



John Brookes Platform Upgrade Works Environment Plan Summary

October 2010

This summary has been submitted to comply with Regulation 11(7)(8) of the Offshore Petroleum and Greenhouse Gas Storage (Environment) (OPGGS(E)) Regulations 2009.

Introduction

In preparation for future expansions, including the planned nearby Halyard Development, Apache proposes to undertake a number of upgrades and preliminary works on the John Brookes Platform between October - December 2010. The John Brookes Platform is in Offshore Commonwealth Waters, and operates under Production Licence WA-29-L.

Project Description

The John Brookes development comprises an offshore unmanned platform and a single 55km subsea pipeline to Varanus Island. The location of the John Brookes Platform is:

- 303,895.0 m E and 7,737,890.0m N (GDA94) or
- 20° 26' 50.45" E and 115 ° 07' 12.62" N (GDA94).

The John Brookes natural gas is processed within the existing gas plant on Varanus Island and transported via an existing subsea export gas pipeline from the Island to the Western Australian (WA) mainland.

The platform is located within Production Licence area WA-29-L within Commonwealth waters, 30 km North West of the State waters boundary and 110 km from the WA mainland. The project site is approximately 55 km North West of Varanus Island and 40 km North West of Barrow Island in the North West Shelf of WA.

In preparation for the nearby Halyard development (EPBC Referral [2010/5611](#) of August 2010), a number of upgrades are required for the John Brookes Platform during Q4, 2010. These activities involve topsides works only, including:

- Laser surveying works (to prepare a detailed 3-D computer model)
- Non-Destructive Testing (NDT)
- Erection of temporary scaffolding
- The welding of attachment points (Corbels) for Halyard wing-deck modules and a J-tube dead-weight support
- Surface treatment / paint works
- Piping / Tubing and Cabling installation, and
- The installation of a Topside Umbilical Termination Unit (TUTU)

A Hazard Identification (HAZID) workshop identified that risk to personnel arising from additional helicopter flights required careful management. These are covered by the Gas Facilities Safety Case. As an additional safety measure, a stand-by vessel will be present near the John Brookes Platform for the duration of the planned activities.

Environmental impacts are minimal, and mainly relate to risks of dropped objects, handling of paints and the storage and handling of diesel fuel. No new environmental risks were identified through the HAZID process which are not covered by the existing "Varanus Island Hub Operations Environment Plan" ("VI Hub Ops EP", EA-

60-RI-186) and “General Petroleum Support Activities North West Shelf State & Commonwealth Waters Environment Plan” (“GPSA EP”, EA-00-RI-158).

Halyard Subsea Installation activities (Q1, 2011) will be managed under a separate “Halyard Development Construction Environment Management Plan” (“CEMP”, HL-00-R1-002), which is subject to DMP acceptance.

Existing Environment

A description of the existing terrestrial, marine and social environment relevant to this scope of work is provided in the “VI Hub Ops EP” and the Halyard Referral ([2010/5611](#)).

Table 1: Ecological activities on North West Shelf

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Ecological Activity												
Humpback whale migration						■	■	■	■	■		
Dugong breeding on North West Shelf	■	■	■	■	■	■	■	■	■	■	■	■
Turtle nesting on North West Shelf	■	■	■	■	■	■	■	■	■	■	■	■
Turtle hatchling emergence on North West Shelf	■	■	■	■	■	■	■	■	■	■	■	■
Migratory Birds			■	■	■	■	■	■	■	■	■	■
Mass coral spawning (few nights within month)			■							■		
John Brookes Upgrade Works												
John Brookes Upgrade Works										■	■	■

Key to activity

- Peak of ecological activity, presence reliable and predictable
- Low level of abundance/activity/presence
- Activity not occurring
- East Spar Inspection

Table 1 provides an overview of the timing of the major ecological activities on the North West Shelf in relation to the John Brookes Platform Upgrade activities. Although within the migration route for humpback whales (*Megaptera novaeangliae*) in the Exmouth to Port Hedland region, the timing of the John Brookes Upgrade Works is largely outside the period of this migration. The activities are likely to overlap with the start of turtle hatching and emergence period.

Note that John Brookes Platform Upgrade activities are restricted to works during daylight and on the platform itself, with no subsea activities being planned as part of this scope.

Environmental Management

The Varanus Island Hub has a site environmental licence (number L6284/1992) issued under the Environmental Protection Act 1986 and the activities associated with the John Brookes Platform Upgrade are in compliance with this license.

The implementation strategy detailed in the VI Hub Ops EP (EA-60-RI-186) covers the environmental risks identified during the HAZID Workshop for the John Brookes Platform Upgrade Works, including roles and responsibilities, environmental education and training, emergency preparedness and incident reporting. Therefore, no additional environmental controls are required for the planned upgrade activities.

Consultation

As part of all Apache offshore activities, including Varanus Island operations, Apache consults with numerous stakeholder representatives on an ongoing basis. See “VI Hub Ops EP” for further details.

