### Odorgard™

Secure, high efficiency odour abatement for critical applications

Technology
for a
sustainable future

Odorgard™ catalytically enhanced chemical scrubbing is an important improvement on the traditional caustic bleach scrubbing process, giving improved *total odour* removal efficiencies with capital and operating cost savings.

#### **Key benefits**

 Excellent removal of H<sub>2</sub>S and total odour Odorgard™ scrubbers can achieve higher than 99.9% removal of H<sub>2</sub>S coupled with unsurpassed removal efficiencies of non-H<sub>2</sub>S components (see over).

#### • Single Tower System

Catalysing the scrubbing liquor with Odorgard™ means that in a single tower more odour is removed than in a comparative 3 tower scrubbing system. This means the plant is more compact, easier to maintain and costs less. The bulk removal and oxidation of odourous VOCs also improves the bed life of downstream carbon polishing (where used).

Outstanding removal of non-H<sub>2</sub>S compounds
 Odorgard™ scrubbers oxidise captured contaminants in seconds rather than minutes. This means as soon as contaminants are absorbed into the scrubbing liquor they are rapidly oxidised to stable soluble salts. This fast oxidation makes Odorgard™ scrubbers the state of the art system for total odour removal.

#### Chemical savings

The Odorgard<sup>TM</sup> enhanced scrubber uses approximately 30% less bleach than a conventional scrubber. This can result in savings of £10,000's each year in running costs for a typical plant.







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# Technology for a sustainable future

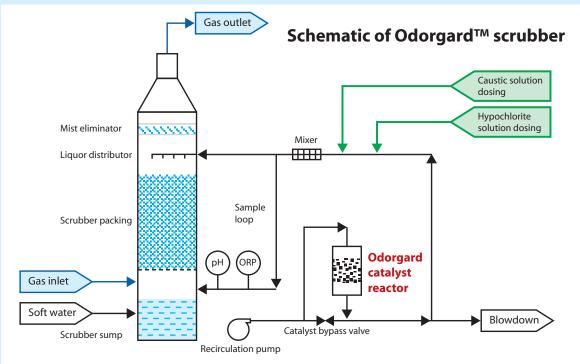
#### H<sub>2</sub>S and non-H<sub>2</sub>S removal performance

The following table is actual performance test data for a single tower Odorgard  $^{\text{TM}}$  Scrubbing System at a site which has high mercaptans and other non-H<sub>2</sub>S loadings.

Measured Loadings	Inlet	Outlet	Efficiency
Odour measured by Olfactometry, ou <sub>E</sub> /m <sup>3</sup>	57,991	1,276	97.8%
Actual H <sub>2</sub> S measured by Jerome, ppm	8.1	0.056	99.3%
Actual H <sub>2</sub> S converted to ou <sub>E</sub> /m <sup>3*</sup>	16,266	112	99.3%
Non-H <sub>2</sub> S odour by deduction, ou <sub>E</sub> /m <sup>3</sup>	41,725	1,164	97.2%
Total odour, ou∈/m³	57,991	1,276	97.8%

<sup>\*</sup>H<sub>2</sub>S converted to odour units using 0.0005ppm odour threshold value





#### Units installed and operating successfully include:

#### Northumbrian Water

Coastal Scheme STW (10 units) Howdon STW (5 units) Washington STW

#### North West Water

Shell Green SPC

#### Anglian Water

Ingoldmells STW

#### Thames Water

Mogden SPC

#### Southern Water

Ford STW & STC (3 units) Sandown STW & SRC Weatherlees Hill (Odorgard upgradeable)

#### Scottish Water

Ardoch STW (Odorgard upgradeable)

#### **DRD Water Services**

Tullaghgarley (Odorgard upgradeable)



