Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment

Draft Environmental Impact Statement (EIS)

Section 10 - Environmental Management

Prepared pursuant to the Environment Protection Act 2019

October 2021

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Key Project Terms

Term	Definition
Adaptive Management	Systematic process for incrementally improving management practices by learning from the outcomes of past and current practices.
Carbon in Leach	This process uses a dilute alkaline cyanide solution to leach (dissolve) gold from the ore material. Activated carbon removes gold out of dilute cyanide solution by adsorption (sticking). The leaching agent and activated carbon are added together in a slurry of ore and water.
Development Envelope	Defined as the maximum area within which the Project footprint could occur. The development envelope for the Project encompasses 790 ha, inclusive of Rustlers Roost, Quest 29, the accommodation camp and haul road.
Environmental Aspect	An element of the Primary Gold's activities, products or services that can interact with the environment.
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from the Primary Gold's environmental aspects. Environmental impacts can be caused directly or indirectly from a Project activity or cumulatively with other non-Project related activities in a set area.
Environmental Factor	The NT EPA listed environmental objectives to identify environmental matters that have value to the Northern Territory and that need to be protected; and to state the objective to be achieved for each matter. The NT EPA has prepared these environmental objectives and organised these in structured divisions of the environment, called environmental factors.
Existing Disturbance Footprint	Defined as the direct disturbance area from known historical activities associated with the Rustlers Roost, Quest 29, accommodation camp and haul road areas. For Rustlers Roost and Quest 29 this is taken from the existing Mine Management Plans. The existing direct disturbance footprint encompasses 169.4ha within the development envelope.
Heap Leach Pad	Existing areas where historic mining placed ore for processing via a leaching solution to dissolve and capture the mineral. The pads contain the remaining material.
Maximum Vegetation Clearing Extent	The maximum extent of native vegetation clearing proposed for the Project based on mapped vegetation extent layers which account for historic anthropogenic disturbances to the development envelope (e.g. historic mining and pastoral activities). This area constitutes a total of 368.86 ha.
Project	The Project includes the expansion of existing pits, waste rock landforms, water storage dams and internal roads in both the Rustlers Roost and Quest 29 MLs. Two new pits will be constructed at Rustlers Roost and new infrastructure includes an onsite processing plant, a tailings storage facility, a landfill, laydown area, magazine, administration office, accommodation camp and groundwater bores for water supply. The Project is inclusive of an expanded connecting haul road between the non-contiguous extraction areas and an accommodation camp.
Project Area	The Project area is defined as wholly including ML1083 (Rustlers Roost), ML 29783 (Quest 29), ML 29814 (accommodation camp) and the connecting haul road. The entire Project area covers 1,143.25 ha.
Direct Disturbance Footprint	Defined as the direct disturbance area based on the current proposed infrastructure and material placement inclusive of Rustlers Roost, Quest 29, the accommodation camp and haul road. This area covers both historically disturbed and undisturbed areas. The disturbance footprint encompasses 532.84 ha within the Project area.
Significant Impact	A significant impact of an action is an impact of major consequence having regard to: (a) the context and intensity of the impact; and (b) the sensitivity, value and quality of the environment impacted on and the duration, magnitude and geographic extent of the impact.
Study Area	Refers to the area of survey or investigation for a specific study. This area may be beyond the Project area or development envelope.
Tailings Storage Facility	A specially engineered and constructed impoundment into which tailings (residue) from the ore processing plant is deposited for placement in perpetuity. The storage facility is constructed with confining embankments consisting of earthen material (e.g. rock and soil) and capped following closure.
Waste Rock Dump	An engineered and constructed impoundment into which overburden from the mining process is placed for safe storage in perpetuity.

Acronyms, Abbreviations and Units

Abbreviation, Acronym or Unit	Definition
$m	Million dollars
%	Percentage
+ve	Assessment of positive
µS	Microsiemens
4WD	Four-wheel drive
AADT	Average Annual Daily Traffic
AAS	Atomic Absorption Spectrophotometer
AAPA	Aboriginal Areas Protection Authority
AARL	Anglo American Research Laboratory
ABS	Australian Bureau of Statistics
AE	Aquatic Ecosystems
AEP	Annual Exceedance Probability
AFANT	Amateur Fishermen's Association of the Northern Territory
AHD	Australian Height Datum
ALA	Atlas of Living Australia
ALARP	As Low As Reasonably Practicable
AMD	Acid and Metalliferous Drainage
ANC	Acid Neutralising Capacity
ANCOLD	Australian National Committee on Large Dams
ANFO	Ammonium Nitrate
ANZG	Australia and New Zealand Government
ARI	Average Recurrence Interval
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
AS	Australian Standard
ASRIS	Australian Soil Resource Information System
ASX	Australian Stock Exchange
AS/NZS	Australian/New Zealand Standards
AUSRIVAS	Australian River Assessment System
BESS	Battery Energy Storage System
BoM	Bureau of Meteorology
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
Bq	Becquerel
BUD	Beneficial Use Declaration
CAD	Computer-Aided Design
CAPEX	Capital Expenditure
CCTV	Closed Circuit Television
CE	Community and Economy
CEO	Chief Operating Officer
CH_4	Methane

