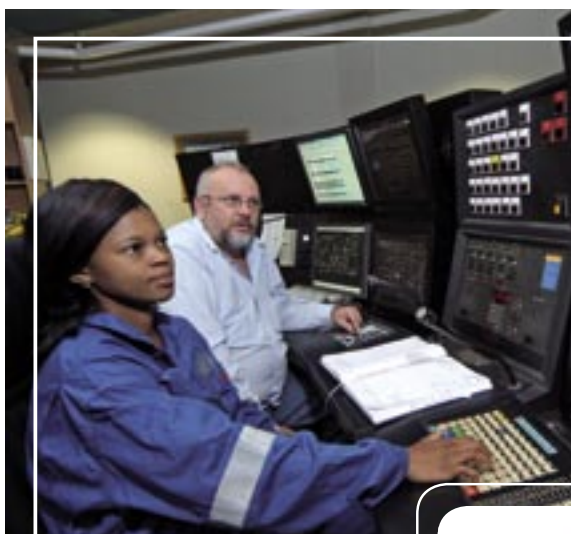


Sustainability Report 2008

A report to our stakeholders



On the cover

Clockwise, from top left,

Pretty Buthelezi is a Trainee Process Technician on the cat cracker panel. Here, she receives training from Kobus Human, Senior Process Technician.

Thamsanqa Majola and Nobuhle Mbooi admire some of the equipment in the new science lab sponsored by SAPREF, at the Zwelethu High School in Umlazi.

Antonio Faria, left, and Marcelino Muenjila, both Instrument Mechanics, service a control valve.

Inter-unit product transfer lines, with storage tanks.

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Felicia Alvar, Instrument Mechanic, tests a Flame Eye instrument in the workshop.

From the

As a key member of the South Durban community we aspire to manage our business to operational excellence. To do this we have committed to a philosophy of continual improvement in all aspects of our business. This means that we constantly strive to do better. This report gives details of what we have done during 2008 to maximize the efficiency and safety of our plant, to improve our environmental performance and to increase our investment in nearby communities.

We completed our pipeline replacement project on schedule, having restored the work areas to the original condition and decommissioned the old lines. I wish to thank all those along the pipeline route for their co-operation and patience during the three-year project.

In addition to some planned shutdowns for maintenance, we proactively shut down certain units to carry out repairs as part of a rigorous, ongoing programme to reduce risk associated with corrosion. Another programme that is well under way is to improve the robustness of a number of our pumps by installing double seals in place of existing single seals.

A significant change was the introduction of barges to provide bunkers to ships in Durban harbour. Previously bunkers were supplied by pipelines and the change reduces the risk of spills.

Our drainage system was streamlined to improve the quality of effluent in the sewerage system within the refinery. To our delight, we



Raj Hooblal, Environmental Engineer, points out the spot in a drainage canal where he first found fish.

managing director

have discovered colonies of freshwater fish thriving within this improved environment. We believe this indicates a high quality of effluent water in our sewerage system.

Modifications have been made to our oil separation system in the North Zone which receives run-off water from the production processes. This will further improve effluent water quality discharged to the municipal sewerage system. In a further initiative to improve the quality of effluent before it is discharged to the municipal sewerage system, we have started the Environmental Impact Assessment process for an effluent treatment plant.

At 14.1 \checkmark tonnes per day averaged over the year, our sulphur dioxide emissions were well below the permit level of 20 tonnes per day.

We continued to forge relationships with our stakeholders in South Durban and beyond. In addition to the SAPREF Community Liaison Forum, which continues to function and grow, we met with a broad range of community, local and provincial government, and business representatives. We extended our support of maths and science by establishing a third laboratory and moving the SAPREF Saturday school into the Isipingo community. Through the SAPREF training school more than 120 \checkmark learners were developed with skills that are critical to both SAPREF and the South African economy.

During the year we, together with our contractors, achieved 5 \checkmark million safe hours worked. All contractors who work on site are expected to have an approved HSSE plan which complies with SAPREF Rules and Regulations and statutory requirements. Building on the HIV/Aids VCCT (Voluntary Confidential Counselling and Testing) and treatment programme available to SAPREF people, we facilitated a similar programme for the staff of our contractors.



Bart Voet, Managing Director.

As the year ended we were well advanced in preparing for a major shutdown during 2009. The integrity work undertaken this year will stand us in good stead as we start the shutdown in the third quarter.

Our aim is to build on the improvements of the past to continue running a steady and safe operation which will result in a win-win situation for ourselves and our neighbours.

*Bart Voet
Managing Director*

About this report

This is the eighth multi-stakeholder report produced by SAPREF. Information is reported against selected Global Reporting Indicators (GRI).

This report covers SAPREF's refinery at Prospecton, storage facilities at the harbour, and the single buoy mooring and joint bunkering services managed and operated on behalf of industry. The report does not cover the entire supply chain or outsourced operations.

In line with our business philosophy of continuous improvement, the report seeks to illustrate our performance and challenges in key areas of our business.

Ngubane and Company have verified much of the information in this report. This is indicated by the symbol after certain data and statements, demonstrating that the information has been confirmed by the auditors. A statement of the auditors' factual findings is contained on page 5 of the report.

We thank those who provided feedback on last year's report and we welcome feedback on this report. SAPREF's contact details are on the back cover of this report.

Thank you for your interest in this report. We hope that the information it contains enhances your understanding of SAPREF.



Inter-unit product transfer lines.

Auditors' statement



**NGUBANE
& CO.**

AUDITOR'S STATEMENT OF FACTUAL FINDINGS

Scope

In accordance with your request to verify certain statements and performance related data in SAPREF's "Sustainability Report 2008", we have performed the following agreed-upon procedures as described below.

Our engagement was undertaken in accordance with International Standards on Auditing applicable to agreed-upon procedures. The responsibility for determining the adequacy or otherwise of the procedures agreed to be performed is that of the management of SAPREF. Our procedures are summarized as follows:

- Obtain an understanding of the systems producing the information;
- Review available documentation and records;
- Re-perform calculations where considered necessary;
- Conduct interviews with SAPREF personnel and/or stakeholders; and inspect premises.

Findings

The preparation and content of the 2008 Sustainability Report and the statement and data contained within it for our review is the responsibility of the management of SAPREF. Our responsibility is to issue a statement on our review of the reliability of such statement and data.

The information contained in this report has been prepared from information supplied to us by external sources, as well as information and explanations received from the management and staff of SAPREF. We have relied on the documentation, information and explanations made available to us without independent verification. Our work constitutes the performance of an agreed-upon procedure and not an audit and is substantially different in scope from an audit. Whilst we have gained an understanding of the procedures around the systems that produce the information, we have not tested the reliability, accuracy or completeness of the information generated. Accordingly, we do not express an opinion on the information contained in the report.

The statements and performance related data selected for verification, marked with symbol are supported by appropriate underlying evidence. In performing the procedures as set out above, nothing has come to our attention or caused us to believe that such statements and data are inaccurate in any material respect.

Our report is solely for the purpose set forth in the first paragraph of this report and for your information and is not to be used for any other purpose.

Ngubane & Co. Inc.

NGUBANE & CO. INC.
Registered Auditors

Date: 22 JUNE 2009
Durban

NGUBANE & CO. Inc.
Chartered Accountants (SA)
Company Reg. No. 2004/001416/21
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www.ngubane.co.za
Offices also in Johannesburg,
Cape Town, Polokwane,
Mafikeng and Pretoria

Company profile

A joint venture between Shell SA Refining and BP Southern Africa, SAPREF is Southern Africa's largest crude oil refinery with a refining capacity of 8.5 million tonnes a year. The refinery has been in operation for 45 years.

SAPREF's facilities are of national strategic importance. They include the refinery in the South Durban Basin (SDB), storage facilities at the harbour (Island View), and the managing and operating of a single buoy mooring (SBM) where tankers offload about 78% of South Africa's crude oil imports, and Joint Bunkering Services on behalf of various petroleum companies. In 2008 SAPREF refined crude oil to manufacture about 22% of South Africa's petrol and made a variety of other petroleum products including diesel, paraffin, aviation fuel, liquid petroleum gas, base oil, solvents and marine fuel oil.

