They ranged from a high of 550 $\mu g/m^3$ in the 1930's constantly decreasing with time to a low of (approximately) 30 $\mu g/m^3$ in 1985. Data are also given for NO_x, particulates, VOCs and CO, especially those contributed by transport emissions. Other papers in the first seminar (entitled Urban Air Pollution) dealt with defining the problem of air quality, air emission inventory, air monitoring networks and how to interpret air quality data.

In the second conference session, entitled Health Impacts, papers were delivered on the affect of air pollution on public health, acute respiratory effects of particulate air pollution, and mechanisms underlying pollution-induces lung damage.

One paper suggests a strong correlation between particulates pollution and morbidity in mortality. One author notes that total mortality is observed to increase approximately 1% per 10 $\mu g/m^3$ increase in PM_{10}. Somewhat stronger associations are observed for cardiovascular mortality (approximately 1.4% per 10 $\mu g/m^3$ PM_{10} and considerably strong associations are observed for respiratory mortality (approximately 3.5% per 10 $\mu g/m^3$ PM_{10}).The impact on the lungs of air pollution is discussed in another paper in which the author notes:"Taken together these results provide a convincing basis on which to explain not only the acute broncho constrictor effect of pollutant gases, but also the enhancement of allergic-induced airway disease and predisposition for infection."The final session, solutions to the problems are discussed, focussing mainly on transportation. The following three papers were presented:

1. Traffic and health
2. Are catalytic converters enough?
3. The motorist's view

G.F. Bennett

Safety and Engineering Aspects of Spent of Fuel Storage: Proceedings of a Symposium Vienna, Oct. 1994, International Atomic Energy Agency, Vienna, 1995, 1320 Austrian Schillings, 451pp., ISBN: 92-0-101695-6

"The total amount of spent fuel accumulated worldwide at the end of 1994 was over 155|000 tonnes heavy metal (t HM). Of this, about 60% is presently being stored in facilities, awaiting either reprocessing or final disposal. The quantity of accumulated spent fuel is over 20 times the present total annual reprocessing capacity. The projected cumulative amount of spent fuel generated by the year 2010 is expected to reach 300|000 t HM. Assuming that part of it is reprocessed, the amount to be stored by the year 2010 is projected to be about 200|000 t HM. The first geological repository for the final disposal of spent fuel is not expected to be in operation before the year 2010. Therefore, interim storage will be the primary spent fuel management option in many countries for the next 20 years."

Given the need for safe, interior storage, the IAEA and OECD held the symposium in

October 1994. Both presented papers (53 in number) and poster presentations (13 in number) having been included in these proceedings under the following major titles:

1. Spent fuel storage programmes
2. Spent fuel storage technology
3. Licensing and safety aspects of spent fuel storage

The first section (Spent fuel storage programmes) contained papers from several countries, delineating their experience with and current plans for spent fuel storage. The national experience varies with the country. Canada, which uses both wet and dry spent fuel storage techniques, claims (since this storage began in the late 1970's) that their experience is more comprehensive and of longer duration than any other similar program in the world.

Papers from the following countries were published in this section: Argentina, Belgium, Canada, India, Japan, Korea, Romania, Slovakia, Spain, Sweden, and the United States. Of the 30 countries with nuclear programs, only five (Canada, Finland, Spain Sweden and the United States) are actively pursuing direct disposal and even in those countries reprocessing after a period of time, interim storage has not been ruled out.

The second major section of the book consists of 15 papers discussing the technical details of storage systems, especially the impact of spent fuel on the integrity of storage vessels. For example, a paper out of Russia discusses the results of a corrosion investigation of fuel assemblies stored for 13 years in a water pool – there appeared to be no impact of storage on the strength and ductility of the fuel cladding. Conversely, dry vault storage experience gained in France for the design and construction of a facility for interim storage of radioactive material is discussed.

The third and final section of these proceedings contains seven papers discussing the licensing and safety aspects of spent fuel storage. Papers were supplied by Bulgaria, Czech Republic, France, Germany, Hungary, Russia and the Ukraine.

G.F. Bennett

Establishing a National System for Radioactive Waste Management, International Atomic Energy Agency, Vienna, 1995, 160.00 Austrian Schillings, 28pp., ISBN: 92-0-103495-4

The objective of these safety standards is to assist in developing a national system for radioactive waste management, to identify the key responsibilities of the parties involved and to delineate essential features of such a system. The document encompasses all aspects of radioactive waste management from waste minimization to disposal.

Experience, the standards note, shows that safe management of radioactive waste depends on:

(a) developing relevant laws and regulations and establishing or designating a regulatory body for radioactive waste management and