

# Hazardous (Potent) Compounds

Offering consulting services for the safety of patients and people from exposure, contamination and cross-contamination of hazardous compounds.

CRB has been providing designs to protect the operators, the product, the facilities, and healthcare workers from highly hazardous and potent compounds for over 15 years. CRB engineers are specialists with potent compounds and have unique backgrounds in process design, operations, and process safety.

Consistent with current industry and ISPE trends, CRB uses a risk based approach to assess the containment needs for each process step. The risk based approach is based upon the amount of the material present, the physical state and properties of the material, the unit operation being performed, and the health hazard of the material. These considerations allow the owner to weigh the risks associated with each process step and make containment design decisions based on the relative hazard of that operation. This scientific approach provides a safe operation, and since containment decisions are made based on the physical needs of the process, it saves money at the end of the day.



## CRB Staff

- Is experienced with current and developing technologies
- Participates in the ISPE Containment Community of Practice Steering Committee
- Utilizes a risk based approach that saves money and identifies risks
- Are experienced with critical facility and process design



# HAZARDOUS (POTENT) COMPOUNDS

## Applications for Containment of Hazardous and Highly Hazardous (Potent) Compounds

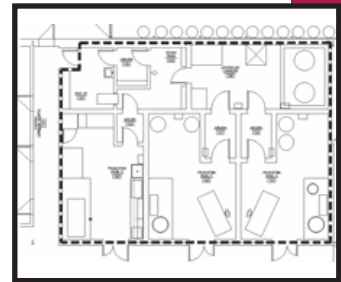
- Active Pharmaceutical Ingredients
- Sterile Fill/Finish
- Solid Dosage
- Drug Compounding
- Component Weighing and Sampling
- Analytical Laboratories
- Research and Development
- Quality Testing



## Design Considerations and Drivers

### Controlling Cross Contamination and Exposure Issues

- Facility Layout – Personnel, Material, Product, and Waste Flow Issues
- Equipment Design
- Room and Equipment Pressurization
- Gowning/Degowning Areas
- Storage of Emergency Gowning and Breathing Apparatus for Facility Recovery After an Incident
- Decontamination and Emergency Response for Equipment Failure
- Personnel Decontamination



### Experience with the Following Containment Applications

- Centrifuge Discharging
- Container Cleaning
- Reactor Charging
- Tableting/Encapsulating
- Sterile Fill/Finish
- Lyophilization
- Dispensary/Weigh and Break Area
- Dryer Charging and Discharging
- Filter Dryer Discharging
- Final Packaging/Filling
- Laboratory – R&D
- Maintenance
- Material Handling Equipment
- Material Movements and Transfers
- Milling/Sizing
- Warehouse Shipping and Receiving
- QC Sampling-In-Process
- Raw Material Sampling Area
- Waste Stream Handling