The SDB comprises residential areas, commercial businesses and heavy and light manufacturing industries. It is the second-

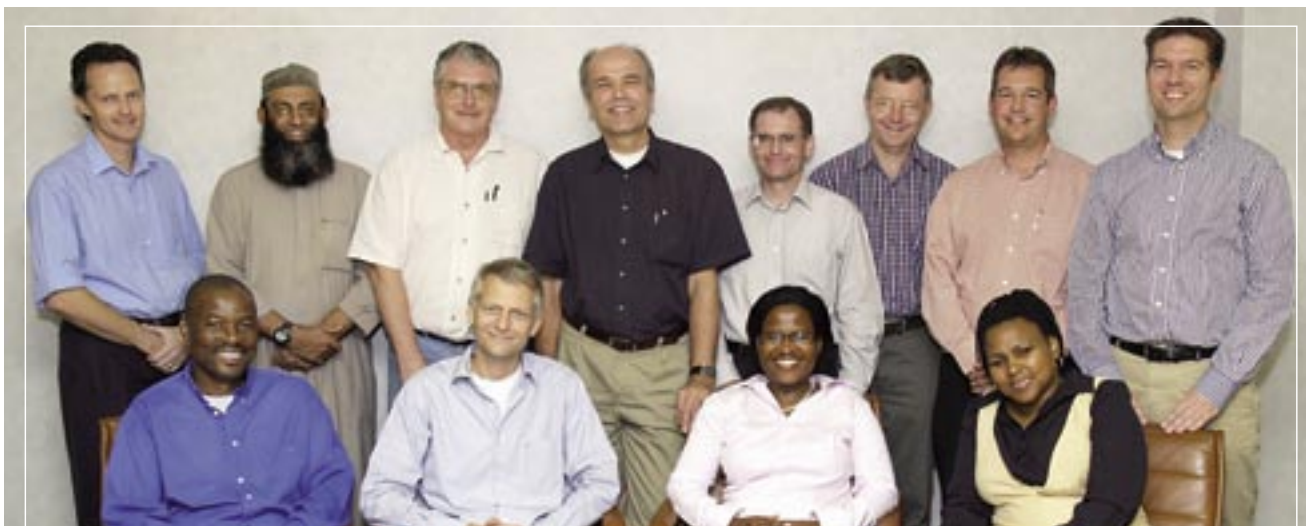
largest industrial area in South Africa in terms of output, contributing about 9% to the country's gross domestic product (GDP).

SAPREF's major stakeholders include its surrounding communities, customers, shareholders, suppliers and contractors, trade unions, direct and indirect workforce, authorities and NGOs (non-governmental organisations).

As at 31 December 2008, SAPREF employed 610 permanent staff. SAPREF is ISO 9001 and ISO 14001 certified.

Vision

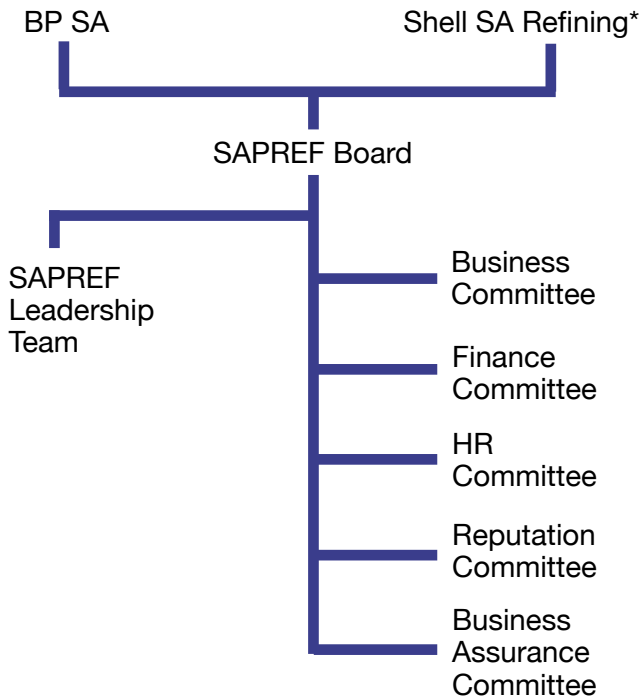
SAPREF is a safe, reliable, world-class refiner of petroleum products that delivers excellence to our customers and shareholders, is respected, trusted and has the confidence of our people, our community, the media, local authorities, elected officials and our suppliers. Our behaviour aligns with our values and business principles.



SAPREF's Leadership Team during 2008:

Standing from left: Rodney Youldon (Hydrocarbon Manager), Moosa Karodia (Technical Manager), Graeme Merrick (Acting Engineering Manager), Carel Mensing (Engineering Manager, Shutdown and Integrity Focus), John van Belkum (Health, Safety and Environment Manager), Dixon Lowe (Business Improvement Manager), Garry Tate (Maintenance Manager), Eric Wildschut (Finance Manager). Seated from left: Musa Mkhwanazi (Human Resources Manager), Bart Voet (Managing Director), Liziwe Mda (Operations Manager), Lindiwe Khuzwayo (Sustainable Development Manager).

Company structure



* Shell SA Energy prior to 1 October 2008

SAPREF's board processes are organised to oversee the company's performance. A formal broad-based risk management process is reviewed regularly. The board is supported by board sub-committees.

Independent tip-off facility

SAPREF is committed to conducting business in a responsible and sustainable manner. Our core business principles include transparency and integrity, which require us to identify and correct practices that are contrary to our company values, in the interests of our employees, suppliers, contractors and all other stakeholders. SAPREF strives to act in a manner that promotes trust, dependability and honesty at all times.

SAPREF is successfully operating an ethics line using Deloitte's Tip-Offs Anonymous™, a facility for all stakeholders to report anonymously any unethical behaviour. ✓ This service is run independently of SAPREF thus ensuring the confidentiality and anonymity of any person reporting fraud or dishonest and/or inappropriate behaviour. ✓

Since the hotline's inception in 2005, it has been used 70 ✓ times as follows :

Telephone calls	34 ✓
E-mails	4 ✓
Faxes	8 ✓
Letters	24 ✓

A database is maintained of all reported unethical behaviour. ✓ The database is used to track areas that require specific attention and to monitor progress of investigations. Management has taken all reasonable steps to respond appropriately to the reports, to recover any losses and to prevent similar offences. In some cases criminal charges were laid where appropriate and disciplinary action was taken. Reports about the types of cases are made to SAPREF's Business Assurance Committee. ✓



Horatio Mkhize, Able Seaman, and Anesh Mohan, Bosun, load bunkering gasoil from SAPREF onto a bunker barge at Island View.

Economic contribution

SAPREF makes a significant contribution to the local economy.

Capital expenditure: R 248 million

Electricity: R 79,5 million

Water: R 30,9 million

Rates: R 21,1 million

Social responsibility: R 4,3 million

Salaries: R 349,6 million

Contracts and procurement

The focus for the contracts and procurement team in 2008 was the strategic sourcing of critical and non-critical spares, establishing the main contracts for the 2009 shutdown and HSSE compliance for all contractors. During the year SAPREF embarked on a broad-based Black Economic Empowerment verification programme, the results of which will be finalised in 2009.

Our B-BBEE spend as a percentage of discretionary spend was 25.62%.

Suppliers/Contractors orders

The total cost of all approved and committed orders on goods, materials and services was R1,154 billion.



Solvents tanks.

Stakeholder engagement

SAPREF Community Liaison Forum (CLF)

The SAPREF CLF celebrated five years of existence during 2008.

The CLF, established to provide a platform for constructive dialogue between SAPREF and interested stakeholders, met 11 times during the year and was regularly attended by more than 20 organisations from the Durban South area.

The forum is facilitated by an independent facilitator and operates according to an agreed set of principles. The forum comprises a social task team and an environmental task team, which meet before every CLF meeting.

The CLF continued its support for the soccer development programme, aimed at developing soccer talent among nine schools in South Durban. Administrative support for the project was moved to the Durban South Football Association.

A CLF project to improve the aesthetic appearance of the refinery continued, with four of our six stacks (chimneys) being painted.

