Aurizon Bulk Central Environmental Management Plan - Tarcoola to Darwin Network

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Further Information -

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Document Title

Aurizon Bulk Central
Environmental Management Plan - Tarcoola to Darwin Network

Document Review Approval

Title	Approver	Signed	Date
Environment Manager	Mark Harris	M.Harris	28/11/2023
Principal Advisor Environment	Haydn Franklin	H.Franklin	10/11/2023

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Environmental Management Plan – Tarcoola to Darwin Network

1. Introduction

1.1 Background Description

Aurizon Holdings Limited (Aurizon) is a major national rail operator offering freight transport and ancillary logistic services to mining, agricultural industries and to the general bulk freight market in Australia. A subsidiary of Aurizon, Aurizon Bulk Central (ABC), administers the operations within South Australia and Northern Territory (SA/NT), which includes the 2,200 km Tarcoola to Darwin Railway network.

The Tarcoola to Darwin Railway network is leased under the Australasia Railway Project Concession Deed ('the Deed'), until 14 January 2054, from the Australasia Railway Corporation (AARC). Under the Deed, ABC operates locomotive freight movements between Adelaide and Darwin with connecting rail services to other interstate locations. In addition, ABC provides bulk haulage services between mine sites, the Port of Darwin, and surrounding Adelaide locations. ABC also manages third party track access agreements with other rail operators including, Journey Beyond Railway (JBR) which operates the passenger service 'The Ghan'.

1.2 Description

This Environmental Management Plan (EMP) details the critical process steps, requirements and accountabilities for Environmental Management associated with ABC's operations. It forms part of the Aurizon Bulk Central Safety, Health and Environmental Management System (SHE MS) which sets the SHE direction across the business. It requires activities which have the potential to affect the safety and health of people and/or the natural environment, are planned, organised, implemented and checked in accordance with legislative requirements and general environmental duty obligations.

ABC recognises its responsibilities to conduct its business with due regard for applicable environment legislation and good environmental practice in business areas across Australia. This EMP has been developed to give effect to these responsibilities and to demonstrate due diligence.

This EMP details the structure for undertaking environmental management consistent with the applicable standards - Australian/New Zealand Standard ISO 14001:2015 Environmental Management Systems - Requirements with guidance for use ("AS/NZ EMS Standard"). This document has been developed specifically to facilitate compliance with the requirements of the Deed.

This EMP applies to the Tarcoola to Darwin Railway Corridor and incorporates all the associated activities within this corridor as outlined in **Section 1.4** of this plan.

1.3 Purpose

This EMP is a AARC Specific document, which means it applies to all instances of environmental management in ABC's Tarcoola to Darwin owned network (including all yards, terminals, and sidings). ABC SA/NT operations (including freight and bulk haulage movements on 3rd party networks), Whyalla bulk iron ore and steel mill operations, Thevenard (Ceduna) bulk operations, multiple bulk grain movements, and containerised freight are not included or covered by this EMP[1].

The purpose of this EMP is to guide ABC in meeting its environmental obligations, community expectations and general environmental duty consistent with the Enterprise-Wide Aurizon Environmental Management Principle ENV-PRI-001, and environmental obligations presented within the Deed.

This EMP, where practicable, has been aligned to the Australian Standard AS/NZS ISO 14001, and the Guideline for the Preparation of an Environmental Management Plan from the Northern Territory Environmental Protection Authority[2]. This EMP underpins the Aurizon's Holdings Safety, Health & Environmental Commitment (v1, **Appendix C**) and defines procedures and initiatives to achieve the objectives of the Commitment. It is intended that this document be used as a reference document for environmental matters. It has been specifically developed for use by those conducting activities on the Tarcoola to Darwin railway line including:

- Employees of Aurizon;
- Contractors of Aurizon;
- Third Party Above Rail Operators; and
- Concession Deed stakeholders.

The EMP forms part of an ABC's Management Systems that draws on common procedures wherever possible to support the requirements of the Plan. It is therefore important that the EMP be read in conjunction with existing Aurizon/ABC's policies and ABC procedures as referenced throughout this Plan.

The EMP is implemented as a dynamic document that will evolve and be continually improved over time with the ongoing development of the SHE MS including environmental procedures and initiatives. The EMP will be reviewed biennially and revised as required by the ABC Environment Advisor, in collaboration with relevant stakeholders.

[1] Reference to BC-ENV01 Environment Management Plan – Bulk Central that covers other ABC operations.

[2] Guideline for the Preparation of an Environmental Management Plan, NT EPA, May 2015, V1.

1.4 Scope

The geographical scope of this EMP includes the railway corridor from Tarcoola (South Australia) to Darwin (Northern Territory), which also including the Alice Springs, Tennant Creek, Katherine, and Berrimah (Darwin) Rail Terminals/yards.

The operational activities that are conducted within this geographical scope include, but are not limited to the following:

- Rollingstock operational activities
- Minor rollingstock maintenance activities
- Locomotive refuelling
- Bulk fuel storage (above ground tanks and on-rail)
- Transportation of intermodal freight including dangerous goods
- Generation & transportation of waste products
- Trade waste & effluent collection (containment, treatment, & disposal)
- Rail infrastructure maintenance and repair activities
- Vegetation maintenance of the railway corridor
- Maintenance of trackside access roads and subsequent fire breaks
- Derailment and incident recovery
- Energy consumption (electricity, diesel, gas, fuel)
- Terminal infrastructure maintenance
- Loading and unloading of freight
- Bulk minerals transport
- Track infrastructure (including rail and sleepers, ballast, ground formation, bridges, culverts, and level crossings)
- Freight terminals and ports

Key Infrastructure located within the geographical boundaries of the scope of the Tarcoola-Darwin rail corridor includes:

- Track, including rail and sleepers (mainline and sidings)
- Ballast and formation
- Bridges and culverts
- Level crossings
- Freight terminals and ports

1.5 Exclusions to Scope

Exclusions to the scope of this EMP include operations of ABC outside of the Tarcoola to Darwin Corridor, Darwin Port Operations (APSD), Bulk Central Network Access (3rd Party) as well as any significant construction related activities, including major track and infrastructure upgrades. If a significant construction project is to be undertaken, consultation will occur with all Concession Deed stakeholders, and an individual Construction Environmental Management Plan (CEMP) shall be developed which will be specific to that project. This

CEMP will be tabled and agreed to at the Project Management level before works commence.

All passenger terminal buildings owned and maintained by Great Southern Rail or other third party are excluded from this EMP, as well as spur lines connecting to passenger terminals in Alice Springs which are the responsibility of the third-party owner.

