Monthly Data Summary

Environmental Protection Licence 2122



Monitoring Period

DECEMBER 2022

EPA	Indenti	cation	Numb	er	3	

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample values	Highest sample value	100th percentile concentration		
							limits		
Nitrogen Oxides	mg/m3	Continuous	100.00%	430.3	631.7	801.2	1500 mg/m ³		
Suflur Dioxide	mg/m3	Continuous	100.00%	753.6	966.0	1136.3	1700 mg/m ³		
addition to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 apply to Nitrogen oxides and affur dioxide, respectively.									

100th Unit of No. of samples Most recent percentile Pollutant Date of sample required by licence measure result concentration limits 31/08/2021 0.0001 Cadmium mg/m3 Six monthly 0.2 mg/m Chlorine mg/m3 Six monthly 31/08/2021 0.049 20 mg/m³ Fluorine mg/m3 Six monthly 31/08/2021 9.4 20 mg/m mg/m3 14.0 Hydrogen chloride Six monthly 31/08/2021 50 mg/m 0.0004 31/08/2021 Mercury Six monthly 0.05 mg/m³ mg/m3 Solid Particles mg/m3 Quarterly 19/10/2021 33.0 50 mg/m Sulfuric acid mist and sulfur mg/m3 Six monthly 31/08/2021 1.100 100 mg/m trioxide (as SO3) Type 1 and Type 2 substances 31/08/2021 0.009 0.75 mg/m³ mg/m3 Six monthly in aggregate Volatile organic compounds as 31/08/2021 0.050 mg/m3 Six monthly 10 mg/m n-propane equivalent

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detetction, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.



Air emission monitoring - Combined air emissions from boiler 2 via Points 9 and 10 to Point 1

Pollutant	Unit of measure	No. of samples required by licence	Dat a capture %	Lowest sample value	Mean of sample	Highest sample value	100th percentile concentration limits		
Nitrogen Oxides	mg/m3	Continouus	98.06%	201.1	371.8	659.7	1500 mg/m ³		
Suflur Dioxide	mg/m3	Continuous	99.03%	622.3	752.6	1106.6	1700 mg/m ³		
In addtion to the 100th percent Sulfur dioxide, respectively.	In addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 apply to Nitrogen oxides and								

Pollutant	Unit of measure	No. of samples required by licence	Date of sample	Most recent result	100th percentile concentration limits
Cadmium	mg/m3	Six monthly	1/09/2021	0.0001	0.2 mg/m ³
Chlorine	mg/m3	Six monthly	1/09/2021	0.009	20 mg/m ³
Fluorine	mg/m3	Six monthly	1/09/2021	9.7	20 mg/m ³
Hydrogen chloride	mg/m3	Six monthly	1/09/2021	13.0	50 mg/m ³
Mercury	mg/m3	Six monthly	1/09/2021	0.0010	0.05 mg/m ³
Solid Particles	mg/m3	Quarterly	5/11/2021	33.4	50 mg/m ³
Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3	Six monthly	1/09/2021	1.800	100 mg/m ³
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	1/09/2021	0.009	0.75 mg/m ³
Volatile organic compounds as n-propane equivalent	mg/m3	Six monthly	1/09/2021	0.045	10 mg/m ³

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detetction, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

EPA Indentifcation Number 5 Air emission monitoring - Combined air emissions from boiler 3 via Points 11 and 12 to Point 2 Unit retired from service April 22

Air emission monitoring - Combined air emissions from boiler 4 via Points 13 and 14 to Point 2

Pollutant	Unit of measure	No. of samples required by licence	Dat a capture %	Lowest sample value	Mean of sample	Highest sample value	100th percentile concentration limits		
Nitrogen Oxides	mg/m3	Continouus	100.0%	329.9	445.3	577.7	1500 mg/m ³		
Suflur Dioxide	mg/m3	Continuous	100.0%	731.1	925.6	1072.9	1700 mg/m ³		
In addtion to the 100th percent Sulfur dioxide, respectively .	In addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 apply to Nitrogen oxides and								

