



Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**

GUIDELINES

Guidelines for Preparing Petroleum Annual Environmental Reports

As required by Regulation 16 of
Petroleum Pipelines (Environment) Regulations 2012,
Petroleum (Submerged Lands) (Environment) Regulations 2012, and
Petroleum and Geothermal Energy Resources (Environment)
Regulations 2012.

Version 2.0

August 2020

Document Hierarchy for Petroleum Annual Environmental Reports

Legislation	<i>Petroleum Pipelines Act 1967</i> <i>Petroleum (Submerged Lands) Act 1982</i> <i>Petroleum and Geothermal Energy Resources Act 1969</i>
Guidelines	This document

Version History

Version	Date	Changes
1.0	Januray 2014	DMP Guideline for Preparing Annual Reports
2.0	2020	This document

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Purpose

This guideline provides information on preparing Annual Environmental Reports as required under Regulation 16 of the Petroleum Pipelines (Environment) Regulations 2012, Petroleum (Submerged Lands) (Environment) Regulations 2012 and the Petroleum and Geothermal Energy Resources (Environment) Regulations 2012 (the Regulations). These reports must be submitted at least once per annum to enable determination of compliance with:

- the environmental performance objectives and environmental performance standards in the Environment Plan (EP); and
- the implementation strategy in the EP.

As outlined in Regulation 16(a), the operator must monitor and record information about its petroleum, geothermal or pipeline activity, in order to meet the reporting obligation in Regulation 16(b).

Guidelines

Content of the report

Ideally, annual reports will follow the structure outlined below.

1. Scope
2. Summary of Works and Operations
3. Environmental Performance
4. Review of Audits
5. Review of Incidents
6. Review of Emissions and Discharges
7. Review of Chemicals and Other Substances
8. Monitoring and Research
9. Decommissioning and Rehabilitation
10. Revision of the Environment Plan
11. Awareness, Training and Exercises
12. Summary of Consultation

Note: where there are conditions or limitations placed on EP approval, reporting on compliance with conditions or limitations, where relevant, should be addressed within the Environmental Performance section of the report.

1. Scope

This section should define the reporting period and reference the relevant EPs, including document number/s and revision/s, which are being reported on. Annual reports must be submitted at least annually for reporting periods covering 12 months or less. Where more than a single EP (or different revision of the same EP) is reported on it should be made clear in the sections of the report described below (i.e. different EPs may have different performance objectives, standards and measurement criteria which should be adequately covered in Section 3).

2. Summary of works and operations

This section should include a summary of the works and operations completed in the reporting period. Where applicable, the subsequent outcomes, findings and further actions should also be summarised. This could be provided as a table summarising the main works and operations for the reporting period, as in the example provided in Table 1.

Table 1: Example summary of works and operations completed in FY 2020-2021

Timing	EP Reference	Description of works/ operations undertaken	Outcomes and findings	Further actions
March to June	S3.7.3 Work-overs	Work-overs were performed on wells 01, 02, 03 and 05, in accordance with the notifications submitted on 13/3, 7/4, 19/5 and 5/6.	Work-overs on wells 01, 02, 03 and 05 complete.	No further actions.
18 October to 21 November	S3.7.8 Decommissioning	The Beta-04 well decommissioning works commenced on 18 October and concluded following removal of the cellar and re-contouring of the site on 21 November.	Beta-04 well decommissioning completed and rehabilitation works to be completed by June 2022.	Continue rehabilitation works and subsequent monitoring.
July to June	S3.7.2 Care and maintenance	Care and maintenance operations were completed on an ongoing basis throughout the reporting period.	Weeds were identified in around the northern turkey's nest in June.	Weed removal to be completed by end of August 2021.
4 April to 7 April	S3.7.7 Facility maintenance	The facility was shut down between 4 and 7 April for routine NDT on pipework and to carry out scheduled tank floor inspections.	Pipework NDT complete and no areas of concern identified. Condensate tank A floor requires repairs due to corrosion.	Condensate tank A emptied and offline. Scheduled for repairs in September 2021.