2. Glossary

Term	Definitions
AAPA	Aboriginal Areas Protection Authority
AARC	Australasia Railway Corporation
ABC	Aurizon Bulk Central
Aurizon Holdings	Aurizon Holdings Pty Ltd
CEMP	Construction Environment Management Plan
DEW	Department for Environment and Water
DIT	Department for Infrastructure and Transport
EAG	Environmental Advisory Group
EMP	Environmental Management Plan
EMS	Environmental Management System
EPL	Environmental Protection Licence
ERA	Environmental Risk Assessment
FAQ	Frequently Asked Questions
JBR	Journey Beyond Rail (eg. 'the Ghan')
PEPA	Preliminary Environmental and Planning Assessment
NGER	National Greenhouse and Energy Reporting
NPI	National Pollutant Inventory
NT EPA	Northern Territory Environment Protection Authority
REMP	Rail Emergency Management Plan
SA EPA	South Australia Environment Protection Authority
SA/NT	South Australia / Northern Territory
SHE	Safety Health and Environment
SHE MS	Safety, Health and Environmental Management System
SMS	Safety Management System
SWMS	Safe Work Method Statement
TCIR	Train Control Incident Report
'the plan'	Environmental Management Plan

3. Application of the EMP

3.1 EMP Development and Approval

This EMP has been developed to guide Aurizon's approach to managing above and below rail operations on the Tarcoola to Darwin Network. Key documents which have been used in the development of this EMP include:

- **Tier 1 Policy / SHE Charter and Related Board Directives:** Aurizon Enterprise-wide strategic direction and mandatory instructions for SHE, provided by the Aurizon Board, CEO, Executive Officers and external sources.
- **Tier 2 Elements:** Aurizon Enterprise-wide SHE Framework that sets performance expectations and auditable criteria for implementation of a SHE Management System.
- **Tier 3 Principles:** Aurizon Enterprise-wide SHE Principles that incorporate legislative obligations. ▪
- **Tier 4 Related Documents**[3]**:** Other Aurizon Bulk Central SHE documents deemed mandatory for ABC by relevant Authorising Officers and Sub-Function/Business Documents.

3.2 Environmental Management System

Aurizon Bulk Central's EMS uses Aurizon Enterprise Tier 1 to 3 framework (policy to Principal), while integrating into ABC's SHE MS. The use of the upper tiers of the Framework aims to establish an auditable framework, accountability matrix, and company integration, against which line managers can take ownership of all environmental issues under their control. The documentation under the EMS, Tier 4, allows alignment with ABC's SHE MS safety accreditation, procedures, guidelines, and auditing requirement. A picture showing the SHE MS structure is shown in **Figure 1** below.

Figure 1 - Aurizon's Safety, Health and Environmental Management System Structure.

[3] Note: A range of document types exist within Tier 4 Related Documents (e.g. Form, Manual, Plan, Standard etc.)

The objectives of the EMS are to:

- Ensure ABC establishes mechanisms to achieve compliance with environmental legislation, Board charter and commitments, corporate principles, applicable industry standards and codes;
- Enable effective management of environmental risks and avoidance of environmental harm;
- Achieve continual improvement in environmental performance; and
- Give effect to the Environmental Policy / Charter.

3.3 Environmental Commitment

Aurizon's and ABC's commitment to achieving best practice performance across all its operations as one of Australia's largest transport and logistics businesses is formalised in three separate but integrated documents.

1. Aurizon Safety, Health & Environment Committee Charter (Enterprise Wide)

    - These commitments guide all SHE processes, including governance, planning and strategy, training, incident management, compliance and communications.

2. Aurizon SHE Commitments (Enterprise Wide) – Environmental Commitments

    - Setting clear, achievable, and measurable responsibilities, objectives, and targets to enable continuous improvement to safety, health and environment.
    - Minimising adverse environmental impacts arising from our operations, including preventing pollution, minimising waste, and improving resource use efficiency.
    - Minimising our impact on Indigenous and non-indigenous cultural heritage through a framework founded on knowledge, understanding, and respect.
    - Measuring and reporting on safety, health, and environmental performance and learning through investigation, assurance, and review

3. Aurizon Environmental Management Principle (ENV-PRI-001)

    - The purpose of this Enterprise-wide Principle is to:
        - Ensure Aurizon establishes mechanisms to achieve compliance with environmental laws, regulations, Board policies and directives, corporate principles, applicable industry standards and codes; and
        - Enable effective management of environmental risks; and
        - Achieve continual improvement in environmental performance; and
        - Give effect to the Environmental Policy.

This Principle is mandatory and applies to all of Aurizon business operations, including ABC's.

The above three documents are available in **Appendix B, C and D** for review.

4. Environmental Management Planning

4.1 Environmental Hazard and Risk Management

ABC is committed to effectively managing environmental risk in accordance with the ABC's Risk Assessment Procedure (MS-PRC-001). The Procedure also links to the Risk Assessment Form (MS-FRM-036), of which is used for both new and existing operations (modified or checking purposes).

In relation, environmental risk registers (Aspect and Impact Registers) have been prepared for the high to medium risk facilities associated with the Tarcoola – Darwin network (including the rail corridor, Berrimah and Alice Springs Terminals). Registers are reviewed and updated annually in line with the environmental audit program, review of recent environmental incidents or where material changes to operations have occurred.

The environmental hazards and risks considered within ABC's operational areas include but are not limited to:

- Operating diesel-powered locomotives, vehicles and track machines;
- Repair, maintenance and servicing of rollingstock;
- Management of hazardous liquid and solid wastes generated by ABC activities;
- Storage and transport of bulk chemicals and hazardous / dangerous goods;
- Use of materials and resources;
- Refuelling of locomotives;
- Rail / industrial noise and air pollutants (dust and emissions); and
- Other local environmental and community issues.

See **Section 7** for management of key environmental risk management controls and related details.

4.2 Environmental Legal Obligations

ABC must comply with all Commonwealth, State and Territory legislation, as well as requirements of the Deed. ABC maintains a compliance register of all legislation which impacts its activities as part of its SHE MS. This register identifies (but is not limited to) Commonwealth, State and Territory environmental protection regulations (SA and NT), land use planning statutes, local government regulations, and obligations specific to the Deed requirements that are relevant to ABC's activities. The document provides details on compliance requirements with legal obligations outlined in numerous environmental licences and permits. It also includes details on legislative reporting obligations including:

- *National Greenhouse and Energy Reporting Act 2007* (NGER);
- National Pollutant Reporting (NPI);
- Commonwealth *Environment Protection and Biodiversity and Conservation Act 1999* (EPBC act);
- State and territory -based Environment Protection Acts and Regulations; and
- Site-based approvals such as operating licences and trade waste permits.

The following legislation and codes have been identified as key regulatory controls applicable to ABC's activities:

- *Environment Protection Act 1993* (South Australia)
- *Environment Protection Regulations 2009* (South Australia)
- *Environment Protection (Movement of Controlled Waste) Policy 2014* (South Australia)
- *Radiation Protection and Control Act 1982* (South Australia)
- *Aboriginal Heritage Act 1988* (South Australia)
- *Aboriginal Heritage Regulations 2017* (South Australia)
- *Environment Protection Act 2019* (Northern Territory)
- *Environment Protection Regulations 2020* (Northern Territory)
- *Waste Management and Pollution Control Act 1998* (Northern Territory)
- *Waste Management and Pollution Control (Administration) Regulations 1998* (Northern Territory)
- *Australasia Railway (Special Provisions) Act 2015* (Northern Territory)
- *Bushfires Management Act 2016* (Northern Territory)
- National Environment Protection Measures (NEPMs)
- *Planning, Development and Infrastructure Act 2016 (South Australia)*
- *Dangerous Substances Act 1979 (South Australia)*
- *Dangerous Substances (Dangerous Goods Transport) Regulations 2008 (South Australia)*
- *Dangerous Goods Act 1998 (Northern Territory)*
- *Dangerous Goods Regulations 1985 (Northern Territory)*
- Australian Code for the Transport of Dangerous Goods by Road and Rail (Edition 7)

In addition to the above, Aurizon employees have access to websites containing legislation (e.g. https://www.legislation.gov.au/) via the Aurizon intranet, and Environment Team members are all subscribed to weekly environmental legislative updates.

