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Case No: CO/1225/2018

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
PLANNING COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 11 January 2019

Before :

THE HONOURABLE MR JUSTICE SUPPERSTONE

- -

Between :

THE QUEEN **on the application of** **FRIENDS OF THE EARTH LIMITED**	**Claimant**
- and -	
THE ENVIRONMENT AGENCY	**Defendant**
- and -	
CUADRILLA BOWLAND LIMITED	**Interested Party**

- -
- -

Matthew Reed QC and Matthew Dale-Harris
(instructed by **Friends of the Earth Ltd**) for the **Claimant**
Tim Buley (instructed by **The Environment Agency Legal Services**) for the **Defendant**
Nathalie Lieven QC (instructed by **Herbert Smith Freehills LLP**) for the **Interested Party**

Hearing date: 29 November 2018

- -

Approved Judgment

Mr Justice Supperstone :

Introduction

1. The Claimant challenges a decision of the Environment Agency ("the Agency") dated 11 December 2017 to grant a variation to the environmental permit granted to the Interested Party ("Cuadrilla") in 2015 relating to mining waste activities involving hydraulic fracturing at Preston New Road, Lancashire ("the Site").

2. On 1 August 2018 Ouseley J ordered the application for permission to apply for judicial review to be adjourned to be listed in court as a "rolled-up hearing".

3. At this hearing Mr Matthew Reed QC and Mr Matthew Dale-Harris appeared for the Claimant; Mr Tim Buley appeared for the Agency; and Ms Nathalie Lieven QC appeared for Cuadrilla. I have been considerably assisted by Counsels' written and oral submissions, for which I am grateful.

4. The only variation that was in issue by the time of the hearing was a variation that changed the rate at which fracturing fluid can be injected into a well during the hydraulic fracturing phase. The variation amended a daily injection limit of 765m^3 fracturing fluid per day to a limit of 765m^3 per hydraulic fracturing stage.

Factual Background

5. The Site is one of the first shale gas exploration sites to receive planning permission in the UK. An application for planning permission by Cuadrilla was made in May 2014 and was permitted on appeal by the Secretary of State in October 2016.

6. In 2014 Cuadrilla applied for a permit under the Environmental Permitting (England and Wales) Regulations 2010 ("the 2010 Regulations"), which was accompanied by a "best available techniques" ("BAT") statement dated 30 May 2014. Following consultation, a permit ("the 2015 Permit") was issued on 16 January 2015. The 2015 Permit extended to specified activities which were detailed in Schedule 1 Table S1.1. For present purposes the relevant activity is Activity A5: a groundwater activity under paragraph 3(1) of Schedule 22 of the 2010 Regulations for the discharge, namely of fracturing fluid into the target formation, that might lead to an indirect input of a pollutant to groundwater.

7. Condition 3.1.2 restricted Activity A5 by stipulating that a limit given in Schedule 3 shall not be exceeded. Schedule 3 contained Table 3.2 which imposed a maximum limit on the daily discharge volume of 765m^3/day ("the Daily Fluid Limit").

8. Condition 2.3.1 restricts operating techniques to those specified in Schedule 1, Table S1.2 which made reference (so far as relevant) to an approved waste management plan for the Site dated 4 June 2014 ("the 2014 WMP") and to a hydraulic fracturing plan to be approved under pre-operational measure PO3.

9. A decision document ("the 2015 Decision") accompanied the 2015 Permit, giving reasons for the grant.

10. At paragraph 5.1.8 of the 2015 Decision the Agency stated:

"We are satisfied with the Applicant's proposals to minimise the overall quantity of waste arising from this process. …

Approximately 10%-40% of the injected fluid for each fracturing stage is predicted to return as flowback fluid to the surface between hydraulic fracturing stages.

Flowback fluid will be re-used for hydraulic fracturing wherever the level of total dissolved solids are compatible, which may require dilution with mains water, with the friction reducer. This will involve utilising a closed loop system between hydraulic fracturing stages to ensure that all flowback fluid (post-separation from any gas and sand) is captured and is available for re-injection into the target formation as part of the hydraulic fracturing process.

