



Annual Environmental Performance Report

Palm Valley Gas Field
Field Environmental Management Plan

May 2022


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Signature and Certification

We hereby declare that the information provided in this annual environment performance report and accompanying documents is to the best of our knowledge, true and correct.	
Signature	
Name	Ross Evans
Position	Chief Operating Officer
Date	13 May 2022

Glossary

Abbreviation / Acronyms	Definition
AAPA	Aboriginal Areas Protection Authority
AEPR	Annual Environment Performance Report
CoP	Code of Practice
CP	Central Petroleum Limited
CTP	Central Treatment Plant
DEPWS	Department of Environment, Parks and Water Security
DITT	Department Industry, Tourism and Trade
DTSC	Department of Tourism, Sport and Culture
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPS	Environmental Performance Standard
FEMP	Field Environment Management Plan
GIS	Geographic Information System
HSE	Health, Safety and Environment
NEMP	National Environment Management Plan
NLC	Northern Land Council
NORMS	Naturally Occurring Radioactive Materials
NT	Northern Territory
OL3	Operating Licence Three
PVGF	Palm Valley Gas Field
TO	Traditional Owner

Note: throughout the document references to:

- the Department of Environment and Natural Resources (DENR) have been replaced with the Department of Environment, Parks and Water Security (DEPWS)
- The Department of Primary Industries and Resources (DPIR) have been replaced with the Department of Industry, Trade and Tourism (DITT)

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1.0 Introduction

This Annual Environment Performance Report (AEPR), as required under the Petroleum (Environment) Regulations 2016 (NT), is presented to demonstrate the environmental performance of Central Petroleum (CP) as the operator of the Palm Valley Gas Field (PVGF) in respect of achieving the environmental outcomes and performance standards, and monitoring, recording and reporting requirements.

The report includes sufficient information to allow the minister to assess CP's compliance with the obligations described within the PVGF Environmental Management Plan approved 15 February 2019 and any other law in force in the Northern Territory related to conduct of the regulated activity. The AEPR covers the period from 15 February 2021 to 14 February 2022. Activity was undertaken at the Palm Valley Gas Field (PVGF) continuously during the reporting period.

1.1 Background

The regulated activities conducted under the PVGF EMP that have been assessed against performance are as follows:

- Gas production, processing and transfer via pipeline
- Civil maintenance including road, tracks and lease maintenance
- Repair, maintenance of gathering flowlines and associated equipment
- Shutdown maintenance activities including cold venting
- Routine well head maintenance and function testing
- Routine wireline activities as listed in the approved Reservoir Management Plan
- Operations repair and maintenance of existing facilities
- Pipeline and flow line operations, maintenance and repair including pigging
- Maintenance and repairs of existing processing facilities including the direct replacement of obsolete or irreparable equipment
- Grey water and wastewater system maintenance
- Fuel and chemical storage, handling and transportation
- General waste management
- Weed control
- Maintenance of erosion and sediment controls

The location of the PVGF is shown in Figure 1-1.

1.2 Contents of Performance Report

This AEPR describes the environmental performance of CP by evaluating the following:

1. Compliance with Ministerial approval conditions
2. Compliance with each environmental outcome and performance standard within the approved EMP
3. Compliance with reporting requirements in accordance with regulations
4. All recordable and reportable incidents, including root cause analysis and related corrective actions to prevent re-occurrence
5. Findings of all regulatory inspections and audits and related actions to address any findings

Although the *Code of Practice: Onshore Petroleum Activities in the Northern Territory* (legislated 11 June 2019) was implemented post approval of the PVGF EMP, CP is working towards aligned the EMP with the Code of Practice.

