

## ANNUAL RETURN

Information on this form is required in accordance with the conditions of your licence or approval issued under part 5 of the *Waste Management and Pollution Control Act* or part 7 of the *Water Act*.

Failure to provide the information requested on this form and/or the provision of false or misleading information is an offence under the legislation and you may be liable to heavy penalties.

|                             |                                    |
|-----------------------------|------------------------------------|
| <b>LICENCE/APPROVAL NO.</b> | EPL230-01                          |
| <b>REPORTING PERIOD</b>     | 10 February 2022 – 9 February 2023 |

### Section 1. Licence/Approval Holder Details

Please check your business details and contact details including 24-hour emergency response in NT EPA online and/or on page one of your licence.

Are these details correct?

- ☒ Yes      Go to Section 2  
☐ No      Please correct your details by updating in NT EPA Online or complete the table below.

| Licence holder               |   |
|------------------------------|---|
| Legal Entity Name:           | ENI Australia   |
| ABN:                         | 18 092 812 023  |
| Registered Business Address: | ENI Australia B.V<br>226 Adelaide Terrace,<br>Perth WA 6000 |
| Postal Address:              |   |
| Contact Person:              | Mark Easterbrook  |
| Position Title:              | Senior Environmental Advisor                                |
| Contact Details:             | Mark Easterbrook  |
| b/h:                         | +61 (0) 8 9320 2623   |
| mobile:                      |   |
| email:                       | mark.easterbrook@eni.com                                    |
| Location of premises         |   |
| Address:                     | N.T. Portion 012637 plan(s) CP 004183<br>Nemarluk           |
| 24 hour emergency response   |   |
| Position Title:              | Eni Duty Officer  |
| phone:                       | 0419 943 584  |
| mobile:                      | 0419 943 584  |

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## Section 2. Statement of Compliance

Were all conditions of the licence/approval complied with during the reporting period?

☐ Yes Proceed to Section 4.

☒ No Complete details below (add more rows if required)

| Details of Non-compliance |                                   |                                 |   |   |
|---------------------------|-----------------------------------|---------------------------------|---|---|
| Condition number          | Date of non-compliance (dd/mm/yy) | Was NT EPA notified? (Yes / No) | If yes, date NT EPA notified (dd/mm/yy) | If yes, how was NT EPA notified? (e.g. phone, email, Pollution Hotline) |
|                           |                                   | If no, complete Section 3       |   |   |
| 28                        | 11/02/2022                        | Yes                             | 02/03/2022                              | Email + Document  |
| 28                        | 14/03/2022                        | Yes                             | 05/05/2022                              | Email + Document  |
| 28                        | 16/03/2022                        | Yes                             | 05/05/2022                              | Email + Document  |
| 28                        | 10/05/2022                        | Yes                             | 29/06/2022                              | Email + Document  |
| 28                        | 12/05/2022                        | Yes                             | 29/06/2022                              | Email + Document  |
| 28                        | 23/06/2022                        | Yes                             | 26/07/2022                              | Email + Document  |
| 28                        | 20/07/2022                        | Yes                             | 25/08/2022                              | Email + Document  |
| 28                        | 25/08/2022                        | Yes                             | 03/10/2022                              | Email + Document  |
| 28                        | 20/09/2022                        | Yes                             | 04/11/2022                              | Email + Document  |
| 28                        | 26/10/2022                        | Yes                             | 16/12/2022                              | Email + Document  |

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|    |            |     |            |                  |
|----|------------|-----|------------|------------------|
| 28 | 23/11/2022 | No  |            |                  |
| 28 | 17/12/2022 | Yes | 02/02/2022 | Email + Document |
| 28 | 21/01/2023 | Yes | 09/03/2023 | Email + Document |

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### Section 3. Report of Non-compliance

Please supply the following details for each non-compliance not reported to the NT EPA identified in Section 2. Use a separate page for each non-compliance.

The date and time of the non-compliance.

23<sup>rd</sup> November 2022

When the non-compliance was detected and by whom.

Detected by Mark Easterbrook (Senior Environmental Advisor) in January 2023. This non-compliance was not communicated to NT EPA via email. It has been communicated through this Annual Return.

This NCR was prepared for submission, however upon review in preparation of this document it was identified that the email notification had not been forwarded to the NT EPA.

Sample Point – PW02 (Discharge Pump Outlet)

Produced Water measured above EPL Limits for Toluene, Ethylbenzene, m+p-xylene, Cu, Mn, Zn. It is above the trigger value for Benzene.

