



Natural Hydrogen Exploration Low impact on-road geophysical activities

PEL 687 – Yorke Peninsula

Statement of
Environmental Objectives

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1. Introduction

1.1. Purpose

This Statement of Environmental Objectives (SEO) has been prepared to meet the requirements of Sections 99 and 100 of the *Petroleum and Geothermal Energy Act 2000* (PGE Act) and Regulations 12 and 13 of the *Petroleum and Geothermal Energy Regulations 2013* (PGE Regulations).

The intent of the SEO is to outline the environmental objectives to which geophysical operations using existing roads within PEL 687 on Yorke Peninsula (with minimal requirement to access private land) will conform, and the criteria upon which the achievement of these objectives will be assessed.

The objectives of this SEO have been developed on the basis of the information provided in the Environmental Impact Report (EIR) (Gold Hydrogen 2024), and are in keeping with the objectives of the PGE Act, which include:

- to minimise the environmental damage from exploration for, or recovery or commercial utilisation of, resources to which the Act applies
- to establish appropriate consultative processes involving people directly affected by regulated activities and the public generally
- to protect the public from risks inherent in regulated activities.

‘Environment’ is broadly defined in the PGE Act to include natural, social, cultural and economic aspects. The environmental objectives outlined in this SEO incorporate these aspects.

1.2. Scope

This SEO applies the activities that would be involved with undertaking geophysical operations using existing roads within PEL 687 on Yorke Peninsula (with minimal requirement to access private land). These activities are described in the EIR (Gold Hydrogen 2024). PEL 687 is shown in Figure 1-1.

The following are excluded from the scope of this SEO and the accompanying EIR:

- the portion of PEL 687 located on Kangaroo Island
- activities in reserves established under the *National Parks and Wildlife Act 1972* or exploration activities immediately adjacent to a Marine Park established under the *Marine Parks Act 2007*.

In addition, Gold Hydrogen’s Environmental Impact Report for exploration drilling (Gold Hydrogen 2023a) identified a number of other areas that would specifically be avoided by drilling operations. These areas, which are listed below, would also be avoided by the proposed geophysical operations (noting that the scope described in the EIR would naturally avoid most of these areas):

- Wardang Island Indigenous Protected Area
- Native Vegetation Heritage Agreement areas (established under the *Native Vegetation Act 1991*)
- land where access has not been agreed with the landowner
- land in close proximity to towns or sensitive receptors
- areas of high-quality native vegetation and significant wetland areas
- areas of identified cultural heritage significance.

Figure 1-1: Location of PEL 687 on Yorke Peninsula





2. Environmental Objectives and Assessment Criteria

2.1. Objectives

Potential environmental hazards and consequences associated with geophysical operations using existing roads within PEL 687 on Yorke Peninsula (with minimal requirement to access private land) have been identified in the Environmental Impact Report (Gold Hydrogen 2024). Gold Hydrogen is committed to achieving a range of environmental objectives in regard to these potential hazards.

The environmental objectives geophysical operations using existing roads within PEL 687 on Yorke Peninsula (with minimal requirement to access private land) are:

1. Minimise disturbance to infrastructure, land use and the local community
2. Avoid disturbance to sites of cultural and heritage significance
3. Minimise risks to the health and safety of the public
4. Avoid the introduction and spread of weeds, exotic pest fauna and pathogens
5. Minimise disturbance to and avoid the contamination of soil
6. Minimise disturbance to drainage patterns and avoid impacts to or contamination of surface waters and groundwater resources
7. Minimise disturbance to native vegetation, fauna and associated habitat
8. Minimise the visual impact of operations
9. Minimise the impact on the environment of waste storage, handling and disposal
10. Remediate and rehabilitate operational areas to agreed standards.

2.2. Assessment Criteria

The environmental objectives identified above are subject to an assessment to measure the level of achievement. The assessment criteria for each objective are set out in Table 2-1 and include:

- Defined conditions – In many cases the achievement of an objective can be assessed through ensuring defined conditions are met or carried out. Such conditions include:
 - Prohibitions that achieve the objective through the prevention of unacceptable actions
 - Requirements to carry out certain actions in accordance with approved procedures or industry accepted standards.
- Scientific studies / monitoring - In some cases assessment of the environmental objectives may not be possible in the shorter term and may require longer term monitoring and scientific evaluation. In such cases, the assessment criteria may be in the form of longer-term data and information gathering.

