SIMEC Uskmouth Power

Annual Environmental Report

2018



Permit No LP3131SW

Summary

Atlantis Energy has taken over ownership of the Uskmouth Power Station through a reverse merger with SIMEC, they have rebranded and are now registered as SIMEC Atlantis Energy (SAE). SIMEC Uskmouth Power (SUP) the power station is a wholly owned subsidiary of SIMEC Atlantis Energy.

There has been no coal fired generation from any of the Units at Uskmouth following the damage to the station switch gear 2017. Power for maintaining the safety of staff and the integrity of the station has been supplied by diesel gen sets, work is ongoing to restore a supply through the electrical Grid system. The coal stock and the carpet coal has been sold and removed from site.

NRW have issued a Regulation 61 notice for information relating to how SUP intend to meet the requirements of IED BRef; SUP have informed NRW that we intend to change the primary fuel from coal to a waste derived product, and as such the answer to the Reg 61 notification will be covered by a substantial variation to our permit.

The various studies for the conversion project are underway with contracts for Environmental Permitting and Planning (EPP) being awarded to RPS and Front End Engineering Design (FEED) being awarded to a collaboration between RJM and WSP. Following a favourable outcome to the studies it is expected that financial commitment will be given mid 2019 with an 18 month conversion period preparing SUP for a two Unit return to service.

EU ETS Verification; first part completed in October 2018 with the final audit being completed in January 2019 any improvement opportunities identified during this audit, will be discussed during the EUETS Management system review. The EU ETS process for 2018 has been brought forward in time in preparation for UK account to be settled prior to Britain leaving the EU.

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1) Introduction

Uskmouth Power Station was built in the late 1950's and was fully operational by 1963. The Station was closed in 1995 by the original owners but was later purchased and refurbished, a number of environmental improvements were also undertaken during this time in order to comply with the IPC regulations. The Station is currently owned by SIMEC Atlantis Energy (SAE), SIMEC Uskmouth Power (SUP) is a wholly owned subsidiary of SAE.

The station comprises of three combustion Units and associated generators and has a total generation capacity of 360 MW sent out, the main environmental improvements fitted during the refurbishment were; the replacement of Heavy Fuel Oil (HFO) with Gas Oil. Low NOx burners with Over fire Air, Flue Gas Desulphurisation, Bag filters and an open evaporation, recirculation cooling system using secondary treated sewage water which replaces the original once through system from the river. All Gas oil purchased this year has been 0.1% sulphur in compliance with SCOLF Regs.

The station is out of service following an incident with the station switch gear, the repairs to the switch gear is expected to be included in the fuel conversion project currently being investigated.

2) Environmental Policy

Uskmouth Power Station

Environmental Policy

SIMEC Uskmouth Power Limited is committed to high standards of environmental performance across our business through reducing the environmental impact of our activities, preventing pollution and promoting the sustainability of the natural resources upon which we depend.

To meet these needs, SIMEC Uskmouth Power Limited commits to manage its operations based on the following Environmental Policy:

- Identify, analyse, evaluate, eliminate or manage risks that could cause an environmental incident, leading to injury or illness to people, damage to property and unacceptable impacts on the community;
- Observe and respect all applicable environmental laws and rules related to Uskmouth Power Stations operations, products and activities;
- Improve through monitoring and the regular evaluation of environmental performance, setting milestones, formulating relevant action plans and instituting suitable control procedures;
- Provide appropriate staff training to ensure awareness of SIMEC Uskmouth Powers Environmental Policy and performance;
- Require contractors to provide appropriate training for the safe, environmentally sound performance of their work;
- Ensure that all employees and contractors understand that working in an environmentally sound manner is a condition of employment, and that they are each responsible for the environment around them;
- Communicate Environmental performance with staff, contractors, public, government authorities and other interested parties.

The Station Manager is accountable for ensuring the Environmental Policy is implemented and that its effectiveness is reviewed annually. All employees and contractors are responsible for applying the Environmental Policy within their work.

