RRWG Policy Issues for Research Program
(Discussed at RRWG 2001 Meeting)

1. What is the hypothesis that we want to test?

2. What would be the affect on ambient air levels of substituting low reactive compounds for highly reactive ones?

3. Would controlling only the most reactive compounds (while exempting lower reactive compounds) have any significant impact on ambient ozone levels?

4. How would low reactivity compounds emitted in large volume affect ambient ozone levels? Could widespread exemption of lower reactive compounds cause the ambient air quality standard to be violated in certain locations?

5. What is the geographical validity of reactivity scales? Are scales valid over the whole country or only in certain locations? If not, how large are variations? What would be the cause of the variations?

6. How do initial conditions affect reactivity scales (i.e., VOC/NOx ratios)?

7. How does meteorology affect scales?

8. Do reactivity scales shift if reactivity is evaluated over different lengths of time? (i.e., would a scale evaluated over 8 hours differ from a scale evaluated over 5 days?)

9. What is sensitivity of scales to different conditions? For example, do compounds' position on the scale flip-flop with different conditions?

10. Should we be looking at other kinds of scales than MIR scales? What other scales should we look at? Would we want to evaluate how other types of scales vary with varying conditions?

11. What atmospheric model is used to evaluate validity of reactivity scales? Is this model one that is widely used and available to various independent researchers so that work can be verified and peer reviewed? Is a proprietary model of value if it is not widely accessible to everyone?

Questions 12 and 13 below are technical questions, but they have policy implications.)
12. What is the sensitivity of reactivity in the model? Are all compounds lumped into a few bins? Is carbon bond IV, which lumps compounds into 11 reactivity bins, sensitive enough to evaluate reactivity scales? Is there a better way of handling reactivity in models? If so, what?

13. Are effects of grams versus moles being considered? If a certain percentage of VOC is being reduced in a model, is this by weight or by number of moles? If one compound is being substituted for another in a computer run, is this substitution being made by weight or by number of moles? How will this affect the outcome of the experiment?