April 2009 to December 2009

ANNUAL REPORT

Pipeline Licence 18

QSN Pipeline

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LIST OF ABBREVIATIONS

ALARP	As Low As Reasonably Practical
AS2885	Australian Standard 2885 – Pipelines-Gas and Liquid Petroleum
AVT	Accuracy Verification Test
CMMS	Computerized Maintenance Management System (MAXIMO)
CP	Cathodic Protection
DCVG	Direct Current Voltage Gradient
EMS	Environmental Management System
ERE	Emergency Response Exercise
GPS	Geographical Positioning System
HAZOP	Hazard Operability
HELM	Heritage, Environmental and Land Management
HSE	Health Safety and Environment
LMS	Land Management System
MAP	Moomba to Adelaide Pipeline
MSP	Moomba to Sydney Pipeline
MLV	Mainline Valve
PIRSA	Primary Industries and Resources of South Australia
PL18	Pipeline Licence Number 18
ROW	Right of Way
SCADA	Supervisory Control and Data Acquisition
SEO	Statement of Environmental Objectives
SMS	Safety Management System
SWQP	South West Queensland Pipeline
ERE	Emergency Response Exercise

1 PURPOSE

This report is submitted in accordance with the requirements of Pipeline Licence 18 and the South Australian Petroleum & Geothermal Energy Act & Regulations 2000.

2 SCOPE

The QSN pipeline is owned and operated by Epic Energy. This report reviews operations and maintenance activities carried out from 7 April 2009 to the 31 December 2009.

In accordance with the Petroleum & Geothermal Energy Act & Regulations 2000, a performance assessment is also provided with regard to the Statement of Environmental Objectives, for the QSN Pipeline.

3 TECHNICAL ASPECTS

Table 1 provides technical information on the QSN Pipeline. The pipeline runs from the South Australian / Queensland border to Moomba and was constructed in accordance with AS 2885.

Table 1 QSN Pipeline Technical Information

Date Constructed	2008
Date Commissioned	January 2009
Length	182km
External Diameter	406.4mm
Wall Thickness - Normal - Heavy Wall (creek beds, roads)	 8.1 mm 9.7 mm
Pipe Grade	API 5L X70
MAOP	15,300kPa
Fluid	Natural Gas
Coating	3LPE
Main Line Valves	Single MLV at KP 101
Scraper Stations	Scraper facilities installed within Moomba Meter Station
Meter Stations	Single Meter Station at Moomba – provides gas to both MAP & MSP

3.1 Pipeline Licence Variation

A pipeline licence variation to PL18 was granted by PIRSA on the 7th October 2009, which will allow for pipeline looping length of approximately 92km's from the South Australian border to Moomba along the existing pipeline route.

The pipeline will be of steel construction with a minimum outside diameter of 400mm and a maximum outside diameter of 508mm.

4 REGULATED ACTIVITIES

4.1.1 Risk Management Review

As this is a new pipeline system that was constructed in 2008, formal risk assessments, reviews and analysis were completed as part of the design, construction and commissioning process. The issues raised in these risk assessments were addressed as required under AS2885 and under the South Australian Petroleum & Geothermal Energy Act 2000 approval process.

The next formal risk assessment is due in 2013.

4.1.2 Training

Epic Energy is committed to developing the skills of their employees and contractors to meet the operational needs of its business. During 2009 staff training was conducted in-house using a number of techniques which included training courses developed specifically for Epic Energy and delivered using self paced modules or as a group presentation using either a training service provider or suitably skilled Epic Energy staff.

In addition to internal training, staff attended a range of external courses selected to further enhance their knowledge of the natural gas and liquid hydrocarbon pipeline transmission industry. The range of training staff attended during 2009 included:

2WD Defensive Driving
4WD Drive & Recover SRODRV001 & 2
Accelerated Management
AS 2885.3 Pipelines Gas & Liquid Petroleum - O & M
AVT Testing
Backhoe Front-end Loader >= 2L Engine LB
Basic Fire Prevention & Control (Extinguishers)/Refresher (Phase 3)
Chainsaw - Basic Operations & Maintenance
Chemical Use and You
Coaching & Teambuilding Skills
Combustion Basics
Concepts of Instrumentation - Instrumentation Modules
Confined Space Awareness
Confined Space Entry
Control Systems Basics
Corrosion Control Introduction (BL)
CPR
Data Capture/Eddict
Design Learning Programs
Dogging Certificate DG
Drugs & Alcohol - Epic Energy 2009
Drugs & Alcohol - Epic Energy 2009 Supervisor Awareness
Dry Creek Office Induction
EEHA Installation and Maintenance
Effective Communication
Electrical Equipment in Hazardous Areas Intro
Elevated Work Platform WP
Emergency Pipeline Repairs

Fatigue & Stress Management
Fauna Relocation & Management
Fire/Floor Warden Training (Phase 1)
Flow Measuring Instruments – Basics
Forklift Operator Certificate of Competency LF
Gas Analysis Basics
Gas Detection - Santos (Epic SA & Qld)
General Principles of Pipeline Design
GIS Training
GPS/Palm Pilot
Hazardous Materials (MSDS)
Heat Stress - Santos (Epic SA & Qld)
Hydrocarbon Properties & Principles
Instrument/Electrical Basics
Introduction to AS2885 and the Australian Pipeline Industry
Introduction to Pigging
Job Hazard Analysis
LMS Computer Training
Low Voltage Rescue
Manual Handling
MAXIMO - Working in Maximo – Basic
Mercury Awareness
Metrotech Pipe Locator Training
Natural Gas Filtration Introduction
OHS Fundamentals
Operations Field Induction
Permit to Work Awareness 2009
Permit To Work System / Refresher
Personal Protective Equipment
Personnel Movement Tracking
Pipe Location - General Epic Module
Pipeline Risk Management
Pipeline Surveillance
Pipeline System Components Introduction
Pipeline Voice Communications
Power Tool Safety
Pressure - Instrumentation Modules
Pressure Reduction Skid Operation
Pressure, Temperature & Level Indicators - Basics
Preventing Discrimination & Harrassment
Principles of Flow Measurement
Process & Instrumentation Diagrams and Drawings
Responsible Officer
SCADA and Control Systems Basics
Senior First Aid Full Certificate SA
Senior First Aid Refresher SA
SWER Training
The Atmosphere & Working With Gases
Third Party Works
White Card - National OHS Common Industry Induction
Work in accordance with an issued permit
Working at Heights
Working in Remote Locations
Working Safely Near Pipelines & Pipeline Infrastructure

