

TOTAL E&P UK



St. Fergus

**Environmental
Statement**

2007



TOTAL

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Safety, Health and Environment Policy Statement.

TOTAL E&P UK Limited is committed to conduct its business without causing harm to people, with care for the environment and respecting the principles of sustainable development.

It is our policy to:

- Encourage a positive SHE culture through strong leadership from management and supervision, workforce involvement, personal responsibility and a spirit of openness and co-operation.
- Comply with all legal requirements and TOTAL Group policies.
- Ensure that all risks associated with our operations are identified and controlled and that personnel working on our sites manage these risks to ensure a safe, healthy working environment and the prevention of pollution.
- Strive to achieve continuous improvement by setting measurable SHE objectives and reviewing performance through statistical analysis and audits.
- Work with those industrial and commercial partners who demonstrate a commitment to SHE equal to our own.
- Ensure that employees and contractors are trained and competent to meet the Company's SHE requirements.
- Develop, maintain, and test plans for emergency preparedness.

Compliance with this policy is an important element in the performance evaluation of all employees, particularly those with line management responsibilities.



Roland Fester
Managing Director
January 2007

Introduction.



I am pleased to introduce the 2007 Environmental Statement for the TOTAL E&P UK Limited North Sea Gas Terminal at St Fergus. This document is the 9th Environmental Statement published by the terminal since joining the Eco-Management and Audit Scheme (EMAS) in 2000.

This Environmental Statement forms part of our voluntary commitment to maintain EMAS accreditation and ISO 14001 certification, which represent the highest international standards of environmental management.

This report:

- Describes the facilities we operate and the main activities carried out on site
- Details the emissions from the plant to the environment in 2007
- Outlines our 2007 objectives and targets, and our performance against them
- Outlines our objectives and targets for 2008

2007 has been a year for celebration. The year marked the terminal's 30th anniversary of operations and 20th anniversary of gas production from our Alwyn North field.

Another significant highlight was winning the prestigious Vision in Business for the Environment of Scotland (VIBES) award. We are very proud to have received this accolade, reflecting our efforts and achievements for our ongoing commitment to minimising environmental impact.

The year also marked the cessation of gas production from BP's Miller Platform, which means that in 2008 gas processing for the Miller Receiving Facility (MRF) will also cease. During 2007, studies commenced to determine the most appropriate method for decommissioning this facility.

Following our successful application in 2006 to operate under the environmental permit - Pollution Prevention and Control (PPC) – the site was issued with the new permit in October 2007, and we have been working to ensure that we understand and comply with all the new requirements that have resulted from this change.

During 2007, five of our releases required reporting to the regulatory authorities: two smoky flares, one flaring event and two discharges to Blackwater Burn. In all cases the appropriate corrective actions were immediately put in place and no further actions were required.

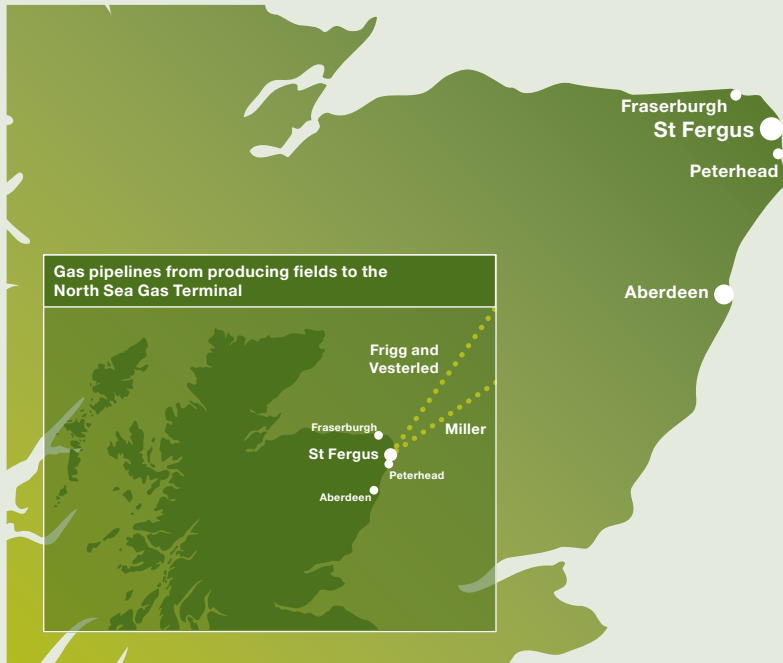
We are pleased to share within this Statement details of both the successes and challenges of our operations at the St Fergus Gas Terminal. I hope that you find this report both informative and interesting and look forward to receiving any comments that you may have.

