

[000321/22], [2022/01/14]

## Certificate of Analysis

### Project details

#### Customer Details

Customer reference:	BROOKDALE (GT1165)
Quotation number:	Q2109-066_A
Order number:	GT1165
Company name:	GROUND TRUTH
Contact address:	9 QUARRY AVENUE, HILTON, 3245
Contact person:	CATHERINE MEYER

#### Sampling Details

Sampled by:	CUSTOMER
Sampled date:	2021/12/14
Additional customer information:	030360/21- SAMPLED BY: C. MEYER, 030361/21- SAMPLED BY: C. MEYER, 030362/21- SAMPLED BY: C. MEYER, 030363/21- SAMPLED BY: C. MEYER, 030364/21- SAMPLED BY: C. MEYER, 030365/21- SAMPLED BY: C. MEYER, 030366/21- SAMPLED BY: C. MEYER

#### Sample Details

Sample type(s):	SURFACE WATER SAMPLES
Date received:	2021/12/15
Delivered by:	CUSTOMER
Additional customer information:	URBAN STREAM, NEAR DOMESTIC LANDFILL, DOMESTIC LANDFILL
Temperature at sample receipt (°C):	18.8

#### Report Details

Testing commenced:	2021/12/15
Testing completed:	2022/01/14
Report date:	2022/01/14
Our reference:	000321/22

## Analytical Results

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
Chemical				
85	Dissolved Calcium	mg Ca/l	23	31
85	Potassium	mg K/l	4.46	6.42
85	Dissolved Magnesium	mg Mg/l	15.7	24
84	Sodium	mg Na/l	120	150
87	Dissolved Silver*	mg Ag/l	<0.01	<0.01
87	Dissolved Aluminium	mg Al/l	<0.63	<0.63
88	Dissolved Arsenic	mg As/l	<0.08	<0.08
87	Dissolved Boron	mg B/l	<0.16	<0.16
87	Dissolved Barium	mg Ba/l	<0.08	0.16
87	Dissolved Beryllium	mg Be/l	<0.16	<0.16
87	Dissolved Cadmium	mg Cd/l	<0.17	<0.17
87	Dissolved Cobalt	mg Co/l	<0.17	<0.17
87	Dissolved Chromium	mg Cr/l	<0.16	<0.16
87	Dissolved Copper	mg Cu/l	<0.17	<0.17
87	Dissolved Iron	mg Fe/l	<0.15	<0.15
86	Dissolved Mercury	mg Hg/l	0.006	<0.0031
87	Dissolved Lithium	mg Li/l	<0.625	<0.625
87	Dissolved Manganese	mg Mn/l	<0.17	0.74
87	Dissolved Molybdenum	mg Mo/l	<0.31	<0.31
87	Dissolved Nickel	mg Ni/l	<0.18	<0.18
87	Dissolved Lead	mg Pb/l	<0.08	<0.08
91	Dissolved Sulphur*	mg/l	15	7.2
89	Dissolved Antimony	mg Sb/l	<0.05	<0.05
88	Dissolved Selenium	mg Se/l	<0.625	<0.625
87	Dissolved Tin	mg Sn/l	<0.02	<0.02
87	Dissolved Strontium	mg Sr/l	<0.17	<0.17
87	Dissolved Titanium	mg Ti/l	<0.03	<0.03

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
<b>Chemical</b>				
87	Dissolved Thallium	mg Tl/l	<0.02	<0.02
87	Dissolved Uranium	mg U/l	<0.02	<0.02
87	Dissolved Vanadium	mg V/l	<0.02	<0.02
87	Dissolved Zinc	mg Zn/l	<0.02	<0.02
87	Dissolved Zirconium*	mg Zr/l	<0.02	<0.02
Calc.	Sum dissolved metal concentration*	mg/l	182	223
10G	Total Alkalinity	mg CaCO <sub>3</sub> /l	151	203
3	Chemical Oxygen Demand (Total)	mg O <sub>2</sub> /l	59	<25
64G	Total Ammonia	mg N/l	<1.5	6.29
65Gc	Nitrate	mg N/l	<0.25	0.68
52	Total Oil & Grease*	mg/l	7	<3
66G	Orthophosphate	mg P/l	0.18	<0.1
5	Suspended Solids at 105°C	mg/l	36	<18
<b>Microbiological</b>				
32	<i>E.coli</i>	MPN/100ml	>2420	>2420
<b>Organics</b>				
103	Aldrin*	µg/l	<0.5	<0.5
103	Dieldrin*	µg/l	<0.5	<0.5
103	Heptachlor*	µg/l	<0.5	<0.5
103	Hexachlorobenzene*	µg/l	<0.5	<0.5
103	Methoxychlor*	µg/l	<0.5	<0.5
103	Endrin*	µg/l	<0.5	<0.5
103	cis-Chlordane*	µg/l	<0.5	<0.5
103	trans-Chlordane*	µg/l	<0.5	<0.5
103	oxy-Chlordane*	µg/l	<0.5	<0.5
103	Alpha-Endosulfan*	µg/l	<0.5	<0.5
103	Beta-Endosulfan*	µg/l	<0.5	<0.5
103	Alpha-HCH*	µg/l	<0.5	<0.5
103	Beta-HCH*	µg/l	<0.5	<0.5
103	Gamma-HCH*	µg/l	<0.5	<0.5
103	Delta-HCH*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
<b>Organics</b>				
103	Isodrin*	µg/l	<0.5	<0.5
103	Mirex*	µg/l	<0.5	<0.5
103	2,4-DDE*	µg/l	<0.5	<0.5
103	4,4' -DDE*	µg/l	<0.5	<0.5
103	2,4-DDD*	µg/l	<0.5	<0.5
103	4,4' -DDD*	µg/l	<0.5	<0.5
103	2,4-DDT*	µg/l	<0.5	<0.5
103	4,4' -DDT*	µg/l	<0.5	<0.5
-	Dichlorvos*	µg/l	<20#	<20#
-	Fenchlorphos (Ronnel)*	µg/l	<1#	<1#
-	Methyl Parathion*	µg/l	<1#	<1#
-	Chlorpyrifos (Dursban)*	µg/l	<1#	<1#
-	Prothiofos (Tokuthion)*	µg/l	<1#	<1#
-	Mocap (Enthoprofos)*	µg/l	<1#	<1#
-	Disulfoton*	µg/l	<1#	<1#
-	Guthion*	µg/l	<20#	<20#
-	Naphthalene*	µg/l	<0.1#	<0.1#
100	Naphthalene	µg/l	<0.148	<0.148
-	Acenaphthene*	µg/l	<0.1#	<0.1#
-	Acenaphthylene*	µg/l	<0.1#	<0.1#
-	Flourene*	µg/l	<0.1#	<0.1#
-	Phenanthrene*	µg/l	<0.1#	<0.1#
-	Anthracene*	µg/l	<0.1#	<0.1#
-	Fluoranthene*	µg/l	<0.1#	<0.1#
-	Pyrene*	µg/l	<0.1#	<0.1#
-	Benzo[a]anthracene*	µg/l	<0.1#	<0.1#
-	Chrysene*	µg/l	<0.1#	<0.1#
-	Benzo[k+b]fluoranthene*	µg/l	<0.2#	<0.2#
-	Benzo[a]pyrene*	µg/l	<0.1#	<0.1#
-	1,3 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,3 Dichlorobenzene	µg/l	<0.125	<0.125
-	1,4 Dichlorobenzene*	µg/l	<0.2#	<0.2#

