SALTEND COGENERATION PLANT: 2006 UPDATE OF ENVIRONMENTAL STATEMENT

1 INTRODUCTION

1.1 Environmental Statement

In 2002, the Saltend Cogeneration Plant, operated by the Saltend Cogeneration Company Limited (SCCL) received registration under the Eco-Management and Audit Scheme (EMAS)[1]. As part of the registration process, the 'Environmental Statement 2001' was published. This was verified by EAQA 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 in 2001
- Performance against 2001 Environmental Improvements Objectives
- Environmental Improvement Objectives for 2002.

1.2 Update of Environmental Statement

Following the publication of the first Environmental Statement, annual updates were produced for the years 2002 and 2003. A second Environment Statement was published in 2005. This provides data for the year 2004, environmental information and the improvement programme for 2005.

Since publication of the 2005 Environmental Statement, the Health Safety and Environmental Policy was re-approved by the Station Manager. SCCL maintained full legal compliance. The Environmental Management System has been revised to comply with updated ISO 14001:2004 and re-certified in August 2005.

2 ENVIRONMENTAL IMPROVEMENT OBJECTIVES

Progress on objectives set for 2005 is presented below.

	2005 OBJECTIVE	TARGET	PROGRESS
1	Implement the new Large Combustion Plant Directive variation to IPC Authorisation.	Jan 05	Complete.
2	Implement the new EU CO2 Emissions Trading scheme requirements.	Mar 06	Complete.
3	Maintain EMAS Registration.	Oct 05	Complete, Statement published.
4	Prepare IPPC permit application.	Dec 05	Complete.
5	Provision of Refresher Environmental Awareness training course to staff	May 05	Complete. Also Contractor induction booklet revised.
6	Launch SCCL Internet site to provide environmental information for the public.	Aug 05	Complete.

[1] EC No 761/2001 as amended 3 Feb 2006.

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	2005 OBJECTIVE	TARGET	PROGRESS
7	Update procedures on CHP QA, duty of care on waste, HSE tours, asbestos, purchasing goods and the monitoring of legal requirements.	Dec 05	Complete.
8	Modify the cooling towers and dosing system.	Jan 05	Complete.
9	Complete modifications to the oily water separator discharge.	Aug 05	Complete.
10	Implement recommendations on integrity testing of bulk chemical storage tanks	Dec 05	Complete.
11	Improve the engineering of the lube oil vent.	Aug 05	Installed in 2005, commissioning proposed for 2006 outage – Objective No.
12	Change resins in the water treatment plant	Dec 05	First train changed May 2005, second train change carried over to 2006, see Objective No. 5.
13	Implement daily monitoring and reporting of the BP condensate and HRSG blow down recovery plants.	Dec 05	Condensate recovery project abandoned. HRSG blow down monitoring in place via DCS.
14	Commission dock equipment for dosing cooling water make-up, then monitor macro-fouling control.	Dec 05	Carried over to 2006 – Objective No. 6.
15	Investigate cadmium in discharges to water.	Jul 05	Complete.

The following new objectives are set for 2006. These were based on a review of the significant aspects and impacts, with contributions and support from SCCL personnel.

	2006 OBJECTIVES	TARGET
1	Determine path forward for the continuing operation (recommended) of the RO ECell operation.	Oct 06
2	Commission macro-fouling control system and monitoring study.	Dec 06
3	Update induction material to highlight SCCL's requirements for contractors' activities regarding the prevention, reduction, segregation, control and disposal of waste.	Mar 06
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
5	Complete cost benefit analysis of changing resins versus deterioration in water quality.	Mar 06
6	Commission improved engineering of the lube oil vent to minimize the generation and release of an oil mist	Sep 06
7	Consider duel fuel/electric vehicles when purchasing new site vehicles and company cars.	Mar 06
8	Sample discharge for As, Cr, Cu.	Jan06
9	Review the benefits of membership within the Humber INCA.	Jan 06

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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
Dock Water (net abstraction)	5,626,164	7,433,448	5,306,612	3,619,275 (1)	2,362,661
Mains (potable) water	1,925,222	2,272,254	2,196,596	2,533,530	2,287,661
Natural Gas	1,394,796	1,196,672	1,304,617	1,291,691	1,346,154
Sodium hydroxide (caustic soda)	3,380	3,696	3,372	3,472	3,075
Sulphuric acid	3,336	3,041	3,248	3,000	3,023
Sodium hypochlorite (bleach)	735	817	986	1,017	1,029

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

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
Electricity exported * (megawatts)	8,200,840	7,413,576	8,256,404	8,122,906	8,606,461
Steam supplied (tonnes)	944,420	1,199,557	1,188,499	1,282,994	1,160,760

* 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	QUANTITY (tonnes)					LIMIT (tonnes)
	2001	2002	2003	2004	2005	
Carbon dioxide	< 3,836,000	< 3,291,000	< 3,610,00(	3,499,851	3,553,376	4,077,000
Nitrogen oxides	< 3,413	< 3,176	< 2,005	1,989	1,858	4,055
Carbon monoxide	<109	< 92	< 54	38	64	not applicable
Sulphur dioxide	< 44	< 38	< 4.5	< 4.3	< 12.7	50
Unburned Natural Gas	not available	< 31	2.5	4.2	2.0	not applicable

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

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3.4 Water

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

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

*includes new data from suppliers on sodium hypochlorite.

3.5 Waste

Waste arising from the operation of the Saltend Cogeneration Plant is summarised below.

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

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'.

3.6 Complaints

One environmental complaint was received from a resident in Paull, who was concerned about stack emissions during start-up. She was invited to site to look around the Plant and discuss environmental management issues.

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4 FURTHER INFORMATION

The next update on 2006 information will be provided in 2007. 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:

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VERIFICATION

AFAQ-EAQA Ltd (UK-V-0010) verified this statement on 14th September 2006 against the requirements of the EMAS Regulation EC No. 761/2001 as amended 3 Feb 2006.

D Brownsword
Lead Verifier,
AFAQ-EAQA Ltd,
Accredited Environmental Verifier for EMAS

EAQA Ltd