Flowback fluid that has been separated from the sand and natural gas will be stored at the surface in enclosed steel containers on top of the well pad membrane within the perimeter fence line. As hydraulic fracturing will be conducted consecutively over a period of days the storage of the separated flowback fluid will be temporary.

Flowback fluid at the surface will be subject to Ultra Violet (UV) disinfection prior to re-use, to control bacterial growth. This is a precautionary approach to help maintain productivity of the fractures and reduce the risk of bacteria causing souring of the natural gas. UV disinfection has been selected to replace the need for the non-hazardous biocide (glutaraldehyde) additive within the early stages of exploration. The process does not create any further waste at the site and increases the number of times that flowback fluid can be re-used.

…

No limits are required to be imposed for re-use of the flowback fluid because the mineralised content that is brought to surface with the flowback fluid has come from the formation to be fractured.

Reuse of the flowback fluid in the hydraulic fracturing fluid will only result in the mineralised content returning to the formation from which it was derived and will therefore have no discernible impact upon the receiving environment.

We have assessed that there is no groundwater in the shale and we do not expect the fractures to propagate into the Millstone Grit. If the retained fluid did unexpectedly migrate into the Millstone Grit, the quality of water in the Millstone Grit and the retained fluid will be so similar that there will be no significant environmental impact.

> We have assessed this process and we are satisfied that fracturing fluid that incorporates separated flowback fluid remains non-hazardous. …"

11. Table S3.2 to the 2015 Permit imposed a daily injection limit of 765m^3 fracturing fluid per day.

12. On 23 June 2017 Cuadrilla applied to vary the 2015 Permit in five ways, which included an application to amend Table S3.2 to change the maximum daily discharge of 765m^3 per day to be consistent with the original Waste Management Plan ("WMP") limit of 765m^3 per hydraulic fracturing stage, which the Agency had approved as part of the permit approval process in 2015.

13. The Agency consulted on the application in July 2017. The Claimant responded to that consultation on 3 August 2017, raising concerns that this will result in "larger quantities of waste flowback fluid [being] produced within a given timeframe"; that the amount of waste flowback produced might exceed the UK's treatment capacity; that Cuadrilla and the Agency had failed to clearly identify how much flowback fluid might be produced; and that there had not been a BAT assessment of Cuadrilla's proposals for the treatment and disposal of flowback fluid at the Site.

14. In November 2017, following the open consultation, the Agency published a draft decision and opened a minded-to consultation.

15. The Claimant responded to that consultation on 4 December 2017 and raised a new concern about the Agency's failure to assess alternative techniques which would maximise the rate of flowback fluid re-use (rather than provide an alternative to offsite treatment) and drew attention to the availability of electrocoagulation as such a technique. At paragraph 20 of their letter, they wrote:

> "Electrocoagulation treatment of flowback fluid would accord with the waste hierarchy by treating waste on site, removing suspended solids and other substances from the flowback fluid thus making it more suitable for re-use. If the re-use of flowback fluid can be maximised, less fresh water will be required for fracking and less waste flowback fluid will need to [be] transported off site for treatment and disposal."

The Claimant's response appended a report by Dr Alan Watson of Public Interest Consultants which referred to academic literature which indicated that electrocoagulation was an "emerging technology" which had been used to treat hydraulic fracturing waste waters, referred to the Agency's approval of electrocoagulation as part of the on-site treatment of flowback fluid for re-use at Kirby Misperton site (referred to as "KM8"), and expressed his view that it had the potential to increase the proportion of flowback fluid which could be re-used and thus reduce the environmental impacts of the scheme.

16. On 11 December 2017 the Agency made the Decision and issued a varied permit notice which was accompanied by a decision document giving reasons for the Decision ("the Variation Decision").

17. The Variation Decision stated at paragraph 3.1.3:

> "Amend table S3.2 to change the maximum daily discharge of 765m^3 per day to be consistent with the Waste Management Plan limit of 765m^3 per hydraulic fracturing stage:
>
> This change to reflect the wording of the approved Waste Management Plan. The Applicant has clarified that multiple stages may be carried out on a daily basis.
>
> There is no increase in risk to groundwater associated with this change. The maximum quantity of waste flowback fluid that can be stored on site has not been changed and remains at 3000 cubic metres.
>
> As stated in section 5.9 Table 5 of the approved Waste Management Plan, this waste will be regularly removed and taken to an off-site approved waste facility. In the event that the operator could not find somewhere to take their waste, the operator would have to take the necessary measures to ensure that no further waste of this type is generated until alternative treatment/disposal routes were in place."

