10377

Government of South Australia
Department of the Premier and Cabinet

4 August 2017

Environmental Impact Classification - Pursuant to Section 98 of the Petroleum and Geothermal Energy Act 2000 –South East Pipeline System (PL3 & 4) - Statement of Environmental Objectives (SEO), Epic Energy, July 2017.

Pursuant to section 98 of the *Petroleum and Geothermal Energy Act 2000* (the Act) the Minister must classify the regulated activities covered by a prepared Environmental Impact Report (EIR) as either of low, medium or high environmental impact.

The classification must be made on the basis of:

- The prepared EIR;
- Criteria established for classifying the level of environmental impact of regulated activities, a copy of which is found on the Department of the Premier and Cabinet (DPC) Petroleum web page: http://petroleum.statedevelopment.sa.gov.au/legislation_and_compliance/environmental_register; and
- Comment received from relevant Government departments in accordance with established administrative arrangements between these departments and DPC-Energy Resources Division (DPC-ERD).

This document summarises the classification made by DPC-ERD on the South East Pipeline System (PL3 & 4) - Statement of Environmental Objectives (SEO), Epic Energy, July 2017. This classification is based on information provided in the EIR prepared by Epic Energy Limited.

ACTIVITY CLASSIFICATION SUMMARY

1. From an analysis of the environmental significance of the events and potential impacts associated with the proposed activities against the classification criteria referred to above (assessment provided as Attachment 1), these regulated activities have been classified as **low impact**.

2. The majority of events were assessed to be of low environmental significance. This is due to the fact that appropriate management measures will be implemented by Epic Energy Limited to avoid or mitigate any potential environmental consequences.

CONSULTATION

1. For a **low impact** classification, DPC consults with the Department of Environment, Water and Natural Resources (DEWNR) and the Environmental Protection Authority (EPA) in accordance with the administrative arrangement dated 11 November 2005 and 25 June 2012 respectively.

2. Comments received from EPA and DEWNR on 24 March 2017 and 4 April 2017 respectively, agreed with the classification of **low impact.**

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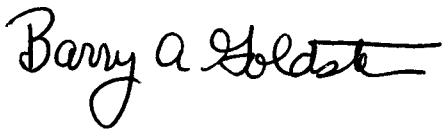
SOUTH AUSTRALIA

3. In accordance with Section 101 of the Act, activities classified as **low impact** require DPC to undertake relevant government agency consultation. This consultation period was for at least 20 business days.

4. Comments received from this consultation are tabled in the appendix of the EIR whereby all reasonable comments within scope need to be adequately addressed. DPC are satisfied that all comments raised during consultation have been adequately addressed.

Pursuant to delegated powers, I classify this regulated activity as **low impact.**



Barry Goldstein

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PROJECT: PIPELINE LICENCE 3&4 - South East
ACTIVITY: OPERATIONS AND MAINTENANCE

