PLAN

APA Group

Transmission Operations

CPL-EMP-3161

OEP Summary Cape Lambert Lateral PL8 / PL106

Version: 1.0 Issued: 11/02/2016

DOCUMENT CONTROL

Approval

Summary of Changes	Updated to National Template and for PL106 inclusion	
Custodian	B Jayatilaka Environment Officer	
Reviewed	L Smith Compliance Manager	
Approved	E Mott Regional Manager Pilbara	

Distribution List (delete if not required)

Copies to:	Name / Details	Location
1	Controlled Copy	WA IMS Document Control
1	Department of Mines and Petroleum	Perth, WA

Printed Working Copy

All printed copies of this document are to be used as reference copies only. It is the responsibility of those with printed copies to ensure that the document is current. Transmission documents and templates are published into the Transmission Document Site. Access to document templates and all current Transmission documents are available from this site, which includes links to the WA, QLD, NT regional document libraries.

Responsibility

Any amendments to this document will be the responsibility of the document owner or custodian. All native copies of published Transmission documents are managed by the Transmission Document Controller. Use the document change request form to initiate a change or to request a controlled document number when creating a new document.

Table of Contents

List of Figures

List of Tables

1 INTRODUCTION

This Environment Plan (EP) Summary provides an overview of the environmental management requirements for the operation of the Cape Lambert Lateral (CLL), both Pipeline Licence (PL) 8 and PL106, which are owned by Robe River Mining Joint Venture (JV),managed by Pilbara Iron (wholly owned subsidiaries of the Rio Tinto Group (RTIO)) and operated by APA Group. The pipeline transports gas to the Cape Lambert Power Station.

1.1 Purpose and Scope

The purpose of this EP Summary is to provide information to the general public regarding operational environmental considerations and management requirements. The scope of this EP Summary is limited to works associated with CLL operations and maintenance works. Any construction activities outside the scope of this EP (i.e. requiring a new licence or licence alteration) are excluded.

1.2 Objectives

The overall environmental objectives of the EP are as follows: -

- To minimise environmental impacts resulting from operational activities;
- To mitigate all identified environmental risks to as low as reasonably practicable (ALARP);
- To comply with all relevant legal and regulatory environmental requirements; and
- To minimise disturbance to surrounding landholders.

1.3 Definitions

Table 1 Definitions

ALARP	As Low as Reasonably Practicable	ERA	Environmental Risk Assessment
AHIS	Aboriginal Heritage Enquiry System	ERP	Emergency Response Plan
APA	APA Group	HSE	Health Safety and Environment
ASS	Acid Sulphate Soils	JHA	Job Hazard Analysis
CLL	Cape Lambert Lateral	JV	Joint Venture
DAA	Department of Aboriginal Affairs	OSCP	Oil Spill Contingency Plan
DAFWA	Department of Agriculture and Food	PL 8 /106	Pipeline Licence 108
DG	Dangerous Good	ROW	Right of Way
DPAW	Department of Parks and Wildlife	RTIO	Rio Tinto Group
DER	Department of Environment Regulation	SDS	Safety Data Sheet
EP	Environment Plan	SWMS	Safe Work Method Statement
EPA	Environmental Protection Authority	TPC	Third Party Contractor

2 ASSET DESCRIPTION

The Cape Lambert Lateral (CLL) (Pipeline Licence 8) commences at the off-take facility on the Dampier to Bunbury Natural Gas Pipeline (DBNGP) approximately 18 km east of Karratha. The pipeline is owned by the Robe River Mining Joint Venture (JV) and managed by Pilbara Iron /Hamersley Iron Pty Ltd (a wholly owned subsidiary of the Rio Tinto Group). Pilbara Iron has commissioned APA Group to operate the CLL on its behalf. The CLL has been operating since 1984 delivering gas to the Cape Lambert Power Station. In 2012 the lateral was physically isolated at KP49.05 from the power station which has since been de-commissioned. The pipeline was temporarily suspended until the new power station comes online; planned for early 2016. The new station requires a new 2km lateral (PL 106) to connect to the existing CLL. This OEP includes this extension, as a part of the CLL.

The CLL is located within a dedicated easement traversing the Karratha and Mt Welcome pastoral leases and mining tenements, unallocated Crown land, government reserve and rail leases. The pipeline easement provides access to the pipeline for maintenance and operation. Temporary work areas outside the easement require landholder consent and appropriate regulatory approvals.

