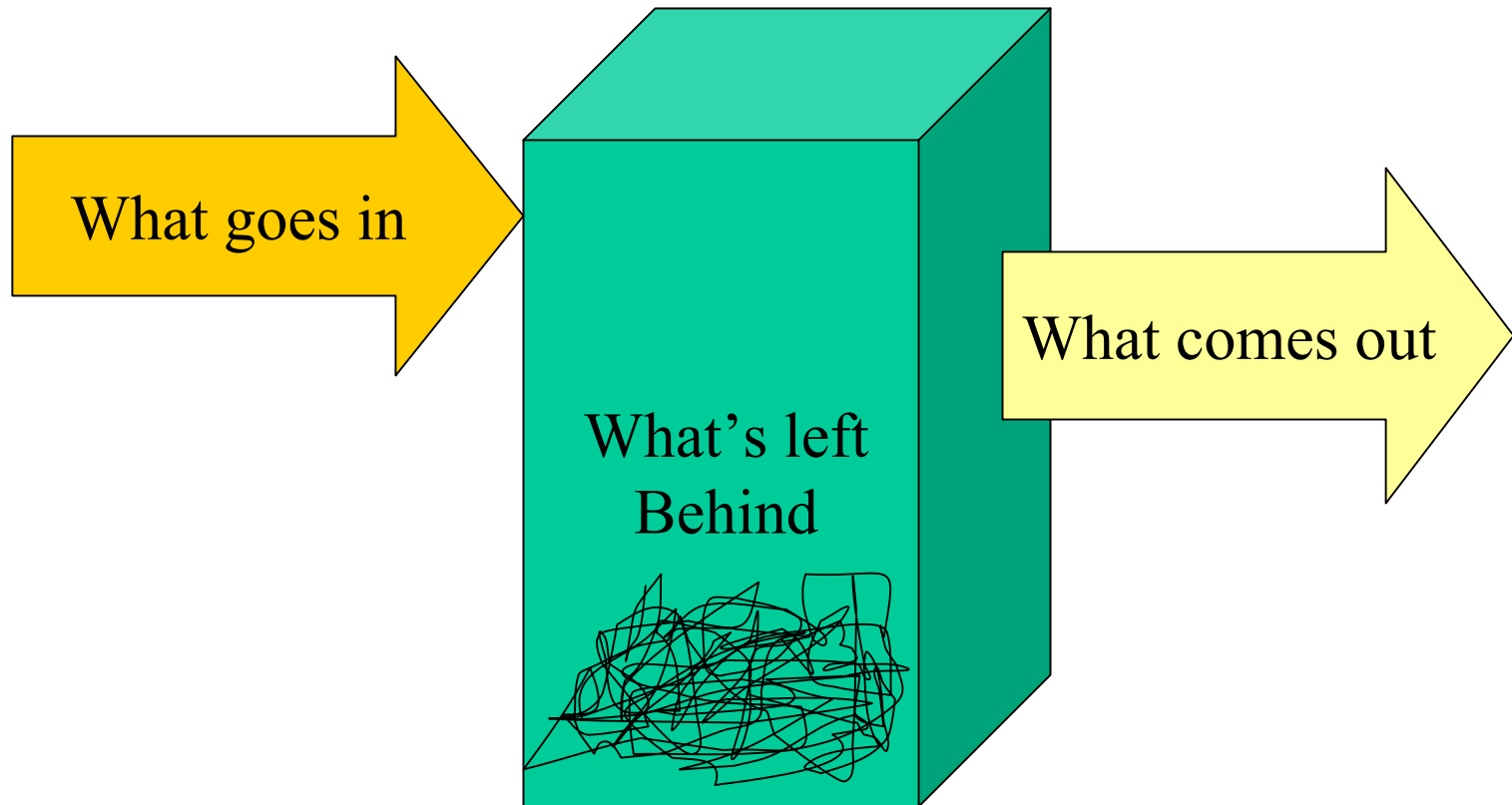


# Black Box Exercises

# The Black Box Approach



# Examine the Unit as a Black Box

- What does it look like?
- What does it do?
- How does it do it?
  - What design features allow it to do its job?
  - How is it operated?

# Examine the Unit as a Black Box (cont'd)

- Are there design or operating features that would be of special interest in the permitting of the unit?

# What Goes Into the Unit?

- Waste streams
- Containers
- Process gases or liquids
- Energy inputs
- Others

# What Comes Out of the Unit?

- Product of treatment
  - Shredded metal
  - Emissions plume
- Other process emissions
  - Drained contents of the treated containers
  - Ejecta/fallout
- Leaks and fugitive emissions
- Other

# What's Left Behind?

- Process residues
  - Metal scraps or particles
  - Munition casings
  - Waste residues
  - Ash
  - Other

# Consider Impacts to Human Health and the Environment

- Input streams
- Output streams
- Residues



# What Exposure Pathways are Important?

- Soil
- Surface water
- Air
- Ground water