

Reporting of leachate monitoring for the period from 01-Apr-2020 to 30-Jun-2020

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ^{(1) (4)}	Unit ⁽⁵⁾
Cell 1/2 Sump	Base of well/borehole/sump	Field	08/04/2020		14.73	m
			04/05/2020		14.73	m
			10/06/2020		14.74	m
	Groundwater level/dip		08/04/2020		14.44	m
			04/05/2020		14.4	m
			10/06/2020		14.32	m
	Leachate level above base of sump/pit base		08/04/2020	3m above base	0.29	m
			04/05/2020	3m above base	0.33	m
			10/06/2020	3m above base	0.42	m
	Total Alkalinity as CaCO3	TM043	14/04/2020		8680	mg/l
	Biological oxygen demand	TM045	14/04/2020		159	mg/l
	Total organic carbon	TM090	14/04/2020		800	mg/l
	Ammoniacal Nitrogen as N	TM099	14/04/2020	<3,640 mg/l	2390	mg/l
			13/05/2020	<3,640 mg/l	2240	mg/l
			15/06/2020	<3,640 mg/l	2490	mg/l
	Chemical oxygen demand (unfiltered)	TM107	14/04/2020		2560	mg/l
	Electrical conductivity @20°C (lab)	TM120	14/04/2020		39500	µS/cm
			13/05/2020		39100	µS/cm
			15/06/2020		38600	µS/cm
	Cadmium (filtered)	TM152	14/04/2020	<0.105 mg/l	0.000832	mg/l
	Calcium (filtered)		14/04/2020		29.2	mg/l
	Chromium (filtered)		14/04/2020		0.192	mg/l

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Cell 1/2 Sump	Copper (filtered)	TM152	14/04/2020		0.0273	mg/l
	Iron (filtered)		14/04/2020		3.69	mg/l
	Lead (filtered)		14/04/2020		0.0178	mg/l
	Magnesium (filtered)		14/04/2020		47	mg/l
	Manganese (filtered)		14/04/2020		0.0923	mg/l
	Nickel (filtered)		14/04/2020		0.277	mg/l
	Potassium (filtered)		14/04/2020		2620	mg/l
	Sodium (filtered)		14/04/2020		3950	mg/l
	Zinc (filtered)		14/04/2020		0.146	mg/l
	4-Methylphenol	TM176	14/04/2020	<1.6 mg/l	<0.1	mg/l
	Diethyl phthalate		14/04/2020	<0.44 mg/l	<0.1	mg/l
	Chloride	TM184	14/04/2020	<19,000 mg/l	11600	mg/l
			13/05/2020	<19,000 mg/l	11000	mg/l
			15/06/2020	<19,000 mg/l	11400	mg/l
	Sulphate		14/04/2020		48.7	mg/l
	Total Oxidised Nitrogen as N		14/04/2020		<1	mg/l
	Dichloromethane	TM208	14/04/2020	<0.033 mg/l	<0.003	mg/l
	Mecoprop	TM411	14/04/2020	<0.071 mg/l	0.126	mg/l
Cell 3/4 Sump	Base of well/borehole/sump	Field	08/04/2020		11.3	m
			04/05/2020		11.3	m
			10/06/2020		11.2	m
	Groundwater level/dip		08/04/2020		10.65	m
			04/05/2020		10.84	m
			10/06/2020		10.81	m
	Leachate level above base of sump/pit base		08/04/2020	2.8m above base	0.65	m
			04/05/2020	2.8m above base	0.46	m
			10/06/2020	2.8m above base	0.39	m
	Total Alkalinity as CaCO3	TM043	14/04/2020		4770	mg/l
	Biological oxygen demand	TM045	14/04/2020		63	mg/l