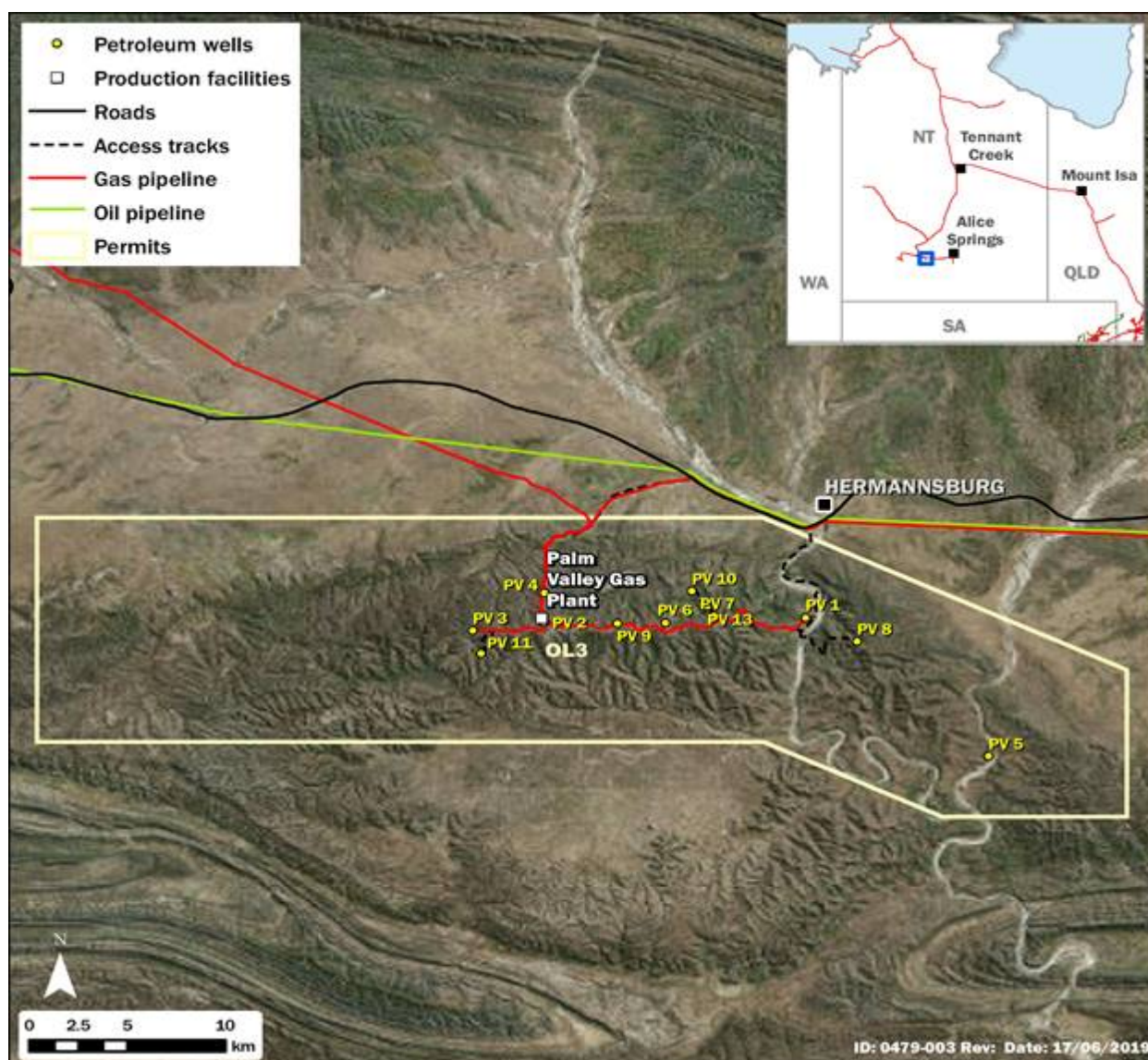


Figure 1-1 Palm Valley Gas Field Location

1.3 Assessment of Compliance

Table 1-1 shows the compliance status indicators used in the AEPR.

Table 1-1 Compliance Descriptors

Indicator	Description
Compliant	Compliant with requirement for entire 12-month reporting period
Non-Compliant	Not compliant with one or all aspects of the requirement during the reporting period
Not Applicable	Requirement not applicable during the reporting period

1.4 Evidence of Compliance

The following sources of evidence are used to demonstrate compliance:

1. Internal tracking of compliance by CP through:
 - Inspections, as committed to in the EMP, as follows:
 - PVGF EMP
 - Our incident management system records
 - Quarterly environmental inspections
 - Area and lease inspection reports
 - Work management and maintenance system records
 - Daily production reports
 - Various registers in place including:
 - animal control, waste, hazardous goods, chemical, weed control
2. Reports provided under the National Greenhouse and Energy Reporting Act
3. Outcome from regulatory inspections conducted by the Department of Environment, Parks and Water Security (DEPWS), Petroleum Operations
4. Recordable and reportable incident reports submitted to DEPWS Petroleum Operations
5. Reports provided to DEPWS, the Department Industry, Tourism and Trade (DITT) and other government agencies.

2.0 Demonstration of Compliance

2.1 Ministerial Approval Conditions

The PVGF FEMP was approved by the Minister for Primary Industry and Resources on 15 February 2019 with conditions, which are assessed for compliance in Table 2-1.

Table 2-1 Compliance with Ministerial EMP Approval Conditions

No	Ministerial Condition	Compliance Status	Evidence
1	2(a) Determination of an environmental security in a form accepted by the Department of Primary Industries and Resources to be submitted no later than 14 March 2019	Compliant	DITT and DEPWS agreed to extend this date to 7 October 2019. CP engaged an independent civil engineering and resource industry services company, to develop an estimate for end-of-life closure and rehabilitation based on their own and industry rates for demolition, waste removal and disposal, and site rehabilitation. Central submitted these estimates and a proposed environmental security to DEPWS in August 2019.
2	2(b) The quantum of the security determined under condition 2(a) is to be submitted and received by the department on or before 12 June 2019 or as agreed to by the Department of Primary Industries and Resources	Compliant	An invoice for the new environmental security was issued by DITT in December 2020 and the payment was made in January 2021.
3	2(c) A plan for the appropriate removal and disposal of the accumulated salts / sediments from the PV9 evaporation pond, is to be submitted to the DPIR on or before 31 May 2019.	Compliant	A plan was submitted to DEPWS on 31 May 2019 which outlined CPs options and a proposed plan for the accumulated salts / sediments from the PV9 evaporation pond. CP are continuing to engage with DEPWS regarding the ongoing commitments within the submitted plan.

2.2 Environmental Outcomes and Performance Standards

Table 2-2 provides a systematic overview of CP’s compliance with the environmental outcomes and environmental performance standards within the approved PVGF FEMP. The environmental outcomes for the PVGF FEMP (as listed in Table 2-2) are sourced from the ‘management objectives’ in Tables 8-1 to 8-13 of the PVGF FEMP and the environmental performance standards sourced from ‘performance measures’ in Tables 8-1 to 8-13 of the PVGF FEMP.

Table 2-2 Compliance with Environmental Outcomes and Environmental Performance Standards