Further Details

For further information please contact:

Dr Sjaak Lemmens
 Senior Environmental Scientist
 Apache Energy Ltd
 PO Box 477, West Perth, WA 6872
 Phone: 08-6218 7205
 Email: sjaak.lemmens@apachecorp.com

Table 2: Key Environmental Management Commitments for John Brookes Upgrade Works (see VI Hub EP, EA-60-RI-186, for further details)

Activity	Avoidance, Mitigation and Management Measures
Operational Environmental Awareness	<ul style="list-style-type: none"> • Through inductions and educational material as per VI Hub EP, all personnel are familiar with the environmental requirements of the VI Hub EP and bridging documents, to ensure these guidelines and procedures are being followed. • Environmental issues specific to this activity shall be addressed in a pre-mobilisation toolbox meeting
Incident Reporting	<ul style="list-style-type: none"> • Use the Apache “<i>Hazard Reporting, Incident Notification and Investigation Procedure</i>” (AE-91-IF-002) to report incidents to DMP within 2 hours (OPGGS (Env) Regulations; 26A). • Recordable incidents to be reported to DMP at the end of each month (OPGGS(E) Regulations; 26B).
Deck drainage, chemical storage and management	<ul style="list-style-type: none"> • Follow Apache “<i>Refuelling and Chemical Transfer Management Procedure</i>” (AE-91-IQ-098) and “<i>Environmental Requirements For Offshore Marine Vessels</i>” (AE-91-IQ-202) • Maintain good housekeeping practices. • Store chemicals in bunded areas away from open drains and chemical containers are to be intact. • Use drip trays under all machinery and fuel points and valves. • In the event of a spill, take all actions to control the spill and divert deck drainage to on board containment tanks for treatment through the oil in water separator. • Ensure absorbent material is on board to use in soaking up chemical or oil spills on deck. • Report all spills through Apache “<i>Hazard Reporting, Incident Notification and Investigation Procedure</i>” (AE-91-IF-002). • All spills > 80 L are “<i>Reportable Incidents</i>” under the OPGGS(E) Regulations 2009 (26A) and must be reported to DMP within 2 hours, either directly by contacting the DMP Duty Inspector on 0419 960 621 or via the Apache Perth office. • All spills < 80 L are “<i>Recordable Incidents</i>” under the OPGGS(E) Regulations 2009 (26B) and must be reported to DMP at the end of each month via the Apache Perth office.

Activity	Avoidance, Mitigation and Management Measures
Spillage of diesel fuel or oil	<ul style="list-style-type: none"> • Refuelling should be done prior to ofgshore mobilisation where possible. • If offshore refuelling is unavoidable, then carry out diesel refuelling during daylight hours only, weather permitting. • Follow Apache “<i>Refuelling and Chemical Transfer Management Procedure</i>” (AE-91-IQ-098) and “<i>Environmental Requirements For Offshore Marine Vessels</i>” (AE-91-IQ-202). • In event of a spill take all actions to control it. • Do not use dispersant without Australian Marine Safety Authority (AMSA) approval. • Report all spills to Apache Perth office (see Apache “<i>Hazard Reporting, Incident Notification and Investigation Procedure</i>”, AE-91-IF-002). • All spills > 80 L are “<i>Reportable Incidents</i>” under the OPGGS(E) Regulations 2009 (26A) and must be reported to DMP within 2 hours, either directly by contacting the DMP Duty Inspector on 0419 960 621 or via the Apache Perth office. • Report all releases of oil in water of > 30 mg/L (over a 24 hour period) to Apache Perth office (Note: for vessel discharges, MARPOL stipulates a maximum of 15 mg/L OIW instead). • All spills < 80 L are Recordable Incidents under the OPGGS(E) Regulations 2009 (26B) and must be reported to DMP at the end of each month via the Apache Perth office. • Implement Apache’s Oil Spill Contingency Plan (OSCP, AE-00- EF-008) if required.
Liquid Waste Management	<ul style="list-style-type: none"> • Drum waste oil, grease and other liquid waste and return to VI for recycling as per “<i>VI Hub EP</i>” and Waste Management Plan.
Solid Waste Management <ul style="list-style-type: none"> • Food scraps • Garbage • Litter • Scrap metal and wood etc 	<ul style="list-style-type: none"> • All food scraps to be returned to Varanus Island for disposal as per VI Hub EP and Waste Management Plan. • Do not dispose of debris, garbage or litter into the sea (skips need covers to prevent wind blown rubbish – especially plastics and cups). • Segregate industrial waste (scrap metals / drums etc) wherever possible for appropriate disposal onshore. • Reduce, reuse and recycle waste wherever practicable. • Record the volume and type of waste as per VI Hub EP and Waste Management Plan. • Vessel waste management as per “<i>Environmental Requirements For Offshore Marine Vessels</i>” (AE-91-IQ-202)
Sewage discharge	<ul style="list-style-type: none"> • No sewage discharges from John Brookes platform *(unmanned facility). • Vessel sewage discharges as per “<i>Environmental Requirements For Offshore Marine Vessels</i>” (AE-91-IQ-202)
Light Overspill	<ul style="list-style-type: none"> • Minimise use of non-essential lighting. • As planned activities are scheduled for daytime only, risk for light overspill associated with this activity is minimal
Fishing	<ul style="list-style-type: none"> • No fishing is permitted from the John Brookes Platform.