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
<b>Organics</b>				
100	1,4 Dichlorobenzene	µg/l	<0.171	<0.171
-	2-Chloronaphthalene*	µg/l	<0.2#	<0.2#
-	Hexachloroethane*	µg/l	<0.2#	<0.2#
-	4-Chlorophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	4-Bromophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	Di-n-butyl phthalate*	µg/l	<20#	<20#
-	Butyl benzyl phthalate*	µg/l	<20#	<20#
-	Bis(2-ethylhexyl) phthalate*	µg/l	<20#	<20#
-	1,2 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2 Dichlorobenzene	µg/l	<0.148	<0.148
-	1,2,4 Trichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2,4 Trichlorobenzene	µg/l	<0.121	<0.121
-	Benzo[g,h,i]perylene*	µg/l	<0.2#	<0.2#
-	Indeno[123-cd]pyrene*	µg/l	<0.2#	<0.2#
-	Dibenz[a,h]anthracene*	µg/l	<0.2#	<0.2#
100	1,1-Dichloroethane	µg/l	<0.128	<0.128
100	1,1,2,2 Tetrachloroethane	µg/l	<0.426	<0.426
100	Benzene	µg/l	<0.09	<0.09
100	Toluene	µg/l	<0.315	<0.315
100	Ethylbenzene	µg/l	<0.036	<0.036
100	m+p-Xylene	µg/l	<0.044	<0.044
100	o-Xylene	µg/l	<0.039	<0.039
100	1,3,5 Trimethyl benzene	µg/l	<0.281	<0.281
100	1,2,4 Trimethyl benzene	µg/l	<0.302	<0.302
100	n Propylbenzene*	µg/l	<0.283	<0.283
100	Tertiary Butylbenzene*	µg/l	<0.265	<0.265
100	Secondary Butylbenzene*	µg/l	<0.137	<0.137
100	n Butylbenzene*	µg/l	<0.163	<0.163
100	Isopropylbenzene	µg/l	<0.089	<0.089
100	1,1,1,2 Tetrachloroethane	µg/l	<0.5	<0.5
100	Styrene	µg/l	<0.093	<0.093
100	4-Isopropyltoluene*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
<b>Organics</b>				
100	Bromobenzene	µg/l	<0.112	<0.112
100	Chlorobenzene	µg/l	<0.112	<0.112
100	1,2,3 Trichlorobenzene	µg/l	<0.106	<0.106
100	Bromoform	µg/l	<0.341	<0.341
100	Chloroform	µg/l	<0.158	<0.158
100	Carbon tetrachloride	µg/l	<0.137	<0.137
100	Dibromomethane	µg/l	<0.235	<0.235
100	Bromochloromethane	µg/l	<0.5	<0.5
100	Bromodichloromethane	µg/l	<0.178	<0.178
100	Dibromochloromethane	µg/l	<0.146	<0.146
100	1,2 Dibromoethane	µg/l	<0.151	<0.151
100	1,2-Dichloroethane	µg/l	<0.226	<0.226
100	1,1,1 Trichloroethane	µg/l	<0.2088	<0.2088
100	1,1,2 Trichloroethane	µg/l	<0.258	<0.258
100	Hexachlorobutadiene	µg/l	<0.287	<0.287
100	2 Chlorotoluene	µg/l	<0.088	<0.088
100	4 Chlorotoluene	µg/l	<0.123	<0.123
100	1,2-Dichloropropane	µg/l	<0.132	<0.132
100	1,3-Dichloropropane	µg/l	<0.093	<0.093
100	2,2-Dichloropropane	µg/l	<0.186	<0.186
100	1,2,3 Trichloropropane	µg/l	<0.381	<0.381
100	1,1-Dichloropropene	µg/l	<0.166	<0.166
100	MTBE	µg/l	<0.1238	<0.1238
100	Trichloroethylene	µg/l	<0.146	<0.146
100	1,1 Dichloroethene	µg/l	<0.174	<0.174
100	Bromomethane*	µg/l	<0.32	<0.32
100	1,2-Dichloroethene cis	µg/l	<0.143	<0.143
100	1,3-Dichloropropene cis	µg/l	<0.369	<0.369
100	Ethylchloride	µg/l	<0.235	<0.235
100	Methylene Chloride*	µg/l	<0.5	<0.5
100	Tetrachloroethylene	µg/l	<0.158	<0.158
100	Trans1,2- Dichlororethene	µg/l	<0.5	<0.5

