Our Ref: 01.01.01.01-5559U
UKOP Doc Ref:1269285

Offshore Petroleum Regulator
for Environment & Decommissioning

ITHACA ENERGY (UK) LIMITED
13 QUEEN'S ROAD
ABERDEEN
AB15 4YL

Registered No.: SC272009

Date: 6th April 2023

Department for Business, Energy
& Industrial Strategy

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [redacted]
Fax

www.gov.uk/beis
bst@beis.gov.uk

Dear Sir / Madam

THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2020
PIPELINE PL6055 Captain EOR

A screening direction for the project detailed in your application, reference PL/2359/0 (Version 1), dated 2nd March 2023 has been issued under regulation 6 of the above Regulations. The screening direction notice, and any relevant conditions and comments are attached. A copy of this screening direction will be forwarded to the application consultees, the Oil and Gas Authority and published on the gov.uk website.

If you have any queries in relation to this screening direction or the attachments, please do not hesitate to contact [redacted] on [redacted] or email the Environmental Management Team at bst@beis.gov.uk.

Yours faithfully

Signature Not Verified
Digitally signed by Environmental Section
Date: 2023.04.06 10:35:21 BST
Reason: On behalf of the Department for Business Energy and Industrial Strategy
Location: The Department for Business Energy and Industrial Strategy

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THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2020

SCREENING DIRECTION CONFIRMING THAT AN ENVIRONMENTAL IMPACT ASSESSMENT IS NOT REQUIRED

PIPELINE PL6055 Captain EOR

PL/2359/0 (Version 1)

Whereas ITHACA ENERGY (UK) LIMITED has made an application dated 2nd March 2023, under The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020, and whereas the Secretary of State has considered the application and is satisfied that the project is not likely to have a significant effect on the environment; in exercise of the powers available under regulation 6, the Secretary of State hereby directs that the application for consent in respect of the project need not be accompanied by an Environmental Impact Assessment, provided that the project is carried out as described in the application for the screening direction and in accordance with the conditions specified in the attached schedule.

In giving a screening direction under regulation 6 of the above Regulations, the Secretary of State accordingly gives agreement to the Oil and Gas Authority to the grant of consent for the project as detailed in the application, PWA/4408.

Effective Date: 6th April 2023

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THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2020

SCHEDULE OF SCREENING DIRECTION CONDITIONS

The grant of this screening direction is conditional upon the screening direction holder complying with the following conditions.

1 Screening direction validity

The screening direction shall be valid from 1 May 2023 until 30 April 2024.

2 Commencement and completion of the project

The holder of the screening direction must confirm the dates of commencement and completion of the project covered by the screening direction. Notification should be sent by email to the Environmental Management Team Mailbox: bst@beis.gov.uk

3 Nature of stabilisation or protection materials

Rock deposits

20,000 tonnes of clean, inert rock material, containing minimal fines, (The quantity of rock deposited should be the minimum required to provide the necessary stabilisation or protection, and any surplus rock must be returned to land).

Sand bags deposits

60t tonnes of clean, inert rock or sand material containing minimal fines contained within 1 tonne capacity bags which shall be reovered to the vessel. (The number of bags deposited should be the minimum required to provide the necessary protection, and any surplus bags must be returned to land).

Grout bags deposits

221.25 tonnes of grout contained within 25 kilogramme capacity biodegradable bags. (The number of bags deposited should be the minimum required to provide the necessary protection, and any surplus bags must be returned to land).

Concrete mattress deposits

484 concrete mattresses, each measuring 6 metres x 3 metres x 150 centimetres, and 15 concrete mattresses each measuring 12m x 3m x 150 centimetres. (The number of mattresses deposited should be the minimum required to provide the necessary protection, and any surplus mattresses must be returned to land).

4 Location of pipeline and stabilisation or protection materials

Within an area bounded by the coordinates as specified in the applocation.

