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Consents given under the Petroleum Act 1998 and Reviews under the Assessment of Environmental Effects Regulations 1999

Conoco (U.K.) Limited

Project Description:

ConocoPhillips (UK) Ltd.,(ConocoPhillips) intend to increase production from the Europa Gas field by drilling an extension well in the Europa Field, which currently consists of 4 wells tied back to the Europa Normally Unmanned Installation (NUI). It is anticipated that the gas produced from this well will take Europa field over its current production consent by more than 500,000 m³ /day of gas and therefore an ES is required under the Offshore Pipelines (Assessment of Environmental Effects) Regulations 1999 (as amended). The proposed extension well E5 to the Europa Field is located in the UKCS Block 49/22a, in the Southern North Sea, approximately 70 Km from the North Norfolk coast and 50Km west of the UK/Netherlands median line, in water depths of approximately 35 metres.

The ES included an assessment of the impacts of the drilling of the extension well for completeness, although the regulations only require an ES to assess the impact of the increased production. The well was also the subject of a PON15B application.

If the well is successful, ConocoPhillips intend to clean up the well and go directly into production through the existing NUI Europa Platform which is tied back to the LOGGS facility. All produced fluids will be exported to and processed at the Theddlethorpe Gas Terminal via existing pipeline infrastructure.

ConocoPhillips intend to drill the well as a single extended reach slot-recovery well drilled through the existing platform using a jack up rig. As the well is a sidetrack of a previously drilled well, all sections will be drilled with a riser in place, with the 12.25" section drilled with low toxicity oil based mud (LTOBM) and all 206 tonnes of LTOBM cuttings generated skipped and shipped to shore. The lower sections of the well (8.5" & 6") will be drilled with water based mud (WBM) with 116 tonnes of WBM cuttings discharged to sea.

The well will be cleaned up before being brought into production, with a worst case estimate of 4,290 tonnes of CO₂ being generated during clean up.

At peak production in 2009, it is estimated that the extension well will produce approximately 65.1 mmscf/day of gas, which is expected to continue for approximately 5 years until 2014. Produced water will be transported in a closed loop system via the existing infrastructure to the LOGGS complex where the gas and fluids phases are separated. The produced water is then sent onto the Theddlethorpe Gas Terminal where it will be treated prior to discharge. No modifications to the host LOGGS will be required to accommodate the increase in production from Europa and there will be no increase in atmospheric as a result of the extension of the Europa field, due in part to minor back-out of existing Europa production, the decline of the existing LOGGS production and total throughput, and because the existing compression system on LOGGS is currently operating in partial re-cycle. When E5 is brought on line the recycle valves will be closed and E5 will be used to load the first stage of the compression trains instead of the recycled gas. There will therefore be no impact on the PPC permit currently in place for LOGGS.

The EIA identified the following activities as having the potential to cause an environmental impact and were discussed further within the ES:

- Physical Presence of Jack up Rig and Vessels
- Permitted discharge and accidental spillage of water based mud and cuttings
- Accidental spillage of hydrocarbons

The EIA identified the following environmental sensitivities:

Protected Habitats: Annex 1 Habitats – The Europa Field is situated approximately 14 Km within the proposed boundary for the North Norfolk Sandbanks possible Special Area of Conservation (pSAC). There will be a transient and localised effect of the spud cans smothering benthic infauna and there is a contingency to rock dump a maximum of 3,000 tonnes for rig stabilisation. However the area is minimal (463m³) and equates to 0.0000107% of pSAC and as the rig will be located over the platform the impact will be within the 500m exclusion zone. Recovery is also expected to be rapid following cessation of drilling, especially as there will be only limited discharge of cuttings (116 tonnes of WBM cuttings). As production from E5 will be through the existing Europa infrastructure, and there will be no additional visits by ship or helicopter above that currently required for the operation and maintenance of the unmanned platform, there will be no offshore discharge of produced water, and there will be no increase above current levels of atmospheric emissions as a result of bringing on the E5 well, it is not felt that the production from the E5 well will have a significant impact on the structure and function of the North Norfolk Sandbanks pSAC.

Protected Species: Harbour Porpoise have been recorded in block 49/22 during the proposed drilling period in low to high numbers. However any disturbance is expected to be limited to the drilling period not production and the short duration and localised disturbance during this period is considered unlikely significantly impact marine mammals in the area including Annex II species.

Consultees:

The statutory consultees for this project were the Joint Nature Conservation Committee (JNCC) and the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). They made the following comments:

(i) JNCC: JNCC requested further information with regard to the site survey information, with particular reference to demonstrating there is no evidence of Annex 1 Habitats. Following the provision of additional information by ConocoPhillips on the 15 April via an update to the PON15B, the 01 July & 07 August 2008, JNCC confirmed that they are content for the development to receive consent but recommended that an appropriate assessment screening is undertaken as the development lies within the boundary of the North Norfolk Sandbanks pSAC. Having undertaken a screening exercise we are content that neither the re-entry drilling of the E5 extension well or the production through the Europa NUI & LOGGS will have a significant effect on the function or structure of the pSAC. In reaching this decision BERR has taken into consideration the limited footprint of the drill rig which will be within the 500m zone of the platform, the limited footprint of the drill cuttings (116 tonnes) due to the short length to be drilled with WBM and the limited duration of drilling. Production will not result in an increase in footprint as production will occur through existing infrastructure and will not require an increase in power generation or result in an increase in atmospheric emissions.

(ii) CEFAS: Commented that “as noted in the project description this block is situated in an area where mackerel, plaice, lemon sole and sprat spawn. There are currently no restrictions on drilling in this block.”

Public Consultation: No comments were received as a result of the public consultation.

Further Information: Further information was requested from ConocoPhillips which incorporated those issues raised by JNCC and the internal BERR review. Additional information was provided by ConocoPhillips on the 15 April via the PON15B and on the 01 July and 07 August 2008, which adequately addressed the issues raised.

Conclusion: Following consultation and the provision of further information as detailed above, we are satisfied that this project is unlikely to have a significant environmental impact. In particular, we are content that it will not have a significant adverse effect on the marine environment in general or on any protected sites or species covered by the ‘Habitats Regulations.’

Recommendation: It is therefore recommended that the application to increase the production at Europa as a result of the drilling of the Europa E5 well is approved.