Methods	Determinands	Units	030360/21	030361/21
			BROOKDALE, PHOENIX: CS 1 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 2 GT1165 14.12.2021
<b>Organics</b>				
100	1,3-Dichloropropene trans	µg/l	<0.361	<0.361
100	Trichloromonofluoromethane*	µg/l	<0.5	<0.5
100	Vinyl chloride	µg/l	<0.137	<0.137
100	1,2-Dichloroethene trans	µg/l	<0.139	<0.139
100	1,2 Dichloroethene*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030362/21	030363/21
			BROOKDALE, PHOENIX: CS 3 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 4 GT1165 14.12.2021
<b>Chemical</b>				
85	Dissolved Calcium	mg Ca/l	28	17.0
85	Potassium	mg K/l	3.07	3.28
85	Dissolved Magnesium	mg Mg/l	19.7	11.4
84	Sodium	mg Na/l	121	38
87	Dissolved Silver*	mg Ag/l	<0.01	<0.01
87	Dissolved Aluminium	mg Al/l	<0.63	<0.63
88	Dissolved Arsenic	mg As/l	<0.08	<0.08
87	Dissolved Boron	mg B/l	<0.16	<0.16
87	Dissolved Barium	mg Ba/l	0.13	<0.08
87	Dissolved Beryllium	mg Be/l	<0.16	<0.16
87	Dissolved Cadmium	mg Cd/l	<0.17	<0.17
87	Dissolved Cobalt	mg Co/l	<0.17	<0.17
87	Dissolved Chromium	mg Cr/l	<0.16	<0.16
87	Dissolved Copper	mg Cu/l	<0.17	<0.17
87	Dissolved Iron	mg Fe/l	<0.15	<0.15
86	Dissolved Mercury	mg Hg/l	0.003	<0.0031
87	Dissolved Lithium	mg Li/l	<0.625	<0.625
87	Dissolved Manganese	mg Mn/l	0.51	<0.17
87	Dissolved Molybdenum	mg Mo/l	<0.31	<0.31
87	Dissolved Nickel	mg Ni/l	<0.18	<0.18
87	Dissolved Lead	mg Pb/l	<0.08	<0.08
91	Dissolved Sulphur*	mg/l	8.8	6.5
89	Dissolved Antimony	mg Sb/l	<0.05	<0.05
88	Dissolved Selenium	mg Se/l	<0.625	<0.625
87	Dissolved Tin	mg Sn/l	<0.02	<0.02
87	Dissolved Strontium	mg Sr/l	<0.17	<0.17
87	Dissolved Titanium	mg Ti/l	<0.03	<0.03
87	Dissolved Thallium	mg Tl/l	<0.02	<0.02
87	Dissolved Uranium	mg U/l	<0.02	<0.02
87	Dissolved Vanadium	mg V/l	<0.02	<0.02
87	Dissolved Zinc	mg Zn/l	<0.02	<0.02
87	Dissolved Zirconium*	mg Zr/l	<0.02	<0.02



Methods	Determinands	Units	030362/21	030363/21
			BROOKDALE, PHOENIX: CS 3 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 4 GT1165 14.12.2021
<b>Chemical</b>				
Calc.	Sum dissolved metal concentration*	mg/l	185	81
10G	Total Alkalinity	mg CaCO <sub>3</sub> /l	174	101
3	Chemical Oxygen Demand (Total)	mg O <sub>2</sub> /l	<25	<25
64G	Total Ammonia	mg N/l	1.85	1.59
65Gc	Nitrate	mg N/l	<0.25	0.54
52	Total Oil & Grease*	mg/l	<3	<3
66G	Orthophosphate	mg P/l	0.17	0.40
5	Suspended Solids at 105°C	mg/l	<18	<18
<b>Microbiological</b>				
32	<i>E.coli</i>	MPN/100ml	>2420	>2420
<b>Organics</b>				
103	Aldrin*	µg/l	<0.5	<0.5
103	Dieldrin*	µg/l	<0.5	<0.5
103	Heptachlor*	µg/l	<0.5	<0.5
103	Hexachlorobenzene*	µg/l	<0.5	<0.5
103	Methoxychlor*	µg/l	<0.5	<0.5
103	Endrin*	µg/l	<0.5	<0.5
103	cis-Chlordane*	µg/l	<0.5	<0.5
103	trans-Chlordane*	µg/l	<0.5	<0.5
103	oxy-Chlordane*	µg/l	<0.5	<0.5
103	Alpha-Endosulfan*	µg/l	<0.5	<0.5
103	Beta-Endosulfan*	µg/l	<0.5	<0.5
103	Alpha-HCH*	µg/l	<0.5	<0.5
103	Beta-HCH*	µg/l	<0.5	<0.5
103	Gamma-HCH*	µg/l	<0.5	<0.5
103	Delta-HCH*	µg/l	<0.5	<0.5
103	Isodrin*	µg/l	<0.5	<0.5
103	Mirex*	µg/l	<0.5	<0.5
103	2,4-DDE*	µg/l	<0.5	<0.5
103	4,4' -DDE*	µg/l	<0.5	<0.5
103	2,4-DDD*	µg/l	<0.5	<0.5
103	4,4' -DDD*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030362/21	030363/21
			BROOKDALE, PHOENIX: CS 3 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 4 GT1165 14.12.2021
<b>Organics</b>				
103	2,4-DDT*	µg/l	<0.5	<0.5
103	4,4' -DDT*	µg/l	<0.5	<0.5
-	Dichlorvos*	µg/l	<20#	<20#
-	Fenclorophos (Ronnel)*	µg/l	<1#	<1#
-	Methyl Parathion*	µg/l	<1#	<1#
-	Chlorpyrifos (Dursban)*	µg/l	<1#	<1#
-	Prothiofos (Tokuthion)*	µg/l	<1#	<1#
-	Mocap (Enthoprofos)*	µg/l	<1#	<1#
-	Disulfoton*	µg/l	<1#	<1#
-	Guthion*	µg/l	<20#	<20#
-	Naphthalene*	µg/l	<0.1#	<0.1#
100	Naphthalene	µg/l	<0.148	<0.148
-	Acenaphthene*	µg/l	<0.1#	<0.1#
-	Acenaphthylene*	µg/l	<0.1#	<0.1#
-	Flourene*	µg/l	<0.1#	<0.1#
-	Phenanthrene*	µg/l	<0.1#	<0.1#
-	Anthracene*	µg/l	<0.1#	<0.1#
-	Fluoranthene*	µg/l	<0.1#	<0.1#
-	Pyrene*	µg/l	<0.1#	<0.1#
-	Benzo[a]anthracene*	µg/l	<0.1#	<0.1#
-	Chrysene*	µg/l	<0.1#	<0.1#
-	Benzo[k+b]fluoranthene*	µg/l	<0.2#	<0.2#
-	Benzo[a]pyrene*	µg/l	<0.1#	<0.1#
-	1,3 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,3 Dichlorobenzene	µg/l	<0.125	<0.125
-	1,4 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,4 Dichlorobenzene	µg/l	<0.171	<0.171
-	2-Chloronaphthalene*	µg/l	<0.2#	<0.2#
-	Hexachloroethane*	µg/l	<0.2#	<0.2#
-	4-Chlorophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	4-Bromophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	Di-n-butyl phthalate*	µg/l	<20#	<20#

