

Compliance Assessment Report

Report ID:
CAR_NRW0033500

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

Site	Barry Site EPR/BU2110IS	Permit Ref	BU2110IS		
Operator/Permit holder	Cabot Carbon Ltd				
Regime	Installations				
Date of assessment	07/09/2017	Time in	09:00	Out	17:00
Assessment type	Audit				
Parts of the permit assessed	Site EMS				
Lead officer's name	Kemp, Andi				
Accompanied by					
Recipient's name/position	Paula Lloyd/ Environment & Quality Manager	Date issued	19/06/2018		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). 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	CCS Category	Condition(s) breached
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KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Number of breaches recorded is greater than zero, please see Section 3 for 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 (eg. 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 advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Environmental Management System Audit at Cabot Carbon, Barry – September 2017

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Purpose of Compliance Assessment

All environmental permits under the Environmental Permitting Regulations 2016 contain a condition requiring a written environmental management system (EMS) and implementation of that system, along with evidence and records of its implementation and application.

Permit condition 1.3.1 states:

There are also various conditions that specifically address maintenance, management, accidents, monitoring, resource use – these areas should be supported by the overall management system.

Condition 4.1.5 requires a summary report on improvements and targets set under the EMS, to be submitted annually to NRW.

The improvement programme condition and table of improvement programme items cover, amongst other aspects, training, waste reviews, energy reviews, maintenance, emission abatement and water use – the continual improvement required by an EMS should be demonstrated through aspects such as these.

The E.C. Best Available Technology (BAT) Reference document (BRef) for large volume (solids) inorganic chemicals sector also includes environmental management system implementation as a technique to achieve BAT; see section 8.9.

As part of the permit application process and the ongoing operating techniques, the operator has

submitted details of their EMS – this information forms the written intentions of the operator and structure of the EMS.

The EMS runs through the whole process and operations at the site. Typically it should set the environmental policy, identify significant adverse environmental impacts, identify and comply with applicable legislation, set environmental targets, audit key processes and review the EMS.

The Nature and Scope of the Audit

The audit was planned in advance and a pre-meeting to discuss scope and available evidence, documentation and personnel, took place several weeks before the actual audit with the operator.

The operator was briefed that the NRW auditor would look at the following:

- Environmental Policy
- Significant environmental aspects and impacts – how are they derived and ranked
- Initial review, management reviews, internal audit schedule
- BSI 14001 inspection reports
- Targets and objectives and process for continual improvement

Around the plant and within procedures the NRW audit team will examine how the above is implemented and manifests itself in routine procedures and programmes such as:

- Training
- Maintenance
- Sustainable design
- KPIs

NRW assembled a team of officers – this facilitates the examination of the many evidence documents and recording of observations.

The conduct of the audit was explained to the operator and comprised:

- Introductory meeting and overview of purpose and scope
 - Confirm areas of plant and relevant personnel that will be inspected and questioned
- Desk based review of the main documentary components of the EMS
 - Including the external assessor reports under the ISO 14001 management system
 - Environmental policy, plans, aspects and legal registers, internal audits and reviews
 - Specific on site procedures and operational instructions
- Identify several aspects to inspect out on plant and verify with relevant personnel
- Audit team de-brief
- Post audit initial feedback to operator

The operator was advised that the audit would be diverted or stopped should non-compliance, with the potential to cause significant harm or pollution, be witnessed occurring during the actual audit.

Beyond the day of the audit several activities are typically conducted:

- Request for additional information
- Clarification of information, discussions, procedures
- Write audit that includes observations, recommendations and formal actions
- Submit audit draft and ensure operator is content that this is an accurate assessment
- Formally submit final audit and actions
- Track actions with operator

Overall then NRW is seeking confirmation that the site has implemented an EMS, continues to maintain it and support it with appropriate personnel and resource, and audits and reviews its own performance. The overarching objective being to prevent pollution of the environment, select and utilise resources in a sustainable manner and protect people and the site neighbours.

