.F., 1984.
The Physiography of southern Ontario. 3rd Edition. Ontario Geological Survey, Special Volume 2.

Gwyn, Q.H.J., 1972
The Quaternary Geology of Dundalk area – Southern Ontario. Ont. Dept. Mines and Northern Affairs, P.727

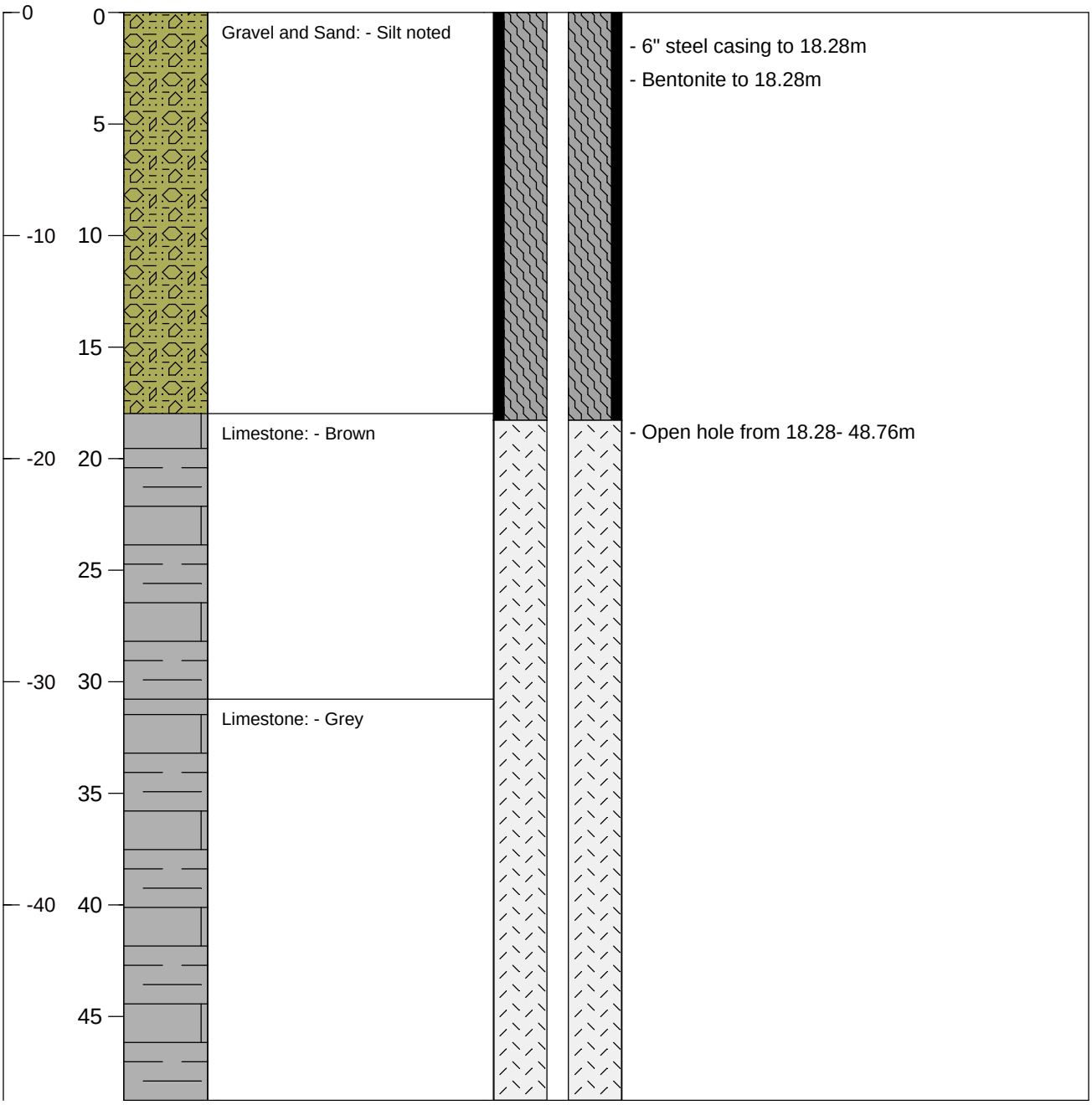
Whitewater Hydrogeology Ltd., 2015
Melancthon Pit (Shelburne South Pit) 2015 Annual Compliance Report. Prepared for Strada Aggregates.

APPENDIX A
WATER WELL RECORDS

Well Name: OW1

Project No: 07-253p **Date:** August 2, 2004	**Location:** Lot 12, Con 3, Twp. of Melancthon Shelbourne
Logged By: Keith Lang	**Total Depth:** 48.76m **Ground Elevation:**504.07 (masl) **Top of Casing:**504.77 (masl)
Drilled by: Keith Lang Well Drilling	**UTM:** Northing: 4888237 Easting: 561395
MOE Well Tag I.D. A 006830	

Depth (m) Elev. (masl)	Stratigraphic Description	Monitor Details



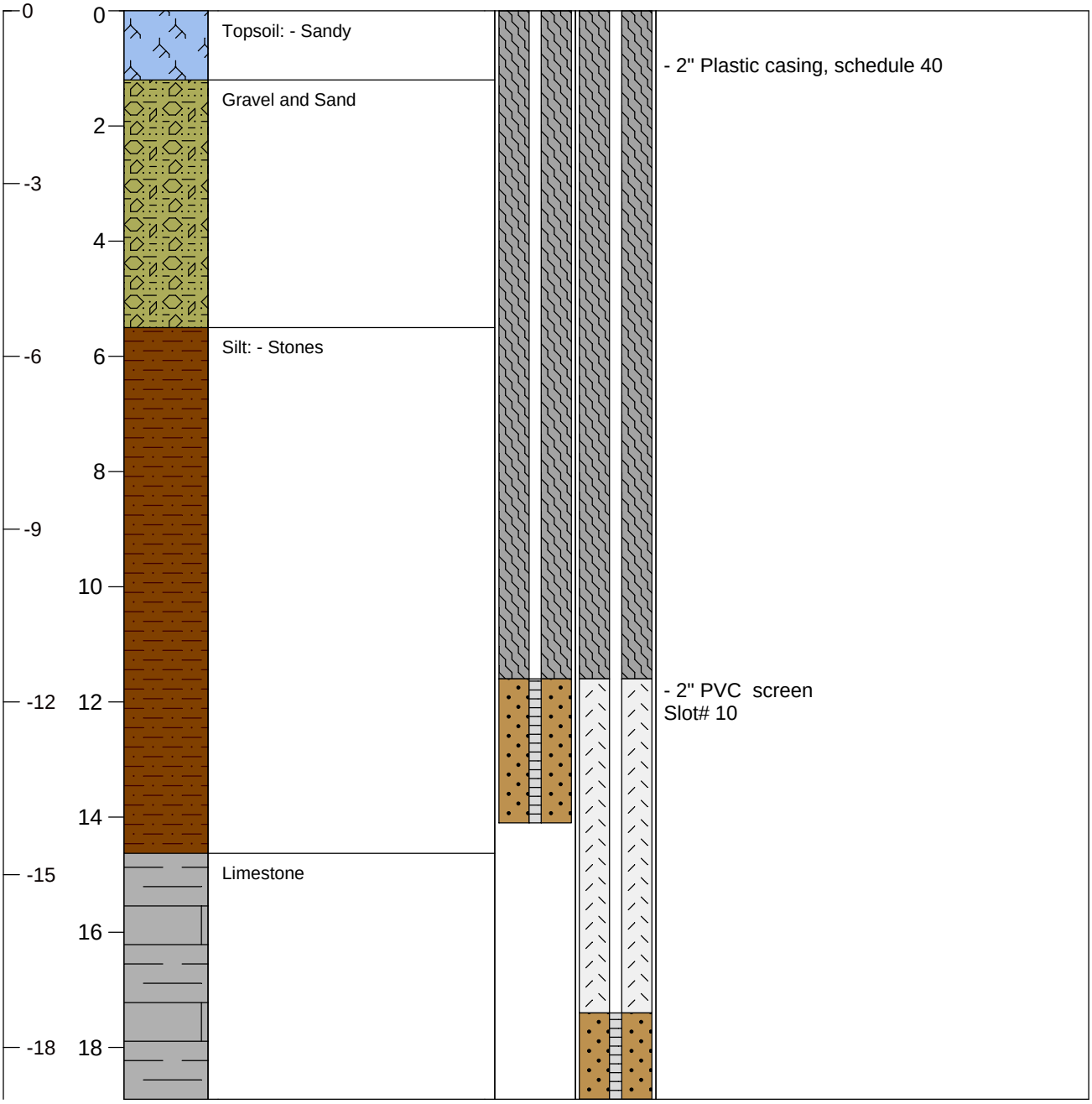
Prepared By: Goffco Limited

Prepared For: STRADA AGGREGATES

Well Name: MW1-01

Project No: 07-253p **Date:** December 1, 2001	**Location:** Lot 12, Con 3, Twp. of Melancthon Shelbourne
Logged By: Keith Lang	**Total Depth:** 18.9m **Ground Elevation:** 507 (masl) **Top of Casing:** (masl)
Drilled by: Keith Lang Well Drilling	**UTM:** Northing: 4887604 Easting: 561145
MOE Well Tag I.D. MW1-01	

