Operational Environmental Management Plan

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Document History

Version	Date	Amended By	Details of Amendment
A	28/06/2010	Caitlin Bridgland	New Document Created (replacing GD Environmental Management Guideline
1	02/09/2010	Caitlin Bridgland	Updated document to reflect business change
2	12/08/2011	Monita Leong	Merged onto new ATCO Gas Australia business approved controlled document template. Replaced all reference of WA Gas Networks with ATCO Gas Australia. The intention of this document has not been change therefore automatic preapproval applies
3	12/01/2016	G Grigg and S Fitzgerald	Updated document to align to ISO 14001 requirements and include audit actions
4	08/03/2018	Matthew Bowdler	Updated document to address ISO 14001 previous audit findings and for general update.

TABLE OF CONTENTS

1. Introduction

ATCO Gas Australia (ATCO Gas) owns, operates and maintains the largest gas infrastructure network in Western Australia. The company serves Geraldton, Kalgoorlie, Albany, Bunbury, Busselton, Harvey, Pinjarra, Brunswick Junction, Capel and the Perth greater metropolitan area, including Mandurah, see Appendix A.

The ATCO Gas distribution network is operated under the following three (3) licences:

- Gas Distribution Licence 8 (GDL8) issued by the Economic Regulation Authority under the *Energy Coordination Act 1994*. The gas distribution system (GDS) as defined in GDL8 operates in the Coastal, Great Southern and Goldfields-Esperance gas supply areas and comprises approximately 13,900km of distribution mains connecting more than 700,000 consumers.
- Dangerous Goods Site Licence GDS014467 for the Albany LPG Storage Facility issued under the *Dangerous Goods Safety Act 2004* by the *Chief Officer* as defined by that *Act*. The Albany LPG Storage Facility comprises eight (8) 45 kilolitre (KL) LPG pressure storage vessels. Currently 6 LPG storage vessels are in operation with a maximum safe operating capacity of approximately 116 tonnes that are used to deliver LPG in vapour form into the Albany gas distribution network.
- Petroleum Pipelines Licence 83 (PL83) issued by the Minister of Energy (or gazetted delegate) under the *Petroleum Pipelines Act 1969* and comprises ATCO GAS HP Class 600 gas transmission pipeline 120 (HP120), one (1) Class 600 PRS (PRS015) and associated Class 600 HP facilities. These assets form part of the Mandurah Gas Lateral (MGL) in North Dandalup to Nambeelup, east of Mandurah.

2. Purpose and Scope

The purpose of this Operational Environmental Management Plan (**OEMP**) is to identify key environmental aspects of ATCO Gas assets and outlines the procedures in place to manage these environmental aspects and impacts associated with the ATCO Gas network. This Environmental Plan should be read in conjunction with document HSE PR00025 WI002 RF01 Environmental Aspects and Impacts Register.

This OEMP applies to ATCO Gas activities which include but are not limited to:

- New mains in subdivisions and service connections;
- Mains extensions;
- Replacement programmes;
- Pipeline patrols;
- Maintenance along the pipeline, pipeline right of way, easements and associated facilities;
- Pigging of the pipeline for cleaning or inspection;
- Emergency response;
- Commissioning and decommissioning of mains; and
- The use and handling of chemicals and hazardous materials.

3. Definitions

Term / Acronym	Definition
GDL8	Gas Distribution Licence 8
GDS	Gas Distribution System
HP	High Pressure
LPG	Liquefied Petroleum Gas
MGL	Mandurah Gas Lateral
NGER	National Greenhouse and Emissions Reporting
OEMP	Operational Environmental Management Plan

Term / Acronym	Definition
PRS	Pressure Reduction Station.
ALARP	As Low As Reasonably Practicable.
ATCO Gas	ATCO Gas Australia Pty Ltd.
CER	Clean Energy Regulator
Contractor	A supplier in a contractual situation.
DBNGP	Dampier to Bunbury Natural Gas Pipeline.
DBP	Dampier Bunbury Pipeline.
DER	Department of Environment Regulation.
DSEWPC	Department of Sustainability, Environment, Water, Population and Communities (Cth).
DoW	Department of Water.
DMP	Department of Mines and Petroleum.
DPaW	Department of Parks and Wildlife.
Emergency	Means an incident which: • has the potential to cause major loss of people, equipment, materials process or the environment; • has caused or threatens to cause failure of gas supply to shippers; • is of sufficient magnitude to attract wide publicity and the responsibility and the response of the police, fire brigade or other emergency services; and • results in an uncontrolled release of gas.
Hazard	Any unsafe act or condition that has the potential to injure people, result in harm to the environment, damage property, equipment or materials or lead to loss of process.
Hazardous Substance	A substance entered in the List of Designated Hazardous Substances; or if the substance is not entered in the List of Hazardous Substances determined in accordance with the Approved Criteria for Classifying Hazardous Substances whether the substance is a hazardous substance.
Incident	An undesired event or set of circumstances that did result in an undesired outcome through injury to people, harm to the environment, damage to property, equipment or materials or loss of process.
JRA	Job Risk Analysis means a method of identifying hazards with workplace tasks and the development of control measures to manage the identified hazards.
Management Plan	A project or job specific management plan, which describes how QHS&E and quality activities and Potential Impacts on a project or job will be managed.
Management System	A framework that integrates quality, health, safety and environmental management activities and ensures compliance to specified requirements; contains objectives, performance standards and responsibilities, as well as specifying the methods of implementation in the context of the operations of the company.
Near Miss	An undesired event or set of circumstances that did not result in any loss but had the potential to do so.
Permit to Work	A completed and authorised permit to carry out work within the compound fences at any site.
PL 83	Pipeline Licence 83.
PIMP	Pipeline Integrity Management Plan.
QHS&E	Quality, Health, Safety and Environment.
Relevant Authorities	Either one or all of DMP, DoW, DER, DPaW, EPA as the case may be.

Term / Acronym	Definition
ROW	Right of Way/ROW/corridor means the area located surrounding an infrastructure installation, e.g. road, or pipeline, legally recognised for access by the relevant authority.
Risk	The exposure to the chance of loss.
Risk Assessment	The process used to determine risk priorities by evaluating and comparing the level of risk against program standards, pre-determined risk levels or other criteria.
SDS	Safety Data Sheet.
SEIP	Safety Environmental Initiative Planning.
Sub-contractor	An organisation that conducts work for a Contractor, under contract to that Contractor.
System Improvement	The corrective action required rectifying a situation. Corrective action encompasses three stages: • implementation of control; • facility for sign-off; and • follow-up to check effectiveness of control.
Take 5	Primary method of identifying hazards with workplace tasks and the implementation of control measures to manage the identified hazards. Where the Take 5 process identifies the lack of required Safe Work Instructions (SWI)/ procedure(s) addressing hazards associated with the assigned task, a TAKE 5 OR JRA shall be conducted.