Workplace Drugs & Alcohol
Workzone Traffic Management

4.2 OPERATIONS AND MAINTENANCE ACTIVITIES

All routine and corrective maintenance activities are specified in Epic Energy's CMMS [Computerized Maintenance Management System - MAXIMO] and scheduled by this system which generates work orders for maintenance staff to complete. Some of the preventative maintenance activities scheduled included:

- Monthly pipeline patrols
- Quarterly Meter Station metering accuracy testing
- Six Monthly Pressure Reduction station I&E and mechanical maintenance
- Six Monthly Cathodic protection system surveys
- DCVG survey
- Annual Emergency response equipment inspections
- Line of Sight Clearing
- Land owner pipeline awareness visits

A description of the Operations and Maintenance activities for 2009 is provided below.

4.2.1 Pipeline Patrol Activities

Monthly road patrols were completed in accordance with AS 2885.3 requirements ensuring the following:

- Signage is in suitable condition and if not, repairs are affected as soon as is practically possible. Any issues not addressed during the patrol are fed back into the CMMS.
- Soil erosion due to wind and water is addressed and restored in accordance with the SEO there was no loss of the pipeline depth of cover reported during 2009.
- There are no leaks occurring at any of the pipeline facilities or along the pipeline route.
- All sites are secure and kept in a good, clean and tidy state.
- Maintenance activities including inspections of above ground pipe coating condition, fences, gates, padlocks, signage, fire extinguishers, weeding and other housekeeping activities are addressed at the meter station and pressure reduction facility associated with the lateral the pipeline surveillance activity.

In 2009 there were no significant issues identified during any of the road patrols.
During the reporting period no material issues occurred during the patrolling or other routine maintenance activities on the QSN Link Pipeline.

4.2.2 Leakage Detection

Epic Energy monitors the QSN pipeline for leakage remotely from TSCC and during the routine ground patrols as staff travel along the pipeline. Field staff looks for signs of gas leakage such as dust plumes, the sound of escaping gas and dead or dying vegetation while staff at TSCC monitors the system pressures, flows and alarms which have been set and fine tuned to indicate leaks in the system.

If a significant leak occurred on the QSN pipeline system a leak detection model used by the Epic Energy Control Room would detect the loss allowing isolation of the pipeline in a timely manner.

During 2009 there were no instances of any leaking valves or equipment on the QSN Link pipeline.

4.2.3 Coatings

No DCVG Survey was carried out on the QSN Link pipeline in 2009 with the last DCVG Coating condition survey carried out during commissioning of the pipeline in 2008. As DCVG surveys are scheduled to be completed once every five years, the next survey will take place in 2013.

4.2.4 Cathodic Protection

Testing during commissioning in February 2009 revealed adequate levels of cathodic protection are apparent along the entire pipe length with all instantaneous off potential levels being in excess of the minimum accepted criterion for protection of -0.85 volts versus a copper/copper sulphate reference electrode. No further surveys or the interference testing has been carried out for the remainder of 2009.

A full line survey and interference testing will be conducted in first quarter of 2010.

This pipeline is considered to be satisfactorily protected.

4.2.5 Electrical & Instrumentation maintenance activities

Accuracy Verification Tests were carried out in line with Epic's maintenance management system with no significant issues to report.

4.2.6 Mechanical Maintenance activities

Filter inspections and replacements were carried out as per the maintenance plan. No other significant mechanical maintenance was carried out.

4.2.7 Communications

During the reporting period, a number of minor system faults restricted site communications for short periods associated with SCADA across the pipeline. All issues were immediately addressed by the maintenance staff with no significant interruptions to the SCADA system data acquisition from the site, and no effect on operational safety.

5 INCIDENT REPORTING

There have been no reportable incidents in relation to PL18 during the 2009 reporting period.

6 LAND MANAGEMENT

6.1 Land Owner Liaisons

As part of Epic's landowner contact program, the two landowners on the QSN Link Pipeline were visited for face to face contact twice during the year. Epic's landowner risk assessment questionnaire was completed by each land owner with questions centered on land use, equipment and machinery used on the property, routine activities and any future changes / modifications in land use in order to gauge the risk these activities may pose to the pipeline.

Epic also issued two pipeline safety mail outs during the reporting period to each landowner.

6.2 Pipeline Safety Awareness

There were no Community Awareness Programs run on the QSN Link Pipeline during the reporting period.

Several Awareness Presentations were conducted to capture all Epic roster employees and contractors whom conduct work on and along the QSN Link Pipeline during the reporting period.

The presentations focus on the general properties of natural gas, the process of gas transmission by pipeline, location of Epic Energy's high pressure gas pipelines in the regions concerned, correct procedures when working within gas pipeline easements, pipeline threats and dealing with emergency situations.

6.3 Pipeline Location and Referral services

Epic Energy provides a free service to locate any pipeline that they own or operate on behalf of third parties. This service is primarily used by other companies and third parties carrying out civil works in the vicinity of the pipelines.

During the reporting period, Epic Energy received no enquires via the free call 1100 "Dial Before You Dig" asset referral service in relation to third party activities in the vicinity of the QSN pipeline easement.

