

Columns

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magazine for the people of

SAPREF
One Team One Purpose

Minister praises SAPREF

for LION project

The LION (Large Increase in Octane Number) plant was unveiled by the Minister of Energy and Minerals, Mrs Lindiwe Hendricks, on 7 April.

Speaking at a ceremony at SAPREF attended by community leaders, captains of commerce and industry, shareholders BP and Shell, and representatives of the petrochemical industry, Mrs Hendricks said the company's investment in new fuel-refining technology was an investment for the future of the country and its people. She praised SAPREF for choosing to further refine petrol component to produce the cleaner products.

SAPREF's new R700-million cleaner fuels plant did more than eliminate lead from petrol and reduce sulphur in diesel – it boosted local employment, pumped millions of rands into BEE and is designed to produce products with a direct environmental benefit. The plant exceeded the International Project Institute's global and South

African safety benchmarks during its two-year construction, came in on budget and on schedule in early December, and made a significant contribution to the local economy.

"Over and above ensuring the production of unleaded petrol and low-sulphur diesel, it is also encouraging that the project plan included BEE and local job creation objectives as in the case of this SAPREF plant. I must compliment SAPREF and the other players in the petrochemical industry for upholding the practice of sustainable development."

SAPREF managing director Wayne Pearce said the production of unleaded petrol and the reduction of sulphur in diesel and petrol would have a significant positive environmental impact.

"For SAPREF-produced fuels alone this



SAPREF chairman Adv Rams Ramashia and Department of Minerals and Energy Minister Lindiwe Hendricks after unveiling the specially made LION plaque.

will now result in a reduction of about 2 000 tonnes annually of lead additive and 12 000 tonnes of sulphur dioxide a year being emitted through vehicle exhausts."

The new plant was completed without an injury resulting in lost time. Safety statistics show that performance was three times better than international

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SAPREF receives safety award

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Part of the LION plant, by night.

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benchmarking standards and six times better than the average South African project in the petrochemical industry. The LION teams were given motivational inspiration when soccer personality Jomo Sono paid several visits to the site to boost the safety culture and teamwork.

The project exceeded its BEE procurement target, with R150 million of the South African-based capital expenditure going to BEE companies.

"As part of the way we do business, we not only identified BEE opportunities for the equipment suppliers, but also for the on-site installation contractors, which ultimately resulted in 78 percent of the project's capital spend within the country," said Pearce.

BEE spend amounted to 31 percent



MD Wayne Pearce, right, hands a gift to Minister Lindiwe Hendricks.

of total procurement and contract spend, exceeding the advance commitment of 20 percent for 2004 and 25 percent for 2005.

"We also sought to provide employment opportunities for local residents and to ensure skills transfer during the project. During the construction of the LION project, 70 percent of the 1 455 people employed were from neighbouring communities." said Pearce.

Minister Hendricks said: "I am also pleased to note that accompanying the investment SAPREF undertook, one of our key objectives both as government and our industry as outlined in the Liquid Fuels Charter, is that procurement spent on Black Economic Empowerment (BEE) companies has been complied with during the upgrading of your refinery, and



Rosie Motene, a well-known actress and TV presenter, was the programme director.

that also needs to be commended.

Wayne commented that a project of this magnitude could only have been accomplished with the effort of an exceptional team. Under the leadership of Tjalling Terpstra, SAPREF established a dedicated project team for the construction, flawless start-up and ongoing operation of the plant. Pearce said that of the 8000 field welds completed, not one needed repair after x-ray inspections. This was a testimony to the quality of work delivered by the welders from Durban, of which 45 % were from the immediate neighbourhood areas.

He recognised the role Fluor Daniel, the managing contractor, played to ensure the success of the project and added that several South African contractors played key roles in the achievement of an excellent construction quality and safety record.

Social investment was always at the forefront of the project. Timber in which components were packed was donated to the Umlazi Technical College for carpentry students to use in making tables, whilst the link with soccer was carried through by supporting a local community-initiated soccer development programme. After the conclusion of the LION project, almost-new furniture helped equip the Sunshine Trauma Unit which provides support for victims of violence.



The well known song-and-dance troupe, Mafikizolo provided the entertainment and performed their specially composed LION song.



Vuli's a team player

Meet Vuli Nxumalo, the new employee relations manager who doesn't smoke or drink, and whose young looks belie his considerable HR experience. He joined SAPREF on 13 March.

Vuli was born near Eshowe, but went to school in Durban. He started working at the Department of Health in 1988, studying part-time and obtaining a national diploma in HR, and then a B Com degree with honours in industrial psychology. He has subsequently worked for Illovo Sugar, ABI, SA National Blood Services and Nampak.

Vuli is passionate about HR and is a good team player. He describes himself as committed to his work and meeting targets, while being friendly and fun-loving. He is a good listener and independent when it comes to making decisions.

