

**Rathlin Energy (UK) Limited, Activities at the West Newton Well Site at
Pipers Lane, High Fosham, East Yorkshire.**

Version 1.35

**This is an interim release, as more information becomes available from
ongoing research it will be developed further.**

This report is produced on behalf of the Protectors of the Pipers Lane, High Fosham, West Newton, well site, who dedicated themselves to monitoring the events at the well site and to providing the documentary, video and photographic evidence that permitted the start of the investigation and documentation of the events.

The document is also dedicated to the residents of surrounding villages who supported the work of the Protectors and who provided supporting evidence of the events at the well site and on the routes to and from the well site.

Version	Changes
1.0	Commencement of drafting
1.1	Revised Layout
1.2	Redrafted Document Removing Some Content
1.3	Extended Number of Sections
1.35	Removed Some Typographical Errors Added Content List.

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Introduction.

This document brings together information obtained from a variety of sources, all public, much of it obtained by Freedom of Information Requests to national bodies such as Environment Agency and Health and Safety Executive.

The purpose of bringing together this information is to allow close examination of the manner in which Rathlin Energy (UK) Limited, has managed and operated the West Newton Well Site located on Pipers Lane, High Fosham, East Yorkshire.

Rathlin Energy UK Limited.

Incorporated on 21st January 2008 Rathlin Energy UK Limited (Rathlin) is a wholly owned subsidiary of :

Connaught Oil and Gas Limited,
Calgary,
Alberta,
Canada.

Rathlin, whilst a wholly owned subsidiary, is held via a company in Jersey, Sunderland Holdings, Connaught Holdings is therefore well insulated from any problems that beset their UK subsidiary company. No doubt the bankers for Rathlin are well covered by cross guarantees from Connaught Oil, other creditors could however be left without payment of their invoices should Rathlin Energy (UK) Limited be liquidated.

Chronology of operations.

In 2008 Rathlin applied for Petroleum Exploration and Drilling Licence (PEDL) 183 giving rights for the exploration for petroleum products (oil and gas) in approximately 240,000 acres of the East Riding of Yorkshire.

In September 2012 Rathlin applied to East Riding of Yorkshire Council (ERYC) for Planning permission to drill an exploratory well at Pipers Lane, High Fosham, East Yorkshire, in January 2013 Rathlin received approval from ERYC of their planning application.

The West Newton Well Site is operated under Environmental Permit BB3001FT issued 1st May 2013, this covered the drilling phase of operations.

In January 2014 Rathlin applied for a permit for the management of waste and for the flaring of waste gas, this was granted on 30th April 2014 under the same permit number EPR/BB3001FT.

Site construction took place between March and May 2013.

Drilling commenced Mid May 2013, to a depth of 75 metres with small rig.

Main rig commenced drilling work Mid June 2013.

Drilling was completed Early September 2013.

Workover phase commenced May 2013

28th October 2014 well intervention equipment moved off site, by 5th November 2014 the well was shut down and all equipment, excepting security staff accommodation, had been moved off site.

Foreword.

The oil and gas exploration industry in which Rathlin is involved, is an industry which, by its very nature, bears a high potential for risk in its operations. Carrying out operations to extract minerals that have the potential to cause fire or explosion carries with it a high level of responsibility in ensuring that all operations are carefully controlled to minimise risk.

The Environmental Agency Operating Permit granted to Rathlin requires that the company manages and operates the well site through an Environmental Management System (EMS) which ensures compliance with the terms of its Operating Permit.

The EMS requires that, in order to reduce risk, Rathlin document all operations that will be carried out on the site, maintain the documentation to ensure that it reflects current practices, that the company audits those practices and the documentation controlling them.

The EMS also requires Rathlin to maintain appropriate records of everything on the site that requires measurements to be made to ensure that safety and process control are properly maintained.

The EMS requires Rathlin to ensure that all of the personnel on the site receive appropriate training for the tasks that they are to perform, that the training reflects the current documented procedures for the performance of the tasks for which personnel are trained and that training records are properly maintained for all personnel on the site.

A further requirement of the Environment Agency Operating Permit is that Rathlin must ensure that it uses sufficient competent persons and resources in the operation of the site.

It is through the operation of its EMS that we can judge the competency of the management, personnel and systems put in place by Rathlin to operate the well site.

Part 1. Atmospheric Pollution.

During the period 9th September 2014 to 29th October 2014 there were at least 15 complaints made to the Environment Agency about a foul odour emanating from the West Newton Well Site at Pipers Lane, High Fosham, East Yorkshire. The dates on which these complaints were made have been provided by the Environment Agency and are set out in the **Table 1**.

Date reported	Post code of report location
09/09/2014	HU11 (1)
10/09/2014	HU11 (1)
12/09/2014	HU11
14/09//2014	HU11
18/09/2014	HU11
18/09/2014	HU11
25/09/2014	HU11
26/09/2014	HU11
29/09/2014	HU11
30/09/2014	HU11
05/10/2014	HU11
15/10/2014	HU11
16/10/2014	HU11
17/10/2014	HU11
20/10/2014	HU11
24/10/2014	HU11
29/10/2014	HU11 (2)

Table 1: Odour complaints, West Newton Well Site.

Note 1 : The reports of odour on 9th and 10th September 2014 were not in the table given by the Environment Agency, these are reported in Environment Agency EPR Compliance Assessment Report of 10th September 2014 compiled as a result of a visit made to the West Newton Well Site to investigate reports of odour emanating from the site.

Note 2 : The report of odour on 29th October 2014 was not in the table given by the Environment Agency, this was provided by the person who made the report under Environment Agency Reference 1290425.

1.1 On 10th September 2014 the Environment Agency visited the site to investigate the reports of an odour at 20.05hrs on 9th September 2014 and 11.25hrs on 10th September 2014, NIRS ref: 01275977 refers to the circumstances of the visit. EPR Compliance Assessment Report, ID 400996/0219962 provides details of the visit to the West Newton Well Site, the Environment Agency staff experienced the odour in varying strengths dependent upon their location relative to the site, the most influential factor was wind direction.

The site was inspected, the flare was acting as a cold vent the odour detected off site was also present on site, it was concluded that activities on site were giving rise

to pollution outside of the site boundaries, possible sources of the odour were identified as:

- Green brine storage tanks 1 to 5 with vents to atmosphere.
- The wire line running into the well.
- Cold venting via the flare stack.
- Blue coloured open brine storage tanks, though these were not in use at the time.
- Oil/condensate tank venting to atmosphere.
- Expro water tank vent to atmosphere.

With so many possible reasons for the odour Rathlin were instructed to carry out tests to determine the cause of the odour and to submit an 'odour management plan, by 19th September 2014.

The foregoing information is taken directly from the EPR Compliance Assessment Report, ID 400996/0219962. The report is much more comprehensive and specific in its instructions to Rathlin regarding the requirements for testing and submission of the results to the Environment Agency along with an odour management plan by 19th September 2014, the requirements are quoted here :

“Action 1: Carry out sampling and analysis of the release from the atmospheric vent of a brine tank whilst it is being filled with brine recently brought to the surface from the well. The purpose of the analysis is to identify the substances being released to atmosphere. The analysis must include as a minimum benzene, toluene, xylene, mercaptans, and organo sulphurous compounds. Data to enable the calculation of a release rate from the tank must also be recorded e.g. Tank fill rate during sampling period. Details of the proposed monitoring should be submitted to the Environment Agency prior to the monitoring being carried out. Timescale for monitoring to be carried out and results submitted to Environment Agency: 19 September 2014.

Action 2: Carry out sampling and analysis of the release from the flare stack whilst it is being used as a cold vent. The analysis must include as a minimum benzene, toluene, xylene, mercaptans, and organo sulphurous compounds. Data to enable calculation of a release rate from the vent must also be recorded. Details of the proposed monitoring should be submitted to the Environment Agency prior to the monitoring being carried out. Timescale for monitoring to be carried out and results submitted to Environment Agency: 19 September 2014

Action 3: Submit an odour management plan which identifies sources of odour and measures that will be taken to manage and minimise the risk of pollution from odour. Timescale: 19 September 2014”

EPR Compliance Assessment Report, ID 400996/0219962 also contained a warning to Rathlin regarding its non-compliance with the requirements of its permit to operate at this site, the non-compliance showed breaches of Section 3.3.1 of its operating permit, "Emission of odours that might cause pollution outside of the site" "A non-compliance which could have a minor environmental effect."