4. Environmental Management System Requirements

Environmental management is an integral part of ATCO Gas operations. Sound management of the ATCO Gas network will generally result in minimising the potential impact of the operations associated with the network. In particular, ATCO Gas aims to manage four key issues:

- The pipeline structure and integrity;
- Pipeline operating conditions and practices;
- the Pipeline Licence area; and
- Activities that could affect the above elements.

In addition to the above, the ATCO Gas Environmental Management System is certified against the AS/NZS ISO 14001 (2004). This OEMP is also consistent with the following:

- AS 2885.3-2001 Pipelines – Gas and Liquid Petroleum – Operation and Maintenance,
- AS 2885.1-2007 Pipelines – Gas and Liquid Petroleum – Design and Construction, and
- AS/NZS 4645.1-2008 Gas Distribution Networks.

4.1 Policy

ATCO Gas aspires to excellence in Health, Safety and Environmental Performance, and continues to drive a Zero Harm target. The AA-WHS-POL-001 Health Safety and Environmental Policy provides a framework for ATCO Gas activities. This policy is accessible to all personnel including employees, contractors and sub-contractors. It is also displayed in all depots and is available on the Intranet.

4.2 Interested Parties

The following list of interested parties are relevant to ATCO Gas's environmental management system.

Clean Energy Regulator	• Reporting greenhouse gas emissions • Energy production and consumption. • Safeguard Mechanism liabilities.

Department of Water & Environmental Regulation	• Gas leaks • Equipment and plant storage • Hazardous and Dangerous Goods • Noise • Water discharge • Acid sulphate soils • Weed management • Native Vegetation • Contaminated sites • National Pollutant Inventory
Department of Mines & Petroleum	• Odorant Gas • CNG refuelling station • Albany LPG Network
Department of Aboriginal Affairs	• Works approvals
Internal Stakeholders	• ATCO Locations and Departments
Western Australia Local Councils	• Tree protection zones • Work approvals

4.3 Scope of the Environmental Management System

The ATCO Gas Environmental Management System encompasses all works and projects conducted by ATCO Gas employees and the contractors employed by ATCO Gas. All aspects of the environmental management system are highlighted within the Environmental Aspects & Impacts Register, HSE Business Plan and the HSE Policy.

4.4 Network Operations

ATCO Gas network operations involve a range of activities generally undertaken by staff and contractors. Common activities include surveillance of the pipeline ROW and easements, maintenance of the pipeline, pipeline ROW, pipeline easements and associated facilities (valves, pressure reduction stations and cathodic protection equipment), new mains in subdivisions and service connections, pigging of the pipeline for cleaning or inspection, emergency response, commissioning and decommissioning of mains, and the use and handling of chemicals and hazardous materials.

Pipelines are widely accepted as a safe and environmentally responsible means for transporting gas and liquids. If pipeline operations are appropriately managed, few environmental issues are likely and those that do eventuate are typically localised and small-scale. Potential impacts that may require preventative action or mitigation measures that are managed in this OEMP include:

- Soil erosion and subsidence;
- Disturbance to flora and fauna and surrounding habitat;
- The introduction or spread of weed and disease;
- Disruption to access or land use;
- Altered surface water flow or drainage;
- Contamination of soil and water;
- The production, handling and disposal of wastes;

- Ignition and spread of fire;
- Degradation of air quality (dust, odour); and
- Reduction to amenity (visual and noise).

4.5 Objectives and Targets

ATCO Gas aspires to minimise environmental impact by measuring and continually improving our HSE performance and sustainability. Environmental objectives and targets are developed annual and outlined in the SEIP Plan.

4.6 Environmental Considerations

During operational activities the Engineers and Environmental Advisor will conduct an assessment of the environmental considerations. The Environmental Advisor will identify any environmental considerations and then provides details of the proposed management measures. This is usually in the form of a Project Advice Checklist (PAC) or within a Project Management Plan (PMP).

4.7 Environmental Aspects, Impacts and Control Measures

4.7.1 Hazard Identification and Assessment

Environmental hazards associated with the ATCO Gas network have been considered and assessed in an Environmental Aspects and Impacts Register (Document HSE PR00025 WI002 RF01). This assessment has been conducted in accordance with ISO 31000:2009.

The register is utilised by ATCO Gas for managing its environmental aspects and impacts. It is maintained by the Senior Environment & Sustainability Advisor. The assessment is conducted on a periodic basis with relevant ATCO Gas employees to identify and assess aspects and impacts that could occur during network related activities and have the potential to impact the environment.

The objectives of the assessment are to:

- Identify and assess all hazards and potential incident events associated with network activities;
- Evaluate the identified risks;
- Where necessary, make recommendations to eliminate or reduce risks;
- Record the assessment findings; and
- Provide a basis for the ongoing monitoring and closure of actions.

Environmental aspects are not externally communicated however the need to communicate significant environmental aspects will be reviewed on a case by case basis.

4.7.2 Environmental Aspects

Environmental aspects and impacts identified for ATCO Gas that are associated with the network will be managed by the following strategies:

4.7.2.1 Access

Relevant Activities	During operation, access to the Pipeline Licence area is required on a regular basis for: • Pipeline surveillance and inspections to identify areas of erosion and subsidence, areas requiring vegetation management, check cathodic protection, identify possible leaks, monitoring third party activity and identifying any unacceptable risks to the pipeline. • Monitoring and auditing of environmental conditions. • Performance of maintenance activities. • Construction of facilities or additional infrastructure.
Potential Impacts	• Disturbance to native vegetation and wildlife. • Disturbance and damage to land uses. • Temporary disruption to landholders and third parties. • Soil compaction, erosion and sediment release to land and water.
Objectives	• To minimise disturbance to native flora. • To minimise impacts to fauna. • To minimise impacts to soil and water. • To minimise disruption to land holders and third parties.
Management Measures	The management measures are as follows: • The ROW and easements shall be used as an access for activities essential to ensuring continued safe pipeline operation and protection of the local environment. • The ROW and easements shall not be used as a general thoroughfare. • Access to the pipeline ROW and easements shall be via existing roads and tracks only. Any use of internal property tracks or private roads for ground patrols must be with the agreement of the landholder. The landholder will be notified at least 24 hours before access is required, where possible. Where this is commonly not possible, alternative agreements will be reached regarding ongoing access. • The access track along the ROW shall be maintained to a minimum practicable width for the safe execution of pipeline inspection and maintenance activities in accordance with AS2885.3 and all relevant Clearing Permits. • Public access along the ROW and easements shall not be permitted (to the extent that it can be reasonably controlled) unless that right already exists. Public access to the ROW shall be controlled by measures, which disguise the ROW (eg. dog leg service track entrances or revegetation plans), or by physical barriers (eg. gates, fences, log and rock barriers, trenches) and signs. • If parking is required on the ROW and easements, it shall be restricted to the pipeline maintenance/construction area and other designated areas. • Parking under trees shall be discouraged to prevent root zone soil compaction causing root damage and impairing water infiltration into the soil. • As a general rule, gates shall be left as they are found. If closed gates are required to be opened for extended periods (eg. convoy passage) they shall not be left unattended unless otherwise agreed with the land holder. • Vegetation and soil erosion will be adequately controlled to allow continued access and safe navigation by vehicles. • The ROW and easements will not be fenced unless it is required for rehabilitation of an area, protection of heritage sites or safety hazard control. • Access to the ROW and easements shall be conducted in a manner that adequately considers potential noise or vibration impacts. • Access to the ROW and easements shall be managed to minimum potential

