**Biosafety Risk Assessment: Risk Likelihood and Consequences Evaluation Worksheet**

This worksheet is intended to be used in conjunction with the “Conducting a Biosafety Risk Assessment” Standard Operating Procedure. This is meant to aid in the “Implementation of New Controls” step, in particular when evaluating the severity of a risk when not all recommended controls can be implemented in a laboratory and the risks must be prioritized.

|  |
| --- |
| **Activity/Practice/Procedure Being Assessed:** |
|  |
| **Hazard Being Assessed:** |
|  |

**Definitions**

|  |  |
| --- | --- |
| Rating of Likelihood | |
| Rating | Likelihood |
| Frequent | More than once a year |
| Moderate | Once per year |
| Occasional | Once in 5 years |
| Rare | Once in 25 years (e.g. once in the life cycle of the system) |
| Unlikely | Once in 100 years |
| Very Unlikely | Once in 1,000 years |

|  |  |  |  |
| --- | --- | --- | --- |
| Rating of Consequences | | | |
| Rating | Consequences | | |
| Catastrophic | People: | fatalities, evacuation outside site area | |
| Environment: | irreversible, long-term damage outside site area | |
| Business: | Total loss: | > $2 million |
| Interruption: | > 2 months |
| Image: | severely damaged, > 1 week, national |
| Critical | People: | serious injuries, effects outside site area | |
| Environment: | reversible, short-term damage outside site area | |
| Business: | Total loss: | $100,000 - $2 million |
| Interruption: | 2 - 8 weeks |
| Image: | damaged, > 1 week, regional |
| Marginal | People: | minor injuries, annoyance outside site area | |
| Environment: | only site area effected | |
| Business: | Total loss: | $5,000 - $100,000 |
| Interruption: | 1 – 2 weeks |
| Image: | < 1 week, local |
| Negligible | People: | no effects | |
| Environment: | only building effected | |
| Business: | Total loss: | < $5,000 |
| Interruption: | < 1 week |
| Image: | no noticeable effects |

**Procedure**

1. Using the definitions above for the likelihood and consequences of this hazard, check the appropriate box below to indicate your estimation of the risk posed by this hazard.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Risk Evaluation | | | | | |
|  |  | Consequences | | | |
|  |  | Negligible | Marginal | Critical | Catastrophic |
| **Likelihood** | Frequent |  |  |  |  |
| Moderate |  |  |  |  |
| Occasional |  |  |  |  |
| Rare |  |  |  |  |
| Unlikely |  |  |  |  |
| Very Unlikely |  |  |  |  |

1. An evaluation closer to the top right of this worksheet’s chart is associated with a severe risk.

**Sources**

This worksheet is based almost entirely upon the following source. This worksheet’s creators are tremendously thankful to the Office of Research Assurances’ Institutional Biosafety Committee (IBC) at Washington State University and its members who created this source.

1. Washington State University Biosafety Risk Assessment Guidelines v.11.13.13
   1. <http://www.bio-safety.wsu.edu/forms.asp>

These resources are the product of research from respected biosafety sources that were combined to help create a biorisk program. Please follow your own professional judgement, your institution's established guidelines, and any applicable local, state, and federal requirements.