Abbreviation, Acronym or Unit	Definition
CIL	Carbon in Leach
CO_2	Carbon Dioxide
CO_2-e	Carbon Dioxide Equivalent
COPC	Contaminant of Potential Concern
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSL	Compact Soil Liner
CSM	Conceptual Site Model
C&D	Construction and Demolition
C&I	Commercial and Industrial
DAWE	Department of Agriculture, Water and Environment (Cth) (current)
DEPWS	Department of Environment, Parks and Water Security (NT) (current)
DGV	Default Guideline Value
DIDO	Drive-in Drive-out
DITT	Department of Industry, Tourism and Trade (NT) (current)
DIWA	Directory of Important Wetlands of Australia
DO	Dissolved Oxygen
DotE	Department of the Environment (Cth) (former)
DotEE	Department of the Environment and Energy (Cth) (former)
EC	Electrical Conductivity
EH&S	Environment, Health and Safety
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
EP Act	*Environment Protection Act 2019*
ERA	Energy Resources of Australia
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
GDE	Groundwater Dependent Ecosystem
GGAP	Greenhouse Gas Abatement Plan
GHG	Greenhouse Gas
GJ	Gigajoule
GL	Gigalitre (1,000 Megalitres)
GPS	Global Positioning System
GRP	Gross Regional Product
GST	Goods and Services Tax
g/t	Grams Per Tonne
GV	Guideline Value
GWP	Global Warming Potential
ha	Hectare

Abbreviation, Acronym or Unit	Definition
HDPE	High Density Polyethylene
HEC-HMS	Hydrologic Modelling System
HFC	Hydrofluorocarbons
HP	Hydrological Processes
HSE	Health, Safety and Environment
IAP2	International Association for Public Participation
IBC	Intermediate Bulk Container
ID	Identification
IECA	International Erosion Control Association
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Provider
ISO	International Organisation for Standardisation
IWEQ	Inland Water Environmental Quality
JORC	Joint Ore Reserve Committee
kL	Kilolitre
km	Kilometre
km^2	Square Kilometre
kV	Kilovolt
L	Litre
L/s	Litre Per Second
LED	Light Emitting Diode
LiDAR	Light Detection and Ranging
LNG	Liquefied Natural Gas
LOM	Life-of-Mine
LPG	Liquefied Petroleum Gas
M	Million
m	Metre
m^2	Metre squared
m^3	Cubic metre
mAHD	Metres Australian Height Datum
mBGL	Metres Below Ground Level
MCP	Mine Closure Plan
MEDLI	Model for Effluent Disposal Using Land
mg	Milligram
ML	Mining Lease (Granted)
MLA	Mining Lease Application
mm	Millimetre
MMP	Mining Management Plan
MNES	Matter of National Environmental Significance
MP	Management Plan
mRL	Metres Reduced Level
Mt	Million Tonnes

Abbreviation, Acronym or Unit	Definition
Mtpa	Million Tonnes Per Annum
MW	Megawatt
N_2O	Nitrous Oxide
NAF	Non-Acid Forming
NAPP	Net Acid Producing Potential
N/A	Not Applicable
NGER Act	*National Greenhouse Energy Reporting Act 2007*
NLC	Northern Land Council
NMD	Neutral Mine Drainage
NORM	Naturally Occurring Radioactive Material
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NSESD	National Strategy for Ecologically Sustainable Development
NT	Northern Territory
NTG	Northern Territory Government
NTU	Nephelometric Turbidity Unit
NT Act	*Native Title Act 1993*
NVIS	National Vegetation Information System
OPEX	Operational Expenditure
PAF	Potentially Acid Forming
PASS	Potential Acid Sulfate Soil
PER	Public Environmental Report
PET	Plecoptera, Ephemeroptera and Trichoptera
PFC	Perfluorocarbon
PGO	Primary Gold Limited, a wholly owned subsidiary of Hanking Australia Investment Pty Ltd
PMF	Probable Maximum Flood
PMLU	Post Mining Land Use
PMST	Protected Matter Search Tool
PPL	Perpetual Pastoral Lease
Q	Quarter
RL	Reduced Level
RMP	Risk Management Plan
RO	Reverse Osmosis
ROM	Run of Mine
RRMPL	Rustlers Roost Mining Pty Ltd
RSWL	Reduced Standing Water Level
SA	Statistical Area
SD	Saline Drainage
SDS	Safety Data Sheet
SEP	Stakeholder Engagement Plan
SEIFA	Socio-Economic Indexes for Areas
SF_6	Sulfur Hexafluoride
SGV	Site-Specific Guideline Value

Abbreviation, Acronym or Unit	Definition
SIGNAL	Stream Invertebrate Grade Number – Average Level
SoBS	Site of Botanical Significance
SoCS	Site of Conservation Significance
SSAN	Security Sensitive Ammonium Nitrate
SSC	State Suburb Code
SSTV	Site-Specific Trigger Values
STP	Sewage Treatment Plant
SWGs	Stock Water Drinking Guidelines
SWL	Standing Water Level
t	Tonne
TAMS	Territory Asset Management Services
TARP	Trigger Action Response Plan
TBD	To Be Determined
TE	Terrestrial Ecosystems
TEC	Threatened Ecological Community
TEQ	Terrestrial Environmental Quality
Th	Thorium
TN	Total Nitrogen
ToR	Terms of Reference
TP	Total Phosphorus
TPWC Act	*Territory Parks and Wildlife Conservation Act 1976*
TSF	Tailings Storage Facility
TSS	Total Suspended Solids
TSSC	Threatened Species Scientific Committee
U	Uranium
UC	Uncertain
V	Volt
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
WCD	Water Control District
WDL	Waste Discharge Licence
WMP	Water Management Plan
WONS	Weed of National Significance
WRD	Waste Rock Dump
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

