Glove boxes are designed to protect workers from hazardous materials. These materials include radioactive materials, carcinogens, and materials that can react violently with air or water. Much of what needs to be checked depends on what you are doing inside and what ancillary equipment and connections are part of the setup.

1. If you are using a glove box, it should be inspected daily prior to use. Basic daily checks should include:
   - Glove conditions (holes, tears, dry rot, connection to window)
   - Window condition (cracks, chips, other damage)
   - Vacuum pump and other feed-through line and fitting connection integrity and valve open/close status at the beginning and end of use.
   - Proper pressure differential
   - Condition and configuration of other systems installed on the box (e.g. valves and reading on pressure and flow gauges fall within acceptable ranges)

2. Be sure “soft” connections for articles attached to the box (e.g. drums, gloves, HEPA Filters) are completely sealed. Even small leaks allow contaminants to escape.

3. Avoid abruptly extending gloves into the glove box. This can cause a pressure pulse that will result in airborne contamination.

4. Understand the design features and limitations of a glove box including:
   - Physical limitations of components, gloves, and support systems (i.e. barriers that maintain contamination control)
   - Ventilation/vacuum controls that maintain a pressure differential between the glove box and the outside
   - Atmospheric controls (e.g., controlling oxygen concentrations)
   - Features that prevent over-pressurization, flooding, and fire

It is suggested that the glove boxes be labeled with the authorized types of work activities as well as the appropriate hazard warning labels.