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Cell 3/4 Sump	Total organic carbon	TM090	14/04/2020		393	mg/l
	Ammoniacal Nitrogen as N	TM099	14/04/2020	<3,640 mg/l	1190	mg/l
			13/05/2020	<3,640 mg/l	881	mg/l
			15/06/2020	<3,640 mg/l	1190	mg/l
	Chemical oxygen demand (unfiltered)	TM107	14/04/2020		1270	mg/l
	Electrical conductivity @20°C (lab)	TM120	14/04/2020		22800	µS/cm
			13/05/2020		11300	µS/cm
			15/06/2020		21500	µS/cm
	Cadmium (filtered)	TM152	14/04/2020	<0.105 mg/l	<0.0008	mg/l
	Calcium (filtered)		14/04/2020		104	mg/l
	Chromium (filtered)		14/04/2020		0.0842	mg/l
	Copper (filtered)		14/04/2020		0.0127	mg/l
	Iron (filtered)		14/04/2020		3.9	mg/l
	Lead (filtered)		14/04/2020		0.00403	mg/l
	Magnesium (filtered)		14/04/2020		93.2	mg/l
	Manganese (filtered)		14/04/2020		1.03	mg/l
	Nickel (filtered)		14/04/2020		0.115	mg/l
	Potassium (filtered)		14/04/2020		1480	mg/l
	Sodium (filtered)		14/04/2020		2330	mg/l
	Zinc (filtered)		14/04/2020		0.122	mg/l
	4-Methylphenol	TM176	14/04/2020	<1.6 mg/l	<0.04	mg/l
	Diethyl phthalate		14/04/2020	<0.44 mg/l	<0.04	mg/l
	Chloride	TM184	14/04/2020	<19,000 mg/l	6290	mg/l
			13/05/2020	<19,000 mg/l	1710	mg/l
			15/06/2020	<19,000 mg/l	5670	mg/l
	Sulphate		14/04/2020		<20	mg/l
	Total Oxidised Nitrogen as N		14/04/2020		9.71	mg/l
	Dichloromethane	TM208	14/04/2020	<0.033 mg/l	<0.003	mg/l
	Mecoprop	TM411	14/04/2020	<0.071 mg/l	0.0388	mg/l

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Cell 5 Sump	Base of well/borehole/sump	Field	08/04/2020		5.8	m
			04/05/2020		5.8	m
			10/06/2020		5.8	m
	Groundwater level/dip		08/04/2020		5.47	m
			04/05/2020		5.62	m
			10/06/2020		5.51	m
	Leachate level above base of sump/pit base		08/04/2020	2m above base	0.33	m
			04/05/2020	2m above base	0.18	m
			10/06/2020	2m above base	0.29	m
	Total Alkalinity as CaCO3	TM043	14/04/2020		4700	mg/l
	Biological oxygen demand	TM045	14/04/2020		58	mg/l
	Total organic carbon	TM090	14/04/2020		395	mg/l
	Ammoniacal Nitrogen as N	TM099	14/04/2020	<3,640 mg/l	1180	mg/l
			13/05/2020	<3,640 mg/l	1260	mg/l
			15/06/2020	<3,640 mg/l	1260	mg/l
	Chemical oxygen demand (unfiltered)	TM107	14/04/2020		1200	mg/l
	Electrical conductivity @20°C (lab)	TM120	14/04/2020		22300	µS/cm
			13/05/2020		23700	µS/cm
			15/06/2020		22200	µS/cm
	Cadmium (filtered)	TM152	14/04/2020	<0.105 mg/l	<0.00008	mg/l
	Calcium (filtered)		14/04/2020		141	mg/l
	Chromium (filtered)		14/04/2020		0.00142	mg/l
	Copper (filtered)		14/04/2020		0.0013	mg/l
	Iron (filtered)		14/04/2020		0.353	mg/l
	Lead (filtered)		14/04/2020		0.00073	mg/l
	Magnesium (filtered)		14/04/2020		10.9	mg/l
	Manganese (filtered)		14/04/2020		0.204	mg/l
	Nickel (filtered)		14/04/2020		0.00355	mg/l
	Potassium (filtered)		14/04/2020		6.75	mg/l