Section 10 Environmental Management

10.1 Environmental Management System

PGO has a strong commitment to responsible environmental management. PGO has commenced preparation of an EMS for the Project and plans to continue to develop the EMS to enable systematic assessment and review of environmental impacts, continuous improvement and obligations to be identified and addressed. An illustration depicting the Project EMS is provided in Figure 10-1. The cyclical process of referring to policy, planning, implementing, checking and reviewing is central to the EMS. The EMS guides environmental management of the Project by providing a framework to prevent or minimise environmental harm, ensure compliance and promote continuous improvement. Details of the following key components of the EMS are described throughout the remainder of this Section:

- Environmental policy;
- Environmental requirements;
- Roles and responsibilities;
- Incident reporting, management and corrective actions;
- Education and training;
- Environmental inspections and audits;
- Communication and reporting;
- Performance outcomes and indicators; and
- Continuous improvement.

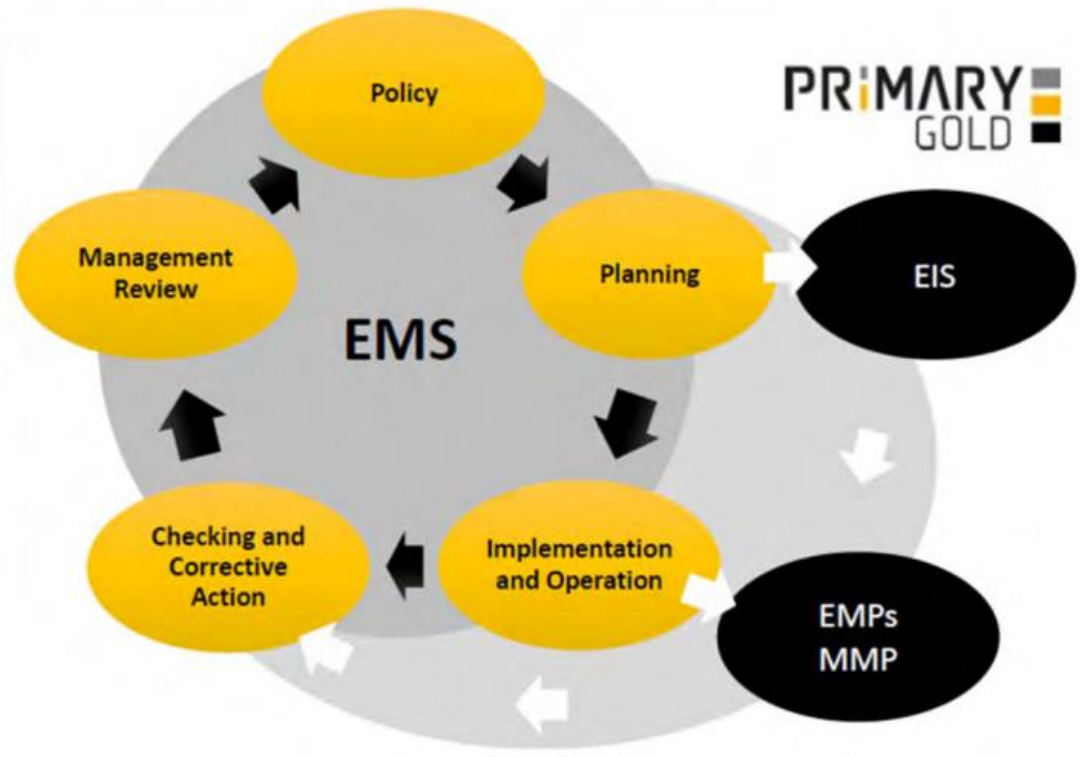

Figure 10-1 Primary Gold's Environmental Management System for the Project

An outline of the proposed EMS documentation structure is provided in Figure 10-2 below. The PGO Environmental Policy is the overarching environmental document for the Project (copy provided in Section 1.4.3). Beneath the Policy in the structure are the EIS commitments (Appendix U), closure specific commitments (Appendix J) and the Project Risk Register (Appendix B). The Risk Register has been developed with input from subject matter experts and forms the basis for identifying environmental risks and appropriate controls to ensure they are managed to acceptable levels. A Project EMP and various Topic EMPs or sub-plans will be developed to manage the impacts associated with the risks identified in the Risk Register (Appendix B). Several of the sub-plans have been prepared and appended to this Draft EIS (including a draft MCP, ESCP, WMP, AMDMP). The Risk Register shall be reviewed and updated on an annual basis, with changes to other system elements made accordingly. The annual review provides a cornerstone for continual improvement of environmental performance.

