

Environmental Impact Report

Pipeline Licence No.s 3 & 4 South East Pipelines



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1 Introduction

1.1 Background

The South East Pipeline network was constructed by the Pipeline Authority of South Australia (PASA) in 1990 and acquired by Epic Energy in 1995. The pipelines transport natural gas from the Katnook gas fields south of Penola to consumers near Penola (SAFRIES factory site), Mount Gambier, (Kimberley-Clark paper mill) and Nangwarry (Carter, Holt & Harvey mill). Epic Energy owns and operates the Katnook to Penola pipeline (Safries Lateral) under Pipeline Licence No.3 and the Katnook to Tantanoola (Katnook to Kimberly-Clark) Pipeline, the Mt Gambier Lateral pipeline and the Kalangadoo to Nangwarry (Nangwarry Lateral) pipeline under Pipeline Licence No.4.

1.2 Regulatory Framework

Recent changes to the South Australian *Petroleum Act 2000* (the Act), Part 12 require that the following documents be prepared in relation to the operation of the MAP:

- An Environmental Impact Report (EIR) - in accordance with Section 97 of the Act and Regulation 10 of the *Petroleum Regulations 2000* (the Regulations); and
- A Statement of Environmental Objectives (SEO) - in accordance with Section 99 and 100 of the Act and Regulations 12 and 13.

This document fulfils the requirements of an EIR as outlined in the Act and Regulations.

1.3 About this Document

This EIR has been prepared to satisfy the requirements of the Act with regard to the operation of the South East pipelines (as detailed under Pipeline Licence No.s3 and 4). This document:

- Provides a description of the South East pipelines (Section 2);
- Describes the specific features of the environment that are reasonably expected to be affected by pipeline operational activities (Section 3);
- Identifies potential environmental impacts and consequences (Section 4);
- Proposes measures to mitigate potential environmental impacts and consequences (Section 4); and
- Summarises stakeholder consultation (Section 5);

A SEO has been developed in conjunction with this EIR, which outlines the environmental objectives that Epic Energy is required to achieve and the criteria upon which the objectives are to be assessed. The SEO has been developed on the basis of information provided in this EIR.

1.4 About Epic Energy

Epic Energy is one of Australia's largest transmission companies, with more than \$3.5 billion invested in energy infrastructure. Epic Energy owns 3,300km of pipeline in Australia and operates another 891km on behalf of other owners. Epic Energy's major transmission pipelines are:

- The Moomba to Adelaide Pipeline system in South Australia;
- The Dampier to Bunbury Natural Gas Pipeline in Western Australia; and
- The South West Queensland Pipeline in Queensland.

Epic Energy's gas customers include electricity generators, gas distribution companies and industrial users.

Epic Energy was established in 1994 and employs more than 200 people. Major shareholders in the company are El Paso Energy Corporation, Dominion Resources, AMP Asset Management Australia Limited, Deutsche Asset Management (Australia) Limited and Hastings Funds Management Limited.

1.5 Epic Energy Environmental Management System

Epic Energy has developed and implemented a detailed Environmental Management System (EMS) which applies to all of Epic Energy's activities.

The Epic Energy EMS is a key tool in managing the environmental responsibilities, issues and risks associated with operational activities. The EMS integrates the management of environmental issues from top management to individual site operations, to reinforce it as a line management responsibility.

The Epic Energy EMS covers all activities undertaken by Epic Energy including:

- Pipeline construction (including route selection, design, land access and construction activities);
- Pipeline operations; and
- Operation of ancillary facilities.

The EMS is comprised of an Overview Manual and a number of supporting documents (refer to Figure 1). The following section details the key components of the EMS that are relevant to operation of the South East pipelines.

Any contractors engaged by Epic Energy are required to undertake environmental inductions and carry out their work in compliance with Epic's EMS and associated procedures.

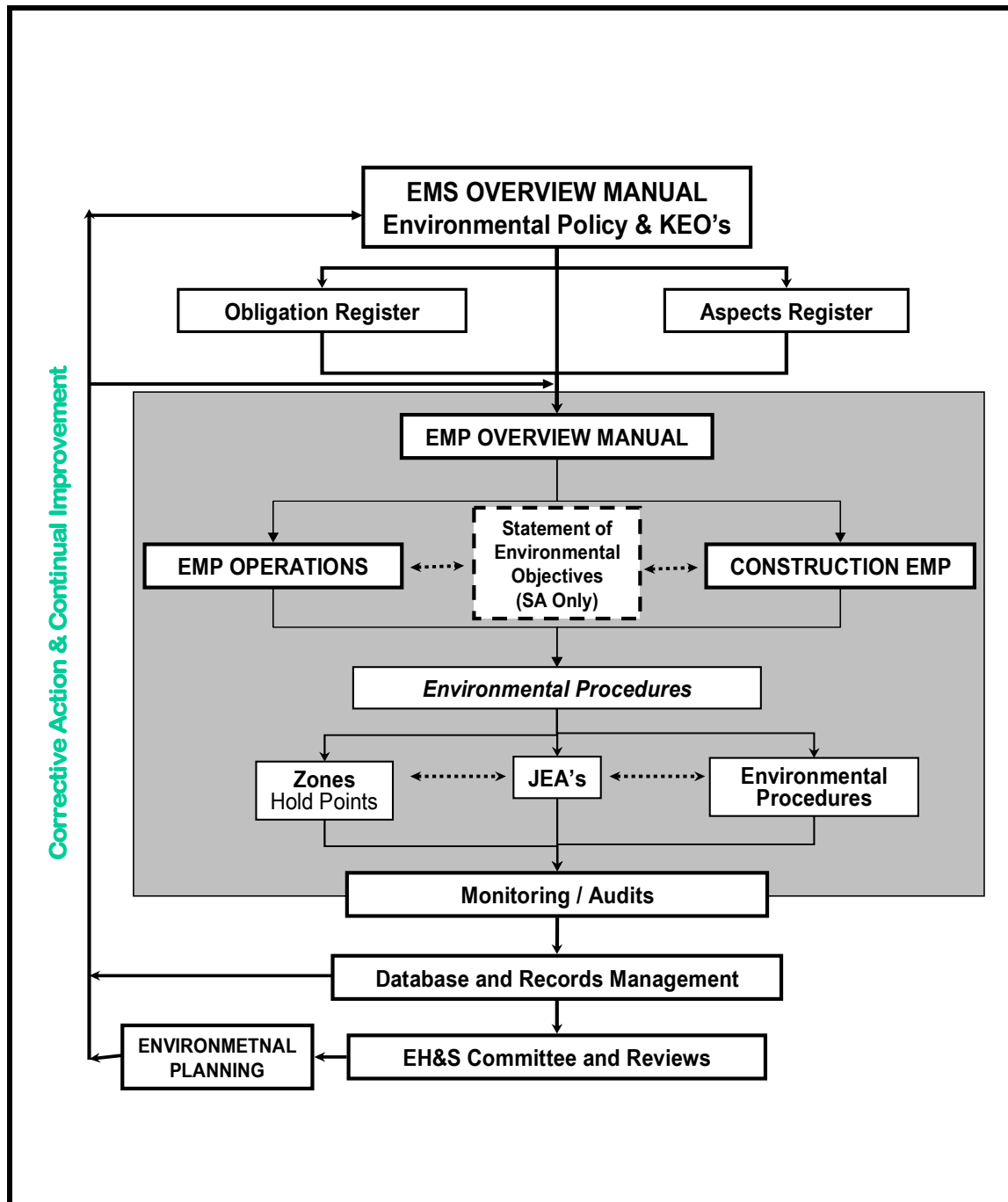


Figure 1 : Epic Energy Environmental Management System

1.5.1 Environmental Commitment

Epic Energy is committed to responsible environmental management of the South East pipelines. All planning, maintenance and operational activities will be conducted in accordance with Epic Energy's Environmental Policy (Appendix A). Epic Energy is committed to achieving the environmental objectives outlined in the corresponding SEO.

1.5.2 Environmental Management Plans

Epic Energy's Environmental Management Plan Operations (the EMP Operations) details the generic environmental control measures that apply for the operation of the pipeline and ancillary facilities. These measures are largely based on the Australian Pipeline Industry Association (APIA) Code of Environmental Practice. Where additional or site specific control measures are required to manage a particular issue, environmental procedures are prepared. Epic Energy ensures that the SEO objectives for operations are met through the implementation of the defined control measures.

1.5.3 EMS Hold Signs

Epic Energy is in the process of implementing a system of EMS Hold Signs on all of its pipelines. The purpose of this system is to install visible signs along the pipeline easement at locations where management measures, in addition to those listed in the EMP Operations, are required e.g. for weed infested areas, areas of particular conservation significance etc. For each location, the sign will cross reference to the relevant Environmental Procedure, which contains details of the specific issue associated with the location and the control measures to be implemented.

1.5.4 Job Hazard Analysis

A Job Hazard Analysis (JHA) is a simple tool that is used to help personnel identify, analyse and manage the hazards that exist in the work they undertake. It formalises the process of hazard identification and management that most people follow when working.

The JHA requires personnel to examine the task they are about to undertake and:

- break the job into separate, defined steps;
- for each step, identify the potential hazards associated with that job step; and
- for each potential hazard, list the method to be followed to prevent the hazard causing an injury, loss, damage or environmental incident.

Under the Epic Energy EMS, a JHA must be completed prior to the commencement of any task that has the potential to cause a significant adverse environmental or cultural impact (e.g. ground disturbance, vegetation clearing, handling hazardous materials and identified high risk activities).

1.5.5 Environmental Monitoring Stations

Environmental Monitoring Stations (EM Stations) are installed along the pipeline route as required, to provide photographic monitoring of a specific issue e.g. monitoring the rehabilitation of an excavation site.

2 Project Description

2.1 South East Pipelines Alignment

The South East pipelines were commissioned in 1990-91 to transport natural gas from the Katnook gas fields near Penola in the South East to industrial and domestic customers south of Penola, in Mt Gambier and Nangwarry and near Tantanoola (refer to Figure 2). The Pipeline Licence 3 route runs from the Katnook gas field to the Safries factory mill south of Penola. The Pipeline Licence 4 route runs from the Katnook gas field to a point south of Allendale where the pipeline splits (referred to as Glencoe Junction) and proceeds in to separate directions; a south-easterly direction to terminate at Mt Gambier; and in a westerly direction to terminate near Tantanoola. This pipeline also includes the Nangwarry Lateral which runs from a point one kilometre north-west of Kalangadoo and supplies a paper mill at Nangwarry.

2.2 Environmental Regions

The South East pipelines extend a total distance of 81.1km. In order to manage the environmental issues associated with the pipeline, the route has been divided into environmental regions. The environmental regions are based on the previously documented bioregions and land systems of South Australia and are used to describe the sections of the pipeline with similar receiving environments and/or land uses. The use of the regions allows for specific controls, where required, to be identified and implemented to address the environmental issues specific to the region.