Depth (m) Elev. (masl)	Stratigraphic Description	Monitor Details



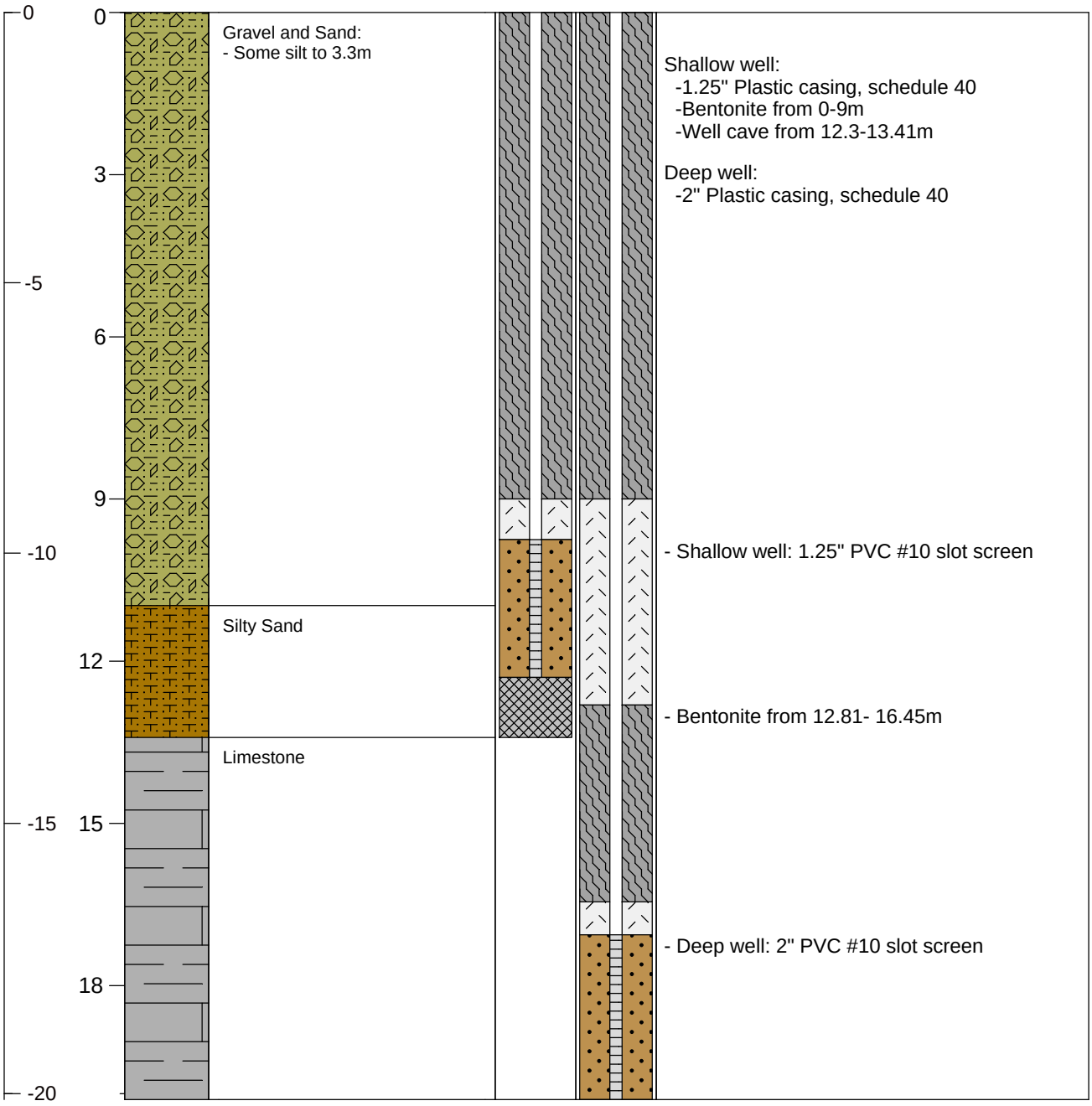
Prepared By: Goffco Limited

Prepared For: STRADA AGGREGATES

Well Name: MW2-04

Project No: 07-253p **Date:** August 1, 2004	**Location:** Lot 12, Con 3, Twp. of Melancthon Shelbourne
Logged By: Keith Lang	**Total Depth:** 20.11m **Ground Elevation:** 496.32 (masl) **Top of Casing:** 497.36 (masl)
Drilled by: Keith Lang Well Drilling	**UTM:** Northing: 4887847 Easting: 561769
MOE Well Tag I.D. A 006815	

Depth (m) Elev. (masl)	Stratigraphic Description	Monitor Details



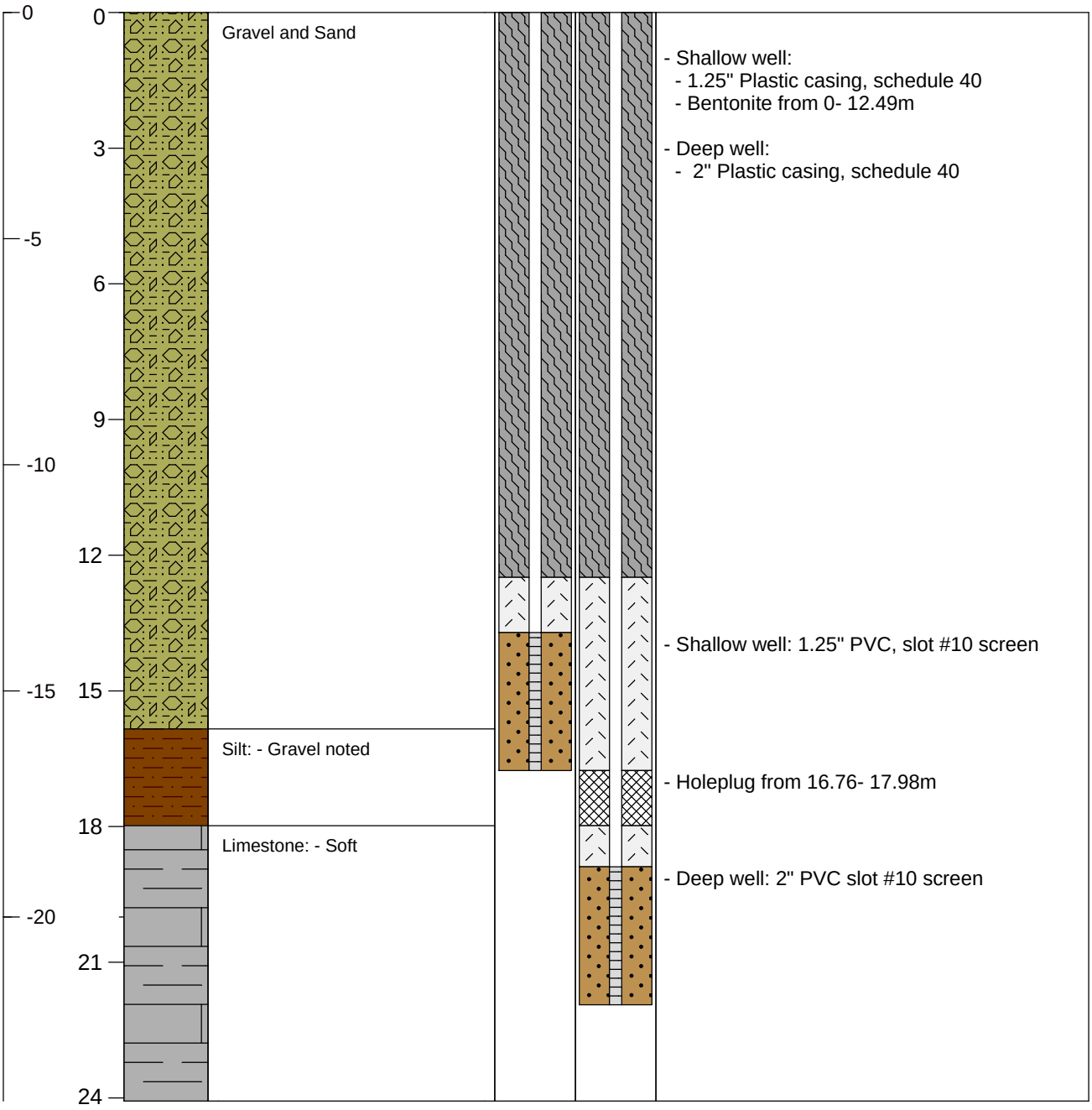
Prepared By: Goffco Limited

Prepared For: STRADA AGGREGATES

Well Name: MW4-04

Project No: 07-253p **Date:** August 1, 2004	**Location:** Lot 12, Con 3, Twp. of Melancthon Shelbourne
Logged By: Keith Lang	**Total Depth:** 24.07m **Ground Elevation:** 511.17 (masl) **Top of Casing:** 512.08 (masl)
Drilled by: Keith Lang Well Drilling	**UTM:** Northing: 4888243 Easting: 561230
MOE Well Tag I.D. A 006827	