Legal Framework

The Mining Waste Directive (2006/21/EC) ("the Directive")

18. The recitals to the Directive include the following:

> "(4) In accordance with the objectives of Community policy on the environment, it is necessary to lay down minimum requirements in order to prevent or reduce as far as possible any adverse effects on the environment or on human health which are brought about as a result of the management of waste from the extractive industries, such as tailings (i.e. the waste solids or slurries that remain after treatment of minerals by a number of techniques), waste rock and overburden (i.e. the material that extractive operations move during the process of accessing an ore or mineral body, including during the pre-production development stage), and topsoil (i.e. the upper layer of the ground) provided that they constitute waste as defined in Council Directive 75/442/EEC of 15 July 1975 on waste.
>
> (11) In order to remain true to the principles and priorities identified in Directive 75/442/EEC and, in particular, Article 3 and 4 thereof, Member States should ensure that operators engaged in the extractive industry take all necessary measures to prevent or reduce as far as possible any negative effects, actual or potential, on the environment or on human health which are brought about as a result of the management of waste from the extractive industries."

19. Article 1 of the Directive headed "Subject matter" states:

> "This Directive provides for measures, procedures and guidance to prevent or reduce as far as possible any adverse effects on the environment, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human health, brought about as a result of the management of waste from the extractive industries."

20. Article 4 is headed "General requirements", and provides:

> "1. Member States shall take the necessary measures to ensure that extractive waste is managed without endangering human health and without using processes or methods which could harm the environment, and in particular without risk to water, air, soil and fauna and flora, without causing a nuisance through noise or odours and without adversely affecting the landscape or places of special interest. Member States shall also take the necessary measures to prohibit the abandonment, dumping or uncontrolled depositing of extractive waste.
>
> 2. Member States shall ensure that the operator takes all measures necessary to prevent or reduce as far as possible any adverse effects on the environment and human health brought about as a result of the management of extractive waste. This includes the management of any waste facility, also after its closure, and the prevention of major accidents involving that facility and the limiting of the consequences for the environment and human health.
>
> 3. The measures referred to in paragraph 2 shall be based, *inter alia*, on the best available techniques, without prescribing the use of any technique or specific technology, but taking into account the technical characteristics of the waste facility, its geographical location and the local environmental conditions."

21. Article 5 is headed "Waste management plan", and provides, so far as is relevant:

> "1. Member States shall ensure that the operator draws up a waste management plan for the minimisation, treatment, recovery and disposal of extractive waste, taking account of the principle of sustainable development.
>
> 2. The objectives of the waste management plan shall be [and the objectives are then set out].
>
> 3. The waste management plan shall contain at least the following elements [and the elements are then set out]
>
> 4. The waste management plan shall be reviewed every five years and/or amended, as appropriate in the event of substantial

> changes to the operation of the waste facility or to the waste deposited. Any amendments shall be notified to the competent authority.
>
> 6. The competent authority shall approve the waste management plan on the basis of procedures to be decided by the Member State and shall monitor its implementation."

22. "Substantial change" is defined in Article 3(29) to mean "a change in the structure or operation of a waste facility that, in the opinion of the competent authority, may have significant negative effects on human health or the environment".

23. Article 7 headed "Application and permit" provides, so far as is relevant:

> "1. No waste facility shall be allowed to operate without a permit granted by the competent authority. The permit shall contain the elements specified in paragraph 2 of this Article and shall clearly indicate the category of the waste facility in accordance with the criteria referred to in Article 9.
>
> …
>
> 2. The application for a permit shall contain at least the following details:
>
> (c) the waste management plan pursuant to Article 5;
>
> 3. The competent authority shall only grant a permit if it is satisfied that:
>
> (a) the operator complies with the relevant requirements under this Directive;
>
> 4. Member States shall take the necessary measures to ensure that competent authorities periodically reconsider and where necessary, update permit conditions:
>
> - where there are substantial changes in the operation of the waste facility or the waste deposited;
>
> - on the basis of monitoring results reported by the operator pursuant to Article 11(3) or inspections carried out pursuant to Article 17;
>
> - in the light of information exchange on substantial changes in best available techniques under Article 21(3)."