The regions associated with the pipeline route are summarised in Table 2-1 and described in Section 3 of this document. It is important to note that while a specific start and end point has been provided for each region, these are indicative only. In practice, the landforms of the area generally change over a number of kilometres.

Table 2-1: Locations of Environmental Regions

Region	Pipeline Licence No.	Katnook – Kimberley-Clark Mainline (KP)	Mt Gambier Lateral (KP)	Safries Lateral (KP)	Nangwarry Lateral (KP)
Naracoorte Coastal Plain	3 4	0 – 29.1 43.7 – 46.1	0 – 9.9	0 – 4.5	0 – 11.5
Mt Gambier Volcanic Region	4	29.1 – 43.7	9.9 – 18.9	-	-



Figure 2: Pipeline Route

2.3 Design and Engineering

The South East Pipeline System transports natural gas for domestic and industrial customers in the Mt. Gambier, Tantanoola and Nangwarry regions, with gas processed from the Katnook Processing Plant and transported to the customers via the Epic Energy owned and operated South East Pipeline. The gas in the South East Pipeline System is odourised via an Origin Energy owned and maintained odourant injection facility located at the Katnook Main Line Valve and Scraper Station facility.

The design parameters and description of the facilities for the South East Pipeline are provided in the following sections.

2.3.1 Pipelines

Katnook – Kimberley Clarke Pipeline (Pipeline Licence 4)

The Katnook to Tantanoola pipeline, known as the Kimberley Clarke pipeline runs from the Epic Energy site, adjacent to the Katnook production plant, through Glencoe Junction, to a meter station near Tantanoola. The cathodic protection system is sacrificial anodes, and the pipeline was constructed with Zaplock joints. The pipeline has pig trap facilities at Katnook and Kimberley Clarke and a Main Line Valve (MLV) midway along the pipeline at Glencoe Junction.

Table 2-2: Kimberley Clarke Pipeline Description / Specification

Date Constructed	1990 – 1991
Date Commissioned	March 1991
Length	46.1 km
Diameter (OD)	168.3 mm
Wall Thickness - Normal - Special crossings (eg. Roads, railways, rivers)	4.2 mm 5.0 mm
Pipe Grade	API 5LX 42
MAOP	10,000 Kpa
Coating	Yellow Jacket
Main Line Valves	3
Actuators	Manual
Compressor Stations	Nil
Meter Stations	Kimberley Clarke meter station

Glencoe – Mount Gambier Lateral (Pipeline Licence 4)

The Mount Gambier lateral runs from Glencoe Junction, midway along the Katnook to Kimberley Clake lateral, to a meter station on Nick Lyon Road, Mount Gambier. The cathodic protection system consists of sacrificial anodes, and the pipeline was constructed with Zaplock joints. The pipeline has pig trap facilities at Glencoe and the Mount Gambier meter station.

Table 2-3: Mount Gambier Lateral Pipeline Description / Specification

Date Constructed	1990 – 1991
Date Commissioned	April 1991
Length	18.9 km
Diameter (OD)	168.3 mm
Wall Thickness - Normal - Special crossings (eg. Roads, railways, rivers)	4.2 mm 5.0 mm
Pipe Grade	API 5LX 42
MAOP	10,000 Kpa
Coating	Yellow Jacket
Main Line Valves	2
Actuators	Manual
Compressor Stations	Nil
Meter Stations	Mount Gambier meter station



Pipeline easement near Katnook Mt Gambier Lateral Meter Station

Safries Lateral (Pipeline Licence 3)

The Safries lateral runs for 4.5 kilometres from the Epic Energy Katnook site adjacent to the Katnook production plant to a meter station in the Safries Pty Ltd property, situated on the Penola to Mount Gambier Road. The pipeline cathodic protection system is sacrificial anodes and the pipeline has welded joints.

Table 2-4: Safries Lateral Pipeline Description / Specification

Date Constructed	1990
Date Commissioned	January 1991
Length	4.5 km
Diameter (OD)	60.3 mm
Wall Thickness	
- Normal	3.9 mm
- Special crossings (eg. Roads, railways, rivers)	3.9 mm
Pipe Grade	ASTM A106 Gr B
MAOP	10,000 Kpa
Coating	Yellow Jacket
Main Line Valves	Upstream and downstream isolation valves
Actuators	Manual
Compressor Stations	Nil
Meter Stations	Safries meter station

Nangwarry Lateral (Pipeline Licence 4)

The Nangwarry lateral runs for 11.5 kilometres from a take off near Kalangado on the 150mm Katnook to Kimberley Clarke pipeline to a meter station at Nangwarry. The lateral is protected with sacrificial anodes, is buried at a minimum depth of 1000mm and 1200mm at crossings and has welded joints. The pressure in the lateral is reduced to 2000 Kpa at a regulator off take station near Kalangado.

Table 2-5: Nangwarry Lateral Pipeline Description / Specification

Date Constructed	2001
Date Commissioned	August 2001
Length	11.5 km
Diameter (OD)	88.9 mm
Wall Thickness	
- Normal	3.2 mm
- Special crossings (eg. Roads, railways, rivers)	4.0 mm
Pipe Grade	API 5LX 56
MAOP	9,850 Kpa
Coating	Yellow Jacket
Main Line Valves	Upstream and downstream isolation valves
Actuators	Manual
Compressor Stations	Nil
Meter Stations	Nangwarry meter station

2.3.2 Facilities and Infrastructure

A brief description of the pipeline facilities and associated infrastructure is provided in Table 2-6.

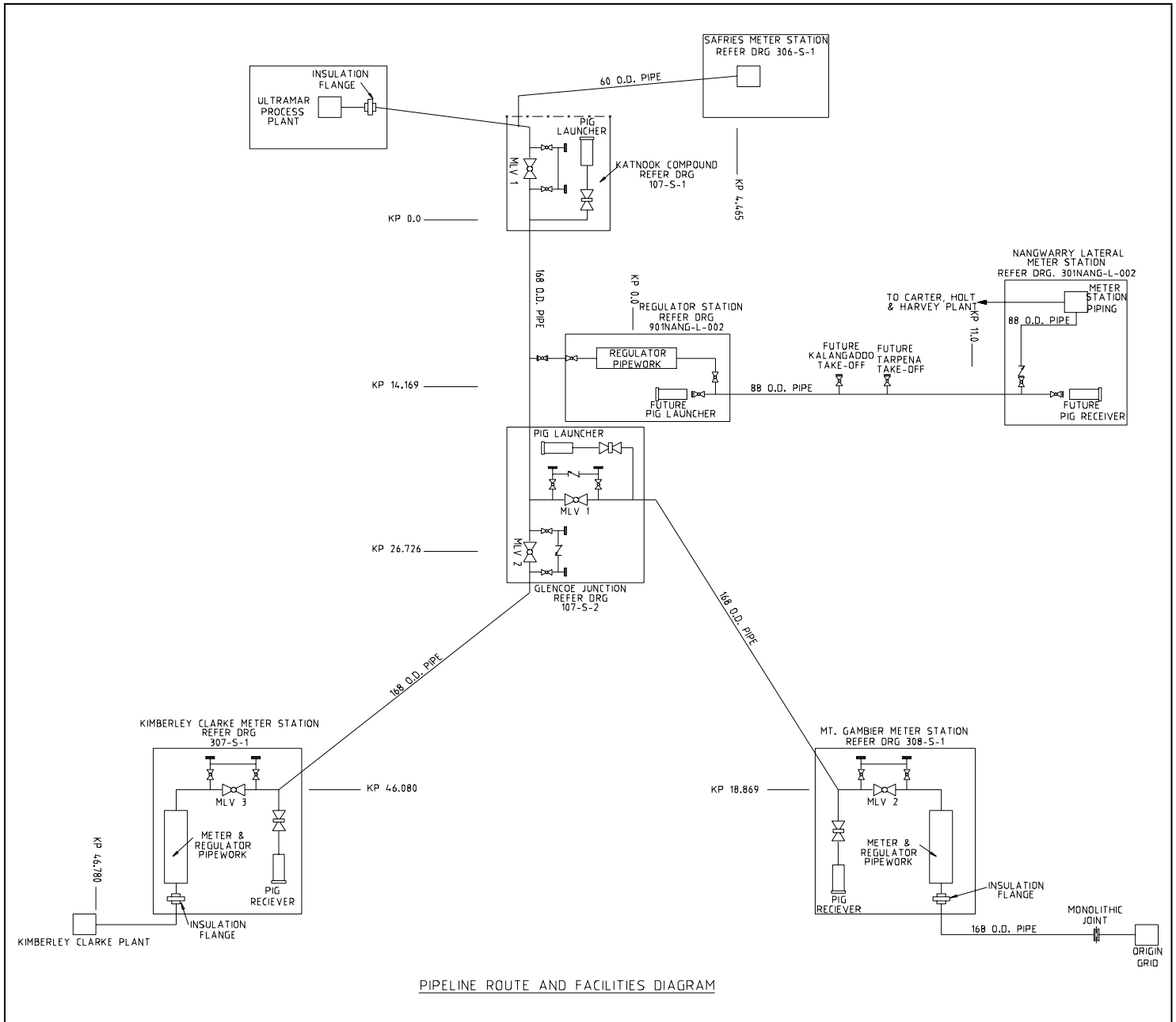
Table 2-6: Pipeline Facilities and Infrastructure

Facility	Description.
Metering Stations	Metering stations are located where gas volumes leave the main transmission lines.
Scraper Stations	Scraper stations are required to allow for cleaning devices (pigs) to be inserted into (and removed from) the pipeline to clean the line and/or detect damage or pipe corrosion along the pipeline.
Mainline Valves	Mainline valves are located at off-take and termination points. Mainline valves are installed to automatically shut down a section of the pipeline when any rapid drop in system pressure is detected. The valves are designed to operate automatically, but may also be operated manually
Cathodic Protection	A cathodic protection system is incorporated into the pipeline design to protect the pipeline from corrosion. This involves the use of buried anode beds, which are connected to the pipeline via cabling. In addition, cathodic protection test posts are located approximately every 3km. The test posts are required to allow for monitoring of the effectiveness of the corrosion protection system.
Pipeline Markers	Pipeline marker signs are located along the pipeline easement, at intervals, so that a person can clearly see a marker sign in either direction. The maker signs are placed closer at bends, on either side of road and watercourse crossings and at fencelines.



Pipeline Marker and Cathodic Protection site

Figure 3: Pipeline route and facilities schematic



2.4 Operation

Day-to-day operations of natural gas transmission pipelines pose few environmental implications. The pipeline is designed to be operated remotely from the Epic Energy Control Room in Perth. Field operators undertake regular route inspections, maintain ongoing liaison with landholders as required, and respond to maintenance requirements such as erosion control and weed control, as necessary.