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
1	Minimise impacts to ecosystem and human health values, as a result of asset integrity failures during the regulated activities (asset integrity)	No uncontrolled releases	Compliant	No significant uncontrolled releases occurred as a result of asset integrity failures during the reporting period.
		No asset integrity failures	Compliant	The routing testing, inspection and preventative maintenance program for all gas field infrastructure did not identify any significant asset integrity failures.
		Keep management of change records	Compliant	CP has a defined management of change process with gated approvals at the various stages. All PV asset related changes during the period followed this process and the outcomes were stored in our document management system.
		Keep asset installation records	Compliant	As built design drawings for PV assets installed as part of the operation were maintained in our document management system.
		Keep records of inspections, monitoring test results and maintenance activities	Compliant	Records of inspections, monitoring outcomes and maintenance activities at PV were recorded in our maintenance system. Any rectification work identified is raised as a work order, managed and closed out in the system.
		Keep training and induction records	Compliant	PV site induction and training records were maintained in a training register maintained by site administrators and the HSE function. Induction materials include content which deals with process safety and asset integrity.
		Maintaining records of emergency response plans	Compliant	Emergency response plans were stored electronically and in hard copy on site. These plans were reviewed regularly as part of emergency exercises.
		Keep records of the leak detection volume	Compliant	Incident management systems records confirmed that any incidents involving identified leaks were captured, categorised and assessed within the system.
		Keep records of releases, leaks and associated clean-ups using CP's incident reporting system	Compliant	Incident management systems records confirmed that the incidents involving releases, leaks and associated clean-ups were captured, categorised and assessed within the system.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Monitor wellhead pressure of producing wells	Compliant	Wellhead pressures were monitored in real time through our production management system. In addition, regular lease reviews were undertaken which includes the monitoring well head pressures. These reviews are scheduled, and the outcome recorded in our maintenance management system.
		Monitor wellhead pressure of non-producing wells	Compliant	Regular lease reviews were undertaken which included the monitoring well head pressures. These reviews are scheduled, and the outcome recorded in our work management system.
		Monitor identified water bores annually	Compliant	Groundwater monitoring was undertaken in accordance with our groundwater monitoring plan in May and October 2021.
		Routine testing, inspection and preventative maintenance program for gas field infrastructure as per the inspection regime within Central Petroleum's maintenance management system	Compliant	The routing testing, inspection and preventative maintenance program for all gas field infrastructure was undertaken as per the schedule and recorded in our maintenance management system.
		Monitor plant conditions daily	Compliant	Operators on site and engineers in head office monitor plant conditions daily and the checks and the outcomes are recorded in the maintenance management system.
2	Minimise impacts to ecosystem and human health values, as a result of conducting the regulated activity (chemicals and hazardous materials)	No uncontrolled releases of chemicals and hazardous materials	Non-Compliant	Several minor incidents of uncontrolled releases of chemicals and hazardous materials were recorded during the reporting period, as presented in Quarterly Incident Reports. These included oily water or oil spills ranging in size from <1L to approximately 500L. All spills remained within disturbed operational areas and did not impact any sensitive environments. Spill response and corrective actions were implemented immediately upon identification and investigations conducted. Monitoring of these areas is ongoing to ensure no long-term impacts.
		No incorrect storage and use of chemicals and hazardous materials	Compliant	Area / environmental inspections and incident management system records identified no instances of the incorrect storage or chemicals.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Maintain a hazardous materials register	Compliant	Details of all hazardous chemicals on site are maintained and regularly updated in a chemical register which details the quantities of hazardous chemicals stored brought onto and removed from site.
		Keep records of inspections, monitoring test results and maintenance activities	Compliant	Records of inspections, monitoring outcomes and maintenance activities are recorded in our maintenance system. Any rectification work identified is raised as a work order, managed and closed out in the system.
		Keep training and induction records	Compliant	Site induction and training is recorded by site administrators and the HSE function. Induction materials include content which deals with chemicals and hazardous materials.
		Keep records of releases, leaks and associated clean-ups using CP's incident reporting system	Compliant	Incident management systems records confirmed that the incidents involving releases, leaks and associated clean-ups were captured, categorised and assessed within the system.
		Routine visual inspections on a weekly basis of storage areas to ensure no spills or leaks	Compliant	Weekly area inspections were undertaken of chemical storage areas, waste storage areas to check bunding, containment systems. Any non-compliance would be recorded as an incident in the incident management system, records did not identify any instances where bunding and containment strategies were deficient.
		Visual inspections on a quarterly basis to ensure adequate bunding and containment strategies implemented	Compliant	Regular area / quarterly environmental inspection records confirmed that inspections were conducted. Any non-compliance would be recorded as an incident in the incident management system, records did not identify any instances where bunding and containment strategies were deficient.
		Monitor emergency response drills monthly	Compliant	Emergency response exercises are scheduled in the work management system to be undertaken monthly. The completion of the emergency response exercises is captured and reported in regular monthly HSE reports. The results of the exercises are also captured in our maintenance management system.
		Groundwater monitoring on an annual basis	Compliant	Groundwater monitoring was undertaken in accordance with our groundwater monitoring plan in May and October 2021.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
3	Minimise impacts to ecosystem and human health values during the regulated activity (produced water management)	No asset integrity failures	Complaint	Incident management system records did not identify any incidents involving asset integrity failures related to produced water management.
		No uncontrolled releases of produced water	Complaint	Incident management system records did not identify any incidents of uncontrolled releases of produced water.
		Keep management of change records	Compliant	CP has a defined management of change process with gated approvals at the various stages. All PV changes involving produced water during the period followed this process and the outcomes were stored in our document management system.
		Keep asset installation records	Compliant	As built design drawings for PV produced water assets installed as part of the operation were maintained in our document management system.
		Keep records of inspections, monitoring, testing and maintenance	Compliant	Records of inspections, monitoring outcomes and maintenance activities at PV related to produced water systems were recorded in our maintenance system. Any rectification work identified is raised as a work order, managed and closed out in the system.
		Keep records of emergency response plans	Compliant	Emergency response plans were stored electronically and in hard copy on site. These plans were reviewed regularly as part of emergency exercises. Plans include spill response scenarios and action guides.
		Keep records of releases, leaks and associated clean-ups using CP's incident reporting system	Compliant	Incident management systems records confirmed that the incidents involving releases, leaks and associated clean-ups were captured, categorised and assessed within the system.
		Conduct daily routine readings of wellhead tank liquid levels	Compliant	Daily inspections of wellhead tank liquid levels were undertaken and recorded in the maintenance management system.
		Visually inspecting evaporation ponds weekly to ensure sufficient freeboard for produced water storage	Compliant	Weekly inspections were undertaken at the evaporation ponds to ensure sufficient freeboard for produced water storage. The results of the inspections are recorded in the maintenance management system.