Methods	Determinands	Units	030362/21	030363/21
			BROOKDALE, PHOENIX: CS 3 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 4 GT1165 14.12.2021
<b>Organics</b>				
-	Butyl benzyl phthalate*	µg/l	<20#	<20#
-	Bis(2-ethylhexyl) phthalate*	µg/l	<20#	<20#
-	1,2 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2 Dichlorobenzene	µg/l	<0.148	<0.148
-	1,2,4 Trichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2,4 Trichlorobenzene	µg/l	<0.121	<0.121
-	Benzo[g,h,i]perylene*	µg/l	<0.2#	<0.2#
-	Indeno[123-cd]pyrene*	µg/l	<0.2#	<0.2#
-	Dibenz[a,h]anthracene*	µg/l	<0.2#	<0.2#
100	1,1-Dichloroethane	µg/l	<0.128	<0.128
100	1,1,2,2 Tetrachloroethane	µg/l	<0.426	<0.426
100	Benzene	µg/l	<0.09	<0.09
100	Toluene	µg/l	<0.315	<0.315
100	Ethylbenzene	µg/l	<0.036	<0.036
100	m+p-Xylene	µg/l	<0.044	<0.044
100	o-Xylene	µg/l	<0.039	<0.039
100	1,3,5 Trimethyl benzene	µg/l	<0.281	<0.281
100	1,2,4 Trimethyl benzene	µg/l	<0.302	<0.302
100	n Propylbenzene*	µg/l	<0.283	<0.283
100	Tertiary Butylbenzene*	µg/l	<0.265	<0.265
100	Secondary Butylbenzene*	µg/l	<0.137	<0.137
100	n Butylbenzene*	µg/l	<0.163	<0.163
100	Isopropylbenzene	µg/l	<0.089	<0.089
100	1,1,1,2 Tetrachloroethane	µg/l	<0.5	<0.5
100	Styrene	µg/l	<0.093	<0.093
100	4-Isopropyltoluene*	µg/l	<0.5	<0.5
100	Bromobenzene	µg/l	<0.112	<0.112
100	Chlorobenzene	µg/l	<0.112	<0.112
100	1,2,3 Trichlorobenzene	µg/l	<0.106	<0.106
100	Bromoform	µg/l	<0.341	<0.341
100	Chloroform	µg/l	<0.158	<0.158
100	Carbon tetrachloride	µg/l	<0.137	<0.137