Topics discussed at CLF meetings covered SAPREF's environmental performance, emergency response capabilities and community investment and development. Representatives from eThekweni Fire and Rescue Services, South Durban Area Based Management and Bluff Nature Reserve also addressed the forum during the year.

Island View CLF

An independently facilitated Community Liaison Forum meets quarterly with industry, residents, NGOs and local authorities to discuss issues pertaining to the Island View chemical storage area. Three meetings were held in 2008. Topics discussed related mostly to odour

complaints, port expansion, traffic congestion and emergency communication.

Broad-based approach

SAPREF's approach to engagement is focused on a range of stakeholders and during the year meetings with key stakeholder groups continued as per our engagement plan. These included neighbourhood schools, community organisations, representatives of local and provincial government and business organisations.



"The SAPREF CLF has over the last five years developed into a formidable forum for stakeholder engagement. Its discussions are frank, honest and constructive and differing views are expressed without fear or favour," says Advocate Karthi Govender, the independent facilitator of the Community Liaison Forum.

Skills development

Venolan Chidambaram, Apprentice Mechanical Fitter, takes measurements on an in-line pump.



The human resources (HR) department helps to make sure that all SAPREF's people are competent to contribute maximally to the achievement of our objectives. The department is involved in various ways in developing full-time employees, future employees and contractors.

Own staff development

As was the case in 2007, skills development activity during 2008 focused on building capacity aligned to business improvement. An average of 4.9 ✓ training days per person was achieved for 2008, in comparison to an average of 5 ✓ training days achieved in 2007.

During 2008 a variety of HSSE learning interventions took place to ensure continuous improvement of our safety performance and in preparation for shutdown events.

In addition to the HSSE competence of own staff, the HSSE competence of contractors working at SAPREF is of utmost importance. For this reason, SAPREF offers induction training to its contractors through the Durban South

Training Trust (DSTT) and further HSE training on-site. During 2008, the DSTT conducted 6190 ✓ contractor inductions, in addition to which the Permit Receivers, Confined Space Entry and Supervisory Alignment courses were facilitated for contractor staff at SAPREF.

Production competency development

The production competency development programme was initiated in 2007. During 2008, the programme focused on the development of competence to support critical staffing requirements in production areas.

Engineering competency development

To enable staff competence to remain current, engineering competency development was supported through the execution of 21 ✓ training interventions aligned to current business needs.

Non-technical training

In addition to the core production and engineering/maintenance functions, SAPREF

Skills development

relies on the skills of non-technical staff for its continued successful operation. During 2008 approximately 66 ✓ non-technical training interventions were facilitated.

Educational assistance

SAPREF continues to support its employees who wish to further their studies on a part-time basis. Staff on the educational assistance programme study towards a variety of qualifications supportive of their current functions and/or a future career path within the organisation. During 2008, a total of 23 ✓ staff members across various departments studied with the assistance of this programme.

Bursaries

The aim of SAPREF's bursary programme is to provide students with support in specific engineering disciplines that are in line with our business needs. Bursaries are offered to students doing engineering degrees in mechanical, electrical and chemical disciplines. The students are provided with the necessary guidance throughout their studies. The bursary holders spend their vacation period at SAPREF gaining exposure to industry. While employment at SAPREF is not guaranteed on completion of their studies, they are considered for appointment according to business needs. If appointed, they follow a graduate development programme which further enhances their professional, technical and leadership skills. In 2008, three ✓ bursary holders qualified.

Learnership development

The SAPREF training school develops previously unemployed learners in the production, mechanical maintenance, instrument maintenance and electrical maintenance disciplines. By means of a learnership, these young people complete national qualifications at NQF levels 2, 3 and 4 and most are appointed into permanent positions in the refinery. The development of skills within these categories is key to SAPREF's continued operational success and

contributes to the skills priorities identified nationally and within the chemical sector in South Africa.

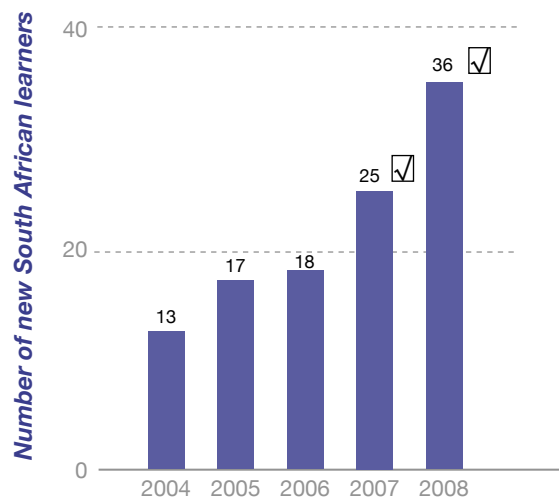
Durban South Training Trust (DSTT)

During the year, the operation of the DSTT was reviewed with an aim of optimising its potential. This will be realised in 2009 when a significant number of learners is expected to be recruited to complete learnerships in mechanical fitting, boiler-making and welding.

Saturday School

SAPREF's Saturday School came into being 15 ✓ years ago, and during 2008 it provided additional support to employees' children in mathematics, science, English, biology and computer skills.

At the beginning of 2008, the Saturday School moved to new premises at Isipingo Intermediary School and extended its services to include children from neighbouring communities. An average of 118 ✓ learners from Grades 9 to 12 attended the Saturday School every Saturday during 2008.



New South African learners recruited per annum

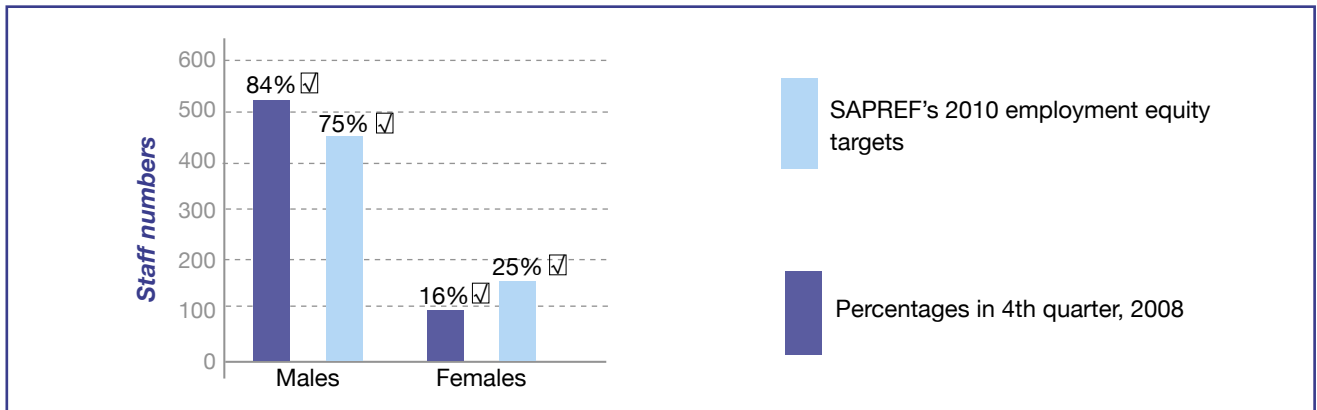
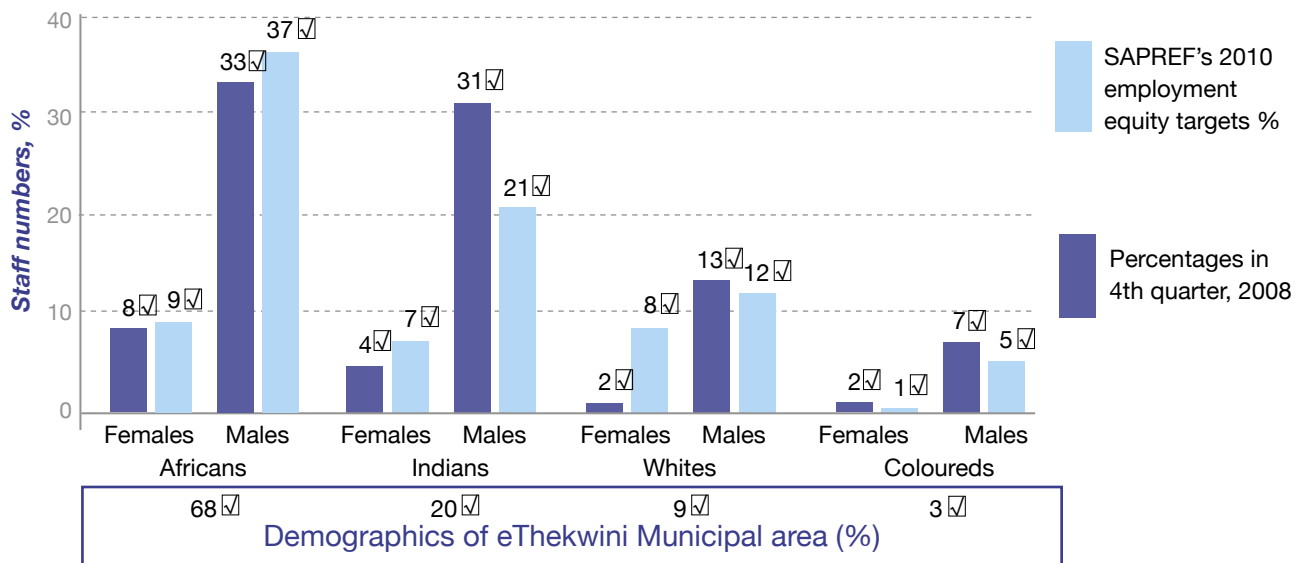
Employment

