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23rd November 2017

Dear Alison Woodfield

Planning application for: Cuadrilla Balcombe Limited, Lower Stumble Exploration Site, London Road, Balcombe, Haywards Heath, West Sussex, RH17 6JH
Reference: WSCC/040/17/BA

Thanks you for consulting Public Health England (PHE) on the above planning application submitted to the West Sussex County Council by Cuadrilla. It is understood that the application is seeking temporary permission for exploration and appraisal comprising the flow testing and monitoring of the existing hydrocarbon lateral borehole along with site security fencing, the provision of an enclosed testing flare and site restoration. It is stated in the application that the applicant does not seek permission to undertake hydraulic fracturing under this planning application (nor in the future).

The site is located in a predominantly rural area, lying directly parallel to a railway line which runs northward to Balcombe village. The closest residential receptors to the site are at Kemp's house approximately 350m to the northwest of the proposed site boundary. Residential properties are also located approximately 600m east; 500m to the southwest; with the village of Balcombe located approximately 700m north of the site boundary.

Natural gas will be produced during flow testing and will be burnt off from the ground flare. The gas flaring will be up to 5000m³ per day for 7 days and generators are anticipated to be operational for up to 12 weeks. It has been assumed that 2 generators will be operating on site however it is anticipated that only 1 will operate at any one time with the second as a back up.

The proposed operations are covered by two environmental permits that have previously been issued by the Environment Agency under the *Environmental Permitting (England and Wales) Regulations 2010*:

- Mining waste permit (ref: EPR/AB3307XD), which was issued in July 2013 and covers the management of non-inert, non-hazardous and hazardous extractive waste, with a management facility; and
- Radioactive substances regulations permit (ref: EPR/PB3439DP), which was issued in September 2013 and allows Cuadrilla to accumulate and dispose of any radioactive waste.

The permits require air quality, surface water and ground water to be monitored during the proposed operations. In response to a Regulation 60 request from the EA, an application to update the two permits has been issued and is currently being considered by the EA.

In terms of air quality the applicant has focussed the assessment on operational phase impacts on local air quality from:

- Exhaust emissions from traffic associated with the proposed development;
- Emission to air from flaring of gas; and
- Emission to air from generators used to power equipment on site.

The site is not located within or close to any Air Quality Management Areas (AQMAs). The applicant states that the main potential impact on air quality of the proposed development are emissions from the enclosed ground flare and the two generator engines. On this basis the applicant has identified the key air pollutants of concern as nitrogen oxides, carbon monoxide and particulate matter from the generators. The application states that gas to be burnt during flaring is predominantly methane and does not contain sulphur or benzene and therefore sulphur dioxide and benzene are not considered further in the assessment.

The applicant has also considered the potential impacts of increased traffic emissions but due to the low number of proposed vehicle movements per day no quantitative assessment of potential emissions has been conducted. The results of the air quality assessment indicate that the predicted annual and hourly NO₂ concentrations, annual and 24-hour mean PM₁₀, annual mean PM_{2.5} and maximum 8-hourly rolling mean carbon monoxide (CO) concentrations at each of the defined human receptor locations, with the proposed development operational, are all well below the relevant AQS objectives.

The applicant suggests there will be minimal risk to ground and surface water from the proposed operation due to a combination of measures employed such as the use of an impermeable membrane placed around the site to contain any spill, protective casing of wells and removal of all on-site waste including contaminated water to suitably licensed off-site treatment facilities. The well testing will involve the use of 10% hydrochloric acid as an acid wash to clean the immediate area of the wellbore. The applicant states that typical radial penetration from the wellbore is less than 6 inches based on natural permeability.

The site has been assessed as having a low risk of flooding from all sources including fluvial, tidal, surface water, groundwater and artificial drainage

The applicant has included risk assessments for potential off site impacts due to noise and odour. The applicant notes that as there will be no significant construction or any drilling works, odour and dust associated with this type of well testing development are typically minimal and given the closest residential receptor is approximately 350m from the site, the applicant considers that these emissions will be negligible and assessment of odour and dust has been scoped out.

Summary

Based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from potential emissions associated with the proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with relevant technical guidance or industry best practice.

PHE would like to suggest that:

- The planning authority consult the local authority environmental health department for matters relating to noise, odour, dust and other nuisance emissions
- The planning authority also consult the Director of Public Health for matters relating to wider public health impacts

Any additional information obtained by the planning authority in relation to these comments should be sent to PHE for consideration. Such information could affect the comments made in this response.

Yours sincerely

Robie Kamanyire

CCs: Surrey and Sussex PHE Centre
Public Health Department, West Sussex County Council