Areas Audited and Documentation List

The following documentation was provided by the operator on the day and assessed by the audit team. This directed questioning of personnel and inspection of plant and processes:

- Permit application documents – section 2.3

- Safety, Health & Environmental Policy – BA-SHE-001
- Organisational chart for the Barry silica plant
- Barry Environmental Manual – BA-ENV-001
- Environmental Aspects – Identification and Evaluation – BA-ENV-002
- Environmental Aspects scoring spreadsheet
- Environmental Objectives and Targets – BA-ENV-004
- Legal and Other Requirements & Evaluation of Compliance – BA-ENV-003
- Environmental Register of Legal and Other Requirements – V4 20.06.17
- Environmental Monitoring and Measurement – BA-ENV-013
- Environmental Management Review – BA-ENV-020
- ISO 14001 Management Review Meeting – 27th dec. 2016
- Cabot Internal Audit Report Form
- Cabot 14001 Internal Audit Plan Master: 2011 – 2017
- SGS (external ISO 14001 assessor) Audit Report: June 2017
- AMS Maintenance Report for fans, blowers, pumps, compressors – vibration and performance assessment – Aug 2017
- ABB Written Scheme of Examination – Piping Systems (Form: INS/21)
- Maintenance schedule – pumps; vibrational analysis follow up; cooling water pump seal work request

Some aspects of environmental performance which can evidence the implementation of the EMS that were put in the Improvement Programme were energy recovery of burner train B (IP25, IP27); abatement chemistry of the caustic tower (IP14, IP20, IP21); waste reduction and management (IP4); training (IP7). Part of this audit assessment will be to verify that the structure of the EMS is set up and organised to deliver the objectives of these Improvement Items and review periodically with the aim of continual improvement.

Specific environmental aspects documented in the written management system and operational systems assessed, with verbal verification by key personnel were: noise and pumps (Aspect 119); HCl pipeline (Aspect 112); accident management. Supporting these aspects and within the scope of the EMS are the overall environmental policy, training, maintenance standards system, design standards, measuring performance, reporting performance, environmental improvement objectives and specific targets.

Desk Based Assessment of the Environmental Management System

Permit Application Documents

The assessment begins with the re-examination of the permit application documentation submitted by the operator, specifically Section 2.3 Management. This information comprises part of the plant Operating Techniques and is relevant through the whole lifetime of the permitted operations and it is expected that elements will be updated accordingly as standards change and new technologies emerge.

The operator declares that they operate an externally verified quality management system to ISO 9001 and an environmental management system to ISO 14001. The EMS has been externally registered and in place since 2002. The site has a current valid registration certificate for the implementation of ISO 14001. This audit examines an external assessors report on the site EMS – this will be covered further on in the audit.

The main areas covered by the operators application submission are:

- Key procedures documented with document control exercised
- Identification, ranking and prioritising the most significant adverse environmental aspects and impacts
- Applicable legislation and changes
- Management of change
- Monitoring of emissions
- Preventative maintenance
- Competence and training
- Accidents and non-conformances
- Communications and reporting
- Internal audits
- Purchasing

The key aspects that are apparent from the operators written intentions are that the operators procedures are all controlled within this management system, with focus given to the most significant impacts under the operators control. Improvements and objectives fall out of internal reviews and audits and purchasing and plant design are carried out with improving environmental performance in mind – and environmental consequences are included within the management of change procedures. Emergency plans exist and there are framework procedures for managing hazardous waste, materials delivery, emissions monitoring, preventative maintenance and responding to management system non conformances. Some of these procedures will be assessed in detail further on.

Environmental Policy

The policy is document reference: BA-SHE-001, last revised 01/04/17, next revision due 01/04/18. The policy has to be approved by the Plant Manager and is signed by the Plant Manager – with authorship by the Environment Manager and co-approval by the Health and Safety Manager. The declarations in the policy state the drive for zero accidents and environmental non-conformances, going beyond applicable environmental legislation, increase efficiency, continuous improvement, key objectives and targets and communications and engagement with staff, contractors, visitors and the community.