7 ENVIRONMENTAL MANAGEMENT

During the reporting period all of environmental requirements as detailed in the Statement of Environmental Objectives were complied with.

Appendix A contains the "Assessment of Declared Objectives" completed for the QSN Link pipeline.

8 EMERGENCY RESPONSE

No emergency response exercises were carried out on QSN Link pipeline during the reporting period. The most recent Emergency Response Exercise was carried out on the QSN pipeline on the 2nd of April 2009 in accordance with the PL18 pipeline license requirements.

Epic Energy has carried out Emergency Response Exercises on other assets throughout the reporting period to maintain a high level of training for personnel and to actively review our process and procedures for continual improvements.

9 REGULATORY COMPLIANCE

Every endeavor is made to ensure that design, manufacture, construction, operation, maintenance and testing of all appropriate facilities, is carried out in accordance with AS2885.

There are no known non compliances for the QSN pipeline that Epic Energy is aware of against:

- The Petroleum & Geothermal Energy Act & Regulations 2000
- The Pipeline Licence (PL18)
- The Statement of Environmental Objectives

Any non-compliance identified would be logged in the CMMS and tracked to conclusion. Regulatory Compliance is monitored during Quarterly meetings between PIRSA and Epic Energy.

Epic Energy utilizes a compliance database to track major regulatory compliance obligations for all of its pipelines.

10 RISK MANAGEMENT

Epic Energy continually reviews operational risks with assessments including inputs from experienced gas industry personnel and emergency services representatives providing an insight into potential new risks and assisting in the development of appropriate management strategies.

Epic Energy utilizes the following risk management strategies to minimize risks to ALARP.

- Ground monitoring of the pipeline easement activities
- Safe Work Systems, including Permit to Work
- Routine maintenance activities to ensure all of the pipeline facilities are maintained in accordance with best industry practices and the relevant codes and standards that apply
- Design change control
- In accordance with AS2885 Epic Energy conducts 5 yearly metre by metre risk assessment reviews
- Pipeline & Safety awareness program
- Land ownership and use notification system
- Landholder and stakeholder contact program
- Participation in state forums for external risk management
- Free “1100” Dial before You Dig information system

In addition Epic Energy undertook a full review of all landowners and stakeholders along the pipeline route, ensuring the efficiency of the landowner contact program.

A new Permit to Work awareness program was rolled out to Epic staff across South Australia.

11 MANAGEMENT SYSTEM AUDITS

11.1 Environmental

There was no environmental auditing undertaken during the reporting year on the QSN Link pipeline. The last environmental assessment was undertaken in February ’09, with all findings and recommendations being responded to by Epic.

11.2 Health and Safety

A full external audit of Epic Energy’s safety Management System (SMS) was undertaken by Harber & Associates, with the applicability of 7 Epic SMS standards audited within South Australia.
These included the following topics;

- SMS 4 Risk Assessment & Management
- SMS 5 Employee Involvement
- SMS 6 Employee Selection, Competency and Training
- SMS 8 Design, Construction and Commissioning
- SMS 13 Emergency Response
- SMS 14 Health System
- SMS 15 Incident Reporting and Investigation

There were no non-conformances noted during the external SMS audit process, however suggestions for improvement were made through the audit recommendations

11.3 Management Audit

Epic Energy completed a number of audits during 2009, these were a combination of Epic’s internal audit program, external audits by industry experts initiated by Epic Energy, and compliance audits conducted by regulators.
The following topic areas were subject to audit during 2009;

- Operating System Change Control
- Safety Management System review (external audit)
- HAZOP
- Maintenance System Optimisation
- Ladders & Platforms
- Compliance with Safety Reliability Maintenance & Technical Management Plan for electrical infrastructure (by Technical Regulator)
- Personnel Tracking Movements
- Permit to Work & Job Hazard Analysis
- Operations Group Systems Audit
- Dial Before You Dig
- Aviation Charter
- Disaster Recovery Test (IT broad systems test)
- Billing and Contractual Obligations
- Daily and End of Month Reconciliation Process (pipeline throughput)
- Accuracy Verification Testing Process (metering)
- Disaster recovery Plan
- Emergency Manuals

Whilst the auditing program did not make any findings of non-conformances, areas for continual improvement and refinement of processes were identified through audit recommendations

12 REPORTS GENERATED DURING THE REPORTING PERIOD

The following reports were generated and forwarded to PIRSA during the reporting period;

- PL18 2008 Annual Report (submitted
- Emergency Exercise Report “Operation QSN” April 2009
- Quarterly Incident Reports

13 VOLUME OF PRODUCT TRANSPORTED

13,325.944 TJ of natural gas was transported through the QSN pipeline during the reporting period.

14 PROPOSED OPERATIONAL ACTIVITIES FOR 2010

During 2010, the following activities are proposed for the QSN Pipeline:

- Complete all scheduled routine maintenance activities and corrective maintenance identified
- Environmental risk workshop
- Preparatory civil work for the Moomba inlet compound relating to the QSN3 development
- Submission of a 2009 Annual Report in March 2010

14.1 PROPOSED CONSTRUCTION ACTIVITIES FOR 2010

The expansion of the exiting SWQP will begin during 2010, however there is currently no intention to undertake construction activities in the South Australian portion of the project, taking in the area of PL18, during 2010.

Some surveying work will take place, which mainly involves pegging of the existing QSN Pipeline.

Scheduling remains flexible in regard to weather conditions, and if plans change to the extent that activities will take place in South Australia during 2010 PIRSA will be advised accordingly.

15 STATEMENT OF EXPENDITURE

Commercial in Confidence

16 KEY PERFORMANCE INDICATORS

The following key performance indicators have previously been established to monitor performance of operations and maintenance activities on the QSN Pipeline.

