

This form will report compliance with your permit as determined by an NRW officer

Site	Pembroke Power Station			Permit Ref	DP3333TA		
Operator/ Permit holder	RWE Generation UK Plc						
Date	24 February 2016			Time in	10:00	Out	17:00
What parts of the permit were assessed	See below						
Assessment	Choose an item.	EPR Activity:	Installation	X	Waste Op		Water Discharge
Recipient's name/position	Ben Williams – Lead Environmental Engineer Dafydd Williams – Environmental Engineer						
Officer's name	Karen Dunn – PPC Officer			Date issued		22 April 2016	

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our [Compliance Classification Scheme](#) (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your [local office](#).

Permit Conditions and Compliance Summary

Condition(s) breached

a) Permitted activities	1. Specified by permit	A	
b) Infrastructure	1. Engineering for prevention & control of pollution	N	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	A	
	4. Containment of stored materials	A	
	5. Plant and equipment	N	
c) General management	1. Staff competency/ training	A	
	2. Management system & operating procedures	A	
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	A	
d) Incident management	1. Site security	N	
	2. Accident, emergency & incident planning	A	
e) Emissions	1. Air	N	
	2. Land & Groundwater	A	
	3. Surface water	A	
	4. Sewer	N	
	5. Waste	N	
f) Amenity	1. Odour	N	
	2. Noise	N	
	3. Dust/fibres/particulates	N	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	A	
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	N	
h) Resource efficiency	1. Efficient use of raw materials	N	
	2. Energy	N	

KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk),
A = Assessed or assessed in part (no evidence of non-compliance), N = Not assessed, NA = Not Applicable

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training, combustion plant, etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- information on the compliance score accrued inc. details of suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This was a pre-arranged audit and the following agenda was provided prior to the visit:

1. Review of the actions / recommendations on the previous Compliance Assessment Report (CAR) form reference 6001 dated 17 September 2015;
2. Foam incidents January 2016 and optimising of new system;
3. Management of site drainage;
4. Handling of chemicals around the site including staff training for this activity;
5. Site tour to look at those areas visited by the audit.
6. AOB

The operatives present were:

Ben Williams – Lead Environmental Engineer
Dafydd Williams - Environmental Engineer

Introduction

The audit began with matters arising under any other business this included discussions on the recently reviewed AST report, CHP submission, environmental monitoring and a proposed future visit following NRW management staff change. At the time of the visit a root cause analysis investigation was underway following an issue with unit 51. The operator explained that the unit was down pending the outcome of the investigation and it was a precautionary approach to take the unit off line until the cause of the issue is found. During the writing of this car the unit is now back up and running.

Operations since the last audit has seen the completion of the first major shut down or 'C' inspections of each unit at the power station. This was the first major shut down since the station became fully operational in 2012. The planned 'C' inspections involved additional staff presence from across the business and specialist contractors on site for the period of the work. This rolling service and maintenance programme was completed within time over a period of 9 months and saw improvements made to the efficiency and flexibility of the power station. The overall efficiency has been the biggest environmental improvement to the site which is now > 60% aiming to reduce the overall emissions to air over time. This is a positive contribution to one of the key objectives of the NRW combustion sector with one of its main aims being to reduce emissions to the environment. The upgrade saw the 'start up' time reduce from 68 to 44 minutes again reducing emissions to air. This work formed part of a large investment by the operator at the Pembrokeshire site which is one of Europe's largest and most efficient combined cycle gas-fired power stations.

Objective 1 - To review the actions / recommendations from the previous CAR form reference 6001 with the operator dated 17 September 2016.

