Occupational Health & Safety Management at PPC’s Lignite Mines

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PUBLIC POWER CORPORATION OF GREECE S.A

- 7.5 million customers
- 12,760 MW installed capacity (70% of Greece’s installed capacity)

Subsidiaries

- Hellenic Distribution System Operator S.A
- Independent Transmission System Operator S.A
- PPC Renewables S.A
## Greece’s Fuel Mix

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lignite</td>
<td>47.7</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>23.9</td>
</tr>
<tr>
<td>Renewables</td>
<td>10.6</td>
</tr>
<tr>
<td>Oil</td>
<td>8.2</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>6.2</td>
</tr>
<tr>
<td>Interconnections</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Mining Business Unit

- 4,850 employees

- 62 Mt Lignite production annually (2012)
  (3rd place in EU’s lignite production)

- 5 open-cast mines located at
  - Lignite Center of Western Macedonia
  - Lignite Center of Megalopolis
Mining Business Unit mission is:

- To ensure the safety of supply of power plants with minimum cost, and
- To formulate plans for the strategic development of mines for optimal exploitation of lignite deposits.
Mining Business Unit has:

- issued **Special Safety Rules** for:
  - Main Mine Equipment (bucket-wheel excavator etc)
  - Conveyor Belts
  - Auxiliary Mine Equipment (bulldozers, loaders, graders, hydraulic excavators etc)
  - Handling, storage and use of lubricants

- proceeded to identify risks, at each mine site by conducting **Risk Assessment Studies** for all mine sites

- established and maintains **Emergency Response Contingency Plans**
RISK ASSESSMENT STUDIES

Addresses the issue of risk assessment and risk classification.

Includes matrices of:

- “seriousness of injury” and “rate of risk”
- severity escalation
- possible damages
- remedy measures
- residual risk

Their purpose is to reduce the risk to acceptable
Emergency Response Contingency Plans

Identifies the potential for, and responses to, incidents and emergency situations.

An ERCP aims to:

- minimize the interruption of operation due to unplanned events
- limit the extent of losses and disasters and prevent their escalation
- implement in advance alternative operation modes
- train mine stuff in emergency procedures
- plan for the fast and smooth recovery of operation
- minimize financial implications
Incidence Frequency Rate

[Graph showing incidence frequency rate for LCWM and LCM from 1993 to 2011.]

Legend:
- LCWM
- LCM
- TREND (LCM)
- TREND (LCWM)
Severity Rate
Incidence Frequency Rate PPC-RWE
Correlation between Incidence Frequency Rate and Lignite Production
Within the framework of continuous improvement in H & S issues, Mining Business Unit redefining its strategy through:

- Management Commitment
- Employee involvement and continuous consultation
- Continuous evaluation and review of Health & Safety initiatives
- Management of OH&S on the basis of carrying out risk assessment and ongoing review of it
- Encouraging effective 'bottom-up' communication
- OH&S performance measurement and monitoring
Overall

PPC's Mining Business Unit culture for Operational Health & Safety is based on three axes:

✓ Operational Health and Safety is a priority and a strategic objective

✓ Human capital is the most important resource of PPC’s lignite mines

✓ Production and Safety are two sides of the same coin
THANK YOU FOR YOUR ATTENTION