4.3 Environmental Licence Obligations

ABC operates under two Environmental Protection Licences (EPLs) as follows:

- South Australia EPL # 50626 – licence to conduct railway activities; and
- Northern Territory EPL #222-01 – licence to collect, transport, store, re-cycle, treat or dispose of a listed waste.

In addition to specific operating conditions, both licences require ABC to follow 'general environment duty', have annual reporting obligations, and are subject to external ad-hoc auditing processes by the EPA.

4.4 Concession Deed Obligations

For the operation and management of the Tarcoola – Darwin Network (above and below rail), relevant stakeholders (AARC) have set environmental targets that include the following.

- ABC meeting all legal and regulatory requirements for environmental management and protection of activities associated with providing rail services. Where these are lacking or insufficient to protect the environment, ABC will apply sound environmental practices (general environmental duty).
- ABC conducting and maintaining a level of environmental awareness incorporating communication programs relating to this document and the requirements of the Deed amongst its employees and contractors.
- ABC regularly reviewing its railway operations to identify and assess the environmental impact associated with those operations. ABC has procedures and operation guidelines which assist with the maintenance and continuous improvements of the SHE MS, including this document.

In addition, there are a number of Monitoring Tasks and Performance Indicators relating to the Deed, which are presented in **Appendix A**.

4.5 Environmental Objectives and Targets

Aurizon's Safety Goal of '*To protect ourselves, each other, and our communities'* reinforces the commitment to safety and extends to all people involved with Aurizon's operations. To deliver safely and therefore environmentally responsibly there are three key actions detailed below, as well as displayed in **Figure 2**.

- Well designed, planned and resourced work: Aurizon workers take the time to design and plan the work, using clear and simple practices - with the right people and tools to deliver the work.
- Informed by risk: Aurizon workers understand the risk, manage the risk, know if our controls are effective, and share what was learned with the broader team.
- Executed by engaged and enabled people: Aurizon workers take accountability, trust each other, promote curiosity and have the capability and competency to support each other.

Figure 2 - Aurizon Strategy in Action

5. Implementation and Operation of the EMP

5.1 Responsibilities, Accountabilities and Authorities

Responsibilities and accountabilities are undertaken in accordance with SHE MS Management, Governance, Responsibilities and Authorities (RS-PRC-027).

The Aurizon Environment Team includes a multi-disciplinary, tertiary qualified Team of environmental professionals strategically located throughout Australia to support environmental management in the business. There is one SA based permanent Principal Environmental Advisor that supports the SA and NT Operations.

The following Aurizon representatives will be responsible for the implementation and maintenance of this EMP.

- **Head of SHE** is accountable that the SHE MS is being implemented effectively which includes the following:
  - Supports the implementation of the EMS;
  - Undertakes management reviews of the EMS, including environmental objectives, targets and indicators;
  - On ground management and execution of the project;
  - Directional control over the project team through the day to day liaison with the Site representative;
  - Support the integration of the EMP throughout the project;
  - Communicate all relevant environmental issues to project personnel including sub-contractors;
  - Provides assistance in environmental audits or inspections; and
  - To address non-conformances and corrective or preventative action requests promptly.
- **ABC General Manager (GM)** has the following responsibilities and authorities:
  - The GM shall be accountable and shall ensure all managers under their control are aware of, and comply with the requirements of this EMP; and
  - The GM is accountable and shall ensure control measures and procedures associated with this plan are developed, implemented, maintained, and reviewed to ensure compliance, continual improvement and application to the organization's operations and activities.
  - The GM must also ensure adequate resources are allocated to achieve committed objectives and targets detailed within this Plan.
- **Environment Manager** has the following responsibilities and authorities:
  - Reviewing ABC's framework documentation – such as the EMP;
  - Updating the Register of Environmental Objectives, Targets and Key Performance Indicators;
  - Incorporating environmental requirements into operational induction;
  - Arranging management review and internal audits of the EMP, legal and other environmental requirements of the business.
- **Principal Advisor Environment** has the following responsibilities and authorities:
  - Writing, implementing, maintaining, reviewing and updating the EMP;
  - Controlling all EMP records and respond to internal communication regarding environmental issues; and
  - Update the environmental legal issues and obligations register;

- Provide environmental assistance in case of emergencies or incidents;
- Monitor project activities and identify non-conformances or need for corrective or preventative actions;
- Participate in management review and internal audits of the EMP and legal and other requirements;
- Undertake site inspections and audits and report results to management; and
- Communicate and distribute EMP to stakeholders;

- **Aurizon and Contractor Personnel** are responsible for:
  - Understand and implement the EMP;
  - Conduct activities in an environmentally responsible manner;
  - Communicate with the ABC Environment Advisor any non-compliance or enquires as required; and
  - Manager and superintendents are also responsible ensuring that incident investigations are carried out in accordance with the requirements of this EMP and related Aurizon procedures.

As per Section 11.3 of the Deed, an Environmental Advisory Group (EAG) is to be established. The objective of the Group is to promote the implementation of the EMP. The function of the Group will be to provide a forum for the consideration and discussion of issues relating to the Environment and the Plan. The group is to be made up of representatives for the AARC, NT Government (Department of Environment, Parks, and Water Security), NT EPA, and Aurizon.

5.2 Competence Training and Awareness

The Aurizon enterprise-wide environmental training and awareness program includes the following.

- An Aurizon Environmental Awareness module (compulsory for all employees);
- Spill Kit Training module (compulsory for all front-line/operational employees);
- Aurizon's Code of Conduct training module;
- Environmental awareness content in site specific and contractor inductions; and
- Access to further information within the Aurizon Intranet Environment Sharepoint.

Task specific training modules such as dangerous goods management are also available to frontline employees. All these training packages and associated records are managed through Aurizon's myLearning online system.

A program of emergency management drills and desktop exercises are periodically undertaken to ensure Aurizon employees are prepared in the unlikely event of a rail environmental emergency.

Contractors and site visitors will also have to work under this EMP, with workers undertaking inductions where necessary, working under supervision of ABC personnel, as well as supply their own Safe Work Method Statement (SWMS) and management plans. Contractors are administered under the Contractor Management (MS-PRC-002) document.

The supervisor of the activity being conducted by the ABC worker or contractor is responsible for ensuring all workers and contractors under their supervision have the relevant licenses, training, induction, skills and competencies for the tasks and activities being undertaken.

5.2.1 Environment (Intranet) Sharepoint

The environment section on the Aurizon Intranet contains key environmental management information including details on EMS Elements. The information is complemented by references and links to the ABC's SHE MS forms, Guidelines and Standards. The information is accessible to all employees. Additional to the EMS information, there is a Frequently Asked Questions (FAQ) section that includes answers to some of the commonly asked questions about environmental management at Aurizon, including incident management and reporting, waste management etc.