	Target	Actual	Comment
Cathodic Protection			
Percentage of the pipeline protected as required by	100%	100%	This represents a satisfactory level of protection over the entire length of the

AS2885.3-2001 and more specifically AS2832.1-2004			pipeline.
Third Party Incident			
Number of times pipeline is damaged	0	0	No damage occurred to the pipeline during the reporting period
Number of near misses (digging within 1m of pipeline)	0	0	No activities of this nature that involved Epic Energy, the owner or a third party were identified during the reporting period
Exposure of pipeline due to washout and wind erosion	0	0	During the reporting period, there were no instances of the pipeline cover being eroded due to wind or water
SCADA and Leak Detection			
Reliability of SCADA and Leak Detection System	100%	100%	No significant SCADA outages were reported or recorded for the QSN pipeline
Environmental			
Number of uncontrolled hydrocarbon releases	0	0	No uncontrolled Hydrocarbon releases were recorded during the reporting period
Earth Tremor Surveillance			
Vehicular surveillance immediately after an earth tremor or flood	100%	100%	No floods or earth tremors were reported during the reporting period

17 CONCLUSION

During the reporting period the construction of the QSN was completed in accordance with all licence and regulatory conditions, maintenance and inspection programs carried out indicated the pipeline is in sound condition and is capable of operating at set parameters with no restrictions.

The CP Survey indicates the protection level meets the targeted performance levels for this system. The pipeline is considered to be in good working condition and well maintained.

Appendix A – Assessment of Declared Objectives

ASSESSMENT OF DECLARED OBJECTIVES

PL 18 QSN Pipeline Objectives and Assessment Criteria[1]

During the reporting period all activities were undertaken in accordance with Epic Energy's Environmental Management System, the Construction Management Plan, Environmental Line List and Procedures.

***Please note that no construction activities took place during the reporting period, therefore Objectives 1 through to 10 are marked as "not applicable" (N/A) for the period. Environmental close out for construction activities was completed in the previous reporting period.**

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
1. To avoid or minimise adverse impacts on soils and terrain	1.1 To minimise soil erosion and sedimentation as a result of pipeline construction	Alignment selection to avoid or minimise impacts on erodible soils and steep terrain Construction Environmental Management Plan (CEMP) contains environmental work procedures (EWP) that specify soil management and reinstatement requirements Implementation specific requirements based on soil type and erosion risk e.g. in gibber, minimise gibber disturbance, roll areas rather than clearing where traffic levels will not be high, carefully stockpile gibber and replace in reinstatement Preventative measures implemented and monitored in susceptible areas Erosion and sedimentation control structures installed and maintained in susceptible areas Records of induction/training regarding CEMP/EWP requirements Regular inspections of construction areas undertaken to look for evidence of erosion	The extent of soil erosion on the easement is consistent with surrounding land 0, +1 or +2 GAS criteria are obtained for borrow pit construction and restoration	N/A	No construction activity took place during the reporting period. N/A
	1.2 To prevent soil inversion	CEMP/EWP requirements include separate stockpiling of topsoil and sub-surface material during excavation Records of induction/training regarding CEMP/EWP requirements Reinstatement of stockpiles in appropriate order during backfill	No evidence of subsoil on surface (colour)	N/A	N/A

[1] Assessment criteria have been developed to be "black and white". Professional judgement is required to assess whether non-compliance is minor or major. It is necessary to ensure that adequate information is available to enable this judgement to be made.