The key activities which may have an impact on landowners, occupiers and the environment include:

- Maintenance of the pipeline easement (e.g. weed control, rehabilitation of erosion and excavation sites);
- Maintenance of the pipeline and facilities (e.g. excavation of the pipeline for maintenance, hydrotesting, assessment of internal pipeline integrity and welding);
- Compressor station operations;
- Access to the pipeline easement;
- Inspection & testing of the pipeline, easement and facilities;
- Emissions from the pipeline;
- Storage and use of hazardous substances;
- Production and disposal of waste materials; and
- Potential accidents or emergency situations.

2.5 Decommissioning

Epic Energy is committed to decommissioning the pipeline in accordance with the regulatory requirements and accepted current environmental best practice.

Currently decommissioning procedures require the removal of all above ground infrastructure and the restoration of associated disturbed areas.

At the time of decommissioning a decision will be made regarding the opportunities for future use of the pipeline. If no longer required, the pipeline will be purged of gas and below ground facilities allowed to gradually degrade in-situ. If however, it is considered that the pipeline may offer some future benefits, it will be filled with an inert material and the cathodic protection system maintained to prevent corrosion. However, all above ground facilities will be removed.

3 Description of the Environment

3.1 Introduction

The purpose of this section of the document is to describe the environment in which the pipeline operates.

The content of this section of the document has been prepared based on a desktop assessment of the entire pipeline route based on publicly available information and previous environmental and cultural heritage investigations completed on behalf of Epic Energy. This desktop assessment was followed up by a field inspection to verify the findings. In addition, site specific information has been sourced, the Epic Energy Land Management System (LMS) and a range of Epic Energy personnel. A complete list of reference sources is included in Section 7.

As the pipeline crosses different landforms and land uses, the pipeline has been divided into regions. This section of the document is presented in terms of the relevant environmental regions. It is important to note that the location specific information presented in this section is not exhaustive, and is included to provide an example of the specific issues that may exist in each region.

The original pipelines and facilities were installed approximately 13 years ago. Consequently the easement has, for the most part, revegetated to a state similar to adjoining land. Due to the close proximity of the pipelines to existing road networks an easement access track has not been maintained, consequently the easement is virtually indistinguishable from the surrounding land use and for the most part is covered by crops or pasture.

3.2 Naracoorte Coastal Plain

The Safries Lateral (South East Pipeline Licence 3) pipeline and the Nangwarry Lateral are entirely situated within the Naracoorte coastal plain region.

The South East Pipeline Licence 4 pipelines passes through the Naracoorte coastal plain region at the following locations:

- Katnook to Tantanoola (Kimberley Clark) - between KP0.0 and KP29.1 and between KP43.7 and KP46.1
- Glencoe Junction to Mt Gambier (Mt Gambier Lateral) – between KP0.0 and KP9.9.

3.2.1 Climate

This region has a Mediterranean climate with cool wet winters and mild dry summers. There is a distinct winter rainfall with the average annual rainfall in the region varying from 600mm in the north to 800mm in the south (PASA 1990b, Laut *et al* 1977). Evaporation rates average between 1600-1700 mm per year (Laut *et al* 1977).

3.2.2 Soils and Terrain

This region is dominated by a system of Plains and dunes inter-dispersed with swamps and lakes. The plains are poorly drained and subject to seasonal flooding while the sandy dunes are well drained.

The plains are characterised by mottled-yellow duplex soils and black self-mulching clays, with black organic soils present in the swamps. The dunes are characterised by red sandy soils which are prone to slight drift (Laut *et al* 1977).

Many of the natural lagoons and swamps in the region have been drained and the surface drainage has been significantly altered due to extensive agriculture in the region.

Underground caves and sinkholes are also an important geological feature in this region (PASA 1990b).

3.2.3 Flora and Fauna

Flora

The vegetation in this region has been highly modified by agriculture and as a result limited areas of remnant native vegetation remain. These remaining areas of native vegetation are considered to be significant. Native vegetation in this region is generally comprised of the following associations:

- Open parkland with a pasture understorey on the plains. The parkland overstorey includes remnant River Red Gum, Swamp Gum and Pink Gum. Some native heath, comprised of *Melaluca gibbosa* and *Hakea rugosa* can also be found.
- A mixture of parkland and shrubland, comprised of coastal mallees (*Eucalyptus diversifolia*) and mallee (*E. obliqua* and *E. baxteri*) can be found on the dunes.
- The swamps and lagoons are characterised by Paperbark scrub (*Melaluca halimifolium*) with an understorey of sedges (*Gahnia trifida*, *G. filum*, *Juncas* species and *Scirpus* species) and samphires (Laut *et al* 1977).

Much of the native understorey species and sections of the overstorey have been cleared and replaced with pastures for grazing.

The remaining remnant woodlands are prone to invasion and displacement by introduced grasses and herbs. Phalaris is one of the most aggressive weeds found in the region and is able to crowd out native plant species. It also creates a fire hazard as it is highly flammable (Croft *et al* 1999).

Environmental weed species considered to be of greatest concern in the region requiring control include (Croft *et al* 1999):

- Monterey Pine (*Pinus radiata*)
- European Olive (*Olea europaea* ssp.)
- Bridal Creeper (*Myrsiphyllum asparagoides*)
- Phalaris (*Phalaris* species, especially *P. aquatica*)
- Boneseed (*Chrysanthemoides monillifera*)
- Blackberry (*Rubus* species)
- Golden Wreath Wattle (*Acacia saligna*)
- Tagasaste/Tree Lucerne (*Chamaecytisus palmensis*)

In addition there are two pathogens of concern which have the potential to be introduced into the region, Phytophthora (*Phytophthora cinnamomi*) and Mundulla Yellows.

The Mt Gambier Lateral pipeline traverses the Wandilo Native Forest Reserve between KP10 and KP11.5 (following an existing road reserve and fire break).

The Katnook to Tantanoola pipeline traverses the Glencoe Hill Native Forest Reserve between KP39 and KP40 (following an existing road reserve and fire break).

Two significant vegetation and habitat areas containing important native woodland are located near the Katnook to Tantanoola pipeline easement between Krongart and Glencoe Junction, These two areas, Blue Gum Water Hole and Gum Flat Swamp, are located between KP17 and KP28.

Plant species likely to be found in this region, listed as endangered, vulnerable or rare under the SA *National Parks and Wildlife Act 1972* and the *Commonwealth Endangered Species Protection Act 1992* include:

Name	Classification (SA)	Classification (C'wth)
Elegant Spider Orchid (<i>Caladenia formosa</i>)	Vulnerable	Vulnerable
Little Dip Spider Orchid (<i>Caladenia richardsiorum</i>)	Endangered	Endangered
Muller's eyebright (<i>Euphrasia collina</i> ssp. <i>mulleri</i>)	Extinct	Endangered
Clover Glycine (<i>Glycine latrobeana</i>)	Vulnerable	Vulnerable
Silver Daisy-bush (<i>Olearia pannosa</i> ssp. <i>pannosa</i>)	Vulnerable	Vulnerable
Lowan phebalium (<i>Phebalium lowanense</i>)	Vulnerable	Vulnerable
Kangaroo Island Pomaderris (<i>Pomaderris halmaturina</i> ssp. <i>halmaturina</i>)	Vulnerable	Vulnerable
Maroon Leek-orchid (<i>Prasophyllum frenchii</i>)	Vulnerable	Vulnerable
Leafy Greenhood (<i>Pterostylis cucullate</i>)	Vulnerable	Vulnerable
Swamp Greenhood (<i>Pterostylis tenuissima</i>)	Vulnerable	Vulnerable
Metallic Sun-orchid (<i>Thelymitra epipactoides</i>)	Endangered	Endangered

Fauna

This region contains habitats that shelter a variety of native mammal, bird and reptile species. Many species are now confined to isolated areas of remnant vegetation.

Fauna species likely to be found in this region, listed as endangered, vulnerable or rare under the SA *National Parks and Wildlife Act 1972* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* include:

Name	Classification (SA)	Classification (C'wth)
Mammals		
Red-necked Wallaby (<i>Macropus rufogriseus</i>)	Rare	-
Southern Brown Bandicoot (<i>Isoodon obesulus</i>)	Vulnerable	Endangered
Sugar Glider (<i>Petaurus breviceps</i>)	Rare	-
Swamp Antechinus (<i>Antechinus minimus</i>)	Endangered	-
Yellow-bellied Glider (<i>Petaurus australis australis</i>)	Endangered	-
Birds		
Chestnut-rump Heathwren (<i>Hylacola pyrrhopygia</i>)	Vulnerable	-
Crested Shrikeit (<i>Falcunculus frontatus frontatus</i>)	Vulnerable	-
Painted Button-quail (<i>Turnix varia varia</i>)	Vulnerable	-
Red-tailed Black Cockatoo (<i>Calyptorhynchus banksii graptogyne</i>)	Endangered	Endangered
Reptiles		
Swamp Skink (<i>Egernia coventryi</i>)	Endangered	-
Glossy Grass Skink (<i>Pseudemoia rawlinsoni</i>)	Endangered	
Freshwater Fish		
Dwarf Galaxias (<i>Galaxiella pusilla</i>)	-	Vulnerable
Yarra Pygmy Perch (<i>Nannoperca obscura</i>)	Vulnerable	Vulnerable
Ewens / Varigated Pygmy Perch (<i>Nannoperca variegata</i>)	Rare	Vulnerable

Two prescribed wetland areas considered to be of environmental significance, White Hawk Lagoon and Dismal Swamp are located adjacent to the Mount Gambier Lateral pipeline easement at KP 0.0 and KP4.0 - 7.0 respectively (PASA 1990b).

3.2.4 Water Resources

The dunes which extend across the plains, running parallel to the coast, in this region act as an impediment to surface drainage to the sea. As a result the surface hydrology of the region is characterised by large areas of seasonal swamps and very few river channels. However agricultural practices in the region have led to the construction of an extensive network of drains which now divert the majority of water to the sea, resulting in few areas of inundation.

The pipeline alignment avoids permanent and major seasonal swamps in this region. However some sections of the pipeline are subject to short-term seasonal inundation (PASA 1990b).

Groundwater in the region is found in aquifers located in the Gambier Limestone and Dilwyn Formations. The depth of the water table varies and can be as shallow as 5 m in some areas, dependant on recharge (Epic Energy 2000). These aquifers contain good to poor quality water which is suitable for drinking and are recharged by the infiltration of rainwater through the soil profile. Water from the Dilwyn formation is used for residential, irrigation, stock and industrial purposes (Origin Energy 2002).

3.2.5 Land Use

The main land use of this region is agriculture with extensive livestock grazing for the production of beef, mutton and wool. The area is also used for forestry, with numerous Pine plantations present and viticulture occurs in the Coonawarra region.

Several other primary industries also occur in the region including timber milling, petroleum gas production and food processing.

