

Part A

Permit Number	RP3133LD
Name of operator	RWE Generation UK plc
Location of Installation	ABERTHAW POWER STATION
Time and date of the detection	28 th July 2015

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	W2
Parameter(s)	pH
Limit	5.8 minimum 6-8.5 95%ile of instantaneous measurements
Measured value and uncertainty	2.3 pH Units Uncertainty +/-0.1 pH Units
Date and time of monitoring	Main Troll 1 continuous pH monitoring probe in seal pit before outfall towers. On the 14/06/15 the pH dropped below 6 at 13:24 to 2.3 at 13:43 and returned to 6 at 14:18. Backup Troll 2 showed similar readings.
Measures taken, or intended to be taken, to stop the emission	The pH fell below the permit limit for a period of approximately 54 minutes. At the time of the event the CW system was not operational, this combined with the incoming tide may have meant that the low pH effluent would not have travelled down the outfall discharge structures and discharged from site. An investigation will be undertaken.

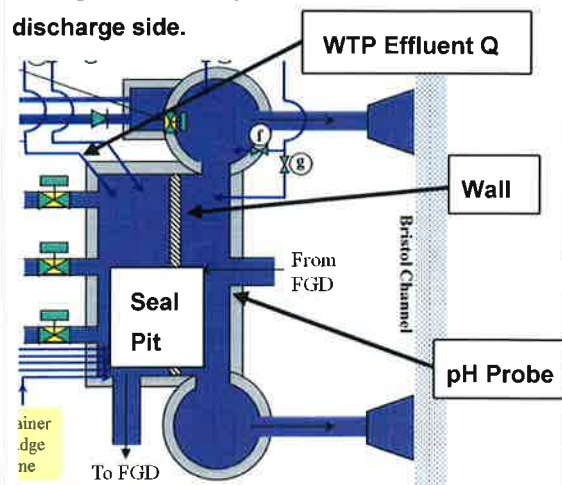
Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.

The investigation identified that acidic effluent had been discharged from the water treatment plant (WTP Effluent Q) to the seal pit instead of to the effluent storage tank due to operator error. The seal pit is divided by a concrete wall which separates returned cooling water from the final discharge. The effluent was discharged into the residual returned cooling water and it is highly unlikely that any significant volume of this effluent dispersed through the dividing wall into the final discharge side.



It is not possible to accurately quantify how much effluent discharged as it is not known how long the effluent pumps were running or how much passed through the dividing wall. However if we assume the worst case scenario that the effluent pump was running from when the CW system was taken out of service until the effluent storage tank level began to rise (10hrs), a total of 545m³ was discharged to the returned cooling water side of the seal pit (and not the final discharge side).

The outfall tunnel is 4.26m diameter and 547m long. This equates to a volume of 7,794m³ and a possible dilution factor of 14:1. A laboratory experiment confirmed that a dilution factor of 4:1 is required to raise the pH of seawater from 2.3 to 6.

Low tide was at 1149hrs so the tide was turning and coming in throughout this incident. With

	the incoming tide the effluent would be held in the discharge side of the seal pit. From the above RWE is of the opinion that the low pH water did not travel down the outfall tunnel and was held and diluted in the seal pit by the incoming tide.
Measures taken, or intended to be taken, to prevent a recurrence of the incident	An electronic interlock is being investigated to prevent the discharge of water treatment plant effluent into the CW system when the CW system is shut down.
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	No release to the environment.
The dates of any unauthorised emissions from the installation in the preceding 24 months.	N/A

Name*	Amy Lavisher
Post	Environmental Compliance Engineer
Signature	
Date	21/08/15

* authorised to sign on behalf of RWE Generation UK plc.