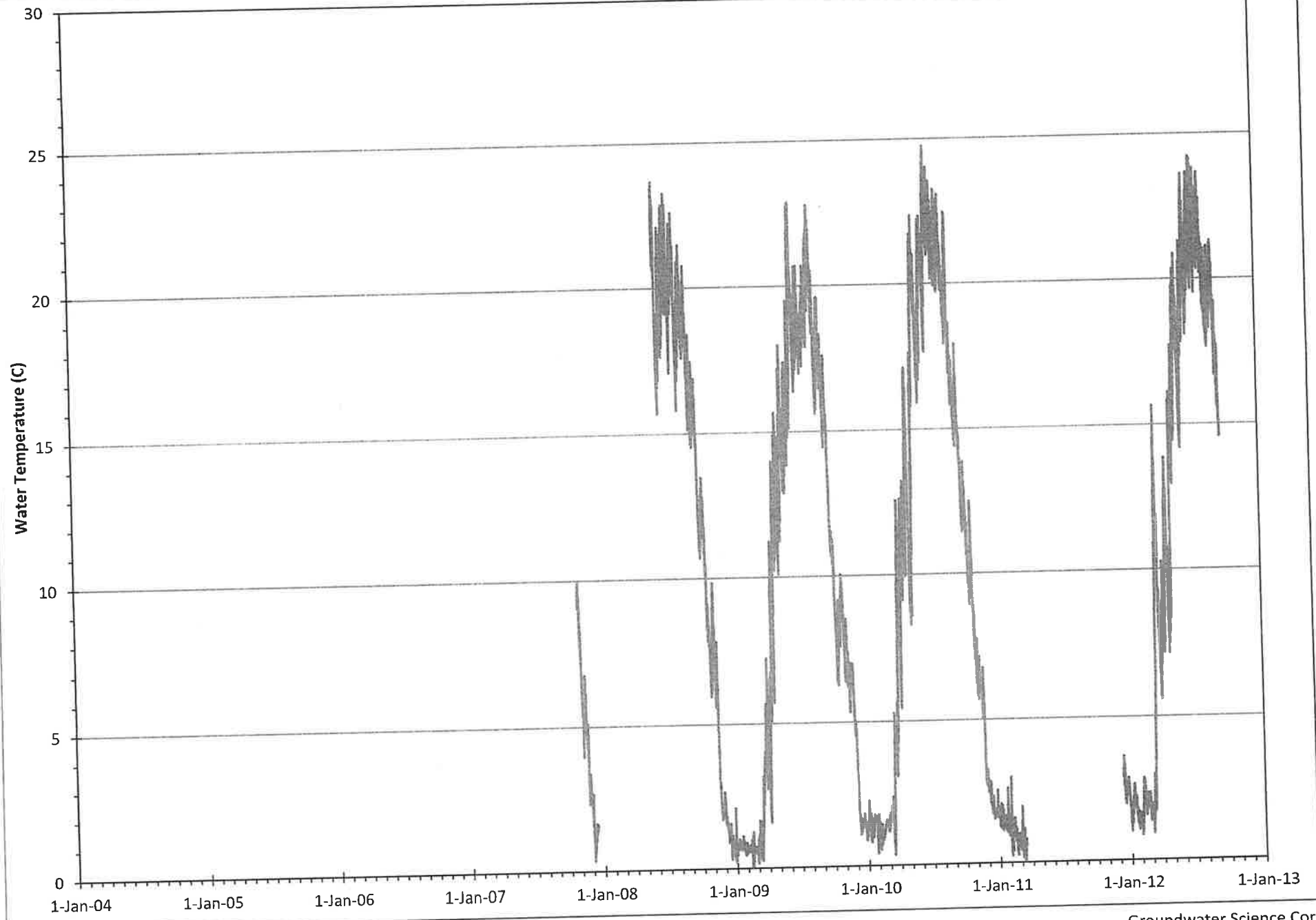


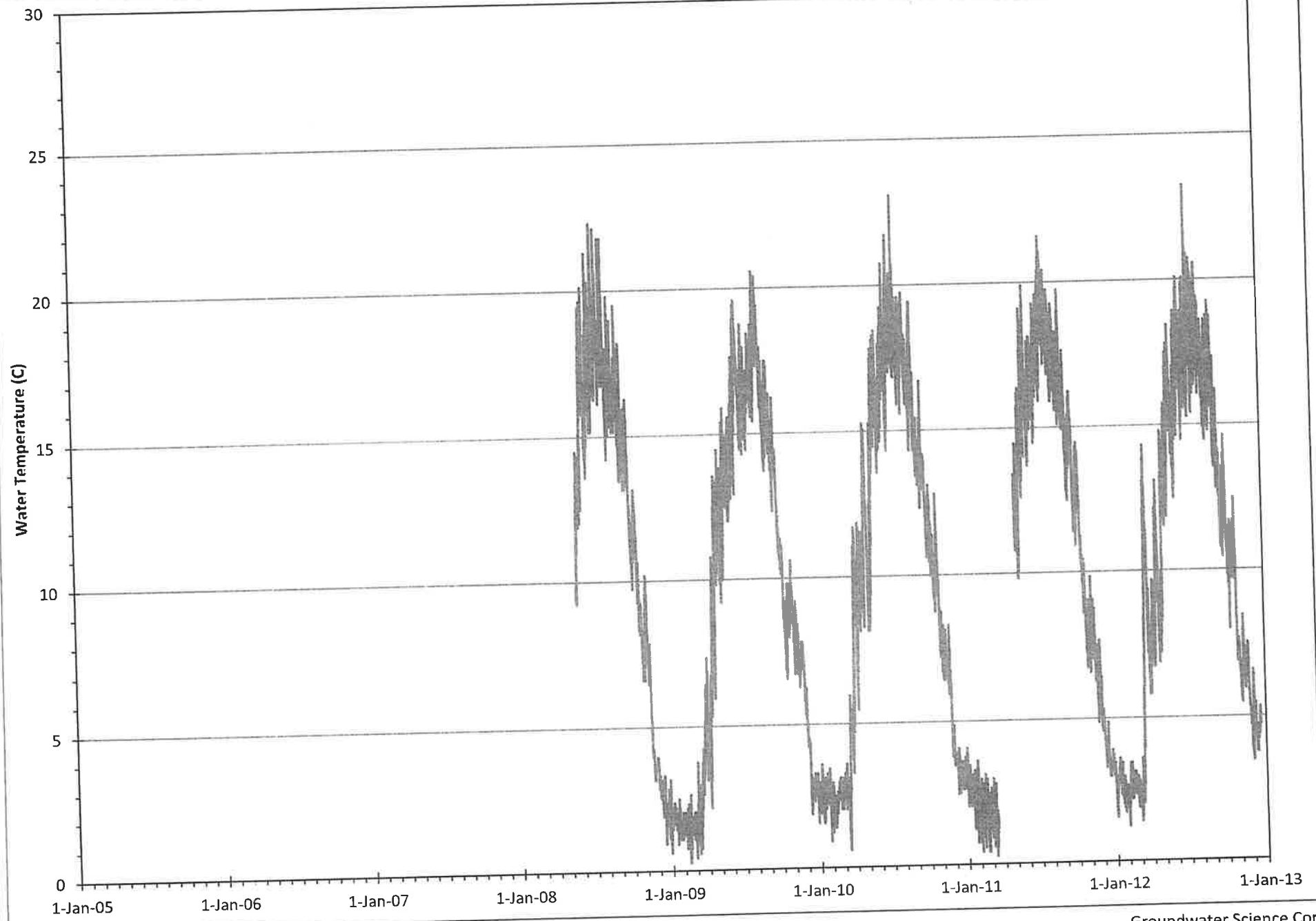
Appendix C
Temperature Plots



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW1 Temperature Plot