Depth (m) Elev. (masl)	Stratigraphic Description	Monitor Details



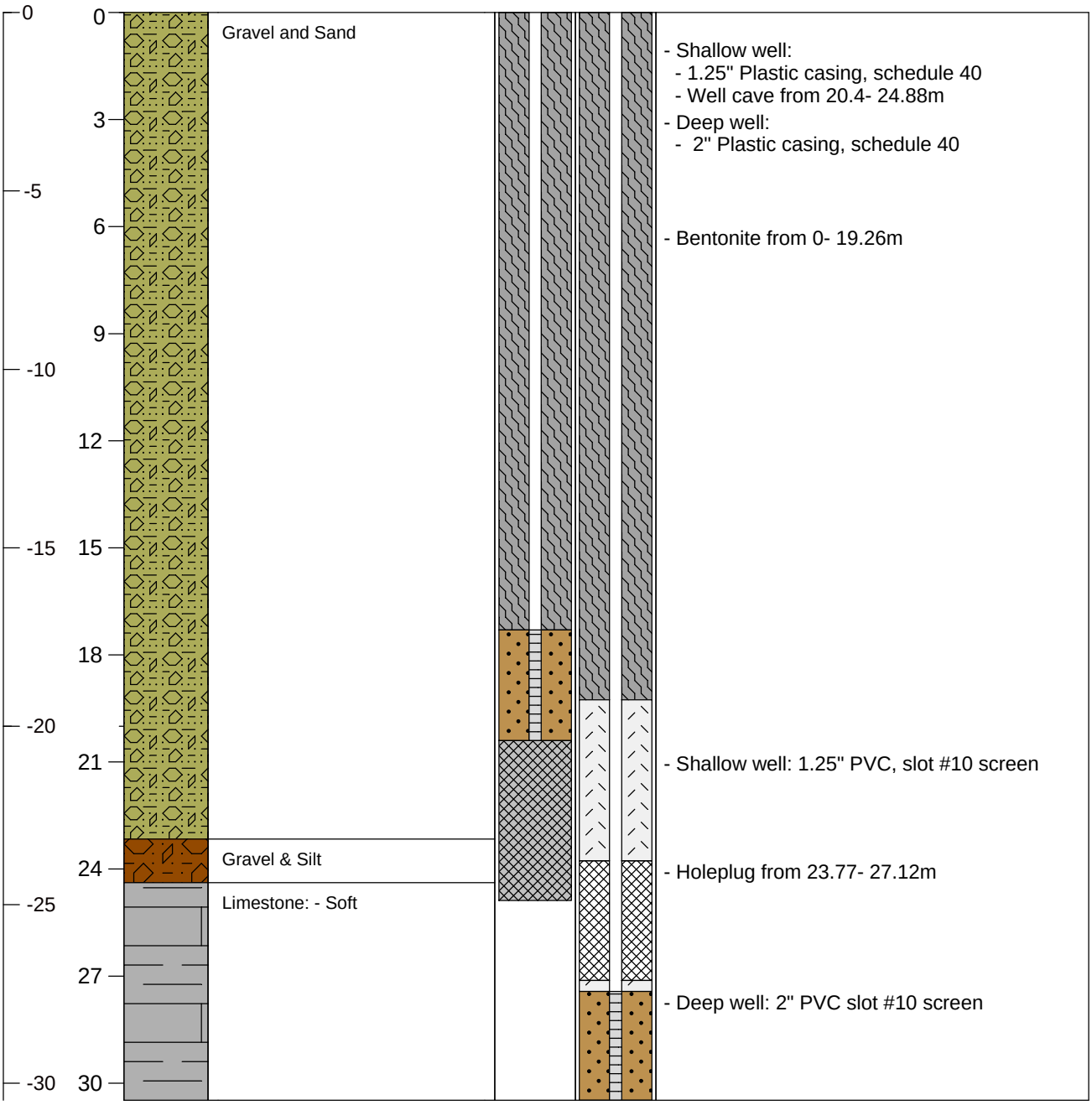
Prepared By: Goffco Limited

Prepared For: STRADA AGGREGATES

Well Name: MW5-04

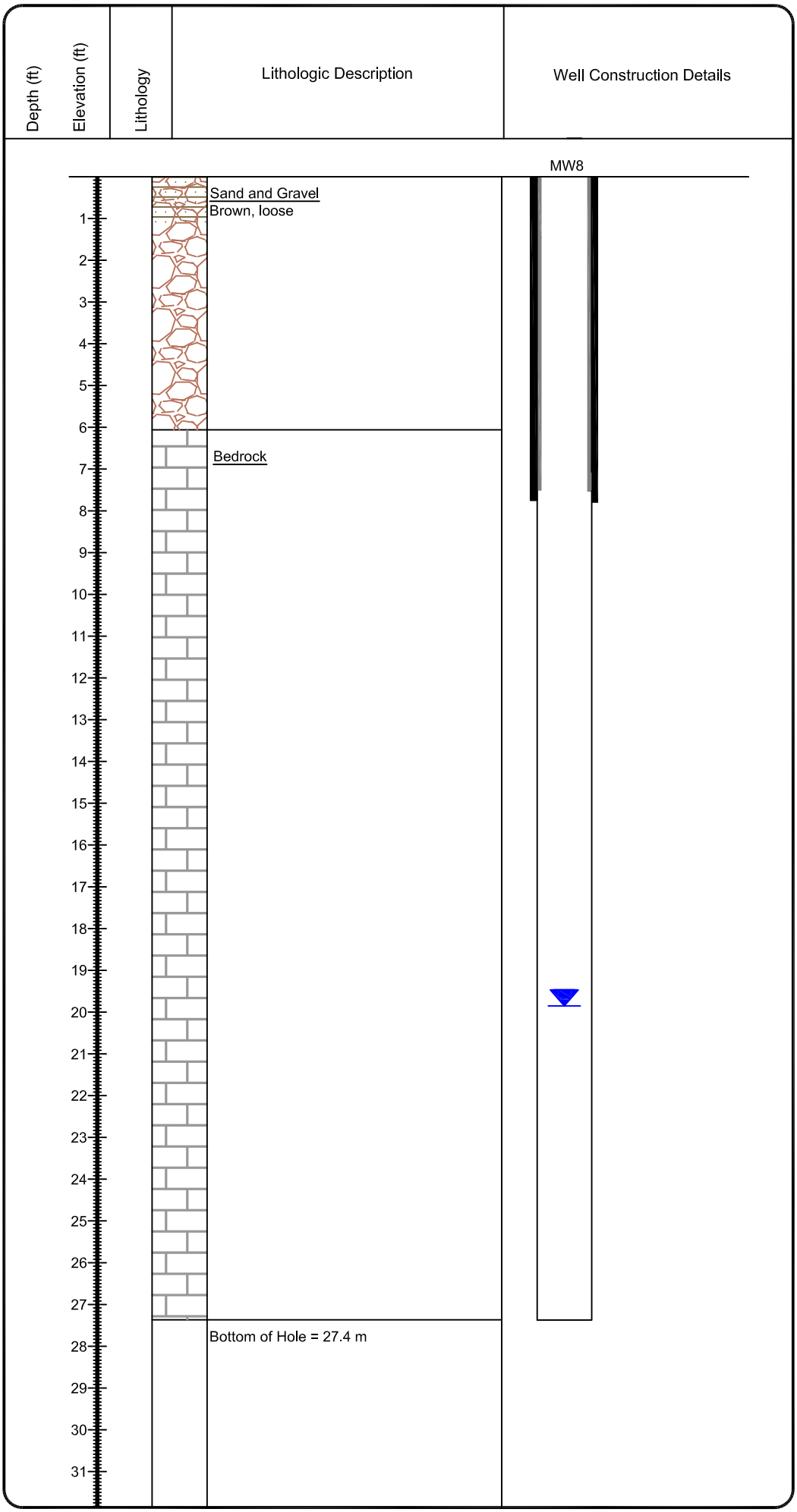
Project No: 07-253p **Date:** August 8, 2004	**Location:** Lot 12, Con 3, Twp. of Melancthon Shelbourne
Logged By: Keith Lang	**Total Depth:** 30.48m **Ground Elevation:** 510.35 (masl) **Top of Casing:** 511.48 (masl)
Drilled by: Keith Lang Well Drilling	**UTM:** Northing: 4887669 Easting: 561431
MOE Well Tag I.D. A 006826	

Depth (m) Elev. (masl)	Stratigraphic Description	Monitor Details



Prepared By: Goffco Limited

Prepared For: STRADA AGGREGATES



MONITORING WELL NEST

MW8

Shelburne Pit
Compliance Monitoring
Hydrogeological Assessment

Lot 12, Con 3
Township of Melancthon

DRILLING DETAILS

Drill Date:	June 2012
Drilling Method:	Mud Rotary
Driller:	Keith Lang Well Drilling
Geologist:	Tecia White

MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:
Northing:

Monitoring Well	MW8		
Ground Elev.			
Top of Casing Elev.			
Stick Up (m)			
Well Depth (m)	27.4 m		
High Water Level (date of water level)			

All units expressed as metres above sea level unless otherwise noted

LEGEND

- Water Level Elevation
- Bentonite Slurry
- Backfill
- Silica Sand
- Schedule 40 (2") PVC Riser Pipe
- Schedule 40 (2") 10-slot PVC Screen
- Protective Casing (4")

Whitewater Hydrogeology Ltd.