4	Minimise impacts on soil, surface	No domestic waste remaining onsite at completion of activities	Not Applicable	Activities at the operation are ongoing, therefore the EPS was not triggered.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
	water, groundwater, sensitive habitat and air quality, minimise creation of food sources or habitat for pest species, minimise waste generation through reduce, reuse, recycle programs, during the regulate activity (waste management)	No unregulated waste handling	Compliant	All waste was removed by licensed contractors to suitably licenced facilities for treatment or disposal. All waste stored on, removed from and disposed of is recorded in a waste register which includes the date of removal, type of waste, whether it is listed, volume of waste, who removed it and its destination.
		Pest species will not be encouraged to site	Compliant	Regular area inspections, animal register and incident management system records did not identify any instances of the introduction of or any increase pest fauna numbers on site.
		Naturally Occurring Radioactive Materials exposure is understood and a management plan in place	Compliant	NORMs risks and exposures are understood, and a management plan is in place.
		Maintaining a waste register	Compliant	The details of all waste stored on site are maintained in a waste register which details the material type, stored quantities, licenced transporter.
		Maintaining waste disposal records including all waste certificates to be noted and accounted for	Compliant	All waste removed from site and disposed of was recorded in a register which includes the date of removal, type of waste, whether it is listed, volume of waste, who removed it and its destination. Listed wastes are noted and accounted for.
		Maintain records of waste storage site inspections	Compliant	Inspections of waste storage areas to check bunding, containment systems and potential spills and leaks were included in regular areas inspections, quarterly environmental inspections and annual audits.
		Keeping Naturally Occurring Radioactive Materials testing records	Compliant	Record of all testing performed and recorded in the NORMS register.
		Visual weekly inspections of waste receptacle to ensure no fauna access to waste storage locations, lids are secure, waste are appropriately stored and there are no leaks	Compliant	Regular area inspections records confirmed that inspections were conducted to confirm lids are secure, waste are appropriately stored and there are no leaks. Any non-compliance would be recorded as an incident in the incident management system, records did not identify any instances were waste receptacles that did not have secure lids to prevent fauna access / interference.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Monthly audit of the waste register to ensure all waste removal is appropriately captured and recorded	Compliant	The waste register is reviewed and updated on a regular monthly basis.
		Soil sampling directly after clean-up at any location where a spill / contamination has occurred as required following incident until soil is classified as remediated in accordance with the NEPM 2013 guidelines for contaminated sites	Compliant	Clean up activities were continuing beyond the reporting period for recorded spills. A sampling plan is being reviewed as part of the incident response.
		Soil sampling directly after an incident to determine the extent of contamination and following removal of contaminated source as required following incident until soil / water is classified as remediated in accordance with the NEMP 2013 guidelines for contaminated sites and/or appropriate surface water guidelines	Compliant	Clean up activities were continuing beyond the reporting period for recorded spills. A sampling plan is being reviewed as part of the incident response.
		Reporting incidents of uncontrolled waste releases using CP's incident reporting system, including corrective actions. Reportable incident records and regulatory notifications will be maintained	Compliant	Incident management system records did not identify instances of uncontrolled waste releases during the reporting period. Records of regulatory reporting are maintained in the document management system.
5	Minimise disturbance to land and land use (including soils and terrain, flora and fauna), minimise erosion (via water	Land disturbance equal or less than planned	Not Applicable	PVGF is currently an operational site and there were no new disturbance areas during the reporting period, therefore the EPS was not triggered.
		Minimum incidences of erosion and sedimentation occurring	Compliant	Area / environmental inspections and incident management system records identified minor erosion and sedimentation incidents following significant rainfall events during the reporting period. All eroded areas were immediately stabilised.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
	or wind) and sediment releases, protection of waterways, and protection of the productivity of land for its intended land use, during the regulated activity (erosion and sediment control)	Areas left safe, stable and non-polluting	Compliant	Environmental / area inspections and incident management system records did not identify any areas being unstable or left in an unsafe state and there were no instances of reportable pollution as a result of operations.
		Commence to rehabilitate disturbed areas within 12 months of decommissioning	Not Applicable	No areas were decommissioned or planned to be rehabilitated during the reporting period, therefore the EPS was not triggered.
		Disturbed areas will be returned to a stable landform such that they are returned to a condition as close as practicable to the surrounding areas (or pre-disturbance state) within an acceptable timeframe	Not Applicable	There were no areas disturbance during the reporting period, therefore the EPS was not triggered.
		No new erosion flow paths originated from site	Compliant	Environmental / wet weather area inspections following rainfall events, and incident management system records did not identify any new erosion flow paths as a result of operations. Minor erosion was identified across the field following significant rainfall across known locations including roads and well lease areas and was immediately rectified.
		No flow on effects caused by flooding at Central Petroleum's operational sites	Compliant	There were no incidents recorded resulting from heavy rainfall events experienced during the reporting period of flooding on site.
		Monitoring for soil erosion and related issues during critical stages such as: after completion of a specific phase of activity all disturbed areas inspected for early signs of compaction, erosion and soil degradations (e.g. generation of bulldust); when accessing the site after the wet season look for signs of erosion and if significant impacts are identified remediation may be required prior to continued vehicle access; after more than 20 mm of rainfall	Compliant	Monitoring and recording of erosion and sedimentation controls is part of area / environmental inspections which occur regularly across site. Vehicle movements directly after rain events are severely restricted. Visual inspections following heavy rainfall events during the reporting period identified minor erosion that was rectified immediately.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Where rehabilitation of a site is undertaken, CP committed to monitoring the rehabilitation until the site is reinstated	Not Applicable	Records indicate that no areas were under rehabilitation which required monitoring during the reporting period, therefore the EPS was not triggered.
		Measuring and uploading the extent of disturbances to a Geographic Information System (GIS)	Not Applicable	There were no areas disturbance during the reporting period, therefore the EPS was not triggered.
		Visual site inspections during civil maintenance works to ensure appropriate erosion and sedimentation control measures implemented	Compliant	Daily reports during civil maintenance activities on field access roads monitored erosion. Additional inspections were conducted following significant rainfall events and maintenance completed where washouts and erosion were evident.
		Visual site inspections following any significant rainfall event (>10mm in 24 hours) to ensure adequate control devices in place in accordance with DEPWS and ICEA best practice guidelines	Compliant	Visual inspections were carried out following rainfall events recorded during the reporting. Corrective works were implemented to rectify eroded roads and to maintain sediment control.
6	Avoid the introduction of weeds and pest fauna and avoid the spread of existing weeds and pest fauna, during the regulated activity (biosecurity)	No introduction or spread of declared weeds and/or pest fauna resulting from Central Petroleum's activities	Compliant	Regular area inspection and incident management system records did not identify any instances of the introduction of or the spread of weeds on site. The annual weed survey undertaken at PV in 2021 did not identify any increase in declared weeds. Regular weed management is conducted as part of lease reviews and daily operations