5.2.2 Project Planning and Governance

Aurizon's Environment Team utilizes the Preliminary Environmental and Planning Assessment Checklist (PEPA) to support the Operations and Projects Teams to meet their environmental planning obligations.

5.3 Environmental Incident Management

ABC is committed to effectively managing all environmental incidents in accordance with its Event Management Procedure (MS-PRC-064). The Procedure sets out the incident management lifecycle for ABC's businesses to implement as required and details processes in relation to preparedness, incident assessment, stakeholder notification, activation, ongoing management and review and stand down.

The ABC Pollution Incident Response Management Plan (PIRMP) details the criteria for reporting and details the people required to be contacted in the event of an environmental incident. This procedure considers incidents arising, or likely to arise, as a consequence of abnormal operating conditions, accidents, and potential emergency situations.

In the event that the incident is more of a public nuisance level (i.e. locomotive exhaust emissions, noise or dust generation), this will be reported using the community complaints management system (**Section 5.4.3**) or internal incident report system, Beakon. A Train Control Incident Report (TCIR) may also be raised via the related Train / Network Controllers.

It is the responsibility of the Environment Advisor to review all incidents that have the potential to trigger notifiable reporting requirements to regulatory bodies.

ABC contractors or stakeholders may have incident reporting forms and procedures. In the cases where an incident occurs as part of their operations that relate to ABC operations, a copy of their form needs to be forwarded to the relevant stakeholders.

Where an environmental incident requires remediation, ABC will undertake any recovery and remediation effort in consultation with key stakeholders and in-line with regulatory requirements. On-site and off-site resources for an incident will be provided commensurate to the severity and potential consequence of the event.

All environmental incidents will be managed via Aurizon's SHE reporting software, Beakon. Beakon provides an electronic system for recording, reporting, assigning, monitoring and close-out of all environmental incidents.

5.3.1 Emergency Preparedness and Control

The Response Plan for 'On Rail' Emergencies (RS-PRC-006) provides the divisions approach to how ABC responds to and manage above rail emergency incidents on the mainline rail infrastructure. The Plan includes references to responsibilities for Environmental personnel to use in responding the emergency and rail incidents.

5.4 Communication

5.4.1 Internal and External Communication

Internal communications methods utilised to ensure effective environmental management and increase employee and contractor environmental awareness and of this EMP includes:

- Risk assessments and on-site hazard identification inspections
- Regional and site meetings
- Project reports
- Performance assessments reports
- Notice boards
- Email communications
- On-site personnel inductions, training (including emergency and incident training) and toolbox sessions (as required)
- Sub-contractor co-ordination meetings

With respect to incident communication, Aurizon's incident management procedure follows the five-step process, as shown in **Figure 3**.

Figure 3 – 5 Step Incident Management Flow Process.

As per Step 3, internal communications includes:

- For incidents on the ABC network — reported to Network Control Centre (Transport Control)
- For incidents within ABC Depots and Yards or 3rd Party Private Sidings – reported to the Yard Controller and Site Supervisor who will report the incident to the broader operation through Transport Control.
- For incidents that occur in offices and other non-rail environments – reported to the site supervisor/manager.

The designated/nominated Event Manager enters and categorises all SHE incidents in the SHE Incident Management System (Beakon) as soon as possible, and no later than 48 hours

after the incident has occurred, to allow the SHE team to comply with regulatory reporting requirements (as and if required).

5.4.2 External Incident Reporting Requirements

Where an environmental incident occurs, the initial external notification process ABC's will use is in accordance with the Event Management Procedure document.

Aurizon's Environment Team provide support to assess incidents including determining if notification to the environment regulator is required. If notification to the environment regulator is required, Aurizon's Environment Team co-ordinates the initial notification and any ongoing communication with the environment regulator.

In ABC's operations notifiable incidents are reported externally using the Event Management Procedure. Regulatory notifications follow the details below:

- **Reporting a life-threatening incident or pollution emergency**
  To report a life-threatening incident or emergency:
  Call 000 and ask for Fire
- The Fire and Emergency Services will Contact EPA (SA or NT) for major pollution/hazardous materials incidents.
  To report a pollution emergency that is not life-threatening:
  Contact EPA 24-hour Pollution and environment incident reporting hotline
  SA EPA – 1800 623 445
  NT EPA – 1800 064 567

Pollution emergencies include discharges of hazardous materials or incidents which threaten public health or the environment.
Incidents are to be reported to the state regulatory
as soon as reasonably practically possible (SA) or within 24hrs of the incident occurring (NT).

Requirement to Notify (per State Jurisdiction):

South Australia –
Section 83(1) of the SA *Environmental Protection Act 1993* states: -

If serious or material environmental harm from pollution is caused or threatened in the course of an activity undertaken by a person, the person must, as soon as reasonably practicable after becoming aware of the harm or threatened harm, notify the Authority of the harm or threatened harm, its nature, the circumstances in which it occurred, and the action taken to deal with it.

Northern Territory –

Division 8 of the NT Environment Protection Act 2019 states

This Division applies if:

224 (a) an incident occurs or has occurred at a site at which:

(i) an action is being carried out under an environmental approval; or

(ii) a proposed action is undergoing environmental impact assessment; and

(b) that incident causes or threatens material environmental harm

or significant environmental harm.

225(1) A specified person who observes or becomes aware of the incident must notify the CEO of the incident and all prescribed information about the incident:

(a) as soon as practicable (and in any case within 24 hours) after the person observes or becomes aware of the incident.

5.4.3 Community Complaint Management

All complaints involving environmental issues shall be promptly and directly responded to using the process outlined in **Figure 4**. All complaints received via this process are stored in Aurizon's Call Centre Community Complaints and Concerns Log and actioned according to Aurizon's Community and Stakeholder service standards guidelines**.**

Community complaints resources include the Community Engagement Charter, the complaints management matrix and key messaging resources.