He is married with three children; he has many interests including reading, gym, horseriding in the Berg, hiking and soccer – he's a Kaizer Chiefs and Golden Arrows fan. He is also choirmaster in his church, and on the parish council.

Long servers

Congratulations to the following long-serving people whose anniversaries came up in March and April 2006:

5 years

Musa Dlamini, XT chips technologist

10 years

Petros Khumalo, area engineer assistant
John van Belkum, PUM OMUTDE

15 years

Sipho Mmembe, process technician
Kelvin Parker, mechanical fitter
Denny Lazarus, mechanical supervisor
Tony Ramsamy, process technician
Ravind Singh, process technician

20 years

Dominic Hlophe, broadening assignment in inspection
Wordsworth Khumalo, mechanical fitter

25 years

Rammy Goven, maintenance coordinator
Vis Moodley, user services technician
Michael Munsamy, operator

30 years

Farook Rassool, production foreman
Ishwar Mahabeer, production foreman
Tim Moodley, foreman: production
Nelson Naidoo, process technician
Jock Paul, XP mechanical fitter



Facing down the 'cannots'

"We gain strength, courage, and confidence by each experience in which we really stop to look fear in the face ... we must do that which we think we cannot." (Eleanor Roosevelt)

Sharon Bango, who draws inspiration from this statement, joined SAPREF on 13 February on a ±three-year assignment from Shell in Cape Town.

Sharon is working in technical auditing as a performance engineer. Her primary role is to increase the depth of analysis on performance-related issues. She is executing GRM calculations, performing retro analyses, learning about Solomon benchmarking, and in general gaining a conceptual view of SAPREF operations.

She grew up in Spruitview on the East Rand while attending St Mary's School in Waverly, Johannesburg. Since she is driven by challenges, she chose to study chemical engineering. She graduated from Wits University in December 2004 and joined Shell.

She played hockey for Southern Gauteng for three years, and enjoyed rowing quads and doubles while at school. These days among other things, squash, soccer and golf keep her entertained. Other interests include music, theatre, photography and reading thought-provoking books. Learning how to play the piano, surfing and fishing are also on her agenda.

On the move

On the departure of Nils Bosma, production manager, accountabilities went to:

- **Lizwe Mda** for all process units, fire station and shift managers
- **Rodney Youldon** for all hydro-carbon planning and logistics matters (SBM, oil movements, despatch, utilities, Island View and E&S).

Line replacement under way



Seen examining the underground pipeline data produced by the Interrogator are, from left, Ashley Derman, materials controller, WBHO/Shearwater JV; John Thomson SAPREF construction supervisor; Rob Routs, executive director Shell downstream; and Iain Everingham, president: Shell Oil Products, Africa.

which shows the location and depth of all underground services.

Trenches are being dug across the length of the lines at 20-metre intervals; measurements being made are used in the layout design for the new lines. At the same time professional land surveyors are fixing the exact co-ordinates of the servitude.

Says project manager Ebrahim Vawda, "We have started at the southern end. Our community liaison officers are letting residents and businesses know in advance when the work will get to them, and small road detours are inevitable at this stage."

Meanwhile, the piping has been ordered from Mittal SA (formerly Iscor) and Mittal Europe; the 6" pipes are being made in South Africa, the others in Europe. The pipe bends, specially designed to accommodate an 'intelligent pig' for inspection purposes, are in the process of being ordered abroad. All pipes will be coated with a three-layer polypropylene system at Hall and Longmore in Johannesburg. The pipe bends will be coated abroad.

The plan is to start installing the pipes in July/August.

The project to replace the seven transfer lines to Island View is under way, with work going on both along the servitude and behind the scenes.

A device known as an Interrogator and which looks like a fancy lawn mower, has been used along the length of the lines. It is a pre-excavating locating and planning tool and uses an antenna to send and receive electromagnetic waves beneath the ground surface. The system uses the data collected to create a 2-D image

Data in sharper focus

Complementing the pipeline replacement project, new software, which is about to enter service, will provide an opportunity to view and analyse our pipeline data (including in-line inspection results) in a way that was not previously possible.

Said Dave Garrod, project specialist, recently returned from factory acceptance testing at Dynamic Risk Assessment Systems in Canada, "Obviously the integrity of both our transfer lines and the lines at Island View is of vital importance to us, as well as our neighbours, and the environment. By capturing and manipulating all relevant data, IRAS (integrated

risk assessment system), will help us to diagnose any potential problems and ensure better pipeline management and risk mitigation in a cost-effective manner. In addition, where field work is concerned, by integrating the risk algorithm with GPS technology and GIS software, we now have the ability to pinpoint features in the field within half a metre of their location."