	weed impacts. • Access to and along the ROW and easements should be minimised following periods of prolonged or heavy rainfall. • If maintenance or construction activity is required, access infrastructure shall be maintained to standards acceptable to the appropriate managing authority.
Documentation and Records	• COM PR0002 Complaints Handling Procedure • HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene • HSE PL00001 GL001 WI001 Work Instruction Weed Removal • HSE PR0005 Land Management • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0017 RF07 Incident Report Form • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • LNM WI001 Land Owner Liaison • SWI ST 001 Safe Work Instruction: Pipeline Patrol • TCO PR0003 Notifiable Incident Reporting • Employee HSE Manual and Induction • Clearing of Native Vegetation Purpose Permit CPS 713/1

4.7.2.2 Protection of Soil and Ground Stability

Relevant Activities	During the operation, the Pipeline Licence area may be vulnerable to soil and ground instability issues such as erosion and subsidence due to: • Exposure of the ground surface to water and wind. • Lack of vegetation cover. • Vehicle and equipment movement. Maintaining an adequate level of vegetation cover on the Pipeline Licence area is vital to protect the soil resource. In the case of surface water flow, access tracks may be more vulnerable to erosion, particularly in steep areas, and require drainage controls to divert overland and channelled flows.
Potential Impacts	• Soil erosion. • Sediment release to land and water. • Damage to native vegetation and wildlife. • Damage to land uses. • Subsidence of pipeline trench.
Objectives	• To minimise the potential for soil erosion. • To adequately prevent or control sediment release to land and water. • To avoid unacceptable damage to native vegetation or wildlife habitats. • To prevent damage to land uses. • Minimise risk of pipeline exposure. • To adequately control subsidence of the pipeline trench.
Management Measures	• Erosion and sediment control structures shall be routinely inspected to ensure they remain effective. • Routine inspections are carried out along the pipeline route to monitor the condition of the access tracks. Where erosion is occurring due to inadequate vegetation cover on the pipeline ROW consideration shall be given to promoting additional growth. Such work shall be conducted in consultation with the landholder. • Maintenance of control structures will include removal of silt build-up and reinforcing or re-establishing failed structures. These structures must not be driven over when travelling along the ROW and easements. • Where erosion is occurring due to inadequate vegetation cover on the pipeline ROW consideration shall be given to promoting additional growth. Such work shall be conducted in consultation with the landholder. • Vehicle access will be restricted to stable ground and designated access tracks where practicable. Additional care is taken near waterways and drainage lines. • Any imported material required for rehabilitation works should be obtained with landholder approval. Imported fill should preferably be sourced locally and be free of weeds and other contaminants. • Subsoil displaced by the pipe, and not utilised as trench crown, may be stockpiled in locations approved by landholders or regulatory authorities for use during maintenance activities. Imported topsoil, of an appropriate quality, will be required to cover subsoil used for ROW and easements repairs and shall only be used with landholder approval. • Potential impacts associated with soil and ground stability will be monitored as part of a structured inspection and monitoring program.
Documents and Records	• HSE WI009 Sediment Containment • HSE WI013 Stockpiled Soil and Dust Control • HSE PR0009 Management of Acid Sulphate Soils • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0017 RF07 Incident Report Form • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • SWI EX 001 Excavation & Backfilling Requirements

	• SWI ST 001 Safe Work Instruction: Pipeline Patrol • TCO PR0003 Notifiable Incident Reporting • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • Employee HSE Manual and Induction

4.7.2.3 Vegetation management

Relevant Activities	Vehicle movement or ground disturbing activities along pipeline areas may impact flora and vegetation. Activities within the permanently disturbed areas of operation are unlikely to impact flora and vegetation, however any activities outside of previously disturbed areas have the potential to impact.
Potential Impacts	• Poor vegetation cover, which in turn may lead to erosion and sedimentation. • Loss of pastoral productive capacity or loss of visual amenity. • Excessive vegetation regrowth. • Disturbance to existing vegetation and faunal habitats. • Establishment of weed species. • Erosion and sediment.
Objective	• To promote and maintain stable vegetation cover. • To minimise impacts on native flora and fauna. • To minimise soil erosion and sedimentation. • To minimise modification to drainage patterns. • To prevent and control weed invasion. • To minimise visual impact. • To minimise adverse impacts on other land uses.
Management Measures	• Clearing of native vegetation is not permitted unless the relevant regulatory approvals are obtained. • Areas that have been recently re-vegetated (following construction or maintenance) shall be avoided by vehicular or machinery movement where practicable to aid successful regeneration. • The access track shall be kept navigable by adequately controlling the vegetation growth in accordance with AS2885.3. • Care shall be taken not to disturb any areas of native vegetation outside the access tracks or the ROW. • Care will be taken when operating vehicles and machinery within the ROW and easements to avoid disturbance to native vegetation. • Revegetation success will be monitored in accordance with a ROW and easements inspection program. • Further restoration works may be required in areas where vegetation establishment has been less than acceptable. Such works shall be conducted in consultation with the relevant landholder.
Documents and records	Refer to the following ATCO GAS documents: • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene • HSE PL00001 GL001 WI001 Work Instruction Weed Removal • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • HSE WI002 Clearing of Native Vegetation Purpose Permit CPS 713/1 • SWI EX 001 Excavation and Backfilling Requirements • SWI ST 001 Safe Work Instruction: Pipeline Patrol • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • NCO WI001 RF02 Metro Pipeline Patrol • Employee HSE Manual and Induction

4.7.2.4 Weed and Hygiene Management

Relevant Activities	• Vehicle and machinery movements. • Site and amenities establishment. • Ground disturbing activities for including trenching, clear and grade, excavation.
Potential Impacts	• Competition from weed species and displacement of native flora. • Impacts to sensitive environments adjacent to weed infested areas. • Loss of visual amenity. • Damage to native vegetation possibly leading to death. • Loss of biodiversity. • Poor regeneration. • Adverse effects to livestock health.
Objectives	• To minimise the introduction and/or spread of weeds and diseases. • To prevent the introduction of disease into new areas. • To promptly identify areas requiring weed control. • To eliminate infestations of noxious species. • To effectively control weed species. • To avoid impacts to primary industries and native vegetation.