100th Unit of No. of samples Most recent percentile Pollutant Date of sample required by licence concentration measure result limits Cadmium mg/m3 Six monthly 2/09/2021 0.0001 0.2 mg/m³ Six monthly 2/09/2021 0.012 Chlorine mg/m3 20 mg/m Fluorine 2/09/2021 11.0 mg/m3 Six monthly 20 mg/m Hydrogen chloride mg/m3 Six monthly 2/09/2021 15.0 50 mg/m³ Mercury mg/m3 Six monthly 2/09/2021 0.0020 0.05 mg/m³ Solid Particles mg/m3 Quarterly 21/10/2021 10.0 50 mg/m Sulfuric acid mist and sulfur 2/09/2021 mg/m3 1.100 100 mg/m Six monthly trioxide (as SO3) Type 1 and Type 2 substances mg/m3 Six monthly 2/09/2021 0.018 0.75 mg/m in aggregate Volatile organic compounds as mg/m3 Six monthly 2/09/2021 0.045 10 mg/m n-propane equivalent

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detetction, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

EPA Indentifcation Number 7

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample	Highest sample value
Nitrogen Oxides	mg/m3	Continouus	100.0%	430.3	631.7	801.2
Suflur Dioxide	mg/m3	Continuous	100.0%	753.6	966.0	1136.3
Flow	cubic metres per second	Continuous				
Moisture	percent	Continuous				
Oxygen	percent	Continouus				
Temperature	degrees Celsius	degrees Celsius				

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	11/03/2021	<0.0003
Chlorine	mg/m3	Six monthly	2	31/08/2021	0.049
Fluorine	mg/m3	Six monthly	2	31/08/2021	9.4
Hydrogen chloride	mg/m3	Six monthly	2	31/08/2021	14.0
Mercury	mg/m3	Six monthly	2	31/08/2021	0.0006
Solid Particles	mg/m3	Quarterly	4	4/05/2022	13.0
Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3	Six monthly	2	19/10/2021	1.100
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	31/08/2021	<0.02
Volatile organic compounds as n-propane equivalent	mg/m3	Six monthly	2	31/08/2021	<0.1
Carbon dioxide	percent	Six monthly	2	19/10/2021	5.7

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

Number of samples from the duct in the year to date

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample	Highest sample value
Flow	cubic metres per second	Continuous				
Moisture	percent	Continuous				
Oxygen	percent	Continouus				
Temperature	degrees Celsius	Continuous				

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	22/10/2019	<0.0002
Mercury	mg/m3	Six monthly	2	31/08/2021	0.0003
Solid Particles	mg/m3	Quarterly	4	4/05/2022	3.2
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	31/08/2021	<0.014

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

Number of samples from the duct in the year to date

EPA Indentifcation Number 9

Air emission monitoring - Boiler number 2 exhaust - duct A

Pollutant	Unit of	No. of samples	Data capture %	Lowest sample	Mean of	Highest sample
Pollutant	measure	required by licence	Data capture %	value	sample	value
Flow	cubic metres per second	Continouus				
Moisture	percent	Continouus				
Oxygen	percent	Continouus				
Temperature	degrees Celsius	Continouus				

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	4/04/2019	<0.0002
Mercury	mg/m3	Six monthly	2	1/09/2021	0.0015
Solid Particles	mg/m3	Quarterly	4	15/09/2020	38.0
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	1/09/2021	<0.017
A loss than sign "<" hefore a re	cult in the table	above indicates that the	measured result	was loss than the	rolovant Limit

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

Number of samples from the duct in the year to date

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample	Highest sample value
Nitrogen Oxides	mg/m3	Continouus	98.1%	201.1	371.8	659.7
Suflur Dioxide	mg/m3	Continuous	99.0%	622.3	779.3	1106.6
Flow	cubic metres per second	Continuous	-			
Moisture	percent	Continuous	-			
Oxygen	percent	Continuous	-			
Temperature	degrees Celsius	Continuous	-			