EPR Compliance Assessment Report ID 400996/0219962 also records breaches of the site management procedures, breaching Section 1.1.1 of its operating permit, these are dealt with in Part 8 of this report.

1.1 Concerns.

Rathlin failed to implement its EMS in a manner that prevented offensive odours and the consequent risk of pollution occurring off-site, it may also have failed to ensure that there were sufficient competent persons and resources on the well site thus breaching Section 1.1.1 of its permit to operate.

Rathlin failed to control the dispersion of offensive odours beyond the boundary of the well site, thus breaching Section 3.3.1 of its permit to operate.

Rathlin could vented gas to the atmosphere not knowing what the constituent chemicals of the release were.

1.2 Rathlin admitted the venting of, “Small quantities of gas” and in an e-mail of 16th September 2014 to the Environment Agency claimed that the affects experienced by residents and visitors that had resulted in complaints to the Environment Agency, “may not be a consequence of the odour coming from the site.” It also attempts to place responsibility for investigating the cause of the odour onto the Environment Agency, asking them to substantiate the claims and to investigate other potential sources, this is interesting as the Environment Agency had already clearly identified the source of the odour and Rathlin had agreed to put in place an odour management plan. The complete text of this e-mail is quoted here:

“From: REDACTED

Sent 16 September 2014 09:27

To : REDACTED

CC : REDACTED

Subject : RE: Rathlin Energy UK Ltd, West Newton Well Site, Environmental Permit BB3001FT HI.

As I have previously stated, Rathlin Energy is taking these complaints very seriously and is taking appropriate steps to manage the odour from site. I am however concerned that the health effects stated by the complainants may not be the consequence of the odour coming from the site and any assumption or otherwise that it is, given that the distance quoted by the complainant and the likely dispersion of any small quantities of gas over such distance, could be detrimental to the wellbeing of the complainants.

I have discussed the potential impact of small quantities of unburnt gas being vented at the well site with our specialist in the management of harmful gases, who has visited the site and experienced the odour. Whilst he and Rathlin Energy accept that there is an odour and the odour having the ability to travel some distance, our specialist does not believe the odour represents a risk to health. For the wellbeing of the complainants, please can you confirm what, if anything the EA is doing independent of Rathlin Energy to substantiate the complaints raised by the residents of the properties in respect of health effects and whether consideration has been given to other potential sources within the area. This question has been raised by the Senior Management Team within Connaught Oil and Gas, parent company of Rathlin Energy (UK) Limited.

Kind regards,

For Rathlin Energy (UK) Limited

REDACTED HSE & Planning Manager”

On 16th September 2014 the Environment Agency responded to Rathlins' attempted blame shifting with an e-mail confirming that their officers had, on 2 separate occasions, identified the source of the odour as the West Newton Well Site, the text of this e-mail is quoted here:

"From: REDACTED

Sent 16 September 2014 10:28

To : REDACTED

CC : REDACTED

**Subject : RE: Rathlin Energy UK Ltd, West Newton Well Site, Environmental Permit BB3001FT
Thank you for your e-mails.**

Officers Environment Agency attended the area around West Newton Well site on Wednesday 10th September 2014 and Friday 12th September 2014 and on both occasions substantiated reports that the odour was present off site.

During the odour assessments the officers did not experience any of the symptoms described by the reporters of NIRS incidents 1277012 or 1277424. The officers' off site exposure to the odour was limited to a maximum of approximately 20 minutes.

Regards

REDACTED"

1.2 Concerns

Though the Environment Agency, during its visit of 10th September 2014, has clearly identified the source and severity of the odour emanating from the well site, Rathlin attempts to place the responsibility for determining if it is harmful, on the Environment Agency.

Rathlin claim that whilst they do not know what is causing the odour, "Our Specialist does not believe that the odour represents a risk to health" How can they know this? Up to this time no analysis of the gases causing the odour has been carried out!

1.3 On 17th September 2014 Rathlin attempted to further obfuscate the situation by posing questions about the honesty of the people who had complained about the odour, implying that they were co-opted by local protestors or by the media. Rathlin also implied that the health risk could be due to factors other than the odour from the well site. The text of this e-mail is quoted here :

"From: REDACTED

Sent 16 September 2014 11:54

To : REDACTED

CC : REDACTED

**Subject : RE: Rathlin Energy UK Ltd, West Newton Well Site, Environmental Permit BB3001FT
I am aware that the EA Officers visited the site and substantiated that an odour was present, Rathlin Energy is not disputing that an odour is associated with our operations, I am also pleased to note that the EA Officers did not experience any symptoms described in the complaints, nor, as mentioned have any of our well site crews (day and night shift), security officers or the police who attended site daily.**

My question relates however specifically to the Complainant's health symptoms, whether anything has been done by the EA or any other agency to determine whether these symptoms are real and, if so, what has caused the symptoms. Rathlin Energy is conscious that an assumption that the health effects are a result of the unburnt gas from the West Newton Well Site could in fact mask a more serious and more local environmental or health and safety issue that is not related to our operations. Rathlin Energy has also been besieged with false allegations about its operations, both directly by protestors and by those they have co-opted locally as well as through the media. Again, I am conscious that **this does not mask a more serious local environmental or health and safety issue. Is this an error?**

Sorry to labour the question but such complaints do have a serious bearing on Rathlin Energy, in terms of our duty of care and moral obligations including staff, contractors, neighbours and

other stakeholders that come into contact with our activities. Rathlin Energy has and will continue to work to protect the health and safety of anyone in contact with our activities and safeguard the surrounding environment.

*Kind regards,
For Rathlin Energy (UK) Limited,
REDACTED”*

The Environment Agency responded on 17th September 2014, the text of the e-mail is quoted here:

“From: REDACTED.

Sent: 17th September 2014 10:02

To: REDACTED.

From: REDACTED.

Subject: RE: Rathlin Energy UK Limited. West Newton Well Site Environmental Permit BB3001FT.

We do not give health advice to people who report incidents. If they request health advice we tell them to contact their GP.

We have been in contact with Public Health England regarding the odour and will be in contact with them again when we see the results of the emissions monitoring.

The actions that we have asked Rathlin Energy to undertake are as a result of the odour detected by the officers of the Environment Agency on Wednesday 10th September 2014 and Friday 12th September 2014.

The language used by the reporters of incident NIRS 1277012 and N1277424 has not influenced the actions that Rathlin Energy have been asked to undertake.

The details of the incident reports were cut and pasted from our National Incident Recording System (NIRS) and emailed to you so you could see exactly what was reported to us. We have not taken any action to determine if the reported symptoms were imagined or not.

Regards

REDACTED.”

1.3 Concerns.

Rathlin, instead of making efforts to control the odour emanating from its well site, is more concerned with casting doubts on the veracity of those reporting unpleasant health effects from the odour.

1.4 Examining e-mail correspondence between Rathlin and the Environment Agency between 10th September 2014 and 19th September 2014, we find correspondence that references the means of acquiring samples of gas from the brine tanks and flare stack of the well site. An e-mail dated 16th September 2014 12:24, from Rathlin to the Environment Agency details the means by which samples will be captured, the company that will carry out the analysis of the samples and the chemicals that will be tested for, these are Benzene, Toluene, Xylene, Mercaptans and Organo Sulphorous Compounds.

In this e-mail the drafting of the Odour Management Plan is mentioned.

The Environmental Agency is asked to approve the methods set out for the sampling methods and testing of the sample.

On 16th September 2014 15:40 the Environment Agency replied with a number of points relating to sampling and testing that required attention. The Environment Agency also suggest that Rathlin, who had specified to the testing laboratory, that test were to be performed to detect Benzene, Toluene, Xylene, Mercaptans and Organo Sulphorous Compounds, do a speciated sweep for other Volatile Organic

Compounds that may be present and which would not be covered by the specified tests.

The Environment Agency person then goes on to discuss method of obtaining samples and measurement of flow rates at the time that the sample is taken and of the facts relating to gas under pressure in liquids.

In the final paragraph the statement is made:

"I suspect that tedlar bag sampling and GCMS analysis would be acceptable for this week and give an insight into what is being emitted, but future monitoring, especially of a more quantitative nature would need to be covered by MCERTS and need to be justified with more detail.

Regards

REDACTED"

1.4 Concerns.

Why did the Environment Agency go through all of the requirements that would ensure that the sampling, transportation and testing of the gas samples all meet the required standards for this to qualify as a valid test of the compounds present in the gases being released from the well and which were being carried off site and causing problems, then at the end relax it to the methods that had been suggested by Rathlin, but which would not meet any standard for such tests?