A handwritten signature in black ink, appearing to read 'N. Carles', written over a white background.

Nicolas Carles
St Fergus Terminal Manager

Site Activities.

The TOTAL North Sea Gas Terminal, operated by TOTAL E&P UK Limited, part of the TOTAL Group, is situated at St Fergus on the north east coast of Scotland, seven kilometers north of Peterhead.



The terminal, referred to as the St Fergus Gas Terminal, has been operating since 1977, receiving natural gas from a number of offshore fields and processing it to meet UK National Grid network specifications for domestic and industrial use.

The gas is transported to the terminal via two offshore pipeline systems – Frigg UK and Vesterled, and the Miller gas system.

The Frigg UK and Vesterled pipelines are a major supplier to the UK National Grid. Processed gas from the Miller Receiving Facilities (MRF) supplies Peterhead Power Station at Boddam, near Peterhead.

Process Description.



Pipelines

The incoming natural gas consists mainly of methane with heavier hydrocarbons, carbon dioxide, nitrogen and small amounts of water and hydrogen sulphide.

The two incoming pipelines, Frigg UK and Vesterled, serve Phase II and Phase III treatment trains and are interlinked on the terminal site. Incoming gas from the Miller field travels via a separate line and is conditioned in the Miller Receiving Facilities (MRF).

On entry to the terminal, each line has a dedicated 'slug catcher' where any liquid hydrocarbons (natural gas liquids) can settle out before entering the main process.

The inlet facilities serving each pipeline also contain Pipeline Inspection Gauge (PIG) traps for the removal of PIGs - devices fitted with sophisticated instruments to remove any deposits and monitor the condition of the pipelines. PIGs are driven along the pipelines by the gas flow.

Processed gas from the Phase II and Phase III refining trains is exported via a land pipeline to the neighbouring National Grid compressor station. Natural gas liquids (NGLs) from Phase III, also recovered during the treatment process, are exported to the neighbouring Shell UK Exploration and Production site and then onwards to the Shell UK Plant at Mossmorran in Fife.

Phase II Process Description

The Phase II slugcatcher is now isolated and depressurised as there is no longer liquid production on Phase II. The gas enters the inlet facilities where it is heated or chilled, depending upon the plant mode of operation. After heat exchange, the gas pressure and temperature are reduced, and the resulting gas is metered and exported via a land pipeline to the neighbouring National Grid site.

Phase III Process Description

The Phase III facilities contain three gas treatment trains and two liquid treatment trains. On arrival at the facilities, the gas is dried, then chilled by pressure expansion to allow removal of NGLs. Following NGL separation, the gas is recompressed, reheated and metered, before being exported to the neighbouring National Grid compressor station. NGL can be exported by land pipeline to the neighbouring Shell site and onwards to Shell UK Plant at Mossmorran in Fife or BP's facilities at Cruden Bay.

Miller Receiving Facilities (MRF) Process Description

The Miller facilities receive sour gas, which contains hydrogen sulphide, from the BP Miller field. The incoming gas is heated to prevent liquid condensation after pressure reduction. Miller gas is then metered and exported by land pipeline to Peterhead Power Station.

Due to the cessation of gas production from the Miller field in 2007, studies commenced to determine the Best Available Techniques (BAT) for decommissioning the Miller Receiving Facilities. These studies were undertaken by a team of TOTAL employees, consultants and decommissioning specialists. The pre-project team evaluated a variety of methods for cleaning, dismantling and disposing of the facility, with the assessment of environmental impacts a key component at each stage.

