

BPU REVIEW OF THE P-52 OIL PRODUCTION PLATFORM

This report summarizes the due diligence carried out and assessments made in relation to the environmental, social and human rights aspects of the semi-submersible oil production platform (P-52) to be located in the Roncador Field of the Campos Basin offshore of Brazil (the "Project"). The form the P-52 platform oil will be piped to an adjacent storage vessel from which tankers will be loaded. ECGD's due diligence process has been carried out since autumn 2004 and has been informed by:-

- the Environmental Impact Assessment (EIA) report prepared by HABTEC Engenharia Ambiental Ltda (October 2003);
- information provided by representatives of the purchaser, Petróleo Brasileiro S.A. (Petrobras), the Brazilian state oil company;
- the work product of the environmental specialists of the Export Credit Agencies considering support for the Project (SACE – Italy, and ECGD); and
- discussions with officials in other Government Departments, notably DEFRA.

A synopsis of the recommendations set out in the body of this report is listed in Schedule 1.

Outline of the Report

This report examines the Project under the following headings:

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Methodology

The potential impacts of the Project were analysed over a period of some 8 months by BPU staff with input from DEFRA and the environmental specialists of SACE. Consultants from [redacted] analysed the Environmental Impact Assessment (EIA) Report against the IFC Guidance Note B and the EU Guidance on EIA and EIS Review (June 2003) under the 'call-off contract' arrangements to supplement the capacity of the BPU during periods of high workload.

Information was gathered from the EIA report, directly from Petrobras and from the world wide web.

Communications with Petrobras usually took the form of memoranda sent by email from the two ECAs via BNP Paribas (the arranging bank). In addition ECGD staff participated in conference telephone calls between the ECAs and with Petrobras staff.

The platform will be constructed and assembled at existing shipyards and towed into position. The impacts of the construction phase have not been considered as part of this review. In the course of this review, the BPU has become aware of any indications that the impacts of the construction phase will fall outside the typical impacts of normal shipyard operations.

This report details the most significant potential impacts relating to the operations phase that have been identified and the outcomes of the discussions about them.

Disclosure of information

The application for the Installation Licence for the P-52 Project was submitted to the Brazilian environment agency, Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), on 28th October 2003 and notices published in national newspapers on 6th and 13th of November of the same year. The EIA has been available for reading at the offices of IBAMA since the end of October 2003. This fulfils the requirements of the OECD Recommendation on the Environment and Officially Supported Export Credits (2003) that "For Category A projects, [Members should] seek to make environmental impact information publicly available (e.g. EIAs, summary thereof) at least 30 calendar days before a final commitment to grant official support".

ECGD disclosed its consideration of this Project on its website on 15th December 2004. To date, the Project has generated no interest from members of the public or NGOs.

Main criteria for acceptability

Compliance by the Project has been considered against applicable international environmental and social policies and guidelines.

As stated in the BPU Case Impact Analysis Process, it is ECGD's policy that projects should comply in all material respects with the relevant safeguard policies, directives and environmental guidelines of the World Bank Group (WBG) plus any other relevant international standards for issues not covered by the WBG. Thus for ECGD the applicable environmental and social policies and guidelines against which the Project has been assessed are ECGD's BPU Case Impact Analysis Process itself, the relevant directives, policies and guidelines of the WBG, including the International Finance Corporation (IFC), in particular the Safeguard Policies, the Pollution Prevention and Abatement Handbook and the IFC's equivalent environmental guidelines and the international guidance on oil spill response plans. ECGD's assessment includes consideration of relevant international conventions.

The most relevant **environmental guidelines** are:

- IFC Guideline – Offshore Oil and Gas Development (December 2000)
- WBG General Environmental Guidelines (July 1998)

The most relevant **safeguard policies** are:

- IFC OP 4.04 – Natural Habitats (November 1998)
- IFC Guideline – Occupational Health and Safety (June 2003)

Other sources of guidance/criteria that have been considered are:

- International Maritime Organisation – Marine Pollution Convention 1973/78 (MARPOL) plus amendments up to 2003
- Guidance Note B of IFC OP 4.01 – Environmental Assessment (October 1998) describing the Content of an Environmental Assessment Report
- EU Guidance on EIA and EIS Review (June 2003)

The most relevant **international guidelines for Oil Spill Response Plans** are:

