



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L8780/2013/1
Licence Holder	APT Parmelia Pty Ltd
ACN	078 902 397
File Number	2013/003894-1
Premises	Mondarra Gas Storage Facility Part of Lot 356 and Lot 123 on Deposited Plan 2993 MILO WA 6525 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of Report	29 July 2024
Decision	Revised licence granted

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1. Decision summary

Licence L8780/2013/1 is held by APT Parmelia Pty Ltd (Licence Holder) for the Mondarra Gas Storage Facility (the Premises), located within Part of Lot 356 and Lot 123 on Deposited Plan 2993 Milo, WA.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the premises. As a result of this assessment, revised Licence L8780/2013/1 has been granted. Any decision reports for the existing licence will remain on the department's website for future reference and will act as a record of the department's decision making.

2. Scope of assessment

2.1 Regulatory framework

In amending the licence, the Department of Water and Environmental Regulation (DWER, department) has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at [DWER Regulatory documents | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/regulatory-documents).

2.2 Application Summary

Licence L8780/2013/1 is held by APT Parmelia Pty Ltd (APA, Licence Holder) for the Mondarra Gas Storage Facility (the premises), located within Part of Lot 356 and Lot 123 on Deposited Plan 2993 Milo, WA.

The premises operates as a gas storage facility whereby gas taken from the Dampier Bunbury Natural Gas Pipeline is injected into the depleted Mondarra reservoir for storage. Gas can later be extracted for transport to the market (Perth region) via the Parmelia Gas Pipeline (PGP) or Dampier to Bunbury Natural Gas Pipeline (DBNGP).

For gas injection, the gas extracted from the DNNGP is compressed using reciprocating compressors, filtered, and directed into the reservoir for storage via three wells. When the gas is extracted from the reservoir, the gas stream carries entrained liquids (including water and condensate), which are primarily removed by a slug catcher. Further processing of the gas then occurs prior to direction back into the gas transmission pipeline. During this process, water and condensate are removed from the gas stream; the water is managed in an evaporation pond, while the condensate is stored on-site and removed by a licensed operator.

The premises has eight authorised discharge points to the air, which include the exhausts from three gas engine alternators, two compressor exhausts, a high-pressure flare, a low-pressure flare, and a regeneration gas heater. Annual stack testing is conducted at these discharge points to monitor pollutant emissions, in accordance with condition 9 of the licence.

On 7 September 2023, the licence holder submitted an application to the department to amend Licence L8780/2013/1 under section 59B of the *Environmental Protection Act 1986* (EP Act). The licence holder is proposing to amend the licence to allow an alternative method for selection of sampling positions for their stack emission monitoring to that specified in condition 10 of licence L8780/2013/1 which requires that all sampling must be undertaken at sampling locations in accordance with the current version of AS 4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions*. The requirement to revise the method arises from APA reporting a non-compliance with condition 10 within their Annual Audit Compliance Report (AACR) as the two compressor exhausts and regeneration gas heater sampling planes were found to be non-conforming with the current version of AS 4323.1 (APA, 2023).

2.2.1 Background

Monitoring in accordance with relevant standards is conditioned within licences to ensure the required monitoring is carried out in a manner that generates a representative sample.

Australian Standard 4323.1: 2021 is the second edition of the original 1995 version. This 2021 edition of the standard updated what is considered a conforming sampling plane. In accordance with the updated definition three of the stacks at the premises are now considered to have non-conforming sampling planes. Section 4.2 of the standard describes the different types of sampling planes; ideal, non-ideal and non-conforming. The limiting factor that resulted in the stack sampling plane being non-conforming relates to the distance between the upstream and downstream disturbance (bends or the stack exit). The three non-conforming stack sampling locations were previously considered non-ideal, but were able to meet the requirements of the 1995 version of the standard through an increased number of sampling points. It is only since the standard was revised in 2021 that the monitoring locations are now considered non-conforming, therefore unable to meet the requirements of condition 10 of the licence.