Other land uses in the region include tourism (Coonawarra wine region, Tantanoola caves) and conservation (Gower Conservation Park, Tantanoola Caves Conservation Park and Telford Scrub Conservation Park).

3.3 Mt Gambier Volcanic Region

The South East Pipeline Licence 4 pipeline passes through the Mt Gambier Volcanic Region at the following locations:

- Katnook to Tantanoola (Kimberley Clark) - between KP29.1 and KP43.7
- Glencoe Junction to Mt Gambier (Mt Gambier Lateral) – between KP9.9 and KP19.7.

3.3.1 Climate

This region's climate is characterised by cold, wet winters and warm, dry summers. Rainfall generally occurs during the winter months with an annual average of 750-850 mm. Evaporation is moderate and averages 1600 mm per annum (Laut *et al* 1977).

3.3.2 Soils and Terrain

This region has a distinctly higher relief than surrounding regions and is characterised by a slightly uplifted limestone plain with higher several volcanic cones.

The plains generally consist of red, weakly structured sandy soils, bleached sands with rocky outcrops or ash with brown loams. The majority of the soils in this sub-region are well drained and as a result no surface water is present.

The volcanic cones are comprised of basalt with a cover of brown, friable loams and rock outcrops. The soils in this sub-region are subject to sheet erosion and major gully erosion during periods of intensive rainfall. These cones are enclosed and support fresh water lakes.

3.3.3 Flora and Fauna

Flora

The vegetation in this region has been extensively cleared and modified to support forestry and agriculture. As a result limited areas of remnant native vegetation remain. Native vegetation in this region is generally comprised of open parkland, comprised of River Red Gum (*Eucalyptus camaldulensis*), Brown stringy-bark (*E. baxteri*) and Flooded gum (*E. ovata*) with a pasture understorey on the plains. No native vegetation remains on the volcanic cones which have been cleared and utilised for agricultural activities.

The remaining remnant vegetation in this region is prone to invasion and displacement by introduced grasses and herbs. Phalaris is one of the most aggressive weeds found in the region and is able to crowd out native plant species. It also creates a fire hazard as it is highly flammable (Croft *et al* 1999).

Environmental weed species considered to be of greatest concern in the region requiring control include (Croft *et al* 1999):

- Monterey Pine (*Pinus radiata*)
- European Olive (*Olea europaea* ssp.)
- Bridal Creeper (*Myrsiphyllum asparagoides*)
- Phalaris (*Phalaris* species, especially *P.aquatica*)
- Boneseed (*Chrysanthemoides monilifera*)
- Blackberry (*Rubus* species)
- Golden Wreath Wattle (*Acacia saligna*)
- Tagasaste/Tree Lucerne (*Chamaecytisus palmensis*)

Plant species likely to be found in this region, listed as endangered, vulnerable or rare under the SA *National Parks and Wildlife Act 1972* and the *Commonwealth Endangered Species Protection Act 1992* include:

Name	Classification (SA)	Classification (C'wth)
Elegant Spider Orchid (<i>Caladenia formosa</i>)	Vulnerable	Vulnerable
Little Dip Spider Orchid (<i>Caladenia richardsiorum</i>)	Endangered	Endangered
Muller's eyebright (<i>Euphrasia collina</i> ssp. <i>mulleri</i>)	Extinct	Endangered
Clover Glycine (<i>Glycine latrobeana</i>)	Vulnerable	Vulnerable
Silver Daisy-bush (<i>Olearia pannosa</i> ssp. <i>pannosa</i>)	Vulnerable	Vulnerable
Lowan phebalium (<i>Phebalium lowanense</i>)	Vulnerable	Vulnerable
Kangaroo Island Pomaderris (<i>Pomaderris halmaturina</i> ssp. <i>halmaturina</i>)	Vulnerable	Vulnerable
Maroon Leek-orchid (<i>Prasophyllum frenchii</i>)	Vulnerable	Vulnerable
Leafy Greenhood (<i>Pterostylis cucullate</i>)	Vulnerable	Vulnerable
Swamp Greenhood (<i>Pterostylis tenuissima</i>)	Vulnerable	Vulnerable
Metallic Sun-orchid (<i>Thelymitra epipactoides</i>)	Endangered	Endangered

Fauna

This region contains habitats that shelter a variety of native mammal, bird and reptile species. Many species are now confined to isolated areas of remnant vegetation.

Fauna species likely to be found in this region, listed as endangered, vulnerable or rare under the SA *National Parks and Wildlife Act 1972* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* include:

Name	Classification (SA)	Classification (C'wth)
Mammals		
Red-necked Wallaby (<i>Macropus rufogriseus</i>)	Rare	-
Southern Brown Bandicoot (<i>Isoodon obesulus</i>)	Vulnerable	Endangered
Sugar Glider (<i>Petaurus breviceps</i>)	Rare	-
Swamp Antechinus (<i>Antechinus minimus</i>)	Endangered	-
Yellow-bellied Glider (<i>Petaurus australis australis</i>)	Endangered	-
Birds		
Chestnut-rump Heathwren (<i>Hylacola pyrrhopygia</i>)	Vulnerable	-
Crested Shrikeit (<i>Falcunculus frontatus frontatus</i>)	Vulnerable	-
Painted Button-quail (<i>Turnix varia varia</i>)	Vulnerable	-
Red-tailed Black Cockatoo (<i>Calyptorhynchus banksii graptogyne</i>)	Endangered	Endangered
Reptiles		
Swamp Skink (<i>Egernia coventryi</i>)	Endangered	-
Glossy Grass Skink (<i>Pseudemoia rawlinsoni</i>)	Endangered	
Freshwater Fish		
Dwarf Galaxias (<i>Galaxiella pusilla</i>)	-	Vulnerable
Yarra Pygmy Perch (<i>Nannoperca obscura</i>)	Vulnerable	Vulnerable
Ewens / Varigated Pygmy Perch (<i>Nannoperca variegata</i>)	Rare	Vulnerable

3.3.4 Water Resources

The volcanic cones in this region have been inundated by near-surface groundwater which has led to the formation of deep perennial crater lakes (PASA 1990b). The Blue Lake system at Mt Gambier provides the water supply for the city and immediate region.

3.3.5 Land Use

The dominant land use in this region is forestry with numerous Pine plantations present. Some grazing of modified pastures also occurs.

Several other primary industries also occur in the region including timber milling, and food processing.

Other land uses in the region include tourism (Blue Lakes).

3.4 Cultural Heritage

The pipeline easements traverse a number of Native Title claimant and cultural heritage areas. It also passes by a number of European heritage sites.

A cultural heritage survey of the pipeline route was undertaken prior to construction in 1990. Four areas of potentially high archaeological significance were identified and are detailed below.

Naracoorte Coastal Plain

Three areas were identified on the Katnook to Tantanoola pipeline between approximately KP35 and KP47.2:

- Between the Tantanoola Forest headquarters and the base of the Mt Burr Range;
- 2km north of Koorine Corner to the Tantanoola Forest; and
- at the entrance to Millicent where the alignment crosses a sand dune ridge.

A number of 'scarred trees' are present within the vicinity of the Nangwarry Lateral (Epic Energy 2000).

Victorian Volcanic Plain

One area was identified in the corridor south of Airport Road near Mt Gambier at KP13 to KP19.7 on the Mt Gambier Lateral pipeline.

Numerous aboriginal heritage sites are also known to be present in this region and primarily consist of camp sites and artefact scatters. Mythological sites are also present (Laut *et al* 1977).

3.5 Land & Groundwater Contamination

As previously stated, the South East pipelines have been in operation for 13 years. All potential hydrocarbon contamination sources (e.g. pigging stations) are located within infrastructure compounds where appropriate spill prevention and control measures are in place. To date there has been no incident/evidence of land contamination associated with the Katnook pipelines operation.

Mitigation measures in place to prevent contamination as a result of pipeline operations are detailed in Section 4.10.

4 Potential Impacts and Mitigation Measures

This chapter describes the potential impacts to the environment as a result of pipeline operation and provides an outline of the impact mitigation strategies adopted by Epic Energy. Identification of potential impacts and mitigation strategies are based on environmental issues (eg. soil, flora, heritage, etc.) rather than operational activity. A summary of the potential impacts in terms operational activities is included in Appendix B.

4.1 Flora

4.1.1 Potential Impacts

Daily pipeline operation activities have little impact on native vegetation, however irregular or unscheduled maintenance activities have the potential to result in the clearance of trees, shrubs and groundcover. Activities which may adversely impact on flora include:

- Excavations or 'Dig-ups' – Dig-ups are required to undertake inspection and repair of the pipeline or pipeline coating. It is estimated that up to 6-10 dig-ups occur per year (over 80km of pipeline), but this is highly dependent on the inspection and maintenance program. Vegetation is removed from the immediate area of excavation, which may extend for 5-10m along the easement and from storage and stockpile areas if required.
- Vegetation Control – Trees are not permitted to grow on the easement within 3m of the pipeline. Other vegetation on the easement is controlled to ensure that the line of sight for pipeline markers is maintained. Vegetation is removed as a targeted program and is generally removed at ground level only.

The loss of native vegetation as a result of these activities is unlikely due to the majority of the pipeline easement being located on previously cleared agricultural land or service corridors. However any impact to vegetation, (native or introduced), is likely to be short-term and restricted to existing easements that have previously been used for pipeline construction activities.

4.1.2 Mitigation Measures

General management strategies that are implemented to minimise the impacts on flora are provided below.

Impact mitigation measures include:

- restricting operational activities to the easement access tracks and the easement;
- minimising the time between clearing and rehabilitating the easement when excavations are required;
- trimming vegetation rather than clearing, particularly at watercourses;
- where possible, avoiding the clearing of isolated trees, roadside treebelts and small isolated clumps of trees;
- where practical, removing vegetation without disturbing the soil to preserve root and seed-stock along the easement;
- keeping topsoil stockpiled separately from subsoils and respreading after backfilling in the immediate vicinity of its origin;
- respreading of cleared vegetation where it does not impede vehicles, stock or wildlife; and
- re-contouring the land surface consistent with the surrounding area to ensure localised habitats/niches are maintained.

4.2 Fauna

4.2.1 Potential Impacts

The pipeline facilities are primarily located on agricultural or forestry land with limited habitat value. However some sections of the pipeline are located within or adjacent to state forests or patches of remnant vegetation which do provide an important habitat for native fauna.

Daily pipeline operation and maintenance activities have little impact on fauna, however irregular or unscheduled maintenance activities, such as excavations, have the potential to result in the loss of foraging and breeding habitat. The impact of such disturbances is likely to be short-term and restricted to existing easements that have previously been used for pipeline construction activities. There is also the potential for entrapment of fauna at excavation sites, although the duration of excavation work is generally limited to 3 days (may be longer for complicated maintenance work). Control measures are outlined in Section 4.2.2.