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Cell 5 Sump	Sodium (filtered)	TM152	14/04/2020		41.2	mg/l
	Zinc (filtered)		14/04/2020		0.0224	mg/l
	4-Methylphenol	TM176	14/04/2020	<0.126 mg/l	<0.04	mg/l
	Diethyl phthalate		14/04/2020	<0.36 mg/l	<0.04	mg/l
	Chloride	TM184	14/04/2020	<19,000 mg/l	6040	mg/l
			13/05/2020	<19,000 mg/l	6440	mg/l
			15/06/2020	<19,000 mg/l	6260	mg/l
	Sulphate		14/04/2020		<20	mg/l
	Total Oxidised Nitrogen as N		14/04/2020		9.6	mg/l
	Dichloromethane	TM208	14/04/2020	<0.066 mg/l	<0.003	mg/l
	Mecoprop	TM411	14/04/2020	<0.14 mg/l	0.0378	mg/l
Cell 6 Sump	Base of well/borehole/sump	Field	08/04/2020		24.6	m
			04/05/2020		24.6	m
			10/06/2020		24.6	m
	Groundwater level/dip		08/04/2020		24.5	m
			04/05/2020		24.4	m
			10/06/2020		24.38	m
	Leachate level above base of sump/pit base		08/04/2020	1.5m above base	0.1	m
			04/05/2020	1.5m above base	0.2	m
			10/06/2020	1.5m above base	0.22	m
	Ammoniacal Nitrogen as N	TM099	15/06/2020	<3,640 mg/l	912	mg/l
	Electrical conductivity @20°C (lab)	TM120	15/06/2020		16700	µS/cm
	Chloride	TM184	15/06/2020	<19,000 mg/l	3960	mg/l
Cell 7 Sump	Base of well/borehole/sump	Field	08/04/2020		23	m
			04/05/2020		23	m
			10/06/2020		23	m
	Groundwater level/dip		08/04/2020		22.61	m
			04/05/2020		22.74	m
			10/06/2020		22.65	m

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Cell 7 Sump	Leachate level above base of sump/pit base	Field	08/04/2020	1.5m above base	0.39	m
			04/05/2020	1.5m above base	0.26	m
			10/06/2020	1.5m above base	0.35	m
	Total Alkalinity as CaCO3	TM043	14/04/2020		10100	mg/l
	Biological oxygen demand	TM045	14/04/2020		262	mg/l
	Total organic carbon	TM090	14/04/2020		1560	mg/l
	Ammoniacal Nitrogen as N	TM099	14/04/2020	<3,640 mg/l	2140	mg/l
			13/05/2020	<3,640 mg/l	921	mg/l
			15/06/2020	<3,640 mg/l	62.7	mg/l
	Chemical oxygen demand (unfiltered)	TM107	14/04/2020		5260	mg/l
	Electrical conductivity @20°C (lab)	TM120	14/04/2020		21600	µS/cm
			13/05/2020		11400	µS/cm
			15/06/2020		1690	µS/cm
	Cadmium (filtered)	TM152	14/04/2020	<0.105 mg/l	<0.0008	mg/l
	Calcium (filtered)		14/04/2020		179	mg/l
	Chromium (filtered)		14/04/2020		0.865	mg/l
	Copper (filtered)		14/04/2020		0.0231	mg/l
	Iron (filtered)		14/04/2020		16.5	mg/l
	Lead (filtered)		14/04/2020		0.0141	mg/l
	Magnesium (filtered)		14/04/2020		80.5	mg/l
	Manganese (filtered)		14/04/2020		1.48	mg/l
	Nickel (filtered)		14/04/2020		0.288	mg/l
	Potassium (filtered)		14/04/2020		1150	mg/l
	Sodium (filtered)		14/04/2020		2290	mg/l
	Zinc (filtered)		14/04/2020		0.369	mg/l
	4-Methylphenol	TM176	14/04/2020	<0.126 mg/l	<0.1	mg/l
	Diethyl phthalate		14/04/2020	<0.36 mg/l	<0.1	mg/l
	Chloride	TM184	14/04/2020	<19,000 mg/l	3090	mg/l
			13/05/2020	<19,000 mg/l	1620	mg/l