There is a statement included about reviewing this policy in the internal management reviews. In addition to these declarations, some information on how the policy will be delivered is also included and the operator asserts that to achieve the policy goals, the company commit to:

- Applying Cabot Guiding Principles and recognised industry standards to design and operation of the plant
- Using Root Cause Investigation
- Maintain a recognised management system
- Applying the Responsible Care guiding principles
- Setting key objectives and targets, monitoring these
- Communication and engagement

The Cabot Guiding Principles taken from the operators web site aims to empower employees to take personal responsibility for a safe work place and in protecting the environment.

Barry Plant Organogram

Several features of the management structure are worth pointing out. Firstly the structure is quite a flat structure and the Environment & Quality Manager, along with the Finance Manager, Maintenance Manager, HR Manager, Operations Manager etc., are all at the same tier and report directly to the Facility General Manager (Plant Manager). Additionally the Safety & Health Manager is a separate role to the Environment Manager. These two points suggest that at the Barry plant, the various disciplines are treated equally and that should lead to key performance indicators cutting across all departments and being communicated throughout the plant operations. For example, reduction and correct handling of waste – so each department should be aware of its impact in respect of the specific environmental aspect.

There was a variety of information displayed around the work place illustrating the Company philosophy, principles and values. Statistics on environmental objectives and performance are also displayed. An annual sustainability report is published – this demonstrates, at least in principle, that the various departments share the common goals of resource efficiency, zero incidents and accidents, continual environmental improvement.

Observation 1: *As the Barry plant is part of the international Cabot Corporation, the operator confirms that there are communication links and lines of responsibility between the Barry plant Environment & Quality Manager and the International department within Cabot for the responsibility of environmental performance and the pursuit of sustainable development.*

In some organisations the overall environmental performance is monitored not just by the plant itself and the environment department reporting to the Plant Manager, but there exists a link between corporate

environment and sustainability and the plant environment department. This structure is usually adopted to ensure environmental goals are not lost or diluted in the drive to improve production.

Barry Environmental Manual and Environmental Aspects

Having verified that a written management system exists and examining the overall environmental policy and management organisation, the next step is to look at the scope and structure of the EMS and how this leads to the identification and categorisation of significant adverse environmental aspects.

The document concerned is [Cabot] Barry Environmental Manual – BA-ENV-001. This document lays out the structure of the EMS and how it should satisfy the requirements of accreditation under the international standard: ISO 14001. The Barry plant, as part of the overall management system (the management system incorporates environmental, safety, health, maintenance etc.) holds all its policies, procedures and work instructions in a tiered web based Sharepoint system. Various documents have embedded links to other relevant documents – further on in this audit, reference in specific procedures to other procedures and steps to be taken if actions have potential to impact other areas, will be verified. The owners and authorised personnel who can amend procedures are detailed in the specific procedure.

The environmental manual sets the scope of the EMS to plant based activities and describes the various elements of the EMS: environmental policy, aspects and impacts, legal responsibilities, objectives and targets, training, management structure, monitoring and measuring etc. The key things in this document are that it follows the Plan, Do, Check, Act continual improvement cycle and lists in the relevant sections links to other policies and procedures. The EMS is audited internally over a two year cycle, with a schedule of other internal audits over that period – some of these are documented and assessed separately in this audit. Lastly the management review committee is described and includes the senior department managers and the overall Plant Manager.

As part of this audit an assessment was made of the sites procedure for identifying, then ranking, significant adverse environmental aspects and their impacts. We refer to document BA-ENV-002 and the associated impacts and aspects register.

The operator has tied the “significance” definition to the specific clause in ISO 14001, Clause 4.3.1 Environmental Aspects. The operator defines the scope of impacts in terms of activities, past, present and future occurring on site and occurring under normal, abnormal and emergency conditions, that the operator has reasonable influence over. These aspects were derived at the original design and implementation of the EMS and are reviewed during the life of the EMS and site operations.