Date: February 2017

ABBREVIATIONS: H = High certainty; M = Medium certainty; L = Low certainty

REF	TYPE OF IMPACT	EVENTS	POTENTIAL CONSEQUENCES	PREDICTABILITY						MANAGEABILITY							COMMENTS	ENVIRONMENTAL SIGNIFICANCE
				SIZE	SCOPE	DURATION	FREQUENCY	STAKEHOLDERS	SIGNIFICANCE	AVOIDANCE	PROBABILITY	DURATION	SIZE AND SCOPE	CUMULATIVE EFFECTS	STAKEHOLDERS	SIGNIFICANCE		
	Natural Environment Impacts																**The South East Pipeline System (SEPS) was built in 1990 to design compliant with AS 2885.1 - 1987. When commissioned in 1991, the pipeline system transported natural gas from katnook gas fields near Penola to industrial and domestic customers in and near Penola, Mount Gambier, Nangwarry and Tantanoola. The Pipeline Licence 3 route runs from the Katnook gas field to the Sa fries factory 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 Mount Gamber; and in a westerly direction to terminate near Tantanoola. This pipeline system also includes the Nangwarry lateral which runs from appoint one kilometre north-west of Kalangadoo and supplies a timber mill at Nangwarry. Following a gradual decline in the availability of gas form the Katnook gas field, the APA-owned south East south Australian pipeline was commissioned in 2005 to supply gas from the Port Campbell to Adelaide pipeline into the SEPS.**	
3.3.2, 3.4.2	**Soil Impacts**																**The Naracoorte Coastal Plain 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-munching clays, with black organic soils present in the swamps. The dunes are characterised by red sandy soils which are prone to slight drift. 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 regional. The Mount Gambier volcanic 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 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.**	
4.3, Appendix B (no 8)		Integrity dig ups, trenching and excavations associated with maintenance	Loss of topsoil, soil fertility and erosion	H	M	H	H	H	2	No	Low	Short	Confined	N/A	N/A	2	The Area cleared during excavations is minimised in particular minimising the disturbance of erodible soils. Minimising the time period between clearing and restoration. Restoration carried out as soon as practicable. Use of heavy machinery restricted. Restricting vehicle use in wet or boggy conditions. Reinstating watercourse banks as soon as practicable and applying bank stabilisation techniques as necessary. Reinstating surface contours and natural drainage patterns. Excavations located entirely on easement. Topsoil and subsoil to be separated during excavation and soil backfilled in correct horizons. Promoting rapid restoration by conserving and re-spreading topsoil.	**Low**
4.3, Appendix B (no 2)		Inspections and maintenance along the easement and access tracks	Soil compaction	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Soil compaction is not considered an issue as formed tracks are generally used. Access to pipeline only occur over cleared paddocks when access to a particular pipeline section is required (e.g. for maintenance) and not on a continuous basis. Restricting vehicle use in wet or boggy conditions.	**Low**
3.5, 4.3.2, 4.10, Appendix B (no's 16,18)		Disposal of waste created during maintenance activities	Contamination of soil	M	M	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	EESA Waste Management Procedure describes appropriate waste disposal practices for all waste generated by EESA including solid and putrescible waste, waste water, electronic waste and hazardous waste.	**Low**
3.5, 4.3.2, 4.10, Appendix B (no's 16,18)		Storage, use, collection and transport of hydrocarbons and chemicals	Localised soil contamination	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	All potential hydrocarbon contamination sources are located within infrastructure compounds where appropriate spill prevention and control measures are in place. No incident/evidence of land contamination associated with the pipeline operations. Chemical and fuel storage facilities are bunded and in hardstand areas in accordance with applicable licence conditions and Australian standards (e.g. AS1940:2004 *The storage and handling of flammable and combustible liquids*). Implementation of the Hazard Substances & Dangerous