

OMA Report – Discharges to Water – EPR

Summary sheet

Permit Number: NP3037AF	Compliance Officer: Stuart Ross	
Operator: Uniper UK Ltd	Auditor (if different): Stuart Ross & Rhys Ellis	
Discharge point(s): W1, W2 and W3	Others Present: Andy Black	
OMA Sections	SCORE	
OMA 1 – Management of monitoring	96	
OMA 2 – Periodic monitoring and test laboratories	N/A	
OMA 3 – Continuous monitoring	80	
OMA 4 – Quality assurance	90	
	OVERALL SCORE	89%
OVERALL SITE ASSESSMENT COMMENTS		Letter
		Variation
		Enforcement
Monitoring of emissions to surface water is completed to a high standard and the findings were generally in line with the previous audit as completed 2014. Staff continue to demonstrate an excellent understanding of the permit monitoring requirements with sufficient resources and established management systems in place. The overall OMA score could be improved further by ensuring that any replacement continuous water monitoring equipment is MCERTs certified (where available) and by re-positioning the 'oil in water' analyser on the final effluent discharge. The positioning of the analyser is subject to an action as detailed in section 3 of this report. A small number of procedures would benefit from review to ensure that they are up to date. Provisions for instrument breakdown response and the specification of calibration materials should be clearly documented.		
		Date of audit: 26/11/18
		Signed: 
		Date: 18/02/19

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OMA 1: Management of monitoring

OMA ELEMENTS	SCORE	COMMENTS
A. Documentation of management system procedures for monitoring	4	Effective monitoring procedures are in place. Procedures are controlled and form part of the site EMS.
B. Organisational structure for monitoring	5	Roles and responsibilities are well defined. Sufficient resources are available for monitoring.
C. Schedules and planning of monitoring, including contingencies	5	No periodic sampling is required by the permit. Continuous Water Monitoring equipment monitors each discharge. Calibration and maintenance of the CWMs is scheduled through SAP.
D. Monitoring records and use of monitoring data	5	Monitoring results are trended and reviewed monthly. Real time alarms are in place for all emission points to alert operators to emission limit exceedance and in such circumstances the discharge is ceased and the cause investigated.
E. Understanding the requirements of the permit and monitoring methods	5	Uniper UK personnel demonstrate an excellent understanding of the monitoring requirements as set out in the permit.
OMA 1 – SCORE	24/25	96%

SUMMARY COMMENTS FOR OMA 1

The EMS at Connah's Quay Power Station is accredited to ISO 14001

Summary of key Procedures;

LMI 2014 – A comprehensive and overarching procedure addressing monitoring requirements for all emissions to air and water. This procedure requires review as there are number of minor errors.

LMI 3004 – A procedure addressing the reporting and quality assurance procedures for reporting routine water emissions quality data to NRW as required by the permit.

LMI 2009 `Environmental Roles & Responsibilities` provides additional detail regarding assigned specific responsibilities for MCERTS equipment at Connaught Quay Power Station (CQPS).

In house laboratory methods and CWMs are used to check effluent quality in purge ponds and the operator requires that effluent must meet the permit limits prior to discharge.

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OMA 2: Periodic monitoring and test laboratories

OMA ELEMENTS	SCORE	COMMENTS
A. Sampling provisions <i>Critical Element</i>	N/A	
B. Certification of equipment	N/A	
C. Measurement methods and standards <i>Critical Element</i>	N/A	
D. Calibration methods <i>Critical element</i>	N/A	
E. Frequency of maintenance and calibration	N/A	
F. Reliability of equipment (data availability)	N/A	
G. Breakdown response	N/A	
H. Traceability	N/A	
OMA 2 – SCORE		

SUMMARY COMMENTS FOR OMA 2

No periodic monitoring of surface water emissions is required by the Environmental Permit.

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OMA 3: Continuous monitoring		
OMA ELEMENTS	SCORE	COMMENTS
A. Provisions for monitoring and location of CWMs <i>Critical element</i>	3	Except for the oil in water analyser, the CWMs for all parameters are located at the final discharge point. Sampling locations and facilities appear to be fit for purpose.
B. Certification of CWMs	3	The pH probe at W1 is MCERTs certified whereas probes installed at W2 and W3 are not. MCERTs is not available for salinity, chlorine dioxide, chlorite, TRO and oil in water CWMs.
C. Measurement methods and standards <i>Critical element</i>	5	CWMs used for relevant determinands.
D. Calibration methods <i>Critical element</i>	5	CWMs are suitably calibrated. Documented calibration procedures are in place.
E. Frequency of maintenance and calibration	5	As a minimum, calibration is completed in accordance with the equipment manufacturer's recommended frequency. ABB complete weekly calibration of pH, salinity and temperature instruments. Scotmas complete 6 monthly calibration of chlorine dioxide and chlorite analysers. The manufacturers of the oil in water analyser report that no calibration is required.
F. Reliability of equipment (data availability)	5	Routine emissions monitoring data is collated and reviewed. No notable gaps in data observed and routine monitoring data is reported to NRW without issue.
G. Breakdown response	3	Breakdown service provided by Scotmas and ABB although this provision not clearly documented within the monitoring procedures.
H. Traceability	3	pH and chlorine dioxide calibration standards produced using fresh solutions from sachets and known standards which are generated via the Palintest ChlordioX™ Plus equipment.
OMA 3 – SCORE	32/40	80%

