Bio Tube Summary of AEA Trials

The Environmental Protection Agency (EPA) in England has taken a critical interest in the performance of our Bio Tube product for separators.

They expressed concern that in using a bioremediation process in an oily water separator the result would be the release of toxic or harmful products from the oil phase to the water phase.

In the UK water from industrial and forecourt separators is discharged either to foul sewer or surface water drains.

In the case of **foul sewer** discharge the EPA raised the concern that the release of harmful/toxic products would require a revision of the consent to discharge limit. Consent to discharge limits are usually established as minimum acceptable levels and cover Chemical Oxygen Demand (COD), Biological Demand (BOD) and oil discharges.

Exceeding a consent to discharge limit usually incurs a heavy financial penalty.

Surface water is discharged direct to water streams or rivers and it would be unacceptable to release toxic material direct to such drinking water sources.

The EPA requested the environmental consultancy firm AEA Technology to determine if the Bio Tube concept was a) environmentally acceptable and b) efficient.

The raw materials used in our Bio Tubes were bottle tested on waste engine oil and fresh diesel.

The biological cultures "grown" in the bottles successfully degraded both the waste engine oil and fresh diesel.

The control bottles were then made sterile and the contents analysed to determine if there were any changes which could be associated with adverse effects of the bioremediation process.

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The results showed that NONE of the bioremediation products were harmful or toxic to the environment. In fact specifically targeted toxic molecules were degraded out!

This is an important result and should after successful completion of Phase Two lead to EPA use approval in England.

The data obtained from AEA Technology is highly sophisticated but if your customers would like to see the full report please contact our Bio Technics Product Manager Carol Divine.

Bottle tests as conducted by AEA Technology use a very small part of the Bio Tube product and we had expressed our concern to AEA that their procedure would understate the value of oil and diesel degradation achieved.

We had no need for such concern as the published results showed a 33% reduction in waste oil content and a 92% reduction in diesel content. Phase Two involves a series of separator field trials using a Bio Tube in each separator chamber. These trials start in May and I look forward to sending you the full trial results when they become available. Probably in October or November of this year.

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