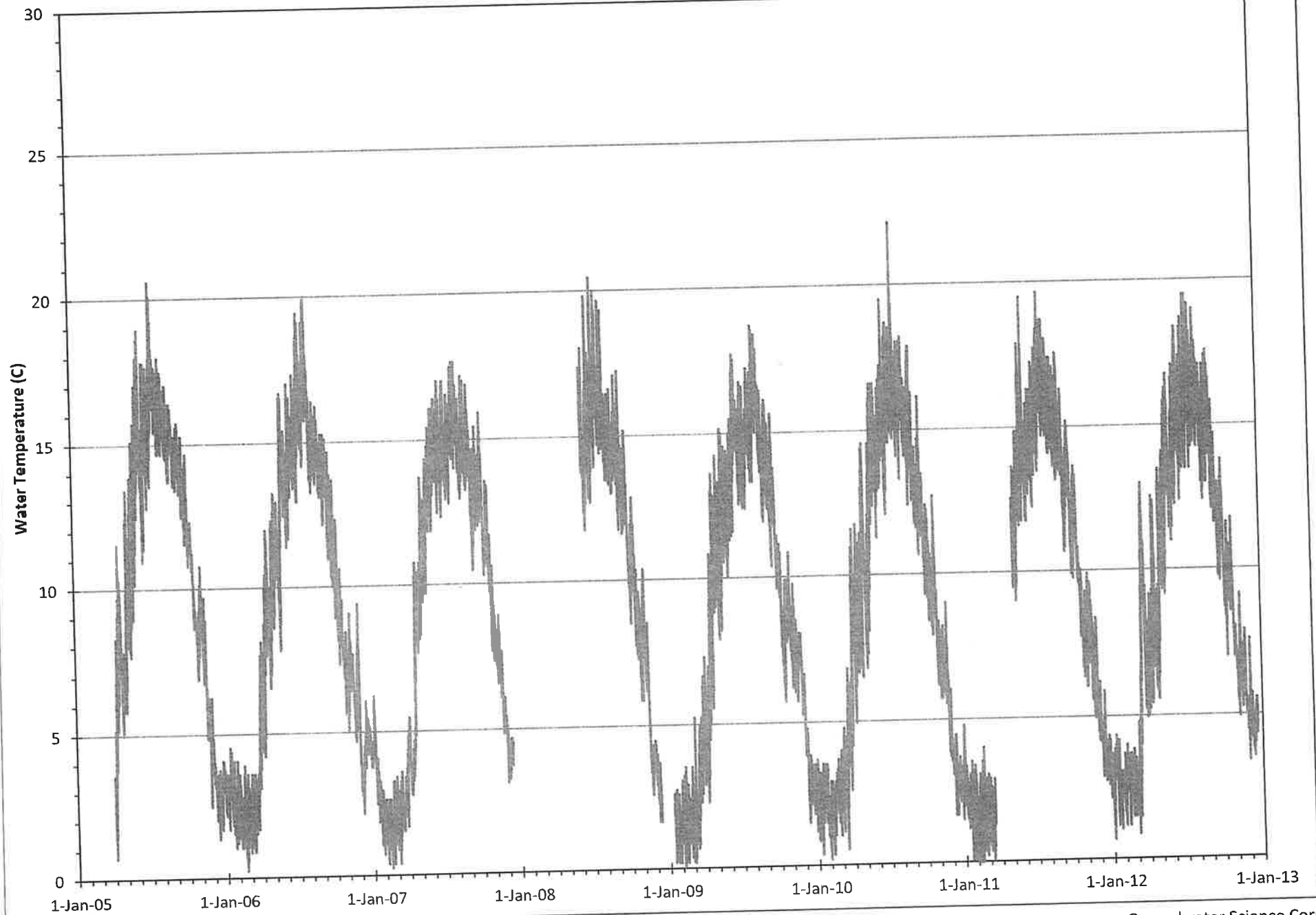
Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW2 Temperature Plot

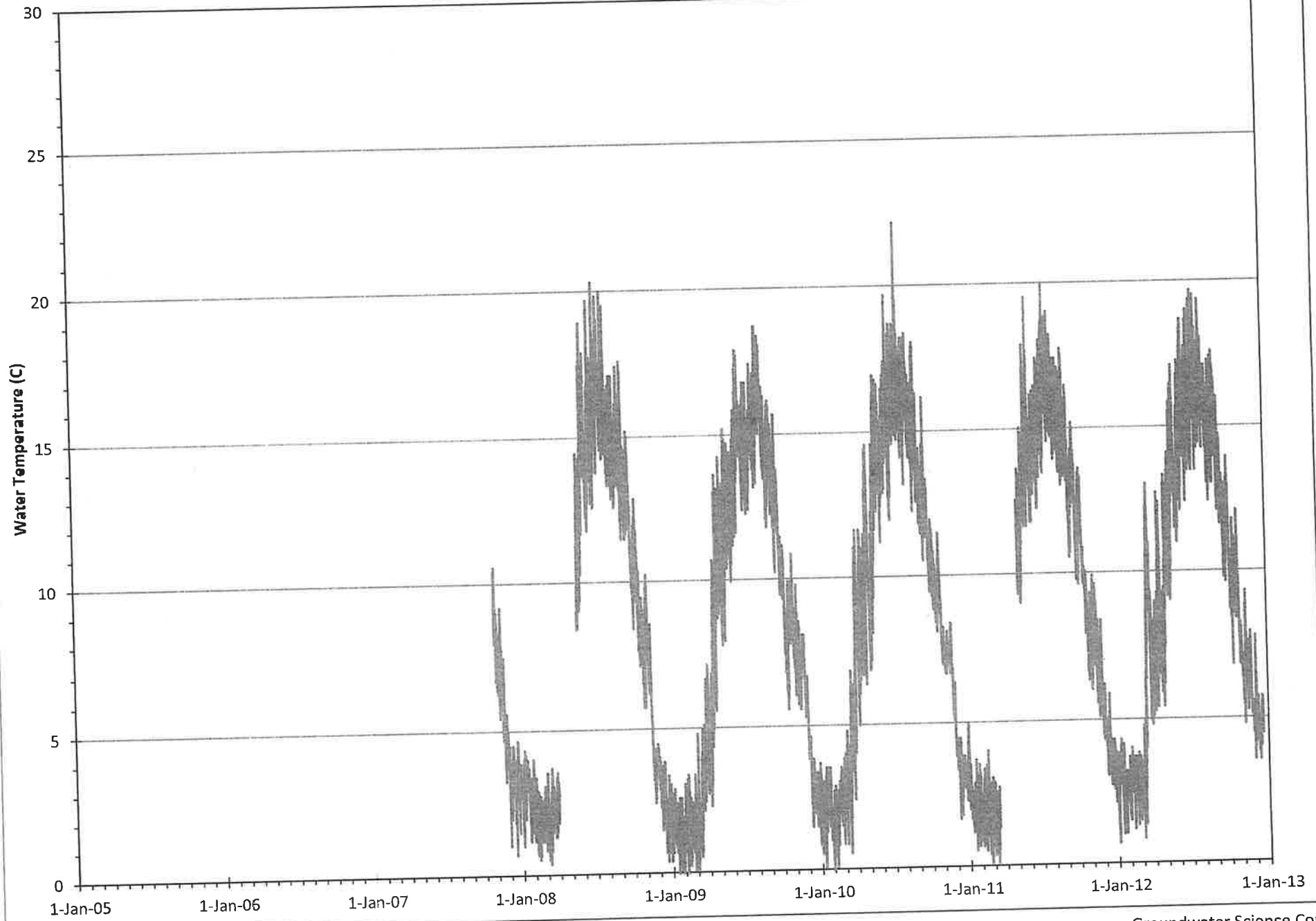
Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW3 Temperature Plot

