

# NPC-CIMPOR in win-win resource recovery trials

Waste disposal is something most people think little about. That is changing in South Africa, however, as government endeavours to increase awareness of the best ways to handle and manage waste at both the industrial and domestic levels. This is important for a number of reasons, such as the growth of the country's existing landfills at a rate of two to three percent annually - a situation which will become increasingly difficult to sustain.



## Waste hierarchy

Waste management strategy is best understood by looking at the illustration above which shows the waste management hierarchy or system in which waste management options are arranged in order of their benefits and importance, with the most beneficial being at the top.

From the illustration, the best option is to avoid or minimise waste altogether. An example of this is the ongoing effort to minimise the plastic bags, bottles and other plastic waste which finds its way into South African landfills. This is followed in descending order of desirability by reuse and recycling of waste. Aluminium and some types of glass are typically recycled, which like the options above recycling in the hierarchy, is preferable to disposal. The next level – recovery – is of particular interest in certain South African industries such as cement making, where some waste is suitable to be co-processed with coal in the manufacturing process.

## Trials

NPC-CIMPOR, as a cement manufacturer, is participating in an alternative fuel trial at their Simuma cement plant, which will make a significant contribution to waste management at the recovery level. Waste at this level of the hierarchy cannot be avoided, nor has it met the requirements to be reused or recycled, and is about to go to the least beneficial lowest level, which is disposal in landfills. Besides saving on consumption of non-renewable coal, co-processing of tyres which are either manufacturers' rejects or have not been selected for re-treading is a more economical option than burning coal alone.



**Environmental responsibility:** (from left) NPC-CIMPOR Environmental Officer Chantelle Howlett and NPC-CIMPOR Plant Manager at Simuma Giovanni Lodetti in front of one of the stockpiles of used and reject tyres that will be used during upcoming tests.

NPC-CIMPOR maintains a staff of environmental specialists which include Environmental Officer Chantelle Howlett and Group Sustainability Manager Cliff Naidoo. They are some of the NPC-CIMPOR personnel who will be observing the alternate fuel trials which begin next week on August 16th. The trials, which are part of government's National Waste Management Strategy or NWMS, will be closely monitored both by government and NPC-CIMPOR's specialists and consultants. Because co-processing of tyres has been practiced internationally for decades, a positive environmental outcome to the trials is expected. Not only are the tyres expected to burn more cleanly than coal, but their consumption as fuel in the cement kilns means they will not go to the lowest level of the hierarchy for disposal, where they would encumber

landfills.

Naidoo says, "When we co-process tyres and coal there is no solid waste and the rubber from the tyres does not adversely affect the quality of the cement. In fact, when the tyres are consumed in a cement kiln, they actually contribute a small amount of iron to the clinker, which is a positive factor in cement manufacture. In some industries where thousands of tons of coal are burned as fuel, ashes are produced, which must somehow be dealt with in the waste management hierarchy – waste which may end up in landfills. In the cement industry, however, the ash is an ingredient and forms part of the product."

*More information can be found at the governmental website of [www.wastepolicy.co.za/nwms](http://www.wastepolicy.co.za/nwms)*