SELF-MONITORING AND INSPECTION

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Agenda

1. Introduction
2. Supervisory authorities
3. Self-monitoring in Sweden
4. Supervisory authority – the way of working
5. Cooperation
Introduction
County administrative board of Stockholm (CAB)

- Supervision and permit
- Multiple of sectors
  - Combustion plants, windpower, waste treatment, waste-water etc.
- 72 environmental hazardous activities
- 10 officers
Supervisory authorities
The Swedish administration - for Supervision

The Parliament

National Government

Government Ministry (Ministry of the Environment and Energy)

County Administrative Boards (21)

Municipalities (290)
Allocation – special ordinance

• The **County administrative Board** responsible for environmental hazardous activities that require permit, A- and B-activities

• **Municipalities**, responsible for environmental hazardous activities that not require permit, C-activities.

• The **Surgeon General** responsible for military installations

(The County administrative Board can delegate the supervision over A- and B-activities, if the municipalities ask for it.)
## Environmental hazardous activities

<table>
<thead>
<tr>
<th></th>
<th>Total Sweden</th>
<th>Total Stockholm</th>
<th>CAB</th>
<th>Municipalities (26)</th>
<th>Surgeon general</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>500</td>
<td>28</td>
<td>11</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>5 500</td>
<td>263</td>
<td>61</td>
<td>191</td>
<td>11</td>
</tr>
<tr>
<td>C</td>
<td>~ 15 000</td>
<td>~ 1 800</td>
<td>~ 1 800</td>
<td>~ 35</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>72</td>
<td>~ 1 800</td>
<td>~ 50</td>
<td></td>
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</tbody>
</table>
Supervisory guidance

• Swedish EPA
  – Guiding, Evaluating, Advising, Coordinating
• Guidebooks and websites
  – For the operator and supervisory authorities

• The County Administrative Board is responsible for giving supervisory guidance to the municipalities.
Self-monitoring in Sweden
Self-monitoring

• Self-monitoring is **preemptive work**

• The operators of environmentally hazardous activities have **sole responsibility** for minimizing the **environmental impact** of their activities.

• The operator have to have sufficient **knowledge** to meet the demands in the environmental legislation, permits and conditions.
Legislation

Self-monitoring
• Environmental code
• Ordinance of Self-monitoring

Monitoring
• SEPA regulation on monitoring and sampling
• Industrial Emission Directive (IED)

Environmental report
• SEPA Regulation on Environmental Report
Environmental Code
- general requirements for Self-monitoring

• Operators must **continuously plan** and control (monitor) the activity to mitigate or **prevent** detrimental impacts on human health or the environment

• Operators shall by **own examinations** or otherwise keep themselves informed about the impact on environment from the activity

• Operator shall present a **programme for self monitoring** if required by authorities
Ordinance of Self-monitoring - more specific requirements

- **Document** the **responsibility** of the environmental issues, to meet the conditions of the permit and other binding legislation including injunctions from authority.
- **Structure** the industry’s **control of emissions**, sampling and analysis
- **Routines** for handling operational **disturbances** and documented procedures for **continuous check of all equipment**
- **Keep records of all chemicals**
Headlines from self-monitoring system - Example

1. Description of the operation and environmental impact
2. Allocation of responsibility
3. Permit and conditions of permit
4. Operating instructions and maintenance routines
5. Emission points and sampling points
6. Sampling method and analysis
7. Risk assessment and mitigation
8. Routines in case of incidents
9. Reporting during normal operation and during disturbances
10. Frequency of inspection by an independent expert.
SEPA regulation on monitoring and sampling

• Operator shall **document** all monitoring activities

• Operator shall use **methods stated in permits** or in regulations or in other cases according to Swedish or international **standards**

• **Accredited laboratories** must be used and sampling personal must be accredited or have equal training
EU regulation on monitoring and sampling

<table>
<thead>
<tr>
<th>Combustion plant total rated thermal input (MW\text{th})</th>
<th>BAT-AELs (mg/Nm\text{³})</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yearly average</td>
<td>Daily average or average over the sampling period</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New plant</td>
<td>Existing plant</td>
<td>New plant</td>
</tr>
<tr>
<td>50–100</td>
<td>70–150 (³)</td>
<td>70–225 (⁴)</td>
<td>120–200 (⁵)</td>
</tr>
<tr>
<td>100–300</td>
<td>50–140</td>
<td>50–180</td>
<td>100–200</td>
</tr>
<tr>
<td>≥ 300</td>
<td>40–140</td>
<td>40–150 (⁷)</td>
<td>65–150</td>
</tr>
</tbody>
</table>
EU regulation on monitoring and sampling

<table>
<thead>
<tr>
<th>NO$_x$</th>
<th>Coal and/or lignite including waste co-incineration</th>
<th>All sizes</th>
<th>Generic EN standards</th>
<th>Continuous ($^3$) ($^5$)</th>
<th>BAT 20</th>
<th>BAT 24</th>
<th>BAT 28</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solid biomass and/or peat including waste co-incineration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A proposal to a programme for self-monitoring shall be submitted to the Supervisory Authority not later than 4 months after the date that this permit has entered into force.