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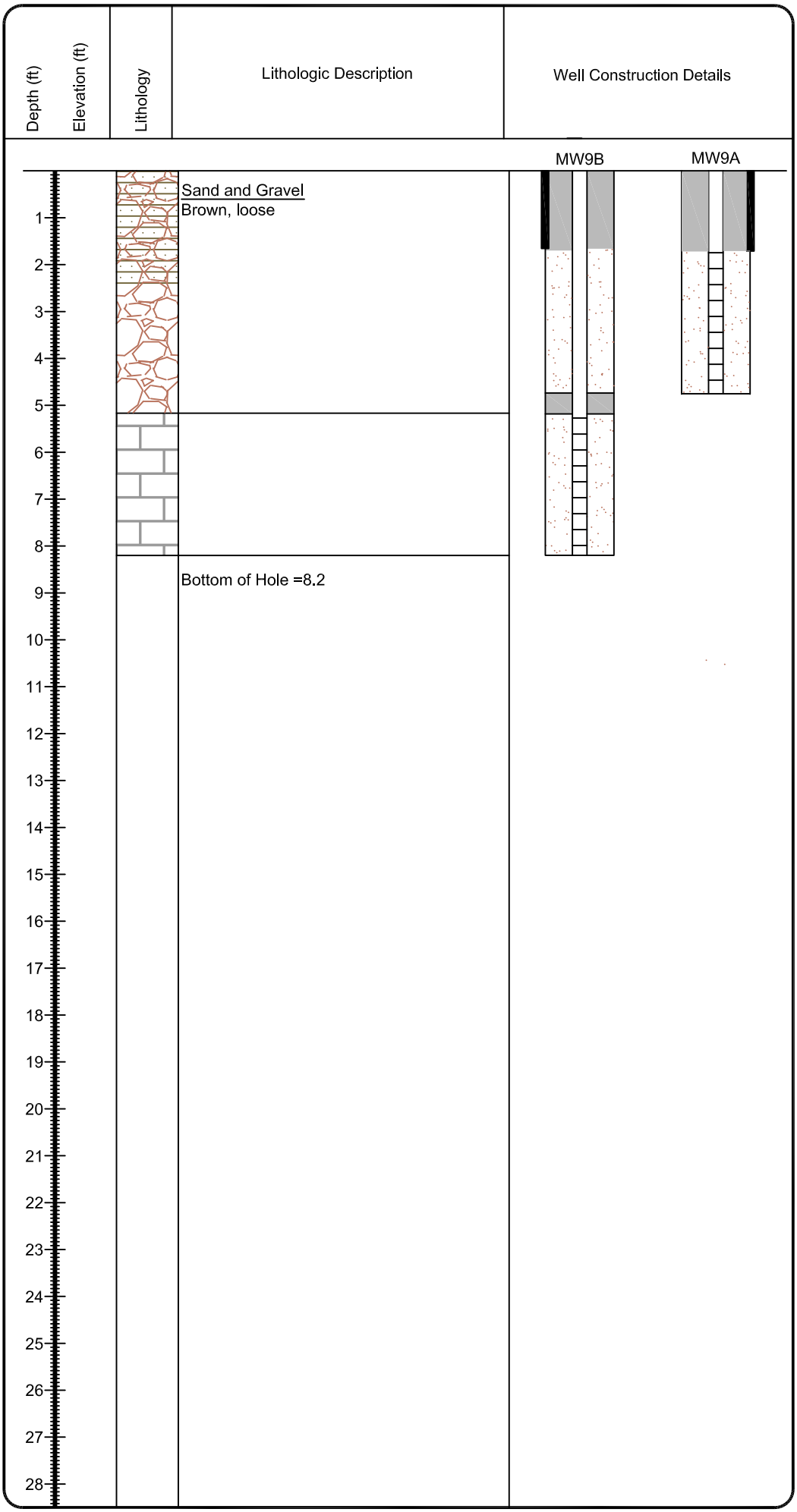

MONITORING WELL NEST

MW9

Shelburne Pit
Compliance Monitoring
Hydrogeological Assessment

Lot 12, Con 3
Township of Melancthon

DRILLING DETAILS

Drill Date:	June 2012
Drilling Method:	Mud Rotary
Driller:	Keith Lang Well Drilling
Geologist:	Tecia White

MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:
Northing:

Monitoring Well	MW9A	MW9B	
Ground Elev.			
Top of Casing Elev.			
Stick Up (m)			
Well Depth (m)	4.8 m	8.2 m	
High Water Level (date of water level)			

All units expressed as metres above sea level unless otherwise noted

LEGEND

- Water Level Elevation
- Bentonite Slurry
- Backfill
- Silica Sand
- Schedule 40 (2") PVC Riser Pipe
- Schedule 40 (2") 10-slot PVC Screen
- Protective Casing (4")

Whitewater Hydrogeology Ltd.

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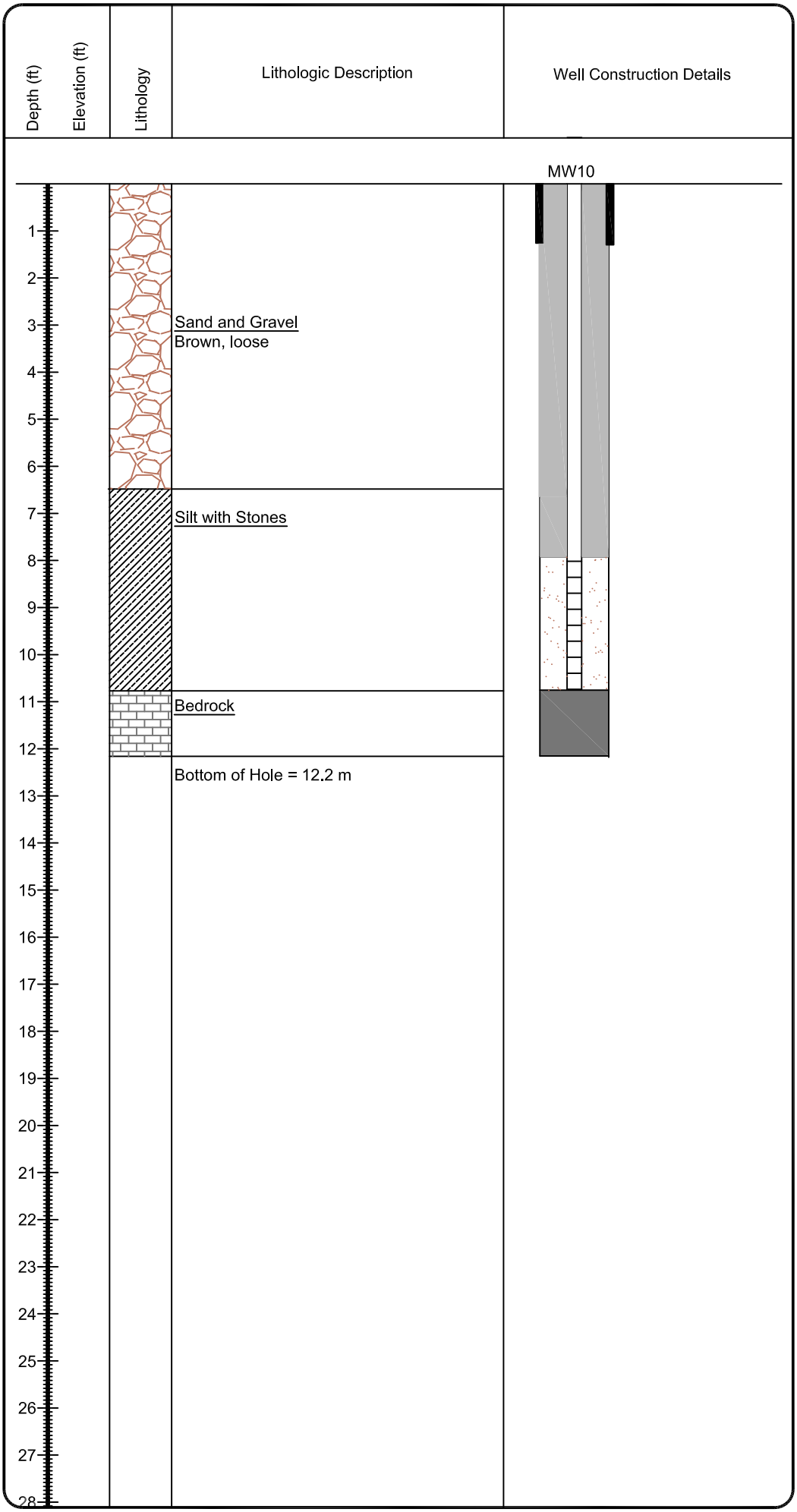