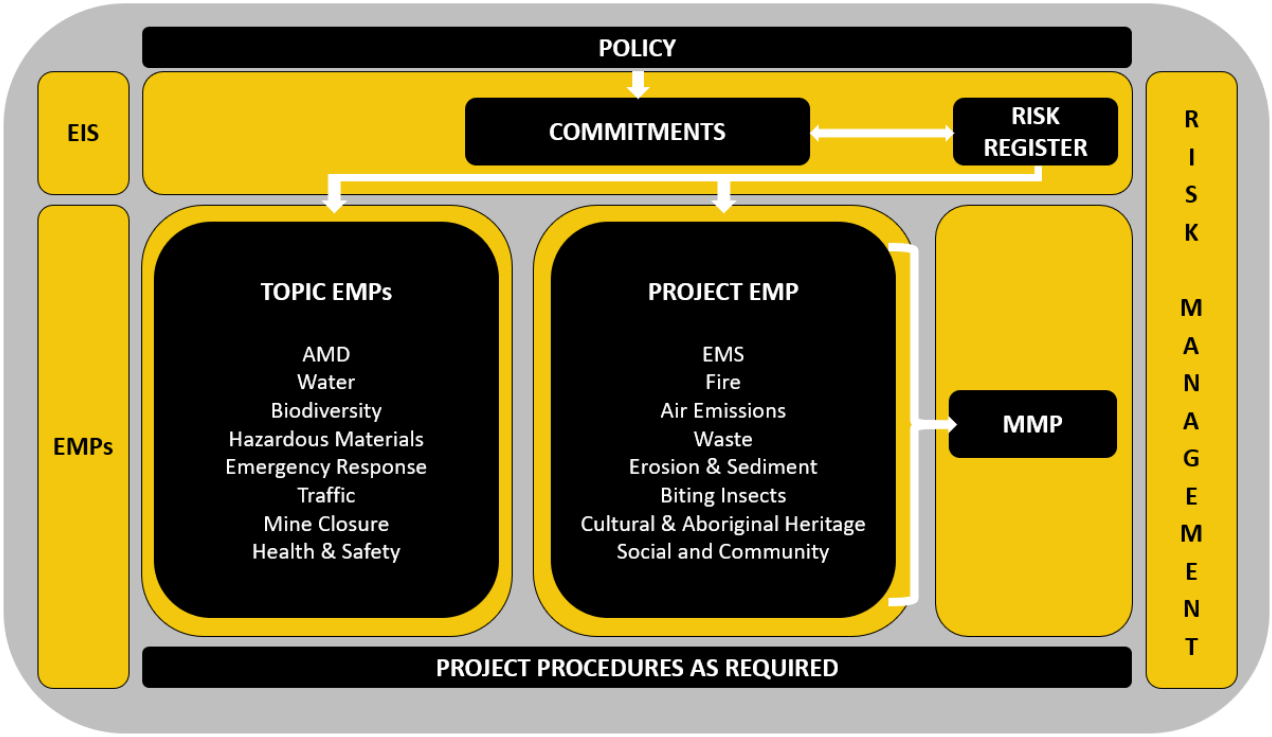

Figure 10-2 Primary Gold's Environmental Management System Documentation Structure for the Project

10.2 Environmental Policy

PGO's Environmental Policy for the Project (copy provided in Section 1.4.3) outlines the commitment to promote sound environmental and community engagement practices, and to undertake all works in accordance with the relevant environmental regulatory requirements. The Environmental Policy shall be reviewed and updated if required on an annual basis. Copies of the Environmental Policy shall be displayed in prominent locations throughout the Project site.

10.3 Environmental Requirements

The PGO management team will identify and track the legal and other requirements applicable to its activities. A legislation register is to be maintained, providing a complete listing of applicable Acts, Regulations, Codes of Practice, Standards, Approvals, Licenses and Permits.

A consolidated list of commitments made in this Draft EIS is provided in Appendix U and specific closure commitments within Appendix J. This list of commitments will form the basis of a commitments register, with other commitments and obligations added from sources such as MMPs, licences, laws and agreements.

10.4 Roles and Responsibilities

10.4.1 Overview

Preliminary roles, responsibilities and authorities for design and construction phases are presented in Section 10.4.2. These will be revised once organisational structures for each phase of the Project are confirmed.

- In accordance with AS/NZS ISO 19011-2011 Guidelines for Quality and/or Environmental Management Systems Auditing:
- Position descriptions will contain responsibilities and accountabilities for environmental compliance and management;
- Include detail of authorities for relevant roles for environmental compliance and management; and
- Performance against environmental compliance and management requirements will be part of the annual performance review.

10.4.2 Design and Construction Works

Table 10-1 provides roles and responsibilities for design and construction works. Refer to Section 1.4.2 for the management organisational structure.

Table 10-1 Draft Environmental Inspection Regime

Role	Responsibility
Managing Director	Approve and endorse the Environmental Policy. Ensure that adequate resources are available to comply with the Environmental Policy. Taking accountability for the effectiveness of the environmental management framework. Ensuring that the environmental management framework achieves the intended outcomes. Promoting continual improvement. Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.
Management Team	Ensure compliance with all legal requirements including requirements of the NT EPA approval Project commitments and other permits. Ensure that requirements of the Project EMP are incorporated into engineering and procurement processes, and that these processes do not conflict with environmental performance requirements. Ensure that adequate resources are available to meet all compliance requirements and implement the requirements of the Project EMP. Ensuring that the Environmental Policy and objectives are established and are compatible with the strategic direction and the context of the organisation. Ensuring the integration of the environmental management framework requirements into the organisation's business processes. Directing and supporting personnel to contribute to the effectiveness of the environmental management.