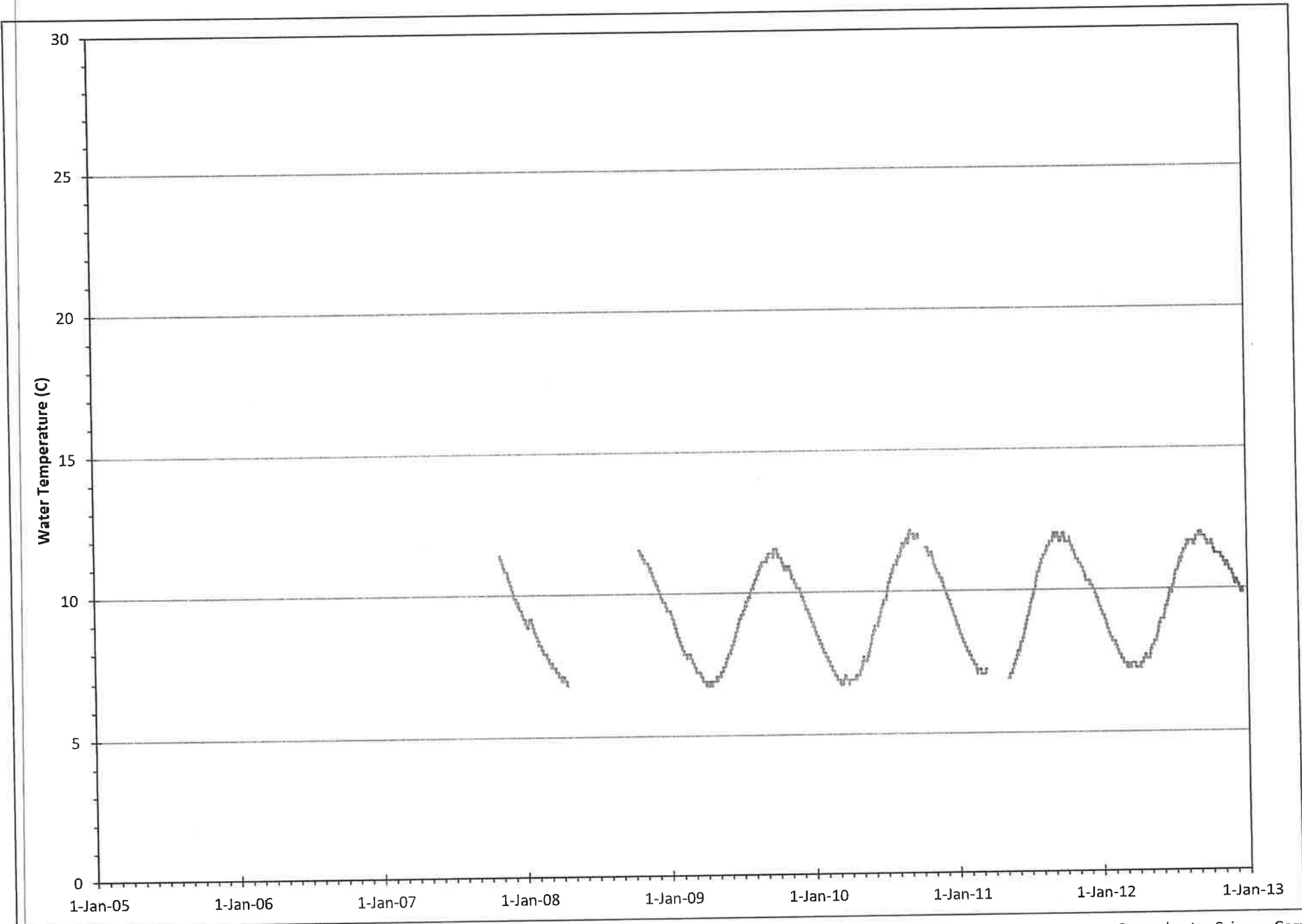
Groundwater Science Corp.
Monitoring Program