Employment equity

As an equal opportunity employer, SAPREF continued to appoint and develop people from previously disadvantaged groups. Each year

we progress closer to our 2010 Employment Equity target although some areas need more focus to fast track the progress. This is more evident for the gender statistics.

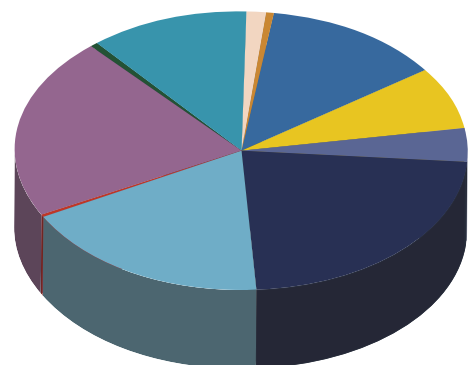
Progress against employment equity targets



Staff

SAPREF's staff complement as at 31 December 2008 was 610 people.

- HSE, 9
- Business Improvement, 3
- Engineering, 78
- Finance, 45
- Human Resources, 23
- Hydrocarbon, 139
- Maintenance, 110
- MD's office, 2
- Operations, 129
- Sustainable Development, 3
- Technical, 69



Pipelines

Pipeline replacement project

SAPREF's three-year R340-million project to replace its product transfer pipelines from the refinery to Island View drew to a close early in April 2008. The project finished on time and within budget, having worked over one million hours ✓ without any lost time injuries or recordable incidents. The seven ✓ new lines were hydro-tested before being put into service and the old lines were flushed and then filled with Bentonite, an absorbent clay material, and decommissioned.

Work areas were restored to their original condition. Restoration involved tarring and curbing roads, grassing verges and planting trees before inspection and acceptance by the eThekweni municipality.

Concrete markers warning of the presence of the petroleum pipelines were installed along the route, in line with international practice, to alert other contractors who may work in the area from time to time.

We thank community members for their patience during the construction period.

Pipeline integrity

Management of the SAPREF transfer pipelines continued in 2008 with regular scheduled tightness tests and annual ✓ hydrostatic pressure tests. In addition, upgrading of the cathodic protection system commenced. New test posts with improved measuring facilities will be provided, allowing better monitoring of pipeline protection. This project will be completed in 2009. With the installation of seven new lines, 70 ✓ rounds of surveying were undertaken in order to understand the modified electrical environment in which the transfer lines are operating. These surveys indicated that the SAPREF lines are adequately protected. ✓



Like all areas affected by the project, this verge in Tara Road was reinstated to original condition after the new pipelines were laid.

Petrol leak remediation

Following the petrol leak that occurred in 2001, SAPREF instituted a rigorous remediation process to extract the free-phase petrol from the ground. Monthly monitoring of more than 90 boreholes on the site revealed that since April 2006 there has been no free-phase petrol detected on the location. ✓ Monitoring of these boreholes continued through 2008 with the same results. ✓

Further MNA (monitored natural attenuation) sampling has been undertaken in 2008, ✓ and in 2009 these and past results will be analysed and used in the running of a water model to establish the progress of natural attenuation and movement of the underground water.

In 2008 soil samples were analysed and it was found that the cleanliness of the soil meets the QRA (Quantitative Risk Assessment) site trigger levels and no further remedial work is required. ✓

In 2009 further water sampling will be undertaken to ensure that the groundwater meets the QRA in respect of the trigger levels for irrigation water.

Refinery performance

SAPREF has a design capacity to process between 180 000 m³ and 190 000 m³ barrels per day (or 24 500 t to 26 000 t tonnes per day) depending on the type of crude oil processed. A total of 7.22 m³ million tonnes of crude was processed in 2008, producing roughly 26% m³ marine fuel oil and specialities, 25% m³ petrol and 41% m³ diesel and jet fuel.

One of the major achievements for 2008 was that there were no major process unit incidents.

Planned shutdowns

The visbreaker was shut down in March and September for planned decoking clean-outs. In the second quarter the HF alkylation unit underwent a planned clean-out of equipment. During September the crude distiller 2, the platformer and hydrodesulphuriser units shut down for catalyst replacement, catalyst regeneration and the cleaning of equipment necessary to restore full capacity for the next year of operation. In addition, the crude distiller 3 was shut down for routine maintenance.

Unplanned shutdowns

Aligned with our intensive programme for reducing the risk associated with corrosion under insulation, we proactively shut down and carried out repairs to the visbreaker in February and March, on the solvents splitter in the second quarter, and on the MDU baseoil unit in September and October.

There were also unplanned shutdowns on the HF alkylation unit and on the cat cracker for turbine washing and later for repair to the reactor. Overall operational availability and refinery utilization were better than 2007 and came within 2% m³ of the annual business plan targets for 2008.

Corrosion

Because of the corrosive environment in which SAPREF operates, much focus is given

to negating the risk of external and internal corrosion on our plant and equipment. There is an ongoing programme to check, and repair where necessary, the external surface condition of our mechanical equipment, including piping. In parallel, existing equipment throughout the refinery is being repainted.

Pump seals

A programme was initiated to reduce the potential for spills by replacing the single seals on a number of pumps with double seals. By end 2008, 51 m³ pumps had been completed.

Tetra Ethyl Lead (TEL)

With the introduction of lead-free petrol, SAPREF's requirement for TEL fell away. Consequently we have demolished the lead storage tank at the refinery and are in the process of doing the same to the facility at Island View.

Joint Bunkering Service

The delivery mode for supplying bunkers to ships in Durban harbour changed from pipeline to barge, thereby removing the risk of injury or spills during loading.

Business Improvement Process

The Business Improvement Process (BIP) is aimed at improving SAPREF's performance in the priority areas of Safety, Integrity, Reliability, Product Quality and People whilst maintaining company standards and legal compliance. These improvement initiatives are managed through selected 'tactics'. A tactic is an activity (or project) addressing improvements for one (or more) specific organisational or operational performance driver(s).

From an original 56 m³ tactics, 26 m³ were closed out during 2008, including tactics addressing process safety governance, reliability governance, performance management and retention.

Water and energy consumption

Water consumption

Water is used in a number of applications in the refinery, namely steam production, process cooling, testing, maintenance, training and for general cleaning and sanitary purposes. In 2008, roughly 4 619 million litres of water were utilised as reflected in the table below:

	Million litres per year	Percent
Steam production	2 873	62
Process cooling	1 009	22
Cleaning / sanitary	221	5
Fire water (for testing equipment, maintenance, training exercises and process water)	516	11
Total water intake	4 619	100

The bulk of the water is used for steam production as steam is the main heat transfer fluid in the refinery process. The main reason for using water (in the form of steam) as a heat transfer fluid is its high capacity to absorb heat and the ability to move it around with ease from one end of the refinery to another.