MONITORING WELL NEST

MW10

Shelburne Pit
Complaince Monitoring
Hydrogeological Assessment

Lot 12, Con 3
Township of Melancthon
-

DRILLING DETAILS

Drill Date:	22/06/11
Drilling Method:	Hollow Stem
Driller:	Keith Lang Well Drilling
Geologist:	Tecia White

MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:
Northing:

Monitoring Well	MW10		-
Ground Elev.			-
Top of Casing Elev.			-
Stick Up (m)	0.8 m		-
Well Depth (m)	10.8 m		-
High Water Level (date of water level)	dry October 2012		- -

All units expressed as metres above sea level unless otherwise noted

LEGEND

- Bentonite Slurry
- Backfill
- Silica Sand
- Schedule 40 (2") PVC Riser Pipe
- Schedule 40 (2") 10-slot PVC Screen
- Protective Casing (4")

Whitewater Hydrogeology Ltd.

Date Issued: November, 2011	Page 1 of 1
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Project No. 00-000	
File Name: -	

Ontario Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. (Pla... 115091 A115091

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	STRADA AGGREGATES		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
30 FLORAL PARKWAY	CONCORD	ONT	L4K4R1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
	MELANCTHON	13	3

County/District/Municipality	City/Town/Village	Province	Postal Code
DUFFERIN		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	561721	4837995		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SAND & GRAVEL			0	20ft
BROWN	LIMESTONE SOFT			20ft	37ft

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	25ft	BENTONITE 87BAGS	

Method of Construction

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

Well Use

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
2in	plastic	40	0	26ft

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ____ ☐ Other, specify ____

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
2in	plastic	.10	26ft	36ft

Water Details

Water found at Depth	Kind of Water	Depth (m/ft) From	To	Diameter (cm/in)
35ft (m/ft) ☐ Gas	☒ Fresh ☐ Untested ☐ Other, specify ____	0	37ft	6in
(m/ft) ☐ Gas	Water found at Depth ☐ Fresh ☐ Untested ☐ Other, specify ____			
(m/ft) ☐ Gas	Water found at Depth ☐ Fresh ☐ Untested ☐ Other, specify ____			

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify ____

If pumping discontinued, give reason: ____

Pump intake set at (m/ft) ____

Pumping rate (l/min / GPM) ____

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft) ____

If flowing give rate (l/min / GPM) ____

Recommended pump depth (m/ft) ____

Recommended pump rate (l/min / GPM) ____

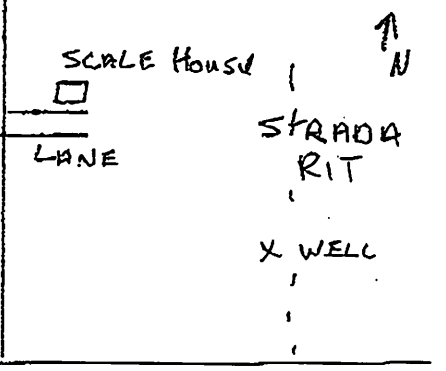
Well production (l/min / GPM) ____

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Location of Well

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
KEITH LANG WELL DRILLING INC	7154

Business Address (Street Number/Name)	Municipality
251 ELDON ST GODERICH	

Province	Postal Code	Business E-mail Address
ONT	N7A3S9	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
	KEITH LANG

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
1446	K. Lang	

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered

Date Work Completed 2012 6 20

Ministry of the Environment

Audit No. Z142139

Received

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Well Owner's Copy

Ontario Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. (Plate) 125524 Tag#: A125524

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	
STRADA	AGGERAGATES		☐ Well Constructed by Well Owner

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
30 FLORAL PARKWAY	CONCORD	ONT	L4K4R1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
	MELANCTHON	13	3

County/District/Municipality	City/Town/Village	Province	Postal Code
DUFFERIN		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	564714	4887997		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SAND AND GRAVEL			0	20ft
BROWN	LIMESTONES SOFT			20ft	39ft
BROWN	LIMESTONE MED			39ft	90ft
		USE CENTRALIZERS			

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	27ft	BENTONITE SLURRY 40gal	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6¼	steel	.188	0 2	27ft
5½	plastic	shc40	20ft	40ft
6in	open hole		40ft	90ft

Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Water Details

Water found at Depth	Kind of Water	Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
58ft (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	0	27ft	8.75 in
74ft (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	27ft	90ft	6in
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason: monitor well

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

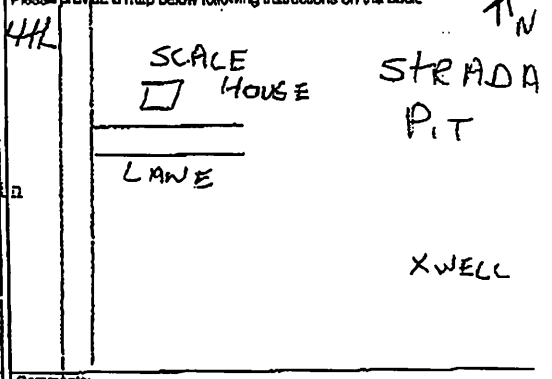
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
KEITH LANG WELL DRILLING INC	7154

Business Address (Street Number/Name)	Municipality
251 ELDON ST GODERICH ONT	

Province	Postal Code	Business E-mail Address
	N7A3S9	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
	KEITH LANG

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
1446	K. Lang	

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2012 7 5

Ministry Use Only

Audit No. 2142147

Received

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1 - Well Owner's Copy

Ontario Ministry of the Environment

Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. (Place sticker and/or print below): A115096

115096

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
STRADA	AGGERGATES		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
30 FLORAL PARKWAY	CONCORD ONT	ONT	L4K4R1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
	MELANCTHON	13	3

County/District/Municipality	City/Town/Village	Province	Postal Code
DUFFERIN		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	561634	4887857		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
BROWN	SAND GRAVEL			0	17ft
BROWN	LIMESTONE SOFT			17ft	27ft

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	6ft	bentonite	

Method of Construction

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, specify ☐ Diamond ☐ Jetting ☐ Driving ☐ Digging

Well Use

☐ Public ☐ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, specify ☐ Commercial ☐ Municipal ☐ Test Hole ☐ Cooling & Air Conditioning ☐ Not used ☐ Dewatering ☒ Monitoring

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
1 1/4	plastic	40	0	6ft
1 1/4	plastic	40	0	18ft

Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
1 1/4	plastic	.10	6ft	16ft
1 1/4	plastic	.10	17ft	27ft

Water Details

Water found at Depth (m/ft) ☐ Gas | Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Water found at Depth (m/ft) ☐ Gas | Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Water found at Depth (m/ft) ☐ Gas | Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	28ft	6in

Results of Well Yield Testing

After test of well yield, water was: ☒ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ___ hrs + ___ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

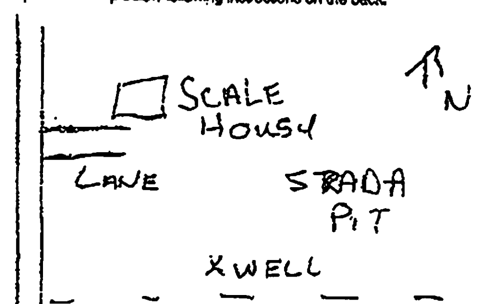
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
KEITH LANG WELL DRILLING INC	7154

Business Address (Street Number/Name)	Municipality
251 ELDON ST GODERICH ONT	

Province	Postal Code	Business E-mail Address
	N7A3R9	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
	KEITH LANG

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
1446	K. Lang	

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☐ Yes ☐ No		Audit No. Z142138
	Date Work Completed 2012 6 20	Received

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APPENDIX B

WATER QUALITY RESULTS

TESTMARK Laboratories

Committed to Quality and Service

Analytical Report

Client: Tecia White
Company: Whitewater Hydrogeology Ltd.
Address: 80 Chamberlain Cres
Collingwood, Ontario, L9Y 0C8
Phone: (705) 888-7064
Fax:
Email: tecia@white-water.ca

Work Order Number: **241716**
Date Order Received: 5/15/2015
Regulation: Information not provided
PO #:
Project #: Strada Aggregates (Shelburne Pit North)

Analyses were performed on the following samples submitted with your order.
The results relate only to the items tested.

