

**WORKSHOP**

**“QUANTITATIVE RISK ASSESSMENT OF OIL AND GAS PLANTS”**

Maadi Hotel  
Cairo, 12<sup>th</sup> - 16<sup>th</sup> November 2006

First day (12<sup>th</sup> November)

**9,30 Opening of the Workshop**

EEAA and RBO Responsibles/Experts

APAT and MATT Experts

**Tour de table**

Presentations of each APAT and EEAA Experts with short details on their activities

Presentation of the Workshop

Mr. Emam Hussein EEAA

Mr. Gaetano Battistella APAT

**1. OIL AND GAS EXTRACTION, PRODUCTION AND TRANSPORT TECHNOLOGIES**

**1. Brainstorming (based on experiences)**

- Drilling technologies aspects
- Main environmental issues

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**12,30 High Tea**

**2. Brainstorming (based on experiences)**

- Production technologies aspects (Mr. Leonardi)
- Transport technologies aspects (Mr. Leonardi)
- Main environmental issues (Mr. Pino)

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**3. EEAA/APAT comments**

**15,30 Ordinary Break**

**4. Working group N. 1**

Define main environmental protection issues on regional basis starting from national inventories of oil and gas industries

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**17,30 Closing of the works**

Second Day (13<sup>rd</sup> November)

**9,30 Opening of the works**

**5. Presentation of results of Working group N. 1**

EEAA Experts/RBO Experts

**6. Conclusion**

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**2. OIL AND GAS ENVIRONMENTAL IMPACTS**

**1. Brainstorming (based on experiences)**

- EU and Italian standards for oil and gas industries evaluation impacts
- Oil and gas IPCC (Intergovernmental Panel on Climate Change) implementation and emissions evaluation methodologies

EEAA Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**12,30 High Tea**

**2. Brainstorming (based on experiences)**

- Oil and gas Integrated Pollution and Prevention Control (IPPC) and relative Best Available Technologies (BAT)

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**3. EEAA/APAT comments**

**15,30 Break**

**4. Working group N. 2**

Implementation of Best Available Technologies (BAT) referring to main environmental issues of available gas industries

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**17,30 Closing of the works**

Third Day (14<sup>th</sup> November)

**9,30 Opening of the works**

**5. Presentation of results of Working group N. 2**

EEAA Experts/RBO Experts

**6. Conclusion**

EEAA Experts/RBO Experts

APAT Experts (Mr. Leonardi, Mr. Pino, Mr. Battistella)

**3. OIL AND GAS MAJOR HAZARDS RISK ASSESSMENT**

**1. Brainstorming (based on experiences)**

- EU and Italian standards for oil and gas major hazards
- EU and Italian procedures and organizations involved in oil and gas major hazards

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Leonardi, Mr. Battistella)

**12,30 High Tea**

**2. Brainstorming (based on experiences)**

- EU and Italian methodologies for major hazards quantitative risk assessment: Hazard and Operability studies (HAZOP), Fault Tree Event Analysis (FTE), Failure Modes and Effects Analysis (FMECA)
- APAT experiences on tools for assessing risks, preventing accidents

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Leonardi, Mr. Battistella)

**3. EEAA/APAT comments**

**15,30 Ordinary Break**

**4. Working group N. 3**

- Define quantitative risk assessment by HAZOP methodology for oil and gas industries industrial units

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Leonardi, Mr. Battistella)

**17,30 Closing of the works**

Fourth Day (15<sup>th</sup> November)

**9,30 Opening of the works**

**5. Presentation of results of Working group N. 3**

EEAA Experts/RBO Experts

**6. Conclusion**

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Leonardi, Mr. Battistella)

**4. OIL AND GAS HAZARDS CONSEQUENCES ANALYSIS**

**1. Brainstorming (based on experiences)**

- Criteria for the identification of critical areas;
- Analysis of environmental consequences of major hazards (soil, groundwater, air);

EEAA Experts/RBO Experts

APAT Experts (Mr. Astorri, Ms. Delli Quadri, Mr. Battistella)

**12,30 High Tea**

**2. Brainstorming (based on experiences)**

- Case studies of oil and gas major hazard risk assessment

EEAA Experts/RBO Experts

APAT Experts (Mr. Astorri, Ms. Delli Quadri, Mr. Battistella)

**3. EEAA/APAT comments**

**15,30 Ordinary Break**

**4. Working group N. 4**

Consequences assessment analysis of major hazard oil and gas spill in soil and groundwater

EEAA Experts/RBO Experts

APAT Experts (Mr. Astorri, Ms. Delli Quadri, Mr. Battistella)

**17,30 Closing of the works**

Fifth Day (16<sup>th</sup> November)

**9,30 Opening of the works**

**5. Presentation of results of Working group N. 4**

EEAA Experts/RBO Experts

**6. Conclusion**

EEAA Experts/RBO Experts

APAT Experts (Mr. Astorri, Ms. Delli Quadri, Mr. Battistella)

**5. OIL AND GAS MAJOR HAZARDS RISK MANAGEMENT**

**1. Brainstorming (based on experiences)**

- Safety Management Systems for oil and gas major hazards industrial plants

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Astorri, Mr. Battistella)

**12,30 Ordinary Tea**

**2. Brainstorming (based on experiences)**

- Safety Management Systems assessment for oil and gas major hazards industrial plants

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Astorri, Mr. Battistella)

**3. EEAA/APAT comments**

**15,30 Ordinary Break**

**4. Working group N. 5**

- Define a safety management system for oil and gas industrial units

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Astorri, Mr. Battistella)

**5. Presentation of results of Working group N. 5**

EEAA Experts/RBO Experts

**6. Conclusion**

EEAA Experts/RBO Experts

APAT Experts (Ms. Delli Quadri, Mr. Astorri, Mr. Battistella)

**17,30 Conclusions and closing of the Workshop**

During the Workshop will be hold also meetings on General Training Component for the 'General Training Activities Programme' definition and on the Subcomponent 'Environmental awareness' program.