On the last CAR (reference 6001) there were a couple of actions carried over from the previous visit (CAR reference 5910). These concerned an updated drainage plan and an action to review and update the accident management plan. During this audit the operator provided a copy of the most up to date plan in a schematic format entitled 'Permanent Operational Drainage' (Figure 4) and an updated Accident Management Plan (February 2016 Issue 2). Confirmation can now be given on this CAR form that the following actions are now complete:

Action from CAR 5910:		Status
1	Action: Drainage plan to be updated to include the changes made in respect of the cesspit installed in the car park and associated drains.	See action 2 below <u>Complete</u>
2	Action: Operator to review and up-date the accident management plan linked to the site's written management system (EMS).	Review <u>complete</u> some minor changes required i.e. drainage map to be updated and included.
3	Action: If on review of the accident management plan (PO2 response) any significant changes are made i.e. updated drainage plan etc. a copy should be e-mailed to KD to update NRW files.	On-going until Feb 2016 <u>Complete</u>

On CAR 6001 three recommendations were made which have been replicated below for ease of reference. On review all the recommendations had been considered, actioned by the operator and noted as **complete**:

Action Required/Advised	Due Date
Recommendation: Operator to maintain an up to date inventory in the sites EMS of the chemicals currently used on site which links to the agreed operating techniques and table 3.6 and agreed by the environmental permit.	N/A
Recommendation: Operator to consider dedicated spill kits in the location of the chemical store and 'Stores' building for easy access and use in the event of a spill. It is also worth considering the use of a drain cover during deliveries and handling of chemicals over the surface water drain located nearest the store.	N/A
Recommendation: Operator to review the document associated with the boom on the intake to ensure it is up to date following the expiration of the marine licence for its installation.	N/A

During the site tour the improvements made by the second recommendation above was demonstrated by the operator (please refer to objective 5 below).

Objective 2 - To gain an update on the 'Foam Reduction Project' and the optimising of the system following incident reports in January 2016.

During this visit the operator provided an update on the project and a discussion was held on the incident reports of foam earlier in the year. Following the reports the operator proactively invited members of the public to the power station to discuss the project work and the opportunity of a site tour. The operator advised that the visit was well received and this was very encouraging as NRW considers the active engagement of the public can be most beneficial.

The project has however seen a setback with structural damage occurring to the runners on the back penstocks. Following the electrical work on the actuators a 48 hour trial took place. During the trial the actuators torqued out and the damage was discovered to the runners which had occurred due to the very aggressive environment in the seal pit. In order to rectify the damage to the structure the operator explained that a diver would need to be deployed and all health and safety considerations were paramount, causing a delay to the project.

The operator has advised the Local Liaison Committee of the delay incurred due to the damage and the requirement for a design modification. The projected commission date following this modification is now expected to be May 2016 and optimisation due to commence immediately following the change. NRW recognises the complexities of the foam reduction project and that further events during certain tidal and weather conditions are likely until the project is complete. Again the operator is keeping both the regulator and local community on board with progress on the project and it is acknowledged that everything is being done to complete the work.

Objective 3 – To review the management of the site drainage with the operator to ensure it is fully understood so containment can be achieved in the event of a spill.

This section of the audit sought to review the on-site drainage at the power station. The operator was able to give a comprehensive overview of the on-site drainage system and went through the map supplied to the site inspector in objective 1 above. The separation of clean and process area drainage was outlined by the operator and how this is managed across the site through a series of retention separators and a main surface water chamber before being discharged (W2). This was further demonstrated during the site tour as the detailed drawings of the site drainage are mounted on the wall of the control room. The drainage lines for the designated areas were reviewed with the operator in the control room. The operator also demonstrated the drainage pumps on the control room computer management system and where improvements have been identified in respect of the visible schematic on screen. This improvement in particular would benefit the control room in the management of the pumps on the drainage system. Again the operator was able to demonstrate a very good level of understanding and management of the drainage system from the control room.

Surface water drainage is linked to the operating techniques in the permit by condition 2.3 table S1.2 Operating techniques. Paragraphs 2.5.4.3.4 to 2.5.4.3.6 inclusive (surface water drainage) of Pembroke EP Application Appropriate Assessment Supporting Document – Chapter 2 Part 1, Volume 2 is linked to the permit and this was examined with the operator. The review of this section was considered to be a beneficial exercise to ensure the system that was proposed at the permitting stage was as built. No breaches of the environmental permit were identified in this review.

Objective 4 – To review the handling of chemicals around the site including staff training for this activity.

