



# SEWAGE TREATMENT PLANT IN AUGUSTA

The plant is part of the Industrial Development Area of Siracusa-Augusta and, therefore, easily reached via the road network of the I.D.A., well connected to the highway Catania-Gela.

The platform is designed to treat organic, urban or agribusiness liquid waste and industrial liquid waste (mostly from the poles of Eastern Sicily), such as leachate, galvanic and photographic water, etc.

The plant architecture provides the ability to treat wastewater of a different kind on separate lines: the first, indeed will be dedicated to the treatment of sewage with a high organic load (such as waste of the food industry and the spoils of septic tanks), for which there are provided a screening and initial grit removal and a second process line, which will be dedicated to industrial wastewater, for which there is provided a pre-treatment of chemical-physical type.

After the pre-treatment steps, both sewage lines are equalized and subjected to membrane biological remediation (MBR) with subsequent denitrification; traditional sedimentation is replaced with a reverse osmosis (R.O.) treatment with final evaporation-crystallization. The sludge line, finally, consists of a dehydration-type centrifuge for both chemical and biological sludge, after stabilization with a dosage of polyelectrolytes to improve the power of dehydration.

All plant sections are equipped with air intake systems in order to limit the emissions of VOCs in the atmosphere, the air drawn in is treated through the passage within a biomass filter biofilter, sized for a flow of about 3.000 Nm<sup>3</sup>/h.

## DESIGN DATA

### Private client

STTA s.r.l

### Tasks assigned and carried out

Final design, Environmental Impact Assessment and Integrated Environmental Authorization application

**Cost** € 2.971.758,33

**Location** Augusta (SR)

**UTM Coord. (Zone 33S)** 515,050

E - 4,116,870 N

**Plant area** 6.500 m<sup>2</sup>

**Design period** 2010

## TECHNICAL DATA

Operations according to Encl. B and C referring to Part IV of Law Decree No. 152/06 (D.Lgs. 152/06) and further amendments D8, D9, D15.

**Maximum potential:** 32.000 m<sup>3</sup>/y; 100 m<sup>3</sup>/d

**Working days per year:** 350

### Treatment sections:

- Preliminary solid separation with grill
- Sand and oil separation
- Physical-chemical pretreatment
- MBR biological treatment with a denitrification and ultrafiltration section
- Reverse osmosis treatment
- Evaporator
- Final dehydration of sludge

## ACCESSORY EQUIPMENT

**Air treatment:** fan system and air treatment from plant

**Section with higher production of odorous substances:** 3.000 Nm<sup>3</sup>/h

**Biofilter surface:** 33 m<sup>2</sup>

