



# Green Evaluation Checklist

Magenta Miller  
Quality Assurance Manager  
Acme Chemical

# Background Info

- This creation of a green checklist has been introduced to many chemical as well as university labs.
- It was introduced by the Environmental Health and Safety Management.
- It is the first step in creating greener protocols and procedures in a lab.

# Why do we need it?

- Labs inevitably require large quantities of energy to carry out the necessary tasks in a safe way.
- Lots of small changes can add up to help create a greener lab. These changes are what this checklist focuses on.
- A bonus is that a lot of the changes are behavioral and won't cost much to implement.

# Management

- This checklist requires an inspector to enforce the changes and I would volunteer myself to do so. I already move through many labs for daily tasks so I would be able to enforce this checklist.
- The QC Manager would also be briefed on all of the policies so they could make necessary changes in the lab and procedures.
- A copy of the checklist will hang in all lab areas as a reminder and guide for daily use.
- There would be random monthly checks where I would come into the labs and see the progress that they are making towards the changes on the checklist.

# Checklist Components

1. Chemicals
2. Electricity
3. Air
4. Recycling
5. Water
6. Waste



# Chemicals

- Maintain and review their chemical inventory to prevent over-purchasing
- Use chemicals/reagents first in, first out
- Use mercury-free equipment whenever possible (thermometers, electrodes)
- Use green chemistry practices...
  - Scale down procedures to use less chemicals
  - Use more efficient chemical reactions or catalysts
  - Substitute with less toxic chemicals when possible



# Electricity

- Turn off equipment when not in use
- Put computers, copiers, printers in sleep mode when not in use
- Turn off lights when leaving (even during the day)



# Air

- Keep chemical fume hood sash lowered as much as possible to reduce volume of conditioned air being exhausted to the outside





# Recycling

- Use a shared office and lab supplies area
- Recycle paper (good on one side) and other office supplies
- Print/copy double-sided whenever possible
- Use rechargeable batteries



# Water

- Report water leaks to Facility Services immediately
- Turn off pipette washer/rinser as soon as pipettes are clean

# Waste

- Autoclaves: consolidate loads when possible.
- Defrost frozen materials before autoclaving.
- Bio-hazardous and Sharps waste: Dispose only when 2/3 full.



# Cost

- Since this would be implemented internally there would be little cost. The total after going through that checklist comes to at most \$20,000 mainly used to switch to automatic lighting as well as research into less toxic chemicals if we choose to pursue this.

# Conclusion

- Monthly random checks to see how many changes have been made and a memo sent out about where improvements can be made each month.
- Another presentation after 12 months of implementation to assess our progress and further changes.

# Bibliography

[http://soa.utexas.edu/csd/symposia/campus\\_sustainability/PDFs/20\\_Nolan\\_LeBansky\\_Peterston.pdf](http://soa.utexas.edu/csd/symposia/campus_sustainability/PDFs/20_Nolan_LeBansky_Peterston.pdf)