Manufacturers’ Pollutant Release and Transfer Register Responsibilities

Experience of E-PRTR in a quarry
European Pollutant Release and Transfer Register

- European Community signed UNECE Protocol on Pollutant Release and Transfer Register and published in 2006 a Regulation establishing a European PRTR.
- 2007 first year of monitoring for quarries larger than 25 ha.
- First reporting: January 2008
E-PRTR What to report?

What?
- Non-hazardous waste (within the country or transboundary)
- Hazardous waste (within the country)
- Hazardous waste (transboundary)

How?
- Identification of the facility
- Off-site Waste-Water Treatment Plant

Figure 2: Overview on the reporting requirements for facilities under the E-PRTR

Waste which is subject to disposal operations "land treatment" or "deep injection", shall be reported as release to land by the operator of the facility originating the waste.
What to declare for vehicle exhaust emissions?

What?

Emissions from vehicle exhaust considered to be 100% PM$_{10}$, CO, NOx, SOx and VOCs

How?

Exhaust emissions of PM$_{10}$ already covered by emission factor of quarrying activities

Next actions
How to evaluate vehicle exhaust emissions?

- Direct measurement in situ.
- Calculation from fuel analysis.
- Exhaust emission factors.
  - Published EF (e.g. EPA)
  - Provided by Vehicle Manufacturer

Our choice

Difficult

Variable + no improvement visible
How to evaluate vehicle exhaust emissions?

- Exhaust emission factors.
  - Published EF (e.g. EPA):
    - Fixed by type of vehicle
    - Only possible improvement: total fuel consumed

Exhaust emission factors.

Published EF (e.g. EPA):
- Fixed by type of vehicle
- Only possible improvement: total fuel consumed

Next actions

Table 4 Exhaust Emission Factors for Various Classes of Mining Equipment (kg/1000L fuel)\textsuperscript{a,b}

<table>
<thead>
<tr>
<th></th>
<th>PM\textsubscript{10}</th>
<th>CO</th>
<th>NO\textsubscript{X}</th>
<th>SO\textsubscript{X} (as SO\textsubscript{2})</th>
<th>VOCs (exhaust)</th>
<th>FAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track type tractor</td>
<td>3.03</td>
<td>9.4</td>
<td>34.16</td>
<td>1.7</td>
<td>3.31</td>
<td></td>
</tr>
<tr>
<td>Wheeled tractor</td>
<td>5.57</td>
<td>32.19</td>
<td>52.35</td>
<td>1.7</td>
<td>7.74</td>
<td></td>
</tr>
<tr>
<td>Wheeled dozer</td>
<td>17.7</td>
<td>14.73</td>
<td>34.29</td>
<td>1.7</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>Scraper</td>
<td>3.27</td>
<td>10.16</td>
<td>30.99</td>
<td>1.7</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>Grader</td>
<td>2.66</td>
<td>6.55</td>
<td>30.41</td>
<td>1.7</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td>Off-highway truck</td>
<td>17.7</td>
<td>14.73</td>
<td>34.29</td>
<td>1.7</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>Wheeled loader</td>
<td>3.51</td>
<td>11.79</td>
<td>38.5</td>
<td>1.7</td>
<td>5.17</td>
<td></td>
</tr>
<tr>
<td>Track type loader</td>
<td>2.88</td>
<td>9.93</td>
<td>30.73</td>
<td>1.7</td>
<td>4.85</td>
<td></td>
</tr>
</tbody>
</table>

How to evaluate vehicle exhaust emissions?

- Exhaust emission factors given by Vehicle Manufacturer
  one example!

How to declare real pollutants release?
This cut the ground from under my feet
How to evaluate vehicle exhaust emissions?

- Exhaust emission factors given by Vehicle Manufacturer
  another example!

Exhaust emission factors given by Vehicle Manufacturer

*another example!*

That, I understand!
How to improve?

- Today quarrying means environmental report.
- To report aggregates producers need clear data from vehicle manufacturer.

Quality of environmental data is now also part of the criteria to select equipment.
European Pollutant Release and Transfer Register

Thank you for your attention