MALAYSIA INDUSTRIAL POLLUTION PREVENTION AND CONTROL POLICIES AND LAWS

by

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• No. of Industries (manufacturing) – 25,547;
• Major industries – Wood Based, Metal, Food & Beverages, Plastic, Electric & Electronic, Metal Fabrication, Chemical;
• Development of New Industrial Areas –
  – Refinery and Petrochemical Integrated Development (RAPID), Pengerang, Johor; &
  – Sarawak Corridor of Renewable Energy (SCORE), Samalaju, Sarawak
**STATE OF POLLUTION SITUATION: AIR**

<table>
<thead>
<tr>
<th>Bahan Pencemar / Pollutant</th>
<th>Masa Purata / Averaging Time</th>
<th>Garis Panduan Malaysia / Malaysia Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm (µg/m³)</td>
</tr>
<tr>
<td>Ozon / Ozone</td>
<td>1 Hour</td>
<td>0.10 (200)</td>
</tr>
<tr>
<td></td>
<td>8 Hours</td>
<td>0.06 (120)</td>
</tr>
<tr>
<td>Karbon Dicksida / Carbon Monoxide</td>
<td>1 Hour</td>
<td>30.0 (35**</td>
</tr>
<tr>
<td></td>
<td>8 Hours</td>
<td>9.0 (10**)</td>
</tr>
<tr>
<td>Nitrogen Dicksida / Nitrogen Dioxide</td>
<td>24 hours</td>
<td>0.17 (320)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>Sulfur Dicksida / Sulfur Dioxide</td>
<td>1 hour</td>
<td>0.13 (350)</td>
</tr>
<tr>
<td></td>
<td>24 Hours</td>
<td>0.04 (105)</td>
</tr>
<tr>
<td>Pejajal Terampai (PM₁₀) / Particulate Matter (PM₁₀)</td>
<td>24 Hours</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>12 Months</td>
<td>50</td>
</tr>
<tr>
<td>Total Suspended Particulate (TSP) /</td>
<td>24 Hours</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>12 Months</td>
<td>90</td>
</tr>
<tr>
<td>Besi / Lead</td>
<td>3 Months</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Nota / Note: ** mg/m³*

**Table 1.2 Malaysia: Ambient Air Quality Guidelines**

**Figure 1.12 Malaysia: Annual Average Concentration of Carbon Monoxide (CO), 2000 - 2014**
STATE OF POLLUTION SITUATION: WATER

Rajah 3.1: Malaysia: Tren Kualiti Air Sungai, 2005-2014
Figure 3.1: Malaysia: River Water Quality Trend, 2005-2014
<table>
<thead>
<tr>
<th>YEAR</th>
<th>CLEAN AIR REGULATIONS</th>
<th>SCHEDULED WASTE REGULATIONS</th>
<th>INDUSTRIAL EFFLUENT REGULATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO. OF INSPECTIONS</td>
<td>COMPLIANCE (%)</td>
<td>NO. OF INSPECTIONS</td>
</tr>
<tr>
<td>2014</td>
<td>13,096</td>
<td>99%</td>
<td>13,044</td>
</tr>
<tr>
<td>2013</td>
<td>8,475</td>
<td>99%</td>
<td>8,475</td>
</tr>
<tr>
<td>2012</td>
<td>7,155</td>
<td>96%</td>
<td>7,297</td>
</tr>
</tbody>
</table>
**Legislative Framework**

ENVIRONMENTAL QUALITY ACT 1974 & REGULATIONS MADE UNDER IT.

- **Latest Amendment (2 Jan 2013)**
  - Only registered EIA consultant can produce EIA report [Section 34A(2)];
  - Fined increase from RM100K to RM500K [Section 34A(8)];
  - Prohibition order or stop work order for prescribed activities [Section 34AA];
  - Power of investigation & Authority card [Section 37A & 37B];
  - Power to arrest without warrant [Section 37C];
  - Competent person [Section 49A];
  - Reward to informers [Section 49B];
## Regulations/Orders under EQA 1974

### Control of Water Pollution from Agro-Based Industry
- EQ (Licensing) Reg. 1977
- EQ (Prescribed Premises) (Crude Palm Oil) Reg. 1977
- EQ (Prescribed Premises) (Raw Natural Rubber) Reg. 1978

### Control of Water Pollution from Municipal & Industrial Wastewater
- EQ (Industrial Effluent) Reg 2009
- EQ (Sewage) Regulations 2009
- EQ (Control of Pollution from Solid Waste Transfer Station & Landfill)