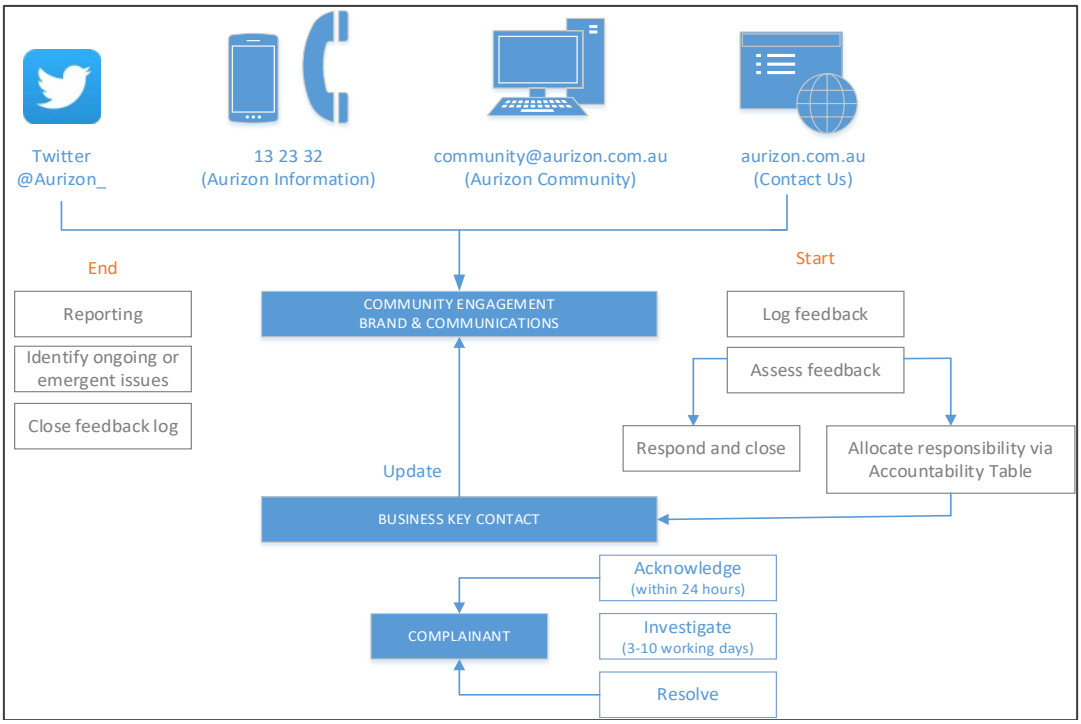

Figure 4: Overview of Aurizon's Complaints Management Process

5.5 Document Control and Record Management

Aurizon utilises the Sharepoint and document portal control and record management systems. All Bulk Central environmental documents are controlled through the ABC's document control portal.

ABC environmental documentation are stored on local network drives and managed by the Environmental advisor. Documents are provided as Hardcopies to operational managers and staff or via digital transfer (i.e. Email). Documents provided to operational staff are considered uncontrolled and are regularly audited to maintain the appropriate version is available. All records are maintained in accordance with ABC's Document and Information Control Procedure (MS-PRC-018).

6. Checking

6.1 Performance Reporting

ABC monitors, reports on, and reviews environmental performance, including:

- Internal monitoring requirements;
- Licences, authorities, approvals and permits;
- Incident reporting;
- Performance of treatments controlling significant environmental risks; and/or
- General managerial reporting.

Reporting includes:

- Annual returns to regulating authorities;
- Annual NGER, NPI and CDP submissions;
- Monthly incidents and complaints reporting from all regions; and
- Monthly monitoring reports (as required).

6.1.1 Monitoring and Measurement

Environmental monitoring is regularly undertaken at ABC Depots and operational areas.

Monitoring can include soil, groundwater, dust, noise, sewage, water treatment plants, trade waste, and fuel storage.

Monitoring is undertaken for both performance effectiveness and discharge compliance. Monitoring data and treatment plant sampling manuals are stored in the network drive.

Where required soil and water quality monitoring is undertaken following Hazchem spill incidents. For notifiable incidents, the monitoring is undertaken by suitably qualified and experienced environmental contaminated site consultants. The data is used to inform management and regulators on the extent of contamination and for potential remediation planning.

6.1.2 Internal and External Audit

An internal environmental compliance audit program is delivered annually for SA and NT operations. Audits are undertaken by the Aurizon Environmental Advisor and conducted consistent environmental standards and licence conditions.

The purpose of the internal audit program is to:

- identify environmental non-compliance and areas of potential environmental risk;
- ensure operations are conducted by project personnel in an environmentally responsible manner;
- ensure the EMP is implemented in an effective manner by project personnel; and
- review and update the EMP.

For ABC, the audit scope included all Depot operations with a high-risk rating.

Audit criteria includes environmental obligations and environmental legislation, licences, permits and agreements with statutory environmental authorities and utilities Aurizon Environment Improvement Audit Checklist is used to capture on-site inspection observations and records of the management system review.

An audit report is distributed to key stakeholders including management teams. The progress of audit completion is tracked monthly as part of performance reporting.

The audit program is managed through the Aurizon Beakon Incident and audit management system with audit issues and actions entered and tracked through the intranet system.

6.1.3 Evaluation of Compliance

Compliance with legal and other requirements will be determined on an annual basis as a part of an annual internal audit in accordance with - How to Conduct an Audit Guideline or during separate internal compliance audits.

6.1.4 Control of Records

Records will be maintained as necessary to demonstrate conformance to requirements of the EMP and in accordance with Document and Information Control Procedure.

6.1.5 Managing Non-conformances / Corrective Action and Prevention

ABC shall improve environmental performance through the implementation of effective and preventive audits, inspections and reviews. Corrective and preventive action will be taken to eliminate or avoid the cause/s of environmental issues or non-compliance.

Audit action distribution and tracking will be undertaken in Beakon, with Beakon being the key tool by which environmental hazards, incidents and non-conformances are reported.

6.2 Monitoring of the EMP

This EMP will be reviewed periodically and if appropriate, revision undertaken as necessary to maintain its ongoing relevance in managing ABC's environmental obligations.

6.3 Management Review

Management review will be conducted in accordance with Section 2.13 of Aurizon's Environmental Management Principle. A monitoring reporting role will be undertaken through the Enterprise Safety, Health, and Environment Committee (SHEC).

7. Environmental Management

The individual management of key aspects of environmental concern for ABC are presented below. Requirements within the Deed[4] specify monitoring tasks and performance indicators that are linked with some of the key environmental aspects and are tabled in **Appendix A**.

7.1 Climate Strategy and Action Plan

In 2020, Aurizon released its first Climate Strategy and Action Plan, which outlines Aurizon's decarbonisation pathway and target of achieving net-zero operational greenhouse gas emissions by 2050, in addition to a 10% operational emissions intensity reduction by 2030.

In addition to the establishment of targets, Aurizon has established a $50M Future Fleet Fund, to incentivise the development and adoption of low-carbon technologies across the Australian freight sector. Aurizon is taking a leading role in the transition to low a decarbonised freight sector through collaboration with key stakeholders including industry peers, customers, equipment providers and research institutions. Further information related to Aurizon's approach to sustainability and climate change is available as follows: https://www.aurizon.com.au/sustainability

[4] Referencing the original deed document: Exhibit 9 – Environment Management Plan (1997)

7.2 Construction and Operation Management

During the operation of the railway, track inspectors are to routinely monitor the condition of the track via Hi-Rail inspections and access via the established access vehicle track. Any defects or repairs that are recorded by the network inspectors (including rail, formation, or access tracks) are to be raised via the TCIR process described in **Section 5.3** of this plan. The access track will be maintained to ensure access, this process is carried out during the normal track maintenance activities by grading and repairing the tracks as needed.

All maintenance works conducted on the network is undertaken using established procedures that have considerations for all the safety, compliance and environmental risks associated with the activities. These procedures are regularly reviewed and updated as needed.

Any further development or construction of the network is to be undertaken with considerations of a PEPA checklist. The PEPA establishes the potential risks associated with environment and planning requirements (under the specific NT and SA regulatory bodies) with any significant track developments that ABC may undertake. Any further significant construction within the Tarcoola-Darwin network will be discussed with AARC, and a CEMP being drafted specific for the works conducted.