Goods Management Procedure which provides formation protocols required for managing the storage and use of hazardous substances and dangerous goods. The Spill Prevention & Response Procedure, this procedure provides practicable guidance to ensure that pollutants are handled and stored in a manner that will reduce the likelihood of a spill occurring resulting in the escape of pollutants to the environment; Epic Energy is prepared for a spill event and able to respond in a timely and appropriate manner; and minimise the potentially serious environmental impacts of a spill event. Waste Management Procedure provides appropriate waste disposal practices for all waste generated by EESA. All workers to complete a Job Hazard Analysis prior to the commencement of any task that has the potential to cause a significant adverse environmental impact. Ensuring all vehicles are well maintained and that all servicing occurs at designated facilities.	**Low**
4.5	**Groundwater Impacts & Surface Water Impacts**																**The Naracoorte coastal plain consists of 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). The region falls within the Lower Limestone Coast Prescribed Wells Area which is proclaimed under the Natural Resources Management Act. The Mount Gambier Volcanic Region contains volcanic cones that 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.**	
4.5, Appendix B (no. 8)		Integrity dig ups, trenching and excavations associated with maintenance	Increase in sediment load.	M	M	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	Sediment traps usually installed as part of standard management measures. Reducing the level of activity during wet weather. Ensuring excavation activities (including stockpiles) do not unduly impede surface water flows. Conducting maintenance activities across drainage lines when dry. Utilising sediments control measures. Reinstate surface contours as part of the rehabilitation process.	**Low**
4.5, appendix B (no. 6, 12)		Redirection of surface water flow by pipeline excavation work, access track construction or easement maintenance work	Altered drainage patterns	M	H	H	H	H	2	No	Med	Short	Confined	N/A	N/A	2	Access tracks in place. All easement maintenance work is conducted to ensure that the new drainage patterns are maintained. Surface drainage patterns are restored following excavation. Reducing the level of activity during wet weather. Utilising sediment control measures. Conducting maintenance activities across drainage lines when dry. Ensuring excavation activities (including stockpiles) do not unduly impede surface water flows. No permanently flowing creeks are encountered on the easement. No impacts for aquifers greater than 2 metres deep occur. For very near surface groundwater, an area of 4 by 5 by 2 metres is disturbed (i.e. volume less than 40 m3).	**Low**
4.5, appendix B (no. 8, 10)		Temporary damming or diversion of creeks or waterways associated with excavations	Erosion	M	H	H	M	H	2	No	Med	Short	Confined	N/A	N/A	2	As water courses tend to be prone to erosion and sedimentation during periods of rainfall and flooding, pipeline maintenance activities are undertaken when conditions are dry (where possible). Sediment control measures are available and used where appropriate. Regular easement patrols pick up any erosion areas after significant rainfall events and these, if found, are responded to as soon as practicable. 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 and boggy conditions.	**Low**
4.5, Appendix B (no. 9)		Disposal of waste water created during operations activities (i.e. hyrdotesting)	Contamination of ground and surface water	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	Hydrotesting usually only occurs on new or repaired sections of pipe which can vary in length from 10m up to 10km. Testing is carried out rarely on an as - required basis. Tests normally take between 4 and 24 hours to complete. Water used for hydrotesting is discharged onto solid ground away from waterways. Depending upon the location of the testing water is usually sourced locally from mains, dams, bores or trucked in.	**Low**