Table 2-1 also outlines the controls that are planned to be implemented to ensure that environmental objectives are achieved, in the 'Guide to How Objectives Can be Achieved' column.



Table 2-1: Environmental Objectives and Assessment Criteria

Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
<p>1. Minimise disturbance to infrastructure, land use and the local community</p>	<p>Adverse impacts of accidental or unforeseen damage to infrastructure or disturbance to land use resolved to the reasonable satisfaction of the road authority / landowner.</p> <p>No adverse impact (outside agreed disturbance / compensation areas) on land use as a result of activities.</p> <p>Timely consultation and notification of proposed activities with relevant landowners and stakeholders can be demonstrated.</p> <p>Landowner / stakeholder complaints are documented, and reasonable steps taken to resolve them can be demonstrated.</p> <p>No uncontrolled fires resulting from regulated activities.</p> <p><u>Fuel and Chemical Storage and Handling</u></p> <p>Refer to Assessment Criteria for Objective 5.</p> <p><u>Waste Management</u></p> <p>Refer to Assessment Criteria for Objective 9.</p>	<ul style="list-style-type: none"> • Road authority / landowner consulted regarding the location, management and timing of proposed activities. • DIT Traffic Management Centre – Roadworks contacted to gain approval for any activities classified as road works or the implementation of a traffic management plan. • If operating on sealed roads, vibroseis trucks or weight drop units implement measures to avoid damage to the road pavement (e.g. use of rubber mats between vibroseis plates and bitumen surface, operation of weight drop units on the road shoulder or verge). • Documentation of road surface condition before and after vibroseis operation (e.g. video recording). • Land access agreements are agreed and put into place before any activities are undertaken on private land. • Any activities on private land conducted in accordance with land access agreement. • Activities are restricted to agreed / defined areas / times. • If necessary, unsealed roads and tracks are sprayed with water as required to minimise dust generation (subject to council approval). • Noise limitation (particularly during early morning/evening) to be included as part of induction procedures (e.g. unnecessary use of horns, reversing of machinery). • Equipment operated and maintained in accordance with manufacturer specifications. • Transport trucks to be restricted to daylight hours as far as possible. • Drivers of heavy vehicles to be instructed not to use engine brake near dwellings. • Adequate buffer maintained between proposed activities and residences. • Assessments of potential noise impacts undertaken as appropriate during design and planning stages. • Lighting will be positioned to minimise light emanating from sites (e.g. laydown) during operations. • Systems in place for logging stakeholder complaints to ensure that issues are addressed as appropriate. • Compliance with Part 10 of the PGE Act (Notice of Entry requirements).



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
		<ul style="list-style-type: none"> • Machinery and equipment removed from site promptly following completion of activities, particularly in visible locations. • Any rehabilitation / restoration activities are undertaken in consultation with, and to the satisfaction of the road authority / landowner. <p><u>Fire Risk</u></p> <ul style="list-style-type: none"> • Existing roads and tracks are utilised. • Liaise with CFS regarding operations to ensure fire concerns are addressed and any Fire and Emergency Services Act requirements are met. • Response to fire included in Emergency Response Plan. • Where necessary (e.g. in fire danger season), fire break constructed around operational sites (e.g. laydown). • Emergency response procedures included in staff training. • Ensure fire risk is included in the induction and all personnel are fully informed on the fire danger season and associated restrictions. <p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> • Refer to measures listed under Objective 5. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> • Refer to measures listed under Objective 9.
<p>2. Avoid disturbance to sites of cultural and heritage significance</p>	<p>In the event the conditions¹ of a cultural heritage clearance are not complied with, the incident is appropriately reported², investigated and remediated in consultation with the relevant Aboriginal heritage organisations, including Native Title groups, Recognised Aboriginal Representative Bodies (RARBs), Aboriginal heritage associations, Traditional Owners and AAR.</p>	<ul style="list-style-type: none"> • Existing roads and tracks are utilised. • Activities avoid areas of identified cultural heritage significance (e.g. any sites identified in searches of the Central Archive and the Register of Aboriginal Sites and Objects). • Heritage risk assessment undertaken if seismic lines are planned to be located in areas such as unformed tracks and undeveloped agricultural land. • Consultation carried out with the Narungga Nation Aboriginal Corporation if activities are located in areas where there is potential to impact cultural heritage, and a cultural heritage survey carried out where required. Any identified sites are avoided.