Signed:



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Ernie Rowe

Head of Conversion & Station Manager

SIMEC Uskmouth Power Ltd.

3) Environmental performance and PPC emission limits

There has been no generation from the station's main boilers

Table 1 shows an estimate of the Annual Mass releases based on the fuel used by the diesel Generators, this is a calculation based on the pollution inventory calculation.

Air Emissions:	SO_2 (tonnes)	NOx (tonnes)	Dust (tonnes)
Actual Annual Total	0.15	8.56	0.08

Table 1

4) Fuel Input, Generation and Efficiency data

4.1) Fuel Burn

The gas oil used in the diesel generators has a sulphur content less than 0.1% W/W and complies with SCOLF regulations (see Analysis in table 3). The mass of fuel burnt in 2018 is shown in table below.

2018	Fuel Burnt (tonnes)		
	Coal	Gas oil	Biomass
Month	tonnes	Litre	tonnes
Jan	0.00	139166.00	0.00
Feb	0.00	98889.00	0.00
Mar	0.00	85633.00	0.00
Apr	0.00	50027.00	0.00
May	0.00	58504.00	0.00
Jun	0.00	57286.00	0.00
Jul	0.00	44476.00	0.00
Aug	0.00	59066.00	0.00
Sep	0.00	53322.00	0.00
Oct	0.00	74573.00	0.00
Nov	0.00	85550.00	0.00
Dec	0.00	88826.00	0.00
Total		895318	

Table 2

SOCOTEC

Analysis Report

Report Number: 18/OCT/COA/1809246
Supplier: Uskmouth Power
West Nash Road
Newport
Gwent
Grade:
Our Ref Oil

Date Sampled: 09 January 2018
Date Received: 18 September 2018
Test Date: 18 September 2018 To 01 October 2018
Date Reported: 01 October 2018
Sampling:

			Test	Sulphur Air Dried	Carbon Air Dried	Hydrogen Air Dried	Nitrogen Air Dried	CV Air Dried	CV Net
			Method	CA31	CA9	CA9	CA9	CA11	*
Sample ID	Sample Date	Ref	Units	%	%	%	%	kJ/kg	kJ/kg
745368	09/01/2018	Gas Oil - Unit 13		0.00	87.03	13.13	< 0.05	45230	42444
745369	09/01/2018	Gas Oil - Unit 14		0.00	87.43	13.27	< 0.05	45230	42414
745370	10/05/2018	Gas Oil - Unit 13		0.00	87.44	13.29	< 0.05	45220	42400
745371	10/05/2018	Gas Oil - Unit 14		0.00	87.56	13.31	< 0.05	45330	42506
745372	12/09/2018	Gas Oil - Unit 13		0.01	87.63	13.32	< 0.05	45220	42394
745373	12/09/2018	Gas Oil - Unit 14		0.01	86.79	13.20	< 0.05	45210	42409

Report Authorised By

Helen Fearn
Reporting Administrator

For and on behalf of SOCOTEC UK Limited

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Procedures used: As method reference

* Denotes calculated values
** Non accredited method for this matrix
*** Sub Contracted test UKAS accredited laboratory
**** Sub Contracted test none UKAS accredited laboratory
# Customer Supplied Result

Notes:
I/S Insufficient sample to test
U/S unsuitable sample to test

Table 3

4.2) Generation and Efficiency

SUP have been using diesel generators throughout the year in order to maintain the integrity of the building and safety of personnel, the generators feed in to a temporary connection which was established after the incoming electrical board was damaged. The generators have been sized to cope with any scenario that can be envisaged in the current circumstance, with this in mind under normal running conditions the gen sets are over size and not running at optimum efficiency.

5) Water Consumption

This year due to inactivity at the station no water has been received from Nash Sewage Treatment Works. Both Towns water supplies have been maintained; potable water being used for domestic use drinking, washing and showers and the bulk supply to maintain the station fire systems. The Demin plant has been drained down and made safe, Veolia have suggested that there will be a high level of investment required for future operations of this equipment.