The assignment of a numerical figure to the various criteria: Legislation; Business Concerns; Environmental Harm and Likelihood; is explained and how the sum of these scores leads to significance. Significance is categorised: Not Significant; Low Significance; Medium Significance; High Significance. The environmental aspects register includes what the activity is, the environmental aspect, the impact, whether direct or indirect (i.e. within the control of the organisation), significance calculation and the various options to

manage the impact.

The register is reviewed and a review can be triggered by the following things: introduction of a new product or substance; an incident; new production equipment / process; cessation of a process; change in legislation; results from the internal audit programme. The site aim to set objectives and targets against impacts with high significance, while Low and Medium significance is managed through normal operational controls.

The current register contains 135 aspects, with one aspect, line 131 Warehouse Waste Production, being assigned a level of high significance.

Action 1 2017 EMS Audit: *The operator should update NRW on when the Aspects & Impacts register was last fully reviewed – especially in the light of any change in processes (e.g. treated silica increase in production), raw materials (e.g. outcome of cooling water dosing concentration factor work), legislation and standards (changes to EPR, IED and revised ISO 14001). Additionally can the operator explain several aspect lines that relate to fires and their ranking as only medium, and confirm if fuel useage for deliveries and product shipment has been evaluated as something the operator may have some element of control in, i.e. reducing number of movements. Due: 30th September 2018.*

From the expected response above, NRW may plan more compliance work associated with the significant environmental aspects and impacts, to ensure the methodology for identification reveals all possible aspects and that the ranking of impacts is accurate and proportionate. There should be quantative evidence used in ranking significance, e.g. benchmark energy useage figures, cost of disposal etc. This is vital if relevant targets are to be set focussing on the greatest impact and leading to better environmental performance. Ref. ISO 14004 Guideline s4.3.1.

Environmental Objectives and Targets

The document reference is BA-ENV-004 and describes how objectives and targets can be set taking into account the following: environmental policy, legal requirements, regulatory activity, significant environmental aspects and impacts, technological developments, continual improvement. An action plan supports the delivery of the objectives and targets and the Environmental Manager maintains the records of these targets and actions to deliver the objectives. Progress is also reviewed by the leadership team.

The environmental permit requires a summary of progress made to any identified objectives and targets set under the formal EMS – various years have been assessed during the normal regulatory year.

This element of the EMS is closely tied to the establishment of significant environmental impacts (see previous heading) as this is ideally (amongst other things) where the operator should aim to set targets for improved environmental performance. The overall improvement target setting is obviously wider than the EMS aspects and impacts and as stated in the operators document, is wide enough in scope to include items raised during normal compliance assessment, changes to policy and legislation and technological developments.

Recommendation 1 below has been drafted to ensure the operator is looking at all possible opportunities to improve environmental performance and to document progress over a rolling period. It is based in part on comments made by the R.O. in respect of evaluating the operators annual submissions for years 2014, 2015 and 2016.

Recommendation 1 2017 EMS Audit: *The operator should consider a way of laying out the environmental improvement targets, linked to the EMS aspect and / or overall environmental objective, in a way that shows several years rolling target setting and delivered actions or carried over, i.e. progress. The procedure for setting targets should be wide enough to include relevant actions that fall out of accidents, emergencies and non-compliances – for example these would tie into the policy requirement for zero incidents and non-compliances.*

Recommendation 2 2017 EMS Audit: *If not already considered, the operator should consider setting objectives around training e.g. environmental awareness, incident response and general operational competence.*

There is an element of subjectivity here, but following comments made in previous CAR1s for years 2014, 2015 and 2016, it may prove beneficial for the operator to have broad subject areas for targets (e.g. resources, water use, energy, less hazardous substances / conditions, waste, emissions, incidents etc.), linked to the significant impacts (and any other relevant driver, e.g. change in legislation), set out the target and decide if this is a one off or a continual effort (e.g. % reduction in waste production per tonne of product year on year), then keep a rolling record of progress and delivery. It is easier to see if an improvement item then reached its target and when, or if not why. Has an avenue for improvement plateaued, if so why (technology, recycling / recovery option limitations etc.) and when will an area be revisited. This should supply a more detailed record of progress and barriers over several years rolling.

