

Annual performance report for: Tradebe Fawley Limited

Permit Number: EPR/ FP3935KL

Year: 2018

This report is required under the Industrial Emissions Directive's Article 55(2) requirements on reporting and public information on waste incineration plants and co-incineration plants, which require the operator to produce an annual report on the functioning and monitoring of the plant and make it available to the public.

1. Introduction

| | |
|--|---|
| Name and address of plant | Tradebe Fawley Charleston Road Industrial Estate Hardley Hythe SO45 3NX |
| Description of waste input | High Temperature Incineration of Hazardous wastes |
| Operator contact details if members of the public have any questions | Mr A Devall SHEQ Manager Address (As Above) |

2. Plant description

Tradebe Fawley is a High Temperature Incineration plant engaged with the incineration of hazardous wastes. The facility operates on a 24/7 basis and is permitted to dispose of 48 000te per annum. The facility is a Rotary Kiln which is capable of handling a wide range of wastes, there are two primary waste streams from the process, a slag ash generated from the incineration process and a filter cake extracted from the water used in the flue gas cleaning process. The site employs 66 personnel engaged with the operation and management of the process.

3. Summary of Plant Operation

| | |
|-------------------------------------|---------------|
| Hazardous waste received | 34900 tonnes |
| Clinical waste received | 2800 tonnes |
| Other waste received (Radioactive) | 2028 tonnes |
| Total waste received | 39 728 tonnes |

| | |
|--|--------------------------------------|
| Total plant operational hours | 7144 hours |
| Total hours of “abnormal operation” (see permit for definition) | 10.5 hours |
| Total quantity of incinerator bottom ash (IBA) produced | 6008 tonnes |
| Disposal or recovery route for IBA | Hazardous and Non hazardous Landfill |
| Did any batches of IBA test as hazardous? If yes, state quantity | 103/442 |
| Disposal or recovery route for APC residues | Landfill |
| Total quantity filter cake residues produced | 1712 te |
| | |
| | |
| | |
| | |