Other potential impacts to fauna as a result of the operation of the pipeline and associated facilities include:

- fauna mortality, through incidental roadkills or occasional contact with facilities
- short-term disturbance associated with noise, vehicle traffic and human activity on the easement and at facilities (especially relevant times, such as breeding, when fauna are sensitive to disturbance).

The pipeline facilities also traverse agricultural land used for the grazing of livestock. The daily operation of the pipeline has little impact upon livestock.

4.2.2 Mitigation Measures

Impact mitigation measures to reduce the potential impact to fauna include:

- restricting operational activities to the easement access tracks and the easement;
- minimising the time between clearing and rehabilitating the easement when excavations are required;

- planning excavations to ensure that the period of time that the trench is open is minimised;
- liaising with landholders to determine appropriate livestock management during excavation activities;
- provision of fauna escape means in open trenches and regular inspection of open trenches for trapped fauna; and
- re-contouring the land surface consistent with the surrounding area to ensure localised habitats/niches are maintained.

4.3 Soils and Terrain

4.3.1 Potential Impacts

Operation and maintenance of the pipeline may result in the following potential adverse effects to soil and terrain:

- Erosion of disturbed sandy soils and the fine powdery sub-soils, particularly by wind
- Erosion of banks and channels of watercourses
- Compaction of soils
- Contamination of soils by oil or chemicals
- 'Tunnelling' of sub-surface water along pipeline trench.

The regions that are more susceptible to soil erosion are:

Region	Potential Impact
Naracoorte Coastal Plain	Sand dunes - prone to slight drift and erosion through water and wind processes
Mt Gambier Volcanic Region	Brown loam soils - subject to sheet erosion and major gully erosion during periods of intensive rainfall

4.3.2 Mitigation Measures

Measures that are adopted by Epic to reduce the risk and impact of soil erosion include:

- minimising the area cleared during excavations, in particular minimising the disturbance of erodible soils;
- minimising the time period between clearing and restoration;
- promoting rapid restoration by conserving and re-spreading topsoil;
- reinstating surface contours and natural drainage patterns;
- reinstating watercourse banks as soon as practicable and applying bank stabilisation techniques as necessary;
- restricting the use of heavy machinery to the minimum necessary to complete the task;
- restricting vehicle use in wet or boggy conditions;
- managing all oils, chemicals and wastes in a manner that minimises the risk of spills to the environment and having in place appropriate contingency plans in the event of a spill.

The potential for the movement of water (leading to tunnel erosion) along/within the trench of the South East pipelines and associated lateral pipelines has been considered. However due to the nature of the soils (primarily sands and loams) and the landforms through which the pipelines pass and the installation of trench breakers during the construction of the pipelines, it is unlikely that sufficient water movement would occur along the trench to create these issues.

4.4 Pests and Diseases

4.4.1 Potential Impacts

A wide variety of weed species are present along the pipeline due to the extensive agricultural activities undertaken in the region.

While most weeds have become endemic and can be spread by stock, animals and agricultural vehicles there are a number of weeds which can be spread by pipeline operations. Of particular concern is Salvation Jane.

The movement of maintenance vehicles and equipment along the easement has the potential to result in the spread of weed species through the transport of plant material on vehicles or soil.

4.4.2 Mitigation Measures

Measures that are adopted by Epic to reduce the risk of pest and/or disease spread include:

- Identifying and clearly marking known infestations of weeds on the easement;
- Developing and implementing procedures to define access routes to the easement to avoid areas of known infestation;
- Minimising soil transport along the easement and prevention of soil transport out of areas of known weed infestation;
- Implementation of a system of vehicle and equipment washdown for vehicles entering and leaving the easement; and
- Implementation of targeted weed eradication programs on the easement and at facilities.

4.5 Water Resources

4.5.1 Potential Impacts

Pipeline operation may result in potential impacts to surface water including:

- Disturbance of surface water drainage patterns.
- Reduced water quality associated with low level contamination.

It is considered that these impacts are minimal in terms of severity and duration, and can be appropriately managed through the implementation of the mitigation measures outlined below.

The potential for pipeline operations to impact on upon subsurface water (aquifers) has been considered. However it is considered that impacts to aquifers would be minimal due to the nature of the product being transported.

4.5.2 Mitigation Measures

Mitigation of impacts on surface water largely relates to the protection of drainage patterns and preventing contamination. Mitigation methods include:

- ensuring excavation activities (including stockpiles) do not unduly impede surface water flows;
- conducting maintenance activities across drainage lines when dry, where practicable;
- utilising sediment control measures;
- reinstating surface contours as part of the rehabilitation process;
- disposing of hydrotest waters appropriately;
- reducing the level of activity during wet weather;
- ensuring all vehicles are well maintained and that all servicing occurs at designated facilities; and
- adopting appropriate chemical and oil storage, handling and disposal.

4.6 Land Use

4.6.1 Potential Impacts

The operation of the pipeline has only a minor localised impact on land use. Localised impacts can be summarised as follows:

- Occasional short-term reduction in available pastoral grazing or cropping land during excavations.
- Occasional temporary cutting of fences to allow access during excavations.
- Use of access tracks on farm properties to access the easement.

Impacts to conservation values are associated with the potential disturbance to flora, fauna or items of cultural heritage. These issues are dealt with sections 4.1, 4.2 and 4.9, respectively. Generally, as the impact will be contained to the existing, previously disturbed easement, it is expected that there will be minimal disturbance to existing land uses as a result of pipeline operations.

No impacts are expected to conservation areas or tourism.

No impacts are expected to the petroleum industry outside the assets and operations of Epic Energy.

4.6.2 Mitigation Measures

Measures implemented to mitigate impacts on land use include:

- minimising the extent of disturbance to native vegetation/pastoral fodder/crops and restricting activities to the immediate easement as far as possible;
- planning activities to minimise the time between clearing of vegetation and rehabilitation;
- reinstating all fences cut during maintenance activities, following rehabilitation of the easement and ensuring temporary arrangements are determined in consultation with the relevant property manager. Any damage to farm property infrastructure is to be rectified;
- ensuring property gates are left as found; and

- contacting the Forestry SA regarding protection of assets in state forest reserves prior to commencing work.

4.7 Noise

4.7.1 Potential Impacts

Noise emissions associated with the operation of the pipeline include vehicle movement along the easement, the occasional operation of heavy equipment or machinery such as excavators, graders and bulldozers, and the operation of mainline valves.

Heavy vehicles and machinery typically have a noise level of 90-95 dB(A) at distances of 10 m from the source.

Noise associated with Mainline valves is generated during remote valve operation but these operations only occur on an occasional basis.

There are very few residential areas in the immediate vicinity of the pipeline. These residential areas are unlikely to be affected by noise associated with the operation of the pipeline.

There is no noise associated with normal operation of the gas pipeline.

4.7.2 Mitigation Measures

Equipment is maintained with standard noise suppression devices fitted. It is considered that specific noise mitigation measures are not required.

4.8 Emissions

4.8.1 Potential Impacts

Dust is likely to pose the main threat to existing air quality. However, the threat is likely to be localised, short term and restricted to vehicle movement on unsealed roads, occasional excavation, and road maintenance activities. Dry conditions are likely to increase dust generation.

No significant impacts are expected to occur to agricultural areas, pastoral areas, residences, native vegetation or water bodies.

Minor air emissions of nitrous oxides, sulphur oxides and carbon monoxide are associated with the exhausts of machinery and support vehicles. These are small and limited.

Minor gas emissions also occur from mainline valves during remote valve operation and some minor emissions may occur from scraper stations during the loading and removal of 'pigs' and during routine inspection and testing of relief valves. Minor quantities of gas may also be discharged where it is necessary to remove sections of the pipeline or equipment for maintenance or repair. The pipeline has been designed to allow sections of the pipeline to be isolated to minimise the amount of gas discharged in these circumstances.

The air quality and Greenhouse gas impacts of these emissions will be insignificant.

4.8.2 Mitigation Measures

Dust emissions will be mitigated by minimising the period between clearing and restoration, and limiting vehicle speeds on access tracks and the easement.

Other air emissions will be mitigated by employing adequate pollution control measures on plant and equipment.

4.9 Cultural Heritage

4.9.1 Potential Impacts

Potential impacts to cultural sites are likely to be minimal as all operational activities are located within existing easements. However, potential impacts may occur as a result of excavation activities where they result in the accidental discovery of new materials.

The discovery of new sites or identification of cultural material is most likely to occur during excavation activities and may yield sub-surface remains, including human remains.

The region where accidental discovery of cultural heritage sites is more likely to occur is Naracoorte Coastal Plain where artefacts may be encountered on sand dunes or in close proximity to water sources or caves.

4.9.2 Mitigation Measures

The principal keys to effective management of cultural heritage issues lie in awareness of heritage as a valid management issue, commitment to protection of cultural heritage and the adoption of clear, systematic and consistent management procedures.

Specific procedures will be adopted to reduce potential impacts to sites of cultural significance. These include:

- completion of an archaeological survey to identify all significant areas prior to the commencement of significant excavation activities;
- entry of all known sites into Epic Energy's MAP GIS system and inclusion in all planning documents and maps;
- implementation of a comprehensive induction program to ensure that all personnel are aware that significant cultural places are off limits to all project personnel;
- where required, employment of a qualified archaeologist and Aboriginal Monitors on-site during excavation activities to inspect all work areas; and
- fencing, flagging and recording of new sites with a GPS and inclusion of sites on the GIS system. Development of further management measures are adopted in consultation with community representatives.

4.10 Public Safety

Currently, there are over 10,000km of high-pressure natural gas transmission pipelines operating in south-eastern Australia. Pipelines are recognised as a safe and efficient means of transporting natural gas. Pipeline Licence One infrastructure poses a very low level of risk to public safety.

4.10.1 Potential Impacts

The main threats to public safety resulting from the operation and maintenance of the pipeline are fire, explosion or radiation exposure as a result of pipeline rupture. The main causes of such ruptures are considered to be:

- Earthquake.
- External corrosion.
- Overpressure.
- Material defects.
- Design defects.
- Construction defects.
- Direct impact from a vehicle or heavy machinery.
- Installation of electricity poles or other services.
- Maintenance of roads and drainage ditches.

Epic Energy has completed a risk assessment of the South East Pipeline System and associated laterals in accordance with the requirements of AS2885. The purpose of the risk assessment was to identify areas where additional control measures may be required to ensure that the risks associated with the operation of the pipeline were reduced to As Low As Reasonably Practical.

The Risk Assessment identified that the greatest threats to the integrity of the pipeline were associated with:

- Third Party or External Interference to the pipeline, and
- Pipeline Corrosion.

All other threats were identified as low or negligible.

4.10.2 Mitigation Measures

There are a number of features of the design and operation philosophy that mitigate the risk posed by the pipeline to people who may be living, working or travelling in the immediate area.