Again the operator gave a comprehensive overview of the chemical receipt process to the power station by outlining the procedures in a flow chart format for both larger bulk chemical deliveries and IBC / packaged goods. The operator also gave a presentation on the awareness training that is provided to staff who handle chemicals on and around the installation. The presentation was very good with an overall emphasis on health and safety. On review it was considered that there was room in this awareness training for environmental considerations and a discussion was held on this and the environmental training package provided for a new member of staff at the induction stage. The operator was able to demonstrate a clear training programme to operatives for the handling of chemicals which is provided and signed off by the site chemist. There was also some discussion with the operator on the wording of 'Ordering and Issue of Process Chemicals' PEB/LP/ENV/3110 in that: 'if an IBC is being moved over a longer distance it will need to be secured to a flatbed vehicle rather than transported using a forklift truck'. From the audit the main transportation of IBC's around the site was by forklift and it was unclear what constituted a 'longer distance' for securing one to a flatbed.

Recommendation: Operator to consider environmental considerations, if by means of a refresher and not covered elsewhere, in the chemical awareness training i.e. reference to the environmental permit consequences for the environment in the event of a spill, need for containment, drainage cover during deliveries etc.

Forklift training was also touched upon whereby those members of staff undertaking this activity receive a recognised 5 day training package that involves elements and practicalities specific to the site. The records for those staff who have been trained and signed off in this area were demonstrated during the audit. It was also noted that the operator has a very good visual way on the control system or shift scheduler of identifying those staff who are trained in a particular activity. For example if an individual on a particular shift is forklift trained that icon will appear against their name so they can easily be identified on the rota.

This objective was also explored further during the site tour where an operative chosen at random (identified as being able to handle chemicals around the site by the icons on the shift scheduler) was asked about this activity and the training they had received. The operative was able to demonstrate what had been discussed previously in the audit regarding forklift training and having received awareness chemical training which had been signed off by the chemist. The operative was also able to give an overview of the environmental awareness training received in their induction. The inspector also asked about the movement of IBC's around the units.

Recommendation: Operator to consider a review of the wording of PEB/LP/ENV/3110 in order to make it clear when an IBC should be fixed to a flatbed i.e. what constitutes a long distance is it to unit 51 from the chemical store or the power station intake or off site.

The most up to date 'How to Comply with your Environmental Permit' documents have been placed on NRW website and can be found using the following link:

<https://naturalresources.wales/apply-for-a-permit/environmental-permitting-regulations-guidance/guidance-to-help-you-comply-with-your-environmental-permit/?lang=en>

The generic base permit document on 'How to Comply with your Environmental Permit' can be found using the following:

<https://naturalresources.wales/media/2110/how-to-comply-with-your-environmental-permit.pdf>

The beginning of the generic document is applicable to all activities. Also for this particular audit the sections on Installations from page 50, general management and sufficient competent person's page 53, emissions to surface water and groundwater pages 60-61 are relevant and give advice and guidance on the permit conditions visited.

Objective 5: To undertake a site tour focusing on the areas visited by the audit.

A tour of the site was undertaken and began in the control room. As outlined above the operator demonstrated in this location the site drainage using maps and its management through the use of the control system. A site operative was also asked about chemical handling and training as mentioned in the above objective. From here a visit to the chemical store was made.



The photographs above shows the new chemical spill kit that has been installed in the location of the on-site stores.

This was an area where in the event of a spill it was considered that you wouldn't want to be searching in the adjacent stores for pollution prevention materials to safeguard the environment. The operator considered the recommendation on the previous CAR and installed a dedicated spill kit which includes drain covers for placement over the surface water drains in this area during a chemical delivery. This was considered a good pollution prevention measure and NRW welcomes these site improvement.



Also during the last visit some chemicals had been placed within the 'stores' racking with one container on its side, increasing its risk of leaking. These smaller drums of chemicals now have a dedicated storage area so they can be kept upright, undercover and contained. Again NRW welcomes this pollution prevention measure again reducing the risk to the environment from a chemical spill.



Following the visit to the chemical store discharge point W2 was viewed with the operator. This is a dedicated outfall to direct surface water run off as defined by agreed operating technique 2.5.4.3.6. There had been a discussion earlier in the audit and a review of the wording of the technique to ensure what was proposed at permitting was as built and accurately outlines the site drainage that discharges at point W2. The drainage lines that serve W2 were looked at with the operator on the map while reviewing the wording of the technique and it was considered it was a true reflection. As can be seen in the photograph opposite the outfall wasn't discharging at the time of the visit.

