

## FFS Refiners realise financial savings through implementation of Cleaner Production (CP) options

### BACKGROUND

FFS was initially established in response to SA's changing energy needs during the 1970's. The former objective of the company was to develop firing systems capable of handling unconventional fuels to process waste and other materials into quality marketable fuels. FFS's Durban-based production operation has comprehensive processing facilities and is capable of accepting virtually any oil-based feedstock; such as ship slops, industrial used oils and refinery byproducts for the manufacture of liquid heating fuel products. This facility processes approximately 36000 - 48000 tons of used oil per annum. At the end of 1999 FFS reinforced its proactive approach to the protection of the environment and sustainable development by obtaining ISO 14001 certification.

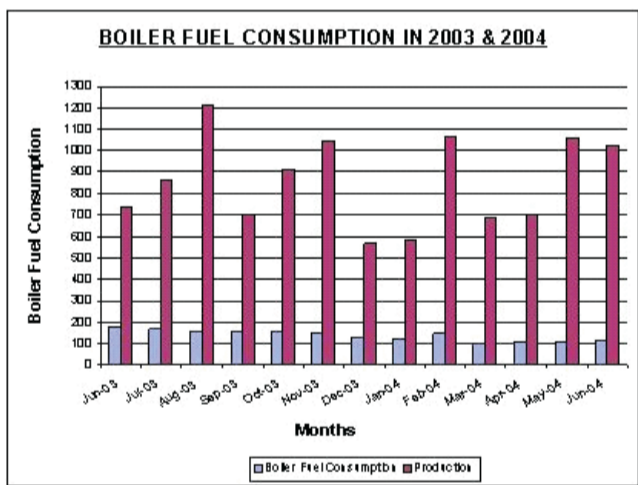
### CHALLENGE

One of the major challenges facing FFS with the adoption of the ISO 14001 environmental management system is the issue of continuous process improvement, to reduce the impact of their process and products on the environment. By adopting the CP approach companies are able to address the issue of "continuous improvement".

### SOLUTION

In March 2004 the NCPC conducted a Cleaner Production Quick Scan assessment of FFS Refiners Teakwood road processing facility. The Quick Scan assessment identified opportunities for energy recovery and emulsion phase separation. These areas were investigated in more detail through carefully planned and executed student projects. The following two options have already been implemented by FFS:

- Installation of a Pinch heater to recover energy from the forced feed evaporator to preheat the feed oil into the evaporator from 60°C to 100°C.
- Sourcing of a more sensitive emulsion interface detection apparatus to obtain a better split at the water and oil emulsion interface results.



### RESULTS

The assessments have resulted in the following savings and impact for FFS:

- Installation of energy Pinch heater has resulted in savings of R21 000 per month from reduced boiler fuel consumption.
- Installation of new technology interface detector for emulsion phase separation resulting in savings of approximately R79 200 per month from reduced boiler fuel consumption

**CEO Don Hunter FFS Refiners: "Cleaner Production is not only a social responsibility but if the challenge is met with Innovation and Science it can also add value to the bottom line"**