It is difficult to assess at a glance the ongoing improvements and targets that have not been met and targets set for the year to come, with the overall site EMS and significant environmental aspects and impacts, from the annual submissions in line with permit condition 4.1.5.

Cabot document BA-ENV-003 covers legal requirements and is linked to the Environmental Register of Legal and Other requirements (v4 20/06/17).

The main points about this procedure are that Cabot makes a link between aspects controlled within the EMS and applicable legislation. The operator has also declared that “anticipated” legislation will be identified – this suggests that the operator employs some form of proactive approach (trade bodies, legal web sites and resources etc.) to keep on top of developing, issued and amendments in applicable legislation.

Action 2 2017 EMS Audit: *The operator to provide NRW with the sources of information on developments of environmental legislation that they use to maintain the Legal register. Due: 30th September 2018.*

Responsibilities of various managers is clearly described. The potential areas from where legislation and standards may emanate (Local Authorities, regulators, national government, codes of practice etc.) and the process of evaluating compliance are included in this procedure.

The register itself is dated 20th June 2017 – this indicates that it should be more or less up to date. The register contains a summary of changes to legislation and the legislation referenced is categorised alongside the environmental aspect, e.g. air emissions or contaminated land etc. NRW will restrict its assessment to the procedures and maintenance around the register itself, but a brief review of the legislation therein confirms the identification of the latest version / amendment of the following key environmental legislation:

- EPR 2016
- REACH
- Hazardous Waste, List of Wastes and Controlled Waste
- Contaminated Land
- Environmental Damage
- TFS, Packaging and WEEE
- Water Resources
- Hazardous Substances consenting
- PCBs
- CLP
- Energy efficiency and climate change

As mentioned, this was a brief review of the register and leads to the following points:

Action 3 2017 EMS Audit: *The operator to confirm if they have assessed the applicability of regulations around batteries, Water Framework Directive (hazardous pollutants) including the groundwater priority substances and Directions and Regulations directly applicable from the E.C . Due: 30th September 2018.*

Recommendation 3 2017 EMS Audit: *Additionally the operator may list certain pieces of legislation that they have considered, but at the moment do not apply to them, e.g. COMAH.*

Environmental Monitoring, Measurement, Review and Internal Audits

The elements above comprise the final section of assessment of the desk based part of the EMS audit and it covers:

- Environmental Monitoring and Measurement – Cabot procedure BA-ENV-013
- Environmental Management Review – BA-ENV-020
- Management Review Meeting minutes – 27th Dec 2016
- Internal Audit Report Form
- Internal Audit Plan
- SGS (ISO 14001 UKAS accredited certification organisation): Recertification Audit Visit 1, 19th Jun 2016 – 23rd Jun 2016

The principle purpose of these aspects and clauses in ISO 14001 is to ensure the operator reviews the system, plans internal audits, carries out internal audits, leading ultimately to retaining registration to the standard and safeguarding the environment.

In Cabots procedures the monitoring and measurement cover emissions as well as systems monitoring and setting and tracking progress with KPIs. Responding to actions arising from incidents, non compliances and non conformances is also covered and included in the internal auditing and actions tracking by the Plant Environmental Manager. Additionally the maintenance manager has similar duties with regard to critical environmental equipment, e.g. emissions monitors, primary containment vessels, pipes and abatement systems. The permit requires regular monitoring data submissions and annual performance indicators around waste produced, disposed, hazardous waste, electricity use, water use and measured against production tonnage.