Methods	Determinands	Units	030362/21	030363/21
			BROOKDALE, PHOENIX: CS 3 GT1165 14.12.2021	BROOKDALE, PHOENIX: CS 4 GT1165 14.12.2021
<b>Organics</b>				
100	Dibromomethane	µg/l	<0.235	<0.235
100	Bromochloromethane	µg/l	<0.5	<0.5
100	Bromodichloromethane	µg/l	<0.178	<0.178
100	Dibromochloromethane	µg/l	<0.146	<0.146
100	1,2 Dibromoethane	µg/l	<0.151	<0.151
100	1,2-Dichloroethane	µg/l	<0.226	<0.226
100	1,1,1 Trichloroethane	µg/l	<0.2088	<0.2088
100	1,1,2 Trichloroethane	µg/l	<0.258	<0.258
100	Hexachlorobutadiene	µg/l	<0.287	<0.287
100	2 Chlorotoluene	µg/l	<0.088	<0.088
100	4 Chlorotoluene	µg/l	<0.123	<0.123
100	1,2-Dichloropropane	µg/l	<0.132	<0.132
100	1,3-Dichloropropane	µg/l	<0.093	<0.093
100	2,2-Dichloropropane	µg/l	<0.186	<0.186
100	1,2,3 Trichloropropane	µg/l	<0.381	<0.381
100	1,1-Dichloropropene	µg/l	<0.166	<0.166
100	MTBE	µg/l	<0.1238	<0.1238
100	Trichloroethylene	µg/l	<0.146	<0.146
100	1,1 Dichloroethene	µg/l	<0.174	<0.174
100	Bromomethane*	µg/l	<0.32	<0.32
100	1,2-Dichloroethene cis	µg/l	<0.143	<0.143
100	1,3-Dichloropropene cis	µg/l	<0.369	<0.369
100	Ethylchloride	µg/l	<0.235	<0.235
100	Methylene Chloride*	µg/l	<0.5	<0.5
100	Tetrachloroethylene	µg/l	<0.158	<0.158
100	Trans1,2- Dichloroethene	µg/l	<0.5	<0.5
100	1,3-Dichloropropene trans	µg/l	<0.361	<0.361
100	Trichloromonofluoromethane*	µg/l	<0.5	<0.5
100	Vinyl chloride	µg/l	<0.137	<0.137
100	1,2-Dichloroethene trans	µg/l	<0.139	<0.139
100	1,2 Dichloroethene*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030364/21	030365/21
			BROOKDALE, PHOENIX: SW 1 DAM 14.12.2021	BROOKDALE, PHOENIX: SW 2 STREAM 14.12.2021
<b>Chemical</b>				
85	Dissolved Calcium	mg Ca/l	9.79	23
85	Potassium	mg K/l	0.74	1.86
85	Dissolved Magnesium	mg Mg/l	14.4	17.3
84	Sodium	mg Na/l	214	123
87	Dissolved Silver*	mg Ag/l	<0.01	<0.01
87	Dissolved Aluminium	mg Al/l	<0.63	<0.63
88	Dissolved Arsenic	mg As/l	<0.08	<0.08
87	Dissolved Boron	mg B/l	0.18	<0.16
87	Dissolved Barium	mg Ba/l	<0.08	<0.08
87	Dissolved Beryllium	mg Be/l	<0.16	<0.16
87	Dissolved Cadmium	mg Cd/l	<0.17	<0.17
87	Dissolved Cobalt	mg Co/l	<0.17	<0.17
87	Dissolved Chromium	mg Cr/l	<0.16	<0.16
87	Dissolved Copper	mg Cu/l	<0.17	<0.17
87	Dissolved Iron	mg Fe/l	0.72	<0.15
86	Dissolved Mercury	mg Hg/l	0.006	0.003
87	Dissolved Lithium	mg Li/l	<0.625	<0.625
87	Dissolved Manganese	mg Mn/l	0.55	<0.17
87	Dissolved Molybdenum	mg Mo/l	<0.31	<0.31
87	Dissolved Nickel	mg Ni/l	<0.18	<0.18
87	Dissolved Lead	mg Pb/l	<0.08	<0.08
91	Dissolved Sulphur*	mg/l	2.1	9.5
89	Dissolved Antimony	mg Sb/l	<0.05	<0.05
88	Dissolved Selenium	mg Se/l	<0.625	<0.625
87	Dissolved Tin	mg Sn/l	<0.02	<0.02
87	Dissolved Strontium	mg Sr/l	<0.17	<0.17
87	Dissolved Titanium	mg Ti/l	<0.03	<0.03
87	Dissolved Thallium	mg Tl/l	<0.02	<0.02
87	Dissolved Uranium	mg U/l	<0.02	<0.02
87	Dissolved Vanadium	mg V/l	<0.02	<0.02
87	Dissolved Zinc	mg Zn/l	<0.02	<0.02
87	Dissolved Zirconium*	mg Zr/l	<0.02	<0.02

Methods	Determinands	Units	030364/21	030365/21
			BROOKDALE, PHOENIX: SW 1 DAM 14.12.2021	BROOKDALE, PHOENIX: SW 2 STREAM 14.12.2021
<b>Chemical</b>				
Calc.	Sum dissolved metal concentration*	mg/l	246	179
10G	Total Alkalinity	mg CaCO <sub>3</sub> /l	300	194
3	Chemical Oxygen Demand (Total)	mg O <sub>2</sub> /l	109	<25
64G	Total Ammonia	mg N/l	<1.5	<1.5
65Gc	Nitrate	mg N/l	<0.25	2.02
52	Total Oil & Grease*	mg/l	10	6
66G	Orthophosphate	mg P/l	<0.1	<0.1
5	Suspended Solids at 105°C	mg/l	<18	39
<b>Microbiological</b>				
32	<i>E.coli</i>	MPN/100ml	10	1986
<b>Organics</b>				
103	Aldrin*	µg/l	<0.5	<0.5
103	Dieldrin*	µg/l	<0.5	<0.5
103	Heptachlor*	µg/l	<0.5	<0.5
103	Hexachlorobenzene*	µg/l	<0.5	<0.5
103	Methoxychlor*	µg/l	<0.5	<0.5
103	Endrin*	µg/l	<0.5	<0.5
103	cis-Chlordane*	µg/l	<0.5	<0.5
103	trans-Chlordane*	µg/l	<0.5	<0.5
103	oxy-Chlordane*	µg/l	<0.5	<0.5
103	Alpha-Endosulfan*	µg/l	<0.5	<0.5
103	Beta-Endosulfan*	µg/l	<0.5	<0.5
103	Alpha-HCH*	µg/l	<0.5	<0.5
103	Beta-HCH*	µg/l	<0.5	<0.5
103	Gamma-HCH*	µg/l	<0.5	<0.5
103	Delta-HCH*	µg/l	<0.5	<0.5
103	Isodrin*	µg/l	<0.5	<0.5
103	Mirex*	µg/l	<0.5	<0.5
103	2,4-DDE*	µg/l	<0.5	<0.5
103	4,4' -DDE*	µg/l	<0.5	<0.5
103	2,4-DDD*	µg/l	<0.5	<0.5
103	4,4' -DDD*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030364/21	030365/21
			BROOKDALE, PHOENIX: SW 1 DAM 14.12.2021	BROOKDALE, PHOENIX: SW 2 STREAM 14.12.2021
<b>Organics</b>				
103	2,4-DDT*	µg/l	<0.5	<0.5
103	4,4' -DDT*	µg/l	<0.5	<0.5
-	Dichlorvos*	µg/l	<20#	<20#
-	Fenclorphos (Ronnel)*	µg/l	<1#	<1#
-	Methyl Parathion*	µg/l	<1#	<1#
-	Chlorpyrifos (Dursban)*	µg/l	<1#	<1#
-	Prothiofos (Tokuthion)*	µg/l	<1#	<1#
-	Mocap (Enthoprofos)*	µg/l	<1#	<1#
-	Disulfoton*	µg/l	<1#	<1#
-	Guthion*	µg/l	<20#	<20#
-	Naphthalene*	µg/l	<0.1#	<0.1#
100	Naphthalene	µg/l	<0.148	<0.148
-	Acenaphthene*	µg/l	<0.1#	<0.1#
-	Acenaphthylene*	µg/l	<0.1#	<0.1#
-	Flourene*	µg/l	<0.1#	<0.1#
-	Phenanthrene*	µg/l	<0.1#	<0.1#
-	Anthracene*	µg/l	<0.1#	<0.1#
-	Fluoranthene*	µg/l	<0.1#	<0.1#
-	Pyrene*	µg/l	<0.1#	<0.1#
-	Benzo[a]anthracene*	µg/l	<0.1#	<0.1#
-	Chrysene*	µg/l	<0.1#	<0.1#
-	Benzo[k+b]fluoranthene*	µg/l	0.3#	<0.2#
-	Benzo[a]pyrene*	µg/l	<0.1#	<0.1#
-	1,3 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,3 Dichlorobenzene	µg/l	<0.125	<0.125
-	1,4 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,4 Dichlorobenzene	µg/l	<0.171	<0.171
-	2-Chloronaphthalene*	µg/l	<0.2#	<0.2#
-	Hexachloroethane*	µg/l	<0.2#	<0.2#
-	4-Chlorophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	4-Bromophenylphenyl ether*	µg/l	<0.2#	<0.2#
-	Di-n-butyl phthalate*	µg/l	<20#	<20#

