

| | |
|--------------|------------|
| Project no.: | 2133 |
| Customer: | Vevelstad |
| Date: | 17/08/2023 |
| Revision: | 2 |
| Responsible: | REE |

Nutrient input to system

| | |
|------------------------------------|----------------|
| Project | 2133 Vevelstad |
| Estimated feed per yr (tons) | 4171,3 |
| Weighted FCR | 0,97 |
| Estimated annual production (tons) | 4300,0 |

| Added with feed incl. Feed spill | Nitrogen (kg/yr) | Phosphorus (kg/yr) |
|---------------------------------------|------------------|--------------------|
| Total nutrient content in feed | 322.340 | 47.426 |
| Ingested fromction | 319.117 | 46.951 |
| Digested fromction | 271.294 | 22.469 |
| Particulate from fraction from faeces | 51.046 | 24.956 |
| Nutrients converted to biomass | 118.475 | 18.525 |
| Dissolved fraction excreted | 152.819 | 3.944 |

| | |
|-----------------|--------|
| Particulate COD | 619007 |
| Particulate BOD | 123801 |
| Dissolved COD | 247603 |
| Dissolved BOD | 123801 |

Nutrients to be treated in RAS

| | Parameter | Contribution to be treated (kg/yr) |
|------------------------------------|-----------------|------------------------------------|
| Nitrogen | Total-N | 203.865 |
| | Particulate-N | 51.046 |
| | Dissolved-N | 152.819 |
| TAN (+ urea and other N-compounds) | | 152.819 |
| | | |
| Phosphorus | Total-P | 28.900 |
| | Particulate-P | 24.956 |
| | Ortho-P | 3.944 |
| BOD | Total BOD | 247.603 |
| | Particulate BOD | 123.801 |
| | Dissolved BOD | 123.801 |

Raw discharge from RAS (excl. Sludge treatment)

Nutrients in RAS overflow

| | Parameter | Nutrients in overflow (kg/yr) |
|------------------------------------|-----------------|-------------------------------|
| Nitrogen | Total-N | 27.535 |
| | Particulate-N | 809 |
| | Dissolved-N | 26.726 |
| TAN (+ urea and other N-compounds) | | - |
| | | |
| Phosphorus | Total-P | 1.717 |
| | Particulate-P | 944 |
| | Ortho-P | 772 |
| BOD | Total BOD | 14.667 |
| | Particulate BOD | 2.976 |
| | Dissolved BOD | 11.691 |

Nutrients in Sludge from RAS

| | Parameter | Nutrients in sludge (kg/yr) |
|------------------------------------|-----------------|-----------------------------|
| Nitrogen | Total-N | 136.933 |
| | Particulate-N | 50.237 |
| | Dissolved-N | 86.696 |
| TAN (+ urea and other N-compounds) | | 1.528 |
| | | |
| Phosphorus | Total-P | 27.184 |
| | Particulate-P | 24.376 |
| | Ortho-P | 2.808 |
| BOD | Total BOD | 143.645 |
| | Particulate BOD | 103.983 |
| | Dissolved BOD | 39.662 |

RAS overflow and reject water (To recipient/ end-of-pipe)

| | Parameter | Nutrients discharge from overflow and reject water (kg/yr) |
|------------------------------------|-----------------|--|
| Nitrogen | Total-N | 118.271 |
| | Particulate-N | 3.321 |
| | Dissolved-N | 114.950 |
| TAN (+ urea and other N-compounds) | | 1.528 |
| | | |
| Phosphorus | Total-P | 5.743 |
| | Particulate-P | 2.163 |
| | Ortho-P | 3.580 |
| BOD | Total BOD | 69.927 |
| | Particulate BOD | 18.574 |
| | Dissolved BOD | 51.353 |