4.3.2, 4.5, 4.10, Appendix B (no. 16, 18)		Storage, use, collection and transport of hydrocarbons and chemicals	Water contamination	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	Risk is minimised by reducing the level of activity during wet conditions, as most water bodies are ephemeral. Appropriate storage, handling and transport mechanisms in place to prevent an incident occurring. Regular monitoring. Contingency plans in place in the event of a spill. Chemical and fuel storage facilities are bunded and in hardstand areas in accordance with applicable licence conditions and Australian standards (e.g. AS1940: 2004 The storage and handling of flammable and combustible liquids). Hazardous Substances & Dangerous Goods Management Procedure for managing the storage and use of hazardous substances and dangerous goods. Spill Prevention and Response Procedure, pollutants are handled and stored in a manner that will reduce the likelihood of a spill occurring resulting in the escape of pollutants to the environment. Epic Energy is prepared for a spill event and able to respond in a timely and appropriate manner, and minimise the potentially serious environmental impacts of a spill event. Waste Management procedures describe appropriate waste disposal practices for all wastes generated by EESA. Workers are required to complete a Job Hazard Analysis prior to the commencement of any task that has the potential to cause a significant adverse environmental impact.	**Low**
3.3.3, 3.4.3	**Vegetation Impacts**																**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. A mixture of parkland and shrub land, comprised of coastal Mallee's and Mallee can be found on the dunes. The swamps and lagoons are characterised by Paperbark scrub with an understorey of sedges and samphires. The remaining remnant woodlands are prone to invasion and displacement by introduced grasses and herbs. Two significant vegetation and habitat areas containing important native woodland are the Blue Gum Water Hole and Gum Flat Swamp. Plant species likely to be found in this region include endangered, vulnerable and rare species under the SA National Parks and Wildlife Act 1972 and the Commonwealth Endangered Species Protection Act 1992. Two prescribed wetland areas considered to be of environmental significance, White Hawk Lagoon and Dismal Swamp are located adjacent to the Mount Gambier lateral easement. Native vegetation in the Mount Gambier volcanic region is generally comprised of open parkland, comprise of River Red Gum, Brown stringy-bark and Flooded gum with a pasture understorey on the plains. No native vegetation remains on the volcanic cones which have been cleared and utilised for agricultural activities. 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.**	
4.1, Appendix B (no. 8)		Scheduled and unscheduled excavation work resulting in vegetation clearance	Loss of remnant vegetation	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Majority of the pipeline easement is located on previously cleared agricultural land or service corridors. Any impact to vegetation is likely to be short term and restricted to the existing easement and to access tracks. Easement is rehabilitated. Vegetation is trimmed instead of cleared where possible. Vegetation is maintain in accordance with Australian Standard 2885.3-2012, Pipelines-Gas and liquid petroleum, operation and maintenance. EESA maintains low-level vegetation on the pipeline easement to provide ground stability, protection against erosion and habitat for fauna. Implemented a Vegetation Management Procedure to provide clear and concise direction to field staff involved in vegetation management. Avoid 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. Vegetation clearance is limited to the area of excavation and 5-10m beyond for storage and stockpile areas. Regrowth is dependent on seasonal conditions. In some cases, seed and fertiliser may be spread to assist.	**Low**
4.1, Appendix B (no. 2)		Vehicular movement associated with inspections and maintenance access to and along easement	Disturbance to or damage to vegetation	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	Majority of the pipeline easement is located on previously cleared agricultural land or service corridors. Remaining on existing road and established access tracks.	**Low**

