

STAN MAYFIELD BIOREFINERY PILOT PLANT

EMERGENCY PLAN

In the event of a major disaster affecting the site, The Foley Cellulose Front Gate (REDACTED) is the official source of emergency related information.

FOLEY CELLULOSE EMERGENCY SIREN

Continuous Horn	Evacuation
Intermittent Horn	Hazard Alert
Whinning siren	Tornado Alert

For more information turn to channel 4 in our two-way radios.

Emergency Phone Numbers

	Business Hours	Evenings/Weekends
Fire	REDACTED	REDACTED
Major Medical	REDACTED	REDACTED
Police Emergency	REDACTED	REDACTED
Needlestick/Sharps Injury/Biological Exposure	REDACTED	
Chemical Spill	REDACTED	REDACTED
http://www.ehs.ufl.edu/RiskMgmt/emergncy/chemspill.htm		
Biological Spill	REDACTED	REDACTED
http://www.ehs.ufl.edu/RiskMgmt/emergncy/biospill.htm		

Other Contacts:

REDACTED, UF Bio-Safety Officer	REDACTED	Cell: REDACTED
REDACTED, UF Lab Safety Coordinator	REDACTED	Cell: REDACTED
REDACTED, Assoc. UF Director of EH&S	REDACTED	
UF Worker's Compensation Office	REDACTED	
Lonnie Ingram	REDACTED	
Ismael Nieves	REDACTED	Cell: REDACTED
William J. Sagues	REDACTED	Cell: REDACTED

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General Information on Emergencies

It is important that persons handling biological agents have the proper training and experience to work with these materials safely. This includes how to handle an accidental release, exposure, injury, or evidence of agent theft or loss.

- Personnel should know what constitutes a potential exposure or release and report this to the PI or lab supervisor immediately. The PI or lab supervisor must report this to the biosafety office.
- Tell medical care providers what hazardous materials and biological agents you work with.
- Bring a copy of the MSDS sheet with you to the clinic.
- All personnel must also be familiar with symptoms of disease or illness associated with the materials they handle so that a previously undetected exposure can be discovered and measures taken to prevent further exposures.
- Know ahead of time the location and operation of emergency equipment such as the eyewash and safety shower, first aid kit, chemical and biological spill kits, emergency numbers, fire extinguishers, emergency exits.
- PIs or lab supervisors should periodically review this information with lab staff/ students and display this information in the laboratory.
- Time and situation permitting, contain and secure all biological agents during any and all emergencies. Agent storage areas shall remain locked.
- When possible, lab staff, PI/lab supervisor should meet and escort emergency personnel on site.

Major Medical Emergency

- 1) Remain calm.
- 2) Call for EMERGENCY RESPONSE - MEDICAL EMERGENCY 9-1-1.
- 3) Initiate lifesaving measures, as required.
- 4) Do not remove injured person unless there is a danger of further harm.
- 5) Provide information to first responders as needed.
- 6) Notify the PI/ supervisor.
- 7) Notify the corresponding UF EH&S subdivision.

Splashes to face and eyes (mucus membranes)

- 1) Rinse face/mouth/nose/eyes
- 2) Eyes should be flushed for at least 15 minutes. An eyewash station will provide the best flush.
- 3) Forcibly hold eye open to ensure effective rinsing.
- 4) Always obtain medical attention for a hazardous material splash to the eye. For biological exposures, **call Needlestick Hotline-Biological Exposures number REDACTED**; they will direct you on what further action to take.
- 5) Bring a copy of the MSDS for the exposure agent with you to the clinic.
- 6) For biological exposures, place contaminated clothing in a biohazard bag for decontamination.
- 7) Report incident to PI/supervisor and the Lab Safety Office or Biological Safety Office (**REDACTED**).

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- 8) Contact UF Workman's Compensation at **REDACTED**.