Methods	Determinands	Units	030364/21	030365/21
			BROOKDALE, PHOENIX: SW 1 DAM 14.12.2021	BROOKDALE, PHOENIX: SW 2 STREAM 14.12.2021
<b>Organics</b>				
-	Butyl benzyl phthalate*	µg/l	<20#	<20#
-	Bis(2-ethylhexyl) phthalate*	µg/l	<20#	<20#
-	1,2 Dichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2 Dichlorobenzene	µg/l	<0.148	<0.148
-	1,2,4 Trichlorobenzene*	µg/l	<0.2#	<0.2#
100	1,2,4 Trichlorobenzene	µg/l	<0.121	<0.121
-	Benzo[g,h,i]perylene*	µg/l	1#	<0.2#
-	Indeno[123-cd]pyrene*	µg/l	0.6#	<0.2#
-	Dibenz[a,h]anthracene*	µg/l	<0.2#	<0.2#
100	1,1-Dichloroethane	µg/l	<0.128	<0.128
100	1,1,2,2 Tetrachloroethane	µg/l	<0.426	<0.426
100	Benzene	µg/l	<0.09	<0.09
100	Toluene	µg/l	<0.315	<0.315
100	Ethylbenzene	µg/l	<0.036	<0.036
100	m+p-Xylene	µg/l	<0.044	<0.044
100	o-Xylene	µg/l	<0.039	<0.039
100	1,3,5 Trimethyl benzene	µg/l	<0.281	<0.281
100	1,2,4 Trimethyl benzene	µg/l	<0.302	<0.302
100	n Propylbenzene*	µg/l	<0.283	<0.283
100	Tertiary Butylbenzene*	µg/l	<0.265	<0.265
100	Secondary Butylbenzene*	µg/l	<0.137	<0.137
100	n Butylbenzene*	µg/l	<0.163	<0.163
100	Isopropylbenzene	µg/l	<0.089	<0.089
100	1,1,1,2 Tetrachloroethane	µg/l	<0.5	<0.5
100	Styrene	µg/l	<0.093	<0.093
100	4-Isopropyltoluene*	µg/l	<0.5	<0.5
100	Bromobenzene	µg/l	<0.112	<0.112
100	Chlorobenzene	µg/l	<0.112	<0.112
100	1,2,3 Trichlorobenzene	µg/l	<0.106	<0.106
100	Bromoform	µg/l	<0.341	<0.341
100	Chloroform	µg/l	<0.158	<0.158
100	Carbon tetrachloride	µg/l	<0.137	<0.137



Methods	Determinands	Units	030364/21	030365/21
			BROOKDALE, PHOENIX: SW 1 DAM 14.12.2021	BROOKDALE, PHOENIX: SW 2 STREAM 14.12.2021
<b>Organics</b>				
100	Dibromomethane	µg/l	<0.235	<0.235
100	Bromochloromethane	µg/l	<0.5	<0.5
100	Bromodichloromethane	µg/l	<0.178	<0.178
100	Dibromochloromethane	µg/l	<0.146	<0.146
100	1,2 Dibromoethane	µg/l	<0.151	<0.151
100	1,2-Dichloroethane	µg/l	<0.226	<0.226
100	1,1,1 Trichloroethane	µg/l	<0.2088	<0.2088
100	1,1,2 Trichloroethane	µg/l	<0.258	<0.258
100	Hexachlorobutadiene	µg/l	<0.287	<0.287
100	2 Chlorotoluene	µg/l	<0.088	<0.088
100	4 Chlorotoluene	µg/l	<0.123	<0.123
100	1,2-Dichloropropane	µg/l	<0.132	<0.132
100	1,3-Dichloropropane	µg/l	<0.093	<0.093
100	2,2-Dichloropropane	µg/l	<0.186	<0.186
100	1,2,3 Trichloropropane	µg/l	<0.381	<0.381
100	1,1-Dichloropropene	µg/l	<0.166	<0.166
100	MTBE	µg/l	<0.1238	<0.1238
100	Trichloroethylene	µg/l	<0.146	<0.146
100	1,1 Dichloroethene	µg/l	<0.174	<0.174
100	Bromomethane*	µg/l	<0.32	<0.32
100	1,2-Dichloroethene cis	µg/l	<0.143	<0.143
100	1,3-Dichloropropene cis	µg/l	<0.369	<0.369
100	Ethylchloride	µg/l	<0.235	<0.235
100	Methylene Chloride*	µg/l	<0.5	<0.5
100	Tetrachloroethylene	µg/l	<0.158	<0.158
100	Trans1,2- Dichloroethene	µg/l	<0.5	<0.5
100	1,3-Dichloropropene trans	µg/l	<0.361	<0.361
100	Trichloromonofluoromethane*	µg/l	<0.5	<0.5
100	Vinyl chloride	µg/l	<0.137	<0.137
100	1,2-Dichloroethene trans	µg/l	<0.139	<0.139
100	1,2 Dichloroethene*	µg/l	<0.5	<0.5

