

# Use of coal ash - pollutants

**3<sup>rd</sup> meeting of the workshop  
on Environmental aspects of  
coal ash utilization –  
Supplementary session**

**Environmental requirements**

(Monitoring)

(Assessment)



# **Since the previous meeting of the workshop two major advances were made**

- **Assemblage of large amount of data including site monitoring and field experiments**
- **Draft formulation of environmental requirements for the safe use of coal ash and of a proposal for regulations governing the use of coal ash based on these requirements was prepared**



**In at least two areas the acquired data and proposed regulations are already considered by the Ministry of the Environment or even adopted by it:**

- ❖ Coal ash was removed from the list of hazardous dusts**
- ❖ A draft proposal of environmental requirements for the use of coal ash in construction materials, infrastructure and agriculture was submitted to the Ministry**



# **The overall objectives of this supplementary meeting are:**

- Present and discuss the proposed requirements**
- Receive feedback on the proposed environmental requirements and regulations**
- The use of LEAF for the environmental assessment of coal ash application to soils – joint research**

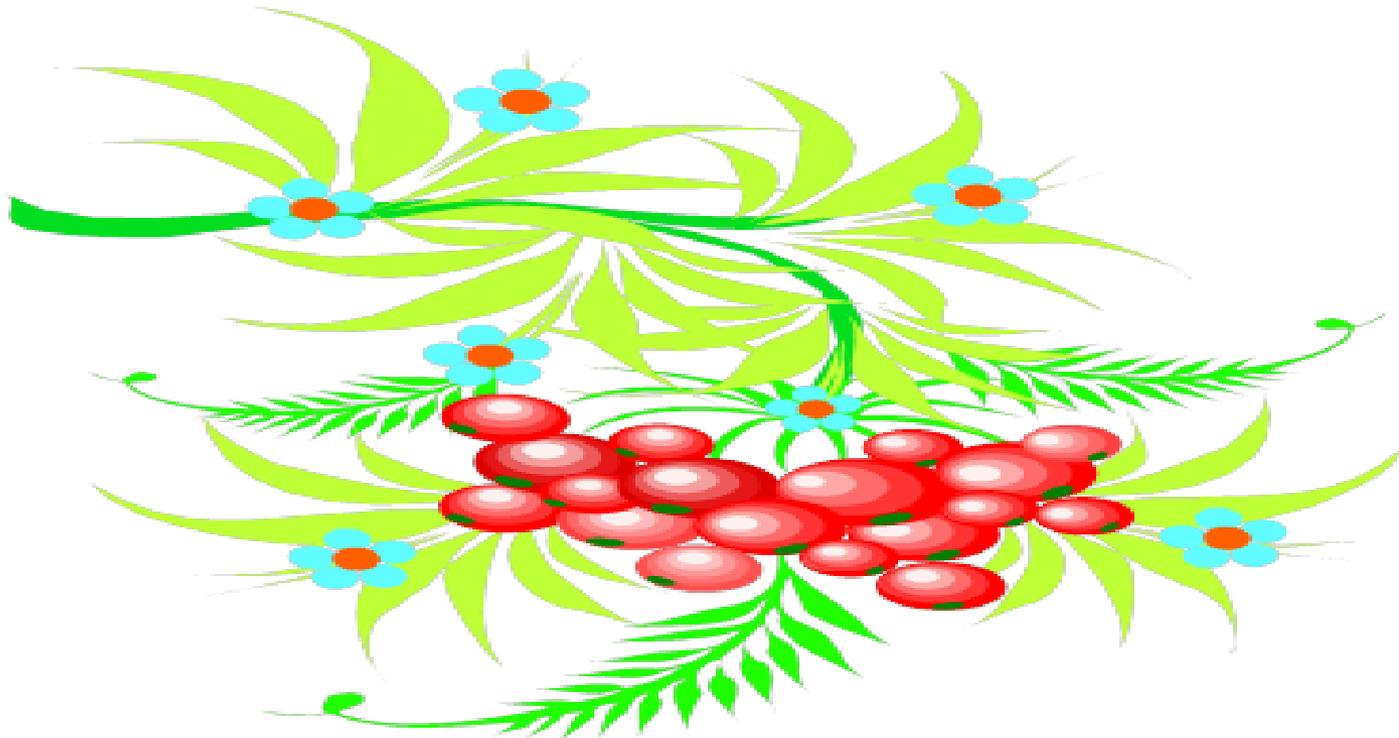


Specific topics to be discussed in this meeting are:

- Identification of the properties of the ash which determine its interaction with the environment, as a function of the nature of the particular relevant environment (e.g., the properties of the soil to which coal ash is added).

- Assessment of the health and environmental risks involved in every application of the ash, taking into consideration the properties of the ash, the relevant environmental situations and the nature of the application.
- The suitability of the proposed regulatory policy for each of the ash applications, taking into account given health and environmental criteria and the characteristics of the ash.

- The contribution of novel measurement and assessment techniques to the regulation of coal ash applications.



# **Environmental Conditions for Coal Ash**

## **Beneficial Applications to Soil**

- 08:00 – 08:30 Registration, light refreshments
- 08:30 – 08:40 Opening remarks – O. Lulav, NCAB
- 08:40 – 08:50 Workshop's objectives – Prof. U. Mingelgrin, Volcani Center
- 08:50 – 09:10 Trace elements in Israeli coal ash and its leachates – Dr. A. Metzger, Israel Electric Corporation (IEC)
- 09:10 – 09:40 Scientific background for proposed regulatory protocols – Prof. R. Keren, Volcani Center
- 09:40 – 10:10 Heavy Metals Absorption in agricultural yield obtained from application of fly ash to soil – Dr. P. Fine, Volcani Center
- 10:10 – 10:30 Proposed environmental conditions for coal ash application to soil (in road construction, infrastructure and agriculture) – Prof. U. Mingelgrin
- 10:30 – 11:00 Break
- 11:00 – 11:20 Use of the Leaching Environmental Assessment Framework for future fly ash management decisions – Susan Thorneloe, USEPA
- 11:20 – 11:40 Development of a decision support system for applying the Leaching Environmental Assessment Framework (LEAF) to beneficial use and disposal decisions in the United States – Prof. D. Kosson, Vanderbilt University, USA

- 11:40 – 12:00 European developments in standardisation of leaching tests and their use in regulations dealing with Hazardous Waste Classification, End of Waste and beneficial use under the Construction Products Regulation – Dr. H. A. van der Sloot, Hans van der Sloot Consultancy, The Netherlands
- 12:00 – 12:15 Proposed joint research program: environmental assessment of coal ash leaching properties and beneficial use applications using LEAF – Dr. N. Teutsch, GSI
- 12:15 – 12:30 Research partners' comments: Prof. D Kosson; Dr. H. A. van der Sloot; Dr. P Fine
- 12:30 – 13:30 Lunch
- 13:30 – 14:10 Panel's comments – Led by Prof. D. Kosson: Dr. I. Zadikov, Ministry of Environmental Protection; G. Reshef, Water Authority; S. Goldberger, Ministry of Health; S. Thorneloe
- 14:10 – 15:15 Discussion
- 14:10 – 15:15 Summary of conclusions and identification of next steps.

**The subject of pollutants in the context of coal ash use in soils will be deliberated from two aspects:**

- Environmental requirements and their scientific basis**
- A joint research proposal on the use of LEAF for the environmental assessment of coal ash application to soils.**