[2] This column is provided for information only. Under the *Petroleum Act 2000,* only objectives and assessment criteria are approved.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	1.3 To mitigate soil compaction if necessary by remedial action	Ripping of identified compacted areas where appropriate to soil type and erosion risk (i.e. generally avoid ripping in gibber) Regular inspections undertaken of easement and construction areas to look for evidence of soil compaction	No visual evidence of soil compaction following remediation of pipeline easement (e.g. hard soil, local water pooling)	N/A	N/A
	1.4 To reinstate soil and terrain as near as practicable to pre-construction contours and conditions	Implement reinstatement requirements specified in CEMP and EWP Records of induction/training regarding CEMP/EWP requirements Regular inspections undertaken of easement and construction areas Installation and monitoring of photo points (environmental monitoring points)	Surface contours consistent with adjacent land 0, +1 or +2 GAS criteria are obtained for borrow pit restoration	N/A	N/A
2. To minimise and manage impacts to water resources	2.1 To minimise short term, and prevent long-term, interruption or modification to surface drainage patterns	Alignment selection to minimise impacts to water resources e.g. select watercourse crossing locations that minimise erosion potential and impacts to the watercourse Management requirements specified in CEMP/EWP Records of induction/training regarding CEMP/EWP requirements Installation and subsequent removal of appropriate temporary watercourse crossing measures Regular inspections undertaken of easement and construction areas specifically to look at watercourse crossings Installation and monitoring of photo points (environmental monitoring points)	No adverse impacts (for example to downstream ecology or land use) resulting from watercourse flow reductions or diversions as a result of pipeline construction activities No evidence of altered watercourse flows following reinstatement No evidence of project related erosion of watercourses intersecting or adjacent to the pipeline easement Surface drainage profiles restored Drainage is maintained to pre-existing conditions or better	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	2.2 To minimise the amount of sediment entering surface water features	CEMP/EWP specify management requirements including: No stockpiling of materials in watercourses/flowlines (note: trench spoil may be stockpiled in dry watercourse beds for very short periods e.g. less than a day) Use of appropriate sediment and silt capturing devices Installation of permanent berms on slopes Minimising period between clearing and reinstatement at or near watercourses Stabilisation and reinstatement of watercourses and drainage lines Records of induction/training regarding CEMP/EWP requirements	Compliance with EPA *Environment Protection (Water Quality) Policy 2003*	N/A	N/A
	2.3 To minimise disruption to third party use of surface waters	Alignment selection to avoid or minimise disturbance to third party uses e.g. stock watering points Liaison with third party users regarding potential disruptions Minimising period of disturbance and prompt reinstatement in sections of easement intersecting or adjacent to water bodies Installation and subsequent removal of appropriate temporary watercourse/water body protection measures to prevent flow interruptions	No reasonable complaints received from landholders or third party users in relation to use of surface waters	N/A	N/A.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
3. To avoid land or water contamination	3.1 To prevent spills occurring and if they occur minimise their impact	Regular inspections for evidence of soil or water discolouration, vegetation or fauna death Incident / Spill reports Use of spill protection methods where work is completed within or adjacent to environmentally sensitive areas Spill response/cleanup procedures, requiring spills to be: reported contained cleaned-up cause investigated and corrective and/or preventative action implemented Spills/contamination remediated in consultation with regulatory agencies and landholder Ensuring personnel are trained in spill response procedures Appropriate spill response equipment is available on site Compliance with fuel and hazardous waste standards Containment of all fuel, oil, hazardous substances and liquid waste in appropriate vessels/containment areas (e.g. polythene lined, bunded areas or on bunded pallets) Bunded areas must have sufficient freeboard (e.g. to hold a 1:100 year, 24hr rainfall event) Bunded areas in accordance with EPA guidelines *080/07 Bunding and Spill Management*	No soil or water contamination as a result of pipeline activities Compliance with Environment Protection Act	N/A	N/A
	3.2 To ensure that rubbish and waste material are disposed of in an appropriate manner	Waste management requirements specified in CEMP/EWP, including: Provision of covered bins for the collection, storage and transport of wastes Waste disposal at an approved waste facility Regular inspection to look for evidence of rubbish, spills (soil discolouration) Waste disposal records, chemical manifests. Appropriately licensed contractors used for any hazardous waste disposal and records are maintained for all hazardous waste disposal	No pipeline related rubbish or litter on easement or at facilities or on surrounding land Waste material is contained and disposed of in accordance with Environment Protection Act	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	3.3 To prevent impacts as a result of hydrotest water, trench water and waste water (e.g. washdown water) disposal	Water disposed of in a manner that prevented discharge or runoff to watercourses or environmentally sensitive areas Water discharged onto stable ground, with no evidence of erosion as a result of discharge Records on source of water and discharge method/location Investigation of water quality prior to release/disposal of trench water and waste water. Testing of hydrotest water if potentially harmful chemicals added. Inspection of water disposal sites for evidence of water entering a watercourse or environmentally sensitive area	Discharge water meets appropriate ANZECC and EPA criteria for point of disposal No evidence of impacts to soil, water and vegetation as a result of water disposal (e.g. soil erosion, dead vegetation, water discoloration)	N/A	N/A
	3.4 To ensure the safe and appropriate disposal of camp wastewater (grey water, sewage)	All wastewater disposed in accordance with the *Public and Environmental Health (Waste Control) Regulations 1995* (i.e. the waste water disposal system must either comply with the *Standard for the Construction, Installation and Operation of Septic Tank Systems in SA* or be operated to the satisfaction of the Department of Health) Treated sewage wastewater disposed of onto land, well away from any place from which it is reasonably likely to enter any waters	No evidence of non-compliance with local or state government regulations	N/A	N/A
4. To minimise adverse impacts to vegetation and fauna	4.1 To minimise clearing of remnant vegetation	Alignment selection to minimise crossings of drainage lines and ephemeral wetlands and avoid or minimise impacts to vegetation with high habitat values (e.g. large trees) CEMP and alignment sheets identify remnant vegetation requiring management / avoidance Flagging/marking of remnant vegetation requiring management / avoidance Retain trees on ROW where possible Trim vegetation in lieu of removal where possible Restrict disturbance to the ROW and approved access and work areas Reduction of ROW width during construction in identified significant areas Obtain any permits / clearance consent required	Vegetation clearing is in accordance with the *Native Vegetation Act 1991* Vegetation clearance minimised No unauthorised clearance of flora identified to be retained 0, +1 or +2 GAS criteria are obtained for borrow pit construction and restoration	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	4.2 To minimise disturbance to fauna	Implement previous measures to minimise impacts to native vegetation Identification and flagging of significant fauna habitats (e.g. large trees) that require management/avoidance during construction and implementation of management requirements Alignment selection to minimise/avoid impacts to important habitats Provision of fauna ramps at regular intervals in open trench Daily inspection of open trenches and removal and identification recording of trapped fauna by appropriately trained and experienced biologists Prompt reinstatement of easement Borrow pits are restored to minimise water holding capacity where agreements are not in place with stakeholders No domestic pets allowed at camps or worksites No feeding of wildlife (e.g. dingoes)	Native fauna casualties associated with construction restricted to as low as reasonably practical	N/A	N/A
	4.3 To appropriately rehabilitate the easement to pre-construction condition, as reasonably practical	Implement reinstatement requirements specified in CEMP and EWP Timely response to rehabilitation Installation and monitoring of photo points (environmental monitoring points)	Vegetation on the easement is reasonably consistent with the surrounding areas Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process 0, +1 or +2 GAS criteria are obtained for borrow pit restoration No complaints received from landholders in relation to regrowth of vegetation on the easement	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	4.4 To achieve a significant environmental benefit for native vegetation clearance	Work (or payment to Native Vegetation Fund) undertaken to achieve a significant environmental benefit, as required by Native Vegetation Regulation 5(1)(zd) Significant environmental benefit requirement either: determined using the "Methodology for calculating total SEB requirements" outlined in the Guidelines[3], or negotiated with the Native Vegetation Council where SEB calculation differs from the standard methodology in the Guidelines. (Note: The Guidelines have provision for case-by-case assessment of significant environmental benefit by the NVC in some circumstances e.g. where SEB capping or additional mitigation measures apply)	Significant environmental benefit approved by PIRSA (where delegated authority applies) or Native Vegetation Council Significant environmental benefit obligation satisfied / implemented	Not Achieved	The significant environmental benefit methodology is still being discussed between Epic Energy and the Native Vegetation Council
5. To avoid the spread of weeds and pathogens	5.1 To avoid the introduction or spread of weeds and pathogens and undertake control where required	Vehicles and machinery cleaned and inspected before entry to project area Identification of weeds and pathogens on easement and adjacent land Implementation of control measures of weeds and pathogens on easement and liaison with the regional NRM Board and the landholder as necessary Records of outbreaks found, weed control activities and photo-monitoring of significant outbreaks Vehicle cleaning/wash down register	The presence of weeds on the easement is consistent with or better than adjacent land No new outbreak or spread of weeds or pathogens as a result of pipeline activities	N/A	N/A