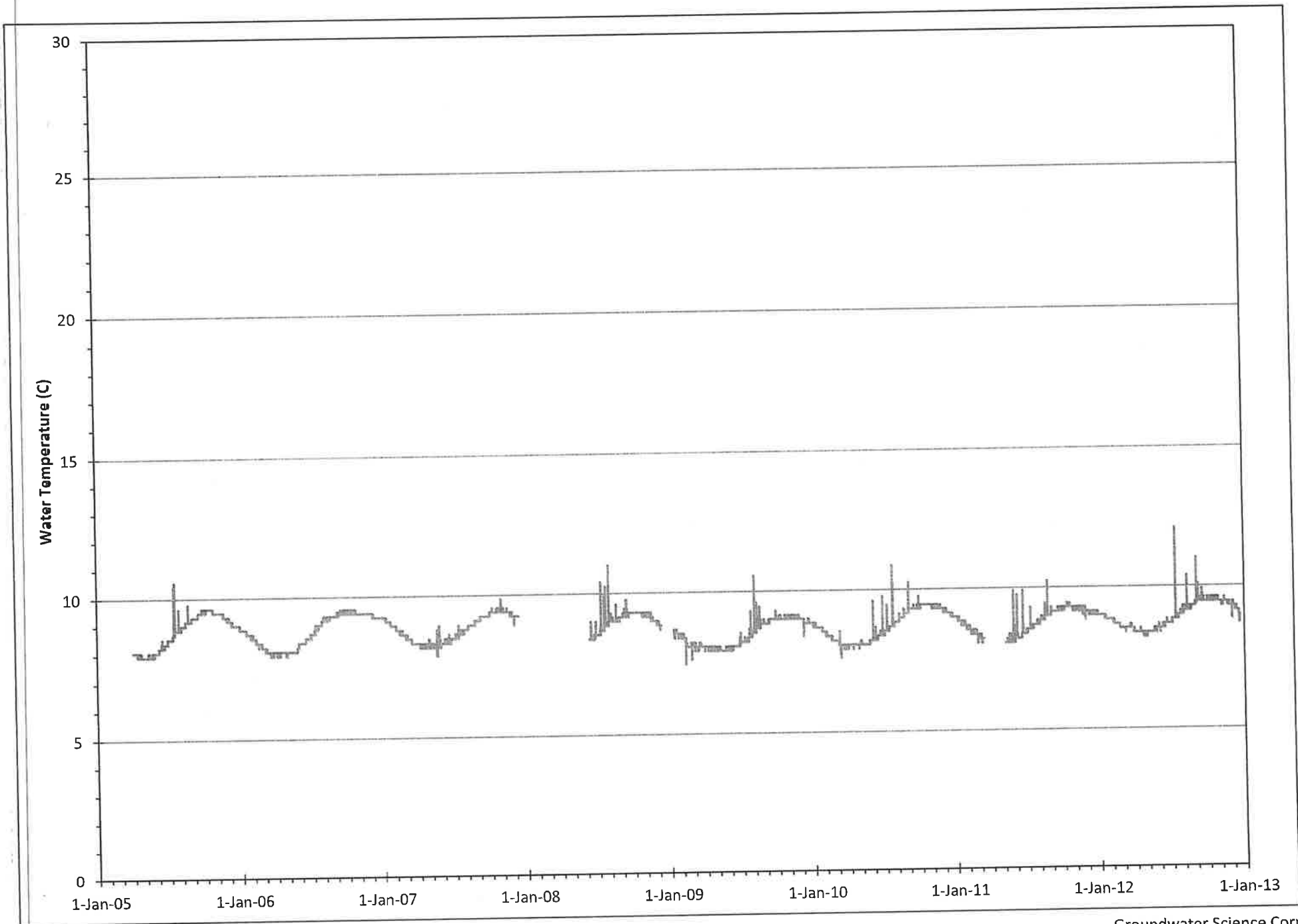


Preston Sand and Gravel Company Limited
Roszell Road Pit

SW4 Temperature Plot

Groundwater Science Corp.
Monitoring Program

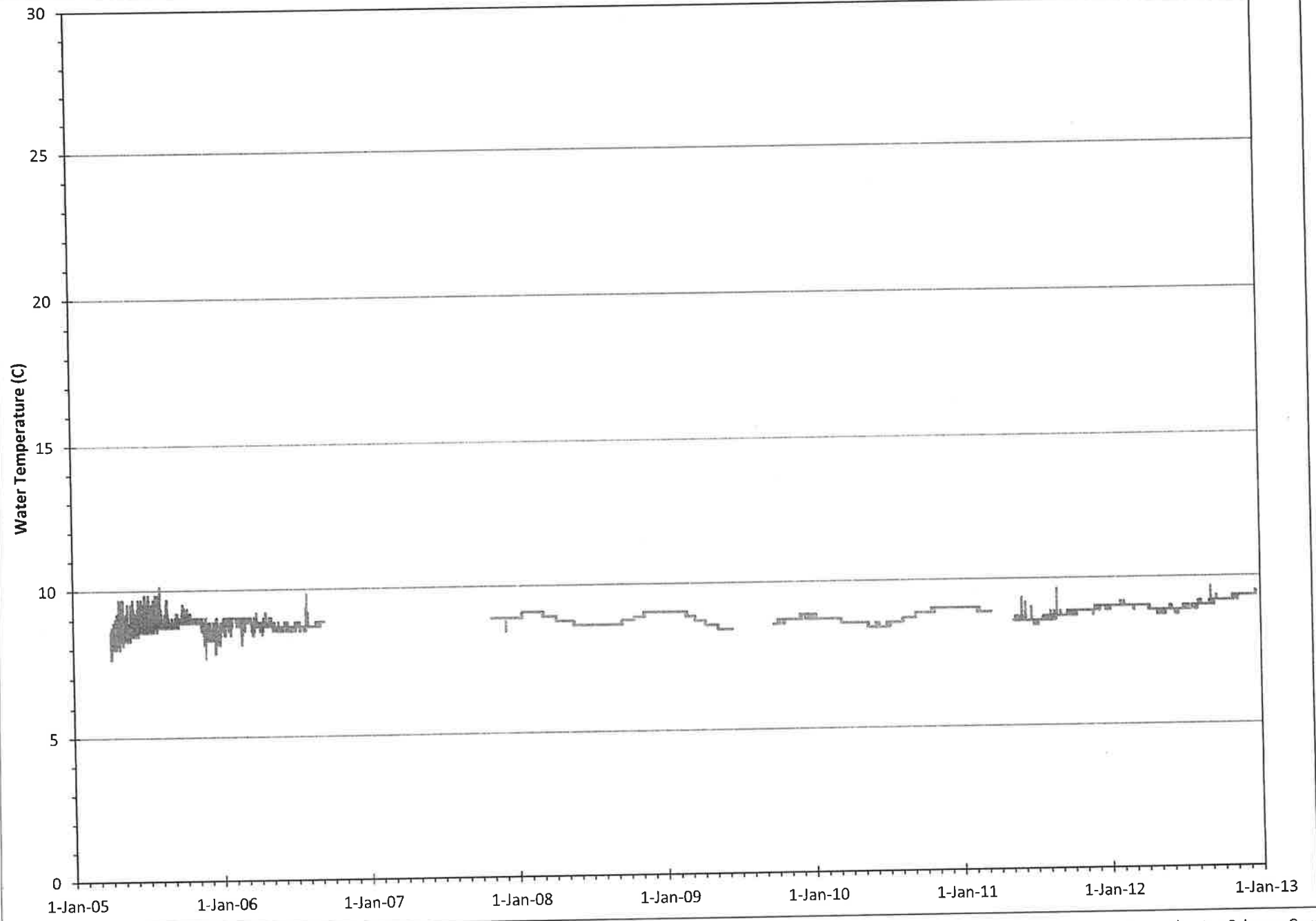




Preston Sand and Gravel Company Limited