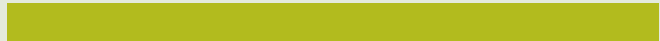
The preferred methods for decommissioning will be selected in 2008, following the appropriate consultation and approval.

MCP-01

The MCP-01 platform is located 173 kilometres north east of Aberdeen. During 2004/2005, the pipelines which ran through MCP-01 were bypassed and gas ceased to pass through the platform. Decommissioning of MCP-01 commenced in 2006. Emissions from the platform have not been included within this report as decommissioning activity is not managed directly by TOTAL E&P UK Limited.



Environmental Protection and Significant Environmental Aspects.



In 1993, the St Fergus Gas Terminal was authorised to operate under an Integrated Pollution Control (IPC) permit. Following an application in August 2006, permission was received for the terminal to operate under the Pollution Prevention and Control (PPC) Regulations. A new PPC permit (ref PPC\A\1012811) was granted in October 2007, which contains strict conditions regulating all site operations, including emissions to land, air and water, and noise and odour.

Our Environmental Management System (EMS) is designed to ensure that we comply with environmental legislation and continually improve our environmental performance. A key requirement of our EMS is the identification of significant aspects resulting from, or associated with, our activities and management of the subsequent impacts. For the St Fergus Gas Terminal we consider the significant environmental aspects to be emissions to air and water, waste management and the use of resources.

2007 Annual Input(s)	2007 Annual Output(s)
Gas: 12,767,615 tonnes	Sales Gas: 12,142,235 tonnes
Electricity: 33 gigawatt (10 ⁹) hours	Natural Gas Liquids: 622,176 tonnes
	Condensate: 0 tonnes
	Flare Gas: 7,983 tonnes
	Venting: 0.34 tonnes
	Fuel Gas: 21,553 tonnes
	Flare Gas as % of Input: 0.06
Difference due to phase changes (mass balance between pipeline inputs and outputs): 26,332 tonnes	

Objectives.

2007 Objectives:

Our performance against our 2007 Environmental Objectives was as follows:

Aspect	Objective	Target	Performance
Emissions to Air	To meet 10% below Dept. for Trade & Industry (DTI) flare consent during 2007	To achieve average flaring volume of 28.40 km ³ /day through nitrogen purging in Phase II and Phase III flare systems	Average daily flaring for 2007 was 25.27 km ³ /day
Emissions to Water	Reduce impact of emissions to water	Identify improvements for waste-water treatment, handling and monitoring Implement groundwater monitoring regime	Waste-water treatment project underway, initial investigations into water quality and quantity completed Deferred until 2008
Waste	Improve waste culture on site	Develop a waste training programme Construct a special waste storage area Develop a waste information card, identifying skip locations and waste rules Ensure the weight of waste sent to landfill is less than 30% of the total waste generated by the site	Waste training programme delivered Special waste storage area constructed. Signage to be erected in 2008 Deferred until 2008 Landfill waste now only constitutes 8% of total waste from site: 55% reused and 22% recycled
Decommissioning	Closure of the Miller Receiving Facilities with all environmental issues being considered	Develop closure plan for the Miller Receiving Facilities by December 2007	Closure plan for Miller Receiving Facilities in draft form, currently being agreed with partners
Community	Continue to implement environment programme, to involve local stakeholders and meet other external stakeholders' expectations	Install bird boxes in Millennium Garden Work with St Fergus Primary to develop a project which can be put forward for the YPTE Green School Awards	Bird boxes have been installed Unable to work with the primary school due to curriculum restrictions

2008 Objectives:

Our Environmental Objectives for 2008 are as follows:

Aspect	Objective	Target
Emissions to Air	To meet European Union Emissions Trading Scheme (EUETS) consent requirements	Carry out site energy efficiency study and implement improvements Implement nitrogen purging on Phase III flare Upgrade emergency power generators
Emissions to Water	Reduce impact of emissions to water	Identify improvements for waste water treatment, handling and monitoring. Best Available Technique (BAT) report to be sent to Scottish Environment Protection Agency (SEPA) Implement ground water monitoring regime
Waste	Improve waste culture on site	Complete new special waste storage area by erecting signage Develop a waste information card, identifying skip locations and waste rules
Decommissioning	Closure of Miller Receiving Facilities with all environmental issues being considered	Develop closure plan for Miller Receiving Facilities with environmental considerations thoroughly assessed
Community	Continue to implement programme for enhanced integration with our stakeholders	
Pollution Control	Assess pollution risk from chemical storage and bunding	Carry out Best Available Technique (BAT) assessment of oil and chemical storage and bunding
Noise Management	Reduce impact of noise emissions from the terminal	Develop terminal noise management plan



Emissions to air.

