

## Case-Study-1

COMPANY: CONFIDENTIAL

ADDRESS:

CITY, ECT

INDUSTRY: REFINING

POLLUTANT REDUCED: VOC

PROCESS: IC4 MAKE-UP PUMPS

CONTACT PERSON:

CONTACT PHONE:

CONTACT E-MAIL

What factors drove you to undertake this project?

We have IC4 make-up pumps in the LDAR Program. These pumps are monitored monthly; the sample results were over the 10,000 ppm limit. Our only course of action was to replace the seals, only to have them fail again the next month. The failure was due to the design of the pump not the seals. The costs for continually replacing the seals were adding up with no results.

Tell us how you reduced the pollution:

We installed our first ERS Bio-Filter system in May of 2006. The G-4 Model filter scrubbed the Hydrocarbons and has kept them from escaping to the atmosphere.

## Innovative Application of Technology:

The design of the Sundyne centrifugal pump has one ¾” npt vent port which is where the Method 21 test instrument sampled and always found it leaking over the 10,000 ppm limit. This port is now piped to the inlet connection of the Bio-Filter Case. The system has a built-in liquid fluid barrier to force the vapors thru the filter pillow, and an outlet line to the sump tank for safety reasons in the event of a seal failure. This application of new technology is keeping the pumps in compliance every month without a single failure (average readings are now under 100 ppm)...

## Additional Information:

We have since installed this filter system on 17 more similar designed pumps, with the same outstanding results. I have submitted this application for “Best Practice” with-in our company. We have saved thousands of dollars in maintenance expenses and we are no longer replacing perfectly good parts trying to meet the required limitations. If this technology had not been found, we would have been forced to replace our pumps with new designed equipment at much higher cost to achieve the same goals.

## Environmental Benefits & Reductions Achieved:

Substance Reduced:	NGL
Amount: (average)	From 50,000 ppm to 100 ppm
Unit:	Sundyne Centrifugal Pump
Type of Pollutant:	VOC
Savings per unit:	\$10,000.00 per yr.

## Overall Savings:

Payback period:	Less than 6 months
Cost savings due to maintenance:	\$10,000.00 per yr.
Cost savings due to down time	\$1000.00 per month
Reduced regulatory paper work	7-10 hours per month
Estimated savings from AFE (new equipment)	\$60,000 per unit

This Technology was invented by Emission Reduction System located in Odessa, Texas

Contact: © Emission Reduction Systems - Bio – Filters  
Office 432-367-0006  
Mike Strickland / [mike@ersbiofilter.com](mailto:mike@ersbiofilter.com)  
AP Martin / [ap@ersbiofilter.com](mailto:ap@ersbiofilter.com)  
U.S. Patent No. 7,951,226 (patented process for pumps)  
Patents and Patents Pending  
ERS has multiple systems for various emission sources available