



**PART A**

**INFORMATION FOR THE PUBLIC**

**GUIDELINES FOR PREPARATION OF  
A PUBLIC ENVIRONMENTAL REPORT**

**BONAPARTE GAS PIPELINE**

**Australian Pipeline Trust Group**

**October 2006**



**Northern Territory Government**

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## **1 PURPOSE**

The Northern Territory Minister for Natural Resources, Environment and Heritage has determined that this proposal requires assessment under the *Environmental Assessment Act* at the level of a Public Environmental Report (PER).

The proponent has also referred the project to the Australian Government under the *Environment Protection and Biodiversity Conservation Act* (EPBC Act). The Australian Government has determined the proposal is a controlled action under the EPBC Act. The controlling provisions for the proposed action are: sections 18 and 18A (Listed threatened species and communities); and sections 20 and 20A (Listed migratory species). The project will be assessed under a bilateral agreement between the Australian Government and the Northern Territory Government.

These guidelines have been developed to assist Australian Pipeline Trust Limited in preparing a PER for the proposed Bonaparte Gas Pipeline in accordance with Clause 8 of the Administrative Procedures of the *Environmental Assessment Act*. The object of these guidelines is to identify those matters that should be addressed in the PER. The guidelines are based on the initial outline of the proposal in the Notice of Intent (NOI).

These guidelines consist of two sections:

- Part A (this section) is the introduction and brief description of the project and the PER process; and
- Part B details the type and extent of information to be included in the PER.

The object of these guidelines is to identify those matters that should be addressed in the PER. The guidelines are based on the initial outline of the proposal in the proponent's NOI. The guidelines, however, are not necessarily exhaustive. They should not be interpreted as excluding from consideration any matters which are currently unforeseen that emerge as important or significant from scientific studies or otherwise during the preparation of the PER and the public consultation process.

This section of the guidelines has been developed to assist members of the public and other interested parties in preparing comments on the PER.

## **2 THE PROPONENT**

The proponent is Sydney-based Australian Pipeline Trust Group.

### **3 DESCRIPTION OF PROPOSAL**

#### **3.1 Introduction**

The Australian Pipeline Trust (APA) proposes to construct and operate the Bonaparte Gas Pipeline (BGP) from Wadeye to Ban Ban Springs, a distance of approximately 275 km. The BGP will be a high pressure gas pipeline that will connect to the Amadeus Basin to Darwin Gas Pipeline (ADP).

The Power and Water Corporation (PWC) has negotiated an agreement with Eni Australia Pty Ltd (Eni) to source replacement gas supplies, from the Blacktip field located offshore in the Bonaparte Gulf, for existing power generation assets in the Northern Territory. The BGP will transport treated natural gas from the Eni Blacktip Gas Plant to supply fuel for the Northern Territory's power supply. The current gas supplies from the Amadeus Basin, west of Alice Springs, will begin to decline in 2008 and are unable to provide future supplies to Darwin. The pipeline, which will initially be capable of delivering 30 PJ/year, will consist of a buried high tensile steel pipe located in a 30 metres wide corridor. Above ground facilities at intervals along the pipeline route are likely to include an inlet station at the Blacktip Plant, a scraper station and up to 6 mainline valves along the pipeline and a regulator and meter station at the ADP connection point. Provision will be made in the design and land agreements to facilitate a future compressor station to allow for expansion of pipeline capacity over time. These future compressor stations would be at the same location as the scraper stations.

Eni are the owner/operator of the Blacktip offshore gas field. Eni will develop the offshore gas production facilities and construct a pipeline to transport the gas from the offshore platform to the gas processing plant at Wadeye. The environmental assessment undertaken for the Woodside Blacktip development has been transferred to Eni for the offshore pipeline and Wadeye gas processing facility.

#### **3.2 Route**

The proposed route of the Bonaparte Gas Pipeline commences near Wadeye which lies near the coast of the Bonaparte Gulf. The pipeline generally follows the Wadeye to Daly River township road for approximately 130km, then crosses the Daly River upstream of the Causeway. The pipeline then heads east-north-east to a point generally in the vicinity of the Dorat Road and Douglas Hot Springs Road intersection and thereafter generally parallels the existing Cosmo Howley mine pipeline to the Amadeus Basin to Darwin Pipeline connection.

#### **3.3 Land Use**

Land use along the proposed route comprises of approximately 130km of Aboriginal freehold land, approximately 2km of government reserve and approximately 143km of pastoral leasehold and various road tenures.