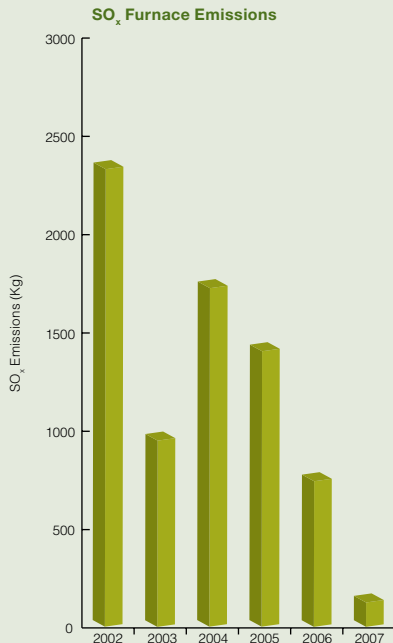
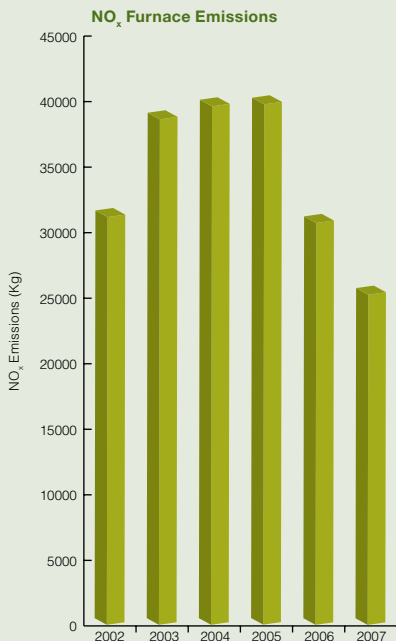
Under normal operations, the sources of atmospheric emissions resulting from operations at the St Fergus Gas Terminal are generated by:

- Furnaces that are used to provide heat to process systems, and
- Flare facilities which are an integral part of the site safety system.

Furnace Emissions

Gas combustion within the furnaces is the greatest source of atmospheric emissions with approximately 60-80 tonnes of gas consumed each day. Processed site gas is used to supply the fuel for the furnaces, which in 2007 represented only 0.17% of the total hydrocarbon exported from the site.

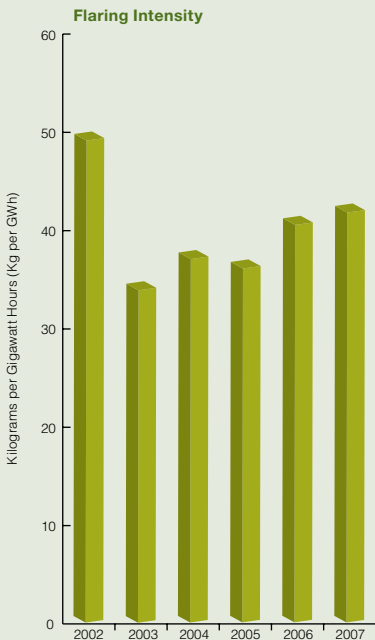
Nitrogen oxides (NO_x) and sulphur oxides (SO_x) are measured as mass emissions. Between 2006 and 2007, more efficient operation of the furnaces resulted in a reduction of NO_x and SO_x emissions.



Flaring Intensity

The St Fergus Gas Terminal has three flare systems, each of which has a small pilot flame for ensuring safe combustion of any gas entering the flare system. Site flaring in 2007 was 7,983 tonnes.