With the new software, SAPREF will have the ability to conduct :

- a detailed analysis of various in-line inspection runs side by side
- an analysis of other factors contributing to high-risk locations such as coating, age and type



Mark Skea, IT project manager DRAS, right, thanks DRAS's president, Glen Yuen, with Dave Garrod, project specialist, and Murray Rydman, senior GIS & data manager.

- an identification of high-risk locations and the primary risk contributors
- a comparison of detailed risk profiles for each pipeline with respect to the attributes for that line.

Safety plaques presented

Dr Rob Routs, executive director Shell downstream, presented two safety plaques to SAPREF on 16 March. One was the Shell Safety Award for seven million hours worked by all own staff and contractors without a lost time injury; this was achieved on 3 January 2006. The other plaque was in recognition of one million hours worked without a recordable incident between 9 November 2005 and 2 February 2006.



Operators and other SAPREF people gathered with Dr Rob Routs, centre, for a photograph with the two safety plaques he had presented.

Congratulating SAPREF, Dr Routs said that about half of his own 35-year career with Shell had been in refiner-

ies, so he knew it took enormous dedication to achieve seven million hours without a lost time injury.

Setback and comeback

SAPREF achieved eight million hours worked without a lost time injury on 20 March, a wonderful milestone to reach. To celebrate, staff and contractors were given electrical health grills. However, it was disappointing that on 23 March, just three days later, a SAPREF mechanical artisan slipped from a scaffold, sustaining a lost time injury.

manager, "It took 14 months to achieve that eight million milestone, and it was not easy, but we can be proud of our 8 044 631-hour achievement.

"We had a setback, now we should step back and make a stunning comeback. Team SAPREF must be resilient and go for TEN million now."

Said Karthi Moodley, acting safety



Shift supervisor David Radebe accepts a safety award from Dr Rob Routs on behalf of SAPREF.

SAPREF to host electrical engineer conference

SAPREF is proud to be hosting the Regional Electrical Engineers Meeting (REEM) - a conference for electrical engineers in the Shell group from all over Africa and the Middle East. It will be held at the Hilton Hotel in Durban from 14 to 18 May, with the theme: Improving our performance with respect to electrical integrity/trips/incidents.

Says Jeff McQueen, electrical manager, "We are hosting the conference, and it is being run by Shell Global Solutions International. It will be particularly useful for our people, as we are somewhat isolated here on the tip of Africa. It will be an opportunity for us to network in and be exposed more to the Shell world. And of course, the end result should be improved performance at SAPREF."

Crude oil pipeline replacement



In the photographs, new sections of pipe are being laid.

at the single buoy mooring, and the presence of abrasive media (sand/grit) in the crude oil.

The replacement pipe will follow the existing route as closely as possible and be buried to a depth of approximately two metres. The diameter of the pipe will be increased from 1000mm to 1200mm to facilitate intelligent pigging (inspection), and to extend the life of the section by reducing flow velocity and internal erosion. The life expectancy of the new section will be 30 years. The new line will be tied in during the next planned shutdown in May 2006.



The road detour near the south tank farm has prompted many to ask: What's going on? Well, at a cost of R27 million, SAPREF is replacing approximately 360 metres of pipeline between Reunion Rocks and the storage tanks. The first sections had been laid by the end of March.

The section of pipeline has suffered internal erosion as a result of high discharge velocity from the offshore tankers

A detailed Environmental Management Plan was prepared to cover the construction and rehabilitation phase of the project, in order to guide the contractor through the operations in a manner which will ensure that environmental disturbance is minimised. In the dune area at Reunion Rocks Beach, the line will be aligned so as to limit disturbance to the dune. A horticulturalist has been contracted to remove, store and replace all indigenous vegetation affected by the proposed project.

Moquini finds safe haven at SAPREF yard

SAPREF extended a hand of compassion recently to all involved in the tragic loss of six lives when the yacht Moquini disappeared last year.

All contact was lost with the yacht during a race from Mauritius to Durban in September 2005. The yacht was found in late February floating upside down with its keel missing about 500 miles off Durban. The yacht was towed into harbour by Smit Amandla, with SAPREF providing a secure place for the craft at its



The yacht Moquini is brought in to SAPREF's yard at Bayhead where it found a temporary home.

Kobe Road marine yard, Bayhead. The bereaved families were the first to visit, followed by various authorities including the South African Maritime Safety Authority who did an in-depth investigation, and the insurers. The yacht was then sold by tender, and was removed at the end of March.

Said George Franklin, marine manager, "We were happy to assist in bringing closure for the families involved, and by offering a secure if temporary home for the yacht."



**PORTFOLIO OF
COMMERCIAL SECURITIES**



Contracts and Procurement department

Look out for this new C&P publication, A5 in size.