		Conduct ad-hoc spot checks for weed free certification when equipment and materials are mobilised to site from known weed infested areas	Not Applicable	No equipment was mobilised to site for operational activities from known weed infested areas, therefore the EPS was not triggered.
		Conduct quarterly inspections to identify weed outbreaks	Compliant	The inspection of weeds forms part of quarterly environmental inspections undertaken. Regular weed management is conducted as part of lease reviews and daily operations.
7	Minimise disturbance to flora and fauna, and minimise disturbance to	OL3 will be monitored to minimise impacts to fauna habitat and sensitive vegetation	Compliant	Area / environmental inspections were undertaken on a regular basis to identify any negative environmental impacts including to fauna habitat and sensitive vegetation areas. Incident management system records did not identify any incidents involving fauna habitat and sensitive vegetation.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
	sensitive areas, during the regulated activity (biodiversity)	No native fauna impacts (injury or fatality)	Compliant	Incident management system records and the animal control register did not identify any instances of fauna injury or fatalities.
		No loss of sensitive vegetation resulting from Central Petroleum's activities	Compliant	Areas / environmental inspections, incident management system records did not identify any incident involving the loss of sensitive vegetation.
		Maintaining records of disturbance	Not Applicable	There were no areas disturbance during the reporting period, therefore the EPS was not triggered.
		Maintaining records of inspections	Compliant	Regular area and environmental inspections were scheduled and undertaken with the records were captured in the work management system and inspection reports. Incident management system records did not identify any incidents of disturbance to flora and fauna.
		Recording all biodiversity incidents using CP's incident reporting system with corrective actions initiated	Not Applicable	Records of all biodiversity incidents related to operational activities were captured in the incident management system including details of any corrective actions undertaken. However, no biodiversity incidents were identified during the reporting period therefore the EPS was not triggered.
		Conduct ecological surveys for flora and fauna prior to any civil maintenance	Compliant	An ecological survey was undertaken prior to civil maintenance activities on the main access road during the reporting period.
		Visual inspections twice per year to ensure no disturbance to known slater skink habitat north of PV-02	Compliant	Regular visual inspections were conducted across the reporting period, and there was no evidence of disturbance / impacts to known slater skink habitat north of PV-02.
8	Minimise risk of causing bushfires, minimise impacts on environmental habitat and fauna, soil erosion, stakeholders, culturally sensitive sites, public	No uncontrolled fires occurring as a result of Central Petroleum's activities	Compliant	Incident management system / routine inspection records did not identify any instances of uncontrolled fires from the operational activities.
		Recording all incidents of fire in CP's incident reporting system and corrective actions initiated	No applicable	Records of all fire incidents related to operational activities were captured in the incident management system including details of any corrective actions undertaken. No fire related incidents were identified during the reporting period therefore the EPS was not triggered.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
	infrastructure and community lands, and to prevent accidental fire risk and ensure safe storage of chemicals, during the regulated activity (bushfire prevention)	Inspect fire control equipment monthly to ensure functionality	Compliant	Fire control equipment is inspected monthly. Inspections and scheduled and the outcome captured in the maintenance management system. In addition, all equipment is independently inspected by a third-party contractor on a six-monthly basis.
		Inspect fire breaks yearly	Compliant	The inspection of fire breaks forms part of regular area and environmental inspections undertaken at least quarterly. Records were kept in the maintenance connect system.
9	Minimise environmental nuisance due to dust for sensitive receptors and minimise atmospheric emissions, during the regulated activity (air quality)	No complaints regarding dust / air quality	Compliant	Incident management system records did not identify any instances of complaints as a result of dust or air quality issues.
		Amicable resolution of complaints	Not Applicable	Incident management system records did not identify any complaints therefore the EPS was not triggered.
		Maintaining records of routine inspections for leaks	Compliant	Regular area, quarterly environmental inspections and annual audits were undertaken to inspect areas and facilities to identify leaks.
		Recording all complaints and subsequent actions in CP's incident reporting system with corrective actions initiated	Not Applicable	Incident management system records did not identify any instances of complaints during the reporting period therefore the EPS was not triggered.
		Keep maintenance records of vehicles and equipment as per the inspection regime within CP's maintenance management system	Compliant	The maintenance management system captures all CP controlled vehicles and equipment and their maintenance records e.g. preventative maintenance schedules and executed activities. No overdue maintenance activities were identified.
		Record all venting events during operations as required	Compliant	All venting was captured in the daily production reports. Any uncontrolled venting is estimated and captured as an event in the incident management system.
		Record complaints from surrounding land users in regard to air quality or visual amenity when applicable	Not Applicable	Incident management system records did not identify any instances of complaints related to air quality or visual amenity related to operations therefore the EPS was not triggered.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Monitor road conditions for dust weekly	Compliant	Infield roads are driven daily, and any poor conditions e.g. corrugation, washouts, dust, etc are reported and captured in the incident management system including details of any corrective actions undertaken. No road condition incidents or hazards were identified during the reporting period.
10	Minimise impacts upon environmental values of the local community, minimise impacts on cultural heritage, minimise safety risks to the public and other third parties, maintain and enhance partnership with the local community, including local contractors, and no loss to the aesthetic or enjoyment for the community, during the regulated activity (traffic and transport)	No issues raised by the community	Compliant	Incident management system records did not identify any instances of complaints from the community.
		An absence of issues raised by the community will be used as an indicator for successful communication	Compliant	Incident management system records did not identify any instances of complaints from the community.
		No unresolved complaints	Not Applicable	Incident management system records during the period did not identify any instances of complaints therefore the EPS was not triggered.
		The community will be highly consulted, and all comments will be assessed and where viable, recommendations implemented	Compliant	PV stakeholder communications log records indicated CP's continued engagement with identified stakeholders. The register also records all any objections / claims from Stakeholder and the response / actions to those objections / claims
		There will be a high level of satisfaction by the community	Compliant	Records of local community meetings indicate a generally positive response to CP activities and engagement with the community.
		No vehicle accidents	Compliant	Incident management system records did not identify any vehicle accidents.
		Tracking fauna strikes and near misses in the Wild Animal Control Register	Compliant	Fauna interactions are recorded in the incident management system. No issues were identified during the period.
		Maintaining a complaints register	Compliant	Records of all complaints related to the operation are registered and captured in the incident management system. No records of any complaints as a result of operational activities were identified.
		Keeping records of stakeholder engagement	Compliant	PV stakeholder communications log records CP's continued engagement with identified stakeholders during operations.
Keeping records of environmental compliance	Compliant	All non-compliance with environmental obligations were captured and recorded in the incident management system and reported as required to the relevant authority.		

