

## NO MORE ODOR AT Malta Waste Water Plant

**WATER SERVICE CORPORATION** inaugurated Ta' Barkat sewage treatment plant in June 2011 to eliminate marine pollution in Malta. This plant can treat about 60.000 cubic meters of domestic sewage per day, which is around 80% of all wastewater in Malta.

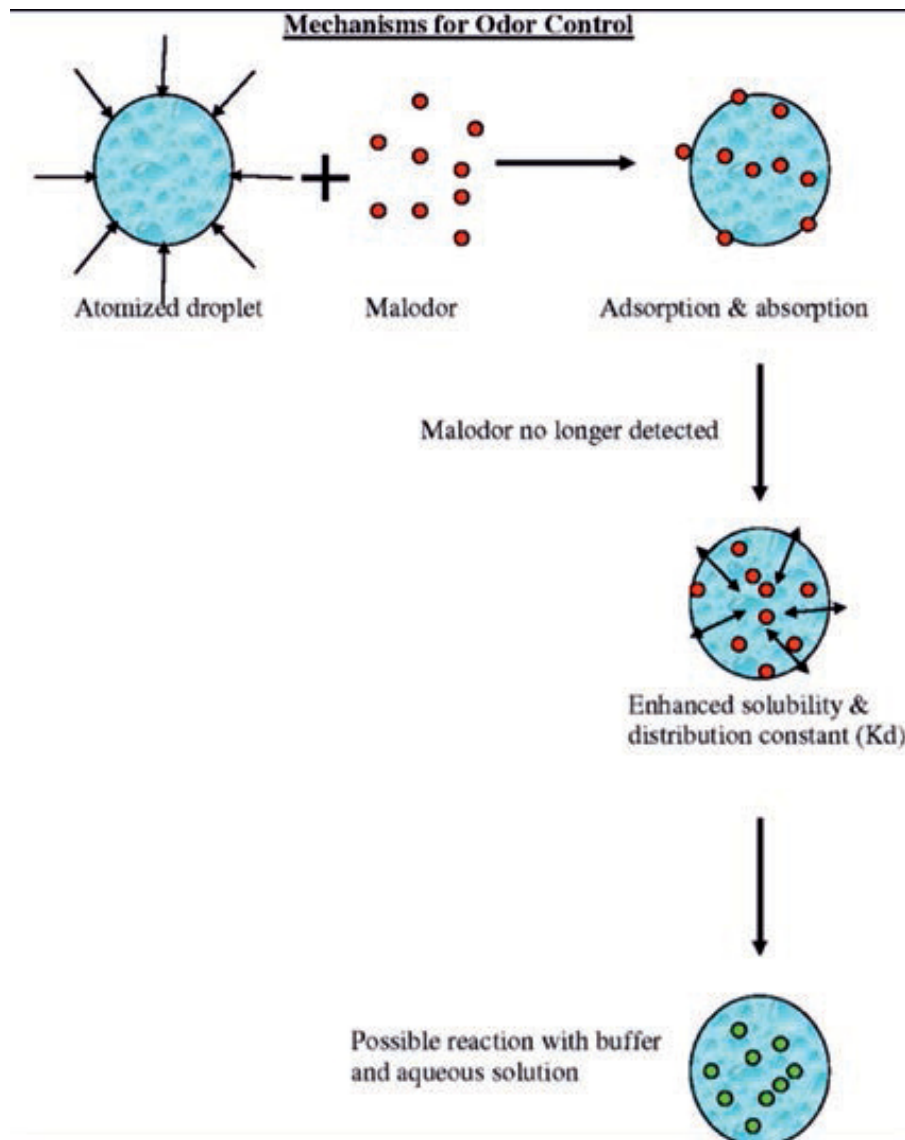


Due to the high temperature in the long and warm summer season, from the first period of running of the sewage plant, sometimes an unpleasant odor problem appeared. Chemic Ltd., a company actively involved in Malta in the startup of new companies, new technologies and supply of water treatment chemicals, contacted ACAT

to find a solution to control the odor problem. ACAT personnel through a survey of the plant handled the problem and offered a full service with dosing equipment system and ECO-SORB®, the product to neutralize the odor. Primarily, ACAT offered a long test in a part of the plant (primary settlement and flocculation area).

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Thanks to the good result of this test, WSC issued a tender to treat all areas of the plant in order to avoid any single odor problem for the future. Chemic in cooperation with ACAT won the tender and installed the full equipment.

The ECOSORB® DOSING SYSTEMS named HPS were installed in the following different areas of the sewage treatment plant observed like odor sources:

1. Pumping station

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2. Primary settlement and flocculant plant
3. B.A.F. Biological aerated filter
4. Sludge thickening and dewatering building
5. Waste wash water tanks
6. Digested sludge storage tank

In Ta' Barkat the full equipment installed is composed of:

- 6 HPS Box
- around 300 nozzles, 4 micron orifice diameter
- 800 meters of pipeline

### HPS BOXES

(high-pressure systems) are the systems of choice for most outdoor installations and even some indoor installations.

These systems run on 70 bar of pressure, providing a good atomization (misting) through patented nozzle design, easily installed. A digital dosing pump is included into the HPS box along with the electrical box control and hydraulic one. The atomization nozzles are commonly installed in a flexible polyamide hose, with a large selection of nozzle spacing's. Standard brass or stainless steel fittings can be used throughout the system.

To correctly size and specify a Hydraulic High Pressure system, one must first define the area to be covered and the location of the atomizing nozzles in order to cause Ecosorb® to come into contact with the malodor. If the installation is open air, the engineer must consider nozzle location in relation to the odor source, areas to be protected from the odors (neighbors), prevailing and secondary



wind conditions. Often, we place a nozzle line with controls around the entire perimeter of an odor source, such as a wastewater pond.

For example, this installation might be along a fence or roofline. Overall, the most effective wastewater plant surrounded by nozzle system misting equipment placement is to place the atomization nozzles as close to the odor source as possible. Nozzle spacing is not critical, as long as we consider that Ecosorb® must simply come into contact with the malodor.

A conservative suggestion is to space the nozzles 2 to 3 meter apart.

### ECOSORB®:

ECOSORB® has proven to chemically convert foul and potentially harmful gases into non-odorous, non-toxic by products. Some tests has verified that Ecosorb is effective in the breakdown and reduction of hydrogen sulfide, ammonia, sulphur dioxide, ethyl and methyl mercaptans - potentially toxic gases which comprise the most common sources of odour.