Methods	Determinands	Units	030366/21
			BROOKDALE, PHOENIX: SW 3 WETLAND 14.12.2021
Chemical			
85	Dissolved Calcium	mg Ca/l	36
85	Potassium	mg K/l	5.64
85	Dissolved Magnesium	mg Mg/l	26
84	Sodium	mg Na/l	188
87	Dissolved Silver*	mg Ag/l	<0.01
87	Dissolved Aluminium	mg Al/l	<0.63
88	Dissolved Arsenic	mg As/l	<0.08
87	Dissolved Boron	mg B/l	<0.16
87	Dissolved Barium	mg Ba/l	0.11
87	Dissolved Beryllium	mg Be/l	<0.16
87	Dissolved Cadmium	mg Cd/l	<0.17
87	Dissolved Cobalt	mg Co/l	<0.17
87	Dissolved Chromium	mg Cr/l	<0.16
87	Dissolved Copper	mg Cu/l	<0.17
87	Dissolved Iron	mg Fe/l	<0.15
86	Dissolved Mercury	mg Hg/l	<0.0031
87	Dissolved Lithium	mg Li/l	<0.625
87	Dissolved Manganese	mg Mn/l	0.60
87	Dissolved Molybdenum	mg Mo/l	<0.31
87	Dissolved Nickel	mg Ni/l	<0.18
87	Dissolved Lead	mg Pb/l	<0.08
91	Dissolved Sulphur*	mg/l	16
89	Dissolved Antimony	mg Sb/l	<0.05
88	Dissolved Selenium	mg Se/l	<0.625
87	Dissolved Tin	mg Sn/l	<0.02
87	Dissolved Strontium	mg Sr/l	0.20
87	Dissolved Titanium	mg Ti/l	<0.03
87	Dissolved Thallium	mg Tl/l	<0.02
87	Dissolved Uranium	mg U/l	<0.02
87	Dissolved Vanadium	mg V/l	<0.02
87	Dissolved Zinc	mg Zn/l	<0.02
87	Dissolved Zirconium*	mg Zr/l	<0.02

Methods	Determinands	Units	030366/21
			BROOKDALE, PHOENIX: SW 3 WETLAND 14.12.2021
<b>Chemical</b>			
Calc.	Sum dissolved metal concentration*	mg/l	277
10G	Total Alkalinity	mg CaCO <sub>3</sub> /l	217
3	Chemical Oxygen Demand (Total)	mg O <sub>2</sub> /l	<25
64G	Total Ammonia	mg N/l	4.96
65Gc	Nitrate	mg N/l	<0.25
52	Total Oil & Grease*	mg/l	3
66G	Orthophosphate	mg P/l	0.21
5	Suspended Solids at 105°C	mg/l	<18
<b>Microbiological</b>			
32	<i>E.coli</i>	MPN/100ml	>2420
<b>Organics</b>			
103	Aldrin*	µg/l	<0.5
103	Dieldrin*	µg/l	<0.5
103	Heptachlor*	µg/l	<0.5
103	Hexachlorobenzene*	µg/l	<0.5
103	Methoxychlor*	µg/l	<0.5
103	Endrin*	µg/l	<0.5
103	cis-Chlordane*	µg/l	<0.5
103	trans-Chlordane*	µg/l	<0.5
103	oxy-Chlordane*	µg/l	<0.5
103	Alpha-Endosulfan*	µg/l	<0.5
103	Beta-Endosulfan*	µg/l	<0.5
103	Alpha-HCH*	µg/l	<0.5
103	Beta-HCH*	µg/l	<0.5
103	Gamma-HCH*	µg/l	<0.5
103	Delta-HCH*	µg/l	<0.5
103	Isodrin*	µg/l	<0.5
103	Mirex*	µg/l	<0.5
103	2,4-DDE*	µg/l	<0.5
103	4,4' -DDE*	µg/l	<0.5
103	2,4-DDD*	µg/l	<0.5
103	4,4' -DDD*	µg/l	<0.5

Methods	Determinands	Units	030366/21
			BROOKDALE, PHOENIX: SW 3 WETLAND 14.12.2021
<b>Organics</b>			
103	2,4-DDT*	µg/l	<0.5
103	4,4' -DDT*	µg/l	<0.5
-	Dichlorvos*	µg/l	<20#
-	Fenchlorphos (Ronnell)*	µg/l	<1#
-	Methyl Parathion*	µg/l	<1#
-	Chlorpyrifos (Dursban)*	µg/l	<1#
-	Prothiofos (Tokuthion)*	µg/l	<1#
-	Mocap (Enthoprofos)*	µg/l	<1#
-	Disulfoton*	µg/l	<1#
-	Guthion*	µg/l	<20#
-	Naphthalene*	µg/l	<0.1#
100	Naphthalene	µg/l	<0.148
-	Acenaphthene*	µg/l	<0.1#
-	Acenaphthylene*	µg/l	<0.1#
-	Flourene*	µg/l	<0.1#
-	Phenanthrene*	µg/l	<0.1#
-	Anthracene*	µg/l	<0.1#
-	Fluoranthene*	µg/l	<0.1#
-	Pyrene*	µg/l	<0.1#
-	Benzo[a]anthracene*	µg/l	<0.1#
-	Chrysene*	µg/l	<0.1#
-	Benzo[k+b]fluoranthene*	µg/l	<0.2#
-	Benzo[a]pyrene*	µg/l	<0.1#
-	1,3 Dichlorobenzene*	µg/l	<0.2#
100	1,3 Dichlorobenzene	µg/l	<0.125
-	1,4 Dichlorobenzene*	µg/l	<0.2#
100	1,4 Dichlorobenzene	µg/l	<0.171
-	2-Chloronaphthalene*	µg/l	<0.2#
-	Hexachloroethane*	µg/l	<0.2#
-	4-Chlorophenylphenyl ether*	µg/l	<0.2#
-	4-Bromophenylphenyl ether*	µg/l	<0.2#
-	Di-n-butyl phthalate*	µg/l	<20#

