



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

Site	Kirby Misperton A Well site		Permit Ref	402444 DB3002HE		
Operator/ Permit holder	Third Energy U K Gas Limited					
Date	08/11/2017 10/11/2017		Time in	07:55	Out	16:45
What parts of the permit were assessed	Operational Readiness					
Assessment	Site Inspection	EPR Activity:	Installation	Waste Op	X	Water Discharge
Recipient's name/position	Operations Support Manager					
Officer's name	[REDACTED]		Date issued	13/11/2017		

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 Conditions and Compliance Summary	Condition(s) breached
a) Permitted activities	
1. Specified by permit	A
b) Infrastructure	
1. Engineering for prevention & control of pollution	A
2. Closure & decommissioning	N
3. Site drainage engineering (clean & foul)	A
4. Containment of stored materials	A
5. Plant and equipment	A
c) General management	
1. Staff competency/ training	A
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	A
e) Emissions	
1. Air	A
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 & litter	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	A
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	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 report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

Summary

The inspection on Wednesday 8th November, and following meeting at Knapton Generating Station on Friday 10th November, highlighted a number of outstanding actions around management systems that must be complete before operations commence. These have been highlighted in previous CAR forms and some are repeated here with additional requests following this inspection.

A review of monitoring reports and approval for a change in a noise monitoring location are also included in this report.

Audit Plan

Purpose

- To ensure Third Energy and their contractors understand, and have the required processes and systems in place, to meet permit requirements.

The inspection is part of a joint inspection with the HSE.

Documentation:

Permit EAWML 402444/DB3002HE

Hydraulic Fracturing Plan 28th September 2017

Waste Management Plan r8

Emissions Monitoring Plan r8

Key items under inspection

(sent to Third Energy & HSE in advance to ensure information is available and for planning purposes).

- Review equipment being used on site and assurance that the Halliburton operational programme matches operating techniques described in permit
- Chemical storage and inventory of what is on site against chemical list
- How will amounts and flow be recorded? Does this meet permit requirements?
- Sampling and how this will be carried out - frac fluid, flowback and waste.
- Leak detection plans and records in place for fugitives as per EMP.
- Emergency plans (with HSE).
- Well integrity (with HSE) – monitoring & records in place
- Training & competence (with HSE) – contractors
- How are sampling/monitoring contractors being coordinated with operations to ensure permit requirements are met? groundwater/surface water/ambient air

- Monitoring equipment for KM7 microseismic – monitoring protocol.
- EA require sample of sand on KM8 site for potential particulate analysis – to be taken during inspection.
- Establish when ambient air contractor next on site.
- General reporting

Surface Water Management

The operator needs to ensure that bunds are emptied regularly and containment capacity is maximised in event of heavy rain or loss of primary containment. Checklists are in place for surface water management and the operator needs to ensure that actions are also in place to ensure that the perimeter ditch is emptied regularly and containment volumes are not decreased by potential silt build up. The site is becoming very muddy which could potentially lead to reduced containment. Efforts have been made to provide safe pathways and the site has been cleaned once to reduce the mud. It is recommended that action is taken to further reduce mud and maximise containment capacity on site in order to minimise pollution potential in the event of an incident.

Monitoring, Sampling & Flow protocols

- **Monitoring and sampling protocols must be complete and in place before operations commence.** Confirmation of this will be required. These should be Third Energy documents as part of the Environmental Management System as required and laid out in CAR 402444/0292772.
- Seismicity protocols should include, as a minimum, reference to the relevant Halliburton testing procedures, where the data is stored and what tests have been carried out (on surface and at depth) with results and dates so that a full history can be provided.
- The air monitoring protocol should include the schedule of visits and reports to assure compliance with the permit. This must include how records will be kept to provide assurance of compliance with the minimisation of fugitives emissions via leak detection described in the emissions management plan and the spot sampling to be carried out during key operations to provide the most useful information (see air monitoring section below).
- The operator must also describe how continuous monitoring data will be reviewed for parameters other than methane.
- Sampling and flow protocols are required to demonstrate how the operator will be carrying out these activities to be compliant with the permit. This must include how the spot sampling will be carried out during frac operations and a commitment to take additional spot samples if the chemical composition changes during the frac operation. These were actions in CAR 402444/0295061 and need to be in place before operations commence, and include sample position, when sampling will take place, and how this data is recorded and reported.

Fresh Water Usage

The operator was reminded that all water used in the frac must be free of any substances that are hazardous to groundwater and therefore the operator should assure themselves that clean water is used in the operations.