- IFC Guideline – Offshore Oil and Gas Development (December 2000) – for the offshore platforms and pipelines
- International Petroleum Industry Environmental Conservation Association: A Guide to Contingency Planning for Oil Spills on Water (2nd edition, March 2000)
- BS ISO 15544:2000 Petroleum and natural gas industries – Offshore production installations – Requirements for emergency response (2000)
- International Maritime Organization: Manual on Oil Pollution – Section II Contingency Planning (1995)

1. Potential Environmental Impacts

1.1 Atmosphere

The most relevant international standards for the Project are the IFC environmental guidelines relating to Offshore Oil and Gas developments. These environmental guidelines are ECGD's main criteria for acceptability of environmental impacts in this industry sector.

1.1.1 Global atmosphere

The Project is designed to extract crude oil from the Roncador oil field in the Campos Basin off-shore Brazil for supply to the Brazilian and international markets. It will be used in a variety of ways including as fuel. As a result a proportion, possibly all, will be burned and this will generate carbon dioxide (CO₂) with its consequential impact on climate change.

DEFRA has confirmed that under the International Panel on Climate Change (IPCC) protocols, greenhouse gas (GHG) emissions are attributed to consumers of fossil fuels, not producers or transporters, and thus any GHG emissions from the oil produced by this Project would be attributed to the countries from which the emissions occur and not to countries producing or transporting fossil fuels.

In addition to the eventual emissions resulting from use of the crude oil, a relatively small quantity of CO₂ will be generated by the operations of the Project itself.

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1.1.2 Local atmosphere

Ongoing impacts on the local atmosphere will result from the emissions from the equipment used in the operation of the Project. The most significant sources will be the gas turbine used for electricity generation and the pilot flames of the flare systems. The flares will only be used in emergencies so the total gas consumption of the pilot flames is only 300Nm³/hr. The flare systems are designed to be smokeless in operation and 'knock-out drums' will be installed to prevent liquids from reaching the flames.

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1.2 Water Bodies

The most relevant international standards for the Project are the IFC environmental guidelines relating to Offshore Oil and Gas developments. These environmental guidelines are ECGD's main criteria for acceptability of environmental impacts in this industry sector.

The water that is associated with the oil produced by the wells is discharged from the platform above the surface of the sea. This is in compliance with Brazilian law and facilitates monitoring of its impact. This produced water is discharged into the sea rather than being re-injected into the oil wells. Petrobras has stated that it is easier to treat fresh seawater for this use rather than the produced water and that this is in compliance with Brazilian legislation. In addition, the re-injection water is needed at the start of production, while the produced water will be available only at a later stage. Although there are currently no limits on the toxicity level of the produced water, CONAMA Resolution 357 states that toxicity limits will be introduced in the future. Petrobras has stated that it will ensure that its operations are in compliance with all applicable Brazilian legislation.

The temperature of the cooling water discharged from the platform will be a maximum of 40°C. This is in compliance with the CONAMA Resolution 357 that limits the discharge temperature to a maximum of 15°C above the seawater temperature – which is 25°C. The IFC environmental guidelines and CONAMA Resolution 357 also limit the temperature rise to +3°C at the edge of the mixing zone – considered to be 100m from the point of discharge. Petrobras has not provided any mathematical modelling to demonstrate that the temperature rise at 100m distance from the point of discharge will be less than +3°C.

The Project will produce no drilling muds as the wells have already been drilled. Sanitary effluent will be treated by an electrochlorination process in aeration tanks on the platform. The treated effluent will comply with Brazilian legislation.

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1.3 Wildlife and habitats

The relevant international standards include the IFC's Safeguard policy on Natural Habitats (OP 4.04), which is also ECGD's main criterion for acceptability of these impacts.

The EIA prepared by HABTEC contains some information regarding the marine environment of coastal regions, which contain a number of endangered or threatened species.

Whales & dolphins (cetaceans): 22 species of cetaceans are listed as being present within or near the Project area. The Fin and Blue whales are listed as 'endangered', but there is no description as to their exact whereabouts or how the Project could impact on them. The Humpback (listed as 'vulnerable' by the IUCN) and the Franca (considered 'endangered' in Brazil) whales migrate through the Project area and therefore may be vulnerable to impacts from the Project.

Other marine animals: The EIA also lists other marine animals as threatened or endangered, including three species of sharks and numerous turtles.

