4. Atlantic Alliance

Tegernsee, Germany
20th – 23rd April, 2007

„Legal Requirements and Technical Solutions in the Combating of Dust“

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Hessian Ministry of Environment, Head of the Hessian Mining Authority
1. Introduction

2. Legal requirements
   2.1 Requirements resulting from environment protection
   2.2 Requirements resulting from health and safety

3. Technical solutions
   3.1 Sprinkling
   3.2 Wet dust collectors
   3.3 Dry filter systems

4. Summary und conclusion
Limits resulting from environmental protection (TA Luft):

Total dust including fine particulate matter: **20mg/m³**

If dust includes carzinogen substances: **1mg/m³**

Limits resulting from health and safety:

Workplace related: **0,15mg/m³**
(silicogen particulate matter)

should be reduced to a value of: **0,05mg/m³**

| 4th Atlantic Alliance | Limits | 21th April 2007 |
Functional Schematic Wet Dust Collector
Examples Wet Dust Collectors

Lowpressure – ROTO-Vent with single Mixingpipe

Highpressure – ROTO-Vent With tenfold Mixingpipe
Compactfilter – Element
<table>
<thead>
<tr>
<th></th>
<th>Capacity m³/min</th>
<th>Degree of Separation %</th>
<th>Achievable Limits mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet Dust Collectors</td>
<td>120 – 800</td>
<td>99 – 99,85</td>
<td>0,8</td>
</tr>
<tr>
<td>Tubefilter</td>
<td>1500</td>
<td>98</td>
<td>3</td>
</tr>
<tr>
<td>Pocketfilter</td>
<td>1500</td>
<td>99,5</td>
<td>0,5 - 1</td>
</tr>
<tr>
<td>Compactfilter</td>
<td>2000</td>
<td>99,99</td>
<td>&lt; 0,1</td>
</tr>
</tbody>
</table>

4th Atlantic Comparison of the different Alliance Technical solutions 2007