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Cell 7 Sump	Chloride	TM184	15/06/2020	<19,000 mg/l	186	mg/l
	Sulphate		14/04/2020		648	mg/l
	Total Oxidised Nitrogen as N		14/04/2020		8.61	mg/l
	Dichloromethane	TM208	14/04/2020	<0.066 mg/l	<0.003	mg/l
	Mecoprop	TM411	14/04/2020	<0.14 mg/l	0.0366	mg/l
Lechate Holding Lagoon	Base of well/borehole/sump	Field	08/04/2020		8.5	m
			04/05/2020		8.5	m
			10/06/2020		8.5	m
			08/04/2020		1.8	m
	Groundwater level/dip		04/05/2020		2.1	m
			10/06/2020		2.9	m
			14/04/2020		5240	mg/l
			14/04/2020		96.6	mg/l
	Total Alkalinity as CaCO3	TM043	14/04/2020		481	mg/l
			14/04/2020		1160	mg/l
			13/05/2020	<3,640 mg/l	1120	mg/l
			15/06/2020	<3,640 mg/l	1150	mg/l
	Biological oxygen demand	TM045	14/04/2020		1340	mg/l
			14/04/2020		18500	µS/cm
			13/05/2020		18200	µS/cm
			15/06/2020		19800	µS/cm
	Total organic carbon	TM090	14/04/2020		<0.00008	mg/l
			14/04/2020		0.268	mg/l
			14/04/2020		<0.001	mg/l
			14/04/2020		<0.0003	mg/l
	Ammoniacal Nitrogen as N	TM099	14/04/2020		<0.019	mg/l
			14/04/2020		0.00736	mg/l
			14/04/2020		0.173	mg/l
			14/04/2020		<0.003	mg/l

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Lechate Holding Lagoon	Nickel (filtered)	TM152	14/04/2020		0.000811	mg/l
	Potassium (filtered)		14/04/2020		0.911	mg/l
	Sodium (filtered)		14/04/2020		1.68	mg/l
	Zinc (filtered)		14/04/2020		<0.001	mg/l
	4-Methylphenol	TM176	14/04/2020		<0.02	mg/l
	Diethyl phthalate		14/04/2020		<0.02	mg/l
	Chloride	TM184	14/04/2020	<19,000 mg/l	4120	mg/l
			13/05/2020	<19,000 mg/l	4110	mg/l
			15/06/2020	<19,000 mg/l	4690	mg/l
	Sulphate		14/04/2020		<20	mg/l
	Total Oxidised Nitrogen as N		14/04/2020		<1	mg/l
	Dichloromethane	TM208	14/04/2020		<0.003	mg/l
	Mecoprop	TM411	14/04/2020		0.0325	mg/l
LMP5a	Base of well/borehole/sump	Field	08/04/2020		8.5	m
			04/05/2020		8.5	m
			10/06/2020		8.5	m
	Groundwater level/dip		08/04/2020		8.5	m
			04/05/2020		8.5	m
			10/06/2020		8.5	m
LMP5b	Leachate level above base of sump/pit base		08/04/2020	1.5m above base	0	m
			04/05/2020	1.5m above base	0	m
			10/06/2020	1.5m above base	0	m
	Base of well/borehole/sump		08/04/2020		6.8	m
			04/05/2020		6.8	m
			10/06/2020		6.8	m
	Groundwater level/dip		08/04/2020		6.76	m
			04/05/2020		6.8	m
			10/06/2020		6.73	m
	Leachate level above base of sump/pit base		08/04/2020	1.5m above base	0.04	m

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LMP5b	Leachate level above base of sump/pit base	Field	04/05/2020	1.5m above base	0	m
			10/06/2020	1.5m above base	0.07	m
			08/04/2020		11.4	m
LMP6a	Base of well/borehole/sump		04/05/2020		11.4	m
			10/06/2020		11.4	m
			08/04/2020		11.4	m
	Groundwater level/dip		04/05/2020		11.4	m
			10/06/2020		11.4	m
			08/04/2020		11.4	m
	Leachate level above base of sump/pit base		04/05/2020	1.5m above base	0	m
			10/06/2020	1.5m above base	0	m
			08/04/2020	1.5m above base	0	m
LMP7a	Base of well/borehole/sump		04/05/2020		10.48	m
			10/06/2020		10.46	m
			08/04/2020		10.28	m
	Groundwater level/dip		04/05/2020		10.4	m
			10/06/2020		10.38	m
			08/04/2020		0.2	m
	Leachate level above base of sump/pit base		04/05/2020	1.5m above base	0.08	m
			10/06/2020	1.5m above base	0.08	m
			08/04/2020		4	m
LMP7b	Base of well/borehole/sump		04/05/2020		4	m
			10/06/2020		4	m
			08/04/2020		3.92	m
	Groundwater level/dip		04/05/2020		4	m
			10/06/2020		4	m
			08/04/2020		0.08	m
	Leachate level above base of sump/pit base		04/05/2020	1.5m above base	0	m
			10/06/2020	1.5m above base	0	m
			08/04/2020	1.5m above base	0	m

