

Memorandum

File ref: EZ100016

To: Tamarind Board of Inquiry: David Hill (Chair), Glenice Paine and Dan McClary
From: ██████████, Advisor EEZ Applications
Date: 20 August 2018
Subject: List of consents and substances approved through marine discharge consents

Consents approved

1. The Tamarind Board of Inquiry requested the Environmental Protection Authority (EPA) to provide a comprehensive list of hazardous substances that have been approved for discharge under previous marine discharge consents granted since the discharge and dumping regulations came into force on 1 November 2015.
2. The table below outlines the marine discharge consents that have been granted and the dosage volumes, concentrations and frequencies of each substance approved for discharge.

Table 1 – List of chemicals approved in marine discharge consents

| Operator | Consent number | Common name -type of chemical | Chemical name | Dose concentration, Parts Per Million (PPM) | Max volume per dose Litres (L) | Frequency ¹ |
|----------|----------------|-------------------------------|---------------|---|--------------------------------|------------------------|
| OMV | EEZ300002 | Corrosion inhibitor | CL-11 | 8,000, | 250 | 5 per year |
| AWE | EEZ300003 | Corrosion inhibitor | WC429 | 20 | 400 | 1 per day |
| | | Corrosion inhibitor | WC460 | 25 | 8.5 | 1 per day |
| | | Demulsifier | WC110 | | 145 | 1 per day |
| | | Demulsifier | WC CB411 | | 145 | 1 per day |
| | | Biocide | WC555 | 500 | 1800 | 1 per month |

¹ The frequency refers to the period over which the stated maximum volume per dose can be applied. For example, if the maximum allowable volume is 400 litres and number of allowable doses is 1 per week, this means that up to 400 litres may be added to the discharge system over 1 week, not that only 400 litres can be added just once per week.

| Operator | Consent number | Common name -type of chemical | Chemical name | Dose concentration, Parts Per Million (PPM) | Max volume per dose Litres (L) | Frequency ¹ |
|----------|----------------|-------------------------------|-------------------|---|--------------------------------|------------------------|
| | | Biocide | WC550 | 500 | 1800 | 1 per month |
| AWE | EEZ300003-2 | Corrosion inhibitor | WC460 | 25 | 408.5 | 1 per day |
| OMV | EEZ300004 | Demulsifier | DMO29726 | 40 | 104,450 | 1 per year |
| | | Biocide | XC29040 | 500 | 527 | 1 per ft |
| | | Biocide | XC29102 | 500 | 199 | 1 per ft |
| | | Pour point depressant | PAO82004 | 500 | 1,305,623 | 1 per year |
| | | Demulsifier | DMO86277 | 50 | 130,562 | 1 per year |
| | | Corrosion inhibitor | CL-30 | 10,000 | 7,950 | 6 per year |
| | | Scale inhibitor | EC6145A | 150,000 | 8,528 | 3 per year |
| | | Friction reducer | FR-46 | 10,000 | 7,950 | 3 per year |
| | | Well stimulator | FE-1A | 10,000 | 160 | 3 per year |
| | | Corrosion inhibitor | HAI-404M | 10,000 | 160 | 6 per year |
| | | Well stimulator | Hydrochloric Acid | 100,00 | 1,600 | 6 per year |
| | | Oxygen scavenger | OS-1L | 2,000 | 32 | 6 per year |
| | | Biocide | Safe-Cide | 1,000 | 7,950 | 6 per year |
| | | H2S scavenger | Safe-Scav HS | 1,000 | 16 | 6 per year |
| | | H2S scavenger | SCA-130 | 10,000 | 318 | 3 per year |
| | | Biocide | Magnacide 575 | 1,000 | 795 | 6 per year |
| | | Mutual solvent | Musol A solvent | Pure | 31,800 | 3 per year |
| | | Corrosion inhibitor | CL-11 | 8,000 | 250 | 5 per year |
| | | Fire-fighting foam | RF 3x6 ATC | 3% | 680 | 3 per year |
| | | Wax solvent | PFR7703 | Pure | 8,000 | 6 per year |
| | | Corrosion inhibitor | CL-111 | 8,000 | 250 | 5 per year |
| OMV | EEZ300004-1 | Biocide | XC29548 | 500 | 447 | 1 per ft |
| OMV | EEZ300004-2 | Demulsifier | Kinetic -311 | 40 | 104,450 | 1 per year |
| | | Biocide | Nuosept-78 | 500 | 3,975 | 6 per year |
| OMV | EEZ300005 | Corrosion inhibitor | CL-111 | 8,000 | 250 | 5 per year |
| | | Demulsifier | DMO86277 | 50 | 130,562 | 1 per year |
| Tamarind | EEZ300006 | Corrosion inhibitor | WC460 | - | 400 | 1 per day |
| | | Demulsifier | WC110 | - | 145 | 1 per day |

| Operator | Consent number | Common name -type of chemical | Chemical name | Dose concentration, Parts Per Million (PPM) | Max volume per dose Litres (L) | Frequency ¹ |
|----------------|----------------|---------------------------------|-----------------|---|--------------------------------|------------------------|
| | | Demulsifier | WC CB411 | - | 145 | 1 per day |
| | | Biocide | WC555 | 500 | 1800 | 1 per month |
| | | Biocide | WC550 | 500 | 1800 | 1 per month |
| | | Oxygen scavenger | Amerzine 210 | 222 | 8 | 1 per day |
| | | Ph control | SLCCA | 13 | 0.5 | 1 per day |
| STOS | EZZ300007 | Oxygen scavenger | EC6064A | - | 180ml | 2 per month |
| | | Biocide | EC6388A | | 1.5L | 2 per month |
| | | Residual trace dye | Rhodamine B Dye | | trace | |
| Shell Taranaki | EEZ300008 | Caustic soda (sodium hydroxide) | | Consent does not state amounts consented. | | |
| | | Diesel | | | | |
| | | Halad- | | | | |
| | | Spersene | | | | |
| | | R-5 | | | | |
| | | Aluminium stearate | | | | |
| | | XP-20 | | | | |
| | | Cement A | | | | |
| | | Cert-N-Seal | | | | |
| | | Natural gas | | | | |