



Risk and Safety Assessment Draft Report

*Stakeholder Meeting
October 23, 2008*



Washington State Public Health Laboratory
1610 NE 150th Avenue, Shoreline, Washington

Risk & Safety Assessment Scope

- Assess potential biological, chemical, radiological hazards to the community from the public health laboratory
- Focus on population hazards
- Screening-level risk and safety assessment
- Qualitative and quantitative analysis
- Guiding principle:

Risk = Probability x Consequence

Key Findings

Comparison of WA-PHL Location

- WA-PHL is sited similarly to other PHLs based on proximity of community assets, including schools, hospitals, parks, and residential areas
- Best practices at other PHLs are limited to state or federal requirements
- One PHL interacts regularly with local fire department and community ER staff

Key Findings

Biological Hazard Assessment

- BSL classification appropriate for types of microorganisms evaluated at WA-PHL
- WA-PHL in compliance with federal and state regulations
- Extensive countermeasures make community exposures unlikely
 - Staff training, decontamination procedures, HEPA filters, spill response, security, etc.

Recommendations

Biological Hazard Assessment

- Additional administrative support in terms of staff and computer-based records management
- Improved computer-based system for tracking biological inventory

Key Findings

Chemical Hazard Assessment

- Chemical Hygiene Plan (CHP) in place to manage chemical lifecycle and establish safe work practices
- CHP effective based on analysis of fire department records and OSHA reportable injuries
- Most-probable release scenarios unlikely to affect community

Key Findings

Chemical Hazard Assessment

- For some chemicals, instantaneous release of entire inventory could result in airborne concentrations of health concern
- Intentional release of stolen material in a classroom could result in indoor air concentrations of health concern
- Intentional release of stolen material in Fircrest pool could result in concentrations of health concern

Key Findings

Chemical Hazard Assessment

- Probability of accidental or intentional release is low
 1. Trained WA-PHL staff
 2. WA-PHL designed for safe handling of chemicals
 3. Appropriate levels of security per law enforcement agencies
 4. WA-PHL not an attractive target
 5. Small volume of chemicals
 6. Chemicals stored in more than one location
 7. Most chemicals available from commercial sources

Recommendations

Chemical Hazard Assessment

- Review storage locations of chemicals
- Computer-based systems for inventory and for staff training
- Regular audit of chemical lifecycle
- Review and update air dispersion study
- Update CHP

Key Findings

Radiological Hazard Assessment

- WA-PHL is in compliance with state radioactive materials license and with federal emission standards
- No accidents requiring notification of state
- Radiation doses received under four release scenarios are less than natural background

Recommendations

Radiological Hazard Assessment

- Update units used to record inventory
- Keep more detailed records of minor and infrequently used materials

Key Findings

Security Vulnerability Assessment

- WA-PHL not a likely target for malevolent attack
 1. Low potential for mass casualties
 2. Low potential for extensive property damage
 3. Not close to other assets or landmarks
 4. Will not disrupt critical infrastructure
 5. Will not disrupt national, regional, or local economy
 6. Low level of media interest
 7. Will not harm corporate reputation or brand
 8. Not an iconic or symbolic target
 9. Local and federal law enforcement analysis

Key Findings

Security Vulnerability Assessment

- Existing countermeasures to detect, deter, and delay
 - Labs on interior of each wing
 - Windows do not open
 - BSL3 lab
 - Security cameras
 - Card key access
 - Security plan
 - Background checks for staff with access to select agents
 - Extensive programs, policies, and procedures for managing bio/chem/rad hazards.

Recommendations

Security Vulnerability Assessment

- Add security camera at north entrance
- Review and update security plan
- Coordinate joint training exercises with local first responders
- Ensure appropriate level of security in new BSL3 lab

Key Findings

Earthquake Assessment

- WA-PHL building should perform well in all earthquake scenarios evaluated
 - LFRS over-designed
 - Buildings are light
 - Symmetric and regular shape to buildings
 - Stucco cladding and gypsum board walls add stiffness

Key Conclusions

- WA-PHL is in compliance with applicable regulations.
- Consequences of some worst-case release scenarios may be of concern but probability of occurrence is very low.
- Under normal operating conditions, most probable risks are unlikely to pose a hazard to the community.

Questions and Discussion

