

**SALTEND COGENERATION PLANT:  
2007 UPDATE OF ENVIRONMENTAL STATEMENT**

**1 INTRODUCTION**

**1.1 Environmental Statement**

As part of the Eco-Management and Audit Scheme (EMAS)<sup>1</sup> registration process, the Saltend Cogeneration Company Limited (SCCL) published Environmental Statements for 2001 and 2004. These were independently verified and contained the following information:

- A message from the Station Manager
- Health Safety and Environmental Policy
- A description of the Environmental Management System
- A review of Environmental Aspects and Impacts
- Data relating to the environmental performance of the Power Plant
- Performance against the previous year's Environmental Improvements Objectives
- The current year's Environmental Improvement Objectives

**1.2 Update of Environmental Statements**

Following the publication of the Environmental Statements, annual update information was made available for the years 2002, 2003, and 2005. This '2007 Update of Environmental Statement' relates to performance in 2006 and describes the environmental improvement programme for 2007.

Since publication of the 2006 Environmental Update, the Health Safety and Environmental Policy was re-approved by the Station Manager. SCCL has maintained full legal compliance.

The environmental aspects and impacts were reviewed during the year. One new significant aspect was identified (release of salt from Cooling Towers) and the significance of two other aspects was down rated (use of MMF and site vehicle exhaust).

**1.3 Environmental Policy**

We will care for the environment through a commitment to the adoption of appropriate environmental practices and the maintenance of:


- Certification under British Standard (BS) European Standard (EN) International Standards Organisation (ISO) 14001: 2004 on environmental management systems;
- Registration under the European Union's Eco-management and Audit Scheme (EMAS).

We are committed to the prevention of pollution and continual improvement in environmental performance by the setting of annual targets and independent auditing against the above international standard and EU Regulation.

We will comply with applicable legal requirements and with other appropriate requirements which relate to its activities and environmental aspects.

Monitoring will be undertaken to facilitate the management of emissions and environmental impacts and other aspects of plant operations. The results of monitoring will be used to assess performance and will be considered in the development of annual targets for the plant.

<sup>1</sup> EC No 761/2001 as amended 3 Feb 2006.

  
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Measures will be adopted to facilitate the conservation of natural resources by:

- Maintaining, and, where practicable, improving the high level of efficiency achieved by the plant;
- Minimising the use of raw materials and subsequent waste arising ('waste minimisation');
- Adoption of recycling and re-use initiatives.

This Policy will be implemented by all SCCL personnel and reviewed on an annual basis.

## 2 ENVIRONMENTAL IMPROVEMENT OBJECTIVES

Progress on objectives set for 2006 is presented below.

No.	2006 OBJECTIVES	TARGET	PROGRESS
1	Determine path forward for the continuing operation (recommended) of the RO ECell operation.	Oct 06	Complete
2	Commission macro-fouling control system and monitoring study.	Dec 06	Carried forward.
3	Update induction material to highlight SCCL's requirements for contractors' activities regarding the prevention, reduction, segregation, control and disposal of waste.	Mar 06	Complete
4	Consider opportunities for engaging oil and lubricant suppliers who would be responsible for the collection and disposal of the associated waste products. To also consider re-use of used oil.	Jul 06	Contract specification (RH-MAI-102) prepared for new supplier. The specification includes requirements for the collection of waste oils and examination of re-use potential.
5	Complete cost benefit analysis of changing resins versus deterioration in water quality.	Mar 06	Complete
6	Commission improved engineering of the lube oil vent to minimize the generation and release of an oil mist.	Sep 06	Complete
7	Consider dual fuel/electric vehicles when purchasing new site vehicles and company cars.	Mar 06	Complete but not justified.
8	Sample discharge for As, Cr, Cu.	Jan06	Complete
9	Review the benefits of membership within the Humber INCA.	Jan 06	Complete

The following new objectives are set for 2007. These were based on a review of the significant aspects and impacts, with contributions and support from SCCL personnel.