2.1 Native vegetation clearing

This section should describe clearing of native vegetation undertaken within the reporting period that relates to the petroleum, geothermal or pipeline activity. It should:

- state the reason(s) that native vegetation was cleared (e.g. maintain firebreaks, maintain easement line of sight, create seismic source lines);
- state the area of native vegetation cleared in hectares (against the approved area where applicable);
- state the applicable clearing instrument or authority in each case (e.g. native vegetation clearing permit or exemption); and
- include figures depicting the approximate extent of native vegetation cleared.
- Where this information has already been provided in a report required by a Native Vegetation Clearing Permit, it does not also need to be included within the annual report. However, the clearing permit number and the related report should be accurately referenced.

3. Environmental performance

The report should include an assessment of compliance against the Environmental Performance Objectives (EPO) and Environmental Performance Standards (EPS) in the EP. Statements of compliance against the Measurement Criteria (MC) are not required as statements of compliance against the EPO and EPS should be informed by the MC in the EP. Commonly this is presented in table format, containing the EPO, EPS and MC from the approved EP, and a column describing the performance achieved in the reporting period.

The assessment of performance achieved should include a statement for each EPO and each EPS individually. It should identify the performance rating achieved, e.g. *compliant*, *non-compliant* or "not assessed". As per the examples in Table 2 DMIRS note these terms to mean:

- Compliant (C): The requirement was met for the entire reporting period.
- Non-compliant (NC): The requirement was not met for some or all of the reporting period.
- Not assessed (NA): The requirement was not applicable or not relevant during the reporting period.

Table 2: Example of compliance against each EPO and EPS in FY 2020-2021

EPO	EPO Rating	EPS	EPS Rating	MC	Contextual information
1. No loss of containment of drilling fluid	C	1.1 Drilling sump lined with 1.5mm HDPE as per DoW – Water Quality Protection Note 26.	C	1.1 Records confirm the purchase, delivery and installation of drilling sump liner is in accordance with EPS 1.1.	<p>Purchase invoice from Geomembrane Supplies WA #003486 confirms the liner specified was 1.5mm HDPE.</p> <p>Entry #34 in the Site Deliveries Register notes that a 40m roll of 1.5mm HDPE with invoice number #003486 was received on 10 February.</p> <p>A letter was supplied by the installer (Our Ref: ABC1234LET) confirming the installation was completed on 15 February and in accordance with DoW Water Quality Protection Note 26.</p>
		1.2 Maintain a minimum 500mm freeboard in the drilling sump.	NC	1.2 Conduct daily inspections of drilling sump during drilling activities to check that fluid level and remaining freeboard is compliant with EPS 1.2.	<p>Daily inspection reports were reviewed for the duration of drilling, i.e. 5 March to 4 April.</p> <p>The drilling sump was not inspected on 3 separate occasions (21, 23 and 27 March 2021), however, the EPS was met on all other occasions. The 3 occasions where the drilling sump was not inspected, were reported as Incident # ENV008 in the Recordable Incident Report for the March reporting period. See section 5 of this report for details.</p> <p>Notwithstanding the missed inspections, this NC did not result in an adverse environmental impact and there was no loss of containment of drilling fluid. As such the corresponding EPO was met.</p>
2. Minimise acoustic disturbance to marine fauna	C	2.1 Shut down source when fauna are observed within 500m of the acoustic array as per EPBC Act – Policy Statement 2.1	C	2.1 Records confirm that marine fauna observations are recorded and verify that procedures are followed in accordance with EPS 2.1.	<p>Marine Fauna Observation records were reviewed for the duration of the survey, i.e. 16 April to 7 May.</p> <p>Marine Fauna were observed within low power zones on four occasions (Our Ref: MFOREP004, 008, 013 and 016), however, only entered the shut-down zone on one occasion (MFOREP013).</p> <p>MFOREP013 states that a solitary humpback whale was being monitored and continued to approach the 500m shut-down zone. The acoustic source was shut down at 11:34AM on 24 April prior to the whale entering the 500m shut-down zone. Soft start procedures commenced at 12:10PM, when the whale was sighted more than 3km from the acoustic source.</p> <p>The EPO was deemed to have been met, because shut-down procedures (per the EPS) were complied with for the duration of the activity.</p>
		2.2 All personnel will complete the environmental induction as detailed in section XY of the EP.	NC	2.2 Records confirm that personnel have completed the environmental induction prior to commencing work in accordance with EPS 2.2	<p>Induction records were reviewed for the duration of the survey, i.e. 16 April to 7 May.</p> <p>One short term employee completed 2 days of work on a support vessel in April prior to completing the environmental induction. The employee was a support vessel crew member and did not operate anything in connection with noise sources. The employee ceased to work on the project as of 18 April.</p> <p>This was reported as Incident # ENV009 in the Recordable Incident Report for the April reporting period. See section 5 of this report for details. This NC did not result in an adverse environmental impact and did not result in any disturbance to marine fauna. As such, the corresponding EPO was met.</p>