Sample Name	Lab #	Matrix	Type	Comments	Date Collected	Time Collected
MW1A	638285	Ground Water	None		5/12/2015	
MW1B	638286	Ground Water	None		5/12/2015	
MW2B	638287	Ground Water	None		5/12/2015	
MW4A	638288	Ground Water	None		5/12/2015	
MW5A	638289	Ground Water	None		5/12/2015	
MW5B	638290	Ground Water	None		5/12/2015	
MW6	638291	Ground Water	None		5/12/2015	
MW8	638292	Ground Water	None		5/12/2015	
MW10B	638293	Ground Water	None		5/12/2015	
OW1	638294	Ground Water	None		5/12/2015	

The following instrumentation and reference methods were used for your sample(s)

Method Name	Description	Reference
A26-Colour	Determination of Colour by Spectrophotometry **Instrument group:** Shimadzu UV/Vis	Modified from APHA-2120C
A55-TOC Water	Determination of Total Organic Carbon in Water **Instrument group:** Phoenix Analyzer	Modified from APHA 5310
Ammonia Water	Determination of Ammonia/Ammonium in Water **Instrument group:** Internally Subcontracted	Based on APHA-4500NH3 H
OP Water	Determination of Ortho-Phosphate in Water **Instrument group:** Internally Subcontracted	Based on APHA-4500P
PHC F1 Water	Determination of PHC F1 in Water - Tier 1 CCME **Instrument group:** Internally Subcontracted	CWS PHC Tier I CCME
PHC F2-F4 Water	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID **Instrument group:** Internally Subcontracted	CWS PHC Tier I CCME
T01-Alkalinity	Determination of Alkalinity in Water **Instrument group:** Accumet ISE Meter	Modified from APHA 2320
T02-pH Water	Determination of pH in Water **Instrument group:** Accumet ISE Meter	Modified from APHA-4500-H+B
T05-Anions Water	Determination of Anions by Ion Chromatography **Instrument group:** Dionex IC	Modified from SW846-9056
T12-CONDWATER	Determination of conductivity in Water **Instrument group:** Conductivity Meter	Modified from APHA-2510
T13-Hardness	Determination of Total Hardness **Instrument group:** Calculation	Modified from APHA-2340B
T13-ICPMS Water	Determination of Metals in Water by ICPMS **Instrument group:** PE Elan ICP/MS-1	Modified from SW846-6020
T21-Turbidity	Determination of Turbidity by Nephelometry **Instrument group:** Nephelometer	Modified from APHA-2130 B
T27-TDS	Determination of Total Dissolved Solids in water by gravimetry **Instrument group:** Denver Balance	Modified from APHA-2540
T94-Carbonate	Determination of Carbonate and Bi-Carbonate **Instrument group:** Calculation	Based on APHA-2330
TP Water	Determination of Total Phosphorus in Water **Instrument group:** Internally Subcontracted	Based on APHA-4500P
VOC Water	Determination of Volatile Organic Compounds in Water by P&T/GC/MS **Instrument group:** Internally Subcontracted	Based on EPA 624

This report has been approved by:

Mark Charbonneau, Ph.D.
Laboratory Director

Sample Data:

Sample Name: MW1A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638285**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	1.9	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.016	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	0.0078	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	91	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	326	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.53	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	10.5	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	2.26	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	11.8	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	576	µS/cm	20150521.T12A

Sample Name: MW1A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638285**

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	246	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	28.5	ug/L	20150520.T13F
Boron	2	103	ug/L	20150520.T13F
Calcium	500	68300	ug/L	20150520.T13F
Copper	1	1.2	ug/L	20150520.T13F
Iron	200	600	ug/L	20150520.T13F
Magnesium	4	18300	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	7	ug/L	20150520.T13F
Nickel	1	9.4	ug/L	20150520.T13F
Potassium	1	1040	ug/L	20150520.T13F
Selenium	1	2.6	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	6000	ug/L	20150520.T13F
Strontium	1	105	ug/L	20150520.T13F
Zinc	1	4.1	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	73.7	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	319	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	325	mg/L	20150521.T94A
Carbonate	1	1	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.265	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1,2-Tetrachloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW1A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638285**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,2-Trichloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	107	% Rec	20150520.R14vw
1,2-Dichloroethane-d4 (Surr) (Dup)	N/A	100	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloropropane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	99	% Rec	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.) (Dup)	N/A	100	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Acetone (Dup)	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Benzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromoform (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW1A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638285**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Chloroethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloroform (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Dichloromethane (Dup)	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Ethylbenzene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
m+p-Xylene (Dup)	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl ethyl ketone (Dup)	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK) (Dup)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE) (Dup)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane (Dup)	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
o-Xylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Styrene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	100	% Rec	20150520.R14vw
Toluene-d8 (Surr.) (Dup)	N/A	100	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Total Xylenes (Dup)	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW1A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638285**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Trans-1,2-dichloroethylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane (Dup)	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride (Dup)	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW1B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638286**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	1.4	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	<0.01	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	88	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	321	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.72	pH	20150521.T02A

Sample Name: MW1B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638286**

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	11.2	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	2.44	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	12.1	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	565	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	239	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	43.4	ug/L	20150520.T13F
Boron	2	42.8	ug/L	20150520.T13F
Calcium	500	69600	ug/L	20150520.T13F
Copper	1	3.2	ug/L	20150520.T13F
Iron	200	690	ug/L	20150520.T13F
Magnesium	4	15800	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	2.9	ug/L	20150520.T13F
Nickel	1	9.4	ug/L	20150520.T13F
Potassium	1	943	ug/L	20150520.T13F
Selenium	1	1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	6730	ug/L	20150520.T13F
Strontium	10	120	ug/L	20150520.T13F
Zinc	1	9.2	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	62.3	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	270	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	319	mg/L	20150521.T94A
Carbonate	1	1.6	mg/L	20150521.T94A

Sample Name: MW1B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638286**

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.018	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	93	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	100	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw

Sample Name: MW1B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638286**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	100	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW2B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638287**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	1.4	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.02	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	0.0079	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	80	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	485	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

Sample Name: MW2B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638287**

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.67	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	6	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	3.32	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	9.4	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	675	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	292	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	62.8	ug/L	20150520.T13F
Boron	2	23.9	ug/L	20150520.T13F
Calcium	500	82900	ug/L	20150520.T13F
Copper	1	1.9	ug/L	20150520.T13F
Iron	200	790	ug/L	20150520.T13F
Magnesium	4	20600	ug/L	20150520.T13F
Manganese	1	1.5	ug/L	20150520.T13F
Molybdenum	1	1.5	ug/L	20150520.T13F
Nickel	1	12	ug/L	20150520.T13F
Potassium	1	698	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	2080	ug/L	20150520.T13F
Strontium	10	141	ug/L	20150520.T13F
Zinc	1	19	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	1	1650	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	322	mg/L	20150525.T27A

Sample Name: MW2B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638287**

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	483	mg/L	20150521.T94A
Carbonate	1	2.1	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.223	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	104	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	100	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW2B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638287**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	101	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW4A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638288**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	1	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.011	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	50	<50	ug/L	20150519.R59f2w5b
F3 (C16-C34)	50	<50	ug/L	20150519.R59f2w5b
F4 (C34-C50)	50	<50	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	71	% Rec	20150519.R59f2w5b

Sample Name: MW4A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638288**

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	262	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	8.05	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.05	<0.05	mg/L	20150525.T05A
Bromide (Dup)	0.05	<0.05	mg/L	20150525.T05A
Chloride	0.05	1.84	mg/L	20150525.T05A
Chloride (Dup)	0.05	1.85	mg/L	20150525.T05A
Fluoride	0.05	<0.05	mg/L	20150525.T05A
Fluoride (Dup)	0.05	<0.05	mg/L	20150525.T05A
Nitrate (as N)	0.01	15.9	mg/L	20150525.T05A
Nitrate (as N) (Dup)	0.01	15.5	mg/L	20150525.T05A
Nitrite (as N)	0.01	<0.01	mg/L	20150525.T05A
Nitrite (as N) (Dup)	0.01	<0.01	mg/L	20150525.T05A
Sulphate	0.05	12.5	mg/L	20150525.T05A
Sulphate (Dup)	0.05	12.3	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	529	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	219	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	76.2	ug/L	20150520.T13F
Boron	2	10.2	ug/L	20150520.T13F
Calcium	500	61000	ug/L	20150520.T13F
Copper	1	1.7	ug/L	20150520.T13F
Iron	200	560	ug/L	20150520.T13F
Magnesium	4	16200	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	1	ug/L	20150520.T13F
Nickel	1	8.6	ug/L	20150520.T13F
Potassium	1	597	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	1490	ug/L	20150520.T13F