The proposal shall describe how inspections and monitoring will be performed including monitoring methods, frequency of monitoring and evaluation.
Permit
- typical condition in a permit

The total annual emissions of dioxins to air are given as **annual mean value** does not exceed 0.10 ng / Nm³, recalculated gas.

Emissions should be determined after **continuous long-term sampling** covering the **total annual emission** of dioxins. The condition shall begin 24 **months** after the date that this permit has entered into force.
SEPA Regulation on Environmental Report

• Annual report to a national website
• A- and B-activities must submit an environmental report
  – Basic information
  – Describing text
  – Report of emission
Environmental report
- Basic information and Describing text

• Basic information
  - classification, address etc.

• Describing text
  - valid permits, valid decisions, conditions and how they are met, yearly production, BAT conclusions

  – The results from self-monitoring is summarized in the annual Environmental report to the authorities
Environmental report
- Report of emission

• Register of the emissions of pollutants to air, water, land and transfers of pollutants through sewage water and transfers of waste.
  – Swedish Environmental Emissions Data (SMED)
  – European Pollutant Release and Transfer Registers, (EPRTR)

• The register is available to the public

http://utslappisiffror.naturvardsverket.se/Kartsida/
Swedish Environmental Emissions Data
Swedish Environmental Emissions Data
Swedish Environmental Emissions Data
Supervisory authority – the way of working
Environmental report
Monthly/quarterly report
Survey report
Self-monitoring programme
Incident report

Response to environmental report
Decisions on checks
Decisions on action to be taken
Inspection visit
Decision on fee to be charged

Permit and conditions
Environmetnally hazardous activity

Supervisory authority
National and European legislation
Swedish legislation
- Frame-legislation
- Preventive more than control focused

EU-legislation:
- Detailed
- Control more than preventive focus
- Follow up and report
Supervision and good governance

• Supervisory authority must be reliable, service-minded and effectiveness

• Impartial/fair judgement and no corruption

• Transparency - all documents, analysis and monitoring programs (official)
Supervision/Inspection

• Desktop-supervision
  – Self-monitoring programme
  – Environmental report
  – Advice by telephone or e-mail

• Site visit

• Supervision campaigns and projects
Site visit

• Ensure compliance with conditions in permits and binding legislation
• Site visit as a result of complaints from individuals or public
• Notify of smaller changes in activities
• Take action to promote corrections
• Examinations made by independent expert (usually a consulting company)
Ordninance of Supervision

• The authorities have a duty to present a **written plan** with the **inspection priorities** and fulfill the plan

• The authority shall **keep a register** of the activities

• The authority shall **annually evaluate** the activities
Inspection plan
- Example

- Environmental impact
- Complexity
- Experience from Supervision
- Level of Self-monitoring

Inspection plan
Priority of industries

• **Emissions** - amounts to water and air
• Handling of chemicals – type of chemicals, how they are stored, etc.
• The **complexity** of the plant
• A- or B-activity or IED
• **Experience** from previous inspections
• Remarks from site-visits
• The **level of the conducted self-monitoring**
• Documentation, annual report
Priority of industries
Our tools for improvements

• Advice and information
• Injunctions with penalty
• Environmental sanction charges
• Notify the prosecutor to investigate the environmental crime
• Prohibit and or stop production
Environmental sanction charges
- Self-monitoring

- Written routines and instructions for all environmental related issues (if not, 100 000-300 000 INR)
- Documented distribution of environmental responsibilities (if not, 250 000-500 000 INR)
- Documentation of the measurements which are performed (if not, 30 000-200 000 INR)
- Fail to submit an annual environmental report (10 000-20 000 INR)
Cooperation
- consensus and development
National Environmental Collaboration

• Funded and organized by:
  – Swedish Environmental Protection Agency
  – Marine and Water Management
  – Swedish Board of Agriculture
  – Swedish County Administration Boards

• The aim is to improve supervision at a regional level
  – Increased consensus on regulatory issues
  – Increased utilization of resources
  – Development of skills
  – Similar supervisory guidance
Water/Air Quality associations

- Companies (and municipalities) cooperate
  - To be cost effective
  - To build common knowledge
  - To achieve high quality audits
Summary

• Self-monitoring, responsibility and knowledge

• Dialogue with respect

• Inspection plan after environmental impact and self-monitoring, do the right thing

• Cooperation
Thank you!