Hawkesbury Waste Management Facility - Yearly Summary for 2021/2022

Licence number - 5293

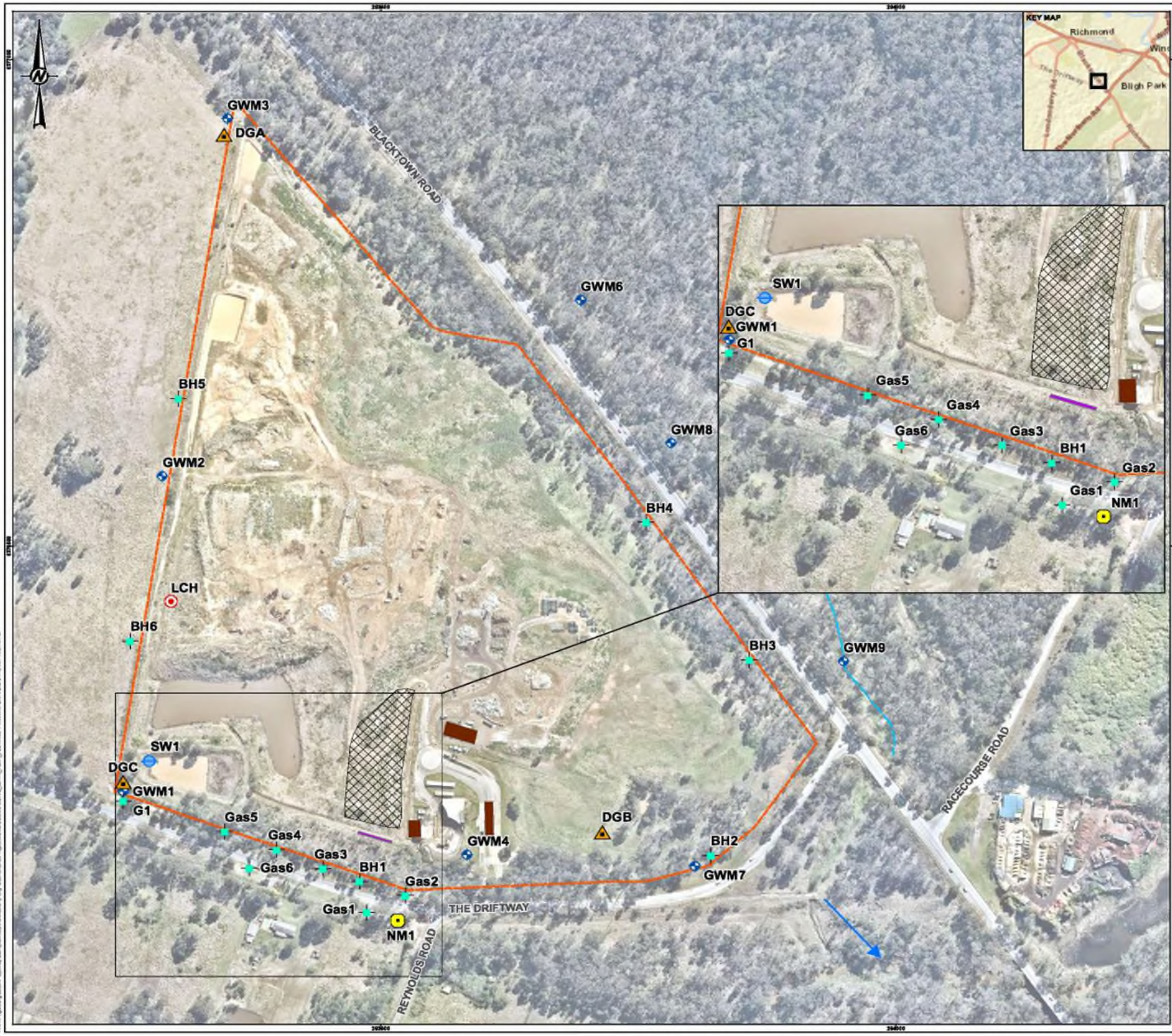
Hawkesbury Waste Management Facility - The Driftway, South WindsorNSW 2756 Licencee - Hawkesbury City Council