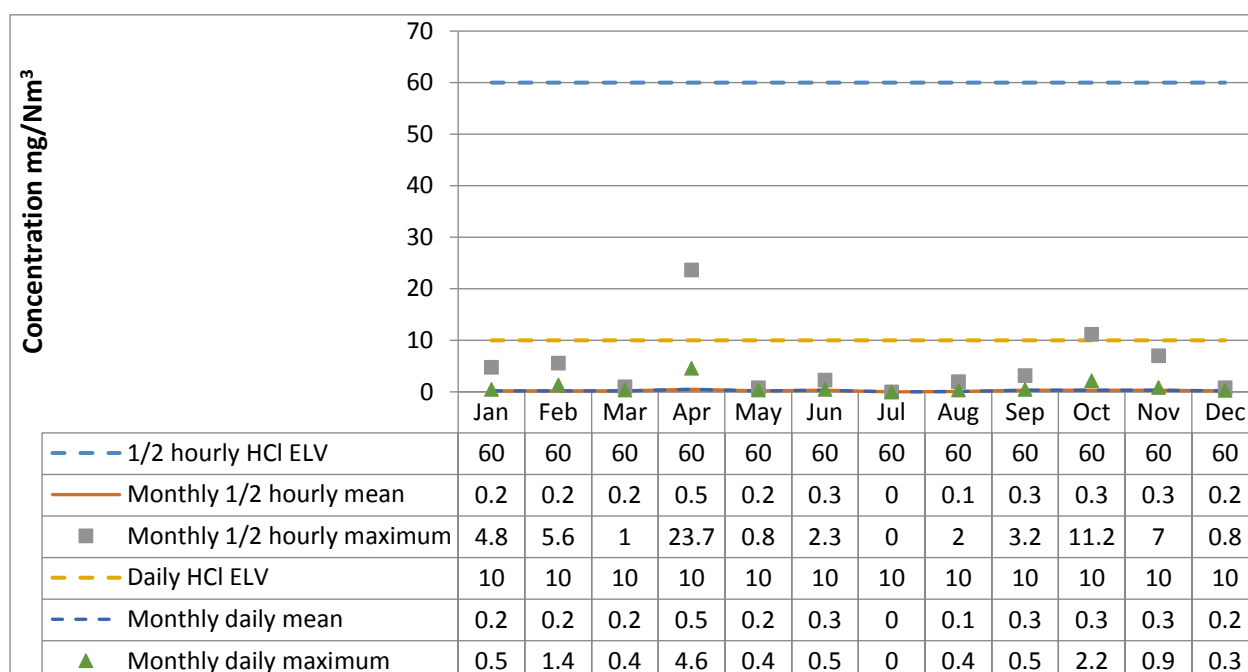
4. Summary of Plant Emissions

4.1 Summary of continuous emissions monitoring results for emissions to air

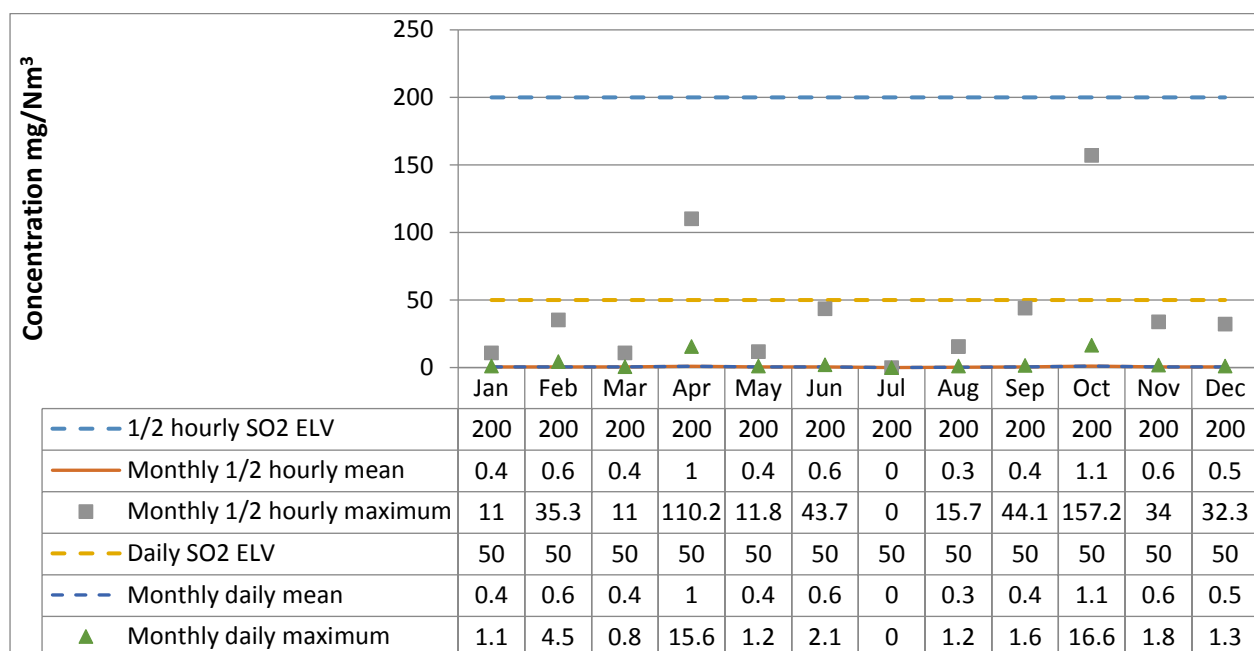
The following charts show the performance of the plant against its emission limit values (ELVs) for substances that are continuously monitored.