### **3.4 Geology**

The geology of the route comprises features of great age as well as recent dynamic landforms. The antiquity reflects the stability of the Top End and explains the deeply weathered, strongly leached and infertile soils of many regions. The dominant rock type along the alignment is sandstone. The two main river basins traversed in the proposed route are:

#### **Moyle River Basin (KP000-120)**

The rock types consist of sandstone, siltstone and claystone sediments of the Upper Permian Hyland Bay Formation. An impervious claystone at a depth of 50 to 100 metres marks the base of the sandstone. A high yielding, widespread shallow aquifer system underlies the BGP corridor in the vicinity of the Wadeye community. Bore yields are inconsistent and vary between 0.5 and 22 L/s but commonly are between 5 and 10 L/s. Higher yielding bores are associated with fracturing or a local source of recharge. The water quality is usually good.

#### **Daly River Basin (KP120-270)**

The Daly basin was formed in the Cambrian period and consists of limestone and sandstone formations, overlain by Cretaceous sediments. The area is characterised by three types of fractured, karstic rocks known as Tindal limestone (limestone and siltstone), Oolloo limestone (dolomitic sandy limestone) and the Jinduckin Formation (a mixture of limestone, siltstone and shale). All three rock types contain extensive unconfined aquifers that serve as the primary groundwater resources in the area and, as a result, provide the base flow of the majority of the rivers and creeks in the Daly basin and have a very important role in wetland hydrology and river flow in the Daly basin.

### **3.5 Resources**

The BGP will initially have the capacity to transport 30PJ of gas per annum with a design life of 42 years. The pipeline will be designed to provide for increased flow rates through future compression and with on-going integrity management the operational life of the pipeline would be expected to be well in excess of 50 years.

### **3.6 Proposed Infrastructure**

Subject to Basic Engineering, the BGP is expected to be constructed using 323.9 mm diameter, 5 L X70 high tensile steel pipe with a Maximum Allowable Operating Pressure (MAOP) of 15300 KPa. The inlet station adjacent to the ENI gas processing plant will consist of a pipeline inspection tool launcher and isolation valves. The interconnection with the 323.9 mm (12 inch), 9650 KPa MAOP ADP will consist of a meter and regulator station. The branch tee intersection will be completed using the hot tap technique.

It is proposed that the high-tensile pipeline will be buried within a 30 metres wide corridor. Whilst Northern Territory legislation provides for a 25m corridor the APA will be seeking a 30m construction corridor on the basis of safety and environmental benefits. The proposed pipeline will be designed and constructed in accordance with the current versions of AS2885 Pipelines- Gas and Liquid Petroleum. This standard

covers the design, construction, operation and eventual abandonment of the pipeline. AS2885 calls up in excess of 80 Australian, American and European standards in accordance with which the pipeline and facilities must be designed.

### **3.7 Construction Process**

Pipe will be supplied to the construction site in pre-coated lengths which will be welded together onsite, the joints field coated and the pipeline buried. Depth of cover will vary depending on the conditions of the terrain, the surrounding land use and the threats to the pipeline at that location (e.g. 750mm in rock, 1200mm in cultivated land). The pipeline corridor will be marked out by surveyors, cleared and graded (including extra workspace and truck turning bays) and the trench centreline pegged, ahead of the trenching. Pipe stringing and bending will follow. Once sufficient pipe has been strung and bent, the welding, non-destructive testing (NDT) and joint coating processes will commence. After welding has progressed for a distance, the pipe will be lowered into the trench followed by trench back-fill. The corridor will then be reinstated and cathodic protection test points and pipeline warning marker signs installed.

Construction is a sequential activity with each crew progressing at approximately 3-5km per day (depending upon the terrain) with approximately 4-7 working days between crews. Reinstatement of the first stages of the pipeline corridor will therefore be likely to commence approximately 2-3 months after the start of construction. Installation of the main line valve facilities, as well as any special road, rail and watercourse crossings are likely to be carried out concurrently with the main pipeline construction.

Depending on the overall logistics and ground conditions special crossing crews, including horizontal directional drilling (HDD), boring and watercourse crossings, may be dispatched prior to main line construction. In this way the crossings will be completed and ready for tie-in when the main line welding crew reaches them.

In general, as specialist crews complete their activities, they will be demobilised from the field.

### **3.8 Access to construction corridor**

During construction, access will be required along the construction corridor and to the campsites, water bores and, if required, any borrow pits. The Stuart Highway will be the principal access route to the Project area; thereafter the majority of the heavy equipment will be transported along existing, mainly gravel, roads.

### **3.9 Workforce**

The workforce will comprise approximately 200-250 personnel during peak construction who will be accommodated in construction camps along the route. The construction camps will include sleeping, catering, maintenance, first aid and administration facilities. Typically there would be a main camp comprising all facilities and a smaller camp. Sleeping facilities would be moved from the main camp

to the smaller camp as the crews progress along the construction corridor until the smaller camp becomes the main camp. It is anticipated that this movement of camps will take place only once (i.e. two campsites in total).