The Environmental Permitting (England and Wales) Regulations 2016/1154 ("the 2016 Regulations")

24. The 2016 Regulations, particularly Schedule 20, implement the Directive in the UK.

25. Regulation 20, headed "Variation of an environmental permit", gives the regulator power to vary any environmental permit on the application of the operator or on its own initiative.

26. Regulation 35, headed "Specific provisions applying to environmental permits", provides that Schedule 7, together with other Schedules, shall have effect. Schedule 7 applies to every Part A installation, which includes the installation at the Site. Paragraph 3 of Schedule 7 headed "Exercise of regulator's functions: general" states:

> "The regulator must exercise its functions under these Regulations for the purpose of achieving a high level of protection of the environment taken as a whole by, in particular, preventing or, where that is not practicable, reducing emissions into the air, water and land."

Paragraph 6, headed "Developments in best available techniques", provides:

> "**6**(1) The regulator must ensure that it is informed of developments in best available techniques and of the publication of any new or updated BAT conclusions and where appropriate must exercise its functions so as to encourage the application of emerging techniques, in particular those identified in BAT reference documents."

27. Schedule 20 applies in relation to every mining waste operation. It provides, so far as is relevant:

> "**3. Applications for grant or variation of an environmental permit**
>
> (1) The regulator must require that every application for the grant or variation of an environmental permit in relation to a mining waste operation involving a mining waste facility to which Article 7 of the Mining Waste Directive applies includes—
>
> (a) the information specified in Article 7(2) of that Directive, …
>
> (3) The regulator must require that every application for the grant or variation of an environmental permit in relation to any other mining waste operation includes a waste management plan.
>
> **7. Exercise of relevant functions**
>
> The regulator must exercise its relevant functions so as to ensure compliance with the following requirements of the Mining Waste Directive
>
> (b) Article 4

(e) Article 7(1) and (3)(a);

12. Developments in best available techniques

(1) The regulator must ensure that it is informed of developments in best available techniques."

Grounds of Challenge

28. The Statement of Facts and Grounds ("SFG") raises three grounds of challenge: first, that the Agency breached the requirements of the 2016 Regulations and the Directive (and the Industrial Emissions Directive) by failing to give any or any adequate consideration to whether electrocoagulation would constitute BAT for the treatment and re-use of flowback fluid as part of the permitted activities under the varied permit ("the Varied Permit") (**Ground 1**); second, and alternatively, under paragraph 6 of Schedule 7 and paragraph 12 of Schedule 20 to the 2016 Regulations, the Agency breached its duty to encourage use of the emerging techniques at the Site when deciding whether to grant the variation (**Ground 2**); and third, when considering whether to grant a variation of the permit the Agency failed to consider the Claimant's representations made during the consultation process that electrocoagulation was BAT for managing flow-back fluid. (**Ground 3**).

29. In their skeleton argument on behalf of the Claimant Mr Reed and Mr Dale-Harris accept that Grounds 2 and 3 are more conveniently considered with and as part of Ground 1.

The Parties' Submissions and Discussion

30. Mr Reed and Mr Dale-Harris identify the key legal issue between the parties as being whether there was a duty upon the Agency to consider what amounted to BAT for flowback fluid when dealing with the application for a varied permit. They submit that there was such a duty upon the Agency.