Process cooling systems also require water of up to 1 009 ML/year. These processes typically use water at ambient conditions to cool hydrocarbon fluids down to 50-60°C in preparation for the next stage in the process.

Energy consumption

The SAPREF refinery consumed an average of 612 MW of energy in 2008 in the form of electricity and furnace fuel. In the winter months (June-August) the energy consumption increased above 656 MW due to cold weather. The lowest demand was around 392 MW during the September shutdown month when part of the refinery was down for planned maintenance.

The electricity is used mainly to drive heavy-duty machinery like pumps and compressors and also to power the control room and offices. In 2008 the Eskom Merewent substation provided capacity for 34 MW which was supplemented by 3 MW from SAPREF's own steam-driven generator. The SAPREF generator supplies essential power to safely maintain the refinery utility systems in an "island mode" of operation in case of unforeseen disruptions in the Eskom power supply in order to enable a quick restart once the Eskom supply resumes.

For furnace firing, fuel gas is predominantly used because it is a cleaner fuel than oil. As a result most of the fuel oil infrastructure has been demolished, leaving only 3 out of 25 furnaces with oil-firing capabilities. In 2008 fuel oil only constituted 3% of furnace fuel with fuel gas making up the other 97%.



Andile Mtshiliba, in personal protection gear, prepares to enter a confined space to desludge a tetra ethyl lead tank prior to demolition, at Island View.

Safety performance

Albert Mabaso, Instrument Site Maintenance Leader, and Franco Forno, Engineering Services Manager, plan the way ahead.



SAPREF regards safety as the highest priority. A set of “Cardinal Rules” guides safety behaviours on site. Non-conformances are reported into CIS (Continuous Improvement System) for appropriate action. Compliance to legal requirements and to SAPREF’s own Rules and Regulations is monitored by the Safety Section and the Leadership Team.

Safety awareness

HSE training to align contractors to SAPREF’s standards continued to be an essential prerequisite for maintenance work at the refinery. The safety campaign during the shutdown of certain units included raising awareness on Cardinal Safety Rules, regular HSE officer meetings and recognising ‘Hero of the week’ individuals to acknowledge their dedication to HSE.

Incident reporting and follow-up

The number of near-misses reported was 975 for 2008. A near-miss is an incident that, under

slightly different circumstances, could have caused illness, injury or damage to assets, the environment or company reputation. This is a critical part of preventative safety management and every person is encouraged to record such incidents to improve the analysis of the reported incidents. Strong incident intervention is exercised based on trend analysis.

Total recordable cases

SAPREF staff, together with contractors, achieved 5 million safe hours during 2008. A total recordable injury case is a measure of injuries that require medical treatment other than first aid. In 2008 this totalled 14 cases. Of these, ten involved contractors and two were classified as lost time injuries as they resulted in absence from a shift at work. The benchmark in safety is to measure the recordable injury frequency rate per million hours worked. In 2008, SAPREF achieved 2.3 with the total hours worked being 5.9 million.

Safety performance

Fires

The very nature of oil refining presents the risk of a fire event. A fire event is classified as “ANY undesirable combustion which takes place” within the SAPREF boundary. In 2008, these were low-risk events which did not necessitate a high-level fire response. Significant fire events are rare due to the robust controls in place to prevent fires.

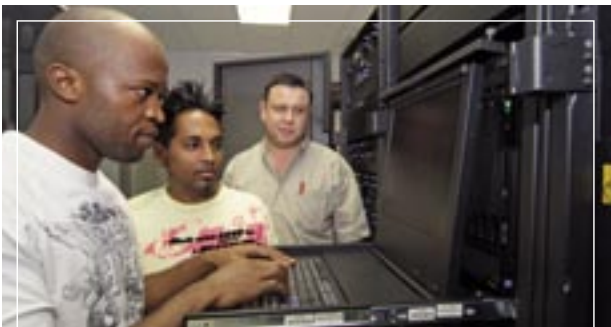
A concerted fire-prevention campaign was initiated across the site. It included raising awareness of fire potential, and training in prevention with staff and contractors. Attention was also focused on early identification of potential leaks in order to prevent spills.

SAPREF embarked on a programme to replace single seals with double seals on pumps in higher-risk operating conditions. ✓ Fifty-one ✓ pumps were upgraded in 2008 and the programme will continue through 2009.

Building on achievements for 2008, we will focus on the following in 2009:

- No lost time injuries
- A total recordable case frequency rate of less than 2.3 cases per million hours worked
- Near-miss and incident recording of more than 1200 reports

- Continue focus on process safety to ensure that preventative barriers are maintained and are effective
- Continue with contractor management by reviewing new HSSE plans with specific focus on shutdown-related plans
- Continue focus on safety through dedicated campaigns and focus on high standards, compliance and personal leadership
- Fire prevention campaigns with particular focus on shutdown and start-up activities
- Continue with fire-fighting, hot work training and emergency drills
- Continue focus on prevention of spills by ensuring equipment integrity through the programmes on internal and external corrosion and pump seal replacement.



Grant Cohn, Database Administrator, right, and Systems Engineers, Anele Meltafa and Dylan Naidu, check back-ups on the new storage system in the information systems department.



Raazia Harris, Safety Watcher, with contractors opening a heat exchanger prior to decoking.

Health performance

Preface

SAPREF's health section is responsible for occupational health and wellness programmes focusing on prevention of workplace effects on health and promoting a healthy workforce.

Contractor HIV/AIDS

In 2008 SAPREF instituted an HIV/AIDS programme for contractor staff, following a highly successful programme for permanent staff. ✓ The contractor HIV/AIDS programme is run and partly funded by the South Africa Business Coalition Against AIDS (SABCOHA). ✓ For a nominal fee contractor companies register on the programme, which gives their employees free access to counselling, testing, treatment, care, and support services. ✓ In 2008 nine ✓ companies joined the programme and a total of 507 ✓ employees from these companies are at various stages of the programme. SAPREF provides support and project management funding for the programme, as well as the premises for counselling and testing. ✓ Neither SAPREF nor the contractor companies have access to the records of employees who are on the programme, which is crucial for encouraging uptake of the service by employees. ✓ The benefits of this programme include:

- Greater awareness about HIV and treatment options
- Employees are encouraged to know their status
- Access to HIV/AIDS services in the private sector, thus reducing the load on state facilities
- The companies get to play a part in the national response to HIV/AIDS.

Brad Mears, the CEO of SABCOHA says this programme is a groundbreaking methodology in allowing businesses to expand HIV and AIDS initiatives into the community. "SAPREF is one of the first companies in South Africa to have initiated such a programme and is seen as a leading company in the fight against HIV and



Wordsworth Khumalo, Workshop Artisan, models the new fire-resistant overalls.

AIDS. The partnership between SABCOHA and SAPREF sets the benchmark for private sector driven initiatives in South Africa," he said.

Fire-resistant overalls

Fire-resistant Nomex overalls were rolled out to SAPREF staff in December. ✓ These overalls will provide enhanced protection in case of exposure to a fire. ✓

Medicals

Medical surveillance for noise and lead was carried out on exposure groups identified by the SAPREF Health Risk Assessments. ✓ The results for lead showed no significant exposure. Out of 144 ✓ people tested for hearing loss, there were four ✓ reportable results.

Building on the achievements for 2008, we will focus on the following in 2009:

- Enrolling more contractor companies onto the SAPREF contractor HIV/AIDS programme
- A programme to improve health and wellness of employees
- Implementation of fire-resistant overalls for contractors working at SAPREF.

Environmental performance

Environmental management follows the ISO 14001:2004 Standard requirements with legal compliance forming the basis. The environmental aspects are reviewed annually and SAPREF monitors the relevant parameters in line with permit conditions. Stakeholder reporting is done on an annual basis and the team engages routinely with the authorities and the SAPREF Community Liaison Forum.

Exceedances

There were no exceedances of ambient SO₂ concentration (based on the World Health Organisation international standard of 191 ppb) during 2008. A continued focus on prevention of exceedances is part of SAPREF's approach to environmental management.