7.3 Air Pollution

The main source of potential air pollution associated with Aurizon's above rail operations is related to the usage of diesel by Aurizon’s locomotives. In order to minimise any potential air pollution the locomotives have been designed, manufactured, maintained and operated to minimise potential air pollutants released to the environment.

The transport by Aurizon of bulk mineral commodities involves the use of specific rollingstock that is designed, manufactured, maintained and operated to minimise the impact on air quality. Veneering is a potential option to be used on bulk commodities transported via open hoppers, such as iron ore to reduce dust (if required). Several bulk commodities services are transported in lidded wagons or in sealed shipping containers that minimise potential for excessive dust production.

7.4 Noise Pollution

The main sources of noise associated with ABC's above rail operations are noise from locomotive engines, wheel to rail interface issues (from locomotives & wagons) and the usage of the klaxon (horn). Within built up areas, network requirements may specify regulations in relation to the usage of the klaxon, as well as changes to speed limits.

In relation to noise from ABC’s rollingstock, the fleet is designed, manufactured, maintained and operated to minimise the impact of noise associated with its operational activities. This includes locomotive and wagon fleet being subjected to set reliability examination, inspection and maintenance cycles compliant with Australian Rail Association (ARA) standards. Reactive maintenance is undertaken as required to address issues that are identified outside of these cycles e.g. a flat wheel noticed in a roll-by inspection would have immediate action taken to address the issue thus removing the associated issues with noise.

In addition, the training of ABC’s drivers include specific consideration of how to operate rollingstock with due consideration to minimising noise impacts on the surrounding community. Noise complaints arising from ABC’s operations are handled as per **Section 5.4.3** of this document.

7.5 Waste Management

As part of standard operations, ABC will manage waste generated from its rollingstock or operation of its services through contracts with appropriately qualified waste contractors. Documentation of the waste removal is kept on file, including any waste tracking information. ABC actively pursues opportunities to promote minimisation of waste and reuse and recycling. All SA/NT Depots separate waste streams for recycling including, steel, paper/cardboard, waste oil, batteries, cans/bottles, and plastics.

In relation to waste recovery associated with an incident, including controlled waste, ABC will consult with key stakeholders, waste authorities, and regulators to arrange appropriate disposal of removal/remediation of any spillage.

7.6 Hazardous Substances and Dangerous Goods

The purpose of the Hazardous Materials Procedure document (MS-PRC-010) is to:

- Provide direction on implementing ABC's legal and regulatory Hazardous Chemicals and Dangerous Goods management obligations.
- Provide the division direction on the use, handling and storage of hazardous chemicals.

The Environmental Management section of the Aurizon intranet provides links to both the Safe Work Australia – Hazardous Chemical Information System (HCIS) and Chemwatch chemical database in the Safety Health Environment and Training section on the Intranet.

The PIRMP document also contain information on managing hazardous chemical and Dangerous Goods spills.

7.7 Hydrocarbon Storage

Hydrocarbon storage (primarily diesel fuels) is carried out for the purposes of plant and locomotive refuelling in several locations along the network. Bulk fuel is stored in appropriately designed double skin internally bunded tanks (above ground) or externally bunded tanks at all locations. The locomotives that use the track primarily undertake Direct in Line (DIL) refuelling from fuel tanks transported within the consist, these tanks mounted on wagon are double skinned with built-in safety systems to prevent failure of equipment and resulting spillage. Fuel infrastructure is regularly maintained, inspected by 3rd party specialist, and equipped with dry break fuel fittings.

Spill response equipment is present at all fuel facilities sites with all operational staff provided training in incident response.

7.8 Flora, Fauna, and Soil Conservation

ABC utilise the experience of its track inspection and management team to monitor potential weed growth within the rail corridor. Declared weed posters are also used (source from regulatory bodies) that highlighting the targeted species to enable the ABC employees to monitor conditions as they carry out normal maintenance and track inspection works. As required, a vegetation management contractor is engaged to assist in vegetation and weed control within the corridor.

The condition of the formation and the adjacent access tracks are to be monitored on a regular basis by the track inspectors who travel sections of the corridor every week. They will identify areas of abutment scour, significant erosion or slope instability.

ABC also maintain a register of the corridor scour sites (from original construction and ongoing maintenance works). The information contained within the register enables the team to prioritise repair activities and to measure deterioration of new or existing sites, within and adjacent to the corridor.

Part of the track inspections includes visually reviewing the condition of vegetation growth throughout the corridor and adjacent water courses (streams or drainage lines). Vegetation is only inspected in the immediate proximity of the structure within the corridor (track, formation, culvert, bridge).

Any identified issues will be managed through incident reports or work orders raised by the on-ground team. All instances of observed animal strike by rollingstock or support vehicles are recorded in a register

Furthermore, Aurizon's Environment Team utilises the PEPA to support the Operations and Projects Teams to meet their environmental planning obligations. The PEPA provides guidance on State, Territory and Commonwealth approval requirements for land use planning, flora and fauna, weeds/pests, hydrology, bushfire actions, social impacts, and general land disturbance.

7.9 Water Quality Conservation

The main source of potential water contaminants associated with ABC's above rail operations are the current and historical loss of hydrocarbons from locomotives, the loss of bulk hazardous and dangerous product/s from wagons, and loss of chemicals current or historically from site facilities to surface and/or groundwater. ABC's diesel locomotive fleet servicing the SA/NT operation's areas hold between 6,000 - 9,000 litres of diesel and up to 1,500 litres of oil per locomotive. ABC also operate DIL refuelling equipment that add an additional ~30,000Lts of fuel to the consist.

To offset this potential source of water pollution, ABC's rollingstock is designed, manufactured, maintained, and operated to minimise the potential contamination of the environment. In addition, reactive maintenance is undertaken as required if an issue is identified outside of planned maintenance and inspection cycles.

All refuelling (trip servicing) of ABC's diesel locomotives is undertaken within trip service facilities, which incorporate relevant environmental waste management control systems.

7.10 Pest and Insect Control

ABC are, where practicable, to manage low lying areas for the pooling of water that may become a breeding ground for insects. Track inspectors are to monitor conditions during the wet season and report any anomalies through the TCIR system.

Observation of any anomalies with respect to feral animals and illegal dumping of rubbish within the network or adjacent will be reported via TCIR and investigated.

7.11 Cultural Heritage Conservation

From the construction of the railway, ABC has recorded all the locations of sites of cultural and heritage significance that were surveyed prior to any disturbance works. This register consists primarily of Aboriginal Areas Protection Authority (AAPA) sites, which are held as a spatial database for ease of review as well as demarked in the field with signage. The track inspectors are familiar with these sites and monitor the locations for anomalies.
Any maintenance works or planned developments are to consider the location of the heritage location as well as state regulations, in order to protect any potential disturbance of known or unknown sites.
ABC is in the process of integrating documents with Aurizon's existing Cultural Heritage Governance Framework and will establish procedures and guidelines to manage activities and potential impacts on both Aboriginal and non-indigenous heritage locations or objects.

