Managing our impact on the environment

ENVIRONMENT

Implats acknowledges that the process of mining and processing has a direct impact on the mining site and its surrounds. It is therefore incumbent on the operating company to anticipate, prevent and, as far as possible, mitigate the effects of its actions. Three critical areas in this regard are air, water and land management.

An Environmental Management System (EMS), based on the international ISO 14001 standard, has been developed and is being rolled out across all our operations. In keeping with an intention to migrate to the new ISO 14001:2004 across the group, Rustenburg operations, Refineries and Zimplats have converted their certification to the new requirements. Marula Platinum and Mimosa have started to implement this standard.

Our operations uphold Implats' safety, health, environmental and quality (SHEQ) Policy, which provides the framework for best practice. The key commitments of the SHEQ Policy are:

- compliance with all applicable laws, regulations and standards;
- pollution prevention; and
- continual improvement in environmental performance.

The group is in the process of implementing a set of corporate standards across all operations, which will form the basis for the development and application of SHEQ management systems at all levels within the group. The standards will cover all operational aspects and activities that have the potential to affect the health and safety of people, the environment, or the community; and will extend throughout the entire life cycle of operations – from exploration and planning through to operation, closure, decommissioning, remediation and rehabilitation.

Air quality

The air quality surrounding the Rustenburg operations is affected by dust and gaseous emissions, especially sulphur dioxide emissions from the smelter operations. In view of Implats' potential to grow, the annual production capacity of the smelter may be expanded from 1.9 million to 2.8 million ounces of platinum. This has resulted in a revision of the internal sulphur dioxide emission reduction strategy as well as the scheduled process permit which is issued in terms of the Atmospheric Pollution Prevention Act.

Total sulphur dioxide emissions per ounce of platinum declined 31.7% year-on-year between FY2005 and FY2006, attributable to improvements in acid plant availability and in the running time of the Sulfacid™ plant over the past two years.

Dust fall-out, primarily from stack emissions, roads and tailings, is monitored at ten locations in the vicinity of the mine. 82% of the samples taken during FY2006 were below the target of less than 300 milligrams per square metre per day.

Quarterly stack sampling, implemented in FY2005, has enabled more accurate monitoring of air emissions from Refineries. The major pollutant is sulphur dioxide, the volumes of which increased by 5.6% to 637.8 tonnes, which is within permit levels. The volume of ammonia released by Refineries rose 212% year-on-year, attributable to the temporary Ignition Scrubbing System (ISS) being unable to scrub ammonia as was stipulated in the scoping document on the expansion project (ammonia is emitted from the furnaces that ignite the final product). This is being rectified by the new scrubbing system, which is currently being installed with the approval of GDACE and the Chief Air Pollution Control Officer (CAPCO) in terms of the EIA.

Water management

Initiatives are in place to conserve water by recycling, eliminating wastage, and preventing water pollution. In an effort to optimise fresh water consumption, our Rustenburg operations began drawing treated effluent water from the Rustenburg Water Care Works in July 2006. Measures are also in place to minimise discharge and maximise recycling opportunities, so as to minimise the operations' overall impact on the water resources. A number of projects are planned over the next few years that will increase polluted water storage capacity while reducing potential for discharge and increasing water recycling. These projects should improve the water quality in the Rockwall Dam, which is intended to be a clean water dam.

The annual water consumption at Refineries rose from 30.1 kilolitres per tonne matte milled in the prior year to 31.8 kilolitres per ton matte milled in FY2006. This increase reflects the fact that a lower grade of material was treated (more water is required per ounce of matte milled in order to produce the same amount of high quality platinum). However, the total fresh water consumption, at 855,340 kilolitres (37% of the permitted volume), was 3.6% lower than in FY2005, illustrating the positive impact of Refineries' water recycling initiatives, which resulted in 305,895 kilolitres of water being recycled, equating to 26.4% of the overall water consumption.

The set targets for fresh water consumption at Zimplats' SMC and Ngezi sites in FY2006 were achieved. This allowed for a year-on-year increase in fresh water consumption at the two sites to about 1.8 and 0.2 million kilolitres respectively (reflecting the overall increased activity levels at Zimplats' operations).

Water consumption at Mimosa was contained to 1.9 million kilolitres, significantly less than the permit. A water management plan is in place that aims to reduce fresh water consumption, improve water quality and reduce effluent run-off. The wastewater outflow from Mimosa complied with the discharge permits for the disposal of effluent and waste. Water from nearby rivers and streams is sampled monthly for chemical analysis to determine the impact of the operations on the aquatic and surrounding environment and no adverse results were observed in FY2006.

Land, biodiversity and waste management

A closure programme and conceptual closure plans for the entire Rustenburg operations were compiled during FY2006. The current cost of the closure and rehabilitation liability at June 2006 was determined at R430,6 million, which included all the mining, mineral processing and prospecting activities at Rustenburg operations, as well as the rehabilitation of all the waste rock dumps.

All of the operational woodchip and sewage sludge wastes at Rustenburg operations are collected for use in the manufacturing of compost by Monontsha, a local community-based business, as input to the rehabilitation of the tailings dam slopes. An area of 69,187 square metres has been rehabilitated since work commenced in February 2006. The project aims to rehabilitate 300,000 square metres over a period of ten years.

Rehabilitation work continues at the Merensky and UG2 opencast operations and is part of the operating contract. Some 207,838 square metres were completely rehabilitated during FY2006.

The total volume of waste generated by Refineries decreased 2.7% year-on-year to 2,265 tonnes, equating to 65 tonnes of waste per tonne of matte milled. Of this, some 23% was recycled and the remaining 77% was disposed of at Holfontein, a permitted landfill site. These reduced waste levels reflect the reduced level of construction activities in the BMR.

Jarosite, the iron-based waste produced after the base metals and PGMs have been leached out, is the single biggest waste stream generated as a by-product of Refineries' processes and is currently dumped at Holfontein. Opportunities to recycle the Jarosite are being investigated.

At Zimplats, rehabilitation work continued at the SMC Tailings dam and at the Ngezi open pit waste dumps. However, only 10 hectares of the planned 87 hectares were rehabilitated at Ngezi in FY2006 as the targeted area was not yet available. At SMC, 5 hectares were rehabilitated (instead of the budgeted 2 hectares).

Development work on a closure plan for Ngezi opencast has commenced and should be finalised during the first quarter of FY2007.

Mimosa's waste management plan is founded on waste minimisation through optimising resource consumption, proper use of tools and equipment; as well as recycling and initiatives to minimise waste rock. All disturbed areas are rehabilitated and previously polluted areas restored to their original state. The tailings dams are being re-vegetated with indigenous grasses and trees that are most suited to the climate around Mimosa.