The South East pipelines are operated in accordance with Australian Standard *AS 2885 Part 3 2001 Pipelines – Gas and Liquid Petroleum*. This Australian Standard describes the minimum standards for the operation and maintenance of pipelines.

The standard requires Epic Energy, as the operator of the pipeline, to:

- develop operating procedures based on the requirements of the standard;
- ensure that operating personnel are suitably qualified, trained and experienced;
- ensure that changes to the original design of the pipeline are fully assessed to ensure that the integrity of the pipeline is not impaired and that the safety of the public, operating personnel and/or protection of the environment is not diminished;
- ensure the appropriate inspections, assessments and maintenance activities are completed; and
- establish safe systems of work for pipeline repairs.

In order to ensure that all risks associated with the operation of the pipeline is reduced to As Low as Reasonable Practicable, control measures implemented by Epic Energy include:

-
- Regular inspection plan to identify any activity near the pipeline which may cause a danger to the buried facilities or pose a threat to third parties,
 - Property Contact Program with all land owners and occupiers and provides them with pipeline safety information,
 - 24 hour 'Dial Before You Dig' contact number and pipeline location service,
 - Community awareness program involving presentations to local contractors, emergency providers and utilities in areas along the pipeline route to educate personnel on the nature of the pipeline, contents, correct work procedures for the easement and emergency procedures,
 - Pipeline warning signs along the pipeline route,
 - Buried markers above the pipeline in areas of increased risk from excavation e.g. road crossings.

In addition, Epic Energy has in place a range of advanced monitoring and control techniques to ensure the safety and security of the pipeline and facilities. These measures include:

- a 24 hour pipeline control centre incorporating state-of-the art monitoring and control systems that continuously receive and analyse pipeline operating reports;
- vibration, fire and gas leak detectors;
- 'intelligent pigging' operations, in which detection equipment travels inside the pipeline checking for abnormalities and corrosion;
- a system of remote controlled valves which allow a pipeline controller to shut off gas flow and isolate any portion of the pipeline; and
- constant physical surveillance of the pipeline easement via aerial monitoring, vehicle patrols and actual 'walking of the line'.

A corrective action program is developed and implemented for identified risks that are not considered to be ALARP. Implementation of such programs is monitored by the Petroleum Group of Primary Industry and Resources SA (PIRSA).

5 Consultation

5.1 Consultation Specific to the EIR & SEO

During the preparation of the draft EIR and SEO, Epic Energy initiated consultation with various stakeholders and interested groups that may have an interest in the operation of the pipeline. The following section summarises the consultation undertaken with State and Local Government, landholders and/or occupiers and Aboriginal Organisations.

5.1.1 Stakeholder Mailout

Key stakeholders associated with the operation of the Katnook pipelines were contacted by Epic Energy. They were informed that Epic Energy was in the process of developing the EIR and SEO and invited to identify any issues that they may have in relation to the operation of the pipeline. A summary of the stakeholders contacted is provided in Table 5-1.

Table 5-1 Stakeholders Contacted

Group	Stakeholder
Landholders / Occupiers	As listed in Epic Energy's Landholder Management Database
Local Councils	City Council of Mount Gambier District Council of Grant Wattle Range Council
Government Agencies	Australian Rail Track Corporation Ltd Dept. of Environment & Heritage (DEH) Dept. of Water, Land & Biodiversity Conservation Environment Protection Authority Forestry SA Primary Industry and Resources SA (PIRSA), Planning SA Transport SA
Aboriginal Groups	South East Nungas Community Organisation Kungari Heritage Association Inc
Control Boards	SE Water Conservation & Drainage Board Grant Animal and Plant Control Board Lower South East Soil Conservation Board Wattle Range Animal and Plant Control Board

A summary of the feedback received is provided in Appendix D – Stakeholder Response.

5.1.2 Government Workshop

On 21st November 2003, Epic Energy held a workshop that was attended by representatives from:

- Primary Industry and Resources SA (PIRSA),
- Department of Water Land and Biodiversity Conservation (DWLBC)
- Forestry SA
- Animal and Plant Control Boards and Soil Conservation Boards. and
- Local Government representatives.

The purpose of the workshop was to provide the government representatives and stakeholders with information regarding:

- the operation of the pipeline,
- the key areas that Epic Energy had identified where there may be an environmental impact,
- Epic Energy's Environmental Management System, and
- Epic's proposed environmental objectives for the operation of the pipelines.

The workshop also allowed representatives to identify any additional issues that they considered should be addressed in the preparation of the EIR and SEO.

A summary of the outcome of the workshop is provided in Appendix D.

5.2 Existing Consultation Program

5.2.1 Landholder Contact

There are 75 landowners and occupiers along the South East Pipelines system. A property owner contact scheme is operated by Epic Energy. The Land Management Officer personally visits each owner or occupier along the pipeline system annually. Other contacts made by Field Maintenance Officers and Superintendents during the course of daily business, or other land related issues that arise occasionally are recorded in the Land Management System (LMS).

Land Management is supported by dedicated LMS software that provides a powerful data base and MapInfo facilities. All property details and notes relating to discussions or issues with property owners are recorded in the LMS. Through its MapInfo facility an image of the cadastral boundaries of each property relative to the pipeline route can be displayed for any property. During the year each property owner dwelling has been captured by GPS and will be displayed on the pipeline / cadastral plans.

If personal contact cannot be made during a visit (e.g. unattended premises), the occupier or owner is telephoned or mailed a letter explaining the reason for the visit, the contact officer's business card, an information brochure on pipeline safety and the 'dial before you dig' contact phone number. All property owners receive the Epic Energy pipeline safety brochure, a complimentary biro, as well as a high quality calendar, which is individually mailed out.

These items all contain the "**Dial Before You Dig**" contact phone number and strongly reinforce safe working practices near high-pressure gas lines. A hard file is maintained for each of the 1500 land parcels crossed by pipelines. Each property is flagged with the Land

Titles Office who informs Epic Energy of any changes in ownership or land tenure details, ensuring that Epic Energy records are always up to date for mail outs and personal visits.

5.3 Pipeline Location Service

Epic Energy provides a free service to locate pipelines for which they are responsible. This service is primarily used by other companies carrying out civil works in the vicinity of pipelines administered by Epic Energy.

There were 12 pipe locations carried out for third parties on the South East Pipeline in 2002. The majority of the pipeline locations requested were as a result of the "One Call" system, and required Epic Energy supervision for third party activity within the pipeline easement, mainly for the replacement or installation of new fences and vehicles working within the easement boundaries.

All authorised activities within the pipeline easement are supervised by Epic Energy field officers to ensure the safety and integrity of the pipeline.

5.4 Community Awareness

Epic Energy implements a Community Awareness Program, which entails holding awareness meetings with communities along the pipeline route.

The target is to hold meetings approximately annually with Forestry SA, CFS, MFS, Police, Ambulance, SES, Local Councils, earth moving contractors, irrigation installation contractors, fencing contractors and various community members invited to attend.

The focus of awareness presentation are on the specific nature and characteristics of the products carried by the South East Pipeline System, the route of the pipeline, basic information about the pipeline and its monitoring, control and emergency procedures.

6 Conclusion

The South East Pipeline network has been in operation for over 10 years, without any significant incident or injury. The impacts from operations to landholders, the environment and stakeholders are short-term and minor in extent. No significant long term adverse impacts are expected. Nevertheless, the following key issues requiring attention during the operation of the pipeline have been identified:

- Avoiding disturbance to 3rd party infrastructure, landholders or landuse;
- Prevention of soil erosion;
- Maintenance of vegetation cover;
- Prevention of weed and disease introduction and spread;
- Prevention of water and land contamination;
- Safeguarding public safety;
- Minimisation of noise and air emissions;
- To minimise noise due to operations;
- To minimise the potential for emissions that may cause public concern;
- Protection of cultural heritage sites and values.

In managing the potential impacts Epic Energy is committed to working closely with all relevant authorities and landholders and monitoring our activities to ensure that all potential impacts are minimised.

7 References

Croft T, Carruthers S, Possingham H & Inns (1999) *Biodiversity Plan for the South East of South Australia*. Department for Environment, Heritage and Aboriginal Affairs.

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Pipelines Authority of South Australia (1990a) *Katnook to SAFries Pipelines Declaration of Environmental Factors*. Prepared by PASA and Kinhill, February 1990.

Pipelines Authority of South Australia (1990b) *South East Pipeline Project Declaration of Environmental Factors*. Prepared by PASA and Kinhill, April 1990.

Appendix A

Epic Energy Environmental Policy

ENVIRONMENTAL POLICY



The environment is one of our most important values

Our company's success and standing in the community depends on our commitment to the protection of the environment in which we work, and complying with relevant laws.

Our goal, whether it is in the performance of routine maintenance or construction of new facilities is to complete our work without environmental non-conformance.

The maintenance of the environment is the responsibility of each and every one of us. We will work to continually assess and improve our practices.

We will ensure free and open communication on environmental issues.

On behalf of all our stakeholders, I have committed Epic Energy to achieve and sustain environmental excellence using appropriate internal and/or external resources.