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M1A	Base of well/borehole/sump	Field	08/04/2020		16.4	m
			04/05/2020		16.4	m
			10/06/2020		16.4	m
	Groundwater level/dip		08/04/2020		15.91	m
			04/05/2020		15.98	m
			10/06/2020		15.95	m
	Leachate level above base of sump/pit base		08/04/2020	2m above base	0.49	m
			04/05/2020	2m above base	0.42	m
			10/06/2020	2m above base	0.45	m
M1B	Base of well/borehole/sump		08/04/2020		10.5	m
			04/05/2020		10.5	m
			10/06/2020		10.5	m
	Groundwater level/dip		08/04/2020		10.1	m
			04/05/2020		10.26	m
			10/06/2020		10.38	m
	Leachate level above base of sump/pit base		08/04/2020	2m above base	0.4	m
			04/05/2020	2m above base	0.24	m
			10/06/2020	2m above base	0.12	m
M2A	Base of well/borehole/sump		08/04/2020		21	m
			04/05/2020		21	m
			10/06/2020		21	m
	Groundwater level/dip		08/04/2020		20.83	m
			04/05/2020		20.8	m
			10/06/2020		20.76	m
	Leachate level above base of sump/pit base		08/04/2020	2m above base	0.17	m
			04/05/2020	2m above base	0.2	m
			10/06/2020	2m above base	0.24	m
M2B	Base of well/borehole/sump		08/04/2020		19.8	m
			04/05/2020		19.8	m

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M2B	Base of well/borehole/sump	Field	10/06/2020		19.8	m
			08/04/2020		19.5	m
			04/05/2020		19.3	m
	Leachate level above base of sump/pit base		10/06/2020		19.44	m
			08/04/2020	2m above base	0.3	m
			04/05/2020	2m above base	0.5	m
M3A	Base of well/borehole/sump		10/06/2020	2m above base	0.36	m
			08/04/2020		21.5	m
			04/05/2020		21.5	m
	Groundwater level/dip		10/06/2020		21.5	m
			08/04/2020		21.3	m
			04/05/2020		21.42	m
	Leachate level above base of sump/pit base		10/06/2020		21.36	m
			08/04/2020	1.8m above base	0.2	m
			04/05/2020	1.8m above base	0.08	m
M3B	Base of well/borehole/sump		10/06/2020	1.8m above base	0.14	m
			08/04/2020		15.54	m
			04/05/2020		15.54	m
	Groundwater level/dip		10/06/2020		15.53	m
			08/04/2020		15.51	m
			04/05/2020		15.5	m
	Leachate level above base of sump/pit base		10/06/2020		15.21	m
			08/04/2020	1.8m above base	0.03	m
			04/05/2020	1.8m above base	0.04	m
M4A	Base of well/borehole/sump		10/06/2020	1.8m above base	0.32	m
			08/04/2020		19	m
			04/05/2020		19	m
	Groundwater level/dip		10/06/2020		19	m
			08/04/2020		18.67	m

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M4A	Groundwater level/dip	Field	04/05/2020		18.74	m
			10/06/2020		18.61	m
	Leachate level above base of sump/pit base		08/04/2020	1.8m above base	0.33	m
			04/05/2020	1.8m above base	0.26	m
M4B			10/06/2020	1.8m above base	0.39	m
			08/04/2020		17	m
			04/05/2020		17	m
	Groundwater level/dip		10/06/2020		17	m
			08/04/2020		16.88	m
			04/05/2020		16.83	m
			10/06/2020		16.72	m
			08/04/2020	1.8m above base	0.12	m
			04/05/2020	1.8m above base	0.17	m
			10/06/2020	1.8m above base	0.28	m

(1) The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

(2) Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography.

(3) For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

(4) The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated; refer to laboratory data sheets for specific uncertainty.

(5) Depths reported as metres (m) are metres below ground level unless are labelled as leachate head above base of sump.

(6) For details of the sampling method, frequency and parameters measured / analysed for, refer to the site Environmental Monitoring Management Plan (EMMP).

(7) Where blank, there is no defined compliance limit specified for the monitoring location / parameter.

Signature: 

Date: 23 July 2020

(Authorised to sign as representative of
Operator)