Role	Responsibility
Contract Management and Procurement Team	Ensure that procurement and contracting strategies reflect environmental performance requirements. Ensure that specifications and contracts include performance requirements in relation to energy and water efficiency and other measures to reduce resource consumption and waste generation. Ensure that contractors hold necessary approvals and authorisations, particularly in relation to waste management services. Review environmental performance credentials of potential contractors. Demonstrate a visible and pro-active commitment to health and safety issue.
Chief Mining Engineer	Ensure that design requirements set out in the EIS commitments, Project EMP and any other design requirements needed to meet conditions of approval are incorporated into design. Consider safety in design and minimisation of environmental impacts in design. Demonstrate a visible and pro-active commitment to health, environment and safety. Identify and provide resources and equipment for the effective management of environmental matters. Ensure Project personnel are trained to improve awareness of environmental issues and responsibilities. Coordinating control measures in the event of environmental emergency. Controlling construction activities until environmental deficiencies are rectified. Reporting environmental performance and compliance to the Managing Director and Management Team through the provision of event-based incident reports and monthly construction performance reports. Ensuring Project operations are performed in accordance with legal and other requirements. Reviewing the effectiveness of the system for continual improvement. Ensuring Project personnel understand and comply with environmental requirements.
Environment, Health and Safety Manager	Provide advice and guidance to internal management, procurement and design teams, and external contractors, in relation to environmental requirements. Conduct regular audits and checks of environmental performance to ensure the EIS conditions, commitments, Project EMP and associated plans are implemented to meet the environmental requirements for the Project. Review and approve the Project environmental risk register and EMP. Manage technical studies and research activities relating to environmental assessment and management of the Project. Communicating the importance of effective environmental management and of conforming to the environmental management framework requirements. Reporting environmental non-compliances to management. Monitoring and documenting environmental performance through the completion of checklists and or inspection reports. Developing procedures specific to address applicable legal and other requirements. Providing Project training and awareness programs. Liaising with employees on environmental matters. Ensuring non-conformances and environmental incidents are identified, reported and suitable corrective actions are determined and completed. Ensuring subcontractors fulfil their environmental obligations. Gathering, analysing and disseminating information on environmental legislation and other requirements relevant to the Project. Coordinating control measures in the event of environmental emergency. Preparing of completing weekly environmental inspections checklists or reports. Manage external relations with landholders and other stakeholders. Coordinate investigation and response to complaints and incidents involving members of the public.
Contractor Construction Managers,	Implement all relevant requirements of the EIS, permits and Project EMP. Integrate environmental management requirements into work procedures and practices.

Role	Responsibility
Supervisors and Environment Staff	Conduct monitoring, auditing and reporting activities required by PGO. Provide initial responses to emergencies involving potential environmental impacts. Participate in incident investigations and assist with incident responses and investigations where required to manage and address environmental impacts of incidents. Conduct induction training and toolbox talks on environmental topics. Compile monthly and quarterly environmental reports.
Contractor Construction workers and all other staff	Comply with all relevant requirements of the EIS conditions, commitments and Project EMP. Identify and report any potential or actual environmental non-conformance or near miss to the EH&S Manager. Comply with the relevant acts, regulations, standards and contractual requirements. Comply with the environmental policy and procedures. Comply with management / supervisory directions. Attend induction and training on environmental awareness as directed. Be aware of environmental risks associated with work activities as identified on risk assessments for those activities.

10.5 Incident Reporting, Management and Corrective Actions

10.5.1 Incident Reporting and Management

An Incident Management Procedure has been developed for the Project. All events (e.g. near misses, audit non-compliances), incidents and injuries shall be reported, assessed and recorded as per the Incident Reporting process illustrated in Figure 10-3 and described below:

- All hazards and incidents are reported to the appropriate Supervisor as soon as the hazard or incident is identified;
- All significant safety incidents are recorded and reported to NT WorkSafe under the *Work Health and Safety (National Uniform Legislation) Act 2011* (NT);
- All significant environmental incidents are recorded and reported to DITT as required under Section 29 of the *Mining Management Act 2001* (NT);
- Where required, copies of the environmental incident report are submitted to the DEPWS and a copy submitted to the AAPA where the incident involves damage or destruction of Aboriginal heritage sites; and
- All significant incidents are investigated, with follow up actions allocated to improve systems and prevent recurrence.

Reportable incidents may include environmental events (such as spillages, unplanned discharges, non-compliance with approval or licence conditions, over clearing and fauna deaths), minor illnesses, minor injuries, medically treated injuries, or serious and potentially serious injuries.

Involvement by the management team in routine inspections by EH&S personnel will ensure that the Corporate level of commitment to the management of EH&S is apparent to all personnel and contractors. Regular and routine site management meetings and communication protocols will ensure prompt reporting of incidents and follow ups.

In the event of a major environmental or safety incident, the matter will be reported to the Chief Mining Engineer and Managing Director who will coordinate any necessary response according to the Emergency and Crisis Management Plan. It is the responsibility of the Chief Mining Engineer to report the occurrence of a serious accident or critical incident

to the CEO of the DITT in accordance with Section 29 of *the Mining Management Act 2001* and conduct a full investigation. Investigations will aim to identify system improvements and will allocate actions to appropriate positions in the organisation to provide for continuous improvement.

10.5.2 Corrective Actions

Corrective and preventative action requires that PGO implements a corrective action process consisting of the following steps:

- Identification of a problem (failure or deficiency);
- Root cause analysis to identify causes and determine solutions;
- Decision as to the appropriate action;
- Application and documentation of corrective or preventative action; and
- Follow-up and evaluation.

Corrective actions in relation to environmental management may arise from:

- Recommendations and outcomes of incident investigation reports, including investigations into incidents, near misses and non-compliances;
- Reviews of monitoring results indicating that performance requirements are not being met and/or that trends indicate that environmental degradation may be occurring;
- Checks and inspections (note that minor corrective actions identified through checks and inspections will generally be resolved on the spot);
- Identification of hazards or improvement opportunities;
- Audit recommendations; and
- Complaints.