1.5 On 18th September 2014 E-mail correspondence between Rathlin and Environment Agency discusses the fact that samples have been taken and sent for analysis.

It is clear from examination of e-mail correspondence that Rathlin sometimes received advanced information of the visits of Environment Agency Officers to the well site as the content of the e-mail quoted here shows:

"REDACTED

19th September 2014 09:25

I need to undertake an environmental permit compliance inspection today at West Newton. We should be at site at approximately 11:00 hrs. I will be accompanied by my colleague REDACTED who has not been on site before.

Also,

Next week I am aiming to do a permit compliance inspection on Wednesday 24th September 2014 at approximately 10:00 hrs. I will be accompanied by senior colleagues from the Environment Agency as follows

REDACTED

Would it be possible to borrow one set of size 44" (or larger) fire retardant overalls for the visit.

Regards."

1.5 Concerns.

The Environment Agency were clearly forewarning Rathlin of their future visits, clearly if there was any risk of odour occurring during a visit by the Environment Agency Rathlin would ensure that the well was shut in during that visit of which they were forewarned.

In the case quoted Rathlin received 90 minutes notice of the visit to take place that day and more than 7 days notice for the visit of 24th September 2014!

1.6 On 19th September 2014 the Environment Agency carried out a visit to the West Newton Well Site this is reported in EPR Compliance Assessment Reports, ID 400996/0220657 stated to be for the purpose of an inspection of Waste Operations and PP3833VA/0220663 stated to be for an inspection of the Installation. Both reports bear the same times for arrival and departure times from the well site. I quote from Section 2 – Compliance Assessment Report Detail sections of each of the reports :

EPR Compliance Assessment Reports, ID 400996/0220657 stated to be for the purpose of an inspection of Waste Operations.

“Present: redacted

No well testing activities were taking place on site at the time of inspection.

The well was reported to be shut in.

Proposed changes to well testing to prevent cold venting at pressures below 2 bar were discussed.”

EPR Compliance Assessment Reports, ID PP3833VA/0220663 stated to be for the purpose of an inspection of the installation.

“Present: redacted

No well testing operations taking place on site at time of inspection. Well reported to be shut in. Enclosed flare not operating. “

Between the visit of 10th September 2014 and the visit of 19th September 2014 there had been 4 incidents of off-site odour reported to the Environment Agency.

1.9 Concerns.

With prior warning of the visit of the Environment Agency Rathlin would have the opportunity to ensure that the well was shut in, as recorded in the Environment Agency Report. There was no mention of the complaints received by the Environment Agency of odour at off-site locations on 12th, 14th and 2 complaints on 18th September 2014.

1.7 On 19th September 2014 E-mail correspondence between Environment Agency and Rathlin, discussing the Odour Management Plan and Analysis of Emissions, took place between 14:57 hrs and 17:46 hrs it also discussed the requirement to be met before re-commencement of operations at the well, these included:

The requirement for a formal submission of :

1. Odour management plan.
2. Emissions monitoring results and assessment.

The e-mail goes on to mention dialogue that had taken place on-site during that days assessment visit, this is quoted here :

*“Following discussions on site today it appears that the emissions monitoring arranged was more appropriate for ambient air monitoring rather than the stationary source monitoring requested.
CAR form for visit to follow.”*

Whilst there had been not mention of the on-site discussion about the suitability of the air quality monitoring arrangements in the EPR Compliance Assessment Report of the 19th September 2014, it appears from what is said here that the arrangement in place for air quality measurement, up to that time, had not been suitable.

Rathlin responds at 17:46 hrs assures the Environment Agency that their requirements are understood and that an odour management plan is almost completed :

“As per discussions on site, Rathlin Energy has identified the VOC’s are being released to atmosphere (cold vented) when pressure of the gas flow at the flare drops below 1.2 bar and results insufficient operating pressure at the flare unit. The flare unit requires a minimum operating pressure of 1.2 bar(g) to initiate gas flare. Below 1.2 bar(g) the flare will not ignite.

The forward plan is not to cold vent. This will be achieved by ensuring that no gas is flowed to the flare unit below 2 bar(g) pressure. At the point at which gas flow from the well drops to 2 bar(g) the well will be shut in. This will provide a safe operating margin.”

The above quoted e-mail also states that the odour management plan will be completed within 2 days.

A local observer reported that the site was shut down by the Environment Agency.

1.7 Concerns.

It is seen that the air quality measurement equipment set up on the well site was not suitable for this application, this is not compliant with the requirements of the Environment Agency Permit. Table S1.3 Pre – operational measures, PO 4 of The Permit requires that Rathlin :

“At least 4 weeks prior to commencement of the gas flaring activity the operator shall submit to the Environment Agency for approval details of the ambient air monitoring programme that they will undertake before, during and after the period of gas flaring.”

Did Rathlin comply with this requirement?

If the air quality measurement system on-site was not compliant with this condition, as implied by the Environment Agency comment in the quoted e-mail, then every level, management, operational, documentation and record keeping of its EMS, was non-compliant with conditions 3.5 of the permit. This failure would also have prevented timely alerting to the emissions from the site.

Why was the site allowed to operate without proper monitoring equipment. Further admission that cold venting took place.

1.8 Looking at events from the perspective of those suffering the effects of the odour we find that on 19th September 2014, the Guardian Newspaper published an article about the odour problems experienced by those living near the West Newton Well Site, this is quoted here :

“People living near a Canadian energy company’s exploratory gas-drilling site in East Yorkshire have complained to the Environment Agency about feeling sick from noxious smells. But the company has re-assured government inspectors and local people there is no danger to human health and has been allowed to continue drilling a 9,000 ft deep “wildcat” bore hole.

“The smell is hideous, very distinctive, pungent and nauseous. It comes in waves. It started last week and has continued since. It fades in and out. The area where they are drilling is very rural and the smell drifts easily a mile away,” says Debbie Stabler who lives 400m from the drill site near West Newton, near Aldbrough in East Yorkshire.

“Depending on the wind, it has at times reached villages like West Newton and Withernwick,” said Stabler, who with others have also complained about gas flaring and light pollution from the round-the-clock operation.”

A statement from a second resident and used in the same newspaper article is also quoted here:

“Sandra Baxter, who lives in the house closest to the site, wrote “I could not go outside on Friday had to ring envi health my eyes were watering and stinging throat feeling weird and could not stop coughing.””

In the same article contained a statement from Rathlin, quoted here :

“Rathlin, which is exploring for conventional oil and natural gas deposits and says it is not injecting sand, water and chemicals at high pressure underground to fracture shale – the process known as fracking – admits causing smells but said people’s awareness could be heightened by “anything out of the ordinary”.

A company spokesman said: **“There has been a slight odour associated with our ongoing testing operations. Our work continues to be monitored by our own people and the regulatory authorities. The odour is not hazardous to health.**

“There is water in the well and the mixing fluids being used are causing the smell. The smell is not methane nor is it additives. I am told that it is from the composition of naturally occurring fluids within the well formation.”

In a statement, the Environment Agency said: **“Following a site inspection we have instructed the company to find the source immediately and take action to fix it. The company is now undertaking urgent work to solve the problem. Operators are required to comply with their permits and the Environment Agency can, and will, stop operations if there is a risk to the environment.””**

It is interesting to note that Rathlin state in the Guardian article that. **“The odour is not hazardous to health.”** How can they know this, on 10th September 2014, Rathlin were ordered to carry out specific tests of emissions from the various potential sources of odour such as on site tanks and flare stack, by the Environment Agency, no results from these tests had been obtained, therefore, how can they know what chemicals or compounds of chemicals were causing the odour. It is not even clear if the testing had been carried out at that time as will become clear from analysis of the Environment Agency report of its visit to the well site on 19th September 2014.

1.9 At 10:09 hrs on 22nd September 2014 Rathlin forwarded its odour management plan to the Environment Agency, the e-mail to which it was attached concluded with the request that, quote :

“With this in mind, it would be appreciated if the Odour Management Plan can be reviewed and agreed by the Environment Agency today. If there are any outstanding points that need to be addressed then we can discuss this by way of a conference call with the respective specialist within our organisations.