5 Prevention of pollution

The holder of the screening direction must ensure that appropriate measures are taken to minimise discharges, emissions and waste, in particular through the appropriate use of technology; and to ensure that necessary measures are taken to prevent incidents affecting the environment or, where they occur, to limit their consequences in relation to the environment.

6 Inspections

Should the Department consider it necessary or expedient for an inspector appointed by the Secretary of State to investigate whether the conditions of the screening direction are being complied with, the holder of the screening direction shall afford the inspector with such facilities and assistance as the inspector considers necessary to exercise the powers conferred by the regulations. The holder of the screening direction shall additionally ensure that copies (electronic or paper) of the screening direction and any other relevant documents are available for inspection by the inspector at:

a) the premises of the holder of the screening direction; and
b) the facilities undertaking the project covered by the screening direction.

7 Monitoring

The results of any pre or post-placement surveys carried out to confirm the necessity for the deposits covered by the screening direction and/or to confirm the accurate positioning of the stabilisation or protection materials, should be forwarded to the Department following completion of the surveys

8 Check monitoring

Should the Department consider it necessary or expedient to undertake an independent monitoring programme to assess the impact of the project covered by the screening direction, the screening direction holder shall afford the Department with such facilities and assistance as the Department considers necessary to undertake the work.

9 Atmospheric emissions returns

Following completion of the project covered by the screening direction, the holder of the screening direction shall report all relevant atmospheric emissions, such as combustion emissions, using the appropriate Environmental Emissions Monitoring System (EEMS) reporting forms.

10 Deposit returns

The holder of the screening direction shall submit a report to the Department following completion of the deposit covered by the screening direction, confirming the quantity of materials deposited and the estimated area of impact, using the appropriate Environmental Emissions Monitoring System (EEMS) reporting form. Where no deposits are made, a 'nil' return is required.

11 Unauthorised deposits

Following completion of the project covered by the screening direction, the holder of the screening direction shall recover any materials accidentally or temporarily deposited on the seabed, such as debris, temporary containers, structures or deposits, or scientific instruments, and shall return the materials to land. If it is not possible to recover any of these deposits, full details of the materials remaining on the seabed must be reported to the Department in accordance with the requirements of Petroleum Operations Notice No.2 (PON2).

12 Screening direction variation

In the event that the holder of the screening direction proposes changes to any of the particulars detailed in the application for a screening direction, the holder must notify the Department immediately and submit an application for a post screening direction amendment. The post screening direction must be in place prior to the amended proposals taking effect.

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COMMENTS ON THE APPLICATION FOR SCREENING DIRECTION

Section 1

The attention of screening direction holders is drawn to the following provisions regarding The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020.

1) You are deemed to have satisfied yourself that there are no barriers, legal or otherwise, to the carrying out of the project covered by the screening direction. The issue of a screening direction does not absolve the screening direction holder from obtaining such authorisations, consents etc that may be required under any other legislation.

2) The Department would draw your attention to the following comments:

The Department has no comments

3) All communications relating to the screening direction should be addressed to:

bst@beis.gov.uk

or

Offshore Petroleum Regulator for Environment & Decommissioning
Department for Business, Energy & Industrial Strategy
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [redacted]
Fax

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SCHEDULE OF SCREENING DIRECTION DECISION REASONS

The Secretary of State has decided that, based on the information provided, the project is not likely to have a significant effect on the environment. The main reasons for this decision are:

1) Decision reasons

The following provides a summary of the assessments undertaken by OPRED to determine whether an Environmental Impact Assessment is required for this project, summarises the information considered, the potential impacts and sets out the main reasons for the decision made. In considering whether an Environmental Impact Assessment is required or not, the following have been taken into account:

a) the information provided by the developer;

b) the matters listed in Schedule 5 of The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment Regulations 2020) (the Regulations);

c) the results of any preliminary verifications or assessments of the effects on the environment of the project; and

d) any conditions that the Secretary of State may attach to the agreement to the grant of consent.