There was also a discussion on the permissive monitoring and frequency of sampling undertaken by NRW as it seemed to have increased of late. The inspecting officer took away an action to speak to the local Pembrokeshire Natural Resources Management (NRM) team and Sampling and Collection team concerning an associated water discharge activity permit and an anomalous permissive sample. This water discharge activity (EPR/HP3820XU) is referenced in the installation permit for the power station. Following a system change a sample point had been re-activated in respect of the anomalous sample so this has now been removed from the sampling run. The frequency of the site drainage or '48 inch main' was set to quarterly and the data is being reviewed. During the right up of this CAR the data review for this sampling location was complete and there was no concern in respect of the results likely to cause any environmental quality standards (EQS) failure. The frequency of this sample point is therefore under review.



Returning to the site office a brief visit was undertaken of the power station intake where the operator's consultants Jacobs were undertaking a survivability study. A survivability study has already been undertaken in respect of the fish return and recovery system at Pembroke and a report submitted for NRW review. It was most interesting to be able to see another study in progress at the time of the visit and speak with Jacobs over the species identified. The survivability study forms part of the environmental monitoring at the power station which hasn't been discussed further on this CAR however further comment will be made separately to the operator following the NRW review of their submission.

Conclusion

There were no breaches of the environmental permit identified as part of this audit. The operator was able to demonstrate a comprehensive knowledge of the site drainage, chemical handling around the site and its associated training. Through our inspections and auditing of complex processes basic pollution prevention can be overlooked and knowledge of the site drainage is sometimes only fully understood in the event of an incident. This was certainly not the case at the Pembroke Power Station whereby the operator was able to comprehensively demonstrate the drainage system and provide confidence to the regulator that the system was fully understood and managed so that containment would be achieved in the event of a spill in order to protect the environment. No actions arose from this audit only a couple of recommendations associated with environmental awareness and the opportunity for a refresher for those operatives handling chemicals and clarity on the associated procedure. It is acknowledged however that the operator has already identified areas for environmental improvements and this includes a proposed amendment to the pump management screen utilised in the control room. NRW also commends the operator on the improvements made to the chemical containment and spill kit at the 'stores' and the active engagement of the community in respect of the foam reduction project. NRW looks forward to an update on the progress of the design modification of the structural and optimisation of the system. It is proposed that the next visit will be an Operator Monitoring Assessment (OMA) for emissions to air. All recommendations have been consolidated in the table at the end of this report form.

{End}

	EPR Compliance Assessment Report	Report ID: 6112
This form will report non-compliance with your permit as determined by an NRW officer		
Site	Pembroke Power Station	Permit
Operator/ Permit	RWE Generation UK Plc	Date
		DP3333TA 22 April 2016

Section 3- Enforcement Response		Only one of the boxes below should be ticked	
You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.			
Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.		☐	
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.		☐	
We will now consider what enforcement action is appropriate and notify you, referencing this form.		☐	

Section 4- Action(s)			
Where a non - compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required/Advised	Due Date
See Section 1 above			
-	-	Recommendation: Operator to consider environmental considerations, if by means of a refresher and not covered elsewhere, in the chemical awareness training i.e. reference to the environmental permit consequences for the environment in the event of a spill, need for containment, drainage cover during deliveries etc.	N/A
-	-	Recommendation: Operator to consider a review of the wording of PEB/LP/ENV/3110 in order to make it clear when an IBC should be fixed to a flatbed i.e. what constitutes a long distance is it to unit 51 from the stores or the power station intake or off site.	N/A

Section 5 - Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you.

● We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.

● Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance which could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General Information

Data protection notice

The information on this form will be processed by Natural Resources Wales (NRW) to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). NRW may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with the officer's line managers. If you wish to raise your dispute further through our official **Complaints** and Commendations procedure, phone our general enquiry number **0300 065 3000** (Mon to Fri **08.00–18.00**) and ask for the **Customer Contact team** or send an email to enquiries@naturalresourceswales.gov.uk If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on **(0845) 601 0987**.