Management Measures	• Monthly inspection and monitoring of the ROW will include an assessment of weed impacts. If weeds are found, aspects noted will include:
	  o Weed species that are present;
	  o Estimated coverage of total area;
	  o GPS coordinates of infestation;
	  o Possible reasons for outbreak, and
	  o Suggested technique for eradication.
	• Maintenance personnel conducting patrols are to be trained in the identification of noxious weed species and techniques for their eradication.
	• Utilisation of existing disturbed areas and designated access and parking areas to prevent the spread of weeds.
	• Disease infected areas on the ROW requiring special hygiene management will be identified and recorded. In potentially affected areas, the entire ROW will be considered at risk and managed accordingly.
	• Areas of high conservation value will be identified and recorded and operational personnel made aware.
	• Operational personnel will be trained adequately in weeds and hygiene and will adhere to HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene.
	• In areas where weed or disease infestation is confirmed, vehicles and machinery will be prevented from carrying soil or vegetable matter that is likely to spread disease into or out of the area. These requirements are defined in SWI ST 001 Safe Work Instruction: Pipeline Patrol.

Documents and Records	Refer to the following ATCO GAS documents: • HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene • HSE PL00001 GL001 WI001 Work Instruction Weed Removal • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form

	• SWI EX 001 Excavation and Backfilling Requirements • SWI ST 001 Safe Work Instruction: Pipeline Patrol • Employee HSE Manual and Induction

4.7.2.5 Earthworks

Relevant Activities	• Ground disturbing activities include earthworks, clear and grade, excavation.
Potential Impacts	• Soil erosion and sediment release. • Interruption to natural surface and groundwater flows. • Disturbance to native vegetation and wildlife. • Damage to adjacent land uses. • Temporary disruption to landholder and third parties. • Introduction of weed species or spread of disease.
Objectives	• To minimise impacts to soil, water and environmental flows. • To minimise disturbance to native flora and fauna. • To minimise disruption to landholders an third parties.
Management Measures	• Ground disturbing activities shall be undertaken in accordance with a job specific management plan. • Prior to commencing ground -disturbing activities which may impact adjacent landholders, adequate notification shall be given. • Only clean fill shall be used if additional material is required (see AS2885.3 section 3.2.4.5). Fill material will be sourced locally and will be similar to the natural soil of the area. Topsoil will be returned to facilitate revegetation. If the area requiring ground disturbing activities is within a sensitive environment, only weed and disease free soil will be used.
Documents and Records	Refer to the following ATCO GAS documents: • HSE WI009 Sediment Containment • HSE WI013 Stockpiled Soil and Dust Control • HSE PR0009 Management of Acid Sulphate Soils • HSE WI002 Clearing of Native Vegetation Purpose Permit CPS 713/1 • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PL0001 GL0001 Weed and Pathogen Management and Vehicle Hygiene • HSE PL00001 GL001 WI001 Work Instruction Weed Removal • HSE PR0017 RF07 Incident Report Form • SWI EX 001 Excavation and Backfilling Requirements • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • TCO PR0003 Notifiable Incident Reporting • SWI ST 001 Safe Work Instruction: Pipeline Patrol • Employee HSE Manual and Induction

4.7.2.6 Acid Sulphate Soils

Relevant Activities	• Excavation and dewatering activities required may cause exposure and / or dewatering of acid sulphate soils.
Potential Impacts	• Acidification of the soil. • Impact on native vegetation. • Damage to adjacent land uses.
Objectives	• To minimise impacts to soil and ground water. • To minimise disturbance to native flora. • To avoid or mitigate the activation on acid sulphate soils.

Management Measures	• Treatment of ASS would be undertaken where necessary by one of the following methods:
	  ○ Prior to excavation of the trench for maintenance activities or construction of additional facilities, a layer of neutralising agent (aglime or lime sands) would be laid along the trench line, within the width of the expected excavation. The amount of neutralising agent would be based on the liming rate listed. Excavation of the trench would result in the soil being blended with the neutralising agent. The stockpile would then all be placed into the trench during backfilling.
	  ○ The excavated soil stockpile would be uniformly covered with the neutralising agent (aglime or lime sands) immediately upon excavation from the trench. The amount of neutralising would be based on the liming rate listed in Table 4. The stockpile and covering layer would then all be placed into the trench during backfilling resulting in a blended backfill.
	• Excavations in in moderate and high risk areas should only be exposed short term and filled in within 24 hours.
	• Medium term soil exposure would be justified to DER and management undertaken in accordance with the DER guidelines for Treatment and Management of Disturbed Acid Sulphate Soils (Department of Environment 2004).
	• Where spoil is considered unsuitable for backfilling, spoil would be removed from site for treatment (where required) and disposed of at an appropriate landfill facility.
	• Any spoil to be disposed off-site would be classified for disposal based on field testing and laboratory analysis. Each load of spoil transported for offsite disposal would be accompanied by a certificate confirming its classification.
	• Dewater from maintenance activities in all areas, of acid sulphate soils, would be analysed to ensure it met the criteria outlined in the irrigation water criteria in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Environment and Conservation Council / Agriculture and Resource Management Council of Australia and New Zealand 2000). These criteria are applicable to disposal of dewater on agricultural land or native vegetation to recharge local groundwater via infiltration or for use in dust suppression.

Documents and Records	• HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • TCO PL00001 Emergency Response Management Plan • HSE PR0009 Management of Acid Sulphate Soils • SWI EX 001 Excavation and Backfilling Requirements • Waste Management Procedure • Employee HSE Manual and Induction