Accidental ingestion or inhalation

- 1) For biological agents, **Call Needlestick Hotline-Biological Exposures number REDACTED**; they will direct you on what further action to take.
- 2) Seek medical treatment.
- 3) Bring a copy of the MSDS sheet for the exposure agent with you to the clinic.
- 4) Complete an Incident Report by contacting the UF Workman's Compensation Office (UFWC) at **REDACTED**.
- 5) The PI or supervisor must notify the Lab Safety or Biosafety office of the incident.

Biohazard Exposure/Incident/Accident follow-up

- 1) As soon as possible after the incident call the following to report the incident:
 - a) UF Workers' Comp (UFWC): **REDACTED**
 - b) UFWC will complete the state required First Report of Injury form for the employee. This allows any medical treatments to be paid for through Worker's Compensation.
 - c) EH&S Biosafety Office: **REDACTED**
- 2) Supervisors / principal investigators must complete and sign the Injury and Incident Report form <http://www.ehs.ufl.edu/RiskMgmt/IIIRpt.pdf>.
- 3) The supervisor must ensure that exposure incidents are reported within 24 hours to the EH&S Biosafety Office. Biosafety Office staff will report the incident to the appropriate authorities per the following guidance documents/sources:
 - a) http://www.selectagents.gov/resources/CDC-APHIS_Theft_Loss_Release_Information_Document.pdf
 - b) NIH Guidelines Section IV-B-2-b-(7): http://www4.od.nih.gov/oba/rac/guidelines_02/NIH_Guidelines_Apr_02.htm#_Toc7261551
 - c) CDC National Notifiable Diseases Surveillance System: <http://www.cdc.gov/ncphi/diss/nndss/nndsshis.htm>
- 4) The UF SHCC Occupational Health Service or Adult Infectious Disease Service shall confer with the affected individual(s) and/or attending physician(s)/caregiver(s) to determine whether the exposure is of a nature that may transmit the biological agent and result in infection.
- 5) Counseling regarding potential exposure and infection, chemo/immuno- prophylaxis and follow-up testing shall be offered to any worker by the UF SHCC Occupational Health Service or Adult Infectious Disease Service if her/his exposure is determined to be of a nature that may transmit the biological agent.
- 6) If the worker refuses appropriate post-exposure prophylaxis and/or testing, this shall be documented in the medical record by the Occupational Health Service and countersigned by the employee, or a refusal document should be signed and forwarded to the Occupational Health Service.

Break in/Security Breach

- 1) Call **REDACTED** for Foley Cellulose Front Gate.
- 2) Notify PI/lab supervisor and the Biosafety Office of the break in.
- 3) Escort University Police personnel at the scene.

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- 4) The PI and Biosafety Office will conduct an inventory check and report results to appropriate authorities as needed.

Handling Biological Spills

Spill in the laminar flow cabinet

- 1) Turn off the cabinet ventilation system to prevent escape of contaminants from the cabinet.
- 2) Cover the spill with paper towels or other absorbent material.
- 3) Pour appropriate disinfectant over the absorbent to inactivate biohazardous material. If necessary, sufficient disinfectant solution shall be used to ensure that the drain pans and catch basins below the work surface contain disinfectant. Disinfect under the front exhaust grill if needed. Walls and equipment in the biological safety cabinet that may have been splashed shall be wiped with disinfectant.

Note that if diluted bleach solutions are used as a disinfectant, the solutions should be made fresh daily.

- 4) Let disinfectant solution sit for 30 minutes.
- 5) Pick up absorbent materials and wipe up excess disinfectant solution.
- 6) Place material in biohazard bag.
- 7) Use tweezers, forceps, or tongs to pick up broken sharps and place in a sharps container.
- 8) Rinse all disinfected areas with water and allow to dry.
- 9) Follow with 70% ethanol.