Kind regards,

For Rathlin Energy (UK) Limited”

REDACTED

At 16:29 on 22nd September 2014 Rathlin submitted a second version of the Odour Management Plan, this was identified as Revision : 2 the e-mail to which it was attached is quoted here:

From : REDACTED

Sent : 22 September 2014 16:29

To : REDACTED

CC : REDACTED

Subject: RE: Environmental Permit compliance inspection, Rathlin Energy West Newton Well site BB3001FT

Attachments : Rathlin Energy-West Newton-Odour Mangement Plan-200914 R2pdf. FAC 6455 (West Newton L46 05-3) Interim Report 22-09-2014.pdf

Importance: High

Please find attached a revised copy of the West Newton Odour Management Plan. The Revision 1 document sent to you this morning made reference to Natural Gas Liquids which is a term the industry uses to describe as ‘heavy ends’ which in certain states are liquid. The revision 1 document did not qualify in detail that, when produced, the constituents referred are in a gaseous state when sent to the flare. Any Liquids that are produced from the well are removed by the separator. I thought I thought it was imported (SIC) to make this point clear. WE have also included within Appendix 2 a further report we have received on the gas composition, which has been produced by EXPRO, Rathlin Energy well testing contractor. For ease of reference I have also attached the document separately.

Kind regards,

For Rathlin Energy (UK) Limited

REDACTED

At 17:11 on 23rd September 2014 the Environment Agency responded to the submission of Rathlin’s Odour Management Plan the e-mail is quoted here :

From: REDACTED

Sent 23 September 2014 17:11

TO: REDACTED

CC: REDACTED

Subject:Rathlin Energy West Newton, Permit BB3001FT, Odour Management Plan.

We have received the following documents from Rathlin energy in response to actions 1-3 on the Environment Agency compliance assessment report (CAR) form 4000996/0219962 form 10/09/2014:West Newton Well Site Odour Management Plan (OMP) RE-05-WN-OMP-001:REV2.00

ESG Analysis of Tedlar Bags for VOCs report West Newton ASC/16028 17th September 2014.

ESG Analysis of Tedlar Bags for VOCs report West Newton 2 ASC/16035 18th September 2014.

EXPROP gas analysis report FAC6455/L46/05-3 22September 2014

West Newton Well site Odour Management Plan (OMP) RRE-05-WN-OMP-001 REV:2.00.
(Response to Action3)

We approve section 10.1.4 of the odour management plan which details measures for the incineration of natural gas. No cold venting of any gas must take place. This includes gas with a high proportion of nitrogen.

We give interim approval to section 10.1.3 which details measure for scrubbing emissions, pending further assessment as set out in the attached document.

Other sections of the plan are not approved and need to be amended to set out the additional appropriate measures you will take. The plan is deficient in the areas set out in the attached document.

Comments and questions regarding monitoring that must be answered in the revised OMP are set out in the attached document.

The EA will confirm its agreement to re-commencement of operations at West Newton well Site if Rathlin Energy first confirms its agreement to carry out the actions below and commits to a time scale for each action.

Actions:

- 1. With regard to the EXPRO gas analysis report FAC6455 / L46/05-3 22 September 2014 confirm where and how the sample was taken, what type of container it was taken in, and the process conditions when it was taken.**
- 2. Carry out air dispersion modelling of the impact of gas venting releases. This must include predicted environmental considerations at the site boundary and at sensitive receptors. Expro gas composition data from report FAC/6455 / L46/05-3 22 September 2014 and Expro flaring and worst case cold venting data from dates when venting took place, including the 9th, 10th 13th and 18th September 2014, must be used.**
- 3. Revise the odour management as set out in the comments on the attached documents must include clarification of odour monitoring and ambient air monitoring proposals and locations.**
- 4. Provide a site specific protocol for MCERTS flow monitoring of a brine tank breather pipe when the tank is being filled with brine.**

Regards.

REDACTED

ESG Analysis of Tedlar Bags for VOCs report West Newton 2 ASC/16035 18th September 2014.
EXPROP gas analysis report FAC6455/L46/05-3 22September 2014

From: REDACTED

Sent: 23 September 2014

To: REDACTED

CC: REDACTED

Subject: RE Rathlin Energy West Newton, Permit BB3001FT, Odour management plan

Thank you for your response. I confirm that we have subsequently spoken and we will provide the relevant information tomorrow morning when you attend the West Newton Wellsite.

Best regards,

REDACTED

At 09:36 24th September 2014 Rathlin responded further to the Environment Agency's request for modification of the Odour Management Plan, the e-mail is quoted here :

From: REDACTED

Sent: 24 September 2014 09:36

To: REDACTED

Cc.: REDACTED

Subject: RE: Rathlin Energy West Newton, Permit BB3001FT Odour Management Plan REDACTED,

Thank you for your e-mail in which you set out four (4) actions as a result of your review of the West Newton Odour Management Plan. I note that the Environment Agency will give its agreement for Rathlin Energy to recommence its operations having Rathlin Energy first provided confirmation that the actions will be undertaken, together with a timescale for completing each action.

On behalf of Rahtlin Energy, I do confirm that Rathlin Energy will undertake the following four (4) actions and in a timescale as described alongside each action.

No.	Action	Timescale for Completion
1	With regard to the EXPRO gas analysis report FAC6455/L46/05-3 22 September 2014 confirm where and how the sample was taken, what type of container it was taken in, and the process conditions when it was taken.	Wednesday 24 th September 2014
2	Carry out air dispersion modelling of the impact of gas venting releases. This must include predicted environmental concentrations at the site boundary and at sensitive receptors. Expro gas composition data from report FAC6455/L46/05-3 22 September 2014 and Expro flaring and worst case cold venting data from dates when venting took place, including the 9 th , 10 th , 13 th and 18 th September 2014, must be used.	Monday 29 th September 2014
3	Revise the odour management as set out in the comments on the attached document. This must include clarification of odour monitoring and ambient air monitoring proposals and locations.	Thursday 25 th September 2014
4	Provide a site specific protocol for MCERTS flow monitoring of a brine tank breather pipe when the tank is being filled with brine.	Wednesday 24 th September 2014

The Odour Management Plan will be updated to reflect the comments raised during your review of the document. The methodology will be implemented on site today (Wednesday 24th September 2014). The air dispersion modelling demonstrating the impact of the vented gas releases will be commenced immediately, however will take a number of days to complete and report. I have suggested Monday 29th September 2014 for completion of the modelling, however I am hopeful we can get this to you in advance of that date. I understand that, whilst it is important to get the air dispersion model completed and sent to you as soon as possible, as this is retrospective it would not prevent us recommencing operations.

Having provided confirmation that Rathlin Energy will undertake the four (4) actions detailed above within their respective timescales, Rathlin Energy will seek the Environment Agency's approval to recommence operations whilst you are undertaking a site visit to the West Newton wellsite today (Wednesday 24th September 2014).

**Kind regards,
For Rathlin Energy (UK) Limited**

1.9 concerns.

Whilst Rathlin was given specific requirements that the Odour Management Plan must be submitted by 19th September 2014 and details of what it must incorporate, neither of the plans submitted on 22nd September 2014 met the requirements of the Environment Agency. On 23rd September 2014 the Environment Agency informed Rathlin of the additional actions that Rathlin must take if the Odour Management plan is to be acceptable to the Environment Agency.

This notwithstanding and given the fact that that some of the actions placed on Rathlin would not be completed for at least 7 days, the Environment Agency, on the assurance that Rathlin would carry out those actions, gave permission for Rathlin to re-commence operations on 24th September 2014.

If the management of Rathlin was unable to provide a viable Odour Management Plan, on what grounds were the Environment Agency giving permission for the re-commencement of operations on 24th September 2014?

1.10 On 24th September 2014 the Environment Agency carried out a visit to the West Newton Well Site this is reported in EPR Compliance Assessment Reports, ID 400996/0220751 stated to be for the purpose of an inspection of Waste Operations and PP3833VA/0220741 stated to be for an inspection of the Installation. Both reports bear the same times for arrival and departure times from the well site.

Both of these inspections identified non-compliances in the management of the site, further comment on this is given in **Section 8**.

EPR Compliance Assessment Report, ID 400996/0220751 identified that the operating procedures for some of the equipment on site were not sufficiently rigorous to prevent odorous emissions from the equipment during its use for its intended purpose, the findings of the inspector are given in the report as :

“Present: REDACTED

Well test equipment and associated storage tanks were inspected. Methods for flow monitoring and sampling of tank breathers were discussed.

The pressurised dual compartment oil/water tank, and atmospheric oil and water tanks share a common vent line which vents via tank of fluid (referred to on site as a scrubber) which is intended to remove/reduce odorous emissions. At the time of audit no one present was aware what fluid was in the tank or if any ongoing monitoring of it was carried out to determine if it was effective or fully reacted and requiring replacement. A hydrocarbon type odour was present on site near to the tank.