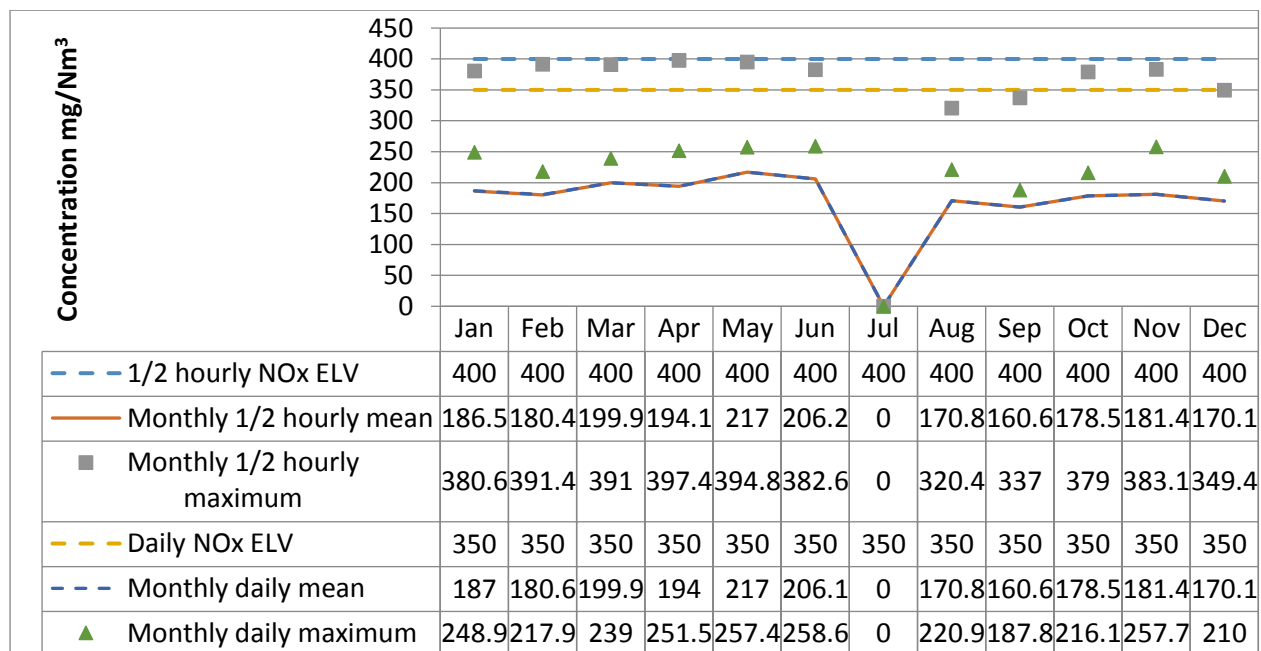
Line 1 - Hydrogen chloride



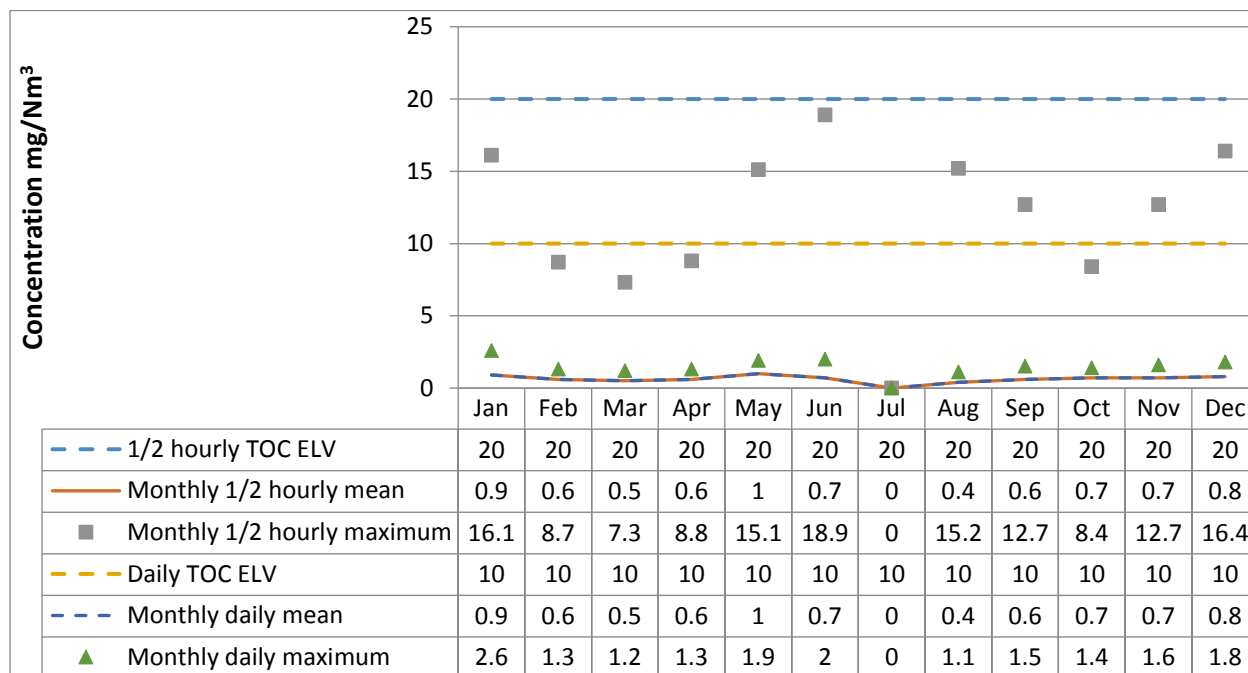
Line 1 – Sulphur dioxide



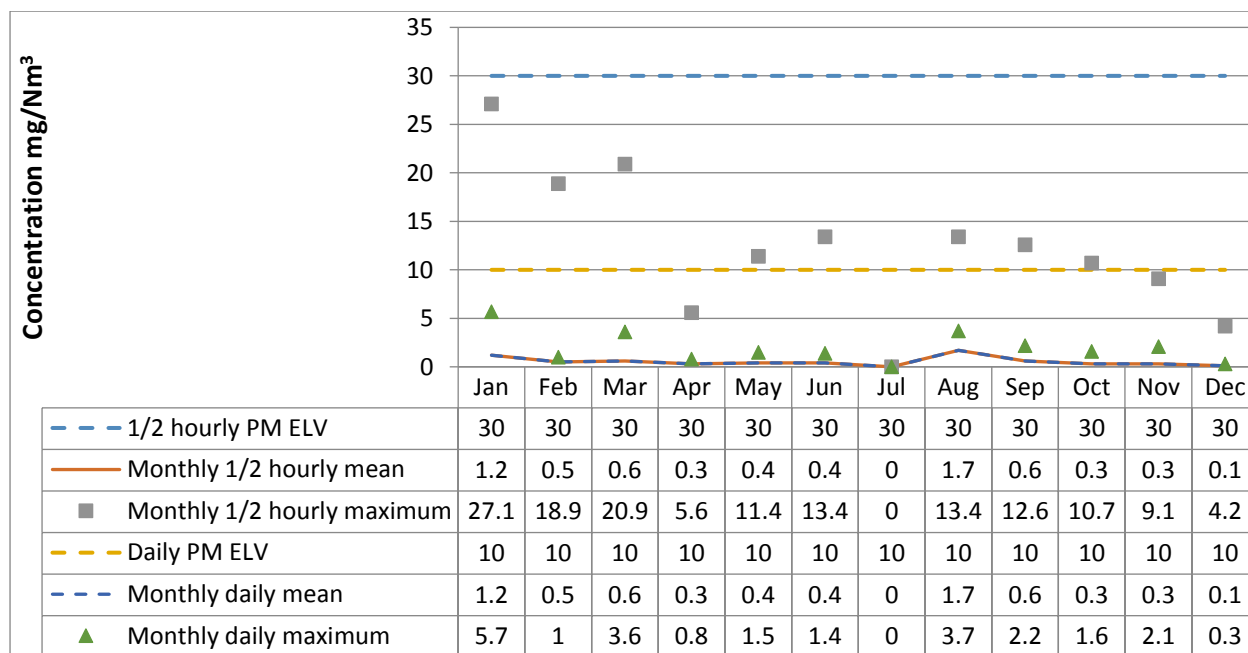
Line 1 – Oxides of nitrogen



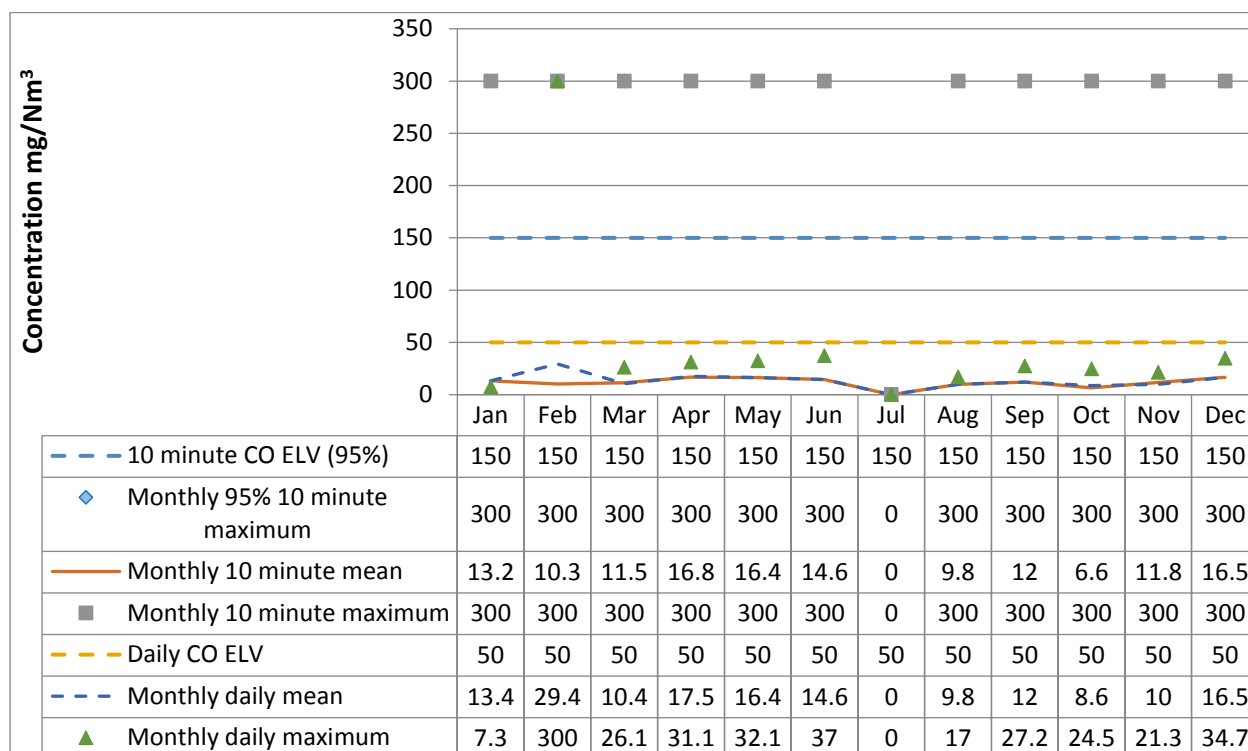
Line 1 – Total organic carbon



Line 1 – Particulates



Line 1 – Carbon monoxide



4.2 Summary of periodic monitoring results for emissions to air

The table below shows the results of periodically monitored substances.

| Substance | Emission limit value | Results | |