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SUMMARY COMMENTS FOR OMA 3

With reference to emission point W1, purge waters are drawn from the below ground main effluent discharge line (shortly before it leaves site) and pass through a cubicle containing the continuous analysers, with a penstock to close and prevent discharge in the event of potential emission limit exceedance. Drawings of the sample line location were provided by Uniper and indicate that the effluent will be well mixed and that the sample point is likely to be representative.

For emission points W2 and W3, analysers are either positioned in the flow below ground level (e.g. pH) or effluent is drawn to the surface and passed through an analyser (e.g. chlorine dioxide). The sample locations (relative to the flow within the drainage system) were not visible and were not assessed by NRW as part of this audit.

W1 CWMS

- Temperature is measured by thermocouple.
- Salinity, Hach-3700 Series analyser with a D3725E2T probe.
- pH, MCERTS ATI pH probe.
- Residual chlorine dioxide and chlorite – instruments manufactured by Reiss GmbH.
- TRO, Hach CL17 free chlorine analyser.
- Flow, (MCERTs certified site-specific arrangements).

W2 CWMS

- pH, ABB 4600 : 4630/500 analyser.
- Oil and grease, Agar Technologies / GE Leakwise PS220 / ID-223/2000 oil in water analyser.
- Residual chlorine dioxide, instruments manufactured by Reiss GmbH.

W3 CWMS

- pH, ABB 4600 : 4630/500 analyser.

Action – Any replacement monitoring equipment shall meet MCERTs requirements where available.

Oil and Grease Monitoring (W1)

During the previous OMA (water) audit 16/09/14, NRW stated that;

‘The oil in water CWM (Turner Designs TD4100) is currently located on the outfall of the ‘SDX’ pit prior to discharge with the purge waters. The SDX pit is the most likely point to receive any oil contaminated water and therefore the operator monitors compliance with the permitted limit at this location. Whilst this is not technically in line with the requirements of the permit it is an acceptable alternative provided checks are maintained for the presence of oil on the purge ponds prior to discharge.

Recommendation – When this analyser is due for replacement a feasibility study should be completed for monitoring oil in the combined final discharge. If deemed feasible the oil and water analyser shall be relocated to monitor the combined final effluent’.

During the audit it was established that Uniper have subsequently installed a new ‘Advanced Sensors SA100P2 oil in water analyser’ on the discharge line to the SDX pit.

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Action - Provide NRW with justification as to why the new oil in water analyser was not installed to monitor the final discharge. If Uniper proposes to continue using the oil in water analyser at its current position, then a risk assessment must be completed to assess the risk of oil entering the purge ponds and discharging from the site undetected. Uniper currently complete a visual inspection of presence of oil and grease on the purge ponds pre-discharge – the results of which shall be included in the all future quarterly monitoring returns. Please complete this action by 31/03/19.

Action – include specification/requirements for materials used for calibration purposes within the relevant instrument calibration procedures. Please complete by 31/03/19.

Action – document instrument breakdown response provisions and incorporate into the relevant monitoring procedure – possibly LMI 2014. Please complete by 31/03/19.

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OMA 4: Quality assurance		
OMA ELEMENTS	SCORE	COMMENTS
A. External quality control schemes	N/A	Periodic sampling is not required by the permit.
B. Internal data quality control	N/A	Periodic sampling is not required by the permit.
C. Competence of monitoring personnel	5	Monitoring personnel are deemed competent, training matrices are in place. Key staff have completed MCERTs awareness training.
D. Auditing of monitoring	3	An audit plan is in place for 2019.
E. Audit compliance	5	Corrective actions are logged allocated and tracked. A new action tracking system is currently being implemented.
F. Reporting	5	Monitoring data is logged and controlled by limited site personnel. Reporting of data is to a high standard meeting the permit requirements.
OMA 4 – SCORE	18/20	90%
SUMMARY COMMENTS FOR OMA 4		