Roszell Road Pit

SW6 Temperature Plot

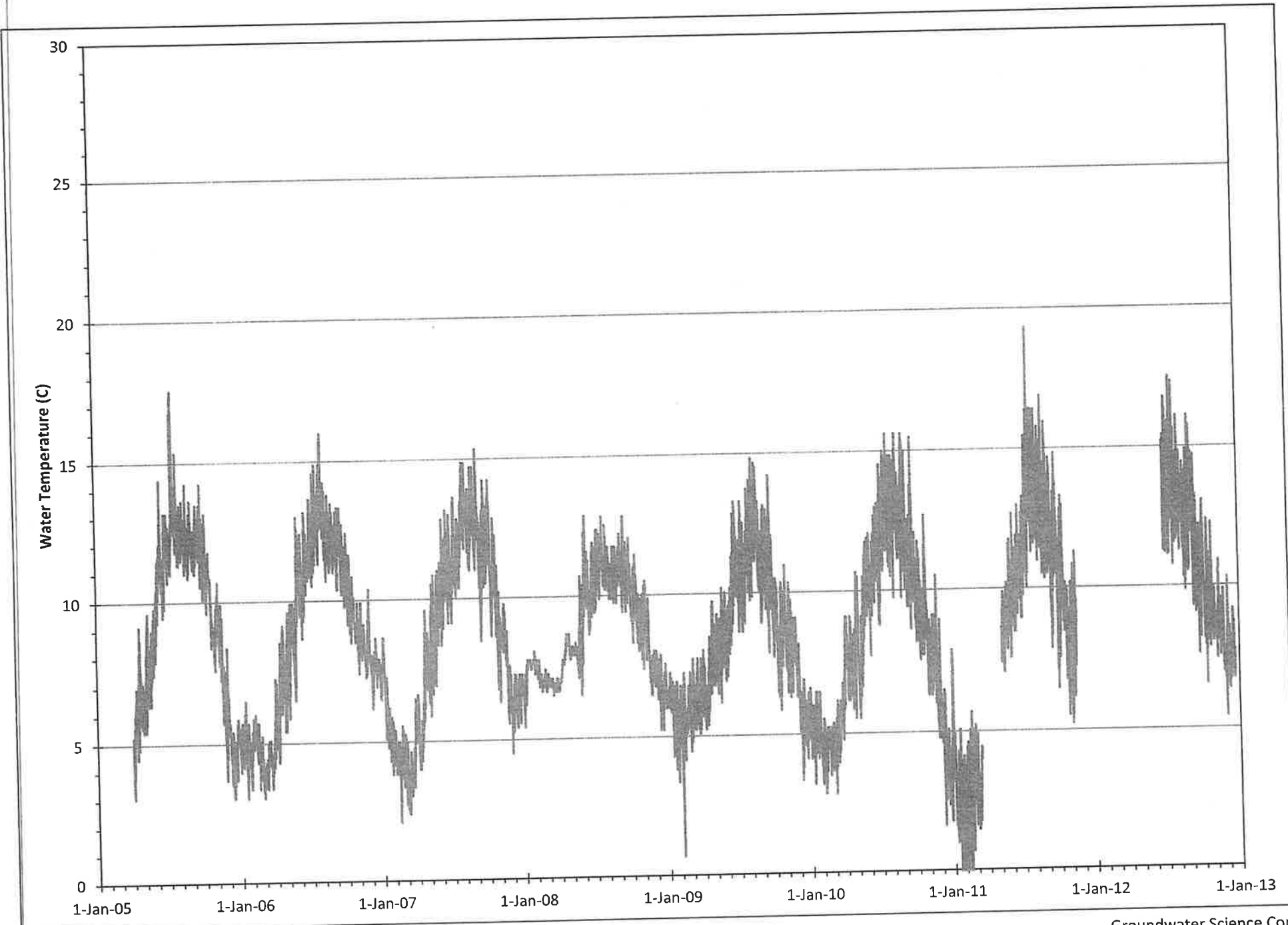
Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW8 Temperature Plot

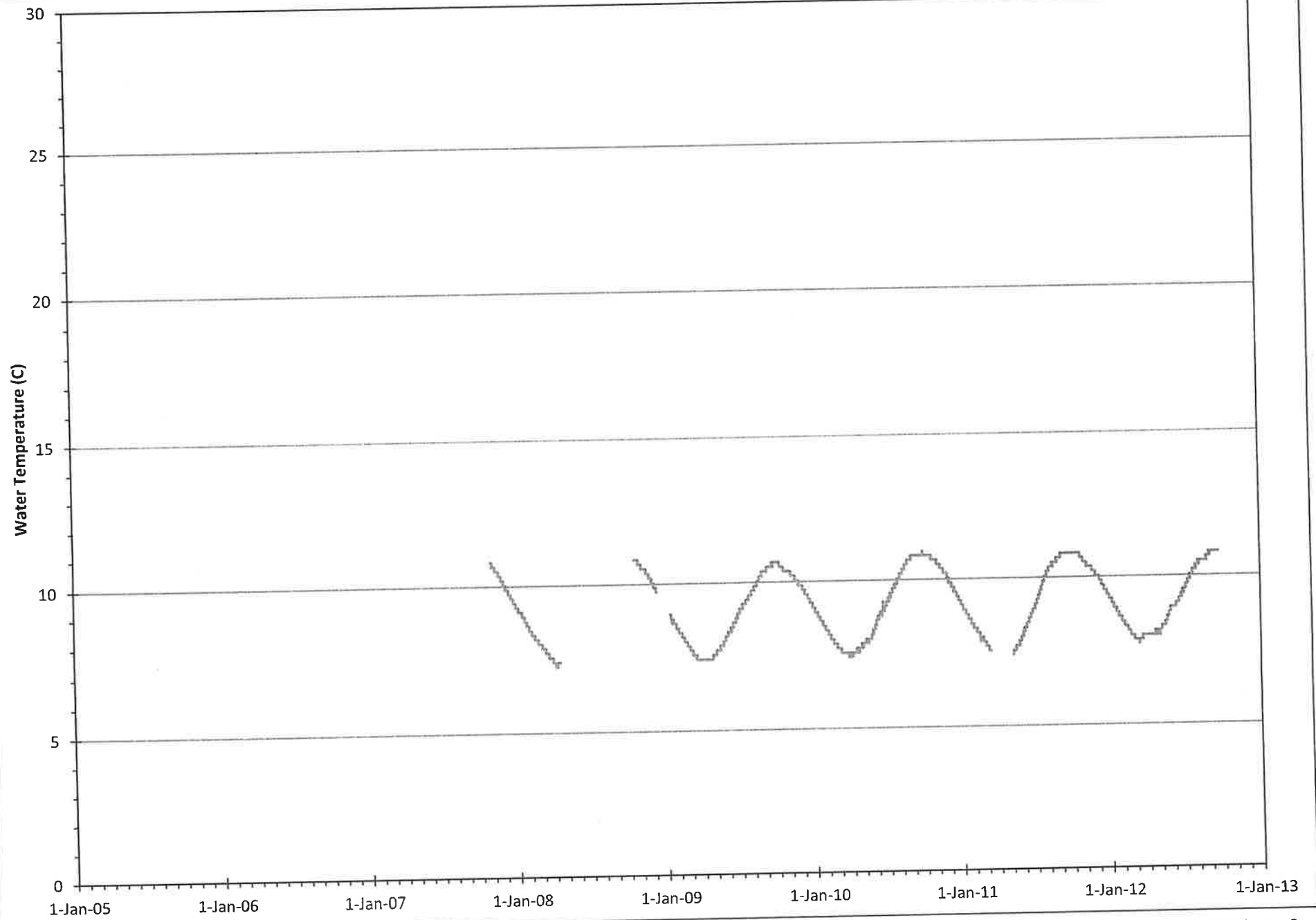
Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW10 Temperature Plot