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4.1., Appendix B (no. 1)		Line of sight and/or vegetation control along ROW	Removal of remnant vegetation	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	Requirement to remove vegetation to just above root level on the ROW to maintain the line of sight of pipeline markers. Trees are trimmed rather than cleared where possible. Not expected to impact on any remnant vegetation as this is undertaken within 2m of the pipeline. Permanent removal of trees greater than 2 metres tall and within 2 metres of the pipeline centreline. Undergrowth is allowed to revegetation across the easement. As the majority of the easement had been cleared for agricultural practices only a small portion of the easement in areas adjacent to forest reserves is likely to require some vegetation removal. Vegetation removed is abundant in the areas adjacent to the easement and therefore fauna habitat loss is minor.	**Low**
4.4, Appendix B (no. 2)		Introduction of weeds associated with inspection and maintenance	Spread of weeds into remnant vegetation leading to vegetation loss through competition with weed infestations	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Remaining on existing road and established access tracks. Preventing the transportation of soil along the easement. Ensuring vehicles are soil and weed free before entering the pipeline easement. Maintaining facilities to be weed free. Implementation of targeted weed eradication programs for declared weeds if required.	**Low**
4.4, Appendix B (no. 17)		Spraying of weeds along ROW	Loss of remnant vegetation adjacent to weed spray areas	H	H	H	H	H	1	No	Med	Short	Confined	N/A	N/A	2	Implementation of targeted week eradication programs for declared weeds. Minor temporary impact to non-target species may occur within the immediate vicinity. Maintaining facilities to be weed free.	**Low**
4.1, 4.10.2, Appendix B (no 11)		Fire caused by welding activities	Loss of remnant vegetation	M	M	H	H	H	2	No	Low	Short	Confined	N/A	N/A	1	The possibility of a fire resulting from welding activities is minimised through appropriate maintenance control measures for safe work practices.	**Low**
3.3.3, 3.4.3	**Native Fauna Impacts**																**This region contains habitats that support a variety of native mammal, bird and reptile species. Many species are now confined to isolated areas of remnant vegetation. Listed endangered, vulnerable or rare fauna species under the *SA National Parks and Wildlife Act 1972* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* are likely to be found in this region.**	
4.2, Appendix B (no. 8)		Unscheduled maintenance work requiring Vegetation clearance associated with maintenance work, maintaining line of sight and access along the easement	Loss of habitat	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Restricting operational activities to the easement access tracks and the easement. Re-contouring the land surface consistent with the surrounding area to ensure localised habitat/niches are maintained. Minimising the time between clearing and rehabilitating the easement when excavations are required. Fences are installed to prevent stock entrapment and ramps are placed in the pit to assist reptile/mammal escape. Planning excavations to minimise the period of time that the trench is open. Regular inspection of open trenches for trapped fauna. Liaising with landholders to determine appropriate livestock management during excavation activities.	**Low**
			Injury or loss of native fauna and/or stock	H	H	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2		**Low**
4.2, Appendix B (no. 2)		Vehicle impact with fauna during inspection and maintenance activities	Injury or loss of native fauna	H	H	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	Restricting operational activities to the easement access tracks and the easement. Liaising with landholders to determine appropriate livestock management during excavation activities.	**Low**
4.2, Appendix B (no. 8)		Integrity dig ups, trenching and excavations associated with maintenance	Injury or loss of native fauna and/or entrapment of fauna	H	H	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	Potential for fauna entrapment is rare, as fences are installed to prevent stock entrapment and ramps are placed in the pit to assist reptile/mammal escape. Minimising the time between clearing and rehabilitating the easement when excavations are required. Planning excavations to minimise the period of time that the trench is open.	**Low**
4.2, Appendix B (no. 2, 3, 8)		Noise associated with inspection and maintenance activities	General disruption to fauna movements and breeding activities	H	H	H	M	H	2	No	Med	Short	Confined	N/A	N/A	2	Restricting operational activities to the easement access tracks and the easement. Liaising with landholders to determine appropriate livestock management during excavation activities. Minimising time between clearing and rehabilitating the easement when excavations are required. Liaising with landholders to determine appropriate livestock management during excavation activities. Re-contouring the land surface consistent with the surrounding area to ensure localised habitat/niches are maintained.	**Low**
	Sensitive Area Impacts																	
3, 4.6		Disturbance to Wandilo and Glencoe Hill Native Forest Reserves	Loss of Reserve's value	H	H	H	H	H	1	Yes	Low	Short	Confined	N/A	N/A	1	No impacts are expected to conservation areas other than those addressed under soil, flora and fauna impacts. The pipeline traverses the Wandilo and Glencoe Hill Native Forest Reserves. Forestry SA will be contacted regarding protection of assets in these reserves prior to commencing work.	**Low**
	Air Impacts																	
4.8, Appendix B (no.5,6,10,14,16 ,19)		Routine and non-routine venting of gas associated with maintenance and emergency response	Greenhouse gas emissions	M	H	H	M	H	2	No	High	Short	Confined	N/A	N/A	2	Emissions will be small and limited. Pipeline is designed to allow sections to be isolated to minimise the amount of gas discharged during maintenance/repair. Minor gas emissions also occur from pressure relief valves and some minor emission may occur from scraper stations during the loading and removal of 'pigs' and during routine inspection and testing of relief valves. Emissions may also be generated as a result of venting gas during emergency situations. Depending on the nature of the situation, gas could be emitted for few minutes up to 1 to 2 hours. This type of emission would occur very rarely. Whilst there are no dwellings in close proximity to the mainline valves, there is some commercial and industrial activity. Air emissions will be mitigated by employing adequate pollution control measures on plant and equipment. Relief valves are located at each meter station. Relief valves are tested on a 6 monthly basis. Emissions are limited to the test, which is generally limited to 30 seconds.	**Low**