Flaring

In 2008 SAPREF flared at an average of 39 tonnes per day compared to an average of 38

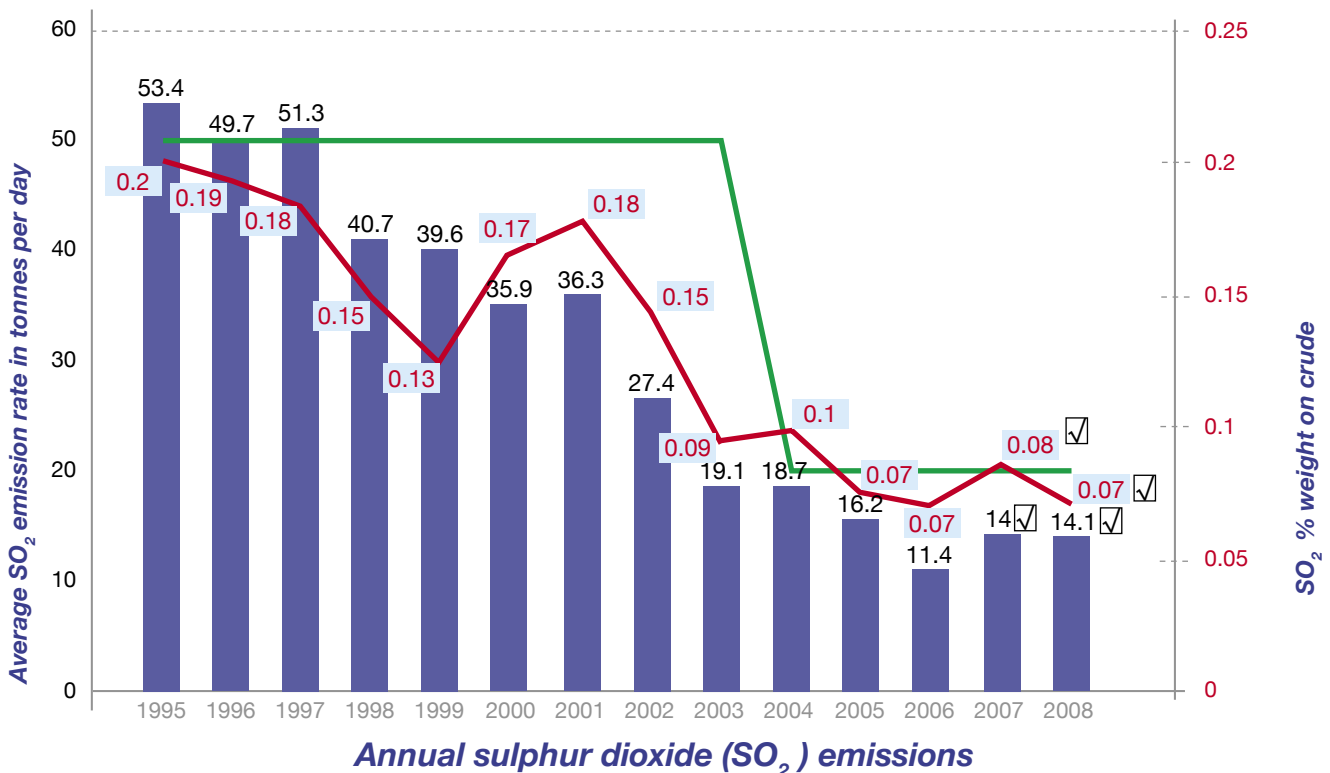
t/d in 2007. The flaring was due to planned shutdowns of certain units as well as some unit trips due to weather activity that impacted on the stability of external electrical supply. SAPREF continues to improve unit integrity and reliability through structured maintenance and repair programmes which are aligned with our drive to minimise flaring events.

Mobile air monitoring

The mobile air monitor was used to assist with environmental complaints management and this will continue during 2009. It was also effectively used to monitor conditions at the SAPREF fence line.

Sulphur dioxide (SO₂)

The result of 14.1 t/d annual average SO₂ achieved for 2008, reflected in the graph below, is well below the 20 t/d permit level.



Average SO₂ (tonnes per day)

Permit limit (tonnes per day)

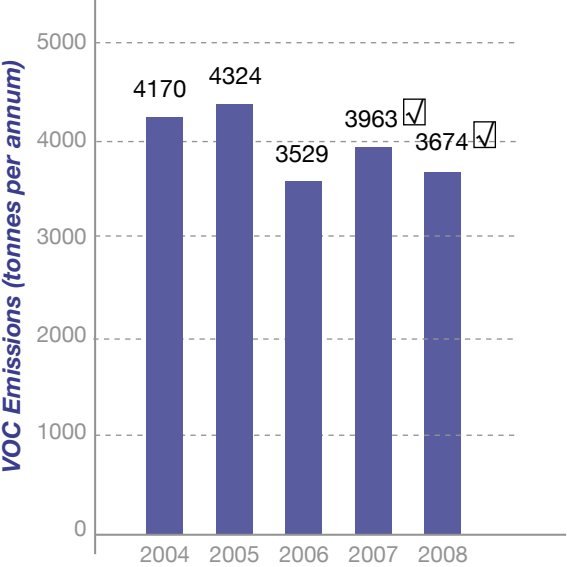
SO₂ % on crude intake

Environmental performance

Volatile Organic Compounds (VOC)

VOC emissions decreased from 3963 tons in 2007 to 3674 tons in 2008.

In 2005 SAPREF initiated a project with SNC Lavalin (Canada) to identify and quantify sources of fugitive VOC emissions within the refinery. The survey part of the project was completed during 2008 and we started addressing the findings as part of our on-going maintenance programme. The work will continue into 2009 and will be followed by a re-evaluation.



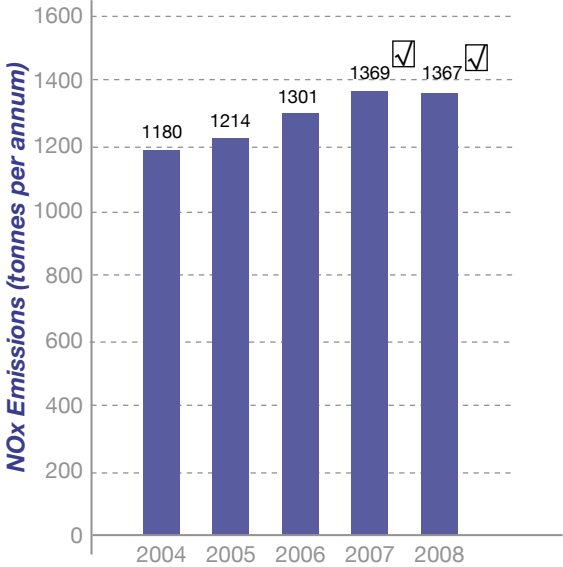
Volatile Organic Compound (VOC) Emissions



A pocket of vegetation at the refinery.

Nitrogen oxide (NOx)

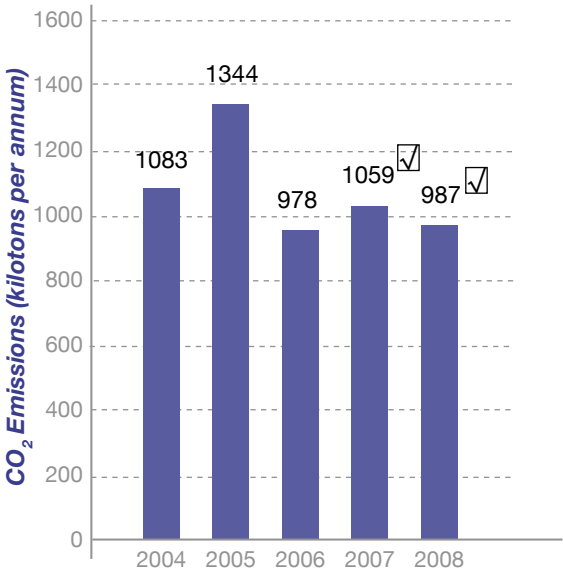
NOx emissions remained at a constant level for the year. NOx emissions are a function of the amount and composition of fuel oil that is consumed.