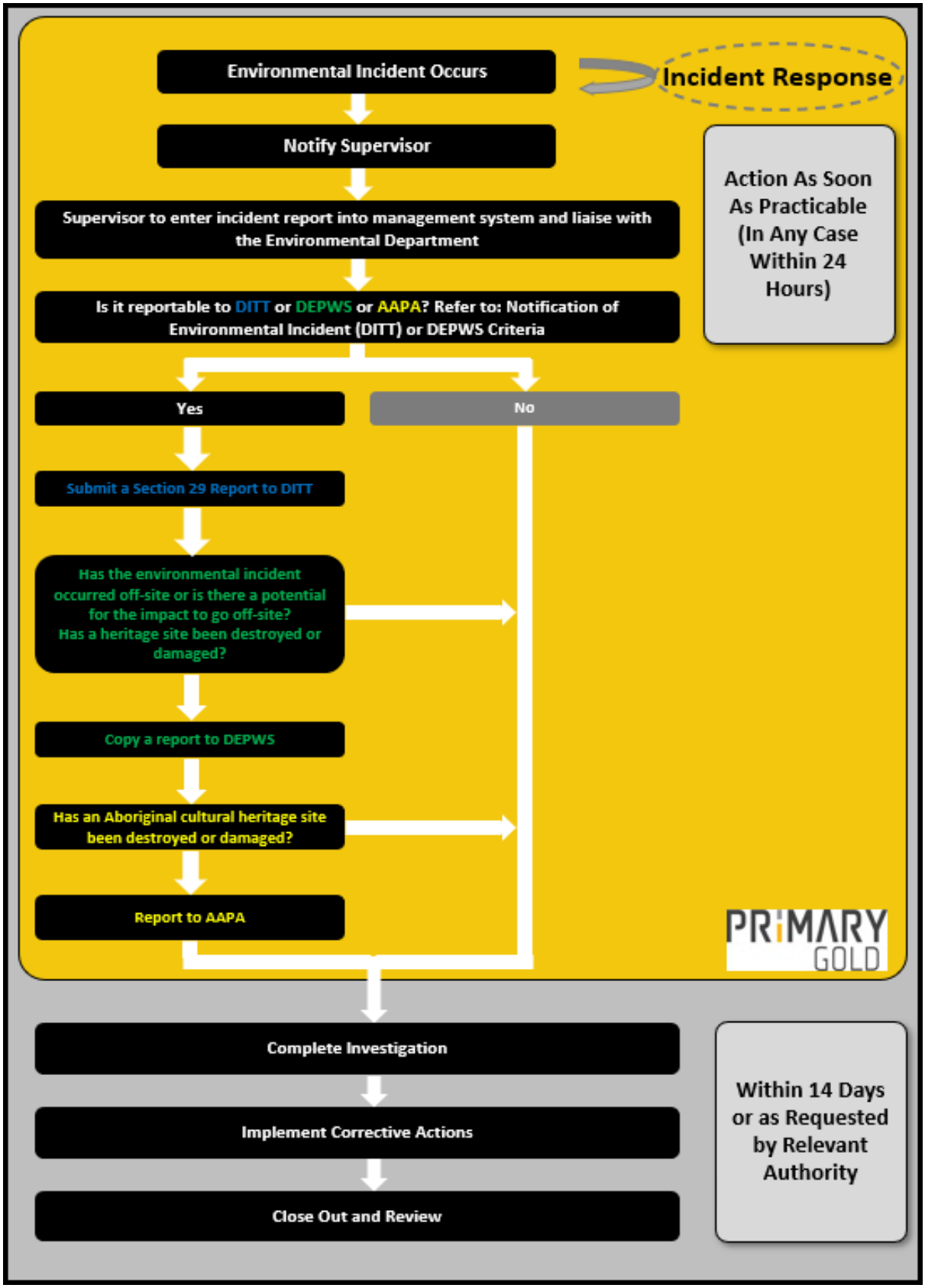

Figure 10-3 Primary Gold's Environmental Incident Management Process for the Project

10.6 Education and Training

PGO will develop and provide all employees and contractors working on the site with an induction. The induction will include an introduction to the site and establish the minimum standards required of all persons to the site. An overview of environmental management will be included along with employees' responsibilities with regard to the environment and their own health and safety. All Contractors will be required to ensure their employees have the required level of competence and training, and provide evidence to PGO.

All health, safety and environmental policies will be communicated to employees and contractors. All employees/contractors will be responsible for adherence to corporate and site policies as part of their duty of care and employment contract conditions. Implementation of the policies is achieved by:

- Employment strategies;
- Copies of policies included in tender documents and contracts;
- Induction of employees, contractors, contractor's employees and visitors;
- Displaying of policies in work areas;
- Training programs; and
- Policies available on the internal server.

Ongoing awareness and communication of environmental issues will be reinforced through email notification, bulletin boards, daily site meetings, toolbox talks, training and awareness programmes. Communication meetings will be regularly held and environmental issues raised and discussed as needed.

All staff will be required to follow department guidelines on off-road driving, safety, ground clearing, staged rehabilitation, bio-security, weed reporting and spread minimisation, and report native and feral animal sightings to the environmental representatives. They are also required to report any environmental incidents to their supervisor or manager and take appropriate action. A preliminary training matrix has been development and provided in Table 10-2.