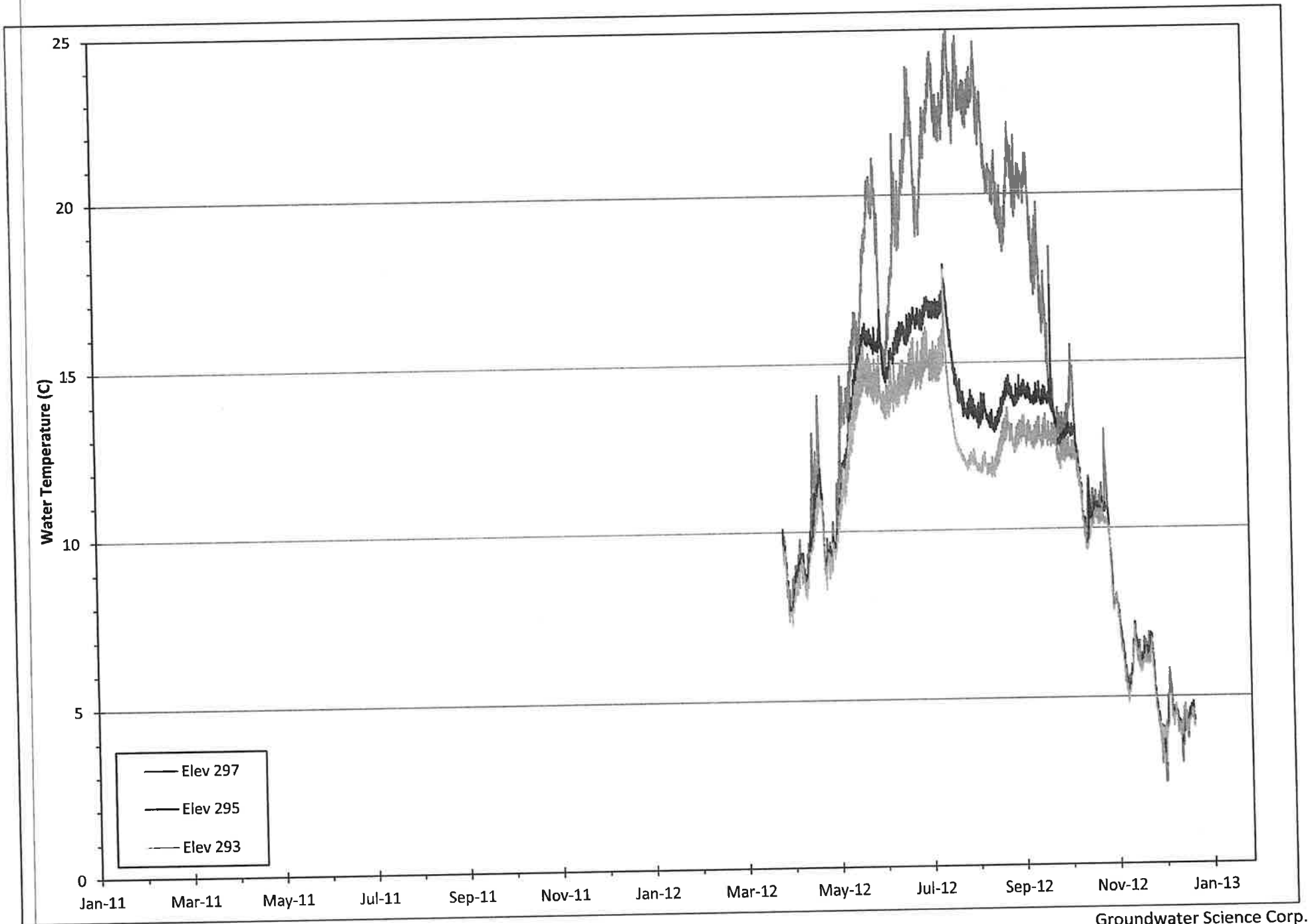
Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

SW12 Temperature Plot

Groundwater Science Corp.
Monitoring Program



Preston Sand and Gravel Company Limited
Roszell Road Pit

LG2 (Test Pond) Temperature Plot

Groundwater Science Corp.
Monitoring Program

Appendix D
Water Quality Results



GROUNDWATER SCIENCE
ATTN: ANDREW PENTNEY
4-590 BEARINGER RD
WATERLOO ON N2L 6C4

Date Received: 28-NOV-12
Report Date: 04-DEC-12 12:42 (MT)
Version: FINAL

Client Phone: 519-746-6916

Certificate of Analysis

Lab Work Order #: L1243033
Project P.O. #: NOT SUBMITTED
Job Reference: ROSZELL RD
C of C Numbers: 136387
Legal Site Desc:

Lindsay D. Zuiker
Account Manager

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Environmental

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1243033-1 WATER 28-NOV-12 10:45 SW2	L1243033-2 WATER 28-NOV-12 11:10 SW3	L1243033-3 WATER 28-NOV-12 11:25 SW6	L1243033-4 WATER 28-NOV-12 11:45 SW8	L1243033-5 WATER 28-NOV-12 12:05 SW10
Grouping	Analyte				
WATER					
Physical Tests	pH (pH units)				
	8.40	8.25	7.96	7.91	8.09
Anions and Nutrients	Ammonia, Total (as N) (mg/L)				
	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromide (mg/L)				
	<0.10	<0.10	<0.10	<0.10	<0.10
	Chloride (mg/L)				
	40.4	38.0	26.1	26.3	21.6
	Fluoride (mg/L)				
	<0.10	<0.10	<0.10	<0.10	<0.10
	Nitrate-N (mg/L)				
	10.2	10.2	14.9	15.3	10.2
	Nitrite-N (mg/L)				
	<0.10	<0.10	<0.10	<0.10	<0.10
	Total Kjeldahl Nitrogen (mg/L)				
	0.42	0.47	<0.15	<0.15	0.54
	Phosphorus, Total (mg/L)				
	<0.030	0.039	<0.030	<0.030	0.030
	Sulphate (mg/L)				
	22.0	22.7	23.7	25.0	25.6
Total Metals	Aluminum (Al)-Total (mg/L)				
	0.014	0.124	0.010	0.050	0.345
	Antimony (Sb)-Total (mg/L)				
	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Arsenic (As)-Total (mg/L)				
	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)				
	0.050	0.058	0.052	0.054	0.052
	Beryllium (Be)-Total (mg/L)				
	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)				
	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)				
	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)				
	<0.000090	<0.000090	<0.000090	<0.000090	0.000186
	Calcium (Ca)-Total (mg/L)				
	87.8	88.8	77.0	83.1	80.7
	Chromium (Cr)-Total (mg/L)				
	<0.00050	0.00060	<0.00050	<0.00050	0.00071
	Cobalt (Co)-Total (mg/L)				
	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)				
	0.0019	0.0028	0.0011	0.0018	0.0029
	Iron (Fe)-Total (mg/L)				
	<0.050	0.133	<0.050	<0.050	0.507
	Lead (Pb)-Total (mg/L)				
	<0.0010	0.0012	<0.0010	<0.0010	0.0033
	Magnesium (Mg)-Total (mg/L)				
	29.0	30.0	28.5	31.5	31.0
	Manganese (Mn)-Total (mg/L)				
	0.0094	0.0173	<0.0010	0.0034	0.110
	Molybdenum (Mo)-Total (mg/L)				
	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)				
	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Phosphorus (P)-Total (mg/L)				
	<0.050	0.094	<0.050	<0.050	0.087
	Potassium (K)-Total (mg/L)				
	1.5	2.1	1.5	1.3	1.2
	Selenium (Se)-Total (mg/L)				
	0.00067	0.00072	0.00048	0.00082	0.00058
	Silicon (Si)-Total (mg/L)				
	4.9	5.3	5.3	5.5	5.5
	Silver (Ag)-Total (mg/L)				
	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)				
	20.0	19.2	11.5	10.9	7.80
	Strontium (Sr)-Total (mg/L)				
	0.123	0.131	0.113	0.120	0.111
	Thallium (Tl)-Total (mg/L)				
	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)				
	<0.0010	<0.0010	<0.0010	<0.0010	0.0011

