

ADD GENERAL INFORMATION

Year

2011

Country

Åland/Finland

WASTE WATER TREATMENT PLANT

Waste water treatment plant

Lotsbroverket

Process

- Primary treatment (e.g. grit removal, sedimentation)
- Conventional activated sludge treatment
- Enhanced phosphorus removal, chemical
- Enhanced phosphorus removal, biological

In Operation since, year

2006

WWTP Capacity (pe=person equivalents)

30000.0

Actual load as pe

25456

Industrial waste water connected to WWTP

- Food Industry
- Animal husbandry

Other, please describe

Other

Tertiary treatment, please describe:

SLUDGE MANAGEMENT

TREATMENT OF SLUDGE BEFORE DISPOSAL

- Thickening (e.g. drum thickener)
- Digestion
- Dewatering (e.g. centrifuge)
- Drying (e.g. belt drying)
- Composting

Hygienization (chemical, thermal), please describe:

Amount of sludge to disposal (DS), tons/year

SLUDGE DISPOSAL

- Agriculture
- Landscaping
- Landfilling
- Incineration
- Other

AGRICULTURAL USE

Are there challenges with the heavy metals or other contaminants in the sludge (legal limits for contaminants easily exceeded or new restrictions being planned)? Yes No

LANDFILL

Are there legal restrictions that prevent landfill of sludge/ashes from incineration in your country/city? Yes No

Amount of sludge to disposal (DS),
tons/year

RECIPIENT

Recipient area in the Baltic Sea

Bothnian Bay

HELCOM map

Discharge Coordinates - Latitude,
Longitude

60.085564,19.928169

62.674143,14.414063



Find Discharge Coordinates from the map!

CONTACT PERSON

Given name

Surname

e-mail

Address

Post office number

Post office address

Phone number

Fax number

ADD NUTRIENTS**WASTE WATER FLOW**

Waste Water Flow, m3/year

2324308.0

Waste Water Overflow, m3/year

26086.42

PHOSPHOROUS**INCOMING PHOSPHOROUS**

Tot-Pin, mg/l (yearly average)

8.59

Tot-Pin, tons/year

10.0

Industrial Phosphorous Load, tons/year

0.0

OUTGOING PHOSPHOROUS

Tot-Pout, mg/l (yearly average)

0.14

Tot-Pout, tons/year

0.44

TOTAL NITROGEN**INCOMING TOTAL NITROGEN**

Tot-Nin, mg/l (yearly average)

53.3

Tot-Nin, tons/year

124.0

Industrial Total Nitrogen Load, tons/year

0.0

OUTGOING TOTAL NITROGEN

Tot-Nout, mg/l (yearly average)

11.64

Tot-Nout, tons/year

27.0

AMMONIA NITROGEN**INCOMING AMMONIA NITROGEN**

NH4-Nin, mg/l (yearly average)

0.0

NH4-Nin, tons/year

0.0

Industrial Ammonia Nitrogen Load, tons/year	<input type="text" value="0.0"/>
OUTGOING AMMONIA NITROGEN	
NH4-Nout, mg/l (yearly average)	<input type="text" value="0.0"/>
NH4-Nout, tons/year	<input type="text" value="0.0"/>
BIOLOGICAL OXYGEN DEMAND, BODx	
BOD-method used	<input checked="" type="radio"/> BOD7 <input type="radio"/> BOD5
BODxin, mg/l (yearly average)	<input type="text" value="267.0"/>
BODxin, tons/year	<input type="text"/>
BODxout - RECIPIENT LOAD	
BODxout, mg/l (yearly average)	<input type="text" value="1.33"/>
BODxout, tons/year	<input type="text" value="4.22"/>
CHEMICAL OXYGEN DEMAND, COD	
CODin, mg/l (yearly average)	<input type="text" value="713.0"/>
CODin, tons/year	<input type="text" value="1557.0"/>
CODout - RECIPIENT LOAD	
CODout, mg/l (yearly average)	<input type="text" value="30.3"/>
CODout, tons/year	<input type="text" value="72.23"/>
ENERGY PURCHASE	
	View example sheet
Oil, m3/year	<input type="text"/>
Electricity, kWh/year	<input type="text"/>
Oil spec.weight, tons/m3	<input type="text"/>
Oil CO2, grams/kWh	<input type="text"/>

SLUDGE ENERGY[View example sheet](#)Total Biogas Production, m³/yearBiogas Burned for Heating, m³/yearBiogas Used for Electric Energy Production, m³/yearMethane (CH₄) content of Biogas, %

Electricity Produced from Sludge, kWh/year

COMBINED HEAT AND POWER PLANT

Capacity CHP, MW

Efficiency factor (electric), %

Efficiency factor (thermal), %

ENERGY MANAGEMENT

How long the biogas can be stored, h

Thermal self-sufficiency (of the whole consumption), %

Electrical self-sufficiency (of the whole consumption), %