One green cylindrical horizontal brine tank is currently in use and the tank breather was routed to atmosphere via an IBC of potassium permanganate. Abatement will be required for each of the brine tanks.

The following requirements for action were placed on Rathlin:

“Action 2: Put an EMS procedure in place which identifies the abatement required on each tank breather, what the reactant for each breather is, who is responsible for testing and maintenance of the reactant, how the reactant will be tested and monitored to ensure it is replaced before it becomes ineffective, and how records of testing and replacement will be kept. Train out the procedure to those with responsibility for testing and maintenance, and get them to sign the training record. Timescale: 3 October 2014. “

EPR Compliance Assessment Reports, ID PP3833VA/0220741 also of 24th September 2014 found that the operating procedures for the CEB4500 Enclosed Flare were not incorporated into the Rathlin procedures for the operation of the equipment. The findings of the inspector are given in the report as :

“Present: REDACTED

The well was shut in at the time of audit and no flaring was taking place. The CEB4500 enclosed flare is operated by a third party contactor with two dedicated operators on a 12 hour shift system. The flare has three thermocouples for continuous monitoring of the temperature of the two pilot lights and the burner box. Temperature readouts are displayed on a control panel at the side of the flare. The flare operators have a log sheet for half hourly recording of flare temperature and other parameters, but the log sheet does not form part of the Rathlin EMS.

Action 1: Put an EMS procedure in place to require half hourly logging of flare parameters by the flare operators. Train out the procedure to both flare operators to ensure half hourly logging is carried out on both shifts. Get both flare operators to sign the training record. Timescale: 27 September 2014. It was reported that a spare thermocouple is kept on site to reduce downtime in the event of a failure.

These findings of each of these inspections are breaches of the requirements of **Section 1.1.1 b)** of Environment Agency permit BB3001FT which requires:

- 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 complaint; and
- b)** using sufficient competent persons and resources.

Competent management with oil and gas industry experience would have been aware of the need for the management system to include a written procedure and proper training of personnel in the application of the procedure. This is a strong indicator of a lack of vigilance with regard to ensuring that the written management system is kept current and a lack of review of the management system and of ensuring appropriate operator training.

At 16:34 on 24th September 2014 the Environment Agency gave Rathlin permission to resume flaring, the content of the e-mail is given here :

“From: REDACTED

Sent: 24 September 2014 16:34

To: REDACTED

Cc.: REDACTED

Subject: RE: Rathlin Energy West Newton, Permit BB3001FT Odour Management Plan

I confirm the Environment Agency’s agreement to re-commencement of operations at West Newton.

With regard to Action 4 the timescale for the written site specific protocol will have to be extended, as following the site visit today I need to provide the monitoring contractor ESG with some information, which I will do 25/09/2014. I suggest a revised timescale for submission of the brine tank monitoring site specific protocol of 29th September 2014.

REDACTED”

A seen from the following it was not long before the odour was once more a problem.

1.10 Concerns.

Whilst the management of Rathlin knew that it and its EMS were under scrutiny, it was still found lacking in two areas during the Environment Agency visit of 24th September 2014.

Deficiencies were found in the way in which Rathlin were managing the emissions from brine tanks and the atmospheric oil and water tanks on the site. There were no records of the maintenance of the odour management for emissions from the brine tanks or the atmospheric oil and water tanks, there were no records of what liquids were present in the tanks at the time of inspection. There were no records of who was responsible for ensuring that the reactants responsible for removing odour from emissions from the tanks or of the frequency with which they were changed.

Equally importantly there were no procedures in place, or records of the flare parameters during operation, this is particularly revealing of the attitude and culture of both the management and the company in general, in view of the odour complaints already notified to Rathlin.

Failures of both management and the operation of the EMS are indicated by these failures recording 2 breaches of sections 1.1.1.

In view of these failings, found on the day that permission had been given for the resumption of operations, why did the Environment Agency continue to allow permission to be given for Rathlin to resume operations?

1.11 Occurrence of off-site odour was reported to the Environment Agency on 25th September 2014, 26th September 2014, 29th September 2014 and 30th September 2014.

Whilst Rathlin had undertaken, as part of the Odour Management Plan, that it would not cold vent gas where did the odour experienced on these dates come from? Was the Rathlin Odour Management Plan faulty and therefore ineffective or were its operational requirements ignored?

The first indication of a report of odour originates in an e-mail from the Environment Agency to Rathlin, the content of the e-mail is quoted here :

***"From: REDACTED
Sent: 25 September 2014 12:52
To: REDACTED
Cc.: REDACTED
Subject: Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT***

The environment Agency received an odour report today regarding the West Newton Well Site. Details below.

***NIRS report 1281178 Reported 25/09/2014 11:26 hrs
'NE Odour Complaint, Rathlin Energy, Hull'***

The caller rang with regard to the odour from the above company. They are based on the site and the odour last week was horrendous.

When the site closed down , the odour disappears. However , they have commenced operations today it flared 20 minutes at 11:00.

"The odour was described as gas and very, very pungent. The odour comes and goes with the wind, but when it comes it is extremely pungent. The wind is blowing away from the village in a north, north east direction, rather than south last week. The smell came back when the flaring started".

We expected that the flare would combust the odorous components in the gas. If the flare was operating for 20 minutes we expect the flare combustion chamber to be up to temperature. Please can you investigate if the flare was operating correctly over the 20 minutes period and report back. Also please advise if an odour of the type released during the 20 minute period is expected to be released during the 5-10 days of continuous flaring.

***Regards,
REDACTED"***

Rathlin responded to the Environmental Agency at 13:30 hrs, the content of the e-mail is quoted here :

***"From: REDACTED
Sent: 25 September 2014 13:30
To: REDACTED
Cc.: REDACTED
Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT***

"Thanks for the report. I was expecting you to receive a complaint irrespective of whether there was any odours or not. Can you clarify the section highlighted in yellow below. Not sure if the report is referring to the person reporting the odour is based on site or that it is the company that is based on site.

I have been in constant communication with the site and, as I discussed this morning we did flow the well at 10:10. Please see report we have received on site following up on my report of the EA complaint.

I have confirmed with the Aereon flare supervisor that during the 20 minutes of flaring that the temperature the flare was operating at was within the range 1100-1250 degrees centigrade. The temperature range provides the ideal combustion of the gas within the flare unit. I can also state that the flaring commenced at 10.10 hrs and finished at 10.30 hrs and not 11.00 as stated in the complaint.

To determine if odours identical to last weeks were being emitted, personnel within the site personnel were deployed strategically around the entire site to monitor any odours from the operation.

I was at the flare stack with the Aereon supervisor and REDACTED was in attendance for the majority of the operation. There was at no time any reoccurrence of the odour emitted last week. The only detectable odour was from the combustion of gases during the incineration process and these were intermittent.

REDACTED discussed odours with the Environment Agency yesterday and informed them that there would be odours from flaring as this could not be eliminated as it is a product of flaring. He also informed them that the odour would not be anything like the odour that occurred last week.

Will continue to monitor this and report back.

REDACTED

The EA Responded, the content of the e-mail is quoted here :

“From: REDACTED

Sent: 25 September 2014 13:47

To: REDACTED

Cc.: REDACTED

Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT

All of the text provided is as recorded by the EA incident communication service. I read it that the company is based at the site. I have spoken to the reporter who stated that the odour reported was detected at an off-site location on Fosham Road.

Regards.

REDACTED

Rathlin responded with a brief e-mail, the content of which is quoted here :

“From: REDACTED

Sent: 25 September 2014 13:51

To: REDACTED

Cc.: REDACTED

Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT

OK REDACTED Our team on site are very aware or the sensitivity and are monitoring to substantiate the complaint.

Will update you further as an (SIC) when

REDACTED”

At 14:30 on 25th September 2014 Rathlin reported on further flaring, the content of the e-mail is quoted here :

“From: REDACTED

Sent: 25 September 2014 14:30

To: REDACTED

Cc.: REDACTED

Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT

We have just finished the second bleed off and flaring of the well. Flaring commenced at 13:50hrs and finished at 14:03hrs. The same procedures were undertaken as the previous flaring conducted at 10:10hrs, i.e. shut in at 2 bar.

The odour from incineration was less noticeable.

Pressure built up slowly to around 160 psi after the well was shut in.

**Kind regards,
REDACTED”**

Clearly the e-mail contains a contradiction of their earlier statement regarding the level of odour experienced in the earlier flaring at 10:10, where it was stated that. **“There was at no time any reoccurrence of the odour emitted last week.”** Yet now it is reported that, **“The odour from incineration was less noticeable.”** If the odour was less noticeable then there must have been a noticeable odour at the earlier flaring.

