**US-EU CONFERENCE**

**DRAFT**

**Nanotechnology in the Workplace**

**Brussels - 11-13 July 2012**

**TOPIC**

Establishing Standardized OSH Principles for Developing Best Practices Applied to Nanotechnology Work Settings

**INTRODUCTION**

Nanotechnology has the potential for great societal benefits, however, studies suggest some nanomaterials and products may cause adverse health effects. While certain reports suggests that nanomaterials may have wide use in consumer applications, workers remain the population most vulnerable to any potential adverse effects since this group has the potential for highest exposures. While many national and international efforts have concentrated on worker safety issues *there has yet to be established a set of high-level principles for addressing occupational safety and health considerations for nanotechnology or nanomaterials*. Establishing a set of high-level principles would facilitate development of consistent global best practices protecting workers without hindering international development of nanotechnology for societal benefits.

**SCOPE**

This conference presents an opportunity to establish a set of high-level common principles based on the current best science that can be applied across the globe for developing best practices (guidance) for the safe use and handling of nanomaterials in all occupational settings. These principles would build on efforts from numerous workshops and conferences while leveraging the best available science. The past and current efforts include but are not limited to: international efforts for assessing environmental and occupational release of nanomaterials using a life-cycle approach; international efforts to design hazard classifications and risk management measures; workshop to establish criteria for developing OELs for nanomaterials; international research efforts on EHS of nanomaterials.

**POTENTIAL SUB-TOPICS AND KEY QUESTIONS**

**1. ‘Gaps’ in the legislative EU and US framework**

*Gaps related to particle-related hazards. Classification and labeling – REACH, National initiatives relating to traceability, risk communication, MSDS*

* *Which gaps and loopholes can be identified and how can these shortcomings solved? What is the actual state of the art at this moment concerning these gaps on the national level as well as on US/Eu-level?*

**2. Establish criteria for identifying work-place hazards/risks**

*Knowledge gaps. Type of particle-related hazards (CMRS, oxidative stress, overload) MNMs in relation to exposure to PGNPs (process-generated NP). Interference with environmental background concentrations. Development of OELs, RELs,…. and/or generic limit values for nanomaterials.*

* *Given the fact that there are knowledge gaps ( unknown properties of nanomaterials, incomplete information about their hazards etc), what approaches are at hand to guarantee a safe workplace?*

**3. Establish principles for measurements and monitoring**

*Measurement and characterization equipment and methodologies, limitations, standardization. Influence of agglomeration and aggregation phenomena.*

* *What principles can be defined for measurement and monitoring? What are the minimal requirements for risk assessment? Is a full health based assessment needed?*

**4. Establish principles for control**

*Administrative and engineering control. Risk assessment and evaluation, workers registration, periodic health surveillance, early warning systems*

* *Are the traditional’ control measures sufficient for nano’s at the workplace?*

**5. Establish foundation for risk management practices**

*Precautionary principle, ALARA, Control banding, Nano Reference Values*

* *What is precaution and prevention concerning the use of nanomaterials?(linked with 2)*

**6. Establishing principles for developing positive S&H work cultures where workers are included in decision-making process**

*Working training, capacity building, ethical issues, workers participation, works’ council, safety reps*

* *What should be done urgently to make employers and workers to increase awareness of the potential risks and the need to work safely in this field?*
* *How to realize a mutual consensus on precautionary control policy amongst the social partners and governmental institutions*

**POTENTIAL OUTCOME**

Develop white paper which clearly establishes how future guidance and best practices for nanotechnology should be developed. This paper would clearly articulate the basic high-level principles needed to establish occupational best practices for nanotechnology in any work-place setting utilizing the best available science and state-of-the-art approaches.