Nitrogen Oxide (NOx) Emissions

Carbon Dioxide (CO₂)

Carbon dioxide emissions decreased from 1059 kilotons in 2007 to 987 kilotons in 2008.

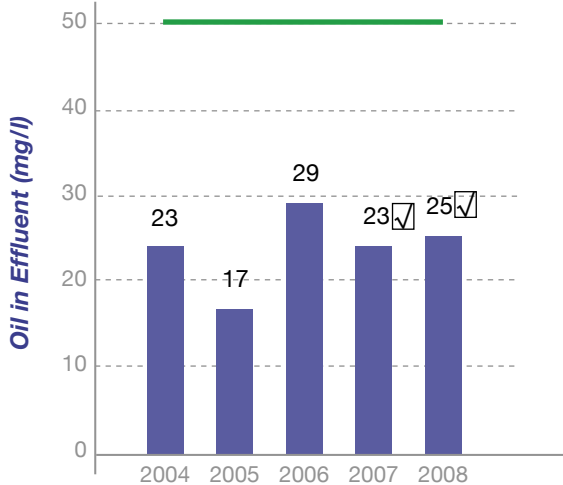


Carbon Dioxide (CO₂) Emissions

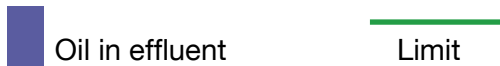
Environmental performance

Oil in effluent water

The average oil concentration in effluent increased from 23 mg/l (milligrams per litre) in 2007 to 25 mg/l in 2008. SAPREF has embarked on a corrugated-plate interceptor (CPI) upgrade and a defined oily sewer maintenance programme which should yield positive results in 2009.

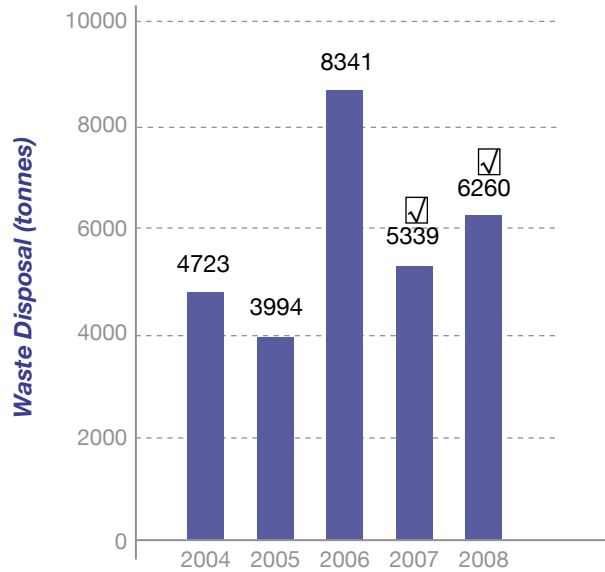


Oil in Effluent Water



Waste management

Approximately 6 260 tonnes of waste were responsibly disposed of during 2008 at an approved landfill facility.



Disposal of waste



Yasmin Adams, Process Technician, configures a solvents tank line-up.

Environmental performance

Effluent treatment plant

SAPREF embarked on an environmental impact assessment for an effluent treatment plant which will improve the quality of effluent generated by the site prior to discharge to the municipal sewerage treatment works.



Nero Nundlal, Operations Focal Point, examines modifications to a corrugated plate interceptor (CPI) at north zone.

Building on the achievements for 2008 we will focus on the following in 2009:

- Maintain sulphur dioxide emissions below 20 t/d on average for the year
- Ensure compliance with all relevant legislation and permit requirements
- Continue effective progress with the leak detection and repair programme and establish leak detection capabilities on site
- Develop and implement an oil-in-water improvement plan, including control at source, and progress the design of a new effluent treatment plant
- Progress groundwater monitoring and remediation
- Run campaigns on waste reduction and housekeeping.

Dune rehabilitation



During the year SAPREF continued to remove alien invasive species from the forested dune adjacent to the refinery in line with the national drive to reduce alien vegetation. Over the years SAPREF has planted more than 150 000 indigenous plant species to rehabilitate the dune. Larry Singh, director of the Isipingo Island Institute, says "SAPREF assumed custodianship of the section of the Bluff that is adjacent to their plant and have been managing it through the years. The result is that it is the most well preserved section of this extensive dune. The plants and animals are extremely well preserved."

Social investment

SAPREF has identified nine communities in its immediate area and is committed to making a difference in those communities by supporting sustainable projects. Education, especially maths and science, is a key focus area for SAPREF as it provides long-term benefits, both socially and economically. Other focus areas are capacity building and poverty alleviation.

Science centre

SAPREF established a science laboratory at Zwelethu High School in Umlazi in 2008. The project involved refurbishing an existing classroom into a fully equipped laboratory with science kits, equipment and computers. Nine schools in the area utilise the laboratory.

Saturday schools

The refinery-based Saturday School which

historically catered for the children of staff was moved to Isipingo Intermediary School in 2008 and extended to include learners from nearby communities. Together with the SAPREF-sponsored Saturday Schools at Zwelihle High School, Umlazi and Merebank Community Centre, some 500 high school children attend and receive additional tuition in maths and science.

School entrepreneurs programme

Recognising that only one-third of South African school leavers currently find employment, SAPREF has been sponsoring the SAPREF Mercury School Entrepreneurship Competition since 2006. Its mission is to develop an entrepreneurship culture starting at school level. This year over 200 entries were received from schools all over KZN.



Vuyokazi Sikhosana and Sandile Khumalo with some of the equipment in the new science lab at Zwelethu High School.

Social investment

IIE/Steps

Steps is the community version of SAPREF's Investment in Excellence personal development programme. During the year teachers from Alipore Primary School, ✓ Zwelihle High School, ✓ and Thamela Primary School, ✓ attended the three-day programme.

Computers to schools

Together with Shell Chemicals, SAPREF donated 54 ✓ brand new computers to the following secondary schools : Isipingo, ✓ Strelitzia, ✓ Reunion, ✓ Ganges, ✓ PR Pather, ✓ Merebank, ✓ Umbilo, ✓ Fairvale ✓ and Wentworth. ✓ The computers will be used by learners for enhancing their science and technology studies.

CLF soccer development project

This project was initiated some four years ago ✓ primarily to identify and develop talent within certain South Durban primary schools. In 2008 management of the project was transferred to the Durban South Football Association. ✓

The project also provided opportunity for unemployed youths to train as soccer coaches.

Clearing of alien vegetation

About two years ago the Isipingo Island Institute undertook extensive removal of alien vegetation from SAPREF's premises. During 2008 they returned to the area to remove newly grown alien vegetation. The Institute trains unemployed community members to carry out this work.

National Business Initiative (NBI)

Through an annual financial contribution SAPREF supports the work of the NBI towards sustainable growth and development in South Africa. ✓

Other

SAPREF also supports a number of initiatives which assist schools and the community in their fundraising efforts.



Former MEC for education, Ina Cronje, centre, with some of the 9000 learners in South Durban who will benefit from the 54 new computers that SAPREF co-sponsored.