At 14:30 the Environment Agency responded, informing Rathlin that they were aware that there had been a flaring event, the e-mail is quote here :

**“From: REDACTED
Sent: 25 September 2014 14:38
To: REDACTED
Cc.: REDACTED
Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT**

**Thank you for the update. The EA was also notified by the reporter of the earlier incident.
Regards
REDACTED”**

Clearly Rathlins actions were under scrutiny and they were aware of it as shown by their e-mail of 15:11 on 25th September 2014 the content of which is quoted here :

**“From: REDACTED
Sent: 25 September 2014 13:11
To: REDACTED
Cc.: REDACTED
Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT**

Yes, I suspect it will continue to be the case.

By way of an update, we are unlikely to flaring again today. (sic) The previous two attempts to flow the well were on the basis of the natural build up in pressure from the formation. We will now set up to pump nitrogen which will take us up to tomorrow morning before we are back at attempting to flow the well again.

**This is the trouble with exploration, you never know the characteristics of the formation until you test. Some take no time at all to deliver constant flow, whilst others such as this well take time. I guess that’s better (for us anyway) than drilling a well and having nothing to test.
Kind Regards,
REDACTED”**

The previously quoted e-mail turned out to be incorrect in its assertion that there would be no more flaring that day, at 16:44 a further e-mail was sent to the Environment Agency by Rahtlin, the content is quoted here :

***“From: REDACTED
Sent: 25 September 2014 16:44
To: REDACTED
Cc.: REDACTED
Subject: RE : Odour complaint today regarding the Rathlin Energy West Newton. BB3001FT***

Furth (sic) update. We have progressed well this afternoon, which in turn, puts us in a position to attempt to flow the well sooner than expected. The well is showing encouraging signs of potential unsupported flow and it is important we keep up the momentum if we are ever to resolve the matter. We will therefore be flowing the well overnight.

As we are getting towards evening, it reminds me that I sent over to you the reason why we have a short duration flame visible during the initial start of flaring, when the operator adjusts the flow rates of gas and air to achieve optimum burn efficiency. I want to check that you are happy with this. I intend to get a video of the flaring operation (from a safe distance) to demonstrate this. I will forward this to you tomorrow.

Please confirm receipt of this e-mail by return.

***Kind regards,
RDEACTED***

1.11 Concerns.

It is clear that, as soon as Rathlin re-commenced operations there were complaints of odour, though at first Rathlin denied this, stating in their e-mail of 13:30, “*There was at no time any reoccurrence of the odour emitted last week.*” Rathlin in an e-mail at 14:30 admitted that “*The odour from incineration was less noticeable.*”

From this statement the earlier odour must have been noticeable.

Why then did the Environment Agency allow Rathlin to carry on operations knowing that they were still not controlling the odours which were being emitted from the site?

1.12 Meanwhile in another e-mail thread it is clear that Rathlin are still working on the provision of a site specific protocol for the emissions from its brine tanks.

***“From: REDACTED
Sent: 25 September 2014 13:58
To: REDACTED
Cc.: REDACTED
Subject: Proposed pre-abatement monitoring of emissions. Rathlin Energy West Newton BB3001FT***

***Re. the proposed pre-abatement monitoring of emissions from a brine tank vent, and from the combined pressurised water tank vent/atmospheric water tank vent
We advise that flow monitoring and sampling at each point is carried out to MCERTS standard. Samples should be taken from the vent line when the tanks are being filled. The following***

*information should be recorded. Pump rate to tank, gas temperature, separator pressure (for monitoring of the combined pressurised water tank vent/ atmospheric water tank vent only). We advise that sampling and analysis for the following be included:
There followed a list of chemicals.*

*Regards
REDACTED"*

Rathlin responded at 14:02, the content of the e-mail is quoted here:

*"From: REDACTED
Sent: 25 September 2014 14:02
To: REDACTED
Cc.: REDACTED
Subject: Proposed pre-abatement monitoring of emissions. Rathlin Energy West Newton BB3001FT*

*REDACTED
I will forward this now to REDACTED at ESG. He has already provided a preliminary Site Specific Protocol in accordance with MCERTS, however, is expecting to receive this information in order to finalise it.
Many thanks again,
REDACTED*

The requirement placed on Rathlin by the Environment Agency at 09:36 on 24th September 2014 appears to have been missed, the Site Specific Protocol was supposed to be delivered by 3rd October 2014.

1.12 Concerns

Rathlin had neither an acceptable Odour Management Plan in place nor any means of controlling odour from the Brine Tanks, why were they allowed to continue operations when there were still complaints of offensive odour?

1.13 At 08:39 on 26th September 2014 Rathlin forwarded a revised Odour Management Plan to the Environment Agency, the content of the accompanying e-mail is quoted :

*"From: REDACTED
Sent: 26 September 2014 08:39
To: REDACTED
Cc.: REDACTED
Subject: RE: Rathlin Energy West Newton, Permit BB3001FT Odour Management Plan Rathlin Energy-West Newton-Odour Management Plan- 240914 R" (Issued).pdf
Please find attached a revised Odour Management Plan for the West Newton wellsite, which captures the comment raised following the Environment Agency review of the original submission and your conversation with the Rathlin Team during your site visit on Wednesday of this week. You will note and are aware that additional information is still outstanding to fully complete the plan, which is being compiled by our consultants. The MCERTS protocol for monitoring at the breather tanks should be ready today. I will forward that to you when I receive it.*

*Kind regards,
For Rahtlin Energy (UK) Limited*

REDACTED

There were multiple reports of odour from off-site locations on 29th and 30th September 2014.

On 1st October the Environment Agency contacted Rathlin to remind them that they had failed to complete the actions required of them in CAR's Forms issued to them on 28th August, CAR form 400996/0219063 required Rathlin to :

Action 2. Make the hazardous materials inventory a controlled document as part of the EMS with a version number and date and update it to reflect the substances stored on site.

**Action 3: Confirm what these substances were/are used for on the well site.
Timescale: 8 September 2014**

Rathlin were also reminded that they had not submitted the, "air dispersion modelling of the impact of gas venting releases.

In each case Rathlin were given 10 days to complete the remedial actions identified by the Environment Agency, they had not complied with this requirement in either case.

The e-mail thread is fragmented during this period, no rejection of Rathlin's Odour Management Plan has been found, however on 17th October 2014 it is found that a another revised Odour Management Plan was submitted, the e-mail accompanying this is quoted here :

"From: REDACTED

Sent: 17 October 2014 17:45

To: REDACTED

Cc.: REDACTED

Subject: RE: Rathlin Energy West Newton, Permit BB3001FT Odour Management Plan

Attachments: West Newton-Odour Management Plan- R1 171014.pdf

Please find attached new version of the odour management plan for West Newton, adopting the risk management format. We have presented by way of sequenced events from initial workover (well and circulation tanks) and more specifically the well testing, which has been the main activities when the odour has been present.

The plan is supported by the SSP's and site plans, all of which you have. A copy of this document will be available on site, together with the supporting SSP's and plans. We will continue to review the OMP.

Certainly agree, it is a much simpler way of presenting information.

Kind Regards,

It appears that the Environment Agency had suggested a more appropriate way of documenting the Odour Management Plan and that Rathlin had adopted this.

Further complaints of odour were registered with the Environment Agency on 5th, 15th, 16th, 17th, 20th, 24th and 29th October 2014 so assuming immediate adoption of the Revised Odour Management Plan why were these complaints received?

Concerns 1.13.

Though Rathlin had not by 1st October 2014 delivered requirements placed upon it by the Environment Agency from non-conformances found during site inspections on 28th August 201 and that these related to the problems associated with the emission of odours no restrictions on their operations resulted.

Why were they were allowed to continue to operate the well site?

Odours continued to be emitted right up to the end of operations on the well site.

Part 2. Water/Land Pollution.

2.1 On 3rd June 2014 the Environment Agency carried out an inspection at the West Newton Well site, this is reported in EPR Compliance Assessment Reports, ID 400996/210777 stated to be for an inspection of waste operations. The inspecting officer found the following :

That a fuel bowser for the drilling rig was incorrectly fitted with a direct drainage outlet in its bund that had a removable threaded insert. The bowser does not meet the requirements of the Control of Pollution Act (Oil Storage) (England) Regulations 2001. As the bowser was located on the HDPE containment area it was not recorded as a non-compliance. A loss of fuel from the bowser would have contaminated the aggregate surface and the containment ditch.