31. Mr Buley and Ms Lieven observe that the main argument advanced by the Claimant under Ground 1 in the SFG was that the Agency is required to reconsider the contents of the WMP on each occasion when an operator makes a variation of an existing mining waste permit. (See SFG, paras 68-72). That submission, as I understand it, is no longer pursued by the Claimant. The way the Claimant now puts its case is as set out at paragraphs 24-29 of their skeleton argument:

> "24. If the Agency had to be satisfied that the application/WMP used BAT when granting permission for the 2015 Permit, it follows that it had to be satisfied of the same matters when it granted the Varied Permit. In simple terms, there is an overarching duty to assess whether, in the circumstances of the application in question, the proposal complies with BAT.
>
> 25. This does not mean that the Agency, as the competent authority, must, in order to comply with its duties, undertake a full assessment of BATs for each aspect of a regulated facility's operation when deciding whether to grant either a variation

application or a fresh permit (or, indeed, when exercising any other functions under the EP [Environmental Protection] Regs or the MWD [Mining Waste Directive]). The extent of the requirement to satisfy the duty will be related to the nature of the specific function carried out and the circumstances within which the decision is made. In the context of a variation application, for example, the extent of considerations may be quite limited; there may be no changes in the scientific or technological issues at play in the application or there may be no representations or objections which suggest that any different decision may need to be made on the terms of the application.

26. Alternatively, if the Agency has already previously approved a WMP under an earlier application and has received no representations on the variation application suggesting a need to reconsider any part of the facility's technical operation, the Agency would be able to conclude that its decision to grant the variation complied with the requirements of the EP Regs and the WMD.

27. But, in each instance, there must be consideration of the relevant duties, including an assessment of whether the facilities they are about to permit are operated in accordance with BAT.

28. Turning to the present case, the Agency was not, therefore, necessarily required to reassess every issue which it considered before granting the original permit, nor was it prevented from relying on its previous reasons for concluding that the MWD had been complied with and the installation had used BATs.

29. But the Agency needed, in order to satisfy its overarching duties as identified above, the consider the specific question in this application of whether the proposals for removing the $750m^3$ per day limit for the discharge of fracturing fluid and dealing with the increased rate of flow back that would be likely to arise as a result were in accordance with BAT, for the following reasons [which included, that a consultee, the Claimant, had expressly advocated the use of electrocoagulation for this purpose which was contended to provide water saving benefits, and provided an expert report drawing attention to cogent evidence that the technique was being marketed; the Claimant's representations concerning electrocoagulation and Dr Watson's expert evidence were plainly 'new matters'; the Agency had in April 2016 concluded that electrocoagulation was BAT for the treatment and re-use of flowback fluid in respect of KM8; and electrocoagulation was known to the Agency to be 'an emerging technique' which would allow for the re-use of water on site, minimise waste generation and reduce fresh water requirements]."

32. The "overarching duties" that require the Agency to consider BAT arise, the Claimant contends, from two sources. First, there are general requirements which take effect when the Agency is carrying out its functions and that are applicable whether the Agency is considering an application for a varied permit or a fresh permit. For this submission Mr Reed relies on paragraphs 3 and 6 of Schedule 7 and paragraph 12 of Schedule 20 of the 2016 Regulations.

33. Second, when deciding whether to grant a variation permit the 2016 Regulations and the Directive require consideration of whether both the application and the WMP accompanying it comply with BAT. Paragraph 7 of Schedule 20 requires the determination of the application be conducted "so as to ensure compliance" with specified provisions for the Directive, including Article 4 and Article 7(1) and (3)(a). Further, ensuring that it is "satisfied" the operator will comply with the requirements of the Directive under Article 7(3), which will include that it meets the objectives specified under Article 5. This will require consideration, Mr Reed submits, of whether the WMP sets out sufficient information to establish compliance with the relevant objectives of the Directive.

34. The process for obtaining a permit for a mineral waste facility is, as Mr Buley and Ms Lieven point out, set out in the Directive. The 2016 Regulations refer back to the Directive, so it is the interpretation of the Directive which is critical in this case.

35. Any application for a permit under Article 7 of the Directive and paragraph 3 of Schedule 20 of the 2016 Regulations must be accompanied by a WMP. The Agency must consider whether to approve a WMP (Article 5(6) of the Directive). An application for a permit cannot be granted unless and until the relevant WMP has been approved. An application to vary a permit must be accompanied by a WMP. However, there is nothing in the Directive that says that an application to vary an extant permit has to be accompanied by a new, varied or amended WMP. There is also nothing in the Directive or the 2016 Regulations that automatically requires the Agency to reassess a plan that has already been approved. Rather, the circumstances in which an approved WMP must be reviewed or amended are set out in Article 5(4) of the Directive. They are either (1) after five years, or (2) where there are "substantial changes to the operation of the waste facility". Mr Buley observes that the Claimant does not suggest there has been a development in relation to whether electrocoagulation is BAT such as to engage Article 7(4). Article 7(3), on which Mr Reed places reliance, deals principally with applications for new permits.