4.7.2.7 Bushfire mitigation

Relevant activities	Generally, the risk of bushfire as a result of operation and maintenance is considered low. The main bushfire ignition sources include gas release, and spark emitting maintenance work such as welding and grinding.
Potential Impacts	• Injury to public or personnel. • Damage to, or loss of, flora, fauna and habitat. • Damage to pastoral land uses. • Damage to, or loss of, third party infrastructure.
Objectives	• To minimise bushfire risk. • To protect the public and personnel. • To protect property and minimise damage or loss. • To prevent the spread of bushfire in the event of ignition. • To provide adequate response in the event of ignition.
Management Measures	• Procedures to prevent and respond to bushfire incidents are developed and implemented in accordance with AS2885.3, and TCO PL00001 Emergency Response Plan. • Operations and maintenance are conducted in accordance with the requirements of the regulatory and local fire authorities. In particular, operations comply with relevant fire restrictions, notification requirements and permitting procedures. • All equipment complies with the relevant fire safety standards. • Machinery and vehicles not in use are parked in designated parking areas. • Vehicles are regularly checked to ensure combustible materials do not build up in critical areas where ignition could occur. • Where flammable or combustible chemicals are required to be stored on site, appropriate firefighting equipment will be available. Incompatible chemicals will not be stored together. Where practicable, flammable liquids will be stored in flammable liquid cabinets and in accordance with the SDS. • Firebreaks are maintained at facility sites as appropriate.
Documents and Records	• TCO PL00001 Emergency Response Management Plan • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PR0017 RF07 Incident Report Form • TCO PR0003 Notifiable Incident Reporting • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • SWI SSU 006 Use of Fire Extinguisher • Waste Management Procedure • Employee HSE Manual and Induction

4.7.2.8 Air Emissions

Relevant Activities	• The release of natural gas during purging to allow certain maintenance activities. • The release of odorised gas. • Vehicle and machinery exhausts. • Dust emissions from vehicles and equipment. • The release of methane gas as a result of pipeline and facility maintenance operations. • Pigging operations.
Potential Impacts	• Release of air pollutants. • Greenhouse gas emissions. • Odour emissions. • Temporary reduction of amenity associated with dust. • Localized impacts to sensitive flora and fauna.
Objectives	• To minimise the creation of safety hazards. • To minimise atmospheric emissions. • To minimise noise impacts to adjacent landholders. • To minimise greenhouse gas emissions.
Management Measures	• The planned release of gas from pipelines will be minimised for economic and environmental reasons, and where practicable, only takes place under favourable meteorological conditions, which will facilitate rapid atmospheric dispersion of the gas. • Periodic leak surveys are conducted to detect fugitive gas releases from the pipeline as per AS2885.3 requirements. • Gas vents are located at appropriate distances from residential areas and infrastructure in accordance with relevant regulatory and Australian Standard requirements. • Adjacent landholders, local authorities and regulatory authorities (such as CASA) are advised of pending major venting operations prior to undertaking the activity. • Appropriate dust emission controls shall be applied during operation as necessary.
Documents and Records	• COM PR0002 Complaints Handling Procedure • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PR0017 RF07 Incident Report Form • HSE WI013 Stockpiled Soil and Dust Control • AA-ENV-PLA-006 National Greenhouse and Energy Reporting System Handbook • LNM WI001 Land Owner Liaison • TCO PR0003 Notifiable Incident Reporting • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • Employee HSE Manual and Induction • NGERS Reporting Handbook

4.7.2.9 Noise

Relevant Activities	• Vehicles and machinery travelling along the pipeline ROW and easements and access tracks. • Earthworks and vegetation management. • Maintenance and equipment. • Above ground facilities.
Potential Impacts	• Disturbance to local residents and other landholders. • Disturbance to stock and wildlife.
Objectives	• To minimise operation noise impacts on adjacent residents and other landholders. • To minimise operation noise impacts on wildlife and livestock.
Management Measures	• As the inlet and outlet facilities are located away from town sites and residences, noise from pipeline facilities will not have a significant impact. • Operations shall comply with all relevant regulatory requirements and AS2885.3 regarding noise control. • Equipment shall be selected in consideration of its noise emissions. Where practicable, equipment will be selected that is likely to result in the lowest noise impact while still completing the required task. • Where practicable, excessively noisy activities shall be scheduled for periods that are less likely to result in noise nuisance. This decision will be made in consultation with the residents. • Where appropriate, noise monitoring shall be conducted. • Noise complaints will be dealt with in accordance with the normal incident reporting procedures.
Documents and Records	• HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • LNM WI001 Land Owner Liaison • COM PR0002 Complaints Handling Procedure • HSE WI008 RF01 Noise Measurement Form • HSE WI008 Environmental Noise Control • Employee HSE Manual and Induction

4.7.2.10 Heritage Management

Relevant Activities	Ground disturbing activities. Construction and maintenance activities.
Potential Impacts	The main potential impact to heritage areas or items as a result of operations and maintenance is disturbance or destruction of heritage sites.
Objectives	• To avoid impacts to known sites on or near the ROW or in the vicinity of associated facilities. • To implement an effective consultation program with heritage and community groups, regulatory authorities and other relevant stakeholders.
Management Measures	• Advice from Department of Aboriginal Affairs will be sought when works are planned within Heritage areas. • Operations will be in accordance with the existing construction Heritage Management Protocol and relevant Heritage Agreement. • Operational personnel shall be adequately made aware of Heritage and Cultural Potential impacts and management.
Documents and Records	• HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • SWI EX 001 Excavation & Backfilling Requirements • Heritage Management Protocol & Heritage Agreements • Employee HSE Manual and Induction

4.7.2.11 Water Management

Relevant Activities	• Hydrostatic testing activities. • Times of natural rainfall during activities. • Vehicle and machinery movements. • Dewatering. • Normal operating processes involving water disposal and management.
Potential Impacts	• Reduction in water quality as a result of increase sediment load. • Contamination of surface or ground water. • Altered drainage patterns and water flow regimes. • Secondary impacts to flora and fauna as a result of altered water quality or quantity.
Objectives	• To control erosion in all operational areas including maintenance areas. • To minimise the volume of sediment entering waterways from operational activities or associated facilities. • To prevent contamination of surface water, watercourses and groundwater. • To manage surface water flows and to minimise potential adverse impacts associated with altered flow regimes. • To minimise impacts to riparian, aquatic and water dependant flora and fauna.
Management Measures	• Should erosion and sedimentation occur, appropriate corrective action should be undertaken (consideration to be given to permanent rather than temporary repair). This may include restoring bank profiles, reseeding slopes, replacing sandbags or gabions or installing additional silt fences or geotextile fabric. • All chemicals used during operations will be transported, stored, handled and disposed of in accordance with the requirements of relevant dangerous goods and environmental legislation and industry standards. • Maintenance of mobile equipment and vehicles will not be conducted within 150m of any surface water body, to reduce the risk of contamination in the event of accidental fuel or oil release. • Hazardous wastes will not be stored or handled within the vicinity of any surface water. • Any spills or chemical release shall be managed in accordance with Emergency Response Plan. • Water removed from trenches will not be discharged directly into wetlands. • If removal of water from trenches is required in regions of ASS acidic water would be treated by direct addition of neutralising agents in a tank. • Any necessary hydro-testing will be carried out off site where possible. Where hydro-testing is done on site, water disposal options will be investigated and finalised rather than discharge to the environment.
Documents and Records	• HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • TCO PL00001 Emergency Response Management Plan • HSE PR0009 Management of Acid Sulphate Soils • SWI EX 001 Excavation and Backfilling Requirements • Employee HSE Manual and Induction