The C&P department has produced a booklet entitled "Portfolio of Commercial Securities", which contains standard templates of all relevant guarantees and securities, the booklet upon completion will be distributed to all departments and contract holders in SAPREF.

New C&P securities to

reduce risk

SAPREF spends up to R1.4 billion every year on third-party goods and services procurement, and even more in a year like 2006 when a turnaround is planned. This involves numerous contracts and procurement transactions.

The contracts and procurement department (through the legal unit) is thus putting in place a robust and comprehensive set of commercial securities and assurance that will ensure that SAPREF does not suffer financial loss in the course of its commercial transactions with suppliers and contractors.

Examples of critical areas where funds deployed in contracts and procurement transactions are secured are:

- payment assurance by having the

right guarantees and warranties to support SAPREF's position

- ensuring effective and efficient service and goods delivery through the enforcement of the relevant bank guarantees, and parent-company guarantees and insurance bonds
- in the event of advance payment being made for the provision of goods and services, ensuring that such payments are secured by the execution of relevant advance payment guarantees.

Explains Fiona Gumede, legal service manager, "It's about reducing risk and enhancing efficiency in the supply chain. We have removed the gaps, enabling us to better control risk and thus reduce doubt and confusion. And, especially for international transactions, having our own documents gives us better negotiating power and establishes consistency in practice."

Tricky job done safely

On a windless day in March, tank 1805 got a new 'bottom'. That's the short version.

The longer version is more interesting. Tank 1805 holds naphtha and is 12 metres high and has a diameter of 7 metres. It was built in 1962. When it became apparent that the floor and

bottom strake (1.5 metres high) needed attention, minds were applied to the various possibilities and a solution was found. Special studies were done to facilitate the complicated job. All measurements had to be very accurate, and of course the lift of the new 18-tonne 'bottom' over live equipment had to be perfect. Safety was paramount. The lifts had to be done when there was no wind.

The tank was cut, the bund wall breached and the top of the tank was lifted off with a special 120-tonne crane, and tied down nearby. The bund wall was rebuilt and the base of the tank was refurbished. Then the bund wall was breached again and the new base lifted into place. The bund wall was then rebuilt and the top of the tank was welded on.



The new bottom for tank 1805 is lifted into place.

Said area engineer Olaf Koot, "Tankage work can be high risk. Professional planning was part of the answer; quality control during pre-fabrication and welding was also critical. Congratulations to all our people and the contractors who were involved in the safe and successful execution of a tricky job."



Safely does it The old top is slowly placed on the new bottom.

Rob Routs meets CLF members

Members of the SAPREF Community Liaison Forum were able to meet and talk to Dr Rob Routs, executive director Shell downstream, when he was at SAPREF on 16 March. At the informal meeting, small groups of community representatives were able to engage with him; later they asked questions from the floor, and Dr Routs responded.

Dr Rob Routs, seated, engages with a community member at an informal meeting.



Nils Bosma looks back ...

Production Manager Nils Bosma said goodbye officially on 31 March after five-and-a-half years at SAPREF.

Looking back, he recognised many highlights, of which some are:

- the step-change in safety; with eight million hours having recently been achieved, it showed that everyone has lifted their understanding of the safety requirements.
- the traditional distance between top management and the shop floor has been reduced; communication channels are more open and further developing.
- there are now structures in the business management system that will help SAPREF to continually improve when the accountability models are functioning.
- in the past year, there have been behavioural changes in the field which are supporting SAPREF's reputational objectives; people have bought into the "no spills" objectives, for example, sowing the seeds for further "perform as advertised".
- in May 2004, the refinery enjoyed a record crude throughput; in addition, this was at a time of record margins.

Looking to the future, he encouraged SAPREF people to work truly as 'one team' with 'one purpose' to supply hydrocarbon products within the internal and external constraints.



2000: Nils Bosma, happy to arrive.

In reality, this meant service departments and operations needing a more effective co-operative model such that operations can focus on their core job with fewer incidents and together lifting the company's reputation. Get the basics right, was his main message. He also felt that competence levels should be beefed up, as much expertise had been lost through exits and not replaced with similarly skilled people.

He said his family had enjoyed the "hospitable environment" in Durban,



2006: Nils Bosma, sad to leave, and maybe with a few more grey hairs.

that they are grateful for the many positive experiences at work and in the communities, and that they leave many new friends for life behind in South Africa.

They were now looking forward to putting down Dutch roots in The Hague but will stay in touch and if Holland will play Bafana Bafana in 2010, he will be there. Nils has returned to Shell in the Netherlands on promotion; with effect from 15 April he is Global Discipline Leader: Operations and Asset Management Consultancy.

For more information on SAPREF, visit www.sapref.com



Proud to have achieved ISO 14001 and ISO 9001 certification