During 2007, average daily flaring was 25.27 ksm³/day which is well within the Department for Business Enterprise & Regulatory Reform (BERR) consent of 31.56 ksm³/day. There was a marked decrease in flaring between 2006 and 2007, 28.7 ksm³/day in 2006 compared with 25.27 ksm³/day in 2007. This has been due in part to the effective use of nitrogen as a purge gas on the Phase II and Miller flares.

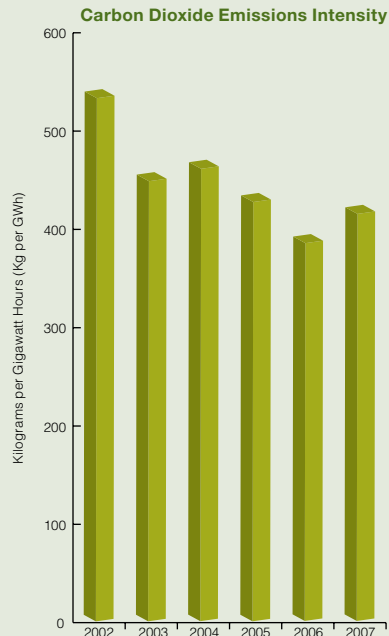


Note - Flaring intensity is a measurement of the quantity of gas flared against gas processed. In 2007 the actual quantity of gas flared decreased. However as the quantity of gas processed also decreased, this resulted in an increase in the flaring intensity figure.

Carbon Dioxide Emissions Intensity

The majority of carbon dioxide (CO₂) generated on site is the result of fuel gas combustion in the site furnaces. Flaring represents another smaller source.

Carbon dioxide emitted from combustion activities is regulated via the European Union Emissions Trading Scheme (EU ETS). Under this scheme the terminal is required to report annually on emissions of CO₂, with a view to reducing CO₂ emissions year on year. CO₂ emissions were reduced from 89,927 tonnes in 2006 to 80,411 tonnes in 2007, a 10% reduction. This was due to improved furnace efficiency and a lower throughput.



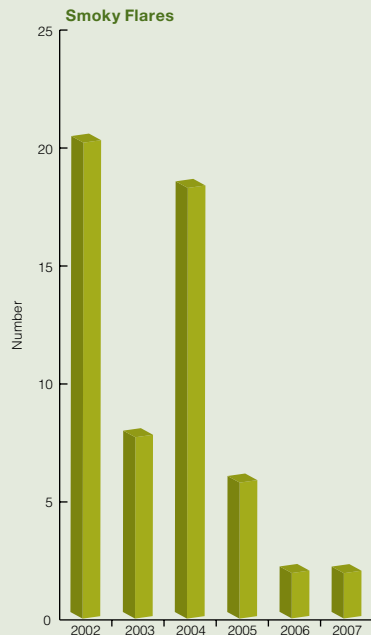
Note - In 2007, CO₂ emissions decreased compared to 2006. However, as the quantity of gas processed also decreased, this resulted in an increase in the emissions intensity figure.