4.7.2.12 Management of pipeline facilities

Relevant Activities	• Maintenance inspections and activities including greasing, leak testing, use of mobile plant and equipment. • Venting. • Use of hazardous materials.
Potential Impacts	• Safety hazards resulting from increased traffic. • Bushfire and internal fire risk. • Noise disturbance to local residents, landholders, stock and wildlife. • Reduction of visual amenity.
Objectives	• To eliminate unacceptable safety hazards. • To minimise the risk of bushfire. • To minimise the impacts of noise, visibility, odour and traffic to the local community and landholders.
Management Measures	• Facility sites are fenced and locked to prevent unauthorised entry. • Firefighting equipment is maintained on-site in areas of higher fire risk. • Where appropriate, facilities have been gravelled or blue metalled to reduce fire risks and prevent weed infestations. • Pipeline facilities are kept in a clean and tidy condition. • Chemical storage, where required will be in a container designed to prevent the release of spilt substances to the environment.
Documents and Records	• TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • COM PR0002 Complaints Handling Procedure • Employee HSE Manual and Induction • Waste Management Procedure

4.7.2.13 Waste management

Relevant Activities	• Activities involving use of consumables. • Unwrapping of materials and equipment. • Putrescible waste from personnel meals (morning tea, lunch, afternoon tea) brought to site. • Waste from pigging operations (oils, grease, consumables, etc.)
Potential Impacts	• Contamination of soil and water, including ground water. • Health risks to the community and the workforce. • Adverse effects to native vegetation and wildlife. • Reduction of visual amenity. • Inefficient use of resources.
Objectives	• To avoid contamination of soil and water. • To minimize potential risks to workers and the public. • To minimize adverse effects to native vegetation and wildlife. • To minimize visual impacts. • To maximize the efficiency of resource use.

Management Measures	• All waste chemicals and other toxic materials shall be stored and collected for safe transport off-site for reuse, recycling, treatment or disposal at locations approved by relevant regulatory authorities.
	• Waste receptacles transported onto and off site will be lidded and clearly labelled.
	• Any chemicals or hazardous materials brought to site will be stored in containers designed to prevent the release of spilt substances to the environment.
	• Material removed from the headers during pigging operations will be captured with drip trays and disposed of at an appropriate waste disposal centre.
	• Recyclable materials must be recycled. Recycle bins are provided at each ATCO Gas depot.
	• Appropriate measures shall be taken to ensure litter accumulation is avoided and personnel are to take litter and rubbish offsite when they leave.
	• Spills will be cleaned up immediately to avoid contamination and reported immediately using spill kits provided in vehicles.
	• All wastes are disposed of in an environmentally acceptable manner. Waste management procedures are based on the following:
	  ○ Reduce wastes at the source;
	  ○ Reuse materials where possible;
	  ○ Recycle wastes where practicable; and
	  ○ Dispose of wastes appropriately and responsibly.

Documents and Records	• TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI-ST 001 Safe Work Instruction: Pipeline Patrol • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action & Close out • HSE PR0006 Spill Management (Containment and Clean-up) • HSE PR0006 RF01 Spill Management Containment & Clean up Instruction Card • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • Employee HSE Manual and Induction • Waste Management Procedure

4.7.2.14 Hazardous Materials

Relevant Activities	• Activities associated with operation and maintenance. • Activities associated with the use of vehicles and machinery. • Use of specific hazardous materials such as paints, thinners, greases etc, which can be involved in vehicle and plant inspections, daily maintenance and other general works.
Potential Impacts	• Contamination of land and water, including ground water. • Safety hazards to the workforce and the public. • Air and odour emissions.
Objectives	• Minimise adverse impacts on land and water, including ground water. • Minimise safety hazards. • Minimise air emissions. • Avoid impacts on heritage sites.
Management Measures	• The storage and handling of fuels and chemicals will comply with all relevant legislation and Australian Standards AS1940:2004 – The storage and handling of flammable and combustible materials. • Hazardous materials will be managed in accordance with all relevant regulatory and Safety Data Sheet (SDS) requirements. • SDS's are provided for chemicals and are available for all chemicals handled. • The minimum practicable volume of chemicals is stored on-site. • Fuels, lubricants and chemicals are stored and handled, where practicable, within containment facilities (e.g. bunded areas, leak proof trays) designed to prevent the release of spilt substances to the environment. • Where practicable, fuel and chemicals are not stored or handled in the vicinity of natural or built waterways or water storage areas. • Appropriate fuel and chemical handling procedures are adopted which aim to avoid spills to land and water. • Appropriate spill response equipment, including containment and recovery equipment, is available on site. • Operational personnel are trained in spill response.
Documents and Records	• TCO PR0001 RF21 Site Inspection – Pipeline Patrol • SWI ST 001 Safe Work Instruction: Pipeline Patrol • HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PL00003 PL 83 Oil Spill Contingency Plan • HSE PR0006 Spill Management (Containment and Clean-up) • HSE PR0006 RF01 Spill Management Containment and Clean up Instruction Card • TCO PL00001 Emergency Response Management Plan • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • Employee HSE Manual and Induction • Waste Management Procedure

4.7.2.15 Emergency response management

Relevant Activities	General maintenance and operational activities have the potential to result in an emergency event with the potential to impact the environment.
Potential Impacts	• Damage to the environment. • Escalation of emergency event.
Objectives	• Avoid or minimise impact on environment.
Management Measures	• Ensure Emergency Response Plans are in place and tested regularly, including an environmental scenario. • Ensure personnel are trained in accordance with the Emergency Response Plans. • Ensure suitable Emergency Response equipment is available.
Documents and Records	• HSE PR0017 HSE Hazard and Incident Notification • HSE PR0018 HSE Event Investigation, Corrective and Preventative Action and Close out • HSE PL00003-PL 83 Oil Spill Contingency Plan • TCO PL00001 Emergency Response Management Plan • TCO PR0003 Notifiable Incident Reporting • HSE PR0017 RF07 Incident Report Form • Employee HSE Manual and Induction

4.8 Implementation and Operation

4.8.1 Responsibilities

Environmental management will be undertaken by ATCO Gas employees, contractors, subcontractors, and consultants engaged in ATCO Gas network related activities. The associated responsibilities are shown in the table below.