Table 10-2 Preliminary Training and Competency Matrix

Training	Managing Director	Management Team	Contract Management Team	Chief Mining Engineer	Environment, Health and Safety Manager	Contractor Supervisors	Contractors and all other staff	Visitors
General induction	M	M	M	M	M	M	M	
Short induction								M
PGO environmental management framework	M	M	M	M	M	M		
Legal and other obligations	M	M		M	M	M		
Degree qualification – environmental management					M			

Training	Managing Director	Management Team	Contract Management Team	Chief Mining Engineer	Environment, Health and Safety Manager	Contractor Supervisors	Contractors and all other staff	Visitors
Dangerous goods storage and handling				M	M	M	AR	
Waste management and minimisation			M	M	M	M	AR	
Spill prevention and response				M	M	M	M	
Fire fighting				AR	AR	AR	AR	
Erosion and sediment control				M	M	M	M	
Energy and water conservation, including vehicle operation to minimise energy consumption			M	M	M	M	AR	
Cultural heritage awareness and monitoring		M	M	M	M	M	M	M
Weed hygiene			M	M	M	M	M	M
Introductory training – new or substantially amended procedures		AR	AR	AR	M	AR	AR	
Toolbox talks – environmental topics including minor changes to compliance and management requirements and procedures	AR	M	M	M	M	M	M	AR

M = Mandatory
AR = As relevant to work requirements

10.7 Environmental Inspections and Audits

10.7.1 Inspections

Regular environmental site inspections shall be conducted throughout the life of the Project. These inspections shall be undertaken by the EH&S Manager (or nominated personnel), utilising an Environmental Inspection Checklist that shall be developed for the Project.

The checklist will record whether the performance requirement for each item was achieved and corrective actions required to achieve the performance requirement. Where the non-conformance does not present a significant risk of environmental harm, and can be corrected promptly, the corrective action will be closed out on the checklist. Where the risk of environmental harm is more significant and/or the corrective action cannot be undertaken promptly, the action will be recorded in the corrective action register. Table 10-3 provides the draft environmental inspection regime for the Project.

Table 10-3 Draft Environmental Inspection Regime

Inspection	Frequency	Responsible	Output	Tracking
Site-wide Environmental Inspection	Weekly	PGO Site Environmental Officer	Weekly Inspection Report	Corrective Action Register
Project-specific Environmental Inspection	As per Contractor EMP	Contractor	As per Contractor EMP	Corrective Action Register
Project-specific Pre-Wet Weather Inspection	Forecast 80% chance of 10 mm or more in 24 hr period	Contractor	Pre-Wet Weather Inspection Report	Corrective Action Register
Project-specific Post-Wet Weather Inspection	Next day after 10 mm or more of rain in 24 hr period	Contractor	Post-Wet Weather Inspection Report	Corrective Action Register
Site-wide Environmental Observation	Ad Hoc	PGO Site Environmental Officer	Environmental Observation Report	Corrective Action Register

10.7.2 Audits

10.7.2.1 Overview

Project performance against PGO and regulatory requirements shall be audited to assess compliance and ensure any non-compliances identified are appropriately addressed. Environmental audits shall be regularly conducted during the construction, operational and closure phases of the Project.

Records management systems developed by Contractors employed for the Project shall include an interface whereby the PGO representatives can readily access monitoring and reporting information, including compliance audit program reporting.

The following standards may be relevant to auditing activities:

- AS/NZS ISO 14015-2001 Environmental Management – Environmental Assessment of Sites and Organisations;
- AS/NZS ISO/IEC 17021:2011 Conformity assessment – Requirements for bodies providing audit and certification of management systems;
- AS/NZS ISO 19011-2011 Guidelines for Quality and/or Environmental Management Systems Auditing; and
- ISO 19011:2011 Guidelines for auditing management systems.

Draft audit reports will be reviewed by the EH&S Manager. Once an audit report is finalised:

- Audit reports will be circulated to the management team;
- Recommendations will be entered into a corrective action register;
- Findings will be discussed at management meetings;
- Where relevant, findings will be presented as toolbox talks;

- Reports and findings will be tabled at management reviews; and
- Any non-compliances that are required to be reported under legislation or conditions of approval will be reported.

10.7.2.2 Internal

Auditing during construction will depend on the contracting strategy which is currently being finalised. For contractors/subcontractors, PGO will conduct audits on a six-monthly basis, or for shorter duration contracts, at least once during the contract duration. These audits will cover:

- Contractor's compliance with legal and other obligations;
- Whether contractor's management plans have appropriately identified environmental impacts and risks;
- Whether roles, responsibilities and training and competency requirements have been identified and followed;
- Whether adequate management and control strategies are in place to achieve compliance with legal requirements and performance requirements documented in the Project EMP;
- Whether management and control strategies are being implemented;
- Monitoring approaches and outcomes, and identification and implementation of corrective actions; and
- Adequacy of record keeping and reporting.

It would also be expected that contractors will have internal and external audit programs. Internal audits of environmental performance will be conducted by PGO annually.

10.8 Communication and Reporting

10.8.1 Project Internal

Internal reporting will be required in response to relevant Project and legislative requirements. Internal Project reporting is set out in Table 10-4.

Table 10-4 Project Internal Reporting

Reporting Trigger	Report Content	Report Recipient	Reporting Trigger
Monthly Fauna Sightings / Mortality	All Pest Flora and Fauna sited Fauna Mortalities	PGO Site Environment Officer	10th Business day of following month post reporting period
National Greenhouse Energy Reporting	Energy consumption	PGO Operations Manager	10th Business day of following month post reporting period
National Pollutant Inventory	Pollutant emissions	PGO Operations Manager	10th Business day of following month post reporting period
Wet Weather Pre and Post ESC	Details of all wet weather pre and post inspections	PGO Site Environment Officer	Each day as requested by PGO
Incidents causing actual or potential environmental harm	Incident investigation and corrective actions	PGO Site Environment Officer	In line with Environmental Incident Reporting and Classification Procedure

Reporting Trigger	Report Content	Report Recipient	Reporting Trigger
Contractor Monitoring and Reporting Requirements	As per Contractor EMP	PGO Site Environment Officer	In line with the requirements prescribed in EMP

10.8.2 Project External

External reporting is expected to be required in response to legislative requirements. Initial reporting requirements are set out in Table 10-5 and this will be updated based on conditions of approvals.

Table 10-5 External Environmental Reporting Requirements

Reporting Trigger	Report Content	Responsibility	Report Recipient	Reporting Trigger
Annual return	Annual audit compliance report	PGO Chief Mining Engineer	DEPWS	TBA
Environmental Mining Report	Report performance against the MMP	PGO EH&S Manager	DITT	Prior 30 June each year
NT EPA Approval	As per conditions	PGO EH&S Manager	NT EPA	TBA
National Greenhouse Energy Reporting	Energy consumption	PGO Operations Manager	Clean Energy Regulator	TBA
National Pollutant Inventory	Pollutant emissions	PGO Operations Manager	DAWE	TBA
Incidents causing actual or potential environmental harm	Incident investigation and corrective actions	PGO EH&S Manager	DEPWS	In line with Environmental Incident Reporting and Classification Procedure

10.8.3 Contractor Monthly Reporting

Monthly Environmental Reports must be prepared and sent to the Chief Mining Engineer and Managing Director by the 10th day of the following month. The monthly environmental report is to include the following:

- All complaints/ enquiries received, and actions taken to resolve issues;
- All discharges from licensed points and any other dewatering activities including dates, times, monitoring results and volumes released;
- All information regarding any incident or non-compliance that has occurred on site;
- Construction updates for high-risk activities;
- Status of approvals;
- Details of compliance with relevant conditions and legislative requirements;
- Identify opportunities for continual improvement of the environmental management processes and practices;
- All environmental monitoring data including but not limited to rainfall, dust, noise and vibration, and water quality; and

- Provide the following information on a monthly basis including but not limited to:
  - Vegetation clearing quantities by type and quantity;
  - Fauna and flora relocations;
  - Incident locations;
  - Approved water discharge locations and associated water quality results;
  - Water quality monitoring data;
  - Disturbance Footprint; and
  - Ecological survey data.

10.8.4 Records of Environmental Activities

PGO and contractor(s) HSE representatives will maintain, as part of the Project records, legible environmental records of all environmental activities associated with work under the contract to demonstrate compliance with conditions of approval, the Project EMP and contractor EMP. The records must include:

- Site environmental inspection reports;
- Environmental monitoring data and reports (records are to identify the date and time of any sampling, the sample location and the person carrying out the sampling);
- Internal and external audit reports;
- Reports of environmental incidents, environmental complaints or enquiries, associated actions taken, and follow-up actions;
- Minutes of management review meetings;
- All records required to demonstrate compliance with the conditions of approval associated with the works;
- Monthly reports of environmental performance (see Section 10.8.3), including all non-compliances with conditions of approval; and
- Induction and training records.

These records are to be maintained for at least five years.

10.8.5 Documentation, Document Control and Records

The Project EMP, documents and registers will be controlled documents subject to unique document identifiers and version control. The corrective action register will be managed through a database to ensure that updates on the status of corrective actions are available to managers and supervisors.

Other documentation and records to be retained will include:

- Incident register and investigation reports;

- Corrective actions register;
- Complaints register;
- Inspection records (e.g. completed site checklists);
- Maintenance records (contractor);
- Consultation register;
- Records of training and induction;
- Audit reports; and
- All monitoring records.

Monitoring records in relation to the Project must be retained for five years and will be available for provision to the administering authority within 10 business days of any request.

Where changes are required to Project documents, the Project Manager will coordinate and where required approve all amendments/revisions to the documents as required.

The following Project documents will be controlled documents:

- Environmental management plan, any associated sub-plans and appendices; and
- Environmental procedures and forms.

Where superseded versions of controlled documents are required to be retained for any purposes, documents will be identified 'Superseded' to prevent the unintended use of obsolete information.

10.9 Performance Outcomes and Indicators

Performance outcomes and indicators will be identified within the Project EMP. Planning, objectives and targets will be:

- Specific to the Project;
- Quantified and measurable;
- Realistic and achievable;
- Focused on continual improvement;
- Consistent with, and related to, PGO's Environmental Policy;
- Periodically reviewed and, if required, revised; and
- Performance indicators will be reviewed annually.

10.10 Continual Improvement

The Project EMS has incorporated various measures that promote continuous improvement throughout the life of the Project. These include:

- Regular audits and inspections to determine environmental concerns and areas for improvement;
- Incident investigations to look at identifying system improvements as part of the investigation process; and
- Annual review of the Risk Register with changes to other system elements made accordingly.