No.	OBJECTIVE	ACTION	TARGET
1	<p><b>RENEW ENVIRONMENTAL POLICY</b></p> <p>The emphasis of the new 2006 Health Safety and Environment Policy is on health and safety.</p>	<p>Consider the development of a stand-alone environmental policy or revise the existing policy to increase the emphasis on the environment. Also, ensure compliance with the requirements relating to the contents of the Environmental Policy in the EMAS Regulation and ISO 14001: 2004.</p>	<p>January 2007</p>
2	<p><b>REVIEW TANKER SPILLAGE CONTAINMENT FACILITIES</b></p> <p>The tanker off-loading bunds for the delivery of hazardous chemicals to the water treatment plant and cooling towers are undersized for the new 28 tonne tanker deliveries.</p>	<p>Undertake and document an engineering risk assessment of the delivery of smaller loads of chemicals versus bund improvement civil works.</p>	<p>March 2007</p>
3	<p><b>IMPROVE WASTE MANAGEMENT</b></p> <p>The Environment Agency is requiring the pre-treatment of certain wastes prior to disposal, to facilitate compliance with Waste Acceptance Criteria at landfill sites.</p>	<p>Complete an assessment of the implications of relevant 'Waste Acceptance' criteria for the disposal of hazardous waste generated on site and identifies and assesses the pre-treatment requirements versus the cost of incineration.</p>	<p>March 2007</p>
4	<p><b>CONTROL MACRO-FOULING OF KING GEORGE DOCK INTAKE PIPELINE</b></p>	<p>Commissioning of macro-fouling control dosing system at the dock intake and appoint Institute of Estuarine and Coastal Studies to monitor effectiveness.</p>	<p>March 2007</p>
5	<p><b>REDUCE HAZARDOUS WASTE</b></p> <p>The tool cleaner in the work shop uses a kerosene based degreaser.</p>	<p>Complete an assessment of switching to a citrus-based degreaser from the existing kerosene-based system.</p>	<p>June 2007</p>
6	<p><b>IMPROVE WASTE MANAGEMENT</b></p> <p>Approximately 60% of the waste arising is sent off site for recycling. The fate of this waste is not known.</p>	<p>As part of Duty of Care, and to facilitate reporting to the Environment Agency, complete an assessment of the fate of waste taken off site for recycling.</p>	<p>June 2007</p>

No.	OBJECTIVE	ACTION	TARGET
7	<p><b>IMPROVE WASTE MANAGEMENT</b></p> <p>Under the PPC permit, operators are required to minimize the quantity of waste generated by re-engineering operations and activities (cradle to grave approach).</p>	<p>Enter EWC Codes on the stock inventory to facilitate the mapping (and ultimate reduction) of materials and potential wastes on site</p>	<p>June 2007</p>
8	<p><b>GREEN PURCHASING</b></p> <p>The environmental effects register highlights the positive impact of plant operations on the local economy. However, the purchasing policy does not provide any direction or emphasis on the purchase of local goods and services.</p>	<p>Review the purchasing policy and adopt appropriate measures to facilitate the use of locally-supplied services. Undertake an assessment of existing contracts to quantify the existing benefits to the local economy and future benefits associated with a change in the emphasis of the policy.</p>	<p>October 2007</p>
9	<p><b>IMPROVE CHEMICAL STORAGE</b></p> <p>During the site review, it was observed that drums of chemicals were staged outside the chemical dosing building in an unprotected (i.e. un-bunded) area.</p>	<p>Review the adequacy of the existing provision for the appropriate storage of drummed chemicals and develop Plant Improvement Proposal for new storage areas if required by the review.</p>	<p>December 2007</p>
10	<p><b>REDUCE WASTE</b></p> <p>During 2007, SCCL will implement a new oil supply contract in which the supplier will be required to re-use waste oils, minimize packaging.</p>	<p>Monitor the implications of the new oil contract on the quantity of oil used on site and undertake a review of the potential for using synthetic oils on site.</p>	<p>December 2007</p>


### 3 ENVIRONMENTAL PERFORMANCE

#### 3.1 Key Raw Material Use

The quantity of key raw materials used on site is summarised below.

RAW MATERIALS	QUANTITY (tonnes)					
	2001	2002	2003	2004	2005	2006
Dock Water (net abstraction)	5,626,164	7,433,448	5,306,612	3,619,275 (1)	2,362,661	2,570,711
Mains (potable) water	1,925,222	2,272,254	2,196,596	2,533,530	2,287,661	1,828,599
Natural Gas	1,394,796	1,196,672	1,304,617	1,291,691	1,346,154	1,178,433
Sodium hydroxide (caustic soda)	3,380	3,696	3,372	3,472	3,075	2,683
Sulphuric acid	3,336	3,041	3,248	3,000	3,023	2,649
Sodium hypochlorite (bleach)	735	817	986	1,017	1,029	899

(1) Modifications to the CT design increased cooling by radiated heat. This reduces the amount of Dock water evaporated.