¹ Note that cultural heritage clearances are not defined under or referenced by the *Aboriginal Heritage Act 1988* and cannot ever authorise impacts to Aboriginal heritage.

² This may include compliance with reporting obligations pursuant to s.20 of the *Aboriginal Heritage Act 1988*



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
	<p>Damage, disturbance or interference to any Aboriginal sites, objects and remains (all as defined under the <i>Aboriginal Heritage Act 1988</i>) is avoided unless authorisation has been obtained under the <i>Aboriginal Heritage Act 1988</i>.</p> <p>Any Aboriginal heritage sites, objects and remains discovered during operations have been appropriately reported and responded to, consistent with the <i>Aboriginal Heritage Act 1988</i>.</p> <p>Non-Aboriginal heritage sites identified and avoided.</p> <p>No impact to non-Aboriginal heritage places and related objects protected under the <i>Heritage Places Act 1993</i> unless approval has been obtained under the <i>Heritage Places Act 1993</i>.</p>	<ul style="list-style-type: none"> • Cultural heritage awareness and issues covered in inductions. Key personnel (e.g. supervisors, machinery operators) receive appropriate cultural heritage training. • Procedures consistent with the relevant obligations under the Aboriginal Heritage Act are in place to appropriately report and respond to any sites discovered during activities. • If Aboriginal sites, objects and remains are discovered during activities: <ul style="list-style-type: none"> ○ works halt in the vicinity of the discovery ○ advice is sought from the Narungga Nation Aboriginal Corporation, a qualified heritage consultant or AAR ○ mitigation measures are implemented to ensure the discovery is avoided. (If the works cannot be relocated to avoid the Aboriginal site, object or remains, authorisation is obtained under the Aboriginal Heritage Act). • Aboriginal heritage discoveries reported to AAR on behalf of the Minister in accordance with section 20 of the Aboriginal Heritage Act. • Records relating to management/avoidance of any identified sites of cultural heritage significance kept and available for audit. • Heritage site registers (and Heritage Branch, DEW, where appropriate) consulted regarding the location of non-Aboriginal heritage sites and any identified sites are avoided.
<p>3. Minimise risks to the health and safety of the public</p>	<p>Reasonable measures implemented to ensure no injuries or health risks to the public.</p> <p>No injuries, incidents or adverse health impacts involving the public from geophysical survey activities that could have been reasonably prevented by the operator.</p> <p><u>Fire Risk</u></p> <p>Refer to Assessment Criteria for Objective 1.</p> <p><u>Waste Management</u></p> <p>Refer to Assessment Criteria for Objective 9.</p>	<ul style="list-style-type: none"> • Traffic management plan developed in consultation with road authority. • Warning signage and traffic management measures (e.g. speed restrictions) installed where appropriate. • Driver behaviour and vehicle speed limits to be included in compulsory induction. • Vehicle speed limits to be observed. • Compliance with relevant speed restrictions on roads and tracks. • Signage warning of access restrictions / hazards placed at the entry to geophysical operations specific work sites (e.g. laydown) as appropriate. • If access to private land is required, access points will be agreed and additional controls, such as the installation of gates, will be implemented. • Landowners, local councils, potentially affected residents and emergency services will be informed of significant activities such as initial mobilisation and final demobilisation from project sites.



