



**TREATMENT OF SAND POLLUTED BY HEAVY FUEL OIL FROM THE ERIKA**

*Mr Jean-Benoît Clermont*

*Total Raffinage Distribution – Immeuble Galilée – 92907 Paris La Défense Cedex*

[Jean-benoit.clermont@totalfinaelf.com](mailto:Jean-benoit.clermont@totalfinaelf.com)

*Secondary authors : Mr Pierre Scherrer*

---

**ABSTRACT**

The treatment concerns 270 000 metric tons of sand polluted by heavy fuel oil after the Erika broke apart and sank. The polluted sand is stored in four large storage areas located near Saint-Nazaire. The character of the waste is very heterogeneous: the majority is sand, other minerals, fuel and salted water, but there are also plastics, old iron and vegetable matter including pieces of wood.

The process starts with the injection of diesel and water in order to reduce the viscosity of the fuel oil. There then follows a sequence of sorting, water cleaning, filtering and clarifying. The treatment installations, located near Donges refinery, were designed and will be operated by Brezillon, a subsidiary of Bouygues.

Most of the treated products will be re-used. The clean sand will be used in road construction or for industrial concrete; hydrocarbons (a mixture of diesel and fuel oil) will be included with the crude feed and refined in Donges refinery; process water will undergo an on-site biological pre-treatment then be returned to the refinery; mud will be press-filtered then treated by external thermal desorption before being used in the construction of embankments; pieces of iron will be recycled; plastic and vegetable matter will be incinerated.

The two main problems encountered when starting the units concerned the large proportion of silty mud and the emulsification of the fuel/water mixture. The installations had to be upgraded by adding centrifugal and mud treatment units. It will take time to establish the best way to organise the treatment, nevertheless a few recommendations and comments may already be made:



- Large storage zones are needed (less than 10% of the waste is fuel oil)
- The waste is very heterogeneous and sampling is difficult
- Laboratory tests are not enough; on-site operations are necessary to identify the real problems
- It is important to keep the public well informed. This task is difficult in the prevailing emotional atmosphere.

Industrial operations will start in April 2002. The TOTAL group has committed itself to pay 55 million euros for the treatment.

