- either we are "lucky" and the methodology works in our favor, or we must decrease emissions (which we learned to calculate in Part I)

**Part III: What society must do, and how, to decrease Mij, s?**

- Legislation!
- Air Pollution Control!

**Example (review)**

**NOx legislation:** 0.70 lb NOx / 10^6 Btu (AP-42)

```plaintext
Minimum

(a) Efficiency = ?

(b) Conc. NOx = ?
```

38. A coal-fired electric utility steam generating unit burns bituminous coal (12,500 Btu/lb_m) at a rate of 400 tons/h. At the stack exit, the mass flow rate of exhaust gas (assume air) is 2000 kg/s, and the temperature and pressure are 380 K and 95 kPa. The generating unit generates NOx (assume NO2) at a rate given by emission factors for utility boilers, 17 kg NOx per Mg of coal (Mg = 10^6 g).

(a) To satisfy the 1980 New Source Performance Standards for NOx, the EPA requires the installation of a suitable NOx control device. What is the minimum efficiency of this device?

(b) If the actual NOx emission rate is 590 g/s, what is the concentration of NOx (in ppm) in the exhaust gas?