	SOCIAL ENVIRONMENT																	
3.4.5, 3.3.5	**Existing Land use Impacts**																**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 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). Mount Gambier volcanic region: 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).**	
1.5.2, 4.6, Appendix B (no. 8)		Integrity dig ups, trenching and excavations associated with maintenance	damage to crops and pasture	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Soil inversion can be avoided by stockpiling topsoil and subsoil separately and ensuring that they are reinstated properly. Minimising the area cleared during excavations, in particular minimising the disturbance of erodible soils. Use of a disturbance checklist during to help ensure soil profiles. Impacts to landowners will be restricted 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. If soil inversion were to affect farm productivity, the area affected would be minor, and it is a requirement under Part 10 of the *Petroleum and Geothermal Energy Act 2000* that landowners will be entitled to compensation if the damage is not made good by the licensee.	**Low**
			disturbance to stock	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2		**Low**
4.8, Appendix B (no. 8)		Inspection and maintenance activities along the pipeline including Cathodic Protection Surveys	Dust generation	H	H	H	H	H	1	No	Med	Short	Confined	N/A	N/A	2	Likely to be localised, short term and restricted to vehicle movement on unsealed roads, occasional excavation and road maintenance activities. Dust generation will be minimised through minimising excavation time and limiting vehicle speeds on the ROW.	**Low**
Appendix B (no. 3)		Easement maintenance activities	Disturbance and nuisance to landholders and stock	H	H	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	Maintenance occurs on an ongoing basis, depending on track condition, weather condition and track use. Maintenance applies to access tracks to facilities. Public roads are used to access the majority of the easement. Temporary minor impacts from noise. These are limited to the immediate area of the activity.	**Low**
Appendix B (no. 1)		Vegetation clearance for line of sight and along easement	Disturbance and nuisance to landholders and stock	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Short term access to land required which may cause minor temporary impact to landholders and land use within the immediate area of the activity. Only an issue if carried out where there is a public access or near public places.	**Low**
3.5	**Cultural & Heritage Impacts**																**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 lie within the Naracoorte Coastal Plain and Victorian Volcanic Plain. Three areas were identified on the Katnook to Tantanoola pipeline between approximately KP35 and KP47.2. A number of 'scarred trees' are present within the vicinity of the Nangwarry Lateral (Epic Energy 2000). Once area was identified in the corridor south of Airport Road near Mount Gambier at KP13 to KP19.7 on the Mount Gambier Lateral. 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 el al 1977).**	
4.9, Appendix B (no 3, 8, 14)		Vehicle movements, vegetation management and earthworks for integrity digs, erosion control associated with operational and maintenance activities on the easement	Damage to or loss of sites or artefacts of cultural heritage significance.	M	H	H	H	H	2	No	Low	Short	Confined	N/A	N/A	2	Potential impact to cultural sites likely to be minimal as all operational activities are located within existing easements. Archaeological survey to identify all significant areas prior to the commencement of excavation activities in previously undisturbed areas. Entry of known sites into EESA's GIS system. All known sites are registered and included in planning documents. Implementation of a comprehensive induction program to ensure that all personnel are aware of cultural heritage obligations. Where an archaeological survey has identified cultural heritage site/s, a qualified archaeologist and Aboriginal Monitors are employed during excavation activities to ensure the site/s are protected. Fencing, flagging and recording of new sites. When required, development of further management measures are adopted in consultation with community representatives.	**Low**
	Community Health & Safety Impacts																	
4.10, Appendix B (no. 7)		Loss of pipeline integrity from third party interference or pipeline corrosion.	Injury to or loss of third parties.	M	M	H	H	M	2	No	Low	Short	Confined	N/A	N/A	2	The pipeline is constructed, operated and maintained to the AS 2885 pipeline standards. Risk assessment to reduce risks to ALARP. Regular inspections, property contact with all landowners, community awareness program, pipeline warning signs. No significant incidents during operation to date. Where shortfalls are identified, a corrective action program is initiated. Pipeline awareness advertising in industry publication. Buried tape markers above the pipeline in areas of increased risk from excavation e.g. road crossings. Pipeline danger signs along the pipeline route. Community Pipeline Awareness programs. Annual landowner contact program with all land owners and occupiers, providing pipeline safety information and discussing changes to land use. Control and supervision of approved activities near the pipeline. Operation of a 'One Call- Dial Before You Dig'. Vehicle and helicopter pipeline patrols to identify any unauthorised activity near the pipeline. Fire and gas leak detectors. 'Intelligent pigging' operations. 24 hour pipeline control centre that continuously receives and analyses pipeline operating reports.	**Low**
			Loss of gas supply	M	M	M	H	M	2	No	Low	Short	Confined	N/A	N/A	2		**Low**