### **3.10 Above ground facilities**

Above ground facilities will comprise:

- Meter Station
- Up to 6 Main Line Valves
- Scraper stations/ future compressor station
- Markers signs (such as pipeline and anode bed signs.)
- Cathodic Protection Posts
- Power supplies including cathodic protection, transformers and rectifiers
- Communication facilities

### **3.11 Operation and maintenance**

Given that the pipeline will be underground, land users are able to resume previous land use activities on top of the pipeline provided that the use does not include excavation activities. Whilst deep-rooted vegetation cannot be re-established directly across the pipeline (due to the potential damage to the pipeline) shallow root cropping and grassland re-establishment is encouraged and no long-term impacts would be expected to such areas. Typical operational activities are:

**General Operations** - The routine operation and maintenance program includes ground and aerial patrols, repair of equipment, pigging and internal cleaning of the pipeline, corrosion monitoring and remediation, sapling removal from the immediate vicinity of the pipeline and easement and lease area maintenance including access roads. Aerial and/or ground inspections will include detection of third party activities on or near the pipeline easement, detection of erosion, monitoring of rehabilitation success and detection and control of weed species.

**Supervisory Control and Data Acquisition System (SCADA)** - The pipeline will have a SCADA system which will continually monitor pipeline conditions such as pressure, temperature, gas flow in and out, linepack, valve status, cathodic protection and gas quality. All information will be relayed back to the central control room located in Darwin. The SCADA system will enable the pipeline controller to instantly open or close valves, alter operating pressures and start or stop equipment as required at sites on the pipeline.

**Prevention of Pipeline Damage** - Prevention of damage due to third party activity will be achieved through appropriate depth of cover, signposting of the pipeline, one call "Dial Before You Dig" programs, regular inspection of the pipeline route to spot any construction or earthmoving activities in the area, and third party education on the potential dangers of carrying out activities in proximity to the pipeline. A land owner and stakeholder liaison program will be established to disseminate this information. In some areas such as crossings, marker tape or concrete slabs may be buried above the pipeline to reduce risk of third party interference. A risk assessment process, in accordance with AS2885, will be established. Security fencing, gates and locks will

be provided around all major above ground facilities (e.g. scraper stations and mainline valves) to inhibit accidental or unauthorised tampering.

**Cathodic Protection** - Pipeline corrosion will be prevented by the protective external coating and cathodic protection systems. The cathodic protection system will be checked regularly to ensure that the protection voltages are within required limits and to monitor any likely areas of corrosion activity.

#### **4 PER PROCESS**

The proponent has been directed to prepare a PER. Once prepared, the PER will be exhibited for public review and comment for a period of 28 days, during which time advisory bodies will also comment on the document.

Three “Preliminary” copies of the draft PER should be lodged with the Environment Protection Agency for internal review prior to release for public and advisory body comment. One copy will also be required for review by the Department of the Environment and Heritage.

Once this internal review is complete and any necessary changes implemented by the proponent, approximately 20 bound copies of the PER will be required for distribution to NT advisory bodies and public viewing locations (eg. Environment Centre NT, Katherine Council Offices and Katherine Library).

Copies of the PER are to be provided to:

- Department of Defence
- Environment Centre NT
- Northern Land Council
- Parks and Wildlife Katherine Regional Office

In addition, 8 CD ROM copies (in ADOBE\*.pdf format) plus two unsecured Microsoft Word copies should be submitted (to allow placement on the EPA’s Internet site and to facilitate production of the Assessment Report and Recommendations). The proponent should also consider producing at least several copies for direct sale to the public, on request.

Public and government advisory body comments are forwarded to the proponent. The Proponent prepares a Supplement to the PER and submits it to the Minister.

The Environment Protection Agency Program will prepare an Environmental Assessment Report and Recommendations based on the PER, the Supplement and any comments received. If the Minister approves the Report and Recommendations, these are forwarded to the Australian Government Minister for the Environment and Heritage for approval consideration under the EPBC Act. Subject to approval under the EPBC Act, the Report and Recommendations are then forwarded to the responsible (consent) Minister(s) for inclusion in permit, lease or license conditions and in relevant management procedures (e.g. Mining Management Plans).

The Assessment Report and Recommendations are included on the Environment Protection Agency Program’s webpage and hard copies are provided to respondents and selected public libraries and viewing sites.



## **5 ADMINISTRATION**

The nominated Action Officer for this project is Mr Matthew Kinch from the Environment Protection Agency Program, Department of Natural Resources, Environment and the Arts. The contact telephone number is (08) 8924 4020 and facsimile number (08) 8924 4053, e-mail: [matthew.kinch@nt.gov.au](mailto:matthew.kinch@nt.gov.au) .

Copies of the final guidelines will be posted on the DNRETA website at <http://www.nt.gov.au/nreta/environment/assessment/register>

Copies of the PER will be available to the public for purchase from the proponent.

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Figure 1 The Northern Territory Environmental Assessment Process



