



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

Site	Preston New Road Exploration Site EPR/AB3101MW	Permit Ref	UP3431VF
Operator/ Permit holder	Cuadrilla Bowland Limited		
Date	17/07/2019	Time in	Out
What parts of the permit were assessed	Quarterly Groundwater Monitoring Data		
Assessment	Report/data review	EPR Activity: Installation	X Waste Op Water Discharge
Recipient's name/position	HSE&P Manager		
Officer's name	EA Officers	Date issued	05/08/2019

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

Permit Condition	Compliance	Condition(s) breached
a) Permitted activities	1. Specified by permit	N
b) Infrastructure	1. Engineering for prevention & control of pollution	N
	2. Closure & decommissioning	NA
	3. Site drainage engineering (clean & foul)	N
	4. Containment of stored materials	N
	5. Plant and equipment	N
c) General management	1. Staff competency/ training	C4
	2. Management system & operating procedures	A
	3. Materials acceptance	N
	4. Storage handling, labelling, segregation	N
d) Incident management	1. Site security	N
	2. Accident, emergency & incident planning	N
e) Emissions	1. Air	N
	2. Land & Groundwater	N
	3. Surface water	N
	4. Sewer	N
	5. Waste	N
f) Amenity	1. Odour	N
	2. Noise	N
	3. Dust/fibres/particulates & litter	N
	4. Pests, birds & scavengers	N
	5. Deposits on road	N
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	C4
	2. Records of activity, site diary, journal & events	N
	3. Maintenance records	N
	4. Reporting & notification	C4
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 (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored

Number of breaches recorded	3	Total compliance score (see section 5 for scoring scheme)	0.3
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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 report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

The environmental permit requires monitoring of a range of substances in groundwater and for these monitoring results to be reported to us on a quarterly basis (condition 4.2.2). The required determinands are set out in Table S3.5 of the environmental permit.

Through a routine audit of groundwater monitoring reports for Quarter 4 2018 and Quarter 1 2019 Environment Agency Groundwater Protection Officers identified a number of missing analytical results and directed Cuadrilla to undertake a review of their information and procedures.

The investigation undertaken by Cuadrilla was included in two separate responses to the Environment Agency, 5th and 20th of June and a follow-up formal meeting with the Environment Agency 11 July.

Environment Agency findings:

Missing analytical results.

Acrylamide and fluoride from December 2018 to February 2018 (inclusive), total alkalinity, $\delta^{13}\text{C-CH}_4$, $\delta^{13}\text{C-CO}_2$ (isotopic analysis) and dissolved butane from December 2018 to April 2019 (inclusive). The Quarter 1 2019 report shows that there was a result for acrylamide and fluoride provided for March 2019. Isotopic analysis was re-started in June 2019 and dissolved butane and total alkalinity in May 2019

The missing data was brought to light after an Environment Agency audit of the relevant quarterly groundwater monitoring reports.

In December 2018 Cuadrilla employed a new groundwater monitoring contractor. Failures on handover and a breakdown in communication resulted in the laboratory not receiving instruction to undertake the analysis for all of the required determinands. The 'indicative list' of required groundwater analyses included in the Waste Management Plan instead of the list referenced in Table S3.5 in the environmental permit was being used in error. As the sample results were then cross checked against the 'indicative' only list, the missing analytical results were not identified through a routine quality control check and then not subsequently reported to the management team for action.

Cuadrilla discovered that results for acrylamide and fluoride were missing in February 2019 and scheduled the analysis for the next sampling round in March 2019.

The other determinands were not noted until the Environment Agency routine audit of the data.

Isotopic analysis was requested by the operator but not undertaken by the contractor. Note: The results prior to the omission show that the low levels of naturally occurring methane present in the groundwater cannot support isotopic analysis. However, duplicate samples were taken for BH1B during December and April which have been subsequently submitted for analysis.

Despite discovering the two missing determinands in February, the Environment Agency was not notified as required in line with permit condition 4.3.1(b).

Quality control checks were in place and the operator confirmed the dates that these checks were undertaken, however it is considered that these checks were not undertaken in sufficient detail resulting in missing analyses. It is understood that the weekly sampling results were consolidated by the contractor and submitted to Cuadrilla monthly. This is likely to have contributed to the delay in detecting the missing results which could have been detected earlier if they were being checked more frequently. It is recommended that results are QC checked as soon as possible after they are received from the laboratory.