7.12 Fire Management

The access tracks are deemed a firebreak (under consultation with Bushfires NT), these tracks are regularly maintained by herbicide application and grading, as to allow access to the track for maintenance purposes. The condition of the access track is monitored by the track inspectors, who travel the corridor frequently, in addition to the weed management contractor, who conduct a biannual management program.
Furthermore, strategic firebreaks are implemented either within the corridor or adjacent on an as needs basis in consultation with Bushfires NT, this is for planned backburns or high-risk areas.
Track maintenance vehicles are equipped with fire extinguishers which are inspected at regular intervals. Additional firefighting equipment is provided and maintained for track maintenance activities with elevated fire risk (e.g. welding, grinding and associated hot work), this equipment is maintained and inspected as part of the pre-start inspections.

7.13 Land Contamination

The main source of potential land contamination associated with ABC's above rail operations are current and historical loss of hydrocarbons from locomotives, the loss of bulk hazardous and dangerous product/s from wagons and loss of chemicals current and historically from workshops and Depot treatment facilities to ground.

ABC maintains contamination information on each site and network section, with the information being continuous updated and reviewed.

If land is contaminated due to the release of a hazardous or dangerous contaminant due to an incident involving one ABC’s train services, the notification process detailed in **Section 5.4.2** will be applied.

7.14 Mangroves, and Potential / Actual Acid Sulfates Soils.

Mangroves adjacent to the ABC network are considered sensitive vegetation and of ecological importance. For areas of the network adjacent to marine mangrove environments, such as Berrimah yard and railway, ABC regularly inspects the embankments to monitor for potential impacts. All spill incidents within proximity to these environments are quickly managed to minimise any potential impacts. The EPA are notified of all significant spills that have the potential to impact the mangrove/tidal system.

The mangrove environment is also associated with acid sulfate soils/muds (ASS), which when exposed to oxygen has the potential to cause acidic by-product. Any development or excavation of ASS will need to be tested prior to activity commencing and managed appropriately. A CEMP is required when undertaking such tasks.

8. Reference Documents

- ABC Pollution Incident Response Management Plan (PIRMP)
- ABC Preliminary Environmental and Planning Assessment Checklist
- Aurizon's Annual Sustainability Report
- Aurizon Environmental Management Principle
- Aurizon Safety, Health and Environment Charter
- Aurizon SHE Commitment
- Australasia Railway Project Concession Deed
- Australian/New Zealand Standard ISO 14001 Environmental Management Systems
- Audit Summary Form (RS-FRM-023)
- Document and Information Control Procedure (MS-PRC-018)
- Event Management Procedure (MS-PRC-064)
- Guideline for the Preparation of an Environmental Management Plan (NT Gov)
- Hazardous Materials Procedure (MS-PRC-010)
- Hazardous Materials Audit Tool (MS-FRM-038)
- Management, Governance, Responsibilities and Authorities Procedure (RS-PRC-027)
- Pollution Incident Response Management Plan (PIRMP)
- Response Plan for 'On-Rail' Emergencies (2020)
- Risk Assessment Procedure (MS-PRC-001)
- Risk Assessment Form (MS-FRM-036)

9. Revision History

Version No.	Section No.	Description of Change	Preparer (P) / Reviewer (R)
V 1.0		New version history commenced – November 2023	(P) Haydn Franklin (R) Mark Harris

Appendix

Appendix A - Aurizon's Concession Deed Obligations (Post Construction).

The Concession Deed obligations also cover off on construction phase requirements. While the construction phase has been completed, these obligations may still be relevant during general operations or relevant during any future development activities within rail corridor or Deed properties. Note – numbering of monitoring tasks are maintained from Exhibit 9 of the Concession Deed to maintain continuity.

Construction and Operational Management		
Monitoring Task	**Purpose**	**Comments**
2.4.1 During construction phase, liaise with Landholders on fortnightly basis to discuss progress of activities and other issues which may arise	To maintain good relations with Landholders	It has been agreed with the EAG[5] that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
2.4.2 During construction phase, monitor condition of access tracks on a monthly basis	To maintain condition of access tracks	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
2.4.3 During construction phase, implement monthly audit of safety program implementation at construction camps	To access adequacy of safety procedures	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
2.4.4 During railway operation, ensure access track used during construction is maintained to provide access for inspection and maintenance, as required.	To facilitate future access	Refer to **Section 7.2** of this EMP
2.4.5 During railway operation, conduct annual audits of safety program implementation.	To assess adequacy of safety procedures and security arrangements	Refer to **Section 7.2** of this EMP
2.4.6 Maintain records for accidents, incidents and security breaches. Document in annual report.	To facilitate effective future management	Refer to **section 5.3** of this EMP

[5] EAG - Environmental Advisory Group

Fire Management

Monitoring Task	Purpose	ABC Comments
3.4.1 Monitor and maintain condition of all fire breaks seasonally.	To keep firebreaks effective	Refer **Section 7.12** of this EMP.
3.4.2 Inspect all firefighting equipment to ensure it is serviceable and properly located monthly	To ensure firefighting equipment is available for immediate use	Refer **Section 7.12** of this EMP.
3.4.3 Annually assess and document achievements of fire management against objectives for the year.	To determine effectiveness of current and future programs.	Refer **Section 7.12** of this EMP.
3.4.4 Long term monitoring of fire history using aerial photography and ground truthing methods should be carried out annually.	To determine effectiveness of current and future programs	It was agreed with the EAG that this task is no longer required for the operation and maintenance of the corridor.
3.4.5 Establish and maintain a fire monitoring program using nominated photographic sites.	To monitor fire impacts	It was agreed with the EAG that this task is no longer required for the operation and maintenance of the corridor.

Flora and Fauna Conservation

Monitoring Task	Purpose	ABC Comments
4.4.1 Routine Inspection along the railway corridor will be undertaken on a regular basis to monitor the introduction/ spread of declared weeds.	Prevent Introduction and spread of declared weeds in accordance Weeds Management Act	Refer **Section 7.8** of this EMP
4.4.2 Visually monitor and photographically record impacts of fire on habitat and species distribution	Evaluate whether any specific protection measures are required	It was agreed with the EAG that the photographic component of this task is no longer required for the operation and maintenance of the corridor. Refer **Section 7.8** of this EMP for the visual monitoring.
4.4.3 Monitor any illegal hunting, trapping or plant collecting activities and notify the authorities promptly.	Conserve flora and fauna	Refer **Section 7.8** of this EMP
4.4.4 Record sightings and signs of feral animals during construction and operation.	Reduce the spread of feral animals	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.

Soil Conservation		
Monitoring Task	**Purpose**	**ABC Comments**
5.4.1 Routine inspection of the railway corridor will be undertaken on a monthly basis during the wet, and three monthly during the dry, to identify areas of soil erosion, abutment scour, and slope instability.	To identify potential soil erosion problems	Refer to **Section 7.8** of this EMP
5.4.2 Inspections will be made at monthly intervals to identify areas that require additional brush cover to reduce wind erosion.	To reduce the impacts of wind erosion	It was agreed with the EAG that there would not be a need to add additional cover unless disturbed by ABC during maintenance activities as the coverage is now well established.
5.4.3 Inspect conditions of all roads, particularly at stream crossings, to ensure construction/ maintenance vehicles are not creating erosion (weekly during the wet)	To monitor for potential soil erosion	Refer to **Section 7.8** of this EMP.
5.4.4 Biennially inspect vegetation along streams and major drainage lines and rehabilitation areas.	To monitor efficacy of program.	It was agreed with the EAG that there would not be a need to continue these inspections unless disturbed by ABC during maintenance activities as the vegetation is now well established.