Chemicals on Site

All chemicals on site were checked against the frac plan additives listed in Appendix 5 of the WMP. 3 chemicals were on site which were not listed, Barazan, Star-Cide and Oxygen. The operator

advised that these were planned to be used in the well completion phase and are not frac fluid additives.

Please confirm what these chemicals are to be used for and whether they are substitutes or additions to the inventory. Further information, including quantities and justification for their use is required.

Phase Separation

Operator procedures are being finalised for the coiled tubing activities in the flow testing phase and the equipment used at this stage. These must be available for inspection on site before hydraulic fracturing operations commence.

Data Acquisition

Data from the frac stages will be collected in the Halliburton control centre on site. This can also be streamed to Knapton Generating Station and accessed remotely. Security of this data was reviewed. All raw data for flow is stored as an .adi file which will be kept as a record and can be interrogated at any stage. The data will be provided to Third Energy as an excel file for permit reporting. Flowrate is recorded continuously.

Each additive is dosed independently and records are maintained.

It was advised that Halliburton should also record the data in metric as per the permit to enable a quick comparison and assurance that parameters are within the permit limits. A copy of the HF plan was present in the control centre, a copy of the permit should also be readily available in the Halliburton control centre for reference and the operator should ensure that all contractors fully understand the permit requirements related to their work

The most recent Halliburton design of service was reviewed with updated frac models based on the most recent information. Volumes were all within permit limits for each stage.

KM7 geophones

These were in place (installed on Tuesday 7th November 2017 and clamped in place) and had been tested in Aberdeen, at KMA on the surface and at depth. Diagnostic tests were run whilst we were present and all channels were working on all geophones. Spares were available on site, including a complete replacement string. Further calibration is planned before operations commence, data acquisition was in place and communications from KMA were in the process of being finalised.

Whilst all the data is available on request, a monitoring protocol for the geophones is still required for operator assurance and to demonstrate that all permit requirements are being met, as described above. This must be in place before operations commence.

Frac sand

Samples were taken of the 3 frac sands on site. These will be kept by the EA for reference purposes.

Noise Monitoring Location Change

Reports and modelling have been provided to request a change to the noise monitoring location. This minor change is approved in writing under condition 3.5.7 of the permit and is an update to EMP R8. The updated noise monitoring plan will be placed on the public register and forms part of the operating techniques. Please note that you may also require approval from other regulators.

Action: The noise monitoring report from the first phase of work is now due.

Air monitoring telecon 9th Nov 2017 (update following visit and monitoring report submissions)

Air monitoring reports for the period 20th September to 4th October & 4th October 2017 to 22nd October 2017 have been received and placed on the public register. We have reviewed the data against ambient air directive limit values and have no current concerns within our regulatory remit. The air monitoring telecon was held for clarifications of a number of items and monitoring during operations.

It was requested that the operator includes in the monitoring report:

- Values in mg/m³ or µ/m³ where appropriate including reference conditions.
- Further information on what leak detection has been carried out (schedule should be included in the air monitoring protocol as described above and relate to the commitments made in the Emissions Monitoring Plan).
- Information on how spot sampling was carried out during key operations (the operator committed to spot sampling before and after the frac operation and downwind of the operations plus during flowback).
- The method of conversion to concentration was requested for VOCs, and this has been provided as ISO16000-6. This is applicable for indoor use, further clarification was sought on the applicability of this standard in this case.
- It was confirmed by the operator that the blank data referred to in the reports is used to provide confidence that there are no undue errors. The blank data is not used in any of the calculations for monitoring reporting and will be reported in future for VOCs. Other blank data will be kept by the contractor for review if asked.
- It was requested that the operator confirm the holding time in the lab for particulate samples, should further analysis be required.
- The cyclohexadecane result was discussed for VOCs. This was an unusual result and there is the potential that it could have originated from off site sources. No frac operations were taking place on site during this time period. The operator will also double check all results from the lab. This remains under review.
- The operator confirmed that the passive monitoring is now all elevated above the noise barrier where required.

There are currently issues with the Osiris equipment, used for particulate measurement in location 1. An email was received from the operator on 7th November 2017 informing us of this, due to larvae blocking the inlet tube and affecting the pump. The operator confirmed that protective filters and mesh were in place and are present on the other monitoring kit. At present the AQMesh is being used to provide information and the dates that this this substitute data is used will be included in the relevant monitoring report. The operator committed to having the repaired unit in place w/c 13/11/17.



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Site	Kirby Misperton A Wellsite	Permit	402444
Operator/ Permit	Third Energy U K Gas Limited	Date	08/11/2017

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 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			

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.