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1243033-1	L1243033-2	L1243033-3	L1243033-4	L1243033-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	28-NOV-12	28-NOV-12	28-NOV-12	28-NOV-12	28-NOV-12
	Sampled Time	10:45	11:10	11:25	11:45	12:05
	Client ID	SW2	SW3	SW6	SW8	SW10
Grouping	Analyte					
WATER						
Total Metals	Titanium (Ti)-Total (mg/L)	<0.0020	0.0049	<0.0020	0.0020	0.0106
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0094	0.0305	0.0136	0.0167	0.0328
	Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Hydrocarbons	F1 (C6-C10) (ug/L)	<25	<25	<25	<25	<25
	F2 (C10-C16) (ug/L)	<100	<100	<100	<100	<100
	F3 (C16-C34) (ug/L)	<250	<250	<250	<250	<250
	F4 (C34-C50) (ug/L)	<250	<250	<250	<250	<250
	Total Hydrocarbons (C6-C50) (ug/L)	<250	<250	<250	<250	<250
	Chrom. to baseline at nC50	YES	YES	YES	YES	YES
	Surrogate: 2-Bromobenzotrifluoride (%)	61.3	72.6	79.9	80.2	75.0
	Surrogate: 3,4-Dichlorotoluene (%)	122.4	129.9	134.5	126.9	125.6
	Surrogate: Octacosane (%)	77.1	92.3	94.6	93.6	92.5

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	F1 (C6-C10)	MS-B	L1243033-1, -2, -3, -4, -5
Matrix Spike	Aluminum (Al)-Total	MS-B	L1243033-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Total	MS-B	L1243033-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1243033-1, -2, -3, -4, -5
Matrix Spike	Sodium (Na)-Total	MS-B	L1243033-1, -2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Total	MS-B	L1243033-1, -2, -3, -4, -5

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ANIONS-WT	Water	Anion Scan (IC)	EPA 300.0 (IC)
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC DEC-2000 - PUB# 1310-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Water	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
--------------	-------	-----------------------------	----------------------

Fraction F1 is determined by analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F2-F4-511-WT	Water	F2-F4-O.Reg 153/04 (July 2011)	MOE DECPH-E3398/CCME TIER 1
--------------	-------	--------------------------------	-----------------------------

Fractions F2, F3 and F4 are determined by liquid/liquid extraction with a solvent. The solvent recovered from the extracted sample is dried and treated to remove polar material. The extract is then analyzed by GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-TOT-WT	Water	Metal Scan-Total	EPA 6020A
------------	-------	------------------	-----------

The concentration of metals is determined on an unfiltered aqueous sample. The sample is digested with nitric acid and then analyzed directly by ICP-MS.

NH3-WT	Water	Ammonia, Total as N	EPA 350.1
--------	-------	---------------------	-----------

Sample is measured colorimetrically. When sample is turbid a distillation step is required, sample is distilled into a solution of boric acid and measured colorimetrically.

P-TOTAL-WT	Water	Total Phosphorus	APHA 4500-P B E
------------	-------	------------------	-----------------

Samples are digested to convert the total phosphorus to orthophosphate. The orthophosphate reacts with ammonium molybdate and potassium antimonyl tartrate to form a antimonyl-phosphomolybdate complex. This complex is measured colorimetrically and reported as phosphorus.

PH-WT	Water	pH	APHA 4500 H-Electrode
-------	-------	----	-----------------------

Water samples are analyzed directly by a calibrated pH meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the

Reference Information

Environmental Protection Act (July 1, 2011).

TKN-WT Water Total Kjeldahl Nitrogen APHA 4500-N

Sample is digested to convert the TKN to ammonium sulphate. The ammonia ions are heated to produce a colour complex. The absorbance measured by the instrument is proportional to the concentration of ammonium sulphate in the sample and is reported as TKN.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

136387

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



GROUNDWATER SCIENCE
ATTN: ANDREW PENTNEY
4-590 BEARINGER RD
WATERLOO ON N2L 6C4

Date Received: 29-NOV-12
Report Date: 06-DEC-12 12:56 (MT)
Version: FINAL

Client Phone: 519-746-6916

Certificate of Analysis

Lab Work Order #: L1243635
Project P.O. #: NOT SUBMITTED
Job Reference: ROSZELL RD
C of C Numbers: 136390
Legal Site Desc:

Lindsay D. Zuiker
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-1 BH1 Sampled By: DN on 29-NOV-12 @ 09:25 Matrix: WATER							
Physical Tests							
pH	7.73		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	26.6		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	14.0		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491281
Phosphorus, Total	0.030		0.030	mg/L	02-DEC-12	03-DEC-12	R2491198
Sulphate	23.4		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.060		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	91.7		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	27.3		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	0.0013		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	1.9		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	5.7		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	11.7		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.117		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-1 BH1 Sampled By: DN on 29-NOV-12 @ 09:25 Matrix: WATER							
Dissolved Metals							
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0148		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		03-DEC-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	66.8		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	105.9		60-140	%		03-DEC-12	R2489722
Surrogate: Octacosane	79.2		60-140	%	05-DEC-12	06-DEC-12	R2493286
L1243635-2 BH5 Sampled By: DN on 29-NOV-12 @ 09:50 Matrix: WATER							
Physical Tests							
pH	7.77		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	148		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	10.2		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	0.301		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	22.4		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.087		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	110		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273

Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-2 BH5 Sampled By: DN on 29-NOV-12 @ 09:50 Matrix: WATER							
Dissolved Metals							
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	28.8		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	0.0037		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	1.8		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	0.00042		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	6.4		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	88.6	DLM	5.0	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.161		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0196		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	74.0		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	123.2		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	83.5		60-140	%	05-DEC-12	06-DEC-12	R2493286
L1243635-3 BH10S Sampled By: DN on 29-NOV-12 @ 10:10 Matrix: WATER							
Physical Tests							
pH	7.85		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	23.3		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	18.4		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-3 BH10S							
Sampled By: DN on 29-NOV-12 @ 10:10							
Matrix: WATER							
Anions and Nutrients							
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	0.064		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	26.9		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.056		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	97.3		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	0.0010		0.0010	mg/L		03-DEC-12	R2491273
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	29.0		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	2.5		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	5.8		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	11.1		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.121		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0146		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-3 BH10S Sampled By: DN on 29-NOV-12 @ 10:10 Matrix: WATER							
Hydrocarbons							
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	71.6		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	120.0		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	84.3		60-140	%	05-DEC-12	06-DEC-12	R2493286
L1243635-4 BH10D Sampled By: DN on 29-NOV-12 @ 10:25 Matrix: WATER							
Physical Tests							
pH	7.85		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	19.4		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	19.9		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	<0.030		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	26.4		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.050		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	87.8		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	0.00052		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co) Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	0.0052		0.0010	mg/L		03-DEC-12	R2491273
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	27.1		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	0.0034		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-4 BH10D Sampled By: DN on 29-NOV-12 @ 10:25 Matrix: WATER							
Dissolved Metals							
Potassium (K)-Dissolved	2.3		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	6.1		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	7.52		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.140		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0208		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	76.8		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	114.3		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	84.6		60-140	%	05-DEC-12	06-DEC-12	R2493286
L1243635-5 BH8 Sampled By: DN on 29-NOV-12 @ 11:25 Matrix: WATER							
Physical Tests							
pH	7.88		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	33.6		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	5.62		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	0.365		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	31.6		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-5 BH8 Sampled By: DN on 29-NOV-12 @ 11:25 Matrix: WATER							
Dissolved Metals							
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.058		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	85.9		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	27.7		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	0.0069		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	1.7		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	5.4		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	12.3		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.114		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0097		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	75.3		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	118.3		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	83.1		60-140	%	05-DEC-12	06-DEC-12	R2493286