Approximate GIS coordinates (expressed as “Eastings” and “Northings” respectively) for the start and endpoint of the pipeline are as follows: -

- Start point: - 20.6559° 117.13°
- End point: -20.6506°, 117.144°

Except the above ground facilities, the CLL is completely buried.

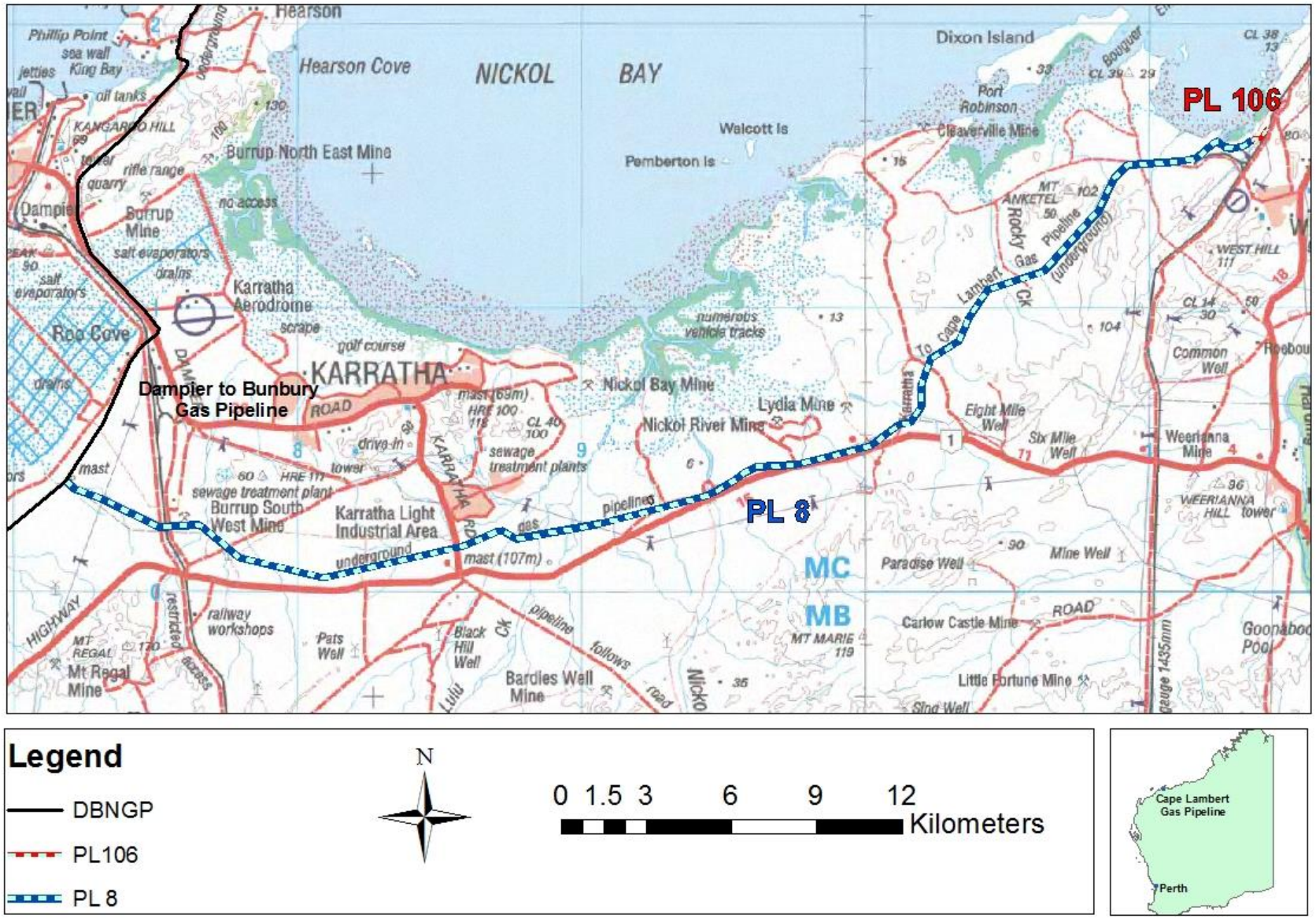

Figure 1 CLL Locality

3 PIPELINE OPERATIONS AND MAINTENANCE

The CLL is operated as a part of APA's Pilbara Region from the Karratha Base. Routine maintenance of the CLL will be undertaken as determined by the Field Services Manager, Team Leaders and plans which are implemented via a dedicated Work Management System (WMS). Specific pipeline operations and maintenance activities to which this OEP applies include:

3.1 General equipment and facility maintenance

- Servicing and overhauls of and equipment;
- Equipment inspections and testing;
- Monitoring;
- Safety inspections and follow up;
- Filter inspections and replacement; and
- General housekeeping

3.2 Cathodic protection surveys

Cathodic protection (CP) refers to the use of electrical current to protect steel pipework against corrosion. CP surveys are undertaken on a regular basis to monitor pipeline integrity and ensure the CP system itself remains functional. CP surveys involve accessing CP test points at approximately (nominally) 1.6 km intervals along the pipeline and connection to a meter which measures corrosion.

3.3 Pipeline excavations

Pipeline excavations are undertaken periodically typically for pipeline repairs and crossing installations. Pipeline excavations are strictly controlled for safety reasons via risk assessment, work permits and procedures. The excavations are generally single defect dig-ups of a few metres but can be greater in length to access multiple defects in close proximity.

3.4 Venting

Venting of gas from the CLL is undertaken to purge the pipeline and / or facilities for maintenance or emergency response purposes. Venting for maintenance purposes varies depending on the procedure being performed; however, all expected quantities are minimal.

3.5 Pipeline pigging

Pipeline pigging is carried out in line with AS2885 requirements and engineering assessment (Asset Management Plan) as per PL108 license requirements. Pigging involves running of gauges (pigs) down a pipeline without interruption to gas flow and may be undertaken for the purposes of either pipeline cleaning or integrity assessment (intelligent pigging). Pigs are run between pipeline pig launching and receiving facilities. By-products of pigging (removal of which is the ultimate goal in the case of a cleaning pig run), are caught in the pig receiver trap along with the recovered pig and contained for offsite disposal.

3.6 Pipeline patrols

Pipeline Right of Way (ROW) vehicle patrols and/or aerial patrols of various sections of the system occur monthly. Vehicle patrols are completed by pipeline technicians and involve visual inspections of the pipeline corridor from a light vehicle. Aerial patrols are conducted using a fixed wing light plane or helicopter which fly's the pipeline route to identify any abnormalities. Patrols may identify issues such as:

- Third Party encroachments
- Vegetation growth
- Presence of weeds
- Erosion, subsidence or stability issues including exposed pipe
- Condition of signage and aerial markers

4 RECEIVING ENVIRONMENT

The CLL falls within the Chichester subregion of the Pilbara IBRA (Interim Biogeographic Regionalisation of Australia) Bioregion, which is described as "the northern section of the Pilbara Craton" (Kendrick and McKenzie, 2001). The subregion contains "undulating Archaean granite and basalt plains include significant areas of basaltic ranges" (Kendrick and McKenzie, 2001, p. 547).

The CLL is located within the Fortescue Soil-Landscape Province of Tille (2006) which comprises an area of approximately 160,050 km2 in the northern Pilbara Region of WA. The CLL traverses the De Grey – Roebourne Lowlands, Karratha Coast and Harding Hills and Plains Soil-Landscape zones (Tille, 2006). The Fortescue Province overlies the Pilbara Craton and is based on the Fortescue botanical district of Beard (1990), also roughly equating with the Pilbara IBRA.

The CLL is situated within the Fortescue Botanical District of the Eremaean Botanical Province of Beard 1975; specifically, entirely within the Abydos Plain Vegetation Unit (DEC, 2006). Plains support a shrub steppe characterised by Acacia inaequilatera over Triodia wiseana (formerly Triodia pungens) hummock grasslands, while Eucalyptus leucophloia tree steppes occur on ranges (RTIO, 2011).

The flora of the pipeline easement is largely pre-disturbed by pastoral activity. Karratha and Mt Welcome Pastoral Stations are predominantly flat grazing land with introduced grasses. Towards Cape Lambert the landscape varies between Spinifex acacia flat and undulating areas to rocky/sandy/hilly areas with low acacias and grasses close to the Cape Lambert Power Station at the northern end of the pipeline.