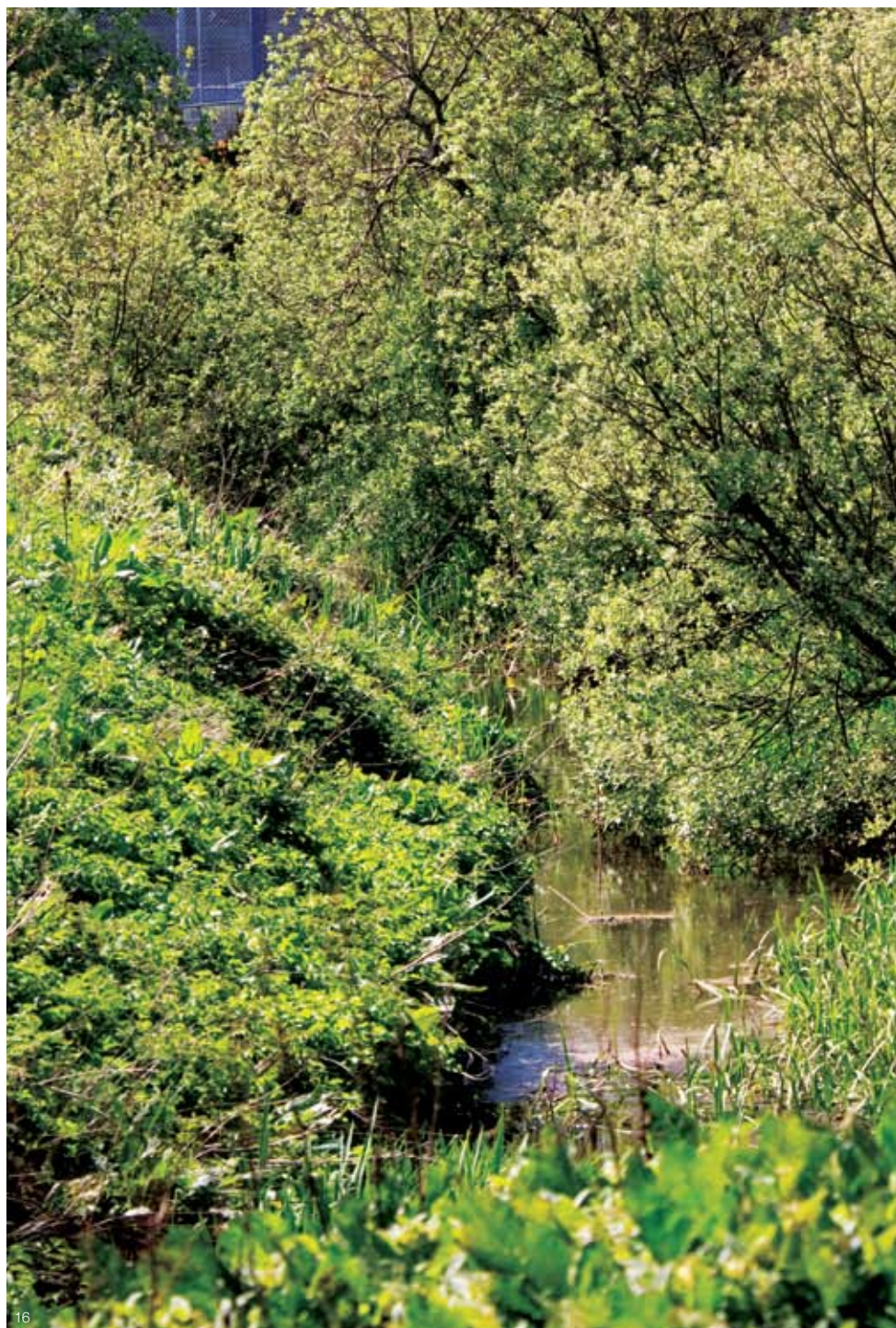


Smoky Flares

During 2007, the Miller Receiving Facilities (MRF) were only used intermittently to receive gas from the BP Miller platform. Whenever shut down and restarts occurred, it was necessary to 'dew point' the gas to ensure that no liquids formed in the pipeline between MRF and Peterhead Power Station. During this process, small quantities of liquid hydrocarbons, which do not burn as cleanly as natural gas, were routed to the flare, resulting in a smoky flare for a short time.

2006 saw the lowest smoky flare occurrence since 2002 with only two smoky flares reported. This was due to improved operational practice and lower throughput. This has continued in 2007 with only two smoky flare incidents reported, one of which was attributed to the MRF. Due to the planned decommissioning of the MRF and the introduction of a new PPC permit, 2007 will be the last year in which smoky flares are reported in this manner.





Water.

Water Collection and Treatment System

Rainwater and water generated by site activities are collected by a network of site drains and routed to the Water Treatment System. Clean water resulting from surface water run-off is collected by open drains and diverted to concrete basins which allow any suspended solids to settle out. Water originating in areas where oil may be present is collected by a separate drain system and any separated oil is recovered. The treated waters from the clean and oily area drains are combined with overflows from the site septic tanks and discharged to the Scottish Water Authority public sewer. Recovered oil from the Water Treatment System is collected in a sump and disposed offsite by a specialist contractor.