### Control of Air Pollution
- EQ (Clean Air) Reg 1978
- EQ (Declared Activities) (Open Burning) Order 2003
- EQ (Dioxin & Furan) Reg 2004

### Control of Pollution from Motor Vehicles
- EQ (Control of Emission from Diesel Engines) Reg 1996
- EQ (Control of Emission from Petrol Engines) Reg 1996
- EQ (Control of Emission from Motorcycles) Reg 2003
- EQ (Motor Vehicle Noise) Reg 1987
- EQ (Control of Lead Concentration in Motor Gasoline) Reg 1985

### Control of Toxic & Hazardous Substances
- EQ (Scheduled Wastes) Reg 2005
- EQ (Prescribed Premises) (Scheduled Wastes Treatment & Disposal Facilities) Reg 1989
- EQ (Prescribed Premises) (Scheduled Wastes Treatment & Disposal Facilities) Order 1989

### Substances that Depletes Ozone Layer
- EQ (Prohibition on the Use of Chlorofluorocarbons & Other Gases as Propellants & Blowing Agents) Order 1993
- EQ (Refrigerant Management) Reg 1999
- EQ (Halon Management) Reg 1999

### Others:
- EIA Order
- Marine Pollution Control
- Delegation of Powers
Water Pollution Control

- Restrictions on pollution of inland waters [Section 25, EQA 1974]
- Prohibition of discharge of oil into Malaysian waters [Section 27, EQA 1974]
- Prohibition of discharge of wastes into Malaysian waters [Section 29, EQA 1974]
Water Pollution Control

Environmental Quality (Prescribed Activities)(Crude Palm Oil) Regulations 1977;

Environmental Quality (Prescribed Activities)(Raw Natural Rubber) Regulations 1978;
Water Pollution Control

Environmental Quality (Industrial Effluent) Regulations 2009;

Environmental Quality (Sewage) Regulations 2009;
Prohibition against placing, deposit of scheduled wastes [Section 34B, EQA 1974]

Environmental Quality (Schedule Wastes) Regulations 2005
Air Pollution Control

Restriction on pollution of the atmosphere [Section 22, EQA 1974]

Environmental Quality (Clean Air) Regulations 2014
Air Pollution Control

Prohibition on open burning [Section 29A & 29AA, EQA 1974]

Environmental Quality (Declared Activities)(Open Burning) Regulations 2003
ENFORCEMENT STRATEGIES

Self Regulatory Mechanism

- Performance Monitoring (PM) of Industrial Effluent Treatment System (IETS) and Air Pollution Control Equipment (APC) by Industries
- Competent Person to operate IETS & APC
- Online Reporting;
  - eSWIS – electronic scheduled waste information system (Hazardous Waste)
  - OER – online environmental reporting (effluent discharge)
  - Continuous Emission Monitoring System – CEMs (air emission)
- Notification and Registration of Environmentally Hazardous Substances – EHSNR (chemicals)
ENFORCEMENT STRATEGIES

- Colorimeter DR390-in-situ analysis of effluent discharge
- Mobile enforcement (m-force) equipments
- To issue compounds, field citation & prohibition order (motor vehicles) on the spot
HACH KIT COLORIMETER DR 390

M-FORCE EQUIPMENT
CHALLENGES IN INCOMPATIBLE DEVELOPMENT

QUARRY

RESIDENTIALS
CHALLENGES IN WATER POLLUTION CONTROL

- Not all Local Authorities enforce installation of Food Oil & Grease (FOG) Traps in Restaurants and Food Courts;
- Sullage direct discharge into drain/rivers;
- Cooperation with MOH enforcing Food Act 1983 (ACT 281) on FOG;
Way forward

- Guided Self Regulation
- Executing Specialize Environmental Management Issues;
- Green Industries
- Cleaner Production/Sustainable Consumption Production Principles on SME Industries
- Environment (RAS) Outreach Programme on 222 Parliamentary Constituencies & 3P (Pollution Monitoring Team)
- Sources Increasing
  - Standards & Protocol are developed
- Animal Farming Activities & Public Wet Market Discharges issues
WAY FORWARD

Environmental Forensic

- Currently being developed – Data bank, multivariate statistics, geostatistics, principal component analysis

Enhancement of Online Reporting on Self Regulatory

- Performance monitoring (PM) reporting on IETS and APC

TMDL

- To develop Total Maximum Daily Load mechanism to control loading of effluent discharge from industries
  - Based on assimilative capacity of receiving water course

Regulation on Cess

- Industries to contribute according to amount of generation of hazardous waste
  - Promoting cradle to cradle principles
THANK YOU