Characteristics of the Project

Having regard, in particular, to the matters identified at paragraphs 1(a) to (g) of Schedule 5 to the Regulations, the characteristics of the project include the following:-

Summary of the Project

As part of the Captain Enhanced Oil Recovery field development, new polymer

injection wells and drill centres will be established in the Captain field. This application assesses the environmental impact of the installation of the subsea infrastructure that will connect the polymer injection wells to the Captain installations. This application includes:

- Six new 6" polymer injection flowlines approx. 5km long, with rigid tie in spools to be installed at new drill centres Area D and E, with a xmas tree for each well
- 1 riser control umbilical at BLP (326m)
- 2 control umbilicals at drill centre Areas D (4.7km) and E (5.8km)
- 3 subsea umbilical distribution centres (SUDS) (1 gravity and 2 piled) and associated well control jumpers at Captain BLP, Area D and Area E respectively
- 6 umbilical jumpers (all <100m in length) from each SUDS to each polymer injection well at Areas D and E
- All flowlines and umbilicals will be trenched and buried along the majority of their length, using jet trenching technology
- Mattresses (499) and grout bags (8850) will be used at the flowline and umbilical ends where they transition out of the trenches within the 500m safety zones
- In the event that there is upheaval buckling or additional protection is required for the pipelines, a 20,000t contingency of rock has been assessed as a worst case sceanrio
- 60 x 1t turning bollards, which are salt bags filled with sand, will be used at the BLP and Areas D and E, to assist with the positioning of the flowlines and umbilicals. Once in position, the sand will be deposited on the seabed and the sacks recovered to the vessel
- A guard vessel will be on site until the jet trenching activities have been completed to ensure fishing vessels in the area are aware of the exposed pipelines on the seabed
- Subsea baskets will be used for the tie in work at the BLP and both drill centres

Description of the Project

The Captain development began production with the field tied back to a Floating, Production, Storage and Offloading Vessel (FPSO). There were 2 subsequent topside developments - a Bridge Linked platform which serves Area's B and C drilling centres, and a Wellhead Protection Platform (WPP) which is a self-contained drilling rig position above Area A drill centre. Crude oil is exported from the FPSO via a shuttle tanker, and gas is exported and imported via the Frigg pipeline.

Produced water has been injected at Captain to maintain reservoir pressure since early field life. Polymer solution injection was proposed in the original Field Development Plan and was undertaken as a pilot project. Following a successful trial, the Captain EOR Project has been developed in 2 stages. Stage 1 commenced in 2017 and comprised the drilling of 6 polymer injection wells and 4 production wells at the WPP. Stage 2 has been split into 2 phases, with phase I commencing in 2022. This phase included the conversion of wells to polymer injection wells, brownfield

modifications to the topsides, installation of a new riser caisson at the BLP, and drilling of a new production well. Stage 2 Phase II forms part of this application, where 6 polymer injection wells are to be drilled, 2 new drill centres are to be installed, 1 new production well will be drilled, with all the associated infrastructure associated with the development. This application is the environmental assessment of the infrastructure pipelines, xmas trees and umbilical distribution centres. The project is due to commence Q2 of 2023 and should be completed by Q1 2024.

Polymer Injection (PI) Flowlines and EH (Electro-Hydraulic) Umbilicals

Three 6" PI wells will be trenched and buried from the BLP to Area D, with the same configuration for 3 x 6" PI flowlines at Area E. 2 EH umbilicals (1 for each drill centre) will also be trenched and buried along with the PI flowlines. The flowlines and umbilicals will be individually jet trenched and buried, with a corridor of disturbance of 100m wide (3 PI flowlines and 1 EH umbilical 20m apart to each drill centre). The pipelines require to be pressurised once laid in the trench, to lock in the expansion that the flowlines experience when in use. The option to lay the pipelines in the same trench was deemed too high a risk, as laying the pipelines in the same trench meant that the pipelines when pressurised, could buckle against each other and fail. The pipelines will be trenched to a depth of at least 0.6m from the top of the flowline to mean seabed level. Once trenched, the flowlines will be depressurised.