Position title	Key Responsibilities Within Process
Senior Environment & Sustainability Advisor	• Conduct periodic reviews of the OEMP to ensure up to date • Monitor impacts of changes on the OEMP • Ensure compliance with relevant environmental regulations • Ensure compliance with the OEMP
HSE Manager Operations Manager Engineering & Construction Manager	• Approve OEMP and overseeing the implementation of the OEMP
Workers (Employees & Contractors)	• Ensure understanding of procedures referred to in the OEMP • Ensure any impacts on the environment are managed in accordance with the relevant documentation • Compliance with OEMP and associated documents • Must observe all company HSE instructions, act in a safe manner and avoid risk to themselves and others • Be responsible for HSE in operations over which they have control over working conditions and methods

4.8.2 Training and awareness

The training program implemented for this OEMP is provided for all ATCO Gas personnel involved in the construction, operation and maintenance of the network. All personnel involved will be made aware of all relevant environmental aspects, impacts and their applicable control measures. The training program will include but not be limited to spill management containment and clean up, flora and fauna and weed and pathogen training.

Personnel will be informed of their obligations and the specific environmental aspects, impacts and their control measures involved with the gas distribution network through the *ATCO Gas Pre Site Safety and Environment Training* and *Site Safety and Environment Training* (ATCO Gas Introductory Field Training) programmes. Personnel will be inducted and records of personnel attendance and assessments of induction training conducted will be maintained. Personnel may also attend additional training where identified, as required by ATCO Gas.

The ATCO Gas training programmes cover the following:

- HSE Policy
- Fitness for Work
- HSE Event Notification & Investigation
- HSE Issue Resolution
- Environmental Aspects, including sensitive areas
- Take 5 Hazard Assessment Process and Job Risk Analysis (JRA) Process
- Weed and Pathogen Management and Vehicle Hygiene, and Weed Removal
- Spill Management Containment and Clean Up
- Sediment Containment
- Soil and Dust Control
- Fire Response
- Management of Acid Sulphate Soils

- Incident Reporting
- Emergency Response
- Permit to Work System

4.8.3 Communication

Notice boards have been established to inform workers of relevant environmental information. This includes HSE committee minutes and environmental incident alerts. The notice boards are refreshed periodically with up-to-date information, as it becomes available.

Communications of environmental issues requiring action are made through:

- HSE committee meetings;
- Audit report findings/ actions;
- Environmental site inspections;
- HSE event reports;
- Monthly report process;
- Envirograms; and
- Toolbox and Safety Focus meetings.

4.8.4 Reporting

4.8.4.1 Internal Reporting

All personnel are responsible for reporting environmental incidents and hazards. Any incident with potential to cause environmental impact must be reported to the Environmental Advisor immediately.

These incidents will be summarised with respect to events or situation that have impacted on the environment, or demonstrated potential to impact on the environment. The reporting of incidents will follow the HSE Hazard and Incident Notification Procedure (Document HSE PR0017). Subsequently, all incidents are captured and tracked in the Incident Management System. Once recorded, environmental incidents are tracked and monitored by the relevant Supervisor, as well as the Environmental Advisor to ensure that action is taken to eliminate or minimise the risk.

4.8.4.2 External Reporting

All personnel must contact the Environmental Advisor immediately to report any incident with potential to cause environmental impact. Document HSE PR0017 HSE Hazard and Incident Notification must be followed.

Where an incident has the potential to have a significant impact on the environment, government agencies may need to be notified to aid with the mitigation of impacts on the environment, in accordance with the following acts and regulations below. The relevant agencies will be contacted by the HSE department or the Legal department.

Requirement	Reference	Department
Where an incident causes or threatens to cause serious or material environmental harm. **Serious Environmental Harm:** environmental harm that: (a) Is irreversible, of a high impact or on a wide scale (b) Is significant or in an area of high conservation value or special significance (c) Results in actual or potential loss, property damage or damage costs of an amount, or amounts in aggregate, exceeding 5 times the	Environmental Protection Act 1986	Department of Environment and Conservation

Requirement	Reference	Department
threshold amount (i.e. $100,000). [Environmental Protection Act 1986, s 3A(1)]. **Material Environmental Harm:** environmental harm that: (a) Is neither trivial nor negligible; or (b) Results in actual or potential loss, property damage or damage costs of an amount, or amounts in aggregate, exceeding the threshold amount ($20,000); [Environmental Protection Act 1986, s 3A(1)].		
23. Pipeline failures and fires, duties of licensee (1) Immediately a licensee becomes aware of the escape or ignition from a pipeline of petroleum being conveyed in the pipeline, the licensee – *[(a) deleted]* (b) shall take such action as is necessary to minimise the loss of the petroleum from the pipeline and the pollution of surrounding lands and water. (2) Where the pipeline is repaired after the escape of the petroleum or ignition of petroleum thereform, the licensee shall forthwith submit a written report to the Minister giving full information as to – (a) The time and place of the escape or ignition of the petroleum; (b) The approximate quantity of petroleum that escaped; (c) The damage resulting from the escape or ignition of the petroleum; (d) The conditions that caused or contributed to the escape or ignition of the petroleum if they are known; and (e) The methods adopted to carry out the repairs to the pipeline.	Environmental Protection Act 1986	Department of Environment and Conservation
Regulation 42 Dangerous Occurrence, where the Notice and/or Report are to be in accordance with Regulation 44 & 45. **42. Dangerous occurrence** For the purpose of the definition of ***dangerous occurrence*** in Schedule 1 clause 3, the following occurrences that arise from a pipeline operation are declared to be dangerous occurrences – (a) An occurrence that did not cause, but could reasonably have been expected to cause – (i) The death of, or serious personal injury to, a person engaged in the operation or other protected person; or (ii) A member of the workforce to be incapacitated from performing work for the period mentioned in regulation 43; (b) An occurrence that was, or resulted in, or could have potentially resulted in any of the following events – (i) A fire or explosion; (ii) The release of an amount of hydrocarbon vapour that is likely to cinstitute a hazard in the	Petroleum Pipelines (Management of Safety of Operations) Regulations 2010 Petroleum Pipelines Act 1969	Department of Mines and Petroleum

Requirement	Reference	Department
surrounding environment; (iii) The release of an amount of petroleum liquid that is likely to constitute a hazard in the surrounding environment; (iv) An unplanned event that required the emergency response plan mentioned in regulation 24(1) to be implemented; (v) Damage to safety-critical equipment; (c) An occurrence of another kind that a reasonable licensee would consider to require an immediate investigation.		

4.8.4.3 National Greenhouse and Energy Reporting

The National Greenhouse and Energy Reporting Act 2007 (**NGER**) is the national framework under which Australian corporations must quantitatively report greenhouse gas emissions, energy consumption and production and other information specified under NGER legislation.

The Senior Environment & Sustainability Advisor is responsible for collating ATCO GAS operations, including contractors total greenhouse emissions. Refer to the ATCO Gas NGERS Handbook or the ATCO GAS National Greenhouse Emissions Reporting Procedure (Document HSE PR0003) for further information.