The vast majority of the Cape Lambert Gas Lateral is situated within soils which have either a low probability or no known occurrence of ASS. However, a few small sections of the pipeline towards the coast skirt the edges of soil types that may be at risk.

The bio-climate of the CLL is tropical semi-desert with nine to eleven dry months of the year. Average annual rainfall is largely within 250 – 300mm per year with the majority received during the summer months (Tille, 2006). Tropical cyclones develop to the northwest of the coastline and track down the coast mainly in the second half of summer, usually producing extremes of wind for several days, and heavy widespread rain.

The local environment of the CLL comprises pastoral, recreational and mineral exploration activities. The CLL has numerous road, track and creek crossings including the Nickol River at KP24.1.

Crossings including creeks, roads and tracks are inspected regularly during critical crossing inspections, easement patrols and easement condition assessments. There have been no incidences of pipeline operations and maintenance activities causing major disturbance to the surrounding environment.

The CLL does not traverse any Environmentally Sensitive Areas (ESA's), Ramsar wetland sites or wetlands of national significance.

5 HERITAGE

A cultural heritage survey of the pipeline route was undertaken prior to construction and a number of Aboriginal heritage sites and isolated artefacts were identified. A search of the DAA Aboriginal Heritage Inquiry System (AHIS) for Register Aboriginal sites and other Heritage places was undertaken in July 2013 and confirmed approximately 35 sites are located along the pipeline route. No specific sites were found along the PL106 section.

Indigenous Land Use and Heritage agreements are in place between Rio Tinto and the traditional owners in the area.

To ensure no ground disturbing works proceed within these areas, prior to any ground disturbing works excavation locations will be provided to the Heritage Environment and Lands team to ensure they are not located within registered sites. In addition, excavation requirements are small, managed on a case by case basis and would require a RTIO AR Permit. The permit application process would uncover any recorded heritage sites. To date, operations have not caused damage to any sites. In addition, consultation with the DAA has established that pipeline activities such as access through a site (excluding ground disturbing works or alike) does not constitute impact to heritage sites and therefore is unlikely to breach section 17 of the Aboriginal Heritage Act 1972.

6 ENVIRONMENTAL MANAGEMENT

Environmental management throughout operational works will be implemented in compliance with the APA ISO14001 accredited, Health Safety and Environmental (HSE) Management System which provides for:

- communication of policies, objectives and roles and responsibilities
- inductions, training and competency of personnel
- monitoring, auditing, record keeping and reporting, including a dedicated hazard and incident reporting system
- management of non-conformances and corrective actions
- development, tracking and ongoing maintenance of documentation
- emergency preparedness and response
- toolbox talks

A risk based approach has been adopted to manage potential threats to the environment as a result of CLL Operations. This process involved initial identification of environmental interactions (aspects) resulting from operational activities followed by an environmental risk assessment (ERA) workshop attended by personnel from a range of backgrounds. The ERA process involved:

- assessment of environmental risks in terms of likelihood and consequence
- identification of mitigating factors and management measures to reduce environmental risks to ALARP
- risk ranking according to severity

A summary of the primary environmental hazards, control measures and mitigating factors identified for the CLL operations has been provided in Table 3.

Note: Table 3 is intended to be indicative of major hazards and controls only and is not comprehensive of all commitments made by APA in the Operations EP.

Table 2 Primary Environmental Hazards and Controls / Mitigating Factors

Environmental Hazard	Control Measures and Mitigation Factors
All hazards	• HSE inductions communicating Environment requirements • Competent personnel – training and procedures / guidance materials provided • Hazard and incident reporting via APA hazard and incident database • Management, PTW*, maintenance and emergency response systems in place • Regular audits, inspections and other EP compliance checks • TPC* compliance with EP commitments via contractual requirements • SWMS's* for tasks presenting specific environmental hazards • Strict controls on vehicles and access implemented via Operations Manuals • Reporting as per Regulatory requirements • Compliance with all relevant legislation and regulatory requirements
Air emissions	• HAZOP* undertaken specifically addressing uncontrolled gas release • Assets designed as per standards of the day (failure prevention) • Physical protection (i.e. cordoning and signage) of live pipework
Chemical use	• Procedures for chemical use • No requirement for chemicals/ fuel storage at site • Location of equipment over hardstand • Regular checks and maintenance of machinery, plant and equipment • Use of self bunded equipment where practicable • Chemical waste generally not anticipated or stored at site
Weed introduction and / or spread	• Vegetation clearing and earthworks limited where possible • Strict hygiene measures for soil disturbing equipment • Access and vehicle controls imposed; as per existing roads and tracks • Weed identification information available to personnel • Timely response to declared weed occurrences as per DAFWA* recommendations

