

### Case Study 3

COMPANY:	CONFIDENTIAL
ADDRESS:	GAS PLANT
CITY, ECT	TEXAS
INDUSTRY:	NGL
POLLUTANT REDUCED	PROPANE
PROCESS	PLUNGER PUMPS (UNDER EPA- KKK MONITORING)
CONTACT PERSON:	
CONTACT PHONE:	
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#### What factors drove you to undertake this project?

We have plunger pumps under the monthly monitoring program with a leak definition of 10,000 PPM. Every month they were tagged for exceeding the limit. Estimate average readings of 80,000 ppm (Team Industrial Service's monitor would flame-out).

#### Tell us how you reduced the pollution:

We installed the ERS Bio-Filter system prototype in February of 2005. This system was used as a test bed for later generations of filters. On January 23, 2006 we replaced the prototype Bio-Filter with an upgrade G-3 model that implemented a wet filter media into the system, a transparent cover over the plunger cradle area so that any liquid leaks from the plunger packing could be detected, and a liquid barrier fluid on the drain system. It has been in service since that time without a failure, and performance has been improved drastically, with Method 21 readings on the average of 103 ppm from around the breather area and 2 ppm from the drain pipe.

## Innovative Application of Technology:

This new Technology was developed by Emissions Reduction Systems. We were glad to work with them on this project. The plunger pumps are A-30 Apex and were not designed to stop vapors, our mechanics were getting very frustrated every month when the inspectors monitored the pumps and continually said they were leaking, when no apparent drips or liquid were present. This simple and cost effective solution has solved the problem. We highly recommend installing these ERS Bio-Filter Systems to anyone who has equipment that falls under KKK or VV monitoring programs. They will save you time and money.

## Additional Information:

Emissions Reduction Systems has different models available for plunger pumps, centrifugal pumps, compressors, tank batteries, valves, and other fugitive emission sources.

## Environmental Benefits & Reductions Achieved:

Substance Reduced:	NGL
Amount: (average)	From 80,000 ppm to 103 ppm
Unit:	A-30 Apex Pumps
Type of Pollutant:	VOC
Savings:	5,000.00 annually on packing alone

## Overall Savings:

Payback period:	Less than one year
Cost savings due to disposal:	minimal (We change filter pillows each quarter)
Down Time for maintenance:	4,800.00 per year
Reduced regulatory requirements:	5-10 hours per month
Reduced Hazards:	LEL

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

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U.S. Patent No. 7,951,226 (patented process for pumps)  
Patents and Patents Pending  
ERS has multiple systems for various emission sources available.