  
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### 3.2 Energy Produced

The quantity of electricity and steam produced by the Saltend Cogeneration Plant is summarised below.

ENERGY PRODUCTION	QUANTITY					
	2001	2002	2003	2004	2005	2006
Electricity exported to grid (megawatt hour)	8,200,840*	7,413,576*	8,256,404*	8,122,906*	8,606,461*	7,553,092
Electricity to CHP host (megawatt hour)	Not previously reported	Not previously reported	Not previously reported	Not previously reported	Not previously reported	536,777
Steam supplied (tonnes)	944,420	1,199,557	1,188,499	1,282,994	1,160,760	930,610

\* Excludes electrical power element of CHP exported to BP.

### 3.3 Air Emissions

Emissions to air from the operation of the Saltend Cogeneration Plant are summarised below.

AIR EMISSION	LIMIT (tonnes)	QUANTITY (tonnes)					
		2001	2002	2003	2004	2005	2006
Carbon dioxide	No longer applicable	< 3,836,000	< 3,291,000	< 3,610,000	3,499,851	3,553,376	3,109,891
Nitrogen oxides	4,055	< 3,413	< 3,176	< 2,005	1,989	1,858	1,710
Carbon monoxide	not applicable	< 109	< 92	< 54	38	64	51
Sulphur dioxide	50	< 44	< 38	< 4.5	< 4.3	< 12.7	8.11
Unburned Natural Gas	not applicable	not available	< 31	2.5	4.2	2.0	5.4

Spot sampling of stack emissions allowed more accurate calculation of sulphur dioxide emissions in 2003. Data for 2001 and 2002 therefore represent over-estimates.

### 3.4 Water

Discharges to water from the operation of the Saltend Cogeneration Plant are presented below.

WATER DISCHARGES	LIMIT	QUANTITY					
		2001	2002	2003	2004	2005	2006
Water abstracted (k tonnes)	26,280	13,650	14,731	13,155	11,403	8,813	7,192
Total discharge (k tonnes)	not applicable	8,024	7,298	7,848	7,784	6,450	4,621
Cadmium (kilograms)	2	< 0.012	< 0.013	< 0.013	< 0.45(1)	< 0.04	< 0.55
Mercury (kilograms)	10	< 0.052	< 0.014	< 0.051	0.19(1)	0.19	< 1.34(2)

- (1) Includes new data from suppliers on sodium hypochlorite.  
 (2) Based on suppliers specification data


### 3.5 Waste

Waste disposal and recycling to off-site outlets from the operation of the Saltend Cogeneration Plant is summarised below.

WASTE DISPOSAL	2001	2002	QUANTITY (tonnes)				2005	2006
			2003	2004	2005	2006		
Recycled	No data	No data	No data	155	93	239	239	
General Waste	4,628	199	48	239	70	159	159	
Hazardous Waste (1)	33	6	42	40	0.7	3	3	

Improved monitoring of waste disposals provided a better estimate of the quantities arising in 2002 and 2003.

- (1) Hazardous waste comprises oils, oily filters, oily rags and used chemicals. In accordance with latest Regulations, SCCL is registered with the Environment Agency as a 'hazardous waste producer'.

  
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### 3.6 Complaints

No environmental complaints were received in 2006.

## 4 FURTHER INFORMATION

The Environmental Statement will be re-published in 2008 and will contain data for the year 2007.

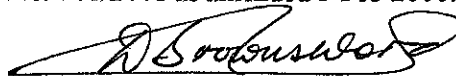
In the meantime, further information can be sought from:

Station Manager  
Saltend Cogeneration Plant  
Saltend Cogeneration Company Limited  
Salt End  
Hedon Road  
Hull  
East Yorkshire  
HU12 8GA

Telephone 01482 895 500

## VERIFICATION

AFAQ-EAQA Ltd (UK-V-0010) verified this statement on 1st August 2007 against the requirements of the EMAS Regulation EC No. 761/2001 as amended 3 Feb 2006.



Lead Verifier, EAQA Ltd.



EAQA Ltd