The annual report should reference the information that was monitored and recorded about the activity that supports the assessment of each EPO and EPS. This information can be presented as an additional column in Table 2, or be integrated within the “contextual information” as in the example above. The sources of information should be consistent with the MC in the EP and should adequately support the performance outcome. Common sources of information that may be referenced as evidence are provided in Table 3. The report should reference the document title, document number, or other unique identifier for audit trail purposes.

In addition, where requirements were not met in the reporting period, i.e. non-compliant, the report should also:

- reference the recordable/reportable incident report(s) that relate to it; or
- outline the relevant details of the non-compliance if it does not relate to an incident (date identified, corrective actions, implementation timing, closeout, etc.).

Table 3: Common sources of information

Permits issued	Contracts/invoices issued	Hazard and near-miss reports
Work/maintenance orders issued	Environmental monitoring reports	Management of change reports
Daily, weekly, monthly operations reports	Laboratory results/reports	Waste, chemical, dangerous good registers/manifests
Routine site inspection reports	Environmental risk register	Incident and non-compliance reports
Audit, inspection and investigation reports.	Invoices, receipts, quotes	Induction records/registers

4. Review of audits

The regulations require that operators audit their environmental performance and compliance with the implementation strategy. The annual report should contain a summary of internal and/or external audits including regulatory audits of the activity conducted during the reporting period. If no audits were undertaken during the reporting period, this should be stated with reference to the last audit and when the next is due.

Where audits were undertaken during the reporting period, the annual report is to include a summary of the non-compliances identified, corrective actions implemented, the status and completion dates of the corrective actions, and any lessons learnt.

5. Review of incidents

The regulations require that operators monitor, audit, and manage non-compliance, and review their environmental performance and the implementation strategy. The annual report should:

- include a summary of recordable incidents;
- include a summary of reportable incidents;
- include an analysis of trends and/or root causes of incidents;
- include a comparison with previous reporting periods (trends, common causes); and
- describe how lessons learnt will be addressed through continuous improvement processes and reflected in future works/operations.

The summary should be provided in the form of tables listing the recordable incidents and reportable incidents and include a column that references supporting documentation. The incidents listed in this section should be consistent with the information provided in the ‘Environmental Performance’ section. Where an event has occurred that did not meet the intent of an EPO or and EPS it is recommended that such an event also be included in this section and in the ‘Environmental Performance’ section of the annual report.

6. Review of emissions and discharges

The regulations require that the implementation strategy provide for accurate monitoring, recording and reporting of emissions and discharges, and that the operator's emissions and discharges can be audited against the EPS and MC in the EP.

The annual report should include a review of the emissions and discharges (e.g. produced water, drill cuttings, flared gas) during the reporting period. This should include a comparison between the emissions and discharges in the reporting period and the qualitative and/or quantitative targets contained in the EP. Where the works/operations are ongoing it is also good practice to compare the results from the reporting period with previous years, discuss any trends, and state whether the emissions and discharges are acceptable and ALARP.