Epic Energy Operates in an Environmentally Friendly Manner

Sue Ortenstone

**Chief Executive Officer
May 2001**

Appendix B

Potential Environmental Impact from Operational Activities

POTENTIAL IMPACTS FROM OPERATION OF THE SOUTH EAST PIPELINE

ACTIVITY DESCRIPTION					PRIMARY IMPACTS & EIR REFERENCE *							
#	ACTIVITY	WHAT IS DONE	SIZE	FREQUENCY / DURATION	VEGETATION & FAUNA (Section 4.1, 4.2 & 4.4)	SOIL (Section 4.3 & 4.10)	WATER (Section 4.5& 4.6)	DRAINAGE (Section 4.5)	LANDHOLDERS / LANDUSE (Section 4.6)	EMISSIONS (Air & Noise) (Section 4.7 & 4.8)	CULTURAL HERITAGE (Section 4.9)	PUBLIC SAFETY (Section 4.10)
Easement Maintenance												
1	Line-of-Sight	Removal of trees greater than 2m tall and within 2m of the centreline of the pipeline is carried out to ensure line-of-sight is maintained. Trees usually cut at ground level and roots left in place. In some cases, trimming of branches is sufficient. This is necessary to enable pipeline marker signs to be clearly identified along the easement.	Line of site control occurs over the entire length of the easement, 2m either side of centreline.	Experience shows line-of-sight operations are required every 5+-10 years, depending upon rainfall events.	Permanent removal of trees greater than 2m tall and within 2m of the pipeline centreline. Where possible, trees are trimmed rather than removed. Undergrowth is allowed to revegetate across the easement. As the majority of the easement has been cleared for agricultural practices only a small proportion of the easement in areas adjacent to forest reserves is likely to require some vegetation removal. Vegetation removal will be minimised in these areas to minimise fauna habitat loss. Fauna will only be temporarily disturbed while the activity is occurring.	none	none	none	Short term access to land required which may cause minor temporary impact to landholders and land use within the immediate area of the activity.	Minor air and noise emissions from vehicles. Noise also associated with machinery used to clear vegetation (grader, saws). Impacts are minor and temporary and occur for the duration of the activity only.	none	Only an issue if carried out where there is a public access or near public places.
2	Patrolling / inspections - easement access	Traveling on formed tracks (either purpose built for pipeline or private/public roads) or over cleared paddocks. Involves access to private property and use of private tracks.	Entire length of easement	Generally, properties are not traversed on the easement as existing access tracks are used where possible. Easement inspections can be carried out on a daily to monthly basis. This frequency is increased where a particular issue exists on a property that may require maintenance or monitoring.	Patrolling has the potential to spread of weeds/diseases. Epic has implemented a range of control measures to ensure that this risk is minimised (refer Section 4.4) Patrolling has the potential for occasional road kill (stock or native animals), although this rarely occurs.	Soil compaction is not considered an issue as formed tracks are generally used. Access to pipeline only occurs over cleared paddocks when access to a particular pipeline section is required (e.g. for maintenance) and not on a continuous basis.	none	none	Temporary disturbance while Epic personnel traverse properties.	Temporary minor impacts from dust generation, vehicle emissions and noise. These are limited to the immediate are of the activity.	none	Access and patrolling the easement does not impact on public safety. Epic uses public roads but these vehicles create no greater risk than other vehicles on the roads.
3	Easement Maintenance	Facility and easement access tracks require maintenance, i.e. Grading, re-sheeting, to allow on-going use by vehicles and to prevent major damage to road infrastructure.	Applies to access tracks to facilities. Public roads are used to access the majority of the easement.	Maintenance occurs on an ongoing basis, depending on track condition, weather condition and track use.	None	Impact from excavation of borrow pits. Refer to Activity # 8 Excavations		Access tracks have been in place for over 10 years. Construction of the access tracks may have caused minor disturbance to surface drainage. All easement maintenance work is conducted to ensure that the new drainage patterns are maintained (i.e. no further impact to drainage occurs).	Temporary disturbance while maintenance work is completed. As tracks tend to be located away from residences etc, this is considered minor.	Temporary minor impacts from dust generation, vehicle emissions and noise. These are limited to the immediate are of the activity.	Potential for impact on unknown cultural heritage sites fro excavation of burrow pits. Refer to Section 4.9.	Refer to Activity # 2 Patrolling.

POTENTIAL IMPACTS FROM OPERATION OF THE SOUTH EAST PIPELINE

ACTIVITY DESCRIPTION					PRIMARY IMPACTS & EIR REFERENCE *							
#	ACTIVITY	WHAT IS DONE	SIZE	FREQUENCY / DURATION	VEGETATION & FAUNA (Section 4.1, 4.2 & 4.4)	SOIL (Section 4.3 & 4.10)	WATER (Section 4.5& 4.6)	DRAINAGE (Section 4.5)	LANDHOLDERS / LANDUSE (Section 4.6)	EMISSIONS (Air & Noise) (Section 4.7 & 4.8)	CULTURAL HERITAGE (Section 4.9)	PUBLIC SAFETY (Section 4.10)
Pipeline Operations												
4	Cathodic Protection Surveys	Traveling ROW, stopping to inspect CP points (above-ground post) on foot. May involve repairs - see activity #8 Excavations	Cathodic Protection inspection posts are located approximately every 1.5km along the entire length of ROW, usually on fence lines to reduce impact to land use.	Conducted every 6 months, over a 2 day period	As per Activity # 2 Patrolling	As per Activity # 2 Patrolling.	none	none	As per Activity # 2 Patrolling	As per Activity #2 Patrolling.	none	As per Activity # 2 Patrolling.
5	Testing and Inspection of Relief Valves	Involves the controlled venting of minimal quantities of gas to atmosphere	Relief valves are located at each Meter Station	Relief valves are tested on a 6 monthly basis. Air and noise emissions are limited to the duration of the test, which is generally limited to 30 seconds.	None	none	none	none	none	Minor volume of methane gas emitted when each valve is tested. Discharge of gas also results in noise generation, although the duration is generally limited to less than 30 seconds. All impacts are considered to be minor and temporary. Refer also to Activity #6 Emissions.	none	none
6	Emissions	Methane gas is released to atmosphere as a result of pipeline and facility maintenance operations (i.e.. Unit blow downs/ venting, valve opening/testing).	500m ³ of gas released per year during unit blow downs.	Occurs for the duration of operational life during filter and separator changes, pigging operations and relief valve maintenance. 15-20 controlled blow downs per year.	none	None	none	none	none	Controlled release of 500m ³ of gas per year during unit blow downs. Minor noise associated with venting/release of gas.	none	none
7	Pipeline Incident	The main threats to public safety from the operation and maintenance are fire, explosion or radiation exposure as a result of pipeline rupture. Epic has completed a risk assessment of the SE Pipeline and determined that the greatest threats are associated with third party or external interference to the pipeline and pipeline corrosion.	Epic Energy has completed a Risk Assessment to ensure that the risk associated with the operation of the pipeline (e.g. risk of a pipeline incident occurring) are reduced to As Low As Reasonably Practical (ALARP). Epic has not had any significant pipeline incident occur during the operation of the pipeline. Refer to 4.10		The actual impact of a potential pipeline incident would be dependent on the nature and scale of the incident. In addition to the potential to create a public safety risk, incidents have the potential to disturb and destroy vegetation, disturb wildlife, cause soil disturbance and erosion and result in significant air and noise emissions. Epic Energy has procedures in place to ensure that once the emergency situation has ceased and access to the area is available, remediation measures would be put in place to restore the area.							

* Refer to relevant section of the EIR for control measures applied by Epic Energy to minimise the risk of adverse impacts.

POTENTIAL IMPACTS FROM OPERATION OF THE SOUTH EAST PIPELINE

ACTIVITY DESCRIPTION					PRIMARY IMPACTS & EIR REFERENCE *							
#	ACTIVITY	WHAT IS DONE	SIZE	FREQUENCY / DURATION	VEGETATION & FAUNA (Section 4.1, 4.2 & 4.4)	SOIL (Section 4.3 & 4.10)	WATER (Section 4.5& 4.6)	DRAINAGE (Section 4.5)	LANDHOLDERS / LANDUSE (Section 4.6)	EMISSIONS (Air & Noise) (Section 4.7 & 4.8)	CULTURAL HERITAGE (Section 4.9)	PUBLIC SAFETY (Section 4.10)
Pipeline Maintenance												
8	Excavations - coating refurbishment - installation of anode beds - emergency response exercises - new tie-ins	Vegetation is cleared. Topsoil is stockpiled. Excavation performed and spoil stockpiled. Pipeline maintenance performed (may include welding, painting, sand blasting). Backfill of trench spoil. Topsoil replaced. Surface re-contoured. Rip compacted areas. Respread of vegetation. Seeding / planting if necessary.	Pipeline excavations typically 4 metres wide by 5 metres long and 2 metres deep, located entirely on the easement. In extreme cases, excavations can be 50m metres long.	Excavations typically up to 10 times per year at various locations (operations dependent). Typically maximum of 1 week. Vegetation rehabilitation is dependent on seasonal conditions.	Excavations generally occur within the easement and therefore areas that have been previously disturbed. Vegetation clearance is limited to the area of excavation and 5-10m beyond for storage and stockpile areas. Cleared vegetation is respread as part of restoration. Area of disturbance is limited to that required for the safe conduct of the activity. Regrowth is ultimately dependent on seasonal conditions. In some cases, seed and fertiliser may be spread to assist regrowth. Fauna impacts are primarily associated with vegetation clearance and subsequent regrowth on the disturbed area. There is potential for fauna entrapment but this is rare, as fences are installed to prevent stock entrapment and ramps are placed in the pit to assist reptile/mammal escape. Refer to Section 4.1 & 4.2 for additional mitigation measures.	Topsoil and subsoil are disturbed by excavation. There is the potential for loss of topsoil and soil inversion. Impacts to soil are minimised through the implementation of management measures. Mitigation measures include: separating topsoil and subsoil upon excavation and backfilling soil in the correct horizons.	No impacts for aquifers greater than 2 metres deep occur. For very near surface groundwater, an area of 4 by 5 by 2m is disturbed (i.e. volume less than 40 m3). Where required, surface water (creeks and watercourses) may be temporarily dammed and diverted for excavations. No permanently flowing creeks are encountered on the easement. Primary mitigation is avoiding such areas when wet. Some silt may be generated during temporary diversions however sediment traps are usually installed as part of standard management measures	Surface drainage patterns over the area of the excavation may be disturbed for the duration of excavation. These are restored as part of the restoration process.	Impacts to landuse are limited to the area of disturbance. In some instances fences are cut to allow temporary access. Any impacts to landholders and land use are generally restricted to the duration of the activity.	Minor air and noise emissions from vehicles. Noise also associated with machinery used for clearing and excavation. Impacts are minor and temporary and occur for the duration of the activity only.	No impact to known sites due to the implementation of effective management measures. There is potential for accidental discovery of previously unknown site (potential is higher in some zones). Epic has implemented detailed management measures to address accidental exposure/discovery. Refer to Section 4.10 for additional information.	Only an issue if carried out where there is public access or near public places. Majority of work is undertaken on private land.
9	Hydrotest	Hydrotesting involves filling a section of pipe with water under pressure to test the integrity of the pipe. Sometimes an inhibitor is added to the water to prevent organisms colonising the pipe but this usually only happens on very long sections of pipe (eg new pipelines). Depending upon the location of the testing water is usually sourced locally from mains, dams, bores or trucked in. Water is usually discharged from the pipe onto a suitable area of ground away from water bodies. Erosion and sedimentation controls are used where required.	Hydrotesting is usually only occurs on new or repaired sections of pipe which can vary in length from 10m up to 10km.	Testing is carried out on an as required basis. Recently testing has been undertaken approx once every 2-5 years. Tests normally take between 4 and 24 hours to complete.	Nil or minimal - Ref Sect. 4.5.2	Impacts to soil are minimal as water is discharged onto a suitable area of ground (stable or stabilised before discharge) and erosion and sediment controls are used where there is the potential or sedimentation to occur. Refer section 4.3.	None - water is discharged onto solid ground away from waterways.	none	none	none	none	none
10	Pigging	Pipeline 'pig' placed in the pipe via a launch bay. Pig travels along inside pipe before being removed at a pig exit site. Removal of pig from pipeline results in minor venting of gas to atmosphere and collection of some oil sludge and debris.	Confined to existing facilities. 50km or less sections usually completed at a time.	Cleaning pigging undertaken annually or as required. Major intelligent pigging programs (to monitor pipeline integrity) tend to be conducted every 5-7years. Program takes 1 week per 50km section/run	None	Pigs are removed within a contained area, therefore contamination from debris and oily sludge is unlikely.	Where required, surface water (creeks and watercourses) may be temporarily dammed and diverted for excavations.	none	none	Minor controlled release of methane upon removal of the pig. Refer also to Activity #6 Emissions.	none	none
11	Welding	Welding usually required when undertaking repairs of pipeline or making modifications to existing infrastructure. Pipeline welding usually occurs following the excavation of the pipeline (refer Activity # 8 Excavations).	Dependant upon length of pipeline under repair	Ongoing as required	The risk of bushfire as a result of welding is minimised through the implementation of strict management measures refer Section 4.10.2.	none	none	none	none	none	none	none
12	Painting	Epoxy painting (spray) of welds or repair areas of pipeline or above ground pipeline	Dependant upon length of pipeline under repair	Painting completed as required, activity duration is less than 2 hours.	None	Potential for minor contamination from overspray and cleaning agents	Potential for minor contamination from overspray and cleaning agents	none	none	Minor noise emissions associated with operation of paint compressor	none	none
13	Sand Blasting	High-pressure abrasive surface blasting of pipe work prior to painting. Undertaken for pipeline inspection or for pipeline coating systems	Area of exposed pipe	Sand blasting completed as required, activity duration is less than 2 hours.	None	Minor contamination from excess sand, the majority of which is usually captured within the trench.	Minor contamination from excess sand, the majority of which is usually captured within the trench.	none	none	Dust generation from blasting activity. Minor noise emissions associated with blasting. This is restricted to the duration of the activity.	none	none
14	Replacement of pipeline section	Section of pipeline is isolated and controlled release of gas undertaken from affected section. Affected area then excavated, old pipeline removed and replaced (includes welding, blasting, coating). Excavation then reinstated.	Generally less than 100m section of pipe excavated	Occurs once every 20 years. Activity usually lasts for approximately 2 weeks	Refer to Activity #8 Excavations	Refer to Activity #8 Excavations	Refer to Activity #8 Excavations	Refer to Activity #8 Excavations	Refer to Activity #8 Excavations	Controlled release of methane to atmosphere occurs upon isolation of the pipeline section. Minor noise is associated with venting/release of gas. Impact is temporary only.	Refer to Activity #8 Excavations	Refer to Activity #8 Excavations