Public Register : https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers

Licence Period - 25th July - 24th July

LOR = Limit of Reporting

NT = Not Tested



LEGEND

- Dust Gauge
- Gas Well
- Groundwater Monitoring Well
- Leachate Tap
- Noise Monitoring Location
- Surface Water Pond
- Rickabys Creek
- Groundwater Flow Direction
- Onsite Building Monitoring for Gas
- Gas interception trench
- Landfille Cell
- Site Boundary

Location Name	Location Type	Easting	Northing	EPL
BH1	Gas Well	293478.951	6276155.105	14
BH2	Gas Well	293820.3754	6276181.774	15
BH3	Gas Well	293857.4314	6276382.747	16
BH4	Gas Well	293757.4092	6276524.352	17
BH5	Gas Well	293303.3976	6276651.378	18
BH6	Gas Well	293256.3984	6276402.27	19
DGA	Dust Gauge	293347.9785	6276922.848	2
DGB	Dust Gauge	293714.4797	6276205.775	3
DGC	Dust Gauge	293249.8196	6276257.599	4
G1	Gas Well	293249.8116	6276237.76	-
Gas1	Gas Well	293486.2153	6276123.324	-
Gas2	Gas Well	293523.6803	6276140.681	-
Gas3	Gas Well	293443.6702	6276168.197	-
Gas4	Gas Well	293398.7968	6276187.883	-
Gas5	Gas Well	293348.42	6276206.086	-
Gas6	Gas Well	293372.1267	6276168.621	-
GWM1	Groundwater Monitoring Well	293250.0361	6276247.556	6
GWM2	Groundwater Monitoring Well	293288.2938	6276572.219	7
GWM3	Groundwater Monitoring Well	293350.8436	6276939.913	8
GWM4	Groundwater Monitoring Well	293583.7328	6276182.866	9
GWM6	Groundwater Monitoring Well	293694.2971	6276753.313	10
GWM7	Groundwater Monitoring Well	293805.0992	6276170.625	11
GWM8	Groundwater Monitoring Well	293781.514	6276606.023	12
GWM9	Groundwater Monitoring Well	293949.2602	6276881.629	13
LCH	Leachate Tap	293296.1116	6276443.418	-
NM1	Noise Monitoring Location	293516.0198	6276114.941	-
SW1	Surface Water Pond	293276.5107	6276279.042	-

0 50 100

1:3,750 METRES

NOTE(S)
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 56

REFERENCE(S)
1. STATE DATA SOURCED FROM NSW STATE DATA.
2. AERIAL IMAGERY SOURCED FROM NEARMAP.COM. DATE OF CAPTURE 30/10/2022.
3. KEY MAP SOURCED FROM ESRI ONLINE BASEMAPS.

CLIENT
HAWKESBURY CITY COUNCIL

PROJECT
HAWKESBURY ENVIRONMENTAL MONITORING

TITLE
SITE DETAILS

CONSULTANT

wsp GOLDER

DD-MM-YYYY	16-01-2023
DESIGNED	KAFIAN
PREPARED	KAFIAN
REVIEWED	IW
APPROVED	IW

PROJECT NO.	CONTROL	REV.	FIGURE
20139725	001-R	A	1

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Monitoring Point 14 - BH1

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy		1.7	3	13	9.3	0.7
Methane	% v/v	Monthy		0	0	0	0	0

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	2.7	0.7	0.3	1.5	13.7	4.5
Methane	% v/v	Monthy	0	0	0	0.1	2.5	0.9

Monitoring Point 15 - BH2

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled
			11/11/2021	24/05/2022
			Date Obtained	Date Obtained
			Sample Code	Sample Code
Carbon Dioxide	% v/v	Every 6 Months	5.5	0.6
Methane	% v/v	Every 6 Months	0	0

Monitoring Point 16 - BH3

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled
			11/11/2021	24/05/2022
			Date Obtained	Date Obtained
			Sample Code	Sample Code
Carbon Dioxide	% v/v	Every 6 Months	3.2	1.4
Methane	% v/v	Every 6 Months	0	0

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Monitoring Point 17 - BH4

Pollutant	Unit	Monitoring Frequency	Date Sampled 11/11/2021, Date Obtained, Sample Code	Date Sampled 24/05/2022, Date Obtained, Sample Code
Carbon Dioxide	% v/v	Every 6 Months	1	0
Methane	% v/v	Every 6 Months	0	0

