Metal distribution in PM10 during the MILAGRO Campaign in Tamaulipas, Mexico

INTRODUCTION
This project was first developed as a result of a linkage between CICATA-IPN Altamira and Tamaulipas Government and the need of the establishment of an air quality monitoring network in other important urban and industrial zones as Tampico, Madero, Altamira, Matamoros, Reynosa, etc. in Tamaulipas.

OBJECTIVES
To study for the first time the metal distribution in Ciudad Victoria, Matamoros, Reynosa, Nuevo Laredo and Altamira, Tamaulipas.

METAL EXTRACTIONS
METHOD EPA 10.3.1
1. Filter 8" x 10"
2. Sample 1" x 8"
3. Acid Digestion
   HCl y HNO3
4. ICP-OES

RESULTS
Figures showing the relationship, concentration and distribution of Cd, Co; Cr, Cu, Fe, Mn, Ni, Pb, V, Zn and PM10 along Tamaulipas sites.

CONCLUSIONS
The PM10 concentrations ranged from 22 to 48 µg/m³ in Tamaulipas. The concentrations Pb were less than 0.0081 µg/m³ among the cities. The highest concentration of metals was observed by Fe and Zn in Altamira and Reynosa with 0.86 and 0.1255 µg/m³, respectively. High correlation was found between V and Ni.