Water Management		
Monitoring Task	**Purpose**	**ABC Comments**
6.4.1 Carry out monthly visual inspections of creek crossings and permanent water bodies for signs of environmental damage	To determine if erosion, pollution or other damage has occurred.	Refer to **Section 7.9** of this EMP.
6.4.2 Sample any borehole used for drinking and have sample analysed for standard parameters (pH, EC, TDS, Turbidity Na, Mg, Ca, CI, SO4, NO3, Fe, Mn, F, Cu, As, Ag) and bacteriological parameters. Re-deploy any borehole with non-potable water. Sample before initial use and annually.	To ensure good drinking water quality is maintained.	It was agreed with the EAG that there would not be a need to continue the water sampling as the bores are no longer used for drinking purposes.
6.4.3 Inspect bore heads for adequate sealing, before commissioning and annually, implement remedial action.	To reduce loss of water	N/A - See comment 6.4.2 above.
6.4.4 Annually inspect vicinity of boreholes for any source of potential contamination	To maintain high water quality	N/A - See comment 6.4.2 above.
6.4.5	To monitor water supply levels	N/A - See comment 6.4.2 above.

Record water levels and discharge meter readings for each bore on a monthly or quarterly basis		
6.4.6 Annually review borehole water-level and abstraction records. Implement corrective action if required.	To ensure safe yield is not being exceeded	N/A - See comment 6.4.2 above.

Waste Management

Monitoring Task	Purpose	ABC Comments
7.4.1 During railway construction, routinely asses the effectiveness of pollution prevention and waste collection and disposal through visual inspection.	To identify areas where pollution prevention and waste disposal methods may be improved	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
7.4.2 During railway operation, assess on a monthly basis, the effectiveness of pollution prevention and waste collection and disposal through visual inspection.	To identify areas where pollution prevention and waste disposal methods may be improved.	Refer to **Section 7.5** of this EMP.
7.4.3 Routinely check hydrocarbon storage and distribution areas for contamination.	To monitor hydrocarbon contamination	Refer to **Section 7.5** of this EMP.

Dust and Noise Management

Monitoring Task	Purpose	ABC Comments
8.4.1 During railway construction, assess the effectiveness of dust and noise management through regular visual inspections and feedback from construction workforce and public, respectively.	To identify areas where dust and noise management may be improved.	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
8.4.2 During Railway operation, assess the effectiveness of dust and noise management through weekly visual inspection and feedback from operational workforce and public, respectively.	To identify areas where dust and noise management may be improved.	Refer to **Section 7.3 / 7.4** of this EMP

Biting Insects Control

Monitoring Task	Purpose	ABC Comments
9.4.1 Prior to onset of wet season, consult with MEB regarding potential problem areas for mosquito breeding and discuss a possible eradication and/or monitoring program.	To ensure effective control of biting insect population.	Refer to **Section 7.10** of this EMP.
9.4.2 Following every wet season, assess the effectiveness of biting insect safeguards	To identify areas where biting insect control methods may be improved	The MEB will have this data, no requirement for ABC to assess as ABC are not experts in this field.

9.4.3 During the wet season, inspect railway alignment for ponded water	To assess effectiveness of drainage systems.	Refer to **Section 7.10** of this EMP

Disease, Pest, and Weed Control

Monitoring Task	Purpose	ABC Comments
10.4.1 Weed inspection and control will be carried out annually or seasonally along the corridor.	To reduce the distribution and spread of declared weeds.	Refer to **Section 7.8 / 7.10** of this EMP
10.4.2 Inspections will be made at regular monthly intervals during construction to identify and control declared weeds.	To reduce the distribution and spread of declared weeds.	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
10.4.3 To check the spread of declared weeds, DENR personnel will undertake periodic inspection of the corridor.	To reduce the distribution and spread of declared weeds.	Government agency responsibility.
10.4.4 Monitor the disposal of rubbish and cover all vessels (e.g. rainwater tanks).	Reduce breeding opportunities for mosquitoes.	Refer to **Section 7.8 / 7.10** of this EMP
10.4.5 Visually inspect vegetation to assess root-rot symptoms on disturbed vegetation (bi-monthly)	Monitor the spread of fungal-mediated dieback.	Refer to **Section 7.8 / 7.10** of this EMP
10.4.6 Monitor feral animal populations through regular bi-monthly inspections.	Monitor the distribution of feral animals.	The reconvened EAG will agree on a methodology for this as there are no defined standards by which this can be determined.
10.4.7 Maintain vigilance against the introduction of feral animal species (e.g. cats, dogs, and cane toads).	Reduce the distribution of feral animals and pests.	Refer to **Section 7.8 / 7.10** of this EMP

Cultural Heritage Management

Monitoring Task	Purpose	ABC Comments
11.6.1 Ensure all sites which have not been disturbed or destroyed in accordance with the appropriate legal procedure are monitored, particularly during and after major construction programs and thereafter on a biennial basis.	To minimise risk of site disturbance	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
11.6.2 Undertake regular inspections of no go areas containing sites of significance to aboriginal people to ensure current construction activities are not resulting in their disturbance.	To protect culturally significant areas.	Refer to **Section 7.11** of this EMP

Rehabilitation and Management		
Monitoring Task	**Purpose**	**ABC Comments**
12.4.1 Inspections will be made at bi-monthly regular intervals after construction is complete to over sow bare areas with appropriate local seed mixes, as necessary.	To assist in revegetation.	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
12.4.2 After Rehabilitation begins, colonisation by animals from adjacent areas will be monitored annually.	To assess efficacy of rehabilitation.	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.
12.4.3 The success of rehabilitation will be monitored annually for the first two years after construction by qualified personnel.	To assess efficacy of rehabilitation.	N/A
12.4.4 Vegetative cover will be documented annually by written description, photographic record and the cover/ abundance rating of representative areas.	To assess efficacy of rehabilitation.	It has been agreed with the EAG that significant construction activities will have a project specific CEMP developed which will cover the requirements of this condition.

Mangroves and Acid Sulphate Soils		
Monitoring Task	**Purpose**	**ABC Comments**
Where PASS and AASS are known to exist conduct weekly water quality monitoring along the railway embankment during construction. Review frequency at end of construction. Monitor water temperature, pH, conductivity and salinity. Monitoring sites to be determined and reviewed in consultation with DIPL.	To determine if acid formation has occurred.	N/A
Carry out regular (weekly) visual inspections of the mangrove stands along the railway embankment.	To determine if dieback or other damage has occurred.	Refer to **Section 7.14** of this EMP

Appendix B - Aurizon Safety, Health & Environment Committee Charter (Enterprise Wide)

Appendix C - Aurizon SHE Commitment (Enterprise Wide)

Appendix D - Aurizon Environmental Management Principle