Concerns 2.1.

Equipment coming onto the site was not being inspected to ensure that it met the requirements of the regulations that the industry must adhere to in the operation of its business, this is a management and procedural failure.

This is of more concern due to the fact that the observers adjacent to the site reported, on more than one occasion, that there was a rainbow effect on the surface of the water in the containment ditch, indicative of a spill of oil into the ditch.

Still under development.

Part 3. Light Pollution.

Under Development.

Part 4. Noise Pollution.

4.1 On 28th August 2014 the Environment Agency carried out an inspection at the West Newton Well site, this is reported in EPR Compliance Assessment Report ID

400996/0219063 stated to be for an inspection of waste operations. The inspecting officer found the following, this is extracted from the EPR:

Noise management

Herras fencing with acoustic panelling has been positioned around the mud pump container. The doors of the mud pump container are being kept open to improve cooling. The open doors will reduce the sound attenuation provided by the container.

It was reported that noise monitoring is to be carried out on site and at selected off site sensitive receptors during operation of the flare.

The foregoing indicates failure of the management of the site operating procedures and of staff training, it is known from resident complaints that noise from the well site was at times excessive, see Section 7.2.

Concerns 4.1.

Contrary to claims by Rathlin that they had operated equipment with maximum care to avoid noise, it is clear from this finding by the Environment Agency that maximum care was not taken to avoid disturbance to surrounding properties. This indicates a further example of poor training of the site personnel and a lack of attention by management, to the proper operation of equipment on the site.

Still under development.

Part 5. Health and Safety.

5.1 On 28th August 2014 the Environment Agency carried out an inspection at the West Newton Well site, this is reported in EPR Compliance Assessment Reports, ID 400996/0219063 stated to be for an inspection of waste operations. The inspecting officer found the following, this is extracted from the EPR Compliance Assessment Report, ID 400996/0219063 :

Inventory of substances stored on site

A copy of the inventory of hazardous materials on site was requested. The well site supervisor was able to access an inventory document inventory via an email on his mobile phone. Due to poor IT links at the site it took 15 minutes to forward the email to an onsite laptop and print out the inventory.

The inventory did not have a date or version number and listed some materials that have been removed from site.

Action 2: Make the hazardous materials inventory a controlled document as part of the EMS with a version number and date and update it to reflect the substances stored on site. Timescale 8 September 2014

The COSHH store was inspected. It was not possible to inspect all the contents as it was being used to store a large number of empty plastic bags contaminated with product residue which were awaiting disposal. It was reported that these are to be transferred to an enclosed skip. The COSHH store will be inspected again during a future site visit.

Outside storage areas were also inspected.

The following substances were present which are not listed on the chemical inventory in appendix 5 of Waste Management Plan RE-05-EPRA-WN-005 Rev: 1.00 submitted as part of the permit application:

3 off empty 25kg cans of 'Brad-tech 6035' (stored on banded pallet)
2 off 205 litre barrels of monethylene glycol (stored on banded pallet)
2 off 205 litre barrels of methanol (stored in drip tray)

Actions Required.

Make the hazardous materials inventory a controlled document as part of the EMS with a version number and date and update it to reflect the substances stored on site. Confirm what the substances not listed on the appendix 5 chemical inventory were/are used for on the well site (refer to text details).

Action 3: Confirm what these substances were/are used for on the well site.
Timescale: 8 September 2014.

Concerns 5.2.

It is clear from the non-conformances recorded by the Environment Agency that Rathlin did not properly manage the Control of Substances Hazardous to Health (COSHH) regulations.

The COSHH Register did not record some of the hazardous materials held on site, some of the substances held were not listed in the chemicals inventory of the Waste Management submitted at the time of application for its operating permit.

There was no register held on site, had there been an emergency situation involving the COSHH Store it would not have been known what substances were involved.

The non-conformances noted here breached conditions 1.1.2 Failing to keep records that allow proper management of operations and 2.3.1 (a) failing to use appropriate procedures in operating the site and 2.3.1 (b) required to provide revised documented procedures to the Environment Agency.

When required by the Environment Agency to correct these non-compliances within 10 days Rathlin failed to do so and had to be reminded 22 days later that it had not complied with the requirements of the Environment Agency in correcting these non-conformances..

5.2 Health and Safety Executive have an ongoing investigation into employees working at height without fall arrester equipment.

Part 6. Aquifer Water Quality Management.

Water from the aquifers is a very important element in the supply of fresh water to all of the communities of East Yorkshire, more than 60% of the water supplied to these communities is drawn from the aquifers. The high importance of water supplied from the aquifers makes it imperative that the quality of this supply is maintained at its current high level. It is therefore appropriate that the Environment Agency Permit EPR/BB3001FT specifying the conditions under which Rathlin is allowed to operate its exploratory work, contains conditions specific to the monitoring of aquifer water quality.

Section 2.4 Pre-operational conditions.

2.4.1 The activities shall not be brought into operation until the measures specified at PO1 and PO2 in schedule 1 table S1.3 have been completed.

Table S1.3 States

PO 2 At least 2 weeks before the commencement of permitted activities the operator shall submit to the Environment Agency a report that details the as built monitoring borehole design and describes the baseline groundwater quality sampling for the site. The chemical sampling suite presented in Table S3.2 of this permit shall be used for the base line groundwater quality sampling programme.

From the Rathlin Liaison Meeting Minutes of 22nd May 2013 reported that the Magpie Rig had been on site and drilling for 7 days with the intention of taking the exploratory borehole down 75 metres to the level of the aquifers, drilling must have commenced 15th May 2014.

The Environment Agency EPR Compliance Assessment Report 400996/0210777 dated 3rd June 2014, reports that : "A drilling rig for groundwater monitoring boreholes was present on the North boundary of site and was drilling outside of the area contained by an HDPE liner.

Concerns 6.

In the East Riding of Yorkshire there is major concern about the possibility of damage to the aquifers caused by oil and gas exploration.

Why was there no baseline testing of the water quality of the aquifers in the area of the West Newton Well Site, prior to any drilling work being undertaken?

The foregoing shows that the water quality of the aquifers below the well site cannot have been established prior to the exploratory well penetrating the aquifers.

Part 7. Traffic Management.

Traffic movements to and from the well site were managed under a traffic management plan submitted to East Riding of Yorkshire Council as part of the planning application. In order to minimise disruption to the villages that traffic to and from the well site would pass through, the hours during which vehicles would operate varied according to the type of operation being undertaken on the well site at that time. Vehicle movements were co-ordinated by well site security to ensure that there would be reasonable spacing between vehicles, in order to facilitate this, holding points for vehicles were established in the lay-by north of Coniston and at the lay-by on Langthorpe Road, New Ellerby. Telephone communications were to be used by the drivers to ensure that spacing between vehicles was maintained.

In the early phases of the operations the traffic management plan ensured that whilst there was an increase in traffic along to the route to and from the site it was not disruptive to residents.

From May 2014 there was a noticeable incidence of vehicles, in particular articulated road tankers, travelling to and from the well site in convoys, these ranged in size between 2 and 6 vehicles. On 2nd July 2014 the route through New Ellerby and Marton was put under very heavy policing. During that morning 65 heavy goods vehicles accompanied by approximately 60 pick-up trucks, vans, 4 wheel drive vehicles and cars, some towing trailers, passed along the route from the A165 to the well site. Later in that day most of these vehicles travelled in the reverse direction from the well site to the A165.

This was a complete disregard of the purpose and intention of the Traffic Management Plan.

On 3rd July 2014 Rathlin published and distributed a letter to the residents of the villages along the route to the well site, in this letter it was stated:

“Humberside Police advised that the safest way to enable us to go about our lawful business was to send all of the equipment on to the site at West Newton in convoys.”

Humberside Police have been asked to substantiate their request to Rathlin Energy via a Freedom of Information Request, they responded:

" There are no recorded instructions given by Humberside Police to Rathlin Energy, therefore no information is held."

It appears that Rathlin deliberately breached the Traffic Management Plan, it also appears that they falsely reported that they had done this at the request of Humberside Police.

Concerns 7.

Why was the Traffic Management Plan allowed to be disregarded?

Why, when there were only a handful of protectors on site at West Newton did Rathlin find it necessary to bring in vehicles in convoy causing total disruption along the route?

Why were Rathlin untruthful in claiming that the use of traffic conveying was advised by the police?

Part 8. Management.