Monitoring Point 18 - BH5

Pollutant	Unit	Monitoring Frequency	Date Sampled, Date Obtained, Sample Code	Date Sampled 11/08/2021, Date Obtained, Sample Code	Date Sampled 3/09/2021, Date Obtained, Sample Code	Date Sampled 27/10/2021, Date Obtained, Sample Code	Date Sampled 11/11/2021, Date Obtained, Sample Code	Date Sampled 14/12/2021, Date Obtained, Sample Code
Carbon Dioxide	% v/v	Monthy		21	2.1	0.6	0.1	0.5
Methane	% v/v	Monthy		11.8	0.4	0	0	0

			Date Sampled 20/01/2022, Date Obtained, Sample Code	Date Sampled 9/02/2022, Date Obtained, Sample Code	Date Sampled 1/03/2022, Date Obtained, Sample Code	Date Sampled 1/04/2022, Date Obtained, Sample Code	Date Sampled 24/05/2022, Date Obtained, Sample Code	Date Sampled 29/06/2022, Date Obtained, Sample Code
Carbon Dioxide	% v/v	Monthy	0.1	0.1	1	0.6	10.3	3.4
Methane	% v/v	Monthy	0	0	0	0	10	7.5

Monitoring Point 19 - BH6

Pollutant	Unit	Monitoring Frequency	Date Sampled, Date Obtained, Sample Code	Date Sampled 11/08/2021, Date Obtained, Sample Code	Date Sampled 3/09/2021, Date Obtained, Sample Code	Date Sampled 27/10/2021, Date Obtained, Sample Code	Date Sampled 11/11/2021, Date Obtained, Sample Code	Date Sampled 14/12/2021, Date Obtained, Sample Code
Carbon Dioxide	% v/v	Monthy		7	7	29.8	23.2	15.2
Methane	% v/v	Monthy		0.2	5.9	27.1	18.1	10.1

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			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	0	0	1.3	1.2	30.4	17.6
Methane	% v/v	Monthy	0	0	0	0.1	44	35.1

Monitoring Point 20 - G1

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy		NT	0	4.2	3.1	2.1
Methane	% v/v	Monthy		NT	0	0	0	0

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	9.3	1.2	0.2	0.3	0.1	0.2
Methane	% v/v	Monthy	0	0	0	0	0	0

Point 21 - Gas2

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

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			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

Point 22 - Gas3

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

Point 23 - Gas4

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

Point 24- Gas 6

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

Point 25 - Gas interception trench

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

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			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

RW1

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
				11/08/2021	3/09/2021	27/10/2021	11/11/2021	14/12/2021
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

			Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			20/01/2022	9/02/2022	1/03/2022	1/04/2022	24/05/2022	29/06/2022
			Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained	Date Obtained
			Sample Code	Sample Code	Sample Code	Sample Code	Sample Code	Sample Code
Carbon Dioxide	% v/v	Monthy	*Well not installed*					
Methane	% v/v	Monthy						

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Monitoring Point 2 - DGA

Pollutant	Unit	Monitoring Frequency	Start Date	Start Date	Start Date	Start Date
			26/05/2021	11/08/2021	10/11/2021	9/02/2022
			Data Collection Date	Data Collection Date	Data Collection Date	Data Collection Date
			11/08/2021	10/11/2021	9/02/2022	24/05/2022
			Sample Code	Sample Code	Sample Code	Sample Code
			EN2107091-001	EN2110082-001		
Particultes deposited Matter	g/m^2/month	Quarterly	NT	NT	NT	NT

Monitoring Point 3 - DGB

Pollutant	Unit	Monitoring Frequency	Start Date	Start Date	Start Date	Start Date
			26/05/2021	11/08/2021	10/11/2021	9/02/2022
			Data Collection Date	Data Collection Date	Data Collection Date	Data Collection Date
			11/08/2021	10/11/2021	9/02/2022	24/05/2022
			Sample Code	Sample Code	Sample Code	Sample Code
			EN2107091-002	EN2110082-002		
Particultes deposited Matter	g/m^2/month	Quarterly	NT	NT	NT	NT

Monitoring Point 4 - DGC

Pollutant	Unit	Monitoring Frequency	Start Date	Start Date	Start Date	Start Date
			26/05/2021	11/08/2021	10/11/2021	9/02/2022
			Data Collection Date	Data Collection Date	Data Collection Date	Data Collection Date
			11/08/2021	10/11/2021	9/02/2022	24/05/2022
			Sample Code	Sample Code	Sample Code	Sample Code
			EN2107091-003	EN2110082-003		
Particultes deposited Matter	g/m^2/month	Quarterly	NT	NT	NT	NT