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		All traffic and transport incidents related to any contamination of the environment, erosion or loss of fauna to be recorded in CP's incident reporting system with corrective actions closed out and recorded	Not Applicable	No traffic or transport incidents with potential for environmental impact were identified during the period therefore the EPS was not triggered. Any records of traffic and transport incidents related to operational activities would be captured in the incident management system including details of any corrective actions undertaken.
		Keep records of any driving incidents during operations as required	Compliant	Records of all driving incidents during operations were captured in the incident management system including details of any corrective actions undertaken. No incidents were recorded.
		Keep records in a fauna register of any sightings, near misses or fauna strikes as required during operations	Compliant	Fauna interactions are recorded in the incident management system. No incidents were recorded.
11	Minimise impacts upon environmental values of the local community, minimise impacts on cultural heritage, minimise safety risks to the public and other third parties, maintain and enhance partnership with the local community, including local contractors, and no loss to the aesthetic or enjoyment for the community, during the regulated activity (community)	An absence of issues raised by the community will be used as an indicator for successful communication	Compliant	Incident management system records did not identify any instances of complaints from the community.
		No unresolved complaints	Not Applicable	Incident management system records did not identify any instances of complaints, therefore the EPS was not triggered.
		The community will be highly consulted, and all comments will be assessed and where viable, recommendations implemented	Compliant	PV stakeholder communications log records indicated CP's continued engagement with identified stakeholders. Meeting records did not identify any comments related to operations which needed to be assessed or corrective actions implemented.
		There will be a high level of satisfaction by the community	Compliant	Records of local community meetings indicate a generally positive response to CP activities and engagement with the community.
		No vehicle accidents	Compliant	Incident management system records did not identify any vehicle accidents.
		No offsite release of contamination from road corridors	Compliant	Incident management system records did not identify any instances of offsite release of contaminants impacting road corridors.
		Keeping a register of all incidents related to access issues, unauthorised access and requirements of pastoralists, recognising that these requirements may change seasonally	Compliant	Incident management system was used to capture and record any instances of unauthorised or other issues related to site access. No records of unauthorised access or access issues were reported.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Keeping records of land access agreements closed out at completion	Not Applicable	PVGF is currently an operational site and no land access agreements have been closed out during the reporting period, therefore the EPS was not triggered.
		Maintaining a complaints register	Compliant	No records of any complaints as a result of operational activities were identified. However, a record of all complaints related to the operation would be registered and captured in the incident management system.
		Keeping records of stakeholder engagement	Compliant	PV stakeholder communications log was used to recorded CP's continued engagement with identified stakeholders during operations.
		Record complaints from surrounding land users regarding noise and vibrations from operations	Not Applicable	The incident management system did not identify any records of complaints from surrounding land users' regarding noise and vibration, therefore the EPS was not triggered.
12	Avoid disturbance of or damage to Aboriginal or cultural heritage artefacts or Sacred Sites, minimise impacts on or disruption to activities of Indigenous stakeholders in culturally significant areas, ensure adequate background information and training is provided to employees and contractors working in culturally significant areas, and ensure the health and safety of	No incidences of disturbance of archaeological sites or sites of cultural significance	Compliant	Incident management records did not identify any disturbance of archaeological sites or sites of cultural significance.
		Keeping a register of all occurrences of archaeological sites identified for provision to the NLC, AAPA and Heritage Branch within DLPE, now the DTSC	Compliant	All existing archaeological sites at PV are mapped and restricted access areas established and communicated so as to avoid any potential impacts.
		Keep records of any incidents relating to interference with Aboriginal sacred sites, places or objects of archaeological significance	Not Applicable	No incidents involving interference with aboriginal sacred sites, places or objects of archaeological significance were captured in the incident management system during the reporting period, therefore the EPS was not triggered.
		Reporting all new discoveries or cultural artefacts.	Not Applicable	The were no new discoveries or cultural artefacts identified during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
	working and the community is not compromised through management of cultural and environmental awareness, during the regulated activity			
13	A safe, stable landform consistent with the surrounding land use and disturbed areas are rehabilitated and returned to the original land use and are consistent with the adjacent analogue site (decommissioning and rehabilitation management)	Successful rehabilitation will mean rehabilitation to a similar condition of the surrounding environment	Not Applicable	Records indicate that no areas were under rehabilitation which required restoration to a similar condition of the surrounding environment, therefore the EPS was not triggered.
		No further habitat loss resulting from Central Petroleum's activities	Compliant	Incident management system records did not identify any instances of further habitat loss from operations. In addition, no clearing was completed under the Palm Valley FEMP during the reporting period.
		Redundant assets will be continually assessed and if necessary decommissioned	Compliant	Assets are continuously being assessed against their use life / safe operating window. However, during the period no material assets were decommissioned.
		Keeping records of rehabilitation monitoring	Not Applicable	Records indicate that no areas were under rehabilitation which required monitoring during the reporting period, therefore the EPS was not triggered.
		Keeping an inventory of decommissioned infrastructure	Compliant	PVGF asset register was used to record the timing and details of any decommissioned infrastructure.
		Reporting all incidents in CPs incident reporting system and initiating corrective actions	Compliant	All incidents were captured and recorded in the Incident management system, however records did not identify any related to decommissioning and rehabilitation management.
		Yearly visual inspections of rehabilitated areas	Not Applicable	Records indicate that no areas were under rehabilitation which required visual inspections during the reporting period, therefore the EPS was not triggered.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		Conducting photographic point monitoring before during and after rehabilitation as required during rehabilitation works	Not Applicable	Records indicate that no areas were under rehabilitation which required photographic monitoring prior to disturbance during the reporting period, therefore the EPS was not triggered.
		Establishing photographic monitoring points before disturbance and vegetation survey before disturbance so to benchmark against in later surveys	Not Applicable	Records indicate that no areas were under rehabilitation which required photographic monitoring or vegetation surveys prior to disturbance during the reporting period, therefore the EPS was not triggered.
		Implementing the following monitoring program: <ul style="list-style-type: none"> - Immediately after rehabilitation works completed to check for integrity of works and ability for future rehabilitation success - Post first wet season - check stability of soil, landform, vegetation type and re-growth and appearance of weeds - One year after rehabilitation – check revegetation success - Yearly inspection – check weed, erosion and sediment control management - Three years after – check soil stability, landscape and vegetation re-growth and type after several wet seasons - After five years – check rehabilitation success measured by landform stability and vegetation regrowth 	Not Applicable	Records indicate that no areas were under rehabilitation which required monitoring during the reporting period, therefore the EPS was not triggered.
		Providing an annual rehabilitation report with the Annual Environment Report which with information including: <ul style="list-style-type: none"> - Total area rehabilitated 	Not Applicable	No areas were under rehabilitated during the reporting period, therefore no reporting required as the EPS was not triggered.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		<ul style="list-style-type: none"> - Photographic monitoring points with GPS locations and results - Any areas left in agreement with future landholders / managers - Monitoring of progressive rehabilitation - Any erosion and sedimentation issues - Any stakeholder consultations and results of discussions - Any issues noted and remedial actions taken (RRCA) - Monitoring of contaminated sites - Weed Monitoring 		