8.1 On 3rd July 2014 the Environment Agency carried out an inspection at the West Newton Well site, this is reported in EPR Compliance Assessment Reports, ID 400995/0214406 stated to be for an inspection of waste operations. The inspecting officer found the following :

Proper records were not being kept of the discharges to surface water as required by the EMS, no document control reference was found, this is a basic failure to properly operate the EMS system.

The records relating to the releases of groundwater during the drilling of the water monitoring boreholes were inspected, it was found that the release of groundwater and fines to the containment ditch had not been recorded.

The grab box which contains all of the documentation relating to the site emergency plan was inspected, the emergency plan that was in the box was a superseded version. The site plan had not been updated since the well testing equipment was deployed to the site.

Site security patrols were relied upon to report leaking fluids, odours or other occurrences, no documented procedure was in place for this nor were site security personnel trained for this purpose.

Whilst the 54,000 litre diesel tank on the site has a leakage alarm, it was advised that a procedure be introduced to require daily visual checks for any leaks from the tank.

Concerns 8.1 The Environment Agency inspector found fundamental failures of the EMS system in relation to the emergency procedures for the site, failure to properly maintain the records that must be relied upon in the case of an emergency, particularly on a well site where oil and gas exploration is taking place is very concerning, it is recorded as a failure of management in Accident, emergency and incident planning, it indicates serious failing of senior management in the monitoring on the systems used on the site. Record keeping failures were noted in relation to discharges of surface water, release of groundwater and in the control of documents in the emergency grab box. Documentation and staff training failures were found in relation to the training of security personnel to detect leaking fluids, odours and other occurrences. In all of the non-conformances recorded here there are serious implications for senior management, fundamental failures of the EMS, which could have serious repercussions for people on the site and people of the surrounding area, have occurred.

8.2. On 28th August 2014 the Environment Agency carried out an inspection at the West Newton Well site, this is reported in EPR Compliance Assessment Reports, ID 400996/0219063 stated to be for an inspection of waste operations. The inspecting officer found the following, this is extracted from the EPR Compliance Assessment Report, ID 400996/0219063 :

Environmental Management System (EMS).

Security procedures standard document RE-03-019 has been put in place in response to Action 5 on CAR form dated 3/7/2014. The procedure references checklist RE-05-CHK-008.

Since 1/8/2014 check lists have been completed by service contactors rather than site security as there has been a 24hr contractor presence on site during well testing. Checklists have been completed by Expro Group and Altus QSERV. It was reported that procedure RE-03-019 and checklist RE-05-CHK-008 have been trained out to security but no records have been kept of which security guards were trained.

Action 1: Train out procedure RE-03-019 and checklist RE-05-CHK-008 to security guards and keep a record of those trained. Timescale: Prior to site security resuming responsibility for check list.

Concerns 8.2.

Failure to maintain records of staff training is a strong indicator of management failure. It breaches condition 1.1.2 of the Environmental Permit granted to Rathlin for their operations on the site.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained. In this case the training requirement was placed on Rathlin as a result of a previously noted failure in security procedures which had been identified by Environment Agency Inspecting Officers, it should have been high visibility for the management of Rathlin.

8.3. Failure to properly manage the noise abatement screening of equipment on the well site, as noted in Section 4.1 of this report, is an indicator of failure to properly manage the well site, to ensure compliance with operating procedures and to ensure that staff on the site are trained to recognise and apply the correct procedures for the operation of equipment so as to minimise nuisance to residences in the area of the well site.

Concerns 8.3.

Complaints of noise from residents of properties in the location of the well site were common and Rathlin were aware of the possibility of this being a problem, a quote from the Liaison Meeting Minutes of 6th August 2013 indicates this “Jonathan Foster said that Rathlin was very conscious of this potential issue (noise) and as a consequence the team on site were managing the operations very closely.”

If the foregoing is true then why did they operate the drilling equipment without the appropriate covers being closed.

The foregoing is an indicator of poor management in that the site personnel were not adequately trained in ensuring that nuisance to residents of nearby properties was avoided.

8.4. The details of the Environment Agency inspection of the Hazardous Materials Store at the West Newton Well Site, recorded on EPR Compliance Assessment Report, ID 400996/0219063 showed that materials which were required to be managed under the .Control of Materials Hazardous to Health (COSHH) regulations were not properly inventoried. There were materials present that were not registered for use on the site and the Hazardous Materials Store was in a state of disarray to the extent that the Environment Agency Inspecting Officer was unable to carry out a full inspection.

A failing of this nature indicates a serious deficiency in the documented procedures for the management and control of hazardous materials, it also indicates management deficiencies in the manner in which the documented procedures are trained out to the staff handling these materials. Senior management is also deficient in the fact that an internal audit of the procedures for COSHH would have revealed the deficiencies in the system. It is strongly indicated that senior management was not taking seriously the proper management of the site, its documented control systems or the proper maintenance of those systems.

Concerns 8.4.

The lack of a COSHH register on site, the general disarray of the COSHH store and the lack of training of the site personnel with regard to proper management of the COSHH store are all indicators of poor management practices and failure to ensure that critical documentation is kept current and available.

8.5. EPR Compliance Assessment Report ID 400996/0219962 of 10th September 2014, records breaches of the site “Management system & operating procedures.” Referencing breaches of conditions and procedures of section 1.1.1 of Environment Agency Permit Number EPR/BB30001FT issue 30th April 2014.

Section 1.1.1 places upon the company, to whom the permit is issued, the requirement to, and here I quote directly from the wording of the permit:

“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 complaint; and
- b) using sufficient competent persons and resources.”

Clearly in allowing odour to be detected beyond the boundaries of the site the Environment Agency identified a lack of proper management on the part of Rathlin.

8.6. Between 12th September and 19th September 2014 Rathlin was required by the Environment Agency to develop an Odour Management Plan, to prevent the cold venting of gases and to prevent the occurrence of objectionable odours being dispersed from the West Newton well site. Two versions of the Odour Management Plan were submitted to the Environment Agency on 22nd September 2014 one at 10:09 the other at 16:29. At 17:11 on 23rd September 2014 the Environment Agency responded to Rathlin pointing out a number of deficiencies in the plan and requiring Rathlin to modify the plan by implementing four actions identified by the Environment Agency.

Concerns 8.5.

The inability of Rathlin to prepare an Odour Management Plan that would satisfy the requirements of the Environment Agency is a further cause for concern, a

company that, in its publicly distributed literature, claims to an experienced oil and gas industry company should have the necessary technical ability to devise a satisfactory plan. To lack the ability means that it is further breaching Section 1.1.1. b) of the operating permit : “using sufficient competent persons and resources.”

8.7. Relating to a site visit on 24th September 2014, EPR Compliance Assessment Reports, ID 400996/0220751 stated to be for the purpose of an inspection of Waste Operations and PP3833VA/0220741 stated to be for an inspection of the Installation. Both reports bear the same times for arrival and departure times from the well site.

Both of the reports find that there are failures by Rathlin in the management of the site, both relate to the potential lack of control of systems that could be the sources of off-site odour which had been complained of by residents and visitors to the area, at the same time Rathlin denied having allowed anything more than a ‘slight odour’ to be present at any off-site location. The findings of the Environmental Agency Inspectors, expressed in these reports and the others quoted in this report, show clearly that Rathlin was deficient in its management of the site, the question must be asked of their competency to operate a site, where, should there be a major event the affects on the surrounding area could be devastating.

Concerns 8.6

There are multiple instances of failures to properly manage the well site and its operation, in particular the allocation of responsibility for properly maintaining the odour abatement of the brine tanks, pressurised dual compartment oil/water tank and the atmospheric oil and water tanks. No EMS procedure was in place for these purposes nor were staff trained to carry out this basic requirement of preventing odour.

Condition 1.1.1 of the operating licence is breached by senior management failing to implement and maintain procedures and to train site personnel.

On the same day another Environment Agency Inspector found that there was no procedure for the monitoring and logging of flare temperatures and the other parameters of the flare, a requirement for half hourly logging of flare parameters was required by the Environment Agency inspector, the procedure to be deployed within 3 days and to be trained out to operators.

At a time when the site was under scrutiny due to the severe effects of the odour on people outside of the site, Rathlins’ management should have been highly attentive to any causes of the odour that they may have been able to influence by careful management of the on-site equipment.

A further breach of condition 1.1.1 of the operating permit was recorded, this purely due to lack of proper management of on-site resources.

Part 9. Other Affects.

House prices, Insurance problems and unpleasant side affects to health of having Rathlin as a neighbour.