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ABBREVIATIONS: H = High certainty; M = Medium certainty; L = Low certainty

REF	TYPE OF IMPACT	EVENTS	POTENTIAL CONSEQUENCES	PREDICTABILITY						MANAGEABILITY							COMMENTS	ENVIRONMENTAL SIGNIFICANCE
				SIZE	SCOPE	DURATION	FREQUENCY	STAKEHOLDERS	SIGNIFICANCE	AVOIDANCE	PROBABILITY	DURATION	SIZE AND SCOPE	CUMULATIVE EFFECTS	STAKEHOLDERS	SIGNIFICANCE		
Appendix B (no. 11)		Uncontrolled bushfire associated with fire due to company activities	Injury to public or personnel	M	M	H	H	M	2	Yes	Low	Short	Confined	N/A	N/A	1	Welding usually required when undertaking repairs of pipeline or making modifications to existing infrastructure. Duration is dependent upon length of pipeline under repair, however it is undertaken ongoing as required. The risk of bushfires as a result of welding is minimised through the implementation of strict management measures including ensuring operating personnel are suitably qualified, trained and experienced and establishing safe systems of work for pipeline repairs.	**Low**
Appendix B (no. 2)		Patrol vehicles associated with inspection and maintenance	Injury to public or personnel	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Access and patrolling does not impact on public safety. Epic uses public roads but these vehicles create no greater risk that other vehicles on the roads.	**Low**
4.7		Fugitive noise emissions.	Nuisance to third parties.	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	Minor noise emissions result from routine testing and inspection of pressure relief valves (6 monthly), but the duration is generally limited to less than 30 seconds. All are located within fenced facilities. Noise associated with normal operation of mainline valves is generated during remote valve operation but these operations only occur on an occasional basis. Noise may be generated as a result of venting gas during emergency situations. Depending on the nature of the situation, noise emissions could remain for few minutes up to 1 or 2 hours. Whilst there are no dwellings in close proximity to the mainline valves, there is some commercial and industrial activity. This type of emission would occur very rarely. Noise emission levels to comply with *Environment Protection Act 1993* and *OHSW Act 1986* . 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 pipeline. Equipment is maintained with standard noise suppression devices fitted.	**Low**
4.8, Appendix B (no. 5 & 6)		Uncontrolled venting as a result of equipment failure	Risk to third party safety.	H	H	H	H	H	1	No	Low	Short	Confined	N/A	N/A	2	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 pressure relief valves and some minor emission 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. Emissions may also be generated as a result of venting gas during emergency situations. Depending on the nature of the situation, gas could be emitted for few minutes up to 1 to 2 hours. This type of emission would occur very rarely. Air emissions will be mitigated by employing adequate pollution control measures on plant and equipment. 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.	**Low**
4.8, Appendix B (no 3, 13)		Inspection, maintenance and excavation activities	Injury risk to third parties from dust generation.	M	H	H	M	H	2	No	Low	Short	Confined	N/A	N/A	2	Dust is likely to pose the main threat to existing air quality, however the threat is localised, short term and restricted to vehicle movement on unsealed roads, occasional excavation, and road maintenance activities. Dust generation will be minimised through minimising excavation time and limiting vehicle speeds on the ROW.	**Low**
4.10, Appendix B (no.)7		Pipeline corrosion, design defects construction defects, over pressure associated with pipeline rupture	Injury to the public or personnel	M	M	H	M	M	2	Yes	Low	Short	Confined	N/A	N/A	1	The actual impact of a potential pipeline incident would be dependent on the nature and scale of the incident. An incident on a lateral pipeline could cause interruption to supply for one week. Epic has completed a Safety Management Study (SMS) of the SEPS in accordance with the requirements of AS2885. The SMS is reviewed on a 5 yearly basis or as required with changed land use. It is used to verify appropriate control measures are implemented to ensure that the risks associated with the operation of the pipeline were reduced to ALARP. This Australian Standard described the minimum standards for the operation and maintenance of pipelines, and requires Pipeline Licence holders to; develop operation 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 that appropriate inspections, assessments and maintenance activities are completed; and establish safe systems of work for pipeline repairs. Epic has a Pipeline Integrity Management Plan to ensure continued pipeline integrity during the life of the pipeline. The plan describes the monitoring, inspection and mitigation of the identified integrity threats, and includes the following: pipeline structural integrity, including technical aspects of maintaining pipelines; anomaly assessment and defect repair; external interference threats to the pipeline; operating conditions changes and remaining life review; and stations operations and maintenance. Epic Energy Incident Management Process is made up of the following parts that are enacted in an emergency situation: incident management plan to provide guidelines to manage a crisis and determine the objectives for recovery from a crisis situation; Emergency Response Manual Part 1, pipeline control procedures for immediate response and support; and Emergency Response Manual Part 2, in the field procedures for immediate response and support.	**Low**
			Loss of gas supply	M	M	M	H	M	2	Yes	Low	Medium	Confined	N/A	N/A	1		**Low**