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-6 BH7S Sampled By: DN on 29-NOV-12 @ 12:00 Matrix: WATER							
Physical Tests							
pH	7.88		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	20.1		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	16.7		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	0.458		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	20.9		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	0.014		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.046		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	0.000098		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	87.9		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	0.0013		0.0010	mg/L		03-DEC-12	R2491273
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	25.3		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	1.1		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	4.4		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	8.43		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.110		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273

Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier ^a	D.L.	Units	Extracted	Analyzed	Batch
L1243635-6 BH7S Sampled By: DN on 29-NOV-12 @ 12:00 Matrix: WATER							
Dissolved Metals							
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0244		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	74.3		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	133.9		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	84.2		60-140	%	05-DEC-12	06-DEC-12	R2493286
L1243635-7 BH7D Sampled By: DN on 29-NOV-12 @ 12:20 Matrix: WATER							
Physical Tests							
pH	7.95		0.10	pH units		30-NOV-12	R2490936
Anions and Nutrients							
Ammonia, Total (as N)	<0.050		0.050	mg/L		30-NOV-12	R2490067
Bromide	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Chloride	27.0		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Fluoride	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrate-N	16.3		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Nitrite-N	<0.10		0.10	mg/L	30-NOV-12	30-NOV-12	R2490506
Total Kjeldahl Nitrogen	<0.15		0.15	mg/L	02-DEC-12	03-DEC-12	R2491284
Phosphorus, Total	1.08		0.030	mg/L	02-DEC-12	03-DEC-12	R2491263
Sulphate	25.4		2.0	mg/L	30-NOV-12	30-NOV-12	R2490506
Dissolved Metals							
Aluminum (Al)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Antimony (Sb)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Arsenic (As)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Barium (Ba)-Dissolved	0.051		0.010	mg/L		03-DEC-12	R2491273
Beryllium (Be)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Bismuth (Bi)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Boron (B)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Cadmium (Cd)-Dissolved	<0.000090		0.000090	mg/L		03-DEC-12	R2491273
Calcium (Ca)-Dissolved	90.5		0.50	mg/L		03-DEC-12	R2491273
Chromium (Cr)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Cobalt (Co)-Dissolved	<0.00050		0.00050	mg/L		03-DEC-12	R2491273
Copper (Cu)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273

Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1243635-7 BH7D Sampled By: DN on 29-NOV-12 @ 12:20 Matrix: WATER							
Dissolved Metals							
Iron (Fe)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Lead (Pb)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Magnesium (Mg)-Dissolved	28.1		0.50	mg/L		03-DEC-12	R2491273
Manganese (Mn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Molybdenum (Mo)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Nickel (Ni)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Phosphorus (P)-Dissolved	<0.050		0.050	mg/L		03-DEC-12	R2491273
Potassium (K)-Dissolved	1.3		1.0	mg/L		03-DEC-12	R2491273
Selenium (Se)-Dissolved	<0.00040		0.00040	mg/L		03-DEC-12	R2491273
Silicon (Si)-Dissolved	5.4		1.0	mg/L		03-DEC-12	R2491273
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L		03-DEC-12	R2491273
Sodium (Na)-Dissolved	9.49		0.50	mg/L		03-DEC-12	R2491273
Strontium (Sr)-Dissolved	0.108		0.0010	mg/L		03-DEC-12	R2491273
Thallium (Tl)-Dissolved	<0.00030		0.00030	mg/L		03-DEC-12	R2491273
Tin (Sn)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Titanium (Ti)-Dissolved	<0.0020		0.0020	mg/L		03-DEC-12	R2491273
Tungsten (W)-Dissolved	<0.010		0.010	mg/L		03-DEC-12	R2491273
Uranium (U)-Dissolved	<0.0050		0.0050	mg/L		03-DEC-12	R2491273
Vanadium (V)-Dissolved	<0.0010		0.0010	mg/L		03-DEC-12	R2491273
Zinc (Zn)-Dissolved	0.0165		0.0030	mg/L		03-DEC-12	R2491273
Zirconium (Zr)-Dissolved	<0.0040		0.0040	mg/L		03-DEC-12	R2491273
Hydrocarbons							
F1 (C6-C10)	<25		25	ug/L		30-NOV-12	R2489722
F2 (C10-C16)	<100		100	ug/L	05-DEC-12	06-DEC-12	R2493286
F3 (C16-C34)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
F4 (C34-C50)	<250		250	ug/L	05-DEC-12	06-DEC-12	R2493286
Total Hydrocarbons (C6-C50)	<250		250	ug/L		06-DEC-12	
Chrom. to baseline at nC50	YES				05-DEC-12	06-DEC-12	R2493286
Surrogate: 2-Bromobenzotrifluoride	72.1		60-140	%	05-DEC-12	06-DEC-12	R2493286
Surrogate: 3,4-Dichlorotoluene	135.3		60-140	%		30-NOV-12	R2489722
Surrogate: Octacosane	79.2		60-140	%	05-DEC-12	06-DEC-12	R2493286

Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Copper (Cu)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Lead (Pb)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7
Matrix Spike	Zinc (Zn)-Dissolved	MS-B	L1243635-1, -2, -3, -4, -5, -6, -7

Sample Parameter Qualifier key listed:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ANIONS-WT	Water	Anion Scan (IC)	EPA 300.0 (IC)
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated	CCME CWS-PHC DEC-2000 - PUB# 1310-L
Analytical methods used for analysis of Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.			
In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.			
In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.			
In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.			
Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:			
1. All extraction and analysis holding times were met.			
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.			
3. Linearity of gasoline response within 15% throughout the calibration range.			
Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:			
1. All extraction and analysis holding times were met.			
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.			
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.			
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.			
F1-HS-511-WT	Water	F1-O,Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
Fraction F1 is determined by analyzing by headspace-GC/FID.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
F2-F4-511-WT	Water	F2-F4-O,Reg 153/04 (July 2011)	MOE DECPH-E3398/CCME TIER 1
Fractions F2, F3 and F4 are determined by liquid/liquid extraction with a solvent. The solvent recovered from the extracted sample is dried and treated to remove polar material. The extract is then analyzed by GC/FID.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
MET-DIS-WT	Water	Metal Scan-Dissolved	EPA 6020A
The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.			
NH3-WT	Water	Ammonia, Total as N	EPA 350.1
Sample is measured colorimetrically. When sample is turbid a distillation step is required, sample is distilled into a solution of boric acid and measured colorimetrically.			
P-TOTAL-WT	Water	Total Phosphorus	APHA 4500-P B E
Samples are digested to convert the total phosphorus to orthophosphate. The orthophosphate reacts with ammonium molybdate and potassium antimonyl tartrate to form a antimonyl-phosphomolybdate complex. This complex is measured colorimetrically and reported as phosphorus.			
PH-WT	Water	pH	APHA 4500 H-Fl electrode
Water samples are analyzed directly by a calibrated pH meter.			

Reference Information

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

TKN-WT Water Total Kjeldahl Nitrogen APHA 4500-N
 Sample is digested to convert the TKN to ammonium sulphate. The ammonia ions are heated to produce a colour complex. The absorbance measured by the instrument is proportional to the concentration of ammonium sulphate in the sample and is reported as TKN.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

136390

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- mg/kg - milligrams per kilogram based on dry weight of sample
- mg/kg wwt - milligrams per kilogram based on wet weight of sample
- mg/kg lwt - milligrams per kilogram based on lipid weight of sample
- mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.