[3] *Guidelines For a Native Vegetation Significant Environmental Benefit Policy For the clearance of native vegetation associated with the minerals and petroleum industry*

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
6. To minimise and manage impacts to heritage sites and values during construction	6.1 To ensure that identified heritage sites are not disturbed	Alignment selection to avoid heritage sites, including archaeological and ethnographic heritage, built heritage and culturally significant vegetation Identification of known heritage sites on easement prior to construction Measures undertaken to protect heritage sites on or near the easement Implement appropriate protocols for dealing with accidental discovery of cultural heritage material during construction Obtain all necessary approvals in the event of an accidental/unavoidable site disturbance Seek advice from relevant authorities for remediation of site, if required Induction/training to include heritage management requirements Incident reports	No impact to known sites without approval under the *Aboriginal Heritage Act 1998* or the *Heritage Places Act 1993* Any new sites identified are reported to appropriate authority and recorded 0, +1 or +2 GAS criteria are obtained for borrow pit construction and restoration	N/A	N/A
7. To minimise noise due to construction	7.1 To minimise noise impacts associated with the movement and operation of construction vehicles and equipment	Regular maintenance of construction vehicles and equipment Incident reports	No reasonable complaints received	N/A	N/A
8. To minimise atmospheric emissions	8.1 To minimise the generation of dust	Management requirements specified in CEMP/EWP including use of water trucks and sprayers if necessary Records of induction/training regarding CEMP/EWP requirements Incident reports	No reasonable complaints received	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
9. To minimise disturbance to third party infrastructure, landholders and land use	9.1 To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided	Alignment selection to avoid or minimise impacts to infrastructure / land use and visual impact Formal easement agreements outlining the legal responsibilities of Epic Energy and landholders Management requirements specified in CEMP/EWP Restrict disturbance to the ROW and approved access and work areas Identification of utilities present on or near the easement on alignment sheets Records of communications with landholders / third party prior to and during construction activities Incident reports Compliance with the *National Parks and Wildlife Act 1972* and Regulations pertaining to correct conduct in a Regional Reserve No pets or firearms brought into Regional Reserve Management of fuel, oil and spills (if they occur) to meet landholder requirements for Quality Assurance programs (e.g. Cattlecare)	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to the satisfaction of the landholder/owner or as near as practicable to undisturbed condition Duration of disturbance does not exceed agreed timeframe No disturbance outside the ROW and approved access and work areas No reasonable complaints received Adverse impacts to Innamincka Regional Reserve operations or conservation values are minimised	N/A	N/A
	9.2 To minimise disturbance to landholders	Restrict disturbance to the ROW and approved access and work areas Landholder activities not restricted as a result of pipeline activities Records of communications with landholders / third party prior to and during construction activities	No reasonable landholder complaints Landholder activities not restricted or disturbed as a result of pipeline activities unless by prior arrangement	N/A	N/A
	9.3 To appropriately reinstate and rehabilitate the easement to allow continuation of current land use activities post-construction	Management requirements specified in CEMP and property line list Reinstatement of easement in accordance with CEMP/EWP Records of communications with landholders prior to and during construction activities Installation and monitoring of photo points (environmental monitoring points)	Species abundance and distribution on the easement is reasonably consistent with surrounding areas Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process	N/A	N/A