Sea birds: The nearby coastal area is particularly diverse in sea birds. The EIA does not contain any consideration of the population status of these species and whether any are endangered.

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1.4 Unsustainable consumption of natural resources

There are no specific international guidelines for assessing the acceptability of projects that promote the unsustainable consumption of natural resources.

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The P-52 Project will facilitate the unsustainable consumption of the crude oil that it extracts from the Roncador Oil Field and supplies to the Brazilian and international markets - although even without P-52 it is still likely that this oil would eventually reach the markets through existing or alternative new extraction projects.

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1.5 Waste generation and disposal

The most relevant international standards for the Project are the IFC environmental guidelines relating to Offshore Oil and Gas developments. These environmental guidelines are ECGD's main criteria for acceptability of environmental impacts in this industry sector.

Produced water discharges are discussed in Section 1.2 of this report. All solid waste will be stored and moved onshore for disposal through existing facilities. According to the review of the EIA, it does not contain full information about some fluids used during the commissioning phase.

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1.6 Noise

The most relevant international standards for the Project are the IFC environmental guidelines relating to Offshore Oil and Gas developments. These environmental guidelines are ECGD's main criteria for acceptability of environmental impacts in this industry sector.

The EIA does not provide any information on the level of any noise generated. However, the equipment in operation on the platform will generate some low levels of noise. The platform will be located so far offshore that there will be no impact on onshore communities. The BPU has no

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information to indicate that any particular marine species will be adversely affected by the noise.

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2. Potential Social Impacts

2.1 Occupational health and safety

ECGD's main criteria for the acceptability of projects' occupational health and safety impacts is compliance in all material respects with the IFC General Health and Safety Guidelines (July 1998).

The EIA contains a substantial (41 pages plus annexes) 'Individual Emergency Plan' that contains information relating to the health and safety of operators on the platform and also the Oil Spill Response Plan.

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3. Relevant international conventions

3.1 MARPOL 1973/78

The ECAs have asked Petrobras to ensure, as far as is practicable, that all shipping operations associated with the Project comply with the International Maritime Organisation Convention on marine pollution – MARPOL 73/78 as amended to June 2003. Petrobras responded that it considered that it was the Brazilian Government's responsibility to ensure that legislation had been enacted to implement all the international conventions and treaties that Brazil had ratified. Petrobras' position is that it will comply with any relevant Brazilian legislation.

Brazilian environmental legislation is enforced by IBAMA, which is part of the Brazilian Ministry of the Environment.

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4 Other guidance

4.1 IFC Guidance Note B: Content of an Environmental Impact Assessment Report

Consultants from [redacted] also analysed the EIA report against the IFC Guidance Note B. Their main comments were:

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4.2 EU Guidance on EIA and EIS Review (June 2003)

Consultants from [redacted] analysed the EIA report against the EU Guidance on EIA and EIS Review (June 2003). The key points arising from this analysis are:

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4.3 Guidance on Oil Spill Response Plans

ECGD has identified four international standards relating to Oil Spill Response Plans (OSRPs):

- International Finance Corporation Environmental, Health and Safety Guidelines – Oil and Gas Development (Offshore) (December 2000)
- International Petroleum Industry Environmental Conservation Association: A Guide to Contingency Planning for Oil Spills on Water (2nd edition, March 2000)
- BS ISO 15544:2000 Petroleum and natural gas industries – Offshore production installations – Requirements for emergency response (2000)
- International Maritime Organization: Manual on Oil Pollution – Section II Contingency Planning (1995)

The BPU analysed the 'Individual Emergency Plan' (IEP) section of the EIA, which contains the information normally contained within an OSRP, against a composite checklist for all four international standards.

Petrobras has committed to implement the IEP in full.

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In November 2004 an oil leakage occurred from the seabed close to a Petrobras production platform in the south Atlantic. Petrobras has informed the ECAs that its oil spill response plan was immediately activated. 12 ships and one Hercules aeroplane were involved. During the "containment" phase, the collected mixture of oil and water collected was stored and sent to another production platform to be reincorporated and treated. No chemical dispersants were used. To support the decisions taken, several modelling calculations were made on the dispersion of the slick. The results were crosschecked with the flight reports, all of them were found to be very close. The slick did not reach the coast and so no "land team" was activated.

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5 Overall assessment

Review carried out and report written by:

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Schedule 1. Synopsis of BPU recommendations