Lecture 8

Meteorology and Plume Behavior
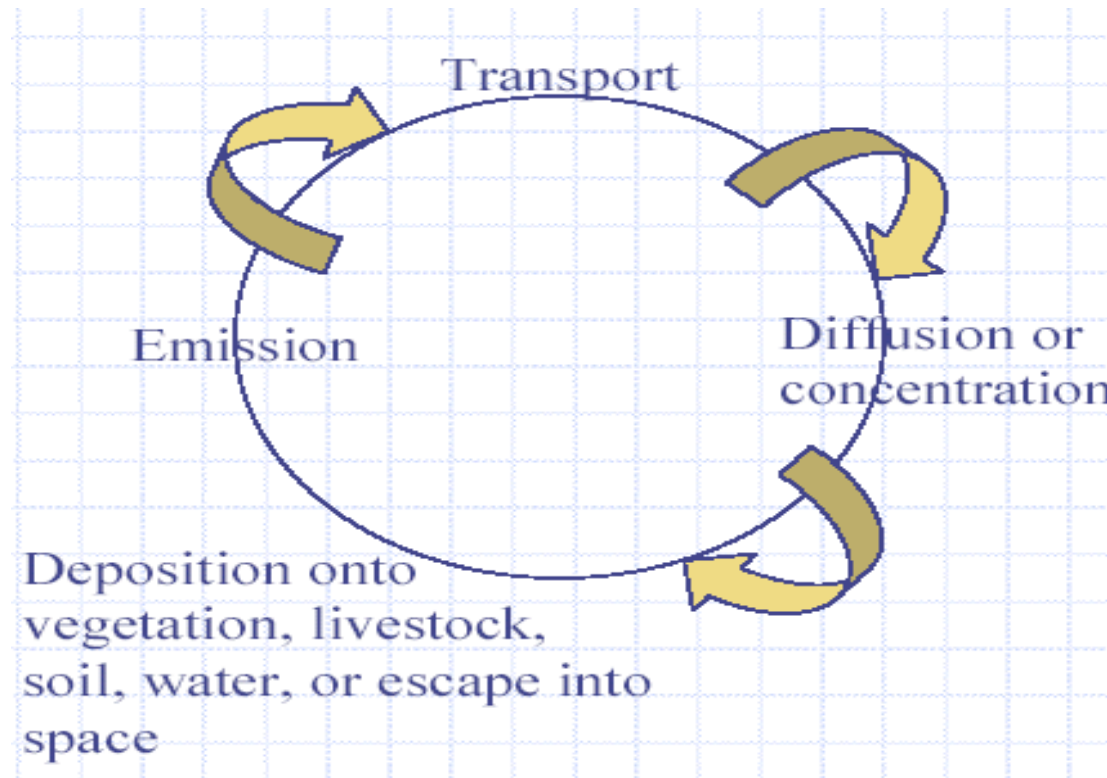
Air Pollution Disasters

1) **Meuse Valley (Belgium), 1930**
2) **Donora (Pennsylvania USA) 1948**
3) **London 1952**
4) **New York (USA)**
5) **Los Angeles (USA)**
6) **Tokyo, Japan**

Air Pollution Accidents:

1) Poza Rico (Mexico)

2) Seveso (Italy)

3) Bhopal (India)

4) Chernobyl Nuclear Disaster, 1986

Air Pollutant Cycle

Dispersion = Advection (Transport) + Dilution (Diffusion)

˝ Meteorology: Air quality is dependent on the dynamics of atmosphere and study of which is called meteorology.

˝ Pollutant disperse vertically in the atmosphere will depend on the rate of change of air temperature with height.

˝ Air at a given altitude has physical force acting on it that make it want to remain at the elevation.

˝ Stable air discourage the dispersion & dilution of pollutants so that the vertical stability of the atmosphere is more important factor that helps to determine the ability of the atmosphere to dilute emissions.