2.3 Mandatory Reporting Requirements

Table 2-3 demonstrates CP's compliance with the reporting requirements under the *Petroleum (Environment) Regulations 2016* (NT) Schedule 1, item 11(2), which requires all information required to be recorded, monitored or reported, to be provided. Where relevant, CP also confirms that all records, monitoring or required reporting under the *Petroleum (Environment) Regulations 2016* (NT) has been provided to DEPWS or the relevant NTG agency except for the elements highlighted in Table 2-3.

Table 2-3 Compliance with Mandatory Reporting Requirements

No	Reference	Requirement	Compliance Status	Evidence
1	Code cl A.3.5	Geospatial information depicting areas cleared is to be provided to the Minister.	Not Applicable	No clearing was completed during the reporting period under the Palm Valley FEMP.
2	Code cl A.3.6 (b)	Weed management plan developed as part of the EMP must provide for ongoing weed monitoring.	Compliant	The Weed Management Plan was implemented, and monitoring was conducted during the reporting period. A weed management survey was conducted across the Palm Valley field in August 2021.

No	Reference	Requirement	Compliance Status	Evidence
3	Code cl A.3.7(a)vi	The fire management plan developed as part of the EMP must provide for annual fire mapping to monitor changes to fire frequency in the relevant areas.	Compliant	The Fire Management Plan includes annual review of the fire mapping. Updated fire mapping was reviewed. The risks and mitigations, environmental outcomes and environmental performance standards in the EMP remain appropriate.
4	Code cl A.3.9(c) Code cl A.3.9(e)	The rehabilitation plan developed as part of the EMP requires progressive rehabilitation of significantly disturbed land which is required to commence no longer than 12 months following the cessation of activities on the land. It also requires regular maintenance and annual monitoring of rehabilitated areas.	Not Applicable	No areas were rehabilitated during the reporting period.
5	Code cl B.4.13.2(c)	As a minimum, the following must be recorded and reported for each stage (where a stage in this context means all fluids pumped at a particular depth interval): a) total volume of hydraulic fluid pumped, b) quality of water used (tested for analytes in section C.8 of this Code. Analyses do not need to be repeated if the same water source is used for multiple stages) and c) typical and maximum concentrations of chemicals or other substances used.	Not Applicable	No hydraulic fracture stimulation and flowback operations conducted.
6	Code cl B.4.13.2(k)iv	Where venting is the only technically feasible option for managing produced gas, the technical considerations preventing the use of the recovered gas must be recorded and included in the operator's annual report.	Compliant	Flaring is not undertaken at Palm Valley. In accordance with the Palm Valley Field EMP, cold venting may occur: <ul style="list-style-type: none"> ▪ during emergency shut-down of the gas plant, ▪ during start-up of the gas plant, ▪ where there is out of spec gas (to bring gas back into spec), ▪ remedial work on an individual well. Venting occurs in accordance with Section 418 of the Schedule of Onshore Petroleum Exploration and Production Requirements the FEMP. Details of venting a tracked and recorded within Daily Production Reports.

No	Reference	Requirement	Compliance Status	Evidence
7	Code cl B.4.14.2(c)	All new barriers or new well operating envelopes must be verified and clearly documented and reported by submission of an updated well barrier integrity validation (WBIV) report to DITT.	Not Applicable	No new well barriers or well operating envelopes during the reporting period.
8	Code cl B.4.15.2(j)	Complete and accurate records of the entire decommissioning procedure must be kept, with these records submitted as part of the legislative reporting requirements for the decommissioning of petroleum wells.	Not Applicable	No decommissioning of wells in reporting period.
9	Code cl B.4.17.2(d)	Any guidelines published by the Northern Territory Government from time to time relating to reporting and data submission, and groundwater monitoring data standards must be followed.	Compliant	A Groundwater Management Plan covering activities in the Amadeus Basin was submitted to DEPWS in February 2021 as part of wider Central Petroleum operations and exploration. The plan was developed in alignment with the principles of the Preliminary Guideline: Groundwater monitoring bores for exploration petroleum wells in the Betaloo Sub-basin where suitable.
10	Code cl C.3(e)	The components of the wastewater management framework, include: Monitor, manage and report in accordance with the Wastewater Management Plan and Spill Management Plan.	Compliant	Monitoring and reporting as specified within the Wastewater Management Plan and Spill Management Plan has been implemented.
11	Code cl C.6.1(d)	Wastewater tracking documentation must be reported to the Minister at least annually in accordance with the framework (Spill Management Plan and Wastewater Management Plan) outlined in the EMP	Compliant	All wastewater generated on site was transferred to the Central Treatment Plant and managed in accordance with the Palm Valley Field Environmental Management Plan. All wastewater is managed on site and tracked through Daily Production Reports.
12	Code cl C.7.1(d)ii	Wastewater Management Plan must include a program for monitoring and reporting against the effectiveness of the measures for the mitigation of interaction with wildlife, stock and human receptors with wastewater.	Compliant	Fauna interactions with wastewater are monitored via the regular inspection program and recorded within the incident management system. No interactions between fauna and wastewater were recorded for the reporting period.

