



AMERICAN BIO RECOVERY ASSOCIATION

BIO RECOVERY SITE RISK ASSESSMENT (BSRA) GUIDELINES

Version 1.5

Field Operations

[ABRA TAC Review 5/1/2019](#)

BIO RECOVERY RISK ASSESSMENT

Project Name: _____

Project Address: _____

Project City _____ State: _____ Zip _____

Project Manager: _____

Front End Management – Taking the Call

I. **Type of Loss:** Drug Trauma Zoonotic Infectious Disease Food Borne Mold Terrorism

Other _____

II. **Type of Facility:** Residential Institutional Municipal Health Commercial Industrial

III. **Are there casualties or illness?** Yes No If yes, How many _____ Overdose? Yes No

IV. **ID Only-Has the person(s) or close personal contacts traveled outside of the country within the past three weeks?**

Yes No (If yes, please consult with the local health department, state or health local officials)

V. **Have the police or health department cleared the scene for mitigation / cleanup?** Yes No
(If no, look up the locations police department and health department and ask for the info)

VI. **If yes – Contact** _____ **Phone number** _____

VII. **Is there a diagnosis?** _____ **Cause of Death** _____

Condition or syndrome name _____

If applicable - examples – (sepsis, meningitis, heart disease, mad cow, stroke, diabetes, dehydration, necrotizing fasciitis)

SUSPECT PATHOGEN/CONTAMINANT – _____ **Bio Safety/Agent Risk Group** _____

If applicable – examples – (Drug Name, MRSA, Staph, Strep, Clostridium, Bacillus, HIV, Hepatitis, TB, Ebola)

To Research the Pathogen for its Biosafety Risk Group, please search the: [ABSA Risk Group Database!](#)

Riot Control Agent (CS) Drug Risk Group – Methamphetamine	Risk Group	3
Riot Control Agent (CN), Bioterrorism Agents, Fentanyl / Carfentanil	Risk Group	4

VIII. **Has the Property Insurance Carrier been notified** Yes No

Name of Insurance Company _____

Phone Number _____ Determination of Coverage Y N Amount _____

Deductible _____ Claim number _____

Adjuster Phone Number _____ Adjuster Name _____

E-Mail _____ Limit or Cap _____

Step 1: Determine Type of Risks Present (Determination of Risk Group)

Risk Group (RG)	Description (Or Highest RG level recommended by ABSA Risk Group Data Base)	Example Activities
Group 1	Agents are not associated with disease in healthy adult humans.	<ul style="list-style-type: none"> Precautionary cleaning for an agent that has little or no risk of surface transmission. Mitigation of an agent that does not present an environmental health risk to humans.
Group 2	Biological agent risk that can cause human disease and might be a hazard to workers; it is unlikely to spread to the community; there is usually effective prophylaxis or treatment available;	<ul style="list-style-type: none"> Blood and Trauma Mitigation Category 3 water damage inside or downgradient from a health care facility. Zoonotic Waste Mitigation and Remediation Diarrhea and loose stool cleanup Mold Remediation
Group 3	Biological / Drug agent risk that usually causes serious human or animal disease, or which can result in serious economic consequences but does not ordinarily spread by casual contact from one individual to another, or that can be treated by antimicrobial or antiparasitic agents.	<ul style="list-style-type: none"> Blood and Trauma Mitigation Zoonotic Waste Mitigation and Remediation Diarrhea and loose stool cleanup Spore forming bacteria and viruses Clandestine Labs and Hazardous drugs CS Riot Control Agent
Group 4	Biological / Drug agent risk that causes severe human disease and is a serious hazard to workers; it may present a high risk of spreading to the community; there is usually no effective prophylaxis or treatment available.	<ul style="list-style-type: none"> Blood and Trauma Mitigation Zoonotic Waste Mitigation and Remediation Diarrhea and loose stool cleanup Bio Terrorism Agents / Toxins and viruses / CN Riot Control Agent IDLH Clandestine Labs and Hazardous drugs Exotic Diseases (Example - Hemorrhagic Fevers – Ebola, Hanta)

Step 2: Identify the Area Risk Group

Identify the locations of all groups/spaces that are potentially impacted from the project. This should include all areas surrounding the project. If there is more than one risk group that will be affected, use the higher risk group.