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
10. To minimise the risk to public health and safety	10.1 To adequately protect public safety during construction	Job Hazard Analysis Records of communications with adjacent landholder and third parties prior to and during construction work including advice of the nature and schedule of activities Use of signage or bunting to identify all potentially hazardous areas Site induction program for all personnel / visitors Adequate implementation of traffic management practices Records of Fitness for Purpose Reports, Risk Assessment and inspections Records demonstrating compliance with AS2885 Records of emergency response plan induction/training for construction personnel Incident Reports	No injuries or incidents involving the public	N/A	N/A
	10.2 To avoid fires associated with pipeline construction activities	Records of regular fire safety and emergency response training for construction personnel Appropriate fire prevention/control equipment on site Incident Reports	No pipeline construction related fires	N/A	N/A
11. To maintain soil stability / integrity on the easement	11.1 To remediate erosion or subsidence as a result of pipeline operations in a timely manner	Timed photo points or regular land survey, specifically to look at evidence of erosion, subsidence, vegetation loss on easement & compare to adjacent land Inspections undertaken as part of regular patrols, following specific works, following significant storm events Preventative measures implemented and monitored in susceptible areas	No un-remediated subsidence The extent of soil erosion on the easement is consistent with surrounding land No excessive erosion on areas adjacent to corridor as a result of easement 0, +1 or +2 GAS criteria are obtained for borrow pit restoration	Achieved	There was no observed erosion or subsidence during pipeline surveillance activities for the reporting period.
	11.2 To prevent soil inversion	Annual land survey to look for soil discoloration, success of vegetation return as an indicator. Disturbance checklist signed off to indicate top soil/subsoil are stockpiled separately and soil profiles appropriately reinstated following the re-instatement of works/excavations	Vegetation cover is consistent with surrounding land No evidence of subsoil on surface (colour)	Achieved	Pipeline surveillance confirms the consistency of vegetation cover with the surrounding land.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
12. To minimise and manage impacts to water resources	12.1 To maintain current surface drainage patterns	Regular patrols and survey undertaken to look for evidence of erosion, windrow development, abnormal vegetation growth or death or any changes to the easement which could change surface hydrology conditions, particularly in the Strzelecki Creek wetland area Observations also to be undertaken following significant storm events Use of disturbance checklist and photo points before, during & after excavations, CP installation, construction activities, etc	For excavations, surface drainage profiles restored For existing easement, drainage is maintained to pre-existing conditions or better	Achieved	Regular patrols and surveillance have not observed any issues with drainage patterns during the reporting period.
	12.2 To minimise disruption to third party use of surface waters	Minimising period of disturbance for any excavation or land disturbance and prompt reinstatement of easement in sections of easement intersecting or adjacent to water bodies Installation and subsequent removal of appropriate temporary watercourse/water body protection measures to prevent flow interruptions	No reasonable complaints received from landholders or third party users in relation to use of surface waters	Achieved	During the reporting period there were no complaints from landholders or third parties in relation to the use of surface water.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
13. To avoid land or water contamination	13.1 To prevent spills occurring and if they occur minimise their impact	Prevention program including pigging, intelligent pigging and pipe maintenance Regular patrols undertaken to look for evidence of soil or water discolouration, vegetation or fauna death Incident / Spill reports Use of spill protection methods where work is completed within or adjacent to environmentally sensitive areas Spill response/cleanup procedures, requiring spills to be: orted ntained aned-up se investigated and corrective and/or preventative action implemented Spills/contamination remediated in consultation with regulatory agencies and landholder Ensuring personnel are trained in spill response procedures Appropriate spill response equipment is available on site Compliance with fuel and hazardous waste standards Containment of all hazardous substances and liquid waste in appropriate vessels/containment areas Bunded areas in accordance with EPA guidelines 080/07 Bunding and Spill Management	No soil or water contamination as a result of pipeline activities Compliance with Environment Protection Act	Achieved	There have been no reported spills during the reporting year.
	13.2 To ensure that rubbish and waste material are disposed of in an appropriate manner	Regular patrols or annual survey undertaken to look for evidence of rubbish, spills (soil discolouration) Waste disposal records, chemical manifests. Appropriately licensed contractors used for any hazardous waste disposal and records are maintained for all hazardous waste disposal Use of photo points before, during & after excavations, CP installation, construction activities etc	No pipeline related rubbish or litter on easement or at facilities or on surrounding land Waste material is contained and disposed of in accordance with Epic approved procedures and Environment Protection Act	Achieved	Regular inspections and monitoring have been undertaken to ensure that waste materials been disposed of.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	13.3 To prevent impacts as a result of hydrotest water, trench water and waste water (e.g. washdown water) disposal	Water disposed of in a manner that prevented discharge or runoff to watercourses or environmentally sensitive areas Water discharged onto stable ground, with no evidence of erosion as a result of discharge Records on source of water and discharge method/location Investigation of water quality prior to release/disposal of trench water and waste water. Testing of hydrotest water if potentially harmful chemicals added. Inspection of water disposal sites for evidence of water entering a watercourse or environmentally sensitive area	Discharge water meets appropriate ANZECC and EPA criteria for point of disposal No evidence of impacts to soil, water and vegetation as a result of water disposal (e.g. soil erosion, dead vegetation, water discoloration)	Achieved	No activities were undertaken by Epic Energy that would cause any impact on land or water resources quality on the QSN Link pipeline during the reporting period
	13.4 To ensure the safe and appropriate disposal of camp wastewater (grey water, sewage)	All wastewater disposed in accordance with the Public and Environmental Health (Waste Control) Regulations 1995 (i.e. the waste water disposal system must either comply with the Standard for the Construction, Installation and Operation of Septic Tank Systems in SA or be operated to the satisfaction of the Department of Health) Treated sewage wastewater disposed of onto land, well away from any place from which it is reasonably likely to enter any waters	No evidence of non-compliance with local or state government regulations.	Achieved	There were no camps in operation during the reporting period, therefore no disposal of wastewater. There were no operational activities that required disposal of wastewater.
14. To promote and maintain native vegetation cover on the easement	14.1 To promote and maintain regrowth on the easement to be consistent with surrounding area	Annual land survey to assess vegetation rehabilitation and look for evidence of disturbance to vegetation on easement (apart from access tracks) Disturbance Checklist (including timed and photos) signed off to indicate adequate steps taken to facilitate regrowth Follow-up rehabilitation work undertaken where natural regeneration is inadequate	Species abundance and distribution on the easement is reasonably consistent with surrounding areas Note: assessment of the consistency with surrounding areas will take into account that regrowth is a time and rainfall dependent process 0, +1 or +2 GAS criteria are obtained for borrow pit restoration	Achieved	Regrowth on the easement is observed to be consistent with the surrounding environment. No borrow pits were utilised during the reporting year.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
	14.2 To minimise additional clearing of native vegetation as part of operational activities	Annual land survey to look for evidence of disturbance to vegetation on easement (apart from access tracks) Use of Disturbance Checklist and photo points before, during & after any excavation or land disturbance activity Vegetation trimmed rather than cleared where possible Consideration of sensitive vegetation, including large old trees, during vegetation trimming and / or clearing activities Obtain any clearance consent required	Vegetation clearing within the easement or on land adjacent to the easement is limited to previously disturbed areas, unless prior regulatory approval obtained under the Native Vegetation Act 1991	Achieved	During the reporting period no activities were undertaken that involved clearing of native vegetation for operational activities.
	14.3 To ensure maintenance activities are planned and conducted in a manner that minimises impacts on native fauna	Use of Disturbance Checklist and photo points before, during & after any excavation or land disturbance activity In the event of excavations, open trenches monitored regularly and left open for the minimum time practical Procedures or management plans implemented for significant fauna species Provision of fauna ramps at regular intervals in open trench Daily inspection of open trenches in areas adjacent to remnant vegetation Prompt reinstatement of easement	Native fauna casualties associated with operations restricted to as low as reasonably practical	Achieved	During the reporting period no operational activities were undertaken that would cause disturbance to native fauna on the QSN pipeline.
15. To avoid the spread of weeds and pathogens	15.1 To ensure that weeds and pathogens are controlled at a level that is at least consistent with adjacent land	Regular patrols undertaken to look for evidence of weeds on easement and adjacent land (if weeds on easement but not adjacent land must implement control to prevent spread) Implementation of control measures of weeds and pathogens on easement in consultation with the regional NRM Board and the landholder as necessary Records of any outbreaks found, weed control activities and photo- monitoring of significant outbreaks Vehicle cleaning/washdown register	The presence of weeds on the easement is consistent with or better than adjacent land No new outbreak or spread of weeds or pathogens as a result of pipeline activities	Achieved	No declared or non declared weed species were observed along the easement.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
16. To adequately protect heritage sites and values during operations and maintenance	16.1 To ensure that identified heritage sites are not disturbed	Consultation with relevant heritage groups if operations occurring outside known surveyed areas Site examined for cultural heritage material prior to work involving disturbance outside known surveyed areas Records of site locations in Operations GIS Use of Disturbance Checklist and photo points before, during & after any excavation or land disturbance activity Measures undertaken to protect heritage sites on or near the easement Implement appropriate protocols for dealing with accidental discovery of cultural heritage material during operations	No impact to known heritage sites without approval under the Aboriginal Heritage Act 1998 or the Heritage Places Act 1993 Any new sites identified are reported to appropriate authority and recorded	Achieved	During the reporting period no activities were undertaken by Epic Energy off the ROW that would cause any impact to heritage sites and values along the QSN pipeline.
17. To minimise noise due to operations	17.1 To ensure operations comply with noise standards	Design any facilities to meet the noise requirements under the Environment Protection Act Incident reports Monitoring results, where deemed necessary (e.g. frequent complaints)	No reasonable complaints received	Achieved	During the reporting period no operational activities were undertaken that would cause any impact on environmental noise and emissions on the QSN pipeline
18. To minimise atmospheric emissions	18.1 To eliminate uncontrolled atmospheric emissions	Maintenance procedures Incident reports	No uncontrolled atmospheric emissions (e.g. due to malfunction or mis-operation)	Achieved	During the reporting period no operational activities were undertaken that would cause any impact on the environment due to uncontrolled emissions on the QSN pipeline
	18.2 To minimise the generation of dust	Compliance with EMS and operations procedures Incident reports	No reasonable complaints received	Achieved	No incident reports or complaints were received during the reporting period in relation to dust.