|--|------------------------|--------------------------|--------------------------|
| | | 29/06/2018 | 16/11/2018 |
| Mercury and its compounds | 0.05 mg/m ³ | 0.0015mg/m ³ | 0.038 mg/m ³ |
| Cadmium & thallium and their compounds (total) | 0.05 mg/m ³ | <0.0014mg/m ³ | 0.027 mg/m ³ |
| Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total) | 0.5 mg/m ³ | 0.325 mg/m ³ | 0.1 mg/m ³ |
| Dioxins and furans (I-TEQ) | 0.1 ng/m ³ | 0.0014 ng/m ³ | 0.0024 ng/m ³ |
| Hydrogen Fluoride | 2 mg/m ³ | 0.0039 mg/m ³ | 0.042 mg/m ³ |

4.3 Summary of monitoring results for emissions to water

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The following tables summarises the results of monitoring of emissions to water for each month:

Total suspended solids

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|------|------|-----|-----|-----|------|------|------|-----|-----|------|-----|
| monthly ELV (mg/m ³) | 45 | | | | | | | | | | | |
| Monthly maximum | 19 | 11 | 15 | 26 | 41 | 31 | 13 | 25.3 | 14 | 25 | 12 | 14 |
| Monthly average | 0.01 | 0.01 | 0 | 7 | 3.4 | 0.01 | 0.01 | 0.01 | 1 | 1 | 3.07 | 1 |