* Refer to relevant section of the EIR for control measures applied by Epic Energy to minimise the risk of adverse impacts.

POTENTIAL IMPACTS FROM OPERATION OF THE SOUTH EAST PIPELINE

ACTIVITY DESCRIPTION					PRIMARY IMPACTS & EIR REFERENCE *					
#	ACTIVITY	WHAT IS DONE	SIZE	FREQUENCY / DURATION	VEGETATION & FAUNA (Section 4.1, 4.2 & 4.4)	SOIL (Section 4.3 & 4.10)	WATER (Section 4.5& 4.6)	DRAINAGE (Section 4.5)	LANDHOLDERS / LANDUSE (Section 4.6)	EMISSIONS (Air & Noise) (Section 4.7 & 4.8)
Facility Operation and Maintenance										
15	Main Line Valves	Main Line valves are used to isolate sections of pipeline. They are used for controlled pipeline activities & in the event of an emergency.	Located either within a MS compound or within a compound 4m by 4m. The valve is located within the pipe.	5 MLVs on pipelines are open continually except if isolations are required or in the event of an emergency. Operated every 6 mths for testing or in emergency.	None	None	None	None	None	None
16	Meter Stations	Meter Stations measure gas flow and regulate and filter gas	Located in a compound with a control building, batteries, oil collection facilities. Compound size ranges from 10m x 10m to 20m x 30m square.	Operated 24 hrs/day 365 days/yr	None	Potential for contamination associated with failure of overhead oil collection tanks for debris removed from product in pipe (dropout). Risk is minimised through regular monitoring and implementation of control measures (refer Section 4.3 and 4.10).	Potential for contamination associated with failure of overhead oil collection tanks for debris removed from product in pipe (dropout). Risk is minimised through regular monitoring and implementation of control measures (refer Section 4.3 and 4.10).	None	None	Minor controlled release of methane for maintenance activities. Refer also Activity # 6 Emissions.
17	Weed Control	Spray pack used to spray weeds in and around compounds	Conducted within compounds at MS and MLV sites	Weed control typically occurs twice per year for 1 week duration (additional control as required)	Death of target weed species. Weed species of concern is targeted. Minor temporary impact to non-target species may occur within the immediate vicinity.	none	none	none	none	Minor air and noise emissions from vehicle limited to the immediate vicinity of the activity.
18	Production of Hazardous Waste	Meter Stations (MS) separators remove debris from line - includes hydrocarbon. Some waste hydrocarbons generated from pigging operations (ex pipeline/product) Mercury and other heavy metals extracted from product and trapped in filters Contaminated filters from maintenance change-overs Contaminated waste and oils removed from site for disposal by a licensed contractor.	Approximately 2000 Ltrs of waste oil removed from collection tanks each year.	Materials continually produced, stored and disposed during the operation of the pipeline.	None	Potential for contamination associated with failure of condensate collection/storage tanks. Risk is minimised through the implementation of control measures (refer Section 4.3 and 4.10).	Potential for contamination associated with failure of condensate collection/storage tanks. Risk is minimised through the implementation of control measures (refer Section 4.3 and 4.10).	none	none	none
19	Station blow downs	Uncontrolled venting as a result of equipment failure eg regulator failure at MS	Refer to Activity #6 Emissions	Dependant upon type and duration of failure.	None	None	None	None	None	Release of gas to atmosphere. Noise associated with release of gas

* Refer to relevant section of the EIR for control measures applied by Epic Energy to minimise the risk of adverse impacts.

Appendix C
Stakeholder Feedback Form

Feedback Form

YOUR CONTACT DETAILS (OPTIONAL)					
Name:			Contact Address:		
Phone:					
Fax:			Organisation & Position: <i>(where relevant)</i>		
Email:					
Stakeholder Category:	Landholder/Occupier	<input type="checkbox"/>		Aboriginal Group	<input type="checkbox"/>
	Government	<input type="checkbox"/>		Other	<input type="checkbox"/>
KEY ENVIRONMENTAL ISSUES IDENTIFIED (Please add any additional issues/comments that you may have)					
Disturbance/Disruption to Landuse - Disruption to landuse over the pipeline - Disturbance to infrastructure (fences, gates etc) - Access to the pipeline - Use of private roads / tracks - Changes to landuse over the pipeline - Excavations			<i>Your Issues / Comments</i>		
Flora and Fauna - Protection of sensitive vegetation and habitats - Maintenance of regrowth - Introduction and spread of pest species			<i>Your Issues / Comments</i>		
Erosion / Runoff - Protection of drainage channels and watercourses - Erosion and sediment runoff - Maintenance of soil stability - Protection of topsoil			<i>Your Issues / Comments</i>		

<p>Emissions</p> <ul style="list-style-type: none"> - Noise - Odour - Uncontrolled / unplanned gas emissions - Dust 	<p><i>Your Issues / Comments</i></p>
<p>Cultural Heritage</p> <ul style="list-style-type: none"> - Protection of known heritage sites - Accidental discovery of previously unknown heritage sites - Protection of areas of cultural significance 	<p><i>Your Issues / Comments</i></p>
<p>Public Safety</p> <ul style="list-style-type: none"> - Identification of the pipeline - Signage - Controlling external activities on the easement - Risk from third party activities - Protection of the public during normal operations and maintenance - Protection of the public during uncontrolled events 	<p><i>Your Issues / Comments</i></p>
<p>Other Issues</p> <p><i>Please include any other issues that you would like to see addressed during the preparation of the Environmental Impact Report and Statement of Environmental Objectives for the South East Pipeline.</i></p>	

Please note : All feedback will be kept in confidence

Appendix D
Stakeholder Response

EPIC - South East Pipeline: EIR and SEO Feedback Form Results

L - Landholder
 LG - Local Government
 L/O - Landholder/Occupier
 G - Government

Organisation	Position	Stakeholder Category	Key Environmental Issues							
			Disturbance to Land	Flora & Fauna	Erosion/ Runoff	Emissions	Cultural Heritage	Public Safety	Other Issues	
NP	NP	L/O	NC	NC	NC	NC	NC	NC	NC	
NP	NP	L	Note that gates on property are padlocked to protect stock. Epic should contact Landholder regarding access to property with exception of house yard.	NC	NC	NC	NC	NC	NC	Other issues do not affect landholder
Grant Animal & Plant Control Board	Authorised Officer	G	NC	Plant hygiene appears adequate	NC	NC	NC	NC	NC	NC
South East Nungas Community Organisation	Heritage Officer		Concern regarding potential for disturbance of heritage items during excavation activities	NC	NC	NC	NC	Concern regarding potential for disturbance of heritage items during excavation activities	NC	NC
NP	NP	L/O	No issues	No issues	No issues	No issues	No issues	No issues	No issues	No issues
NP		L	NC	NC	NC	NC	NC	NC	NC	NC
Forestry SA	Operations Manager	G	Pipeline depth should be 150cm in forest areas to enable commercial logging. Outcome is to maintain integrity of pipeline and still enable operations to be carried out. Soil subsidence needs to be monitored to ensure adequate depth.	Noxious weed spreading is a real issue with vehicle movement, particularly from non-local areas.	Needs to be monitored and remedial action taken.	No found to be an issue to date.	NC	NC	NC	NC
City of Mt Gambier	Councillor	LG	No issues	No issues	No issues	No issues	No issues	No issues	No issues	Ensure public is well informed at all times
NP	NP	L/O	No issues	No issues	No issues	Nothing observed/smelt	NA	Very good		Believes Epic is doing a good job. Believes yearly landholder meetings serve as a good reminder of presence of pipeline and a good way to sort out any issues/queries.
City of Mt Gambier	Director Operational Services	LG	Appropriate level of reinstatement to road crossings. Close liaison with local government on pipeline location on or across roads. Appropriate depth of pipeline given different landuses.	Weed control post excavation extremely important	Sensitive design/ location/ excavation practices required.	Doesn't believe this to be a major issue in SE internal controls outlined should cover this aspect.	Agrees with objectives and actions outlined.	Balance required between size, number of signs and 'visual pollution'.		
Limestone Coast Railway	Operations Manager	LG	No issues	No issues	No issues	No issues	No issues	Requests that Epic personnel wear visibility safety vests when working on railway land.		Impact of potential seismic activity in region (eg. Earthquake). Good understanding of geological structure, particularly with regards to faults, etc.
NP	NP	L/O	Would like to grow roses over pipeline and would like to know if this is possible.	No issues	No issues	No issues	No issues	No issues	No issues	No issues