- Low Impact Risk Area:** No occupancy. No body fluids present. No Demolition Required
 - Medium Impact Risk Area:** Space is occupied. Body fluids present. No Demolition Required hard surface contamination.
 - High Impact Risk Area:** Source Material Demolition/Contaminated Porous Materials or invasive activities required to mitigate
- Other Risks to consider that may need to be addressed prior to active work:**

- | | | |
|---|-----|----|
| 1. Are there violent/feral animals present? | YES | NO |
| 2. Is there Poisonous / Venomous Wildlife? | YES | NO |
| 3. Are there Poisonous plants present? | YES | NO |
| 4. Is there a risk to neighbors and are they contentious / violent? | YES | NO |
| 5. Is and access agreement required from neighboring property owners? | YES | NO |
| 6. Are there any hoarding conditions present? | YES | NO |
| 7. Have the Contaminated structural materials been screened for Asbestos or lead* | YES | NO |
| 8. Have the Contaminated structural materials been screened for Lead* | YES | NO |

* If yes to either questions 7 or 8 and you are positive for either contaminant please research your federal, state or local solid waste for licensing disposal options and laws. Biological Contaminants normally take priority however clearance sampling may be required prior to reconstruction. If no, please consider hiring a qualified third-party consultant to determine if biologically contaminated materials are positive for lead or asbestos.

Step 3: Determine Class (I – IV) of Risk Mitigation Measures Required

Identify Project Type and Risk Mitigation Class

Project Risk Group	Group 1	Group 2	Group 3	Group 4
Low Risk	I	I	II	IV
Medium Risk	I	II	III	IV
High Risk	II	III/IV	III/IV	IV

All projects that require Class II, III or IV risk mitigation measures will require approval of a contaminant control plan prior to the start of work.

Step 4: Risk Mitigation Guidelines

Class	During Project	Suggested PPE
I	<ol style="list-style-type: none"> 1. Charge single use microfiber cloths with a mild detergent or cleaner. 2. Wipe down surfaces and touch points with single use Microfiber clothes folded in 4 sides. Wipe down 2-3 ft of each side of hard surfaces. 3. Follow up by spraying surfaces and touch points with a disinfectant that has a EPA Registered virucidal claim. 4. Discard cloths when visibly soiled or you have touched 12sf. 5. Remove gloves and wash your hands prior to eating or leaving the site. 	<ul style="list-style-type: none"> • Safety Glasses • N-95 Mask • Nitrile Gloves • Chemical Resistant Booties
II	<ol style="list-style-type: none"> 1. Set up exclusion zone and start donning PPE. 2. Contain any gross contamination / pooled-up body fluids and apply a solidifier if necessary. 3. Charge single use microfiber cloths with a mild cleaner and disinfectant. 4. Clean up gross contamination and follow steps in Class 1 above for cleaning protocol. 5. Discard cloths when visibly soiled or you have touched 12sf. 6. Examine if any staining has occurred that cannot be removed by chemical or manual labor. (If materials are stained or soaked see Class III.) 7. Follow and clean path of extraction and inspect all surfaces leaving the scene utilizing an ATP luminometer. 8. Follow up with an application of a disinfectant that has an EPA registered virucidal claim. 9. Decontaminate equipment, workers and personnel and doff PPE. 10. Box and manifest all soaked contaminated rags and PPE as medical waste. 	<ul style="list-style-type: none"> • APR with HEPA OV Filters • Coverall – ANSI Standard for blood borne pathogens. • Inner Nitrile Gloves • Outer Nitrile Gloves • Chemical Resistant Booties
III	<ol style="list-style-type: none"> 1. Isolate HVAC system in area in consultation with Engineering & Maintenance where work is being done to prevent contamination of duct system or adjacent spaces. (Gross Contamination in HVAC – schedule for removal) 2. Set up Exclusion zone and place sticky mat at entrance and exit of work area and replace or clean start donning PPE. 3. Containment Installation - critical barriers i.e. plastic (6 mil poly) or portable containment units, to seal area from non-work area. 4. Maintain negative air pressure (>0.02" water) within work site utilizing HEPA equipped air filtration units or other methods to maintain negative pressure. 5. Re-circulating HEPA units may supplement dust control measures inside the work area. 6. Use only designated route/elevator to transport. 7. Set up designated personnel decontamination area. 8. Charge single use microfiber cloths with a mild detergent or cleaner that deactivates drug residue or registered microbial as applicable. 9. Contain any pooled-up body fluids and apply a solidifier for gross contaminant removal. 	<ul style="list-style-type: none"> • APR with HEPA OV Filters or PAPR with HEPA OV Filters. (Double Shrouded) • Coverall – ANSI Standard for blood borne pathogens. • Inner Nitrile Gloves • Outer Nitrile Gloves • Chemical Resistant Booties • Containment Should be checked prior to shift starting and after the shift is over. • Pressure differential monometer should be used to constantly monitor with alarm to notify unprotected personnel of containment failure.