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
19. To avoid unnecessary disturbance to third party infrastructure, landholders or landuse	19.1 To minimize disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided	Incident reports Records of communications with adjacent landholders / third party prior to and during maintenance work Landholder contact records database Use of Disturbance Checklist (including photo points) or inspection reports, specifically to look at: removal of waste products, re-instatement of soil profiles, adequate re-contouring of surface profile, return of land use Compliance with the National Parks and Wildlife Act 1972 and Regulations pertaining to correct conduct in a Regional Reserve Measures undertaken to minimise third party use right-of-way where necessary No pets or firearms brought into Regional Reserve Management of fuel, oil and spills (if they occur) to meet landholder requirements for Quality Assurance programs (e.g. Cattlecare)	Where disturbance is unavoidable or accidental, infrastructure or land use is restored to the satisfaction of the landholder or as near as practicable to undisturbed condition Duration of disturbance does not exceed agreed timeframe No reasonable complaints received	Achieved	During the reporting period no operational activities were undertaken that would cause any impact on third party infrastructure and landholder on the QSN pipeline. No complaints were received.
	19.2 To minimise disturbance to landholders	Records of communications with adjacent landholders / third party prior to and during maintenance work Landholder contact records database Landholder activities not restricted as a result of pipeline activities Use of Disturbance Checklist and photo points	No reasonable landholder complaints Landholder activities not restricted or disturbed as a result of pipeline activities unless by prior arrangement	Achieved	During the reporting period no operational activities were undertaken that would cause any impact on landholder s on the QSN pipeline

Objective	Goal	Guide to How Objectives Can Be Achieved[2]	Assessment Criteria	Achieved/Not Achieved	Comments
20. To minimise the risk to public health and safety	20.1 To adequately protect public safety during operations	Job Hazard Analysis Records of Annual Reports, Fitness for Purpose Reports, Risk Assessments and inspections Records of communications with adjacent landholder prior to and during maintenance work including advice of the nature and schedule of maintenance activities Adequate implementation of traffic management practices Records demonstrating compliance with AS2885 Use of signage or bunting to identify all potentially hazardous areas Records of regular emergency response training for employees and review of procedures Incident Reports	No injuries or incidents involving the public	Achieved	During the reporting period there were no operational activities that impacted upon public safety on the QSN pipeline
	20.2 To avoid fires associated with pipeline maintenance activities	Incident reports Records of regular fire safety and emergency response training for all operations personnel and review of procedures Established procedures for minimizing fire risk during maintenance	No pipeline related fires	Achieved	During the reporting period there have been no pipeline related fires
	20.3 To prevent unauthorised activity on the easement that may adversely impact on the pipeline integrity	Inspection / Patrol reports and records Comprehensive landholder liaison program and records of communications with landholders Community education program and 'Dial before you dig' number available and widely advertised Clear identification of the pipeline by signs installed in accordance with AS2885 All reports of unauthorized activity are reported and investigated	No unauthorized activity on the easement that has the potential to impact on the pipeline integrity	Achieved	During the reporting period there have been no incidents of unauthorised activity or encroachments on the pipeline which may adversely impact on pipeline integrity