Social investment

Organisation/ Project	Skills development/ capacity building <input checked="" type="checkbox"/>	Education <input checked="" type="checkbox"/>	Charity/ donation/ other <input checked="" type="checkbox"/>	Employment opportunity <input checked="" type="checkbox"/>
Isipingo Island Institute				R75 000 <input checked="" type="checkbox"/>
eThekweni Municipality South Durban Basin Fair		R20 000 <input checked="" type="checkbox"/>		
Crisis Careline			R5 000 <input checked="" type="checkbox"/>	
Settlers School		R10 000 <input checked="" type="checkbox"/>		
We Help Our Children	R35 000 <input checked="" type="checkbox"/>			
M.L. Sultan St. Mary's Primary School		R10 000 <input checked="" type="checkbox"/>		
Environmental Teachers Workshop		R6 551 <input checked="" type="checkbox"/>		
Schools Arbor day		R3 500 <input checked="" type="checkbox"/>		
Thamela Primary School library books		R10 000		
National Business Initiative			R82 937 <input checked="" type="checkbox"/>	
Orient Hill Primary School		R10 000 <input checked="" type="checkbox"/>		
Wentworth Organisation of Women	R10 000 <input checked="" type="checkbox"/>			
CLF soccer development project		R85 000 <input checked="" type="checkbox"/>		
IIE/Steps for community	R79 144 <input checked="" type="checkbox"/>			
Computers to high schools		R109 385 <input checked="" type="checkbox"/>		
Merebank Community Centre maths and science classes		R40 000 <input checked="" type="checkbox"/>		
Zwelethu maths and science lab		R278 780 <input checked="" type="checkbox"/>		
Merewent Community Policing Forum	R20 000 <input checked="" type="checkbox"/>			
Zamukuziphilisa Community Project				R5 000
Lamontville Education Development Association (Readerthon)		R8 000 <input checked="" type="checkbox"/>		
Krishna Rabibal Foundation		R15 000 <input checked="" type="checkbox"/>		
Saturday school		R271 304 <input checked="" type="checkbox"/>		
Scholarships		R559 696 <input checked="" type="checkbox"/>		
Students' vac work	R75 161 <input checked="" type="checkbox"/>			
Learners' Salaries				R2 488 816 <input checked="" type="checkbox"/>
TOTAL	R219 305 <input checked="" type="checkbox"/>	R1 437 216	R87 937 <input checked="" type="checkbox"/>	R2 568 816

TOTAL SOCIAL RESPONSIBILITY SPEND: R4 313 274

Delivery on promises

Sulphur dioxide

Our objective for 2008 was to keep SO₂ emissions below 20 t/d on average. At 14.1 t/d, ✓ SAPREF's annual average was well below this target.

Pipeline replacement

SAPREF's pipeline replacement project was completed on time in April 2008. The project worked over one million hours ✓ without a lost time injury or recordable incident.

Safety

Together with our contractors, SAPREF achieved up to 5 million ✓ safe hours during the year.

Continual improvement

Our ongoing focus on continual improvement led to various initiatives to reduce operational risks. There were no significant process safety events during 2008.

An Environmental Impact Assessment is in progress for the construction of an effluent treatment plant to improve the quality of effluent discharged to the municipal sewerage system.

Remediation

Although no free-phase petrol has been detected since April 2006, SAPREF continued to monitor the boreholes on the remediation site in Tara Road. ✓ A process of monitoring the natural attenuation (MNA) is being used to monitor the biodegradation of hydrocarbons in the groundwater.

Skills development

Learners graduating from the SAPREF training school are well qualified to enter the open job market in the areas of mechanical, instrument and electrical maintenance. A total of 123 learners were developed through the school during 2008.



Explaining a circuit to Trainee Buhle Dlamini, third left, who is on the operations learnership programme, are Tyrone Pottier, Senior Process Technician, left, Annil Roy, South Zone Trainer, and Lofty van der Bent, Senior Process Technician.

Community liaison

The SAPREF Community Liaison Forum continued to meet regularly. The project to paint the refinery stacks progressed with only two stacks remaining to be refurbished. The soccer development programme continued for the third year, ✓ with administrative support being transferred to the Durban South Football Association.

Social investment

SAPREF established a science laboratory at Zwelethu High School ✓ in Umlazi for use by 9 schools in the area. This is the third science laboratory that SAPREF has been involved in developing.

We continue to provide extra maths and science tuition through Saturday Schools in Merebank and Umlazi. ✓ In 2008 the SAPREF Saturday School was relocated to Isipingo to serve learners in nearby areas.

HIV/AIDS

SAPREF facilitated an HIV/AIDS programme for contractor staff through SABCOHA. ✓ Nine ✓ companies have joined the programme.

Feedback on this report

What do you think of our 2008 Report to Stakeholders? Do you feel you have a better understanding of our company and our purpose after reading the report? Do you have any questions?

Give us your views and suggestions of how we can improve the report, in writing, by logging onto our website: www.sapref.com/contact.html.

Alternatively you may telephone our sustainable development department on (031) 480 1911 or send through a fax on (031) 468 1111.

Your opinions are important to us. We look forward to hearing from you.



Khombi Ntshangase, Senior Lab Technician, checks the appearance of a sample of petrol for contamination.



Jeffrey Mthembu, Barge Operator, talks to the chief engineer on a vessel discharging unleaded petrol at Island View.

Credits

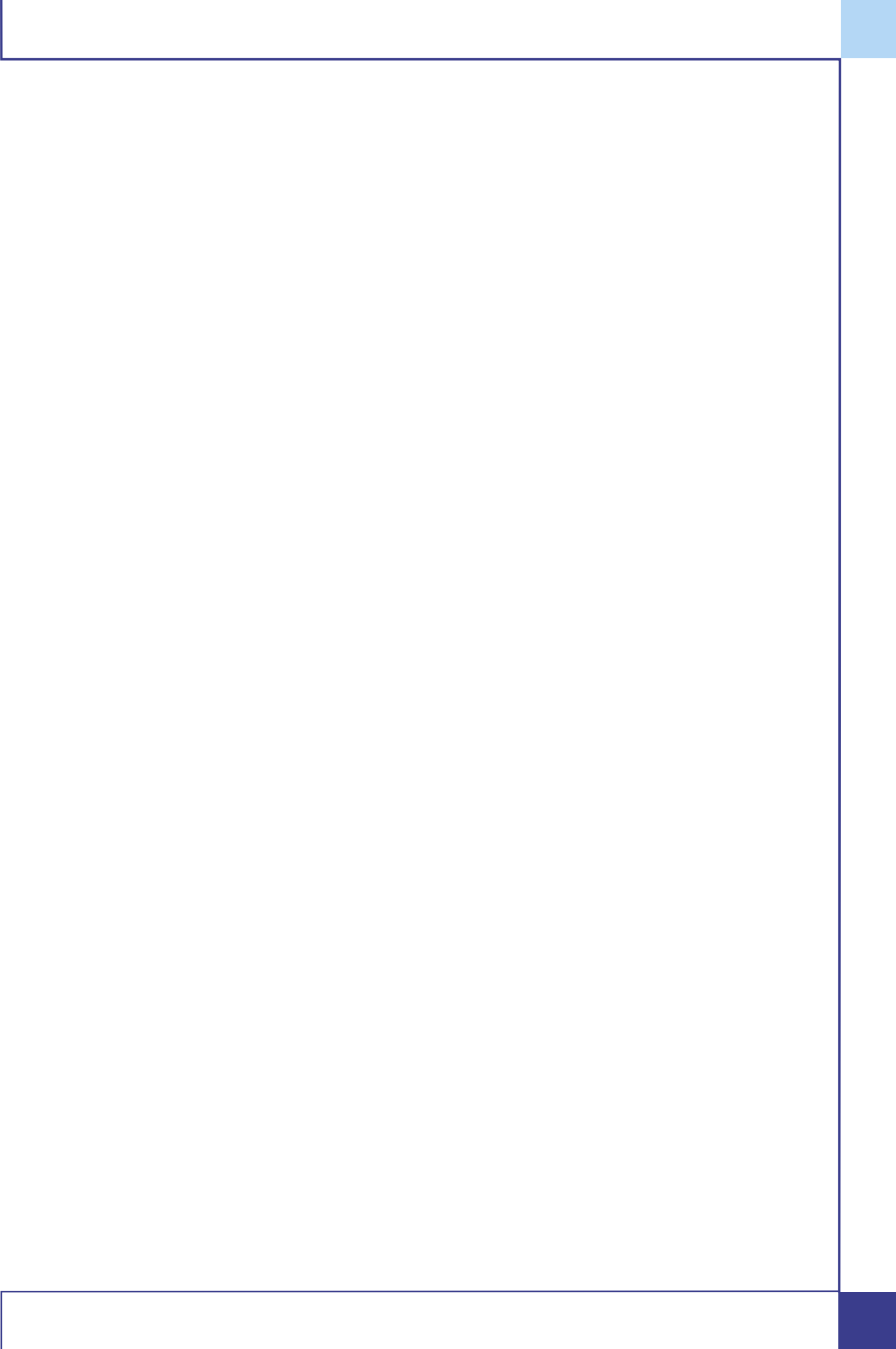
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