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	10/03/2020	< 0.0002
Chlorine	mg/m3	Six monthly	2	1/09/2021	0.009
Fluorine	mg/m3	Six monthly	2	1/09/2021	9.7
Hydrogen chloride	mg/m3	Six monthly	2	1/09/2021	13.0
Mercury	mg/m3	Six monthly	2	1/09/2021	0.0004
Solid Particles	mg/m3	Quarterly	4	3/05/2022	19.0
Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3	Six monthly	2	2/06/2021	2.300
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	1/09/2021	<0.019
Volatile organic compounds as n-propane equivalent	mg/m3	Six monthly	2	1/09/2021	<0.09
Carbon diovido	porcont	Six monthly	2	1/00/2021	10.5

 Carbon dioxide
 percent
 Six monthly
 2
 1/09/2021
 10.5

 A less than sign, "
 ", before a result in the table above indicates that the measured result was less than the relevant limit of Detection for that test.
 The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per

year. The table includes the most recent results available.

Number of samples from the duct in the year to date

EPA Indentifcation Number 11

Air emission monitoring - Boiler number 3 exhaust - duct A Unit retired from service April 22

Air emission monitoring - Boiler number 3 exhaust - duct B Unit retired from service April 22

EPA Indentifcation Number 13

Air emission monitoring - Boiler number 4 exhaust - duct A

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample	Highest sample value
Flow	cubic metres per second	Continouus				
Moisture	percent	Continouus				
Oxygen	percent	Continouus				
Temperature	degrees Celsius	Continouus				

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	24/09/2019	< 0.0002
Mercury	mg/m3	Six monthly	2	2/09/2021	0.0026
Solid Particles	mg/m3	Quarterly	4	3/05/2022	7.4
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	2/09/2021	<0.038

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

Number of samples from the duct in the year to date

EPA Indentifcation Number 14 A :... iccion m

Pollutant	Unit of measure	No. of samples required by licence	Data capture %	Lowest sample value	Mean of sample	Highest sample value
Nitrogen Oxides	mg/m3	Continouus	100.0%	329.9	445.3	577.7
Suflur Dioxide	mg/m3	Continuous	100.0%	731.1	925.6	1072.9
Flow	cubic metres per second	Continuous				
Moisture	percent	Continuous				
Oxygen	percent	Continuous				
Temperature	degrees Celsius	Continuous				

Pollutant	Unit of measure	No. of samples required by licence	# No. of samples collected and analysed	Date of sample	Most recent result
Cadmium	mg/m3	Six monthly	2	9/03/2021	<0.0003
Chlorine	mg/m3	Six monthly	2	2/09/2021	0.012
Fluorine	mg/m3	Six monthly	2	11/10/2018	11.0
Hydrogen chloride	mg/m3	Six monthly	2	2/09/2021	15.0
Mercury	mg/m3	Six monthly	2	2/09/2021	0.0013
Solid Particles	mg/m3	Quarterly	4	3/05/2022	1.7
Sulfuric acid mist and sulfur trioxide (as SO3)	mg/m3	Six monthly	2	1/06/2021	3.200
Type 1 and Type 2 substances in aggregate	mg/m3	Six monthly	2	2/09/2021	<0.032
Volatile organic compounds as n-propane equivalent	mg/m3	Six monthly	2	2/09/2021	<0.09
Carbon dioxide	percent	Six monthly	2	9/03/2021	11.0

A less than sign, "sc", before a result in the table above indicates that the measured result was less than the relevant limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

Number of samples from the duct in the year to date

EPA Indentifcation Number 16

Discharge to waters - Discharge quality monitoring Discharge of cooling water from the cooling water outlet canal to Lake Liddell