Sample Name: MW4A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638288**

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Strontium	1	85.9	ug/L	20150520.T13F
Zinc	1	2.8	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	1	313	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	276	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	259	mg/L	20150521.T94A
Carbonate	1	2.7	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.184	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	115	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	101	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW4A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638288**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	100	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW5A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638289**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	2.6	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.054	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	0.013	mg/L	20150519.R23.1B

Sample Name: MW5A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638289**

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	83	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	263	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	8.02	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	7.1	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	4.99	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	17.4	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	509	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	224	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	36.9	ug/L	20150520.T13F
Boron	2	6	ug/L	20150520.T13F
Calcium	500	63300	ug/L	20150520.T13F
Copper	1	1.8	ug/L	20150520.T13F
Iron	200	580	ug/L	20150520.T13F
Magnesium	4	15900	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F

Sample Name: MW5A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638289**

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Molybdenum	1	1.3	ug/L	20150520.T13F
Nickel	1	7.9	ug/L	20150520.T13F
Potassium	1	887	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	4300	ug/L	20150520.T13F
Strontium	1	92.8	ug/L	20150520.T13F
Zinc	1	6.1	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	1	1950	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	269	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	260	mg/L	20150521.T94A
Carbonate	1	2.6	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.01	1.32	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	106	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	100	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW5A **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638289**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	0.29	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	102	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW5B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638290**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	2.2	mg/L	20150520.T55A

Sample Name: MW5B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638290**

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.019	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	60	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	280	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.99	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.05	<0.05	mg/L	20150525.T05A
Chloride	0.05	5.24	mg/L	20150525.T05A
Fluoride	0.05	<0.05	mg/L	20150525.T05A
Nitrate (as N)	0.01	1.65	mg/L	20150525.T05A
Nitrite (as N)	0.01	<0.01	mg/L	20150525.T05A
Sulphate	0.05	5.32	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	480	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	207	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F

Sample Name: MW5B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638290**

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Barium	1	21.9	ug/L	20150520.T13F
Boron	2	2	ug/L	20150520.T13F
Calcium	500	58800	ug/L	20150520.T13F
Copper	1	1.2	ug/L	20150520.T13F
Iron	200	510	ug/L	20150520.T13F
Magnesium	4	14500	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	<1	ug/L	20150520.T13F
Nickel	1	7.8	ug/L	20150520.T13F
Potassium	1	875	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	2150	ug/L	20150520.T13F
Strontium	1	80	ug/L	20150520.T13F
Zinc	1	7.5	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	10	4050	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	338	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	277	mg/L	20150521.T94A
Carbonate	1	2.5	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.273	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	101	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW5B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638290**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	99	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	98	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW6 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638291**

A26-Colour

Parameter	MDL	Result	Units	QAQCID
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water

Parameter	MDL	Result	Units	QAQCID
Total Organic Carbon	0.4	1.3	mg/L	20150520.T55A

Ammonia Water

Parameter	MDL	Result	Units	QAQCID
Ammonia (as N)	0.01	<0.01	mg/L	20150520.R42.1A

OP Water

Parameter	MDL	Result	Units	QAQCID
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water

Parameter	MDL	Result	Units	QAQCID
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water

Parameter	MDL	Result	Units	QAQCID
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	84	% Rec	20150519.R59f2w5b

T01-Alkalinity

Parameter	MDL	Result	Units	QAQCID
M-Alkalinity (pH 4.5)	2	286	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water

Parameter	MDL	Result	Units	QAQCID
pH	N/A	7.96	pH	20150521.T02A

T05-Anions Water

Parameter	MDL	Result	Units	QAQCID
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	10.4	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	3.14	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	14.7	mg/L	20150525.T05A

T12-CONDWATER

Parameter	MDL	Result	Units	QAQCID
Conductivity	1	565	µS/cm	20150521.T12A

Sample Name: MW6 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638291**

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	244	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	31.9	ug/L	20150520.T13F
Boron	2	<2	ug/L	20150520.T13F
Calcium	500	62900	ug/L	20150520.T13F
Copper	1	43.5	ug/L	20150520.T13F
Iron	200	570	ug/L	20150520.T13F
Magnesium	4	21100	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	<1	ug/L	20150520.T13F
Nickel	1	9.7	ug/L	20150520.T13F
Potassium	1	1980	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	4560	ug/L	20150520.T13F
Strontium	1	93.6	ug/L	20150520.T13F
Zinc	1	9.2	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	<0.1	NTU	20150522.T21A
Turbidity (Dup)	0.1	<0.1	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	315	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	284	mg/L	20150521.T94A
Carbonate	1	2.4	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	<0.002	mg/L	20150520.R23.2A
Total Phosphorus (as P) (Dup)	0.002	<0.002	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW6 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638291**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	104	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	100	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	99	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW6 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638291**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW8 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638292**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	0.98	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	<0.01	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	50	<50	ug/L	20150519.R59f2w5b
F3 (C16-C34)	50	<50	ug/L	20150519.R59f2w5b
F4 (C34-C50)	50	<50	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	64	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	148	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	8.12	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	5.8	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	2.62	mg/L	20150525.T05A

Sample Name: MW8 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638292**

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	15	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	314	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	139	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	23.2	ug/L	20150520.T13F
Boron	2	<2	ug/L	20150520.T13F
Calcium	50	39800	ug/L	20150520.T13F
Copper	1	<1	ug/L	20150520.T13F
Iron	20	353	ug/L	20150520.T13F
Magnesium	4	9620	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	<1	ug/L	20150520.T13F
Nickel	1	5.3	ug/L	20150520.T13F
Potassium	1	562	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	2840	ug/L	20150520.T13F
Strontium	1	68.6	ug/L	20150520.T13F
Zinc	1	10.6	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	14.6	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	188	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	146	mg/L	20150521.T94A
Carbonate	1	1.8	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	<0.002	mg/L	20150520.R23.2A

Sample Name: MW8 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638292**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	104	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	101	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW8 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638292**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	98	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: MW10B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638293**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	1.4	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	0.016	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	60	<60	ug/L	20150519.R59f2w5b
F3 (C16-C34)	60	<60	ug/L	20150519.R59f2w5b
F4 (C34-C50)	60	<60	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	63	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	297	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.83	pH	20150521.T02A

Sample Name: MW10B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638293**

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	6.8	mg/L	20150525.T05A
Fluoride	0.5	1.2	mg/L	20150525.T05A
Nitrate (as N)	0.1	0.97	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	81.5	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	598	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	271	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Barium	1	70.3	ug/L	20150520.T13F
Boron	2	14.6	ug/L	20150520.T13F
Calcium	500	52400	ug/L	20150520.T13F
Copper	1	1.2	ug/L	20150520.T13F
Iron	20	503	ug/L	20150520.T13F
Magnesium	4	34100	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F
Molybdenum	1	16.5	ug/L	20150520.T13F
Nickel	1	7.8	ug/L	20150520.T13F
Potassium	1	2020	ug/L	20150520.T13F
Selenium	1	1.2	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	22800	ug/L	20150520.T13F
Strontium	10	333	ug/L	20150520.T13F
Zinc	1	3.4	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	66.8	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	310	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	295	mg/L	20150521.T94A
Carbonate	1	1.9	mg/L	20150521.T94A

Sample Name: MW10B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638293**

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	0.0812	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	102	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	101	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw

Sample Name: MW10B **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638293**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	100	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: OW1 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638294**

A26-Colour				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
True Colour	1	<1	TCU	20150520.T26A

A55-TOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Organic Carbon	0.4	0.81	mg/L	20150520.T55A
Total Organic Carbon (Dup)	0.4	<0.4	mg/L	20150520.T55A

Ammonia Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Ammonia (as N)	0.01	<0.01	mg/L	20150520.R42.1A

OP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Orthophosphate (as P)	0.005	<0.005	mg/L	20150519.R23.1B
Orthophosphate (as P) (Dup)	0.005	<0.005	mg/L	20150519.R23.1B

PHC F1 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
F1 (C6-C10) - Less BTEX	5	<5	ug/L	20150520.R59f1w
F1 (C6-C10) Incl. BTEX	5	<5	ug/L	20150520.R59f1w

PHC F2-F4 Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Baseline @ C50	N/A	Yes	NA	20150519.R59f2w5b
F2 (C10-C16)	30	<30	ug/L	20150519.R59f2w5b
F3 (C16-C34)	30	<30	ug/L	20150519.R59f2w5b
F4 (C34-C50)	30	<30	ug/L	20150519.R59f2w5b
o-Terphenyl (Surr.)	N/A	60	% Rec	20150519.R59f2w5b