	<ol style="list-style-type: none"> 10. Wipe down surfaces and touch points with single use Microfiber clothes folded in 4 sides. Wipe down 2-3 ft of each side of hard surfaces. Starting at the back of the room to the front of the room. 11. Discard cloths when visibly soiled or you have touched 12sf. 12. Cut out all body fluid-soaked materials or OPIM in pieces small enough to fit into a Biohazard Waste Box and stage for transportation. 13. Follow and clean path of extraction and inspect all surfaces leaving the scene utilizing an ATP luminometer. 14. Follow up with an application of a disinfectant that has a TB or 6-Log sporicidal claim if necessary or proper application chemical for drug or Riot Control Agent deactivation. (Follow the instructions according to EPA registration. 15. Decontaminate all equipment used on site. (Validate your Procedures-Lab Analysis) 16. Box and manifest all soaked contaminated rags and PPE as medical waste. 	
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<p>IV</p>	<ol style="list-style-type: none"> 1. Isolate HVAC system in area in consultation with Engineering & Maintenance where work is being done to prevent contamination of duct system or adjacent spaces. (Gross Contamination in HVAC – schedule for removal) 2. Set up Exclusion Zone and place sticky mat at entrance and exit of work area install three stage personnel decontamination unit with disinfection - start donning PPE. 3. Containment Installation - critical barriers i.e. plastic (6 mil poly) or portable containment units, to seal area from non-work area. 4. Install Biological / Chemical Indicators for sterilization assurance 1 per 100 sf of dwelling space to address biological decontamination. 5. Maintain negative air pressure (>0.02" water) within work site utilizing HEPA equipped air filtration units or other methods to maintain negative pressure to prevent air-borne cross-contamination. Note: Static conditions will be required for 6-log sterilization cycles see section 12. 6. Re-circulating HEPA units may supplement dust control measures inside the work area if demolition is required. 7. Use only designated route/elevator to transport. 8. Contain any body fluids and apply a solidifier for removal. Follow Cleaning protocol in Class 1 Above. 9. Cut out all body fluid-soaked materials or OPIM in pieces small enough to fit into a Biohazard Bag/Waste Box and stage for transportation 10. Follow and clean path of extraction and inspect all surfaces leaving the scene. 11. Decontaminate all equipment prior to leaving the exclusion zone. Leave equipment within the exclusion zone for sterilant application step 12. Considerations for IDLH drugs/Virus/Bacteria: Any HEPA or ULPA vacuum Equipment must be contained and sent off as overclassified medical waste. Do not try to decontaminate or save the equipment. 12. Follow up with an application of a 6-Log EPA registered sporicide for room space sterilization or proper application of chemical for IDLH Toxin, drug or Riot Control Agent deactivation. (Follow the instructions according to the EPA registration) 13. Exit the exclusion zone via the three-stage decontamination chamber. A decontamination attendant will walk you through each stage. 14. Box and manifest all soaked contaminated rags and PPE as medical waste. 15. Upon confirmation of sterilization via Biological Indicator analysis, re-enter the space to remove all remaining equipment. 	<ul style="list-style-type: none"> • Infectious Disease Hooded PAPR with HEPA or HEPA OV AG Filters (Double Shrouded) • SCBA/Level A (Site Assessment) • Inner - Coverall – ANSI BBP rated • Outer Coverall – Tychem TK for liquid splashes. • Inner Nitrile Gloves • Outer Nitrile Gloves 12 mil • Chemical Resistant Booties • Containment Should be checked prior to shift starting and after the shift is over. • Pressure differential monometer should be used to constantly monitor with alarm to notify unprotected personnel of containment failure. <p>Note: For dealing with IDLH Drug contamination such as Synthetic Opioids (Fentanyl and Carfentanil)</p> <p>Response Crew Should have Naloxone on site and be trained to administer it in the event an exposure occurs.</p> <p>For Category A Infectious Waste please refer to the PHSMA packaging requirements.</p>
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**ALL PROJECTS:
FOR HEPA OR ULPA NEG AIR,
SCRUBBERS OR VACUUMS, IT IS
IMPORTANT TO VALIDATE AND
DOCUMENT THE REDUCTION OF
PARTICULATES WITHIN THE
STANDARD DEVIATION OF A
CALIBRATED LASER PARTICLE
COUNTER PRIOR, DURING AND
POST REMEDIAL ACTION.**

