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**2021 Annual
Performance
Report
Aberthaw Power
Station**

Permit Number: RP3133LD

Date: March 2022

Issue: Final

A decorative graphic in the bottom right corner consisting of a series of thin, curved, light blue lines that create a sense of motion or a stylized wave pattern.

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Prepared by:

Name

Chrissie Matthews

Role

Environmental Consents and Permitting Advisor

Summary

This document provides details of the performance of Aberthaw Power Station's activities throughout 2021 as required by condition 4.2.2 of the Station's Environmental Permit (EP) RP3133LD.

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1. Operational Update

The main coal fired units at Aberthaw Power Station stopped generating at the end of 2019; the OCGTs ceased operation at the end of March 2020. There was no commercial power generation at the power station during 2021.

During 2021 decommissioning activities have continued at Aberthaw Power Station and have now been substantially completed.

Key decommissioning milestones which have been achieved during 2021 include:

- installation permanent isolations to the cooling water system;
- removal of heavy fuel oil and tank cleaning;
- electrical separation from the 132kv and 275kv grid substations;
- installation of new 11kv supply and network to power the site post disconnection from National Grid;
- conclusion of the asbestos restoration and demolition survey;
- demolition of the carbon capture plant;
- demolition of the ash reprocessing plant;
- ongoing environmental monitoring of the main site, ash mound and quarry (the ash mound and quarry are covered in separate annual performance reports).

2. Review of Results for Emissions Monitoring

2.1. Air Quality Review

There were no emissions to air from Aberthaw Power Station during 2021. The main coal fired units ceased operation at the end of 2019 and the OCGTs ceased operation during 2020.

2.2. Water Quality Review

Discharges to water during 2021 were from the site surface water drainage systems as the operational units of the power station did not operate in 2021.

Table 1 lists the average values for emissions to water parameters for the site for the year 2021.

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<i>Emission Point</i>	<i>Parameter</i>	<i>EP ELV</i>	<i>Measured Data</i>	<i>Units</i>	<i>Result Type</i>	<i>Reference Period</i>
W2	Differential suspended solids <i>total</i>	50	45.76	mg/l	Maximum	Data reported for February and March 2021 only
	Ammoniacal nitrogen	0.1	0.35	mg/l		Monthly average of daily samples (above background)
	Differential temperature	13.5	0.00	°C		Temperature at ambient. No thermal process during 2021 therefore no data to report for this parameter
	Total hydrocarbon oil	3	0.03	mg/l		Monthly average of daily samples
	pH	5.6	7.60	pH units	Minimum	Instantaneous
		5.8	7.91			95%ile of instantaneous measurements
		8.5	8.23		Maximum	95%ile of instantaneous measurements
	Mercury	60	No longer reported	kg	Annual	Annual Mass Release

Table 1 Emission Point W2 (Cooling Water Outlet)

Emission points SWTP1 and SWTP2 are not reported as they relate to the FGD which did not operate during 2021.

3. Annual Production / Treatment Data 2021 (Table S4.2 EP)

LCP 283: Units 7,8 and 9 coal-fired boilers	n/a Units 7,8 and 9 did not operate in 2021	GWh
LCP 423: GT7, GT8 and GT9 gas oil-fired black start gas turbines	n/a GT7, GT8, and GT9 did not operate during 2021	GWh

4. Performance Parameters 2021 (Table S4.3 EP)

See IED AR1 and HR1 already submitted to NRW.

5. LCP283 Cumulative Rolling Breakdown and Malfunction Hours

LCP283 did not operate during 2021.

6. Contamination / Decontamination of Site

There have been no incidents or emissions which have caused any site contamination during 2021, and therefore no requirement to decontaminate the site.