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
		<ul style="list-style-type: none"> Any required authorisations (e.g. local council, DIT, police) obtained where required for movement of heavy vehicles along public roads (and transport of dangerous goods), including joint inspections of roads before and after transport moves if necessary. Project site mobilisation and demobilisations to detour around town centres where possible. Equipment operated and maintained in accordance with manufacturer specifications. If necessary, unsealed roads and tracks are sprayed with water as required to minimise dust generation (subject to council approval). <p><u>Fire Risk</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 1. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> Refer to measures listed Objective 9.
<p>4. Avoid the introduction and spread of weeds, exotic pest fauna and pathogens</p>	<p>The presence of weeds, pest animals or pathogens is consistent with or better than pre-disturbance conditions and adjacent land or where this is not the case, a management plan is implemented promptly.</p> <p>Declared plants occurring as a result of regulated activities are reported and managed in accordance with relevant legislation and Regional Landscape Plans.</p>	<ul style="list-style-type: none"> All reasonable and practical endeavours taken to minimise the risks of introducing weeds, exotic pest fauna and pathogens into the areas of operation. Appropriate consultation regarding weeds or pathogens carried out with road authority / landowner (and Landscape Board officers where appropriate). Vehicles and equipment arriving at the site must be clean and free of soil and plant material. Vehicles and equipment entering the region or moving between sites (especially from weed or pathogen infested areas into non-infested areas) will be assessed for the risk of transporting weeds and pathogens and cleaned down where appropriate. Biosecurity procedures implemented as agreed with road authority / landowner. Remain on sealed / gravelled roads and tracks where possible. All records of vehicle or equipment inspections and cleaning will be kept for auditing. Any records of detection, monitoring or eradication of weeds or pathogens introduced by activities are kept and available for review.
<p>5. Minimise disturbance to and avoid the contamination of soil</p>	<p>Geophysical surveys and associated infrastructure appropriately located, prepared and rehabilitated / restored (where required) to minimise disturbance to soil resources.</p> <p>No disturbance to soil profiles resulting from activities remains after restoration.</p>	<ul style="list-style-type: none"> Road authority / landowner consulted about proposed activities to minimise potential for surface disturbance / damage and facilitate rehabilitation / restoration (if required). Balloon tyres or tracked vibroseis trucks are used to reduce ground pressures and minimise impact on soil where necessary. Survey line establishment is monitored and documented to ensure soil disturbance is minimised.



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
	<p>Any escape of chemical, fuel or oil to land is either immediately contained and removed or assessed in accordance with NEPM³ guidelines and remediated in a timely manner.</p> <p><u>Waste Management</u></p> <p>Refer to Assessment Criteria for Objective 9.</p>	<ul style="list-style-type: none"> • Imported paving materials (e.g. gravel at the laydown) are removed from site and soil profiles and contours restored, unless otherwise agreed with the landowner. • Any rehabilitation / restoration activities are undertaken in consultation with, and to the satisfaction of the road authority / landowner. <p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> • All fuel and chemical storage areas will be in accordance with relevant standards and guidelines (e.g. AS 1940, EPA guideline 080/16 Bunding and Spill Management and the Australian Dangerous Goods Code). • Hazardous materials stored, used and disposed of in accordance with relevant legislation on dangerous substances. • Generators (if required e.g. at laydown) to be appropriately located to contain any spills (e.g. in polyethylene lined bunded areas or with suitable alternative spill containment). • Refuelling undertaken in designated refuelling or servicing areas. • Appropriate drip capture / spill capture methods implemented in refuelling areas (e.g. use of drip trays or liners). • Field refuelling of vibroseis trucks (if required) undertaken in a safe location, away from native vegetation or surface water features, with appropriate measures in place (e.g. fire extinguishers, emergency isolation lever / stop button, spill response equipment). • Appropriate spill response equipment is available on site. • Personnel have received training in the use of spill response equipment. • Spills or leaks are immediately reported and clean up actions initiated. • Any contaminated materials generated in response to clean up of a minor spill or leak will be disposed off-site at an EPA approved facility. • Assessment and remediation of uncontained spills with larger scale impact is consistent with the National Environment Protection (Assessment of Site Contamination) Measure and relevant guidelines (e.g. SA EPA guidelines). • Records of any spill events and corrective actions are maintained. • Relevant Safety Data Sheet information readily available on site.

³ National Environment Protection (Assessment of Site Contamination) Measure (1999) amended in 2013