Pollutant	Unit of measure	No. of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Ammonia	mg/L	Fortnightly	2	0.02	0.03	0.04
Antimony	mg/L	Fortnightly	2	0.008	0.009	0.01
Arsenic	mg/L	Fortnightly	2	0.007	0.007	0.007
Barium	mg/L	Fortnightly	2	0.102	0.103	0.103
Beryllium	mg/L	Fortnightly	2	< 0.001	0.001	< 0.001
Boron	mg/L	Fortnightly	2	1.14	1.18	1.21
Cadmium	mg/L	Fortnightly	2	< 0.0001	0.0001	< 0.0001
Chlorine	mg/L	Fortnightly	2	0.05	0.06	0.06
Chromium (trivalent)	mg/L	Fortnightly	2	< 0.01	0.01	< 0.01
Chromium (VI) compounds	mg/L	Fortnightly	2	< 0.01	0.01	< 0.01
Cobalt	mg/L	Fortnightly	2	< 0.001	0.001	< 0.001
Conductivity	μS/cm	Fortnightly	2	2550	2575	2600
Copper	mg/L	Fortnightly	2	0.004	0.004	0.004
Fluoride	mg/L	Fortnightly	2	1.41	1.53	1.65
Lead	mg/L	Fortnightly	2	< 0.001	0.001	< 0.001
Manganese	mg/L	Fortnightly	2	0.022	0.03	0.042
Mercury	mg/L	Fortnightly	2	< 0.0001	0.0001	< 0.0001
Methyl Blue Active Substances	mg/L	Fortnightly	2	<0.1	0.05	<0.1
Molybdenum	mg/L	Fortnightly	2	0.121	0.12	0.124
Nickel	mg/L	Fortnightly	2	0.004	0.00	0.004
Nitrogen	mg/L	Fortnightly	2	0.6	0.65	0.7
Oil and Grease	mg/L	Weeklyduring any discarge	4	<2	1	<2
pН		Daily during any discarge	31	7.8	8.1	8.3
Phosporus	mg/L	Fortnightly	2	0.04	0.05	0.05
Selenium	mg/L	Fortnightly	2	<0.01	0.01	<0.01
Sulfur	mg/L	Fortnightly	2	680	735	790
Temperature	°C	Fortnightly	2	27.1	27.1	27.1
Tin	mg/L	Fortnightly	2	< 0.001	0.00	< 0.001
Total dissolved solids	mg/L	Fortnightly	2	1740	1835	1930
Total organic carbon	mg/L	Fortnightly	2	8	8.00	8
Total suspended solids	mg/L	Fortnightly	2	<5	2.50	<5
Vanadium	mg/L	Fortnightly	2	0.01	0.01	0.01
Zinc	mg/L	Fortnightly	2	< 0.005	0.003	<0.005

EPA Indentifcation Number 17 Discharge to waters - Discharge quality monitoring Discharge from oil and grit trap weir overflow to Lake Liddell