3. Risk assessment

Air emissions from the operation of the gas storage facility were initially assessed for the grant of licence L8780/2013/1. At that time (2013), air emission modelling was conducted using measured data from the plant commissioning for nitrous oxides (NO_x), sulphur oxides (SO_x) and carbon monoxide (CO) emissions, alongside NPI emission factor calculations. Ground level concentrations (GLCs) were calculated at two sensitive receptors which were rural residences, the closest being 1.8 km east of the premises boundary. The calculated GLCs did not exceed the relevant assessment criteria at either receptor for all pollutants modelled (APA, 2013). The assessment criteria used were equal to or in some scenarios more conservative than criteria in the *National Environmental Protection (Ambient Air Quality) Measure* (NEPM). Consequently, at the time the delegated officer determined it was unlikely that operation of the premises would pose a significant impact to the air quality in the surrounding environment (DWER, 2014). Comparison of the modelled GLCs with the subsequently revised NEPM 2021 was made for this assessment and found that predictions also do not pose a risk of exceeding the revised criteria.

For this assessment the delegated officer also reviewed the reported air emission monitoring data for the pollutants aforementioned and compared the results with the input data used for the 2013 modelling which was based on measured emissions. The reported emission rates from the two previous annual periods were found to be generally lower than those used within the model, therefore are not indicative of any change to the previously assessed risk of air emission impacts. Consequently, the delegated officer has determined that emissions from the premises are unlikely to impact sensitive receptors, making monitoring precision of a lower importance. Additionally, there are no point source air emission limits within the licence requiring a high degree of monitoring precision for comparison. Therefore, the delegated officer has determined that it is acceptable for monitoring to be undertaken at sampling locations in accordance with the 1995 version of AS 4323.1 as has previously been undertaken rather than the current version and there is no requirement for an alternate methodology. Additionally, the delegated officer considers that, although dated, retaining the current method and sampling locations ensures consistency of results across previous annual periods. This consistency is important for reviewing data for detecting major changes in emission rates, a benefit which changing the method or sampling locations may not provide.

4. Consultation

The Licence Holder was provided with the draft Amendment Report on 24 June 2024. On 12 July 2024 the Licence Holder waived the comment period.

5. Decision

The delegated officer considered the licence holder's request to amend the licence to authorise use of an alternative method for selection of sampling positions for stack emission monitoring due to the locations not meeting the requirements of the current version of AS 4323.1 and determined to instead authorise selection of sampling positions that meet the requirements of the AS 4323.1:1995 version rather than an untested alternative method. The reasons for this decision are as follows:

- the sampling planes were initially installed at locations in accordance with the requirements of the 1995 version of AS 4323.1;
- air emissions pose a low risk of impacting receptors based on the original air quality modeling conducted and reviews of monitoring results from the last two annual periods, and there are no air emission limits on the licence, reducing the criticality of monitoring accuracy; and
- specifying sampling positions in accordance with the 1995 version of AS 4323.1 ensures results are consistently taken from a single representative location over time, aiding in the identification of significant changes in emission rates.

In conclusion, based on the assessment in this Amendment Report, the Delegated Officer has determined that an amended licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 1 below provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised licence as part of the amendment process.

Table 1: Summary of licence amendments

Condition no.	Proposed amendments
10	Specify the 1995 version of Australian Standard 4323.1 the standard substituting the current version
Definitions	Amended the definition of AS 4323.1 to specify the 1995 version.

References

1. APT Parmelia Pty Ltd (APA) 2013, *Mondarra Storage Facility Application For Licence To Operate*, Perth, Western Australia (DWER REF: A661161)
2. APT Parmelia Pty Ltd (APA) 2023, *Mondarra Storage Facility Application For Licence Amendment*, Perth, Western Australia (DWER REF: DWERDT832300)
3. DWER 2014, *Decision Document for Licence L8780/2013/1*, Perth Western Australia (DWER REF: A718689)
4. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
6. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia
7. Standards Australia, 'AS 4323.1;2021 Stationary source emissions Method 1: Selection of sampling positions and measurement of velocity in stacks, SAI Global