SUDS

2 piled SUDS will be installed at Areas D and E. The structures will have 4 piles at each corner (25m in length) and will be designed to be overtrawlable. The option to pile these structures instead of installing the structures under gravity is due to issues in the area with fishing vessel incursions into the existing subsea drill centres. The option to pile the structures was chosen to ensure the structures have a guaranteed foundation. 1 gravity SUDS will be installed at the BLP riser location which does not have the same issue with fishing incursions.

Protective Materials

A worst-case assessment has been included within the application, which has included 499 mattresses and 8850 x 25Kg grout bags, to stabilise/protect the end of the pipelines within the 500m safety zones. 60 turning bollards (60 x 1t salt bags containing sand) will be used to position the flowlines and umbilicals into place, with the sand deposited on the seabed and the bags recovered to the vessel. Rock (20,000 t) may be required for any upheaval buckling or any additional protection. A post lay survey will be undertaken to determine the depth of burial and the presence of any free spans.

Riser Umbilicals and smaller pipelines

A EH riser umbilical (326m) will be installed at the BLP from the new gravity SUDS. A number of smaller pipelines <80m in length, will be installed from the SUDS at each drill centre to each well, all installed within the 500m safety zone. These will not be

trenched and buried, and will be covered with protective materials.

The project will use a number of vessels during the construction phase of the project. These include vessels for construction support, jet trenching, rock dumping, diving and a guard vessel. The project is anticipated to last 135 days.

The permanent seabed deposits of grout bags, mattresses, turning bollards, rock (if used), SUDS and pipelines, will impact an area of 0.031km2. There will be a temporary disturbance of the seabed due to the jet trenching method, the temporary storage of the baskets and the movement and positioning of the mattresses, bollards and SUDS. It is estimated that the temporary seabed disturbance will be 1.095 km2.

No cumulative interactions are foreseen with any other existing or approved projects. There is no risk to human health from the works to install the pipelines or depositing the protective materials. There is no credible potential for a major accident or disaster to affect this project.

Any wastes associated with the project will be handled appropriately and no significant impacts are anticipated. The project is not at risk from natural disasters given its location in UK offshore waters.

Location of the Project

Having regard, in particular, to the matters identified at paragraphs 2(a) to (c) of

Schedule 5 to the Regulations, the environmental sensitivity of geographical areas

likely to be affected by the project has been considered as follows:-

The Captain field is located in the Outer Moray Firth area, approximately 191 km from the UK/Norwegian median line and 70km from the Scottish mainland. Survey data shows the sediments within the area to be indicative of a relatively homogenous sediment type comprising sand, with a lower fines content. There are small, localised areas of muddy sand, with pebbles, cobbles and boulders, but the main sediment type is sandy mud/muddy sand. Sediments range within the region and are classified as 'deep circalittoral mixed sediments' and 'deep circalittoral mud'. Seabed scars were observed within the survey area, however these were found to be trawl scars, and from relic anchoring activities and small pull out pits.

Mean water depth ranges from 96.5m in the west to 124.1m in the east of the area. Water depth at Area D drill centre is 107m, at BLP is 105m and the water depth at Area E is 113m.

A survey of the area showed that epibenthic fauna was relatively sparse. The dominant epifanua were sea pens, with other species observed including Norway Lobster, starfish, brittle stars, polychaetes and gastropods. Various species of sea pen were recorded at all survey stations, with an abundance ranging from occasional to frequent and common to abundant. Burrows created by the Norway lobster also

ranged from common to abundant. A SACFOR assessment for sea pens and burrowing megafauna concluded that the Captain area would be considered to represent the OSPAR habitat 'Sea pens and burrowing megafauna communities'. There was no evidence of the presence of the ocean quahog from the stills of video footage but there was evidence of its' shells in the grab samples taken. The sediments within the area also fall within the broad definition of 'subtidal sands and gravels', which is a priority habitat in UK waters. Muddy sand interspersed with cobbles, pebbles and boulders was also found in the area, and was assessed as being 'low reef'. The Annex I 'stony reef' habitat is therefore not considered to be found in the area. No other Annex I habitats were found in the area.