Pollutant	Unit of measure	No. of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Ammonia	mg/L	Fortnightly	2	0.03	0.04	0.04
Antimony	mg/L	Fortnightly	2	0.009	0.009	0.009
Arsenic	mg/L	Fortnightly	2	0.006	0.006	0.006
Barium	mg/L	Fortnightly	2	0.088	0.094	0.099
Beryllium	mg/L	Fortnightly	2	< 0.001	0.001	< 0.001
Boron	mg/L	Fortnightly	2	0.94	1.00	1.05
Cadmium	mg/L	Fortnightly	2	< 0.0001	0.0001	< 0.0001
Chlorine	mg/L	Fortnightly	2	0.04	0.05	0.05
Chromium (trivalent)	mg/L	Fortnightly	2	< 0.01	0.01	< 0.01
Chromium (VI) compounds	mg/L	Fortnightly	2	< 0.01	0.01	< 0.01
Cobalt	mg/L	Fortnightly	2	< 0.001	0.001	< 0.001
Conductivity	μS/cm	Fortnightly	2	2400	2400	2400
Copper	mg/L	Fortnightly	2	0.004	0.005	0.005
Fluoride	mg/L	Fortnightly	2	1.25	1.28	1.3
Lead	mg/L	Fortnightly	2	< 0.001	0.00	< 0.001
Manganese	mg/L	Fortnightly	2	0.022	0.02	0.026
Mercury	mg/L	Fortnightly	2	< 0.0001	0.00	< 0.0001
Methyl Blue Active Substances	mg/L	Fortnightly	2	<0.1	0.05	<0.1
Molybdenum	mg/L	Fortnightly	2	0.107	0.11	0.114
Nickel	mg/L	Fortnightly	2	0.004	0.00	0.004
Nitrogen	mg/L	Fortnightly	2	0.5	0.50	0.5
Oil and Grease	mg/L	Weeklyduring any discarge	4	<2	1	<2
рН		Daily during any discarge	31	8	8.2	8.3
Phosporus	mg/L	Fortnightly	2	0.06	0.07	0.08
Selenium	mg/L	Fortnightly	2	<0.01	0.01	2
Sulfur	mg/L	Fortnightly	2	670	675	680
Temperature	°C	Fortnightly	2	25.2	25.4	25.5
Tin	mg/L	Fortnightly	2	<0.001	0.00	< 0.001
Total dissolved solids	mg/L	Fortnightly	2	1570	1665	1760
Total organic carbon	mg/L	Fortnightly	2	8	8.50	9
Total suspended solids	mg/L	Fortnightly	2	6	9.00	12
Vanadium	mg/L	Fortnightly	2	<0.01	0.01	0.01
Zinc	mg/L	Fortnightly	2	0.008	0.009	0.01

EPA Indentifcation Number 18

Discharge to waters - Discharge quality monitoring and Volume monitoring Discharge fromskimmer dam overflow spillwayto Lake Liddell

Pollutant	Unit of measure	No. of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Arsenic	mg/L	Weekly during any discharge	4	0.049	0.058	0.07
Boron	mg/L	Weekly during any discharge	4	1.43	1.62	1.79
Cadmium	mg/L	Weekly during any discharge	4	<0.0001	0.00006	0.0001
Chromium (trivalent)	mg/L	Weekly during any discharge	4	<0.01	0.005	<0.01
Chromium (VI) compounds	mg/L	Weekly during any discharge	4	<0.01	0.005	<0.01
Copper	mg/L	Weekly during any discharge	4	<0.001	0.002	0.002
Electrical conductivity	μS/cm	Weekly during any discharge	4	2740	2748	2820
Fluoride	mg/L	Weekly during any discharge	4	2	2.1275	2.2
Lead	mg/L	Weekly during any discharge	4	<0.001	0.0005	<0.001
Mercury	mg/L	Weekly during any discharge	4	<0.0001	0.00005	<0.0001
Oil and Grease	mg/L	Weekly during any discharge	4	<2	1	<2
рН		Weekly during any discharge	4	8.3	8.4	8.5
Selenium	mg/L	Weekly during any discharge	4	0.02	0.03	0.03
Total suspended solids	mg/L	Weekly during any discharge	4	<5	7	11
Zinc	mg/L	Weekly during any discharge	4	<0.005	0.003	<0.005
Volume	kilolitres per day	Daily	31	30000	153419	209000

EPA Indentifcation Number 19 Discharge utilisation area - Volume monitoring Discharge of effluent from the final pond of the sewage treatment system adjacent to utilisation area.

Pollutant	Unit of measure	No. of samples required by licence	No. of samples collected and analysed	Lowest sample value	Mean of sample	Highest sample value
Volume	kilolitres per day	Daily	31	0.28	32.80	156.21

Details of Non-Compliance with Licence Conditions
Licence condition number not complied with
N/A
Summary of particulars of the non-compliance (NO MORE THAN 50 WORDS)
If required, further details on particulars of non-compliance
Date(s) when the non-compliance occurred, if applicable
If relevant, precise location where the non-compliance occurred (attach a map or diagram)
If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance
Cause of non-compliance
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Action taken or that will be taken to prevent a recurrence of the non-compliance