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Monitoring Point 1 - LCH

Pollutant	Unit	Monitoring Frequency	Date Sampled 11/08/2021; Date Data Obtained 44425; Sample Code SE222611.009	Date Sampled 11/10/2021; Date Data Obtained; Sample Code SE225763.009	Date Sampled 9/02/2022; Date Data Obtained; Sample Code SE228721.009	Date Sampled 25/05/2022; Date Data Obtained; Sample Code SE232475.009
Alkalinity (as calcium carbonate)	mg/L	Quarterly	160	2200	1100	640
Aluminium	mg/L	Yearly				
Arsenic	mg/L	Yearly				0.019
Barium	mg/L	Yearly				
Benzene	mg/L	Yearly				0.013
Biochemical oxygen demand	mg/L	Yearly				
Cadmium	mg/L	Yearly				<0.0001
Calcium	mg/L	Quarterly	30	50	34	18
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	910	1200	620	170
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductiviy	µS/cm	Quarterly	6,201	NT	NT	NT
Copper	mg/L	Yearly				0.005
Ethyl benzene	mg/L	Yearly				0.6
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.001
Magnesium	mg/L	Quarterly	77	120	70	19
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrate	mg/L	Quarterly	0.017	<0.05	<0.05	<0.005
Nitrite	mg/L	Quarterly	<0.005	<0.005	0.7	<0.005
Nitrogen (ammonia)	mg/L	Quarterly	NT	NT	NT	190
Organochlorine pesticides	mg/L	Yearly				<LOR
Orgnochlorine pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (total)	mg/L	Quarterly	3.2	5.8	2.2	1.5
Potassium	mg/L	Quarterly	140	170	120	56
Sodium	mg/L	Quarterly	800	1300	730	190
Sulfate	mg/L	Quarterly	3.5	9.5	8.5	2.4
Toluene	mg/L	Yearly				<0.5
Total chromium	mg/L	Yearly				0.016
Total dissolved solids	mg/L	Quarterly	4200	4300	2600	740
Total Iron	mg/L	Yearly				2.5
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				4.5
Zinc	mg/L	Yearly				0.024

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Monitoring Point 5 - SW1

Pollutant	Unit	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2021	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE222611.010	SE225763.010	SE228721.010	SE232475.011
Alkalinity (as calcium carbonate)	mg/L	Quarterly	190	24	66	270
Ammonia	mg/L	Quarterly	0.04	0.04	0.14	7.4
Biochemical oxygen demand	mg/L	Quarterly	<5	<5	<5	6
Sulfate	mg/L	Quarterly	34	210	100	NT
Total Phenolics	mg/L	Yearly				NT

Monitoring Point 6 - GWM1

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.001	SE225763.001	SE228721.001	SE232475.001
Alkalinity (as calcium carbonate)	mg/L	Quarterly	260	280	270	280
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.05	<0.05	<0.05	<0.05
Arsenic	mg/L	Yearly				0.002
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				<0.0001
Calcium	mg/L	Quarterly	96	95	94	90
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	4500	4200	4300	4400
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	11000	11000		10000
Copper	mg/L	Yearly				0.005
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.006
Magnesium	mg/L	Quarterly	330	320	330	310
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	1.2	0.12	0.21	0.25
Potassium	mg/L	Quarterly	5.3	3.2	2.6	4.6
Salinity	mg/L	Quarterly	7500	7000		6600000000
Sodium	mg/L	Quarterly	2100	2300	2200	2000
Sulfate	mg/L	Quarterly	300	280	290	290
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.005
Total dissolved solids	mg/L	Quarterly	7700	8600	8200	7800
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				0.029

Monitoring Point 7 - GWM2

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2021	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.002	SE225763.002	SE228721.002	SE232475.002
Alkalinity (as calcium carbonate)	mg/L	Quarterly	290	310	300	310
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.05	<0.05	<0.05	<0.05
Arsenic	mg/L	Yearly				0.004
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0002
Calcium	mg/L	Quarterly	110	120	110	110.00
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	5000	4800	4500	4800
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	13000	13000	NT	11000
Copper	mg/L	Yearly				0.006
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.008
Magnesium	mg/L	Quarterly	320	310	320	300
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	1.1	1.1	0.44	0.71
Potassium	mg/L	Quarterly	5.2	2.5	1.00	1.90
Salinity	mg/L	Quarterly	8300	8500		7100000000
Sodium	mg/L	Quarterly	2300	2500	2400	2300.00
Sulfate	mg/L	Quarterly	300	290	280	290
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.012
Total dissolved solids	mg/L	Quarterly	8600	9300	8800	8700
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				0.032