Ammonical Nitrogen

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|------|------|------|-------|------|------|------|------|------|------|------|
| monthly ELV (mg/m ³) | 11000 | | | | | | | | | | | |
| Monthly maximum | 30261 | 7145 | 4343 | 7706 | 11488 | 9107 | 1401 | 6164 | 4203 | 7005 | 3503 | 7705 |
| Monthly average | 5043 | 140 | 27 | 1401 | 140 | 1121 | 701 | 239 | 420 | 1401 | 2382 | 1821 |

Aluminium

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-----|------|------|-----|-----|-----|-----|------|-----|------|-----|
| monthly ELV (mg/m ³) | 375 | | | | | | | | | | | |
| Monthly maximum | 696 | 394 | 1547 | 1101 | 365 | 742 | 755 | 577 | 1493 | 776 | 1057 | 841 |
| Monthly average | 149.5 | 120 | 50 | 40 | 0 | 373 | 105 | 118 | 1 | 43 | 154 | 83 |

Arsenic

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| Monthly ELV (mg/m ³) | 100 | | | | | | | | | | | |
| Monthly maximum | 174 | 148 | 140 | 137 | 121 | 185 | 125.9 | 126 | 113 | 103 | 179 | 98 |
| Monthly average | 35.31 | 57 | 35 | 47 | 46 | 57 | 44 | 34 | 31 | 22 | 37 | 22 |

Cadmium

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|------|-------|------|-------|-----|------|-------|-------|------|------|------|
| Monthly ELV (mg/m ³) | 12.5 | | | | | | | | | | | |
| Monthly maximum | 19 | 20 | 50 | 71.5 | 40.67 | 34 | 19 | 27.03 | 17.03 | 30.7 | 36.4 | 48.8 |
| Monthly average | 0.001 | 11.5 | 10.44 | 8.35 | 8.86 | 7.5 | 2.26 | 3 | 3 | 4.1 | 4.5 | 11 |

Chromium

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| Monthly ELV (mg/m ³) | 40 | | | | | | | | | | | |
| Monthly maximum | 59 | 63 | 77 | 83 | 19 | 41 | 43.9 | 57 | 65 | 30 | 78 | 31 |
| Monthly average | 0.211 | 0.001 | 0 | 0 | 6 | 0 | 5 | 1 | 1 | 0 | 1 | 1 |

Copper

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|
| Monthly ELV (mg/m ³) | 275 | | | | | | | | | | | |
| Monthly maximum | 255 | 131 | 137 | 142 | 190 | 202 | 125 | 154.2 | 89 | 333 | 252 | 71 |
| Monthly average | 33.92 | 55 | 31 | 145 | 95 | 87 | 62 | 119 | 77 | 39 | 107 | 85 |

Iron

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-------|-------|-------|-----|------|-----|-----|-----|-----|-----|-----|
| Monthly ELV (mg/m ³) | 1500 | | | | | | | | | | | |
| Monthly maximum | 78 | 240 | 184.9 | 98.84 | 114 | 1307 | 314 | 254 | 35 | 55 | 85 | 860 |
| Monthly average | 0.001 | 0.001 | 0 | 0 | 0 | 0 | 116 | 1 | 1 | 0 | 1 | 21 |

Nickel

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| Daily/monthly ELV (mg/m ³) | 100 | | | | | | | | | | | |
| Monthly maximum | 81 | 84 | 73 | 65 | 156 | 101 | 39 | 70 | 70 | 53.2 | 116 | 231 |
| Monthly average | 21.9 | 32 | 27 | 21 | 49 | 39 | 25 | 23 | 39 | 14 | 34 | 69 |

Phosphate

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|--------|------|------|------|-------|-------|------|-----|------|------|------|------|
| Monthly ELV (mg/m ³) | 155250 | | | | | | | | | | | |
| Monthly maximum | 8529 | 7424 | 2561 | 4182 | 14130 | 26350 | 682 | 829 | 6364 | 9361 | 4750 | 5587 |
| Monthly average | 518 | 797 | 177 | 444 | 1542 | 2340 | 1658 | 128 | 818 | 789 | 378 | 731 |