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5)	2	299	mg/L as CaCO3	20150520.T01B

Sample Name: OW1 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638294**

T01-Alkalinity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
M-Alkalinity (pH 4.5) (Dup)	2	293	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3)	2	<2	mg/L as CaCO3	20150520.T01B
P-Alkalinity (pH 8.3) (Dup)	2	<2	mg/L as CaCO3	20150520.T01B

T02-pH Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
pH	N/A	7.81	pH	20150521.T02A
pH (Dup)	N/A	7.89	pH	20150521.T02A

T05-Anions Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bromide	0.5	<0.5	mg/L	20150525.T05A
Chloride	0.5	5.2	mg/L	20150525.T05A
Fluoride	0.5	<0.5	mg/L	20150525.T05A
Nitrate (as N)	0.1	3.41	mg/L	20150525.T05A
Nitrite (as N)	0.1	<0.1	mg/L	20150525.T05A
Sulphate	0.5	13.3	mg/L	20150525.T05A

T12-CONDWATER				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Conductivity	1	541	µS/cm	20150521.T12A
Conductivity (Dup)	1	535	µS/cm	20150521.T12A

T13-Hardness				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Hardness (as CaCO3)	0.1	225	mg/L	20150521.T13A

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Aluminum	1	<1	ug/L	20150520.T13F
Aluminum (Dup)	1	<1	ug/L	20150520.T13F
Antimony	0.5	<0.5	ug/L	20150520.T13F
Antimony (Dup)	0.5	<0.5	ug/L	20150520.T13F
Arsenic	1	<1	ug/L	20150520.T13F
Arsenic (Dup)	1	<1	ug/L	20150520.T13F
Barium	1	36.8	ug/L	20150520.T13F
Barium (Dup)	1	36.1	ug/L	20150520.T13F
Boron	2	<2	ug/L	20150520.T13F
Boron (Dup)	2	<2	ug/L	20150520.T13F
Calcium	500	55100	ug/L	20150520.T13F
Calcium (Dup)	500	52900	ug/L	20150520.T13F
Copper	1	<1	ug/L	20150520.T13F
Copper (Dup)	1	<1	ug/L	20150520.T13F
Iron	20	510	ug/L	20150520.T13F
Iron (Dup)	20	500	ug/L	20150520.T13F
Magnesium	4	21300	ug/L	20150520.T13F
Magnesium (Dup)	4	21300	ug/L	20150520.T13F
Manganese	1	<1	ug/L	20150520.T13F

Sample Name: OW1 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638294**

T13-ICPMS Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Manganese (Dup)	1	<1	ug/L	20150520.T13F
Molybdenum	1	<1	ug/L	20150520.T13F
Molybdenum (Dup)	1	<1	ug/L	20150520.T13F
Nickel	1	7.6	ug/L	20150520.T13F
Nickel (Dup)	1	7.8	ug/L	20150520.T13F
Potassium	1	531	ug/L	20150520.T13F
Potassium (Dup)	1	532	ug/L	20150520.T13F
Selenium	1	<1	ug/L	20150520.T13F
Selenium (Dup)	1	<1	ug/L	20150520.T13F
Silver	0.1	<0.1	ug/L	20150520.T13F
Silver (Dup)	0.1	<0.1	ug/L	20150520.T13F
Sodium	1	1610	ug/L	20150520.T13F
Sodium (Dup)	1	1600	ug/L	20150520.T13F
Strontium	1	93.2	ug/L	20150520.T13F
Strontium (Dup)	1	92.3	ug/L	20150520.T13F
Zinc	1	8.4	ug/L	20150520.T13F
Zinc (Dup)	1	9.4	ug/L	20150520.T13F

T21-Turbidity				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Turbidity	0.1	6.16	NTU	20150522.T21A

T27-TDS				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Dissolved Solids	3	193	mg/L	20150525.T27A
Total Dissolved Solids (Dup)	3	200	mg/L	20150525.T27A

T94-Carbonate				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Bicarbonate	1	297	mg/L	20150521.T94A
Carbonate	1	1.8	mg/L	20150521.T94A

TP Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
Total Phosphorus (as P)	0.002	<0.002	mg/L	20150520.R23.2A

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,1,1,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,1-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2,2-Tetrachloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1,2-Trichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,1-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
1,2,4-Trichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromo-3-chloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dibromoethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw

Sample Name: OW1 **Date: 5/12/2015** **Matrix: Ground Water** **Lab #: 638294**

VOC Water				
Parameter	**MDL**	**Result**	**Units**	**QAQCID**
1,2-Dichloroethane	0.2	<0.2	ug/L	20150520.R14vw
1,2-Dichloroethane-d4 (Surr)	N/A	104	% Rec	20150520.R14vw
1,2-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1,3-Dichloropropane	0.2	<0.2	ug/L	20150520.R14vw
1,4-Dichlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
1-Bromo-4-fluorobenzene (Surr.)	N/A	99	% Rec	20150520.R14vw
Acetone	30	<30	ug/L	20150520.R14vw
Benzene	0.2	<0.2	ug/L	20150520.R14vw
Bromobenzene	0.2	<0.2	ug/L	20150520.R14vw
Bromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromodichloromethane	0.2	<0.2	ug/L	20150520.R14vw
Bromoform	0.2	<0.2	ug/L	20150520.R14vw
Bromomethane	0.2	<0.2	ug/L	20150520.R14vw
Carbon tetrachloride	0.2	<0.2	ug/L	20150520.R14vw
Chlorobenzene	0.2	<0.2	ug/L	20150520.R14vw
Chloroethane	0.2	<0.2	ug/L	20150520.R14vw
Chloroform	0.2	<0.2	ug/L	20150520.R14vw
Chloromethane	0.2	<0.2	ug/L	20150520.R14vw
cis - + trans-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,2-Dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
cis-1,3-Dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Dibromochloromethane	0.2	<0.2	ug/L	20150520.R14vw
Dibromomethane	0.2	<0.2	ug/L	20150520.R14vw
Dichlorodifluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Dichloromethane	1	<1	ug/L	20150520.R14vw
Ethylbenzene	0.2	<0.2	ug/L	20150520.R14vw
Hexachlorobutadiene	0.2	<0.2	ug/L	20150520.R14vw
m+p-Xylene	0.3	<0.3	ug/L	20150520.R14vw
Methyl ethyl ketone	0.5	<0.5	ug/L	20150520.R14vw
Methyl isobutyl ketone (MIBK)	0.5	<0.5	ug/L	20150520.R14vw
Methyl tert-butyl ether (MTBE)	0.5	<0.5	ug/L	20150520.R14vw
n-Hexane	0.5	<0.5	ug/L	20150520.R14vw
o-Xylene	0.2	<0.2	ug/L	20150520.R14vw
Styrene	0.2	<0.2	ug/L	20150520.R14vw
Tetrachloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Toluene	0.2	<0.2	ug/L	20150520.R14vw
Toluene-d8 (Surr.)	N/A	100	% Rec	20150520.R14vw
Total Xylenes	0.4	<0.4	ug/L	20150520.R14vw
Trans-1,2-dichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trans-1,3-dichloropropene	0.2	<0.2	ug/L	20150520.R14vw
Trichloroethylene	0.2	<0.2	ug/L	20150520.R14vw
Trichlorofluoromethane	0.2	<0.2	ug/L	20150520.R14vw
Vinyl chloride	0.2	<0.2	ug/L	20150520.R14vw

MDL Method detection limit or minimum reporting limit.
% Rec Surrogate compounds are added to the sample in some cases and the recovery is reported as a percent recovered.
QAQCID This is a unique reference to the quality control data set used to generate the reported value.
Data reported for organic analysis in soil samples are corrected for moisture content
Matrix If the matrix is a leachate, the sample was extracted according to regulation 558.
INT Interferences
TNTC Too numerous to count
ND Not detected
NDOGN No Data, Overgrown with Non-Target
NDOGT No Data, Overgrown with Target
NDOGHPC No Data, Overgrown HPC

Unless otherwise specified in the sample comments section of the report, the following statements apply to all samples which were analyzed using the CCME PHC method.

The method as performed complies with the Reference Method for the CWS PHC and is validated for use in this laboratory.
The Chromatogram descended to the baseline at or before nC50.
The nC6 and nC10 response factors were within 30% of the response factor for Toluene.
The nC10, nC16, and nC34 response factors were within 10% of their average.
The nC50 was at least 70% of the nC10-nC16-nC34 average.
The linearity of the calibration curve was within 15% based on response factor.
Any QC data is available on request.
Extraction and analysis hold times were met.
If F4G results are reported, they are not to be added to the C6 to C50 results.
BTEX and selected PAHs have been subtracted from the appropriate fractions only if the parameter names are F1-BTEX, F2-NAPTH, and F3-PAH, otherwise, these compounds have not been subtracted from their respective fractions.