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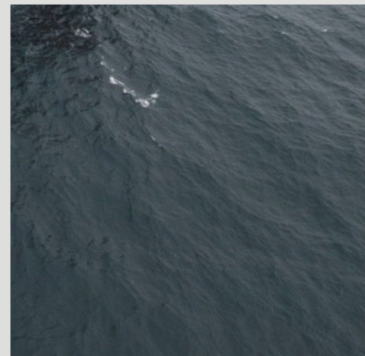
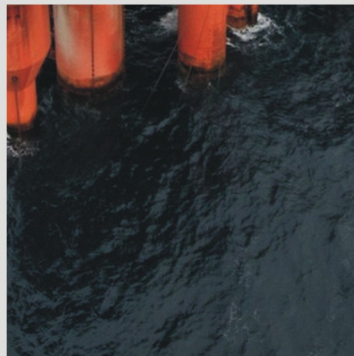
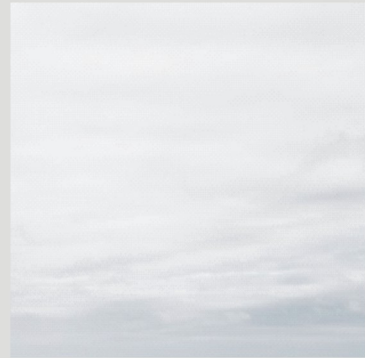
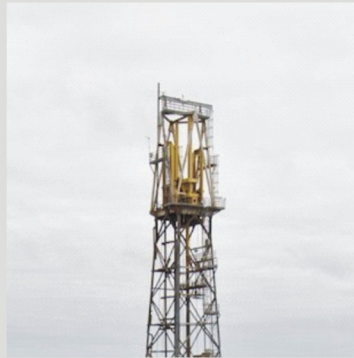
SOLAN DEVELOPMENT

UPDATE TO ENVIRONMENTAL STATEMENT

(DECC Ref: W/4031/2008)

Date: January 2010

Revision: 01



Chrysaor Ltd

**Solan Development
Update to Environmental Statement**

(DECC Ref: W/4031/2008)

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1 Introduction

Since submitting the Environmental Statement (ES) for the Solan Development (Ref W/4031/2008), it has come to light that some modification is required to the atmospheric emission and dispersion figures provided in Tables 4.14 and 4.13 (page 4-20) of the document. The reasons for this are twofold: Firstly Table 4.13 as currently presented does not include a flaring contribution. Although flaring is independent from power generation we believe it should be included in the table as a source of emissions. Secondly we have revised the emissions using the actual molecular weight of the Solan produced gas rather than the typical gas molecular weight suggested in the UKOOA 2004 guidance.

2 Revised Data

Presented below are four tables based on the P10 (worst case) Maximum Production figures used throughout the ES:

Table 4.13a provides maximum yearly emissions data valid for the relatively short period of time when flaring will take place with maximum production rates of 25,000 bopd.

Table 4.13b provides the yearly emissions averaged across field life.

Table 4.14a provides the contribution to atmospheric concentrations of pollutants from power generation and flaring while at maximum production rates of 25,000 bopd.

Table 4.14b provides the contribution to atmospheric concentrations of pollutants at field average levels.

Table 4.13a. Maximum Annual Predicted Total Atmospheric Emissions from Power Generation and Flaring during Production Operations (tonnes).

Emission Gas	Tonnes/year
Total fuel gas used (tonnes)	11,946
Total gas flared (tonnes)	31,857
Carbon dioxide	123,365.65
Carbon monoxide	249.28
Oxides of nitrogen	111.10
Nitrous oxide	28.86
Sulphur dioxide	175.21
Methane	329.56
Volatile Organic Chemicals	319.00

Table 4.13b. Average Annual Predicted Total Atmospheric Emissions from Power Generation and Flaring during Production Operations across Field Life (tonnes).

Emission Gas	Tonnes/year
Total diesel used (tonnes)	4,015
Total gas flared (tonnes)	13,274
Carbon dioxide	50,014.32
Carbon monoxide	92.63
Oxides of nitrogen	70.13
Nitrous oxide	1.96
Sulphur dioxide	69.15
Methane	132.87
Volatile Organic Chemicals	133.92

Table 4.14a. Maximum Predicted Combustion Gases Contributions to Atmospheric Concentrations Downwind during Production Operations

Pollutant	Concentration (mg/m ³)									
	0.5km	1km	2km	3 km	4km	5 km	10 km	20km	30km	50km
CO ₂	5.27	16.40	11.61	7.76	5.42	3.95	1.52	0.51	0.30	0.17
CO	0.011	0.033	0.023	0.016	0.011	0.008	0.003	0.001	0.001	0.0003
NO _x	0.003	0.010	0.007	0.005	0.003	0.002	0.001	0.0003	0.0002	0.0001
SO ₂	0.007	0.023	0.016	0.011	0.008	0.006	0.002	0.001	0.0004	0.0002
CH ₄	0.014	0.044	0.031	0.021	0.014	0.011	0.004	0.001	0.001	0.0004
VOC	0.014	0.042	0.030	0.020	0.014	0.010	0.004	0.001	0.001	0.0004

All values based on Oil and Gas UK emission factors for production flaring operations and, gas fuelled turbine combustion

Table 4.14b. Field Average Predicted Combustion Gases Contributions to Atmospheric Concentrations Downwind during Production Operations

Pollutant	Concentration (mg/m ³)									
	0.5km	1km	2km	3 km	4km	5 km	10 km	20km	30km	50km
CO ₂	2.14	6.65	4.71	3.15	2.20	1.60	0.62	0.21	0.12	0.07
CO	0.004	0.01	0.01	0.01	0.004	0.003	0.001	0.0004	0.0002	0.0001
NO _x	0.003	0.01	0.01	0.00	0.003	0.002	0.001	0.0003	0.0002	0.0001
SO ₂	0.003	0.01	0.01	0.004	0.003	0.002	0.001	0.0003	0.0002	0.0001
CH ₄	0.01	0.02	0.01	0.01	0.01	0.004	0.002	0.001	0.0003	0.0002
VOC	0.01	0.02	0.01	0.01	0.01	0.004	0.002	0.001	0.0003	0.0002

All values based on Oil and Gas UK emission factors for production flaring operations and, diesel fuelled turbine combustion