No	Reference	Requirement	Compliance Status	Evidence
13	Code cl D.4.3.2(f)	A written report detailing the levels of methane measured, the duration of the unusual readings and the results of the investigation must be submitted within one month of the significantly higher-level methane event being detected.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas. Therefore not applicable to CP conventional gas activities.
14	Code cl D.5.9.2(c)	Emissions from exploration, well construction (including during flowback) and workovers must be measured, and reports submitted.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas. Therefore not applicable to CP conventional gas activities
15	Code cl D.5.9.3(a)	Where natural gas is vented or flared at a gas processing or other downstream facility, emissions must be estimated and reported.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas. Nevertheless, reporting has been conducted where applicable as part of wider reporting programs.
16	Code cl D.6.1	All mandated government reporting is complied with; and all detectable leaks and emissions are reported on an annual basis.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas. Reporting of greenhouse gas emissions was made to the Clean Energy Regulator in accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> .
17	Code cl D.6.2(a)	Reports of baseline assessments must be submitted at the conclusion of each field campaign.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas.
18	Code cl D.6.2(b)	Emissions reporting must be in accordance with Section D.5.6. Emissions associated with venting and flaring as described in Section D.5.9 must be provided separately to the Northern Territory Government in accordance with this Code.	Not Applicable	The scope of Section D of the Code of Practice is only for onshore shale gas. Nevertheless, reporting has been conducted where applicable as part of wider reporting programs. Reporting of venting and flaring emissions was made to the Clean Energy Regulator in accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> .
19	PER Reg 14	A current EMP remains in force until the interest holder notifies the Minister the activity is no longer being carried out and all of the environmental outcomes and obligations under the plan have been met, and the Minister advises the interest holder the notice is accepted, and the plan ceases to be in force.	Not Applicable	EMP is currently in force. No notification has been made to the Minister that the activity is no longer being carried out.

No	Reference	Requirement	Compliance Status	Evidence
20	PER Reg 33	DEPWS is notified of reportable incidents within 2 hours of the interest holder becoming aware of the incident, or within 2 hours of the incident occurring. A written report must be provided within 24 hours if the initial report was made orally.	Not Applicable	CP did not have any reportable incidents resulting from activities outlined in the EMP.
21	PER Reg 34	Reports on reportable incidents are to be provided to DEPWS as soon as practicable and within 72 hours of the event occurring. A final report must be provided to DEPWS within 30 days after remediation/clean-up of the affected area.	Not Applicable	CP did not have any reportable incidents resulting from activities outlined in the EMP.
22	PER Reg 35	A written report of all recordable incidents must be provided to DEPWS not later than 15 days after the 90-day reporting period.	Compliant	All recordable incidents reports were submitted as required for the approved EMP during the reporting period as follows: <ul style="list-style-type: none"> 12 April 2021 08 July 2021 15 October 2021, resubmitted DEPWS request on 21 October 2021 11 January 2022
23	PER Reg 37A	A report about flowback fluid from hydraulic fracturing must be provided to the Minister within 6 months of the flowback occurring.	Not Applicable	The regulated activity did not include hydraulic fracturing.
24	PER Reg 37B	A report about produced water from hydraulic fracturing must be provided to the Minister within 6 months of the produced water being extracted.	Not Applicable	The regulated activity did not include hydraulic fracturing.
25	PER Schedule 1 Item 9(2)	Interest holders are required to conduct future engagement with stakeholders, in accordance with the description in the EMP.	Compliant	CP conducted regular engagement with stakeholders during the reporting period with the details and outcomes recorded in the stakeholder communications log.
26	Schedule 1, item 11(2)	Environmental report to be submitted to DITT / DEPWS annually	Compliant	This document represents the Annual Environmental Performance Report for the Palm Valley Field EMP.

No	Reference	Requirement	Compliance Status	Evidence
27	PER Schedule 1, item 12	Interest holder must notify the Minister, occupier of the land and owner of the land on which the activity is to be carried out before commencement of construction, drilling, or seismic surveys.	Not Applicable	Palm Valley site is in operation. Notification of works was not required for any activities during the reporting period.
28	NPI Measure 1998 (Cth) s 9 / Waste Management and Pollution Control Act 2003 (NT)	The occupier of each reporting facility is to be required to provide information to the NPI if a reporting threshold for a substance is exceeded	Compliant	A report was submitted in accordance with the requirements of the National Pollutant Inventory in September 2021 for the 2020/21 reporting period.
29	National Greenhouse and Energy Reporting Act 2007 s 19	A registered corporation must provide a report to the Greenhouse and Energy Data Officer relating to the greenhouse gas emissions, energy production and energy consumption from the operation of facilities under the operational control of the corporation and entities that are members of the corporation's group, during that financial year	Compliant	Reporting greenhouse gas emissions for the Palm Valley operations was undertaken in accordance with the National <i>Greenhouse and Energy Reporting Act 2007</i> and was submitted to the Clean Energy Regulator in September 2021 for the FY21 NGERs reporting period.

3.0 Summary of Compliance

3.1 Overview of Compliance

Table 3-1 provides a summary of the results of the compliance assessment against the 153 total compliance items.

Table 3-1 Compliance Summary

Compliance Indicator	Number	Percentage
Compliant	108	70%
Non-Compliant	1	29%
Not Applicable	44	1%

3.2 Overview of Items Found Not Compliant

The following sections describe:

- The specific compliance requirements not met for the reporting period
- An analysis of the possible potential environmental harm or impact to environmental values resulting from non-compliance or partially compliance, using multiple lines of evidence
- A summary of the corrective actions already implemented, and further actions still required, as applicable, to ensure compliance is fully achieved in the future.

3.2.1 Environmental Performance Standards

Table 3-2 provides a consolidated summary of the performance standards which were non-compliant during the reporting period.

Table 3-2 non-compliant environmental performance standards

Description	Potential environmental harm or impact	Corrective actions
Several minor incidents of uncontrolled releases of chemicals and hazardous materials were identified. These included oily water or oil spills ranging in size from <1L to approximately 500L.	All spills remained within disturbed operational areas and did not impact or harm sensitive environments.	Spill response and corrective actions were implemented immediately upon identification and investigations of root cause conducted. Monitoring of these areas is ongoing to ensure no long-term impacts.

3.2.2 Regulatory Reporting

There were no mandatory reporting requirements found to be non-compliant.

3.3 Application of Lessons Learned Across Central Petroleum Onshore Interests

Given the EMP pre-dates the release of the current regulations and CoP, Central have had to adopt alternative text and measures for the development of 'management objectives' and 'performance standards'. This has resulted in some duplication as well as the adoption of some absolute statements rather than a focus on the environmental outcomes. This approach has resulted in some of the minor compliance issues noted above, none had any significant environmental impact and were quickly dealt with. These would have been reported as partially compliant previously, however that category has now been removed.