4.9 Record Keeping

Records for the monitoring and auditing of the environmental performance of the activity against the environmental performance objectives, standards and measurement criteria will be kept for a period of five (5) years.

Records will be kept including the following:

- Environmental Aspects and Impacts register
- Internal audits and external audits;
- Monitoring and inspection records; and
- Any records included as part of the reporting information.

4.10 Internal audit

Internal audits are regularly conducted to assess effectiveness and compliance of the management system and to facilitate continuous improvement. Where non-conformance or problems are identified, actions are established, implemented and followed up to ensure rectification.

5. Leadership

5.1 Leadership and commitment

The environmental management system involves the annual environmental plan and the environmental aspects and impacts register and the environmental policy. These are reviewed annually by the following staff as part of the review process.

- Senior Environment & Sustainability Advisor
- Senior Manager, Health Safety, Security and Environment
- President ATCO Gas Australia

6. Related Documents

- HSE PR0025 WI002 RF01 Environment Aspects & Impacts Register
- CTR WI014 Control Room SAP Third Party Reports
- ENS PL00002 RF01 Project Advice Checklist
- HSE PL00001 GL0001 Weed and Pathogen Management and Vehicle Hygiene Guide
- AA-WHS-POL-001 Health Safety Environment Policy
- AA-ENV-PLA-006 National Greenhouse and Energy Reporting System Handbook (NGERS Handbook)
- HSE PR0006 Spill Management Containment and Clean Up
- HSE PR0009 Management of Acid Sulphate Soils
- HSE PR0001 WI001 RF01 Potential Hazardous Substance and Asbestos Exposure Registration
- HSE PR0017 HSE Hazard and Incident Notification
- HSE PR0017 RF06 Hazard Report
- HSE PR0017 RF07 Incident Report Form
- HSE PR0018 HSE Event Investigation Corrective and Preventative Action & Close Out
- HSE WI009 Sediment Containment
- HSE WI013 Stockpiled Soil and Dust Control
- HSE WI008 Projects Environmental Considerations
- HSE WI010 Environmental Noise Control
- HSE WI010 RF01 Noise Measurement Report
- SWI FERU 001 Use of FERU
- SWI EX 001 Excavation and Backfilling Requirements
- SWI ST 001 Pipeline Patrol
- TCO PL00001 Emergency Response Management Plan

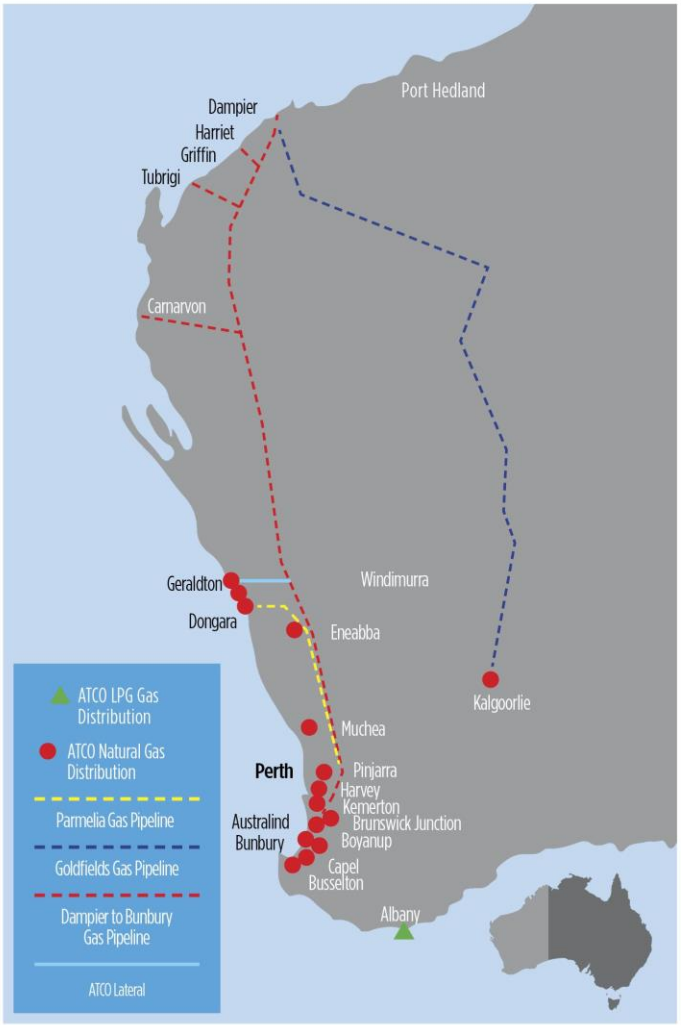
7. Other References

- Aboriginal Heritage Act 1972
- Bush Fires Act 1954
- Conservation and Land Management Act 1984
- Contaminated Sites Act 2003
- Dangerous Goods Safety Act 2004
- Dampier to Bunbury Pipeline Act 1997
- Energy Operators (Powers) Act 1979
- Environmental Protection Act 1986
- Environmental Protection Regulations 1987
- Environmental Protection (Clearing Of Native Vegetation) Regulations 2004
- Environmental Protection (Controlled Waste) Regulations 2004
- Environmental Protection (Noise) Regulations 1997
- Environmental Protection (Abrasive Blasting) Regulations 1998
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)

- Explosives and Dangerous Goods Act 1961
- Health Act 1911
- Heritage of Western Australian Act 1990
- Land Administration Act 1997
- Local Government Main Roads Act 1930
- Native Title Act 1993
- National Greenhouse and Energy Reporting (NGER) Act 2007
- Petroleum Pipelines Act 1969
- Petroleum Pipelines (Environment) Regulations 2012
- Rights in Water and Irrigation Act 1914
- Rights in Water and Irrigation Regulations 2000
- Schedule of Onshore Petroleum Exploration and Production Requirements 1991
- Soil and Land Conservation Act 1945
- Swan and Canning Rivers Management Regulation 2007
- Wildlife Conservation Act 1950
- APIA Code of Environmental Practice
- AS 2885.0-2008 (Amdt 2012) Pipelines – Gas and Liquid Petroleum –General Requirements
- AS 2885.1-2012 Pipelines - Gas and Liquid Petroleum - Design and Construction
- AS 2885.2-2007 Pipelines - Gas and Liquid Petroleum – Welding
- AS 2885.3-2012 Pipelines - Gas and Liquid Petroleum - Operation and Maintenance
- AS 2885.5-2002 (Amdt 2012) Pipelines - Gas and Liquid Petroleum - Field Pressure Testing
- AS 4645.1-2008 – Gas Distribution Networks
- AS/NZS ISO 31000: 2009 Risk Management

Appendix A – ATCO Gas Australia Distribution Network

ATCO Gas Distribution Networks



ATCO Gas Australia Perth Metro