Water Quality

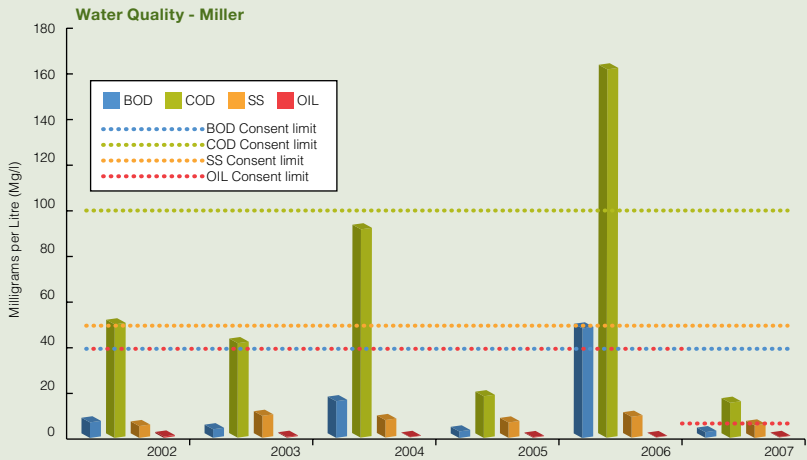
Discharge of the combined site waters to the public sewer is regulated by Scottish Water and Scottish Environment Protection Agency (SEPA).

The quality of the water discharged from the treatment system is regularly monitored by TOTAL E&P UK Limited to ensure compliance. The parameters monitored are: Biochemical Oxygen Demand, Chemical Oxygen Demand, Suspended Solids and Oil Concentration.

Biochemical Oxygen Demand (BOD) is a measure of how much oxygen the naturally occurring bacteria within the water sample will consume as they feed on the organic matter present.

Chemical Oxygen Demand (COD) is the amount of oxygen required for complete oxidation of water-borne matter, both organic and inorganic.

Suspended Solids (SS) is a measure of the total amount of suspended matter in a given sample of water.



Note - The water discharge calculation method changed in 2006. From 2002 - 05 an average of all water analyses was used. In 2006 - 07, the figures are for water analyses taken during the time of a discharge. In 2007, under the new PPC permit, the discharge consent limit for oil was reduced.

There were no excursions above the consent limits for water discharges to the public sewer.

In exceptional circumstances, for example following prolonged periods of excessive rainfall, heavy site flooding can result in the direct discharge of site water to the Blackwater Burn. There were a total of 19 discharges to the Blackwater Burn in 2007, two of which were out with consent limits. These were reported to SEPA.



Waste.

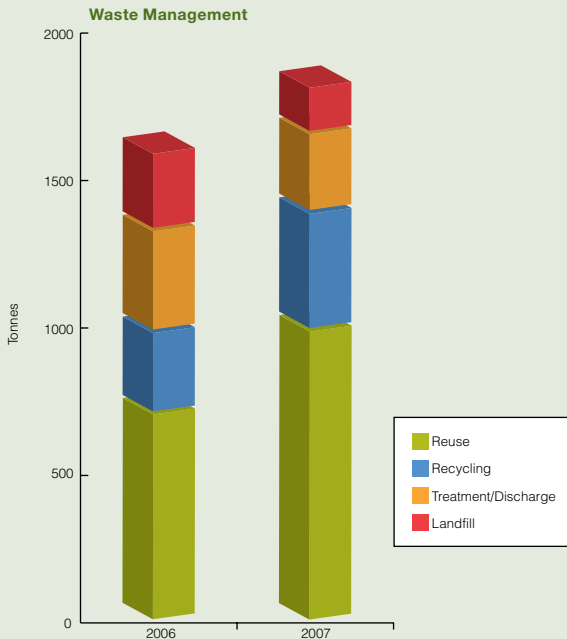
As part of our objective to improve the waste culture on site, our aim is to minimise the tonnage of waste sent to landfill, to maximise waste segregation and to optimise opportunities for reuse and recycling of materials.

All waste materials are categorised and segregated. Waste generated on site includes waste oils, glycol, food waste, paper, scrap metal, plastics, glass, wood and Rockwool.