Step 5: Life Safety Assessment

Life Safety Assessment	Answer (Yes, No)	Alternative Measures If "YES" is answered for any questions in the life safety assessment, alternative life safety measures must be indicated
1. Will a Confined Space Entry Permit be required		
2. Will any existing exit signs need to be covered; removed or relocated?		
3. Will new exit signage be required due to rerouting of a path or egress?		
4. Will fire suppression system (wet/dry/pre-action sprinklers) be impaired during any part of planned work?		
5. Will any component of a fire alarm system be impaired during any part of planned work?		
6. Will any existing fire/smoke rated separation be impacted by planned work?		
7. Will existing fire extinguishers be removed from the space during planned work?		
8. Will Heat Stress be monitored for the workers for this project?		
9. Are there any fall protection risks regarding this project?		

Step 6: Sign-Off:

Project Team/Hiring Department Supervisor must complete this form to document the results of the assessment of the planned work/construction project. The completed form must be submitted to EHS.

PROJECT NAME/DESCRIPTION: _____

Bio Safety Risk Group (1-4): _____

Risk Group Classification (Low-Medium-High): _____

Risk Mitigation Guidelines Class (I – IV): _____

Have any life safety issues been identified through the Life Safety Assessment? ___Yes ___No

The Project Team / Hiring Department Supervisor must submit a written plan detailing how dust/fume control and Interim Life Safety Measures (ILSM) if required, will be achieved to Environmental Health and Safety for any work:

1. That requires Class II, III, or IV risk mitigation measures, and/or
2. That requires interim life safety measures

Work cannot commence until the plan is approved by both EHS and the Project Manager.

Sign-Off:

Project Manager/Supervisor: _____ Date: _____

Environmental Health and Safety: _____ Date: _____

References:

BSRA Matrix Development Based on:

Infection Control Risk Assessment - AIA/FGI Guidelines for Design and Construction of Health Care Facilities 2006.
<https://www.fgiguidelines.org/>

CDC Guidelines for Environmental Infection Control in Health-Care Facilities
<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm>

Cleaning Techniques

Crime and Trauma Scene Bio Recovery – Kent Berg – National Institute of Decontamination Specialists. (NIDS)
www.nidstraining.com

Guidelines for Environmental Cleaning – AORN
<https://www.aorn.org>

USDA - Emergency Management Guidelines for Animal Health
<https://www.usda.gov/>

Microorganism Susceptibility - United States Environmental Protection Agency
https://www.epa.gov/sites/production/files/2015-10/documents/rutala_overview_of_current_disinfection_hierarchy_models_final.pdf

Guidelines on Assessment and Remediation of Fungi in Indoor Environments – NYC Department of Health and Mental Hygiene
<https://www1.nyc.gov/assets/doh/downloads/pdf/epi/epi-mold-guidelines.pdf>

CDC - Appendix B— BMBL Decontamination and Disinfection
https://www.cdc.gov/biosafety/publications/bmb15/bmb15_appendixb.pdf

Emergency Response Safety and Health Database - NIOSH

<https://www.cdc.gov/niosh/ershdb/default.html>

Biological Safety

American Biological Safety Association - Risk Group Database
<https://my.absa.org/Riskgroups>

CDC - BioSafety Risk Level 1, 2, 3, 4 Defined
https://www.cdc.gov/biosafety/publications/bmb15/bmb15_sect_iv.pdf

Clandestine Drugs, Hazardous Drugs

United States Environmental Protection Agency
<https://www.epa.gov/emergency-response/voluntary-guidelines-methamphetamine-laboratory-cleanup-document>

United States Environmental Protection Agency
<https://www.epa.gov/emergency-response/fact-sheet-fentanyl-and-fentanyl-analogs>

United States Environmental Protection Agency
https://www.epa.gov/sites/production/files/2018-11/documents/decon_poster_094.pdf

Occupational Safety and Health Administration (OSHA)

Bloodborne Pathogens CFR-1910.1030
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=10051&p_table=STANDARDS

Hazardous Waste Operations and Emergency Response CFR-1910.120
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=10051&p_table=STANDARDS

Outreach General Construction 10hr or 30hr (Please see what local requirements apply to you)
<https://www.osha.gov/dte/outreach/construction/index.html>

Medical Waste Regulation Explanation for Trauma and Infectious Substance Cleanup
<https://www.osha.gov/laws-regs/standardinterpretations/2007-05-22?fbclid=IwAR2LJnvhKo6wJXJeG8ZTh4dk4z5g-Pq57GNqXPtXwGALMjgNBq3iVuYruvs>