Fourth Meeting of the Heavy Oil Working Group

Tuesday, September 22, 2015
The Sheraton Bogotá Hotel
Calle 25 B Nº 69 C-80, Bogotá, Colombia

Agenda

08:30-09:15 Registration-Breakfast

09:15-09:20 Greeting by Canadian Ambassador Carmen Sylvain

09:20-09:30 Welcome and Introduction
Frank Des Rosiers, Assistant Deputy Minister, Natural Resources Canada

09:30-10:10 Trends & Challenges in Heavy Oil Markets:
Rodolfo Guzman, Latin America Managing Partner, Arthur D. Little

- Q & A / Discussion (20 min)

10:10-11:40 Session 1: Improving Heavy Oil Production through Solvent Conservation and Mitigation of Emissions

Reducing pollutant air emissions from oil and diluent storage tanks while optimizing the heavy oil treatment process, is a common challenge being faced by heavy oil producers. Traditional treatment processes can result in a significant evaporation of valuable solvents and the subsequent flaring or venting of volatile organic compound (VOC) rich gases, which result in potent Short-Lived Climate Pollutants (SLCPs) and toxic air emissions.

This session will focus on technologies and practices to optimize heavy oil processing and recover valuable and readily condensable solvent VOCs, and technologies to quantify and control SLCPs and toxic air emissions. The panel discussion will include countries such as Colombia and Mexico that have recently undertaken projects to evaluate opportunities for process optimization and new emissions control technologies to improve solvent conservation, reduce crude oil viscosity, increase the value added to these products, and reduce SLCPs and toxic air emissions.

- **Country Chair: Colombia**, Eduardo Sánchez, Senior Climate Change Advisor, Colombian Ministry of Mines & Energy

- **Three country presentation panel:**
    1. **CANADA:** Michael Layer, Senior Program Manager, CanmetENERGY-Devon Research Centre, Natural Resources Canada
    2. **COLOMBIA:** Eduardo Sánchez, Senior Climate Change Advisor, Colombian Ministry of Mines & Energy
    3. **ECUADOR:** Pablo Luna, National Operations Manager, Petroamazonas
- Each presentation will be approx. 10 min with 10 slides (30-50 min. total for all 3 presentations)
- Q & A / Discussion (40 min)

11:40-11:50 Health Break

11:50-13:30 Session 2: Challenges with the Production of Heavier Crudes

There are certain challenges associated with the transportation, upgrading and refining of increasingly heavier crudes. For instance, transporting heavy crudes often entails the use of diluents to reduce the oil's viscosity. Some of the challenges that diluents present include: 1) securing a reliable source, 2) cost considerations (in terms of currency and energy), and 3) the added infrastructure needed to return the recovered diluent for reuse.

This session will include a discussion of potential diluent reduction technologies as follows: 1) partial upgrading, to meet requirements for pipeline transportation, 2) advancements in modelling of heavy oil chemistry, components and properties, 3) lifecycle analysis (LCA) assessments, and 4) processing and refining mixed feedstocks.

Finally, the stability, compatibility and fouling research, related to partially upgraded products during refining, will highlight the potential for processing efficiency advancements and GHG emission reductions.

- **Country Chair: Canada**, Frank Des Rosiers, Assistant Deputy Minister, Natural Resources Canada
- **Three country presentation panel:**
    1. **MEXICO:**
        - Jorge Ancheyta, Senior Manager, Mexican Petroleum Institute (IMP), Secretariat of Energy (SENER)
        - Romeo Antonio Rojas, Engineer, Petróleos Mexicanos (PEMEX)
    2. **CANADA:** Kim Kasperski, Senior Director, Research and Development, CanmetENERGY-Devon Research Centre, Natural Resources Canada
    3. **VENEZUELA**: Wilfredo Briceño, President, Venezuelan Institute of Petroleum Technology (INTEVEP- PDVSA)

- Each presentation will be approx. 10 min with 10 slides (30-50 min. total for all 3 presentations)
- Q & A / Discussion (40 min)

13:30-14:50 Networking Lunch

14:50-16:10 Session 3: Environmental Remediation: Responding to On-shore and Offshore Heavy Oil Spills

The session will address knowledge gaps in understanding the range of physical behaviors that transported heavy oils can have when spilled in aqueous environments. Current research aims to strengthen oil spill preparedness and response in the case of spills either offshore from tanker shipping (marine environments), or onshore from pipelines (freshwater environments). Recent results will be presented that compare the spill behaviour of conventional crude oils to that of diluted heavy crude oils, and the factors that affect this behaviour.

- **Country Chair: Mexico**, Rodrigo Hernández Ordoñez, Deputy Director General, Secretariat of Energy (SENER)
- **Two country presentation panel:**
    1. **CANADA:** Kim Kasperski, Senior Director, Research and Development, CanmetENERGY-Devon Research Centre, Natural Resources Canada
    2. **COLOMBIA :** Francisco José Gómez Montes, Ministry of Environment

- Each presentation will be approx. 10 min with 10 slides (20-40 min. total for the 2 presentations)
- Q & A / Discussion (40 min)

16:10-16:25 Wrap-up and Closing Remarks

Frank Des Rosiers, Assistant Deputy Minister, Natural Resources Canada