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
<p>6. Minimise disturbance to drainage patterns and avoid impacts to or contamination of surface waters and groundwater resources</p>	<p>Geophysical surveys and associated temporary infrastructure appropriately located, prepared, constructed and rehabilitated / restored to maintain pre-existing water flows.</p> <p>No new ‘water affecting activities’ are undertaken.</p> <p>No unauthorised discharge or escape of petroleum, chemical, fuel or solid wastes to surface water and/or groundwater.</p> <p><u>Fuel and Chemical Storage and Handling</u> Refer to Assessment Criteria for Objective 5.</p> <p><u>Waste Management</u> Refer to Assessment Criteria for Objective 9.</p>	<p><u>Waste Management</u></p> <ul style="list-style-type: none"> Refer to measures listed Objective 9. <p>• Road authority / landowner consulted about proposed activities to minimise potential for surface disturbance / damage and facilitate rehabilitation / restoration (if required).</p> <p>• Original drainage patterns will be maintained.</p> <p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 5. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 9.
<p>7. Minimise disturbance to native vegetation, fauna and associated habitat</p>	<p>No removal of native vegetation.</p> <p>Any sites of rare, vulnerable or endangered species or threatened communities have been identified, flagged and subsequently avoided.</p> <p>No rare, vulnerable or endangered flora removed or damaged.</p> <p>Activities are not carried out in parks or reserves established under the National Parks and Wildlife Act.</p> <p>No significant adverse impacts on native fauna through any stage of geophysical operations.</p> <p>No native fauna casualties that could have reasonably been prevented through the management measures described in the guide.</p> <p><u>Fuel and Chemical Storage and Handling</u> Refer to Assessment Criteria for Objective 5.</p> <p><u>Fire Risk</u> Refer to Assessment Criteria for Objective 1.</p>	<ul style="list-style-type: none"> Native vegetation clearance avoided by location of geophysical survey and associated infrastructure. Vegetation trimmed, not removed, if required. Vehicles avoid driving or parking in areas where native vegetation is present. (Note that ‘native vegetation’ includes small shrubs, herbs and native grasses as well as large shrubs and trees). Activities are not carried out in parks or reserves established under the National Parks and Wildlife Act. If proposed activities are in close proximity to a park or reserve established under the National Parks and Wildlife Act and indirect impacts are likely, consultation is undertaken with DEW to determine appropriate mitigation measures. Fauna mortality (if it occurs) to be captured by incident reporting system and advice from an ecologist if required. Feeding of wildlife is not permitted. No domestic pets allowed at operational sites. No unauthorised off-road or off-line driving or creation of shortcuts.



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
	<p><u>Waste Management</u> Refer to Assessment Criteria for Objective 9</p>	<p><u>Fuel and Chemical Storage and Handling</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 5. <p><u>Fire Risk</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 1. <p><u>Waste Management</u></p> <ul style="list-style-type: none"> Refer to measures listed under Objective 9.
<p>8. Minimise the visual impact of operations</p>	<p>Geophysical surveys and associated infrastructure appropriately located, prepared and rehabilitated / restored to minimise visual impact.</p> <p>Geophysical survey areas and operational sites kept free of litter and rubbish.</p>	<ul style="list-style-type: none"> Planning has been undertaken to minimise impacts of activities, and records are available for audit. Existing roads and tracks are utilised. Road authority / landowners and relevant stakeholders consulted regarding location of proposed activities. Road authority / landowner consulted about proposed activities to minimise potential for surface disturbance / damage and facilitate rehabilitation / restoration (if required). Activities are restricted to agreed / defined areas. Machinery and equipment removed from site promptly following completion of activities, particularly in visible locations. Refer to additional measures listed under Objectives 1, 6, 7, 9 and 10.
<p>9. Minimise the impact on the environment of waste storage, handling and disposal</p>	<p>Wastes are segregated and transported to an EPA licensed facility for recycling or disposal.</p> <p>Reasonable steps are taken to securely contain waste prior to removal from site.</p> <p>All wastewater (sewage/greywater) disposed of in accordance with the <i>South Australian Public Health (Wastewater) Regulations 2013</i>.</p>	<ul style="list-style-type: none"> EPA’s Waste Hierarchy model (avoid, reduce, reuse, recycle, recover, treat, dispose) should be complied with and waste management undertaken with regard to the <i>Environment Protection (Waste to Resources) Policy 2010</i>. Covered bins are provided for the collection and storage of wastes. All loads of rubbish are covered during transport to an approved waste facility. Waste streams are segregated on site and transported to appropriate facilities to maximise waste recovery, reuse and recycling. Production of waste is minimised by purchasing reusable, biodegradable or recyclable materials where practical. Waste disposal is at an EPA licensed facility. Any hazardous wastes handled in accordance with relevant legislation and standards. Licensed contractors used for waste transport.