As demonstrated in the previous documents assessed, this procedure is linked to related documents (e.g. Control of Environmental Records) and work instructions (e.g. Stack Emissions Testing and Reporting) – a lot of this information was assessed during the 2016 Operator Monitoring Assessment audits and demonstrates in part that the EMS is implemented through to specific work instruction / procedural level.

The operator has listed some KPIs as Table 1 to BA-ENV-013 and it includes: permitted discharges and monitoring, resource usage, waste production, incidents, system non conformances, progress against targets set under the EMS (BA-ENV-004), progress and delivery against ISO 14001 requirements.

The management review procedure is designed to keep the site EMS implemented and running in accordance with the requirements of the standard.

Action 4 2017 EMS Audit: *The operator to provide documentary evidence that they have reviewed the current EMS against any changes to the ISO 14001 standard from a revision in 2015. Due: 30th September 2018.*

The responsibility for delivery of the environmental review is the overall Plant Managers, with support from the Environmental Manager. The review is annual and a standing agenda contains some key items included in the review: permit requirements, changes to legislation, standards, guidance and technology, changes to internal corporate standards. The regulator stresses that the management review should be wide enough in scope to ensure items raised in previous reviews and actions from internal audits are also measured and reported. The management review into the EMS suitability needs to consider whether maintenance and good environmental performance under the standard could be affected by changes in resources, e.g. human and financial.

The minutes from the Dec 2016 annual management review of the ISO 14001 EMS are a comprehensive record of the scope of the review, previous actions, compliance with legal requirements, environmental performance, incidents, non conformances, delivery of internal audits etc.

The internal audit plan has been recorded over many years so it is straightforward to check what has been reviewed and when. The 2016 internal audit plan was delivered, as described in the management review. The plan appears to be wide enough to capture the key elements to be audited under the EMS, such as discharges and compliance, environmental aspects, legal register, training.

An internal audit from 25th April 2017, covering discharges to controlled waters, was provided by the operator. Reviewing this document it is apparent that the internal auditing process is robust, structured and transparent. The operator uses categories for recording results of the audit, e.g. observations, corrective actions and opportunity for improvement. The lead auditor in this case was a member of the management team not directly involved in permitted discharges and the audit questioned the Plant Environmental Manager. The environmental manager also referred to various evidence on record, such as previous OMA reports, external UKAS laboratory log sheets and the sewerage undertaker monthly sample results.

In June 2017 SGS carried out a recertification inspection of the EMS. No non compliances or non conformances were identified. Several observations were recorded and a couple of them relate to water discharge samples and have been previously discussed in CAR1 and / or OMA reports. The regulator can confirm that the certification body has an extant UKAS accreditation for certifying companies to ISO 14001.

Conclusion to Desk Based Assessment of EMS Documentation

NRW is pleased to report that Cabot have retained their registration to ISO 14001. The documents provided show that the site have good systems and procedures in place to implement, review, plan and act on the EMS. This has led to a good record of environmental performance and continued demonstration that the system is fit for purpose, applied out on site, performance is recorded and communicated, improvements are secured and staff are engaged.

Please note the actions above and recommendations.

The audit will now move on to the on site assessment of certain specific items and discussions with appropriate personnel.

Site Inspection of Certain Aspects

Staff in the following positions were asked about certain aspects of their role and following procedures that the EMS is set up to ensure are managed effectively:

- Two maintenance planners
- Engineering & Technical Manager
- Capital Projects Manager

In addition, the Safety, Health, Environment and Quality Manager was present during the whole of the audit. The plant General Manager also received brief feedback and confirmation that there were no significant non-compliances recorded during the day.

Two areas were flagged from the Impacts and Aspects Register for additional on plant verification:

1. Noise
2. HCl acid lines

The following documents were examined during the inspection:

- AMS Ltd. Condition monitoring report – pumps, compressors, fans, vibrational equipment
- Planned maintenance schedule – pumps
- Post maintenance inspection documents
- ABB Written Scheme of Examination – acid piping systems

Following through the principle of the EMS so far assessed, it has been confirmed that an appropriate environmental policy exists; a management system, incorporating environmental aspects, has been implemented; key impacts have been identified; documents and procedures exist and are controlled; the system is reviewed and areas are audited internally.