The total quantity of waste generated on site increased in 2007 compared to 2006. In 2006 the total tonnage of waste generated was 1,637 tonnes, whereas in 2007 the total tonnage of waste generated was 1,840 tonnes. Of this total, 403 tonnes were recycled and 1,016 tonnes were reused. This represents 77% of the total tonnage of waste generated, and shows an increase of waste recycled/reused compared to 62% in 2006.

There were no breaches of waste legislation in 2007.

In 2007, through the terminal's ongoing programme to encourage the reduction of waste to landfill, approximately 900 tonnes of crushed stones were reused to stabilise the banks in landscaped areas.



Resource Consumption.

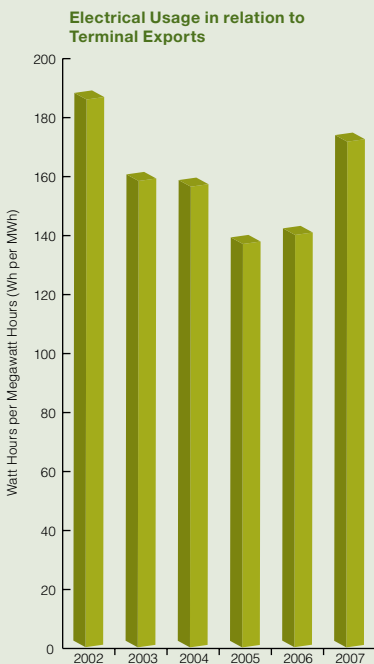
Water Consumption

Site water consumption is mainly for domestic purposes such as the canteen and washroom facilities. In 2007, only estimated readings for water use were available. Nonetheless, subsequent investigations have identified that leaks were responsible for a significant change in water consumption. As meter readings from the water supplier were unavailable, the data set is incomplete and the site has therefore not reported on water consumption in this statement. To improve the leak identification process, in-house water meter checks will be introduced in 2008.



Electrical Efficiency

The administration buildings, workshops and electrical motors used within the plant all consume electricity. Site electrical consumption in 2007 was 3.6% more than in 2006. This was due to increased use of equipment which consumes large quantities of electricity, required due to process conditions.



Environmental Recognition: VIBES Award.



In December 2007, the St Fergus Gas Terminal won the large company category in the prestigious Vision in Business for the Environment of Scotland (VIBES) Award.

The judges said that TOTAL E&P UK, as operators of the terminal, had received the accolade for ensuring that environmental considerations were central to all business decisions and staff training. The judges were also impressed with the “constant and extensive onsite and offsite monitoring that resulted in considerable savings to the environment and to the bottom line.”

Nicolas Carles, St Fergus Terminal Manager said, “At St Fergus everyone plays a role in caring for the environment. Our environmental initiatives are integral to our activities and we are delighted that our efforts have been recognised by VIBES.”

By winning the award, the St Fergus Gas Terminal became eligible to enter the European Environmental Awards in 2010. These awards annually attract some 200 entries from the cream of Europe’s most environmentally-positive businesses. VIBES is the only awards scheme in Scotland that feeds into the European Environmental awards.

One of the key factors in the terminal’s success was the extensive waste management and recycling programme carried out in 2006 and 2007. This programme included reuse of approximately 660 tonnes of sand and hardcore, remediation of 60 tonnes of oil contaminated sand, negotiating to successfully set-up a recycling route for Rockwool, and a further reuse of approximately 900 tonnes of crushed stones.

These initiatives have worked to ensure that an environmental solution can be found for materials otherwise destined for landfill. The initiatives were achieved by a focused team of employees, working together to maximise reuse and recycling.

Jenny Wink, St Fergus’ Administration Supervisor, emphasises that the VIBES award would not have been possible without the complete “buy-in” from all staff. “It not only recognises our challenging approach to waste management, but highlights our overall holistic approach to the environment,” she said.

EMAS Certificate.



This statement has been validated by John Robertson of BSI. BSI is accredited for EMAS verification with registration reference UK-V-0002. The validation was completed on 2nd May 2008

John Robert

John Robertson

Lead Verifier



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Feedback

If you have any comments, or would like further information on our environmental impacts or performance, please contact: Public Affairs and Corporate Communications

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