Copper is only required to be recorded Quarterly, however the copper concentrations have been noted as being above trigger values for three months, so this parameter is being raised here.

|               | Measured value            | EPL Limit | Unit |
|---------------|---------------------------|-----------|------|
|               | 23 <sup>rd</sup> Nov 2022 |           |      |
| Toluene       | 3400                      | 330       | µg/l |
| Ethylbenzene  | 530                       | 160       | µg/l |
| m+p-xylene    | 910                       | 150       | µg/l |
| Manganese – T | 143                       | 80        | µg/l |
| Zinc – T      | 141                       | 43        | µg/l |
| Copper – T    | 8.41                      | 8         | µg/l |

The following trigger values were exceeded:

|     | Measured value            | EPL Trigger value | Unit |
|-----|---------------------------|-------------------|------|
|     | 23 <sup>rd</sup> Nov 2022 |                   |      |
| TSS | 20                        | 10                | mg/l |
| OiW | 16.7                      | 6                 | mg/l |

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|--|
| The actual and potential causes and contributing factors to the non-compliance.  |
| <p>BTEX is a grouped term for the Benzene, Toluene, Ethylbenzene and Xylene (m+p).</p> <p>The equipment currently operating in the produced water treatment system is not designed to remove dissolved (entrained) hydrocarbon.</p> <p>As per EPL230-01 The YGP facility is required to meet BTEX parameters, which are in the light dissolved hydrocarbon phase. It has been shown during laboratory analysis using Gas Chromatography, usually one month after sampling and discharge, that the system is not able to meet these parameters of the licence. Exceedance of this light hydrocarbon fraction is being identified by the exceedances of Benzene, Toluene, Ethylbenzene, and Xylene licence limits.</p> <p>Increased concentrations of Copper, Manganese and Zinc is likely coming from the reservoir. Trending of metals laboratory results show an increase in certain metals concentrations from early 2021. This aligns with a significant increase in produced water flowrate at the same time. As the wells age, they are likely bringing to surface increased volumes of water from the reservoir which brings increased concentrations of metals.</p> |
| The risk of environmental harm arising from the non-compliance.  |
| <p>The EPL limits for BTEX, Cu, Mn and Zn are very conservative as they are currently based on the ANZECC 80% species protection trigger levels (ANZECC 2000), which are intended to be a measure of ambient water quality in the marine environment, rather than as discharge criteria.</p> <p>Produced water dispersion modelling and preliminary feedback from the field dispersion validation exercise (carried out in March 2020 by CDM Smith) indicate that the produced water rapidly disperses upon discharge. The report concludes that water quality guideline values for 99% species protection are met within a 50m mixing zone, achieving a dilution of 273 times across 50 meters.</p> <p>Manganese and Zinc are essential trace elements that are naturally present in the ocean water.</p> <p>Copper has benefits to a marine system in low concentrations. The dilution in the mixing zone reduces the concentration of copper to within ANZECC levels by the 50-meter point, as per the Hydrodynamic Model.</p> <p>Therefore, the risk of environmental harm is determined to be LOW.</p>  |
| The action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance.  |
| <p>Eni is investigating options to improve BTEX treatment and will trial a modification to the treatment process for removing BTEX in March 2023.</p> <p>The Operations team has purchased Activated Charcoal filters which will be installed in an existing CETCO filter system. The filters are expected on site in mid-March, with trials starting once setup. The team plans to take samples from the outlet of the filter system</p>  |

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and complete the laboratory analysis. The impact on BTEX will be tracked, and if reduction is seen, this will support potential design upgrades for a permanent system.

The team is investigating the metals issue. Precipitation of metals from the water has been shown to be possible, however disposal of the precipitate results in TSS issues. The team is investigating metals removal techniques appropriate to the YGP.

Corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur.

Eni still views dilution in the mixing zone to be a component of the solution. However, the team has identified technologies that it aims to trial to meet EPL requirements at PW-02 (the produced water discharge pump).

An EPL amendment request has been submitted to request adoption of the recommended site-specific trigger values and limits. This assessment was still open at time of writing this Annual Return. Eni and NT EPA continue with discussions on this as a part of the solution.

If no action was taken, why no action was taken.

Action is being taken.

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## Section 4. Signature and Certification

|   |                          |  |  |
|---|--------------------------|--|--|
| This declaration must only be signed by a person(s) with the legal authority to sign it. The ways in which the application may be signed, and the people who may sign the application, are set out in the categories below. |                          |  |  |
| If the licence holder is:   | Tick                     | The application must be signed and certified by one of the following:  |  |
| An individual   | <input type="checkbox"/> | The individual.  |  |
| A partnership   | <input type="checkbox"/> | A partner.   |  |
| A company   | <input type="checkbox"/> | The common seal being affixed in accordance with the <i>Corporations Act</i> , or  |  |
|   | <input type="checkbox"/> | Two directors, or  |  |
|   | <input type="checkbox"/> | A director and a company secretary, or   |  |
|   | X                        | If a proprietary company that has a sole director who is also the sole company secretary – by that director.   |  |
| A public authority  | <input type="checkbox"/> | The Chief Executive Officer (CEO) of the public authority, or  |  |
|   | <input type="checkbox"/> | By a person delegated to sign on the public authority's behalf in accordance with its legislation (Please note: a copy of the relevant instrument of delegation must be attached to this application). |  |
| <b>I/We hereby declare that the information provided in this Annual Return and accompanying documents is to the best of my/our knowledge, true and correct.</b>   |                          |  |  |
| Signature   |                          | Signature  |  |
| Name (printed)  | Ernie Delfos             | Name (printed)   |  |
| Position  | Managing Director        | Position   |  |
| Date  | 10/03/2023               | Date   |  |
| Seal (if signing under seal):   |                          |  |  |