CASE STUDY

VANOISE PARK, SAVOIE

2017

Distributor	**DBO Expert France**
Project	Installation of a wastewater treatment system at a high-altitude hiking shelter (2,350 m)
Treatment Capacity	**3,750 L/day**
Soil Analysis	**Permeable**
System Surface Area	**92.9 m²**
Particularities of the Site	The installation includes a grease trap and is installed at an altitude of 2,350 m.

Treatment results available upon request.

Grease trap and septic tank

BACKGROUND

This project consisted in installing a wastewater treatment system at the Refuge du fond d'Aussois in the French Alps. This hikers' shelter contains a kitchen and beds where hikers can spend the night. The system is installed at a high altitude and is designed to treat the wastewater of 25 people and 1.5 kg of $CBOD_5$.

TRAITEMENT PRIMAIRE

The System O)) is preceded by a primary treatment. Raw wastewater leaving the building passes through a grease trap that separates the high levels of fats and oils that come from the kitchen and is then collected in a 15 m3 pre-treatment tank. Inside the tank, the wastewater separates into layers as the fats float to the top and the solids sink to the bottom.

DISTRIBUTION

The effluent of the septic tank flows by gravity into a distribution box where it is then distributed evenly into the rows of Advanced Enviro)) Septic pipes. The proper functioning of the System O)) installation depends on a uniform distribution of wastewater between the Advanced Enviro))Septic pipe rows. This is achieved with the help of equalizers installed inside the distribution boxes. These equalizers have weirs that are manually adjusted by a dial during the installation. They are the only moveable parts in the entire system. Once they are set during the installation, they don't need to be adjusted again. There are no components of the Advanced Enviro))Septic that require electricity when the system is gravity-fed. The effluent of the system is discharged into the soil.

Placement of the septic system components

Covering the System O)) with filter sand

System O)) CE NSF AVIS TECHNIQUE

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ADVANCED SECONDARY TREATMENT

This System O)) uses one cell of Advanced Enviro))Septic pipes. The wastewater flows along the lenght of the rows, where it is treated by bacteria living in the AES pipes and in the filter

SYSTEM FEATURES AND BENEFITS

- All wastewater at the site is treated passively,
- No maintenance is required,
- No energy is spent on wastewater treatment,
- No products are required for wastewater treatment,
- Wastewater odours cannot develop,
- The treated water is perfectly clear and free of pollution.

ECONOMIC ADVANTAGES

By using a System O)), the client saves money in the long term. They won't be required to empty their septic tank by helicopter and they don't have to worry about their installation clogging with the fats and grease coming from the kitchen in the shelter. A Sys-tem O)) costs roughly the same as a conventional system, but has a lifespan of over 30 years. Conventional installations can start to fail after 15 years even if they are treated well.

ENVIRONMENTAL ADVANTAGES

Purification performance well below national standards:

- Less than 25mg/L of BOD5(5-day biochemical oxygen demand)
- Less than 25mg/L of suspended solids (SS)

The treatment process of a conventional installation occurs in the soil, while System O)) treats the wastewater within the system, protecting the native soil.

The covered System O))

System O)) DBO INTERNATIONAL