Methods	Determinands	Units	030366/21
			BROOKDALE, PHOENIX: SW 3 WETLAND 14.12.2021
<b>Organics</b>			
-	Butyl benzyl phthalate*	µg/l	<20#
-	Bis(2-ethylhexyl) phthalate*	µg/l	<20#
-	1,2 Dichlorobenzene*	µg/l	<0.2#
100	1,2 Dichlorobenzene	µg/l	<0.148
-	1,2,4 Trichlorobenzene*	µg/l	<0.2#
100	1,2,4 Trichlorobenzene	µg/l	<0.121
-	Benzo[g,h,i]perylene*	µg/l	<0.2#
-	Indeno[123-cd]pyrene*	µg/l	<0.2#
-	Dibenz[a,h]anthracene*	µg/l	<0.2#
100	1,1-Dichloroethane	µg/l	<0.128
100	1,1,1,2 Tetrachloroethane	µg/l	<0.426
100	Benzene	µg/l	<0.09
100	Toluene	µg/l	<0.315
100	Ethylbenzene	µg/l	<0.036
100	m+p-Xylene	µg/l	<0.044
100	o-Xylene	µg/l	<0.039
100	1,3,5 Trimethyl benzene	µg/l	<0.281
100	1,2,4 Trimethyl benzene	µg/l	<0.302
100	n Propylbenzene*	µg/l	<0.283
100	Tertiary Butylbenzene*	µg/l	<0.265
100	Secondary Butylbenzene*	µg/l	<0.137
100	n Butylbenzene*	µg/l	<0.163
100	Isopropylbenzene	µg/l	<0.089
100	1,1,1,2 Tetrachloroethane	µg/l	<0.5
100	Styrene	µg/l	<0.093
100	4-Isopropyltoluene*	µg/l	<0.5
100	Bromobenzene	µg/l	<0.112
100	Chlorobenzene	µg/l	<0.112
100	1,2,3 Trichlorobenzene	µg/l	<0.106
100	Bromoform	µg/l	<0.341
100	Chloroform	µg/l	<0.158
100	Carbon tetrachloride	µg/l	<0.137

Methods	Determinands	Units	030366/21
			BROOKDALE, PHOENIX: SW 3 WETLAND 14.12.2021
<b>Organics</b>			
100	Dibromomethane	µg/l	<0.235
100	Bromochloromethane	µg/l	<0.5
100	Bromodichloromethane	µg/l	<0.178
100	Dibromochloromethane	µg/l	<0.146
100	1,2 Dibromoethane	µg/l	<0.151
100	1,2-Dichloroethane	µg/l	<0.226
100	1,1,1 Trichloroethane	µg/l	<0.2088
100	1,1,2 Trichloroethane	µg/l	<0.258
100	Hexachlorobutadiene	µg/l	<0.287
100	2 Chlorotoluene	µg/l	<0.088
100	4 Chlorotoluene	µg/l	<0.123
100	1,2-Dichloropropane	µg/l	<0.132
100	1,3-Dichloropropane	µg/l	<0.093
100	2,2-Dichloropropane	µg/l	<0.186
100	1,2,3 Trichloropropane	µg/l	<0.381
100	1,1-Dichloropropene	µg/l	<0.166
100	MTBE	µg/l	<0.1238
100	Trichloroethylene	µg/l	<0.146
100	1,1 Dichloroethene	µg/l	<0.174
100	Bromomethane*	µg/l	<0.32
100	1,2-Dichloroethene cis	µg/l	<0.143
100	1,3-Dichloropropene cis	µg/l	<0.369
100	Ethylchloride	µg/l	<0.235
100	Methylene Chloride*	µg/l	<0.5
100	Tetrachloroethylene	µg/l	<0.158
100	Trans1,2- Dichloroethene	µg/l	<0.5
100	1,3-Dichloropropene trans	µg/l	<0.361
100	Trichloromonofluoromethane*	µg/l	<0.5
100	Vinyl chloride	µg/l	<0.137
100	1,2-Dichloroethene trans	µg/l	<0.139
100	1,2 Dichloroethene*	µg/l	<0.5

Refer to the "Notes" section at the end of this report for further explanations.

## Specific Observations

None

# Quality Assurance

## Technical signatories

### Notes to this report

#### Limitations

This report shall not be reproduced except in full without prior written approval of the laboratory. Results in this report relate only to the samples as taken, and the condition received by the laboratory. Any opinions and interpretations expressed herein are outside the scope of SANAS accreditation. The decision rule applicable to this laboratory is available on request. Sample preparation may require filtration, dilution, digestion or similar. Final results are reported accordingly. Where the laboratory has undertaken the sampling, the location of sampling and sampling plan are available on request. Talbot Laboratories is guided by the National Standards SANS 5667-3:2006 Part 3 Guidance on the Preservation and Handling of Water Samples; SANS 5667-1:2008 Part 1 Guidance on the Design of Sampling Programmes and Sampling Techniques and SANS 5667-2:1991 Part 2: Guidance on Sampling Techniques. Customers to contact Talbot Laboratories for further information.

#### Uncertainty of measurement

Talbot Laboratories' Uncertainty of Measurement (UoM) values are:

- Identified for relevant tests.
- Calculated as a percentage of the respective results.
- Applicable to total, dissolved and acid soluble metals for ICP element analyses.
- Available upon request.

#### Analysis explanatory notes

Tests may be marked as follows:

^	Tests conducted at our Port Elizabeth satellite laboratory.
*	Tests not included in our Schedule of Accreditation and therefore that are not SANAS accredited.
#	Tests that have been sub-contracted to a peer laboratory.
NR	Not required -shown, for example, where the schedule of analysis varied between samples.
$\sigma$	Field sampling point on-site results.
a	Testing has deviated from Method.



\*\*\*\*\*End of Report\*\*\*\*\*