Cetaceans such as minke whale, harbour porpoise, white beaked dolphin and white sided dolphin have been recorded in the vicinity of the Captain field. Densities of the species are categorised as very low, with the exception of the white beaked dolphin which is of medium density in July, September, October, December and February. Grey and harbour seals may be encountered, and density maps show the presence of grey seals in the project area as 5 individuals per 5 km2. Harbour seals are rarely sighted in deeper waters with the density in the project area lower, at less than 1 individual per 25km2.

The Captain area is not situated within any conservation areas, with the nearest area of conservation interest being the Southern Trench NCMPA which lies 47km to the south. This site is protected due to a variety of biodiversity and geological features including burrowed mud, sub-glacial tunnels and minke whale.

The Captain field lies within fishing designated ICES rectangle 45E8 and the proposed operations will coincide with peak fish spawning and/or nursery activity for a number of species. Fishing effort in the area is designated as of moderate importance, with demersal fishing dominating the species type. Fishing in the area accounted for 0.25% (by weight) of UK landings and 0.39% (by value) of total UK landings in 2021. It is not anticipated that the laying of the subsea infrastructure for the next phase of the Captain EOR Stage 2 Phase II project will have a significant impact on fishing.

Sensitivity of seabirds in the project area to oil (Block 13/22) is predominantly medium to high throughout the year, with the exception of December and February which is very high and extremely high respectively.

The closest wreck to the Captain field is a non-dangerous Rhone wreck, which is 700m southeast of the field. A pre-lay route survey will be carried out to establish the final location of the pipeline route. The closest wind farm to the proposed project is Broadshore which is 8km to the southwest of the field. The nearest CCS area is the Acorn project which is located 15km southeast of the Captain field. There are no telecommunications cables within 40km of the field and there are no military restrictions within the block. Shipping density within the area is low, with an average of 4-5 vessels per day within Block 13/22. An FPSO is the closest surface oil and gas installation, at 29km southeast of the proposed project. It is not anticipated that the proposed project will have a significant impact on either the wrecks, other oil and gas

infrastructure/energy projects or windfarms.

Given the location of the project, it is not likely that the areas identified at paragraphs 2(c)(i), (iii), (iv), (vi), (vii) of Schedule 5 to the Regulations will be affected by the change to the project.

Type and characteristics of the potential impact

In accordance with paragraph 3 of Schedule 5 to the Regulations, the likely significant effects of the change to the project on the environment have been considered. Potential effects on the environment from the activities associated with the project were assessed, including impacts arising from atmospheric emissions, seabed disturbance, physical presence, planned discharges and accidental spills. Other than the matters considered further below, there is not likely to be any significant impact from the change to the project on population and human health.

There is currently a 500 m radius safety zone around the existing Captain installations (the BLP, WPP and FPSO) which already excludes unauthorised access of vessels and prohibits access to fishing vessels. There will be 2 new 500m safety zones established at both Areas D and E drill centres which will include the wellheads and SUDS. Some of the infrastructure installation will be carried out within these 500m safety zones. The remaining works that is outwith any 500m safety zone is the polymer injection and umbilical flowlines, which will be jet trenched and buried to a sufficient depth to prevent interference with other users of the sea (demersal fishing). The use of mattresses and grout bags will only be within the 500m safety zones at the BLP, and the new drill centres. In the event that rock cover is required, the use of these will be profiled to be fishing friendly. Any rock that is used as contingency will have a trawlable profile and will be installed in accordance with industry best practice and SFF recommendations. There may be a time lapse between the laying of pipelines and completing the trenching activities therefore a guard vessel will be on location to minimise the risk of other users of the sea from the new infrastructure. There should therefore be no likely significant effects in terms of physical presence from the project.