Lead

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-----|-----|
| Monthly ELV (mg/m ³) | 200 | | | | | | | | | | | |
| Monthly maximum | 8 | 160 | 13 | 67 | 24.18 | 45 | 33 | 71.37 | 44 | 29 | 95 | 15 |
| Monthly average | 0.001 | 0.001 | 0 | 0 | 0 | 0 | 13 | 7 | 1 | 5 | 1 | 11 |

Zinc

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------------|-------|-----|-------|-------|-----|-----|-------|-----|-----|-----|-------|-----|
| Monthly ELV (mg/m ³) | 150 | | | | | | | | | | | |
| Monthly maximum | 631 | 385 | 309.9 | 409.9 | 488 | 599 | 262 | 252 | 164 | 181 | 154.1 | 510 |
| Monthly average | 119.9 | 91 | 118 | 102 | 109 | 6 | 44.04 | 42 | 68 | 37 | 4 | 79 |

Mercury

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|-----|------|------|-----|------|------|-----|------|-----|------|------|-----|
| Daily/monthly ELV (mg/m ³) | 2 | | | | | | | | | | | |
| Monthly maximum | 3 | 0.68 | 4.06 | 2 | 0.63 | 2.25 | 1.6 | 1.75 | 0.5 | 1.09 | 0.54 | 0.7 |
| Monthly average | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |

Temperature

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Daily/monthly ELV (mg/m ³) | 35 | | | | | | | | | | | |
| Monthly maximum | 34.8 | 32.3 | 31.1 | 33.6 | 32.4 | 33.4 | 32.3 | 29.2 | 27.6 | 28.6 | 35 | 30.8 |
| Monthly average | 26 | 24 | 24 | 26.88 | 27.57 | 28.49 | 24.03 | 23.93 | 22.99 | 23.85 | 26.71 | 26.23 |

5. Summary of Permit Compliance

5.1 Summary of any notifications or non-compliances under the permit

| Date | Summary of notification or non-compliance | Reason | Measures taken to prevent reoccurrence |
|------------|---|--|--|
| 16/11/2018 | H2 Heavy metals high on MCERT run, passed on retest | Customer waste stream found to have contamination levels in excess of acceptance caveats | Waste acceptance procedures reviewed and updated to include full disclosure of contaminants. |

5.2 Summary of any complaints received and actions to taken to resolve them.

| Date of complaint | Summary of complaint | Reason for complaint including whether substantiated by the operator or the EA | If substantiated, measures to prevent reoccurrence |
|-------------------|--|--|---|
| 07/08/2018 | Odour Complaint from Neighbouring business | Raised with EA, odour complaint was substantiated | Material was consigned by customer as non odorous, smell arose during offloading. Future loads will be injected directly from the receiving barrel. |

6. Summary of plant improvements

Summary of any permit improvement conditions that have been completed within the year and the resulting environmental benefits.

Summary of any changes to the plant or operating techniques which required a variation to the permit and a summary of the resulting environmental impact.

Increase in permitted annual throughput to 48 000te.

A reduction in annual effluent discharge volumes by 3000 m3.

Summary of any other improvements made to the plant or planned to be made and a summary of the resulting environmental benefits.

- Changed 75te of activated carbon in Mercury Abatement Plant July 2018, continuing heavy metal emission compliance.
- Reline of process chemical storage tank bund Dec 2018.
- Upgrade of control system digital switches, improved plant reliability July 2018.
- Upgrade of fuel tanks
- Upgrade of Plant Heat Exchangers
- Removal of redundant calcium chloride storage

Planned for 2019

- Installation of second ID Fan
- Upgrade of Caustic delivery system (to remove the need for trace heating)
- Drums storage area surface upgrade (>100m²)
- Removal of redundant tank farm and Cooling tower.
- Installation of Tank Farm ROSOVs

7. Details of any public liaison planned for 2019:

| Date and time | Description | Location |
|---------------|---|-----------|
| 01/02/2019 | New Forest Environmental Protection Liaison Committee | Lyndhurst |
| | | |
| | | |
| | | |