To test the effectiveness of the management system two aspects were examined and additional evidence was provided at the task specific level.

To assess noise the operator commissions an external company to provide a report on the condition of equipment that could cause noise through vibration – additionally preventing and remedying vibration will extend the life of equipment, be more energy efficient and can help prevent spills, leaks etc. A report was presented from Aug 2017 which covers ranking the equipment performance (acceptable, alert, alarm, critical, new actions), details faults and declining performance and recommends actions. Some of the actions include replacing the equipment, grease bearings, additional monitoring, check fan blades for debris, security of units and inspect coupling for correct fitment.

What has not been assessed in this audit, as this would be assessed during routine compliance work, is whether these recommendations have been acted upon in a timely manner. What is assessed here is that an identified significant environmental aspect is being addressed. However there was evidence provided showing a maintenance job record for one of the items flagged by the Aug 2017 condition monitoring report. This record shows minimal delay between AMS report and actual on site maintenance. The job number: 4339883, BA-P-9A, cooling water pump, records the action taken to address the fault.

Next is examined a planned maintenance schedule, in this case weekly pump lubrication. The sheet details various pumps and their unique identifier, manufacturer, lubricant to be used, basic inspection items (check fan guards), record actions and amount of top up used. The instruction also includes raising of work order if defects are found. The maintenance technician also needs to record their name and date for each item, when job completed.

Two other actual maintenance records of jobs done were inspected: 4270866 cooling water pump drive side oil seal, and 4242419 cooling water pump leaking oil. The records show that in the latter case the pump was removed and sent for servicing and then refitted and retested and in the former case pump removed

and repaired and refitted.

The procedures and computer based maintenance schedule and recording system was seen, as well as the above records, and the planners responsible talked NRW through the scheduling and recording process including dealing with extended jobs to ensure requests do not get simply fed back into the system – senior management are informed of delays and appropriate action is taken. Specific items and any significant time lag (based on environmental criticality of the equipment concerned) identified will form part of routine compliance assessment.

The last document to be assessed and the process discussed, was the design, installation, inspection and repair of acid piping systems. In this case an ABB WSE for HCl vapour piping system was assessed. The technical manager responsible for selection of equipment to ensure it is fit for duty talked through the process and standards used. This WSE then follows up on the installation with a 50 month full inspection interval and ABB were commissioned to write the scheme of examination and carry out the inspection.

Briefly the document lists the P&IDs, ABB inspection procedure, assets concerned and inspection procedure. The pertinent aspects of this are that the WSE is signed off and agreed, the correct drawing is attached, the inspected sections are recorded and new locations selected for the next examination, aspects to look out for are included (e.g. bulging GRP), thickness tests, CUI inspected, pipe supports included and bellows are inspected and sampled.

A final discussion took place with the Capital Projects Manager and management of change was assessed. The MOC procedure and computer based checklist was looked at. Critically in terms of environmental management, the checklist requires entry of details concerning whether the intended change will affect emissions or cause new emissions or other environmental incidents. Until the relevant questions have been addressed the intended change cannot progress. Responsible people have to check and confirm with electronic signatures that the change will not adversely affect the environment.

Conclusion

NRW is content that Cabots EMS is adequate, well managed and implemented fully across the site. The aspects inspected on plant are evidence that the significant environmental aspects, policy aims and legal requirements have been identified and are managed and recorded actually on site.

The operator should be commended on their diligent effort.

END

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0033500**

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

Site	Barry Site EPR/BU2110IS	Permit Ref	BU2110IS
Operator/Permit holder	Cabot Carbon Ltd	Date	07/09/2017

Section 3 – Enforcement Response

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.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			

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 verbally or 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 that 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 the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The 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 (eg. 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
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The 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

The 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 fifteen 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 officer's line managers using the informal appeals procedure. 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 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.