The effects of jet trenching are understood to be temporary, and the recolonisation of the area commences when the trenching is completed. There will be, particularly for sea pens and burrowing megafauna, temporary impacts. Burrowed mud habitats show a medium sensitivity to abrasion/penetration which may be caused by the project activities. Sea pen have been shown to re-anchor themselves after disturbance and can be resilient. Ocean Quahog are sensitive to increased siltation and can bury into the sediment when disturbed as long as their inhalant siphon is not damaged. Ocean quahog have a short life span and a high reproduction rate, and given the small area of seabed affected, it is not thought that the project activities will impact on the population of the species. Given the above, it is expected that the benthic communities will regenerate in the area over time. It is anticipated that the new infrastructure will create a new habitat for benthic organisms, such as sponges, soft corals and brittle stars.

The widespread introduction of hard substrate (deposits of protective material such as rock and mattresses) can change the local seabed type to one that adversely affects species with a sand/gravel sediment habitat preference. The hard substrates introduced to the seabed are expected to be colonised but are not expected to result in a physical change to another habitat type. In the Captain field, there are numerous cobbles and boulders that already provide a substrate for species with preference for a harder substrate. It is not expected that the introduction of protective material will change the seabed type.

Seabed disturbance will occur from the jet trenching and burial of the polymer injection pipelines, the surface laying of tie-in spools and jumpers, and the introduction of the protection materials. The disturbance of the seabed by adding the protective materials, will result in the smothering, crushing and mortality of benthic fauna. The introduction of hard surface substrate to the area will have a direct impact on the benthic communities, with the natural habitat and communities lost. Jet trenching will also contribute to the mortality of the benthic community as this will increase the turbidity in the water column which can cause issues for filter feeding organisms. However, it is understood that although there will be individual losses of species as a result of the project, this will not affect the species at a population level. It is also expected that that the benthic communities will regenerate in the area over time. Given the above, and the very small area of temporary (1.095 km2) and permanent seabed disturbance (0.031km2), there should be no likely significant effects on the seabed as a result of the project.

The installation activities will generate underwater noise through vessel engine use, however the main source of noise during construction will be the piling of the 2 SUDS at Areas D and E. Modelling of the noise generated by the piling activity was undertaken in order to assess the impact to marine mammals. The modelling concluded that the noise levels generated due to the piling activities could disturb marine mammals up to a distance of 8km. The contribution to the noise levels from vessel presence and potential rock dumping were considered negligible. The developer has stated that JNCC mitigation guidelines will be followed during the piling operations, which includes the use of soft starts. Given that the piling works will last one day and are therefore temporary in nature, and the use of standard noise mitigation measures, the impact to marine mammals and fish are not expected to be significant.

The proposed operation will utilise six vessels, and atmospheric emissions have been assessed from the diesel used for each vessel, and the time spent on location. The total atmospheric emissions from the vessels undertaking the project work, accounts for 0.049% of the total UKCS CO2 emissions (using 2021 as a baseline). The emissions may result in a deterioration of the local air quality, but due to the relatively short duration of the work, and that the exposed conditions in the area will rapidly disperse the emissions, it is not anticipated that there will be a significant impact.

There are no expected transboundary effects from the proposed project (UK/Norway median line is 191km from the field), as discharges to the marine environment and

atmospheric emissions will be localised and dispersed rapidly.

There are no expected cumulative impacts as a result of the project. The closest oi and gas installation is 29km from the field, with the CCS and offshore wind projects 15km and 8km from the field respectively. Due to the localised nature of the project, significant cumulative impacts are not expected.

The main risk of accidental release of hydrocarbons is from a loss of diesel inventory from a vessel. The assessment showed that there is no potential for a significant effect from the loss of diesel from a vessel, therefore the impact was not assessed further.

2) Decision

Taking the above considerations into account, the Secretary of State has concluded that the project is not likely to have a significant impact on the environment and that an environmental impact assessment is not required.

3) Mitigation of significant effects

The following are features of the project or measures envisaged that the developer has proposed to avoid or prevent what might otherwise have been significant adverse effects on the environment:

n/a