36. I agree with Mr Buley and Ms Lieven that paragraph 6 of Schedule 7 to the 2016 Regulations and paragraph 12 of Schedule 20 do not assist the Claimant. They are entirely general requirements, not linked in any direct way to the specific decision to grant a permit or a variation to a permit. I reach a similar conclusion in relation to the reliance the Claimant places on paragraph 7 of Schedule 20 and Article 4 of the Directive. Article 4 contains a general obligation which cannot in itself mean that the Agency is required to reassess every aspect of an operation on each and every occasion that an operator seeks a variation, however minor, of an existing permit. Paragraph 7 of Schedule 20 simply says that the Agency must exercise its functions so as to ensure compliance with the named articles. It does not alter or extend the duties under the Directive.

37. The merit of the analysis of Mr Buley and Ms Lieven, which in my view is plainly correct, is that it creates clarity. Article 5(4) of the Directive expressly provides for the WMP to be reviewed "every five years" or if there are "substantial changes to the operation of the waste facility or to the waste deposited". This is, as Ms Lieven describes it, the process by which the WMP is updated, and any changes in BAT are taken into account in a controlled and predictable fashion. Similarly, under Article 7(4) of the Directive there is a requirement to reconsider and, where necessary, update permit conditions where there are "substantial changes in the operation of the facility or the waste deposited". What amounts to a "substantial change" is defined in Article 3(29). Each bullet point in Article 7(4) cross-refers to other parts of the Directive and creates a comprehensive set of circumstances where the Agency has to reconsider permit conditions.

38. Article 5(4) (pursuant to the definition of substantial change in Article 3(29)) creates what Mr Buley describes as "a clear threshold". I agree with Mr Buley that there can be no basis for the court to supplement that with the test proposed by the Claimant (see para 31 above) which, in my view, would create considerable uncertainty.

39. The Claimant's argument, as Ms Lieven observes, is contrary to the words and scheme of the Directive, as it would be imposing a duty to reconsider the WMP and potentially vary conditions even where, as in the present case, there was no substantial change to the operation of the facility. I agree that the Claimant's analysis is also contrary to the overall approach of the Directive. The effect would be that on each occasion an operator made an application for a variation of a permit it would be at risk of being subject to a significant change in its conditions unrelated to the variation in question.

40. I am satisfied that the circumstances in which an approved WMP must be reviewed or amended are set out exhaustively in Article 5(4) of the Directive. Accordingly, the Agency was not required to reconsider or review the WMP in this case, there being no substantial changes to the operation of the waste facility.

41. Having reached this conclusion I will take the other issues raised by this claim more shortly.

42. The Claimant contends that the Agency erred in thinking that the proposed change to Table S3.2 had a purely formal effect, that is of bringing the permit into line with the WMP. However, as Mr Buley points out, the Agency did not say this. In the context of considering the proposed change it was plainly relevant to point out that the change in question did bring the permit into line with the WMP, not least because Article 7(3) requires the permit to be refused if it contradicts the WMP. Mr Reed retorts that the WMP does not specifically contemplate multiple stage fracking per day. Accordingly, the Agency proceeded on the basis of an error of fact. I reject this submission. There was no error of fact. The WMP imposes no constraint on the number of stages of fracking per day.

43. The Agency did however consider the change in its own right and reached the conclusion that it was not significant. Mr Gary Edwards, in his witness statement on behalf of the Agency, said at para 5: "… the [Agency] continues to assert that there have been no substantive changes proposed by [Cuadrilla] as a result of the variation

that would effectively require a fresh BAT assessment". That is consistent with the reasons which the Agency gave in granting the variation.