Environmental Hazard	Control Measures and Mitigation Factors
Disturbance to local vegetation (both native and other desirable plants i.e. feedstock)	• Native vegetation clearing limited and in compliance with WA Environmental Protection (Native vegetation Clearing) Regulations 2004 • Vegetative material from clearing retained for use during site remediation • Disturbed (by APA) areas to be remediated as follows: – Stockpiled topsoils re-spread evenly to a maximum depth of approx. 10 cm – Surfaces re-profiled and scarified to assist seed and water trapping – Stockpiled vegetative material spread over topsoils to aid vegetation re-establishment
Soil erosion	• Strict controls on vehicles and access imposed • Topsoil removal limited and controlled • Topsoils removed for construction reused during post construction remediation • Topsoil stockpiles maintained to minimise erosion • Remediation of disturbed areas as described above
Ignition source for Fire	• Fire response equipment maintained at site and in vehicles and machinery • Operations sites maintained to minimise fuel availability and fire risk • Localised fire emergency response covered in ERP • Emergency contact details available to all operations personnel • Dedicated containers for chemicals classed as flammable • Smoking within designated areas only • Fire awareness to be reinforced at toolbox meetings
Waste Generation	• All wastes to be removed from site and disposed of to the appropriate class landfill facility • Adequate waste receptacles maintained onsite and waste segregated as appropriate
Dust generation	• Strict controls on vehicles and access • Dust suppression assistance to be sought as required
Disturbance to local fauna	• Fauna movement not restricted – can move away from sources of disturbance • Trenching and excavation activities controlled • Escape ramps for fauna installed in open trenches and morning visual trench inspections undertaken • Trained and competent handlers engaged for fauna removal from site if required
Third party disturbance	• Regular landholder consultation undertaken • Lighting at site to be concentrated in required areas only • Strict controls on Operations vehicle movement imposed
Disturbance to heritage values	• Works to cease and DAA to be notified immediately if suspected heritage artefacts identified • Strict controls on Operations vehicle movement imposed • All site works contained within easement boundary • Prior to any ground disturbing works excavation locations will be provided to the Heritage Environment and Lands team to ensure they are not located within registered sites

7 STAKEHOLDER CONSULTATION

A summary of Project Stakeholders and consultation undertaken by APA is provided in Table 4.

Table 3 Stakeholder Summary

Stakeholder	Consultation to date	Ongoing commitment
Shires / Local Government: The City of Karratha	• Awareness / notifications prior to construction	• Consultation as necessary and as part of pipeline operations consultation program
Landholders: Karratha & Mt Welcome stations	• Operations specific consultation ongoing	• Notification of activities planned on their land • Ongoing liaison throughout operations
Rio Tinto (Pilbara Iron)	• Ongoing commercial liaison • Pipeline Awareness	• Notification of activities planned for the pipeline • Compliance with policies / permitting for works • Ongoing liaison throughout operations
DFES: Local emergency services provider	• Liaison throughout ERP development and implementation	• Notification of risk activities as agreed • Ongoing liaison throughout operations
DMP: Regulator	• Liaison ongoing throughout Operations	• Regular reporting monthly, 3 monthly, annual • General liaison as required i.e. due to changes, audits etc.
DAA: Regulator	• Liaison / advice prior to construction	• DAA to be contacted if heritage area's / artefacts encountered during Operations or works required within registered areas

8 APA CONTACT DETAILS

For further queries regarding the CLL please contact APA on: -

Ph.: (08) 6189 4300; or Email: reception.wa@apa.com.au

9 REVISION HISTORY

Revision	Date	Amendment	Prepared by
0	9/05/2014	Issued for Use	B. Jayatilaka
1	26/10/2015	Update to National Template and for PL106 inclusion; Issued for Use	B. Jayatilaka