Monitoring Point 8 - GWM3

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.003	SE225763.003	SE228721.003	SE232475.003
Alkalinity (as calcium carbonate)	mg/L	Quarterly	450	500	520	500
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.05	<0.05	<0.05	<0.05
Arsenic	mg/L	Yearly				0.008
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0002
Calcium	mg/L	Quarterly	130	130	110	110
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	8000	7700	7600	7300
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	19000	20000	NT	16000
Copper	mg/L	Yearly				0.022
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.019
Magnesium	mg/L	Quarterly	620	670	550	530
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0003
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.2	0.57	0.39	0.47
Potassium	mg/L	Quarterly	4.4	3.6	2.6	5
Salinity	mg/L	Quarterly	12000	13000		10000
Sodium	mg/L	Quarterly	3700	4300	3300	3300
Sulfate	mg/L	Quarterly	590	590	570	550
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.021
Total dissolved solids	mg/L	Quarterly	14000	15000	15000	13000
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				0.091

Monitoring Point 9 - GWM4

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.004	SE225763.004	SE228721.004	SE232475.004
Alkalinity (as calcium carbonate)	mg/L	Quarterly	95	90	96	93
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.01	<0.005	<0.05	<0.05
Arsenic	mg/L	Yearly				0.003
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0002
Calcium	mg/L	Quarterly	22	22	23	21
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	4200	4000	3900	4200
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	12,300	11,000		9400
Copper	mg/L	Yearly				0.012
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.09
Magnesium	mg/L	Quarterly	323	320	330	310
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.08	0.19	0.16	0.3
Potassium	mg/L	Quarterly	<1	0.8	0.6	1.1
Salinity	mg/L	Quarterly	nt	7400		6100
Sodium	mg/L	Quarterly	1990	2100	2000	1900
Sulfate	mg/L	Quarterly	144	150	150	150
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.012
Total dissolved solids	mg/L	Quarterly	7980	8400	7700	7500
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly	<0.05			NT
Xylene	mg/L	Yearly	<0.0015			NT
Zinc	mg/L	Yearly	0.022			NT

Monitoring Point 10 - GWM6

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.006	SE225763.006	SE228721.005	SE232475.005
Alkalinity (as calcium carbonate)	mg/L	Quarterly	170	160	140	240
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	0.28	0.24	0.05	0.8
Arsenic	mg/L	Yearly				0.004
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0001
Calcium	mg/L	Quarterly	90	140	24	63
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	1200	1500	160	680
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	5,900	4,800	NT	2100
Copper	mg/L	Yearly				0.017
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.044
Magnesium	mg/L	Quarterly	120	160	19	46
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0008
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.86	0.03	1.1	3.4
Potassium	mg/L	Quarterly	5.6	5.5	0.6	0.7
Salinity	mg/L	Quarterly	3800	3100		1300
Sodium	mg/L	Quarterly	510	610	73	170
Sulfate	mg/L	Quarterly	53	53	23	42
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.02
Total dissolved solids	mg/L	Quarterly	4900	3400	510	1400
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly	<0.05			NT
Xylene	mg/L	Yearly	<0.0015			NT
Zinc	mg/L	Yearly	0.085			NT

Monitoring Point 11 - GWM7

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.007	SE225763.007	SE228721.006	SE232475.006
Alkalinity (as calcium carbonate)	mg/L	Quarterly	150	180	190	250
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.05	<0.01	0.02	0.04
Arsenic	mg/L	Yearly				0.002
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0004
Calcium	mg/L	Quarterly	73	52	45	50
Carbonate	mg/L	Quarterly	NT	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	4000	3500	3300	3800
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	10,000	10,000	NT	8800
Copper	mg/L	Yearly				0.05
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.03
Magnesium	mg/L	Quarterly	270	200	190	200
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.22	0.09	0.2	0.13
Potassium	mg/L	Quarterly	3.1	2.8	0.4	1.3
Salinity	mg/L	Quarterly	6700	6600	NT	5700
Sodium	mg/L	Quarterly	1800	2000	2000	1800
Sulfate	mg/L	Quarterly	130	110	100	140
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.003
Total dissolved solids	mg/L	Quarterly	6900	7000	6700	6700
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				0.023