44. The Claimant contends that the Variation Decision has a highly significant substantive effect, which was to remove the limit on the number of fracking stages that could take place each day. As such the Claimant appears to be advancing an alternative argument that the changes in the variation application were "substantial" and therefore Article 5(4) of the Directive applies. However, as Ms Lieven observes, this argument must necessarily be based on *Wednesbury* irrationality, which is a high hurdle when challenging the decision of the expert regulator in a complex technical field. Mr Reed advances the argument on the basis that there was an error of fact made by the Agency (see Claimant's skeleton argument at para 45). However, he does not identify any error of fact. I agree with Ms Lieven that his submission amounts to no more than highlighting a disagreement on the finding that the change was not substantial. Mr Watson in his witness statement (at para 26) suggests that there may be more HGV movements, but it is not clear why this would be so. Cuadrilla maintain that the same percentage of Flowback Fluid can be recycled so the only change is that the turnaround on the flowback fluid will be quicker.

45. Further, I do not accept that the Agency ignored the Claimant's representations made on 4 December 2017. The Variation Decision (at page 21) refers to them under the heading "Advertising and consultation on the Draft Decision":

> "This section reports on consultation on our draft decision carried out between 06/11/2017 and 04/12/2017.
>
> A total of 33 responses were received from individual members of the public as well as Friends of the Earth, Sefton Green Party.
>
> The issues raised in the consultation were the same as those raised previously..."

46. The Claimant contends that this reference to their representations shows that the Agency erred because the representations made on 4 December 2017 included new arguments about electrocoagulation, so they were not the same "as those raised previously". Mr Reed says that electrocoagulation was not considered in 2014. However, the Claimant had in fact raised electrocoagulation in 2015 when the Agency had addressed the points made, and again in 2017. In circumstances where, as I have found, the Agency was not under a duty to reconsider electrocoagulation as BAT I consider that the Agency was entitled to describe "the issues raised" as being the same as those raised before, and was not obliged to deal with the points in detail.

47. Finally, Mr Buley and Ms Lieven submit that it is highly likely that the outcome of the Variation Decision would have been no different if the Agency had given full consideration to whether electrocoagulation was now BAT for the proposed operations at the Site. Accordingly, even if there was some error of law, Mr Buley submits that the court should refuse relief under s.31(2A) of the Senior Courts Act 1981 ("the 1981 Act"). Ms Lieven goes further and suggests that s.31(3C) of the 1981 Act applies and a court should refuse to grant permission as there would be no difference in outcome.

48. I accept Mr Buley's submission that it is highly likely that the outcome for the Claimant would not have been substantially different if the conduct complained of had not occurred.

49. The Claimant has placed considerable weight on the fact that Third Energy, another company seeking to undertake hydraulic fracturing for shale gas, had intended to use electrocoagulation at their site at Kirby Misperton. However, as Mr Nicholas Mace, Cuadrilla's Health, Safety, Environmental and Planning Manager explained in his witness statement (at para 16), "the composition of the hydraulic fracturing fluids being used at the Cuadrilla site and the Third Energy site are chemically different… Furthermore, the compositions of fluid and minerals contained in the shale rock at Cuadrilla's PNR site and the Third Energy site may also be different". In any event Third Energy has decided to remove the use of electrocoagulation from their WMP. By letter dated 9 October 2017 Third Energy informed the Agency that they were doing so "as it is no longer considered viable to treat the flowback water on site and re-use it in subsequent zones being stimulated".

50. It is clear from the first witness statement of Mr Edwards, a Senior Advisor employed by the Agency, (at paras 6-10) that while the Agency consider electrocoagulation to be "a promising technique that could potentially be used alongside other water treatment processes in the treatment of flowback fluid", it is "considered to be unsuitable as a treatment method at the Site, which is bigger in scale than the operations being conducted by Third Energy at its KM8 site" (para 10). Further in Mr Edwards' second witness statement (at para 17) he notes that electrocoagulation is not considered BAT under the European Commission's current draft Best Available Techniques Reference Document (BREF); and confirms that whatever its approach to scheduled hydraulic fracturing stages, Cuadrilla will be confined to the volumes of hydraulic fracturing fluid set out in its varied permit. Hence the concern regarding allowing multiple fracturing stages per day is not warranted.

Conclusion

51. I consider that the grounds of challenge are arguable. Permission is therefore granted. However, for the reasons I have given, none of the grounds of challenge are made out. Accordingly, this claim is dismissed.