2018	Towns Main		NSTW	Demin	CW
	Potable	Bulk Supply	Make Up	Production	Blow Down
Jan	219	153	0	0	0
Feb	234	137	0	0	0
Mar	266	166	0	0	0
Apr	182	1233	0	0	0
May	150	120	0	0	0
Jun	318	1101	0	0	0
Jul	230	405	0	0	0
Aug	263	100	0	0	0
Sep	194	181	0	0	0
Oct	236	204	0	0	0
Nov	244	210	0	0	0
Dec	240	300	0	0	0
Total	2,776	4,310	0	0	0

Table 4

5.1) Emissions to Water

Uskmouth Power Station has three permitted release points W1a, W1b and W2.
W1a is the discharge to the land drainage ditch (reen) which skirts around the South side of the property boundary, the reason for monitoring this discharge point is due to the potential for contamination from the coal stock areas. W1b is the discharge to the same land drainage ditch (reen) as W1a, the reason for monitoring this discharge point is due to the potential for contamination from the ash storage facility. The water captured by these systems is stored in two separate ponds. Water from these ponds is used for coal and dust suppression, the ash storage area has a dust suppression system installed which is fed from the pond at W1b by a dedicated pump, filter and ultra violet steriliser to ensure good water quality.
W2 is the discharge point in to Julian's Pill the source of this discharge is the station storm water system as the cooling towers have been emptied. Samples from all three discharge points are taken by site personnel and sent away to independent laboratories for analysis. A summary table of the discharge analysis can be seen in the table below.

2018														
Emission Point	Substance / Parameter	ELV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
W1a	Suspended	75 mg/l	16	28	8	15	No Flow	9	No Flow	No Flow	No Flow	No Flow	9	12
W1a	pH	6-9	7.45	7.69	8.22	7.78		7.19					7.5	7.61
W1a	Cadmium	0.01 mg/l			0.0006									
W1a	Mercury	0.005 mg/l			0.00022									
W1b	Suspended	75 mg/l	8	14	7.65	12	No Flow	8	No Flow	No Flow	No Flow	No Flow	7.65	7.65
W1b	pH	6-9	7.72	8.17	8.18	7.87		7.28					7.58	7.84
W1b	Cadmium	0.01 mg/l			0.0006									
W1b	Mercury	0.005 mg/l			0.0001									
W2	Suspended	150 mg/l			7.65	15	No Flow	7.65	No Flow	No Flow	No Flow	No Flow	7.65	
W2	pH	6-9			8.35	7.75		7.77					7.89	
W2	Temperatur	30^{oC}				16		16						
W2	BOD	100 mg/l			6	2		1					1	
W2	Zinc	2 mg/l			0.03	0.04		0.018					0.08	
W2	Copper	0.8 mg/l			0.014	0.012		0.01					0.04	
W2	Nickel	0.4 mg/l			0.006	0.006		0.005					0.012	
W2	Lead	0.8 mg/l			0.006	0.006		0.006					0.02	
W2	Chromium	0.8 mg/l			0.002	0.002		0.002					0.009	
W2	Flow	210 litres/ second max												
W2	Flow	19872 m3/day												
W2	Cadmium	0.01 mg/l			0.0006									
W2	Mercury	0.005 mg/l			0.0001									

** May, July, August, September and October had no water discharge from release points, so no analysis needed*

Table 5

6) EMS

An Environmental Management System (EMS) has been incorporated into our site procedures based on the old ISO 14001 standard.

7) Environmental expenditure

Due to the current status of the power station no additional funds have been made available other than those required to maintain compliance with our environmental obligations.

8.1) Maintenance Outages

No outages are planned until a decision is made on the future operation of the station.

8.2) CEMs QAL2/AST

CEMs are not in service so no testing has been conducted

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9) Permit Breaches

There have been no breaches of our permit conditions or limits.