Spill in the centrifuge

- 1) Allow aerosols to settle for 30 minutes before attempting to clean up the spill. Keep the centrifuge closed during this time. Post a sign on the centrifuge so others don't try to open it.
- 2) Gently open the centrifuge to prevent re-aerosolization.
- 3) Place absorbent materials in the chamber and pour a fresh 1:10 dilution of household bleach (0.5% sodium hypochlorite) over them. Let sit 30 minutes.
- 4) Carefully remove carriers to a tub containing a fresh 1:10 dilution of household bleach (0.5% sodium hypochlorite). Soak 30 minutes.
- 5) Wipe the interior and lid of the centrifuge with a fresh 1:10 dilution of household bleach (0.5% sodium hypochlorite).
- 6) Use tweezers, forceps, or tongs to pick up broken sharps – place in a sharps container.
- 7) Wipe all areas with plenty of water to prevent corrosion. Dry and follow with 70% ethanol.

Spill inside the laboratory

Advance preparation for management of a spill is essential. A "bio spill kit" should be available and contain the following:

- Forceps/scoop for broken glass/sharps
- Paper towels or absorbent material
- Disinfectant
- Respirators, if necessary (e.g. for large spills or spills of highly concentrated material)
- Latex or nitrile gloves and safety glasses
- Autoclave bag

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- 1) Notify room occupants of the spill.
- 2) For biohazardous spills > 50 ml, those containing high concentrations of agent, or those involving BSL3 agents, all persons should leave the laboratory immediately.
 - a. Close the door.
 - b. Post a sign on the door to keep people out.
 - c. No one should enter for approximately 30 minutes so that aerosols can be cleared by the ventilation system or allowed to settle.
 - d. During this time, notify the PI or lab supervisor and the biosafety office.
- 3) If clothing is known (or suspected) to be contaminated, remove the clothing with care, folding the contaminated area inward. Discard the clothing into an autoclave bag for autoclaving.
- 4) Wash all potentially contaminated body areas as well as the arms, face and hands. Shower if necessary.
- 5) Any exposed persons should seek medical advice or treatment as described above: **call Needlestick Hotline-Biological Exposures number at REDACTED**; they will direct you on what further action to take.
- 6) Protective clothing should be worn to clean the spill area. Latex or nitrile gloves, autoclavable, or disposable footwear, safety glasses, and an outer garment.
- 7) Take the "bio spill kit" to the spill, and place paper towels, spill pillows, or other absorbent materials around and on the spill. Watch out for your lab coat or gown trailing into the spill as you attempt to deal with it.
- 8) Carefully pour a fresh 1:10 dilution of household bleach (0.5% sodium hypochlorite) over the absorbent material; avoid splashing and work from the outside towards the center.
- 9) Let disinfectant solution sit for 30 minutes.
- 10) Use tongs or a scoop to pickup the absorbent materials and place them into an autoclave bag/container. Use additional paper towels to wipe up excess disinfectant, working toward the center of the spill. Discard all towels and other clean up materials into a discard container/autoclave bag as they are used.
- 11) Wipe the outside of the autoclave bag/container, especially the bottom, with a towel soaked in a disinfectant.
- 12) Place the autoclave bag/container and other potentially contaminated materials, including PPE in an autoclave and sterilize.
- 13) Wash hands, arms and face; shower if necessary.

Spill outside the laboratory

Safe transport of biohazardous material outside the laboratory is essential. Materials should be packaged securely (triple contained in unbreakable containers) to avoid such spills. In addition, the person transporting the material should be knowledgeable about the hazards of the material and how to respond to a spill.

In the event of a spill outside the lab:

- 1) Clear area of all personnel and keep them out of the spill. Stay there, or have an assistant stay there to keep people out of the spill until it can be cleaned up.
- 2) Bring the spill kit from the lab to clean up the spill. If this is not possible, call, or have an assistant

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call, the University of Florida Biosafety Office at **REDACTED** for help.