Monitoring Point 12 - GWM8

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.008	SE225763.008	SE228721.007	SE232475.007
Alkalinity (as calcium carbonate)	mg/L	Quarterly	410	440	440	370
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	<0.05	<0.05	<0.05	0.4
Arsenic	mg/L	Yearly				0.026
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0002
Calcium	mg/L	Quarterly	120	130	130	110
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	5700	5300	5500	4300
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	15,000	15,000	NT	9600
Copper	mg/L	Yearly				0.012
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.022
Magnesium	mg/L	Quarterly	370	390	410	270
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.15	0.87	0.11	0.54
Potassium	mg/L	Quarterly	2.5	5.7	5.1	11
Salinity	mg/L	Quarterly	9600	10000		63000
Sodium	mg/L	Quarterly	2800	3100	3000	1900
Sulfate	mg/L	Quarterly	250	240	270	170
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.016
Total dissolved solids	mg/L	Quarterly	10000	11000	11000	7600
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				1.2

Monitoring Point 13 - GWM9

Pollutant	Unit	Monitoring frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			11/08/2021	11/10/2012	9/02/2022	25/05/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Sample Code	Sample Code	Sample Code	Sample Code
			SE22261.009	SE225763.009	SE228721.008	SE232475.008
Alkalinity (as calcium carbonate)	mg/L	Quarterly	160	190	260	160
Aluminium	mg/L	Yearly				NT
Ammonia	mg/L	Quarterly	0.05	0.17	0.27	0.86
Arsenic	mg/L	Yearly				0.01
Barium	mg/L	Yearly				NT
Benzene	mg/L	Yearly				<0.0005
Biochemical oxygen demand	mg/L	Yearly				NT
Cadmium	mg/L	Yearly				0.0003
Calcium	mg/L	Quarterly	12	26	21	8.7
Carbonate	mg/L	Quarterly	<1	<1	<1	<1
Chemical oxygen demand	mg/L	Yearly				NT
Chloride	mg/L	Quarterly	760	1800	1900	360
Chlorinated volatile compound	mg/L	Yearly				<LOR
Chromium (hexavalent)	mg/L	Yearly				NT
Cobalt	mg/L	Yearly				NT
Conductivity	µS/cm	Quarterly	2,700	3,400		1300
Copper	mg/L	Yearly				0.035
Ethyl benzene	mg/L	Yearly				<0.0005
Fluoride	mg/L	Yearly				NT
Lead	mg/L	Yearly				0.52
Magnesium	mg/L	Quarterly	34	67	58	13
Manganese	mg/L	Yearly				NT
Mercury	mg/L	Yearly				<0.0001
Nitrogen Oxides	mg/L	Yearly				NT
Organochlorine pesticides	mg/L	Yearly				<LOR
Organophosphate pesticides	mg/L	Yearly				<LOR
pH	pH	Quarterly	NT	NT	NT	NT
Phosphate	mg/L	Yearly				NT
Phosphorus (Total)	mg/L	Quarterly	0.53	2.5	1.9	1.9
Potassium	mg/L	Quarterly	9.2	9.4	5.1	7.7
Salinity	mg/L	Quarterly	1700	2200		820
Sodium	mg/L	Quarterly	480	1100	1100	270
Sulfate	mg/L	Quarterly	60	110	110	16
Toluene	mg/L	Yearly				<0.0005
Total chromium	mg/L	Yearly				0.042
Total dissolved solids	mg/L	Quarterly	1400	1900	4500	760
Total organic carbon	mg/L	Yearly				NT
Total petroleum hydrocarbons C6-C9	mg/L	Yearly				NT
C10-C14	mg/L	Yearly				NT
C15-C28	mg/L	Yearly				NT
C29-C36	mg/L	Yearly				NT
C10-C36 (Sum)	mg/L	Yearly				NT
Total Phenolics	mg/L	Yearly				<0.05
Xylene	mg/L	Yearly				<0.0015
Zinc	mg/L	Yearly				0.9

Polluntant Monitoring - Correction Log

EPL No: 5293

Sample Point	Pollutant	Sample Date and Time	Original Data	Corrected Data	Data Corrected	Date Originally Published	Reason