

**EVE 290**  
**Introduction to Environmental Engineering**  
**Fall 2010**  
**Homework #19**

1. Do you think there was a widespread air pollution “problem” prior to the industrial revolution? Explain your answer.
  
2. National Ambient Air Quality Standards (NAAQS) are set by US EPA to regulate outdoor air quality and to protect human health. However, the average person spends about 90% of his/her time *indoors*. Should indoor air quality likewise be regulated? Explain your answer.
  
3. The ground-level temperature is 20° C, the temperature at 1000 m is 16° C, and the temperature at 2000 m is 22.5° C. These conditions describe the prevailing lapse rate. Now, if a 300 m stack emits combustion gases at 21° C, determine how high the gases will rise assuming ideal, adiabatic conditions. See example problem 12.1.