The review should also refer to the strategies in the EP for continuously reducing the impacts of emissions and discharges to ALARP, and whether those strategies were effective during the reporting period.

7. Review of chemicals and other substances

The regulations require that operators disclose the chemicals or other substances in, or added to, any treatment fluids introduced into a well, reservoir or subsurface formation in the course of the activity.

The report should include a review of the chemicals and volumes used in the activity, and include a direct comparison with the planned volumes disclosed in the EP. Any deviations, from the disclosure in the EP should be described and the acceptability of these deviations should be justified.

Note: this section is not relevant to pipeline activities.

8. Monitoring and research

The regulations require that the implementation strategy includes measures to ensure that the EPO and EPS in the EP are met. These measures in the EP may include monitoring or research for weed coverage, dieback, fauna populations, water injection/reinjection/disposal, soil contamination, or surface and ground water quality. The report should summarise any environmental monitoring or research that occurred during the reporting period. Each summary should include the methodology used, results, discussion of results and conclusions, as well as any follow-up investigations undertaken where anomalies are identified.

Where monitoring or research is undertaken by a third party, the operator should still outline the methods, results, conclusions and implications of the results for environmental risk and impact management. Technical third party reports should be attached to the annual report as appendices to demonstrate the suitability of the monitoring and research programs.

9. Decommissioning and rehabilitation

Rehabilitated petroleum activity sites should be physically safe to humans and animals, geotechnically stable, non-polluting and capable of sustaining the post activity land use. The decommissioning and rehabilitation section of the AER should reflect the progress made towards achieving this by providing the:

- total area disturbed by the activity;
- area rehabilitated in the reporting period;
- details of decommissioning and rehabilitation activities undertaken in the reporting period e.g. consultation, removal of infrastructure, top soil salvage, seed collection, land contouring, ripping, topsoil spreading, seeding;
- total area rehabilitated to date;
- rehabilitation monitoring results and any resulting adaptive environmental management planned or undertaken;
- compliance status against the closure objectives, completion criteria and timeframes provided in the relevant EP; and
- progressive rehabilitation planned for the site.

10. Revision of the Environment Plan

The regulations require that the EP be revised in certain circumstances, including:

- new works/operations are identified that are not described in the EP;
- significant modification of, changes to, or new stages of, works/operations already described in the EP;
- the instrument holder or operator changes;
- a significant new impact or risk is identified and is not described in the EP; and
- a significant increase in an existing impact or risk is identified and is not described in the EP.

The report should include a summary of any instances where the above were identified/relevant in the reporting period. It should describe when it was identified, which of the circumstances applied, and what action was taken (e.g. submit a proposed revision of EP).

If none of the above circumstances were relevant during the reporting period, the annual report should state this.

11. Awareness, training and exercises

The regulations require that personnel are made aware of their responsibilities under the EP and have the appropriate competencies and training to meet those responsibilities. The report should include a summary of the information provided to personnel during the reporting period (e.g. through inductions completed, HSE meetings held), and the training completed and/or competencies attained/maintained during the reporting period.

The regulations also require that the arrangements in the oil spill contingency plan are tested at the specified intervals in the implementation strategy. The annual report should:

- include a summary of the emergency response exercises undertaken during the reporting period;
- outline the scenario(s) that the test(s) related to;
- outline which roles described in the EP were involved;
- include details of any third parties involved;
- outline response equipment and processes tested; and
- describe the outcomes and learnings from the test exercises.

12. Summary of consultation

The regulations require that the implementation strategy provides for appropriate consultation with relevant authorities and other relevant interested persons or organisations, such that the engagement continues over the life of a project. The annual report should include a summary of:

- the engagements undertaken – including specifics such as names, dates and methods; and
- the subsequent outcomes and resolutions.

Government of Western Australia

**Department of Mines, Industry Regulation
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8.30am – 4.30pm

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