Groundwater monitoring was undertaken weekly during the hydraulic fracturing phase and monthly thereafter as required by Table S3.5 of the permit. It was noted that the data submitted to the Environment Agency for Quarter 4 2018 (October - December) only included one data set for each month rather than the weekly results. The full set has now been submitted as per the permit requirement and is now available on the public register.

The Environment Agency undertook a review of the full laboratory report data set. Some additional minor clarifications were raised as part of this review including sampling storage time, calibration range and limit of detection of some test methods.

Through the operator's investigation and the Environment Agency's review of the documents, the root cause of the missing analytical results and failure to notify the Environment Agency included;

- the incorrect interpretation of the groundwater monitoring requirements.
- the communication with the newly appointed contractor
- the training of staff undertaking quality control (QC) checks on this data set.

Following the review the Operator has put measures in place to ensure that these issues do not reoccur including:

- fully reviewing the sampling, analysis and reporting procedures to ensure that they are consistent with permit requirements;
- communicating this with the contractor;
- providing additional staff training;
- putting in place monthly management reviews;
- updating the internal procedure for assessing contractor information and undertaking a thorough review with the sampling contractor.

Groundwater sampling, records of analysis and quality control checks will be included in a future audit.

Permit Breaches

Data for Quarter 2 has now been received and shows that the data sets for dissolved butane and acrylamide have been essentially unchanged since sampling commenced in July 2016 and there has been no measurable change in the results either before or after the period of missing data. The results for fluoride and total alkalinity have historically shown natural variations within the typical ranges.

Data analysis for dissolved methane and $\delta^{13}\text{C-CH}_4$, $\delta^{13}\text{C-CO}_2$ (isotopic analysis) has shown that, over a significant number of months in most boreholes, the levels of dissolved methane are too low to support isotopic analysis.

Quarter 2 data shows that there has been no environmental impact from the missing data set and all other parameters show (those that were analysed throughout) that there has been no environmental impact from the operations on site.

Permit condition 3.5.1(b) requires that the operator shall, unless otherwise agreed in writing by the

Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(b) surface water or groundwater monitoring specified in table S3.5.

The missing analytical results from December to June constitute a Category 4 breach of this permit condition. There was no environmental impact.


Permit condition 4.3.1(b) requires us to be notified immediately if a permit condition is not met (Schedule 5 Notification). The operator did not notify us of the missing data, nor the reasons for its omission. This is a Category 4 breach of permit condition 4.3.1(b). No environmental impact.

Permit Condition 1.1.1 states that the operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

The root cause of the missing analytical results and failure to notify the Environment Agency is considered to be inadequate communication and training in relation to the sampling requirement set out in the permit. This is a Category 4 breach of permit condition 1.1.1.

 Environment Agency	EPR Compliance Assessment Report	Report ID: UP3431VF/0337394	
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Operator/ Permit	Cuadrilla Bowland Limited	Date	17/07/2019

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.			X
We will now consider what enforcement action is appropriate and notify you, referencing this form.			

Section 4- Action(s)			
Where 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			
C1	C4	Ensure adequate training is in place for those undertaking groundwater sampling and quality checks - to be reviewed during upcoming audit.	N/A
G1	C4	Provide findings of management review undertaken on July 2019 data - to be reviewed during upcoming audit.	N/A
G4	C4	Ensure notification to the Environment Agency is provided in line with permit condition 4.3.1(b)	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.

● A civil sanction Enforcement Undertaking (EU) offer may also be available to you as an alternative enforcement response for this/these offence(s).

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 the Environment Agency to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The Environment Agency 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.

The Environment Agency 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 Environment Agency 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 28 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 03708 506 506 (Mon to Fri 08.00–18.00) and ask for the Customer Contact team or send an email to enquiries@environment-agency.gov.uk. If you are still dissatisfied, you can make a complaint to the Ombudsman. For advice on how to complain to the [Parliamentary and Health Service Ombudsman](#) phone their helpline on 0345 015 4033.