- 3) If clothing is known (or suspected) to be contaminated, remove the clothing with care, folding the contaminated area inward.
- 4) Discard the clothing into an autoclave bag for autoclaving.
- 5) Wash all potentially contaminated body areas as well as the arms, face and hands. Shower if necessary.
- 6) Any exposed persons should seek medical advice or treatment as described above: **call Needlestick Hotline-Biological Exposures number at REDACTED**; they will direct you on what further action to take.
- 7) Protective clothing should be worn to clean the spill area. Latex or nitrile gloves, autoclavable, or disposable footwear, safety glasses, and an outer garment. If you have been issued an N95 respirator to work with this agent, put that on.
- 8) Take the "bio spill kit" to the spill, and place paper towels, spill pillows, or other absorbent materials around and on the spill. Watch out for your lab coat or gown trailing into the spill as you attempt to deal with it.
- 9) Carefully pour a fresh 1:10 dilution of household bleach (0.5% sodium hypochlorite) over the absorbent material; avoid splashing and work from the outside towards the center.
- 10) Let disinfectant solution sit for 30 minutes.
- 11) Use tongs or a scoop to pickup the absorbent materials and place them into an autoclave bag/container. Use additional paper towels to wipe up excess disinfectant, working toward the center of the spill. Discard all towels and other clean up materials into a discard container/autoclave bag as they are used.
- 12) Wipe the outside of the autoclave bag/container, especially the bottom, with a towel soaked in a disinfectant.
- 13) Place the autoclave bag/container and other potentially contaminated materials, including PPE in an autoclave and sterilize.
- 14) Wash hands, arms and face; shower if necessary.
- 15) If you have not done so already, call the Biosafety Office to inform them of the spill.

Large Scale Spill

In the event of the large-scale spill in the Laboratory Fermentation area:

- 1) Clear area of all personnel and keep them out of the spill. Stay there, or have an assistant stay there to keep people out of the spill until it can be cleaned up.
- 2) The liquid will drain to the sump system.
- 3) After the spill has drained to the sump, flush the spill with 10 L of water by slowly pouring water next to the dam to avoid creating aerosols.
- 4) After the rinse water has drained to the sump, pour 0.1% Bleach solution to cover the affected area.
- 5) Allow the Bleach solution to drain to the sump
- 6) Inactivate the contents of the Wastewater tank according to SOP-9530
- 7) Sample the floor in the affected area and plate for the presence of viable cells according to SOP-0507.

In the event of a large-scale spill in the Plant Process area:

- 1) Clear area of all personnel and keep them out of the spill. Stay there, or have an assistant stay there to keep people out of the spill until it can be

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cleaned up

- 2) The spill will enter the sump system and then pumped to the Wastewater tank
- 3) Once the spill has been cleared from the floor through the sump system, add 0.1% Bleach solution to cover the affected area
- 4) Allow the Bleach solution to drain to the sump
- 5) Place a bleach tote on the Fairbanks floor scale with the fork lift.
- 6) Connect the drain line to the sump with extension hose
- 7) Slowly open the top vent and the bottom drain on the tote to add 2% bleach solution to the sump
- 8) Monitor the weight on the scale to add the bleach about 0.6% of the spill amount
- 9) Allow the Bleach solution to disinfect the sump for at least 10 min.
- 10) Begin inactivating the contents of the Wastewater tank according to SOP-9530
- 11) Turn on the sump pumps
- 12) Rinse the spilled area to the sump system with water.
- 13) Continue the inactivation process from the Wastewater tank.
- 14) Sample the affected floor and plate for the presence of viable cells according to SOP-0507.

