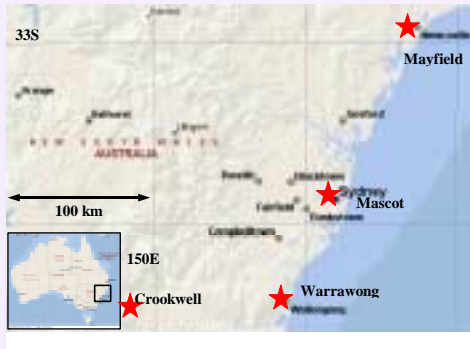


Have Fine Particulate (PM2.5) Lead Levels Dropped in Sydney during the past 10 Years?

Key Question:

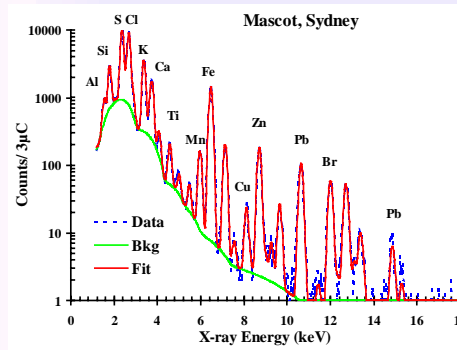
- ★ Has the reduction in leaded petrol sales and the reduction in lead in petrol reduced fine particulate lead in air we breathe?



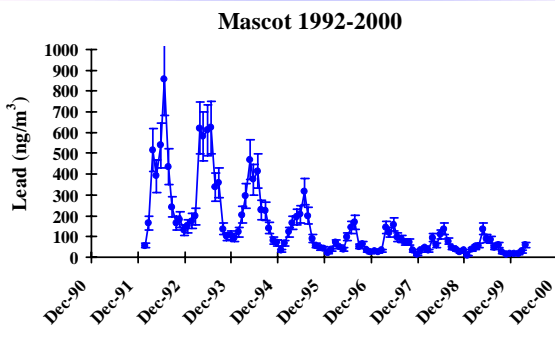
Location of some key long term NSW sampling sites.

Method:

- ★ Very sensitive Ion Beam Analysis (IBA) techniques have been used to analysis the lead content in air collected on filters every Sunday and Wednesday for more than a decade. The mass of material collected is typically only a few hundred micrograms and the lead content of this less than 1%.



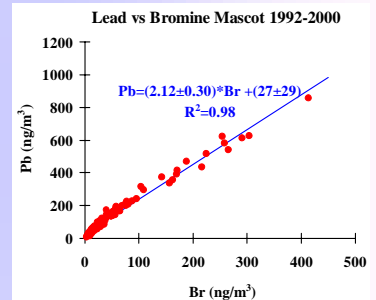
IBA X-ray spectrum of PM2.5 particulate matter from Mascot in 1997, showing elements from Al to Pb present in Sydney's air.



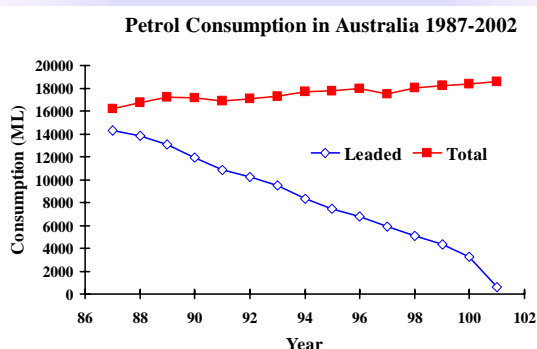
A 10 year record of fine particulate (PM2.5) lead in air at Mascot in Sydney.



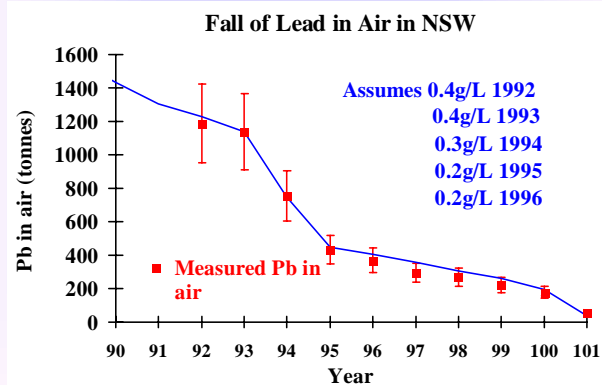
ANSTO fine particle samplers.



Evidence that Pb in air in central Sydney was due almost entirely to petrol combustion.



Petrol sales in Australia showing leaded petrol fell from 88% of sales in 1987 to virtually zero by January 2001.



Fine particulate (PM2.5) lead in Sydney's air fell from 1400 tonnes in 1990 to less than 100 tons today.