Environmental Objective	Assessment Criteria	Guide to How Objective Can Be Achieved
		<ul style="list-style-type: none"> If wastewater disposal system is used for sewage and greywater (e.g. at laydown), wastewater disposal is in accordance with the <i>South Australian Public Health (Wastewater) Regulations 2013</i> and in compliance with the South Australian Health On-site Wastewater Systems Code and EPA guideline 247/20 Septage Management and the <i>Environment Protection (Water Quality) Policy 2015</i>. Any necessary approvals (e.g. local council) are obtained for use of wastewater disposal system. Survey areas are kept free of litter and rubbish.
<p>10. Remediate and rehabilitate operational areas to agreed standards</p>	<p>Any surface infrastructure is removed and the ground surface is contoured consistent with pre-existing contours unless alternative agreement is reached with the regulator and stakeholders.</p> <p>No reasonable stakeholder complaints left unresolved.</p> <p>No rubbish or litter remains on restored sites / survey areas.</p> <p>Refer to Assessment Criteria for Objectives 1, 4, 5, 6, 7, 8 and 9.</p>	<ul style="list-style-type: none"> Imported paving materials (e.g. gravel at the laydown) are removed from site and soil profiles and contours restored, unless otherwise agreed with the landowner. Any rehabilitation / restoration activities are undertaken in consultation with, and to the satisfaction of the road authority / landowner. Remediation work (if required) carried out as soon as possible after completion of all activities. Refer to measures listed under Objectives 1, 4, 5, 6, 7, 8 and 9.



3. Reporting

It is a requirement under Section 85 of the PGE Act that ‘serious’ and ‘reportable’ incidents must be reported to the Minister.

Serious Incidents must be reported to the Minister as soon as practicable after the occurrence, as per Section 85 of the PGE Act and Regulation 32 of the PGE Regulations.

Reportable Incidents must be reported to the Department for Energy and Mining (DEM) on a quarterly basis within 1 month of the end of the quarter, as per Regulation 32.

3.1. Incident Definitions

Regulation 12 (2) requires an SEO to identify events that could, if not properly managed or avoided, cause a serious incident or a reportable incident within the meaning of Section 85 of the Act.

Table 3-1 identifies the potential serious and reportable incidents relevant to geophysical operations. These definitions are based on standard definitions developed by DEM, which are intended to expand on definitions provided in Section 85(1) of the Act and Regulation 32(1), and provide consistency for Licensee reporting. They are consistent with the definitions in Gold Hydrogen’s exploration drilling SEO (Gold Hydrogen 2023b).

In accordance with Section 85 of the Act and Regulation 32(1):

Serious Incident means an incident arising from activities conducted under the licence in which:

- a. a person is seriously injured or killed; or
- b. an imminent risk to public health or safety arises; or
- c. serious environmental damage occurs or an imminent risk of serious environmental damage arises; or
- d. security of natural gas supply is prejudiced or an imminent risk of prejudice to security of natural gas supply arises; or
- e. some other event or circumstance occurs or arises that results in the incident falling within a classification of serious incidents under the regulations or a relevant statement of environmental objectives.

Reportable Incident is defined in Section 85(1) of the PGE Act as incidents (other than a serious incident) arising from activities conducted under a licence that are classified under the PGE Regulations as a reportable incident. Regulation 32(1) classifies the following as reportable incidents:

- a. an escape of petroleum, a processed substance, a chemical or a fuel that affects an area that has not been specifically designed to contain such an escape; and
- b. an incident identified as a reportable incident under the relevant statement of environmental objectives.



Table 3-1: Potential Serious and Reportable Incidents

Serious Incidents	Reportable Incidents
<ol style="list-style-type: none"> 1. A person is seriously injured¹ or killed. 2. An imminent risk to public health or safety arises. 3. Serious environmental damage occurs or an imminent risk of serious environmental damage arises. For example: <ol style="list-style-type: none"> a. Damage, disturbance or interference to sites of cultural and / or heritage significance without appropriate authorisations². b. An escape of a regulated substance, processed substance, a chemical or a fuel to a water body, or to land in a place where it is reasonably likely to enter a water body by seepage or infiltration, or onto land that affects the health of native flora and fauna species³. c. Identification of cross flows between aquifers in natural hydraulic isolation, or uncontrolled flows to the surface. d. Any well incident or failure that threatens or poses an imminent risk to safety or a risk of serious damage to environmental values whether or not those values are referred to in State or Commonwealth legislation. e. Detection of a declared weed, animal / plant pathogen or plant pest species that has been introduced or spread as a direct result of activities. f. Any removal of rare, vulnerable or endangered flora and fauna or threatened ecological community without appropriate permits and approvals⁴. g. Any significant alteration of hydrology that affects a significant wetland area. 4. A regulated activity⁵ being undertaken in manner that involved or will involve a serious risk to the health or safety of a person emanating from an immediate or imminent exposure to a hazard⁶. 5. An uncontrolled release resulting in the activation of emergency response and / or evacuation procedures of an area in or adjacent to the release, and / or fire or explosion. 	<ol style="list-style-type: none"> 1. An escape of a regulated substance⁷, processed substance, a chemical or a fuel that affects an area that has not been specifically designed to contain such an escape⁸ (other than a serious incident). 2. An event that has the potential to compromise the physical integrity of an asset or facility. For example: <ul style="list-style-type: none"> - An unapproved excursion outside of critical design or operating conditions / parameters. - Identification of a critical barrier failure that could lead to the potential for cross flows between aquifers in natural hydraulic isolation, or uncontrolled flows to the surface. - Failure of a critical procedural control in place to reduce a credible threat to low or as low as reasonably practicable (ALARP)⁹. 3. Malfunction or failure of critical plant or equipment that had (or still has) potential to cause a serious incident. 4. Unresolved reasonable complaints from stakeholders regarding operations. 5. Any event where an incursion outside a culturally cleared area has occurred or the conditions¹⁰ of a cultural heritage clearance have not been complied with (other than a serious incident).