Fire Safety

- 1) **If you discover a fire, do the following:**
- 2) Pull the fire alarm and call The Foley Cellulose Fire Response **REDACTED**.
- 3) Fire alarm pull stations are normally located near each exit. If the building is not equipped with a fire alarm system, notify other occupants as you exit the building.
- 4) Do not attempt to fight the fire with portable fire extinguishers or fire hoses unless the fire is small and you have been trained in their proper use. **DO NOT PUT YOUR LIFE IN DANGER WHILE ATTEMPTING TO CONTROL A FIRE.** When in doubt, evacuate.
- 5) Remain calm while talking to the operator. Be prepared to answer several questions as to location, size of fire, your name, number of persons in building (if known) and any injuries. Remain on the line until the operator is finished.
- 6) Meet fire or police personnel when they arrive at the building. Stand by to answer any questions they may have concerning the fire.
- 7) Once out of the building **DO NOT RE-ENTER THE BUILDING FOR ANY REASON**, unless emergency personnel have given the "ALL CLEAR" signal.

If the fire is **INSIDE** your room:

- 1) Leave your room and close the door.
- 2) Predetermine two means of egress from your normal workplace. Learn the location of the nearest fire alarm pull station and portable fire extinguisher.
- 3) Learn how to use portable fire extinguishers. Remember the acronym: **P A S S**
 - P - Pull the pin.
 - A - Aim at the base of the fire.
 - S - Squeeze the trigger.
 - S - Sweep the nozzle from side to side.

If the fire is **NOT** in your room:

- 1) With your hands, test the door for heat before opening.

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- 2) If the door is HOT:
 - a. Stay in your room or lab.
 - b. Phone for help.
 - c. Stay calm.
 - d. Seal cracks with wet towels.
 - e. Wait for help.
- 3) If the door is COOL:
 - a. Take your room key.
 - b. Open the door slowly.
 - c. WALK to the nearest exit and leave the building.
 - d. If the exit is unsafe, return to the room and remain there.
 - e. If the hall is smoky, stay low or crawl out on your hands and knees

Workplace Violence:

All threats and other inappropriate behavior that create an immediate concern for safety should be reported immediately by dialing 911.

Examples of behavior requiring a call to authorities include:

- 1) Direct or veiled threats
- 2) Writes sexual or violent notes – intimidation verbally or physically
- 3) Carries a weapon (Florida Statutes and University Policy prohibit firearms and certain other articles that could be weapons on state property)
- 4) Makes suicidal comments or threats
- 5) Involved in fights or assaults
- 6) Stalks co-workers or their family

See the UF Workplace violence policy at <http://www.hr.ufl.edu/policies/workviolencepolicy.pdf>

Hurricane:

- 1) All biological agents shall be secured and contained in preparation for a hurricane.
- 2) See the checklist to prepare lab areas for an impending hurricane:
<http://www.ehs.ufl.edu/disasterplan/LabPrep.rtf>
- 3) Official emergency information for Taylor County is broadcast on
 - a. Radio: WUFT-FM / WJUF-FM / WLUF-LP / WRUF / AM850 / Rock 104
 - b. Television: WUFT-TV
 - c. Additional information regarding safety and preparedness may be found at:
www.ufl.edu/emerg.html

Tornadoes and other natural disasters:

Foley Cellulose Tornado Alert Siren will sound – continuous whinning sound.

Tornado Watch - conditions are favorable for the formation of tornados.

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Tornado Warning - indicates that a tornado has been sighted or is indicated on radar.

There is generally little or no warning given at the approach of a tornado. In the event of a tornado warning:

- 1) IMMEDIATELY seek shelter, preferably in the hallway of a main office building, an interior bathroom or an interior closet.
- 2) AVOID windows; flying debris can kill. Protect yourself by getting under a heavy desk or table.
- 3) Also, remember to protect your head.
- 4) After the incident, account for coworkers and assess the area to check for release of biohazardous agents.
- 5) Inform first responders if a release of biohazards has occurred.

Chlorine Gas Leak Warning – indicates a chlorine gas leak has been detected on the Foley Cellulose Site.

When the warning is received from Foley Cellulose:

- 1) IMMEDIATELY remove the North Brand Disposable Escape Respirator from its pouch.
- 2) Insert the mouth piece and attach the nose clