

## **SOUTH SIDE LANDFILL**

A permitted solid waste landfill located in southwestern Indianapolis, Southside Landfill has served the greater Indianapolis area since 1971. It is completely surrounded by an impermeable barrier that extends from the ground surface to an average depth of 91 feet. This 5-foot thick impermeable “wall” is anchored into the underlying bedrock and is designed to isolate the landfill from the surrounding groundwater. A drainage system located on the inside of the “wall” collects the liquids that percolate through the landfill. The liquids are collected and pumped to the Southport Advanced Wastewater Treatment Plant for processing.

Once solid waste is deposited into the landfill, it is covered with soil and a decomposition process begins. Methane gas, the major component of natural gas, and carbon dioxide are formed in approximately equal volumes. In the early 1980’s, landfill gas recovery wells were installed and tests were conducted to determine if the landfill gas could be collected safely and in sufficient, reliable quantities to be used as an energy source.

After considerable research and investment, more than 100 landfill gas recovery wells were installed and an intricate pipeline system was constructed to collect and transport the landfill gas. Some of the landfill gas that is collected is used to heat the vehicle maintenance shop and to power the landfill’s liquid pumping system. Rolls Royce also takes some power from the landfill gas. The major consumer of the landfill gas is the Crossroads Greenhouse.

## **CROSSROADS GREENHOUSE**

The greenhouse is a 6.5 acre glass greenhouse which opened in April, 1989. It is divided into several climate controlled zones. The temperature, humidity, automated ventilation system, shade curtains, and artificial lighting in each zone are computer controlled. Landfill gas is used within the greenhouse to satisfy heating and other climate control requirements, and also to generate electricity to supplement electrical needs.

Annually, more than 400,000 poinsettias, bedding plants, and hanging baskets are grown and supplied from the greenhouse. This is in addition to the approximately 80 million starter “plugs” that are shipped to other commercial greenhouses throughout North America.

## **WASTE DERIVED FUELS**

It has been proven that landfill gas generated from the waste products of others provides a reliable, alternative energy source. We are convinced that other beneficial uses of this resource exist. That is why we are constantly searching for other landfill gas uses – both within our own facility, and in public and private facilities in central Indiana.