¹ As per the definition in Section 36 of the *Work Health and Safety Act 2012*.

² Pursuant to *Aboriginal Heritage Act 1988* and *Heritage Places Act 1993*.

³ For reporting purposes, the assessment of 'reasonably likely to enter a water body by seepage or infiltration' may require further intrusive assessment. Should delineation of the extent of the release not be achieved within one week of becoming aware of the incident, DEM will be notified of the incident and the proposed site investigation methodology, including timeframes.

⁴ Pursuant to *Native Vegetation Act 1991* (flora) and *National Parks and Wildlife Act 1972* (fauna).

⁵ Regulated activity as defined in Section 10 of the *Petroleum and Geothermal Energy Act 2000*.

⁶ Resulting in the issuing of a prohibition notice by SafeWork SA pursuant to Section 195 of the *Work Health and Safety Act 2012*.

⁷ As per Petroleum and Geothermal Energy Act definition

⁸ An area assigned during a Hazard and Operability Process (HAZOP) study as a hazardous area for the purpose of gas venting, and designed as such, is considered to be an area specifically designed to contain a gas escape

⁹ As per the Safety Management System process articulated in AS 2885.1-2012, or similar risk assessment process.

¹⁰ Note: Cultural heritage clearances are not defined under or referenced by the *Aboriginal Heritage Act 1988* and cannot ever authorise impacts to Aboriginal heritage.



3.2. Reporting to the EPA

Where applicable, incidents causing or threatening serious or material environmental harm under the *Environment Protection Act 1993* (EP Act) must be reported to the Environmental Protection Authority (EPA) in accordance with section 83 of the EP Act.

The EP Act and its reporting obligations do not apply to:

- petroleum exploration activity undertaken under the PGE Act; or
- wastes produced in the course of an activity (not being a prescribed activity of environmental significance) authorised by a licence under the PGE Act when produced and disposed of to land within the area of the licence.

3.3. Reporting to SafeWork SA

Notifiable incidents (i.e. death, serious injury or illness, or dangerous incidents) must be reported to SafeWork SA in accordance with Part 3 of the South Australian *Work Health and Safety Act 2012*.



4. List of Abbreviations

Abbreviation	Definition
AAR	Aboriginal Affairs and Reconciliation, Attorney General's Department (South Australia)
ALARP	as low as reasonably practicable
CFS	Country Fire Service
contamination	As defined by the <i>Environment Protection Act 1993</i> and the <i>National Environment Protection (Assessment of Site Contamination) Measure (1999) amended in 2013</i>
DEM	Department for Energy and Mining (DEM) (regulator of the Petroleum and Geothermal Energy Act)
DEW	Department for Environment and Water
DIT	Department for Infrastructure and Transport
EIR	Environmental Impact Report prepared in accordance with Section 97 of the <i>Petroleum and Geothermal Energy Act 2000</i> and Regulation 10.
EPA	Environment Protection Authority (South Australia)
infrastructure	Infrastructure includes buildings (including residences), fences, bores, tanks, piping, roads and tracks and other structures, utilities or equipment.
minimise	To reduce as far as reasonably practical, considering all other factors e.g. requirements for safe operations and accessibility
NEPM	<i>National Environment Protection (Assessment of Site Contamination) Measure (1999) amended in 2013</i>
SEO	Statement of Environmental Objectives prepared in accordance with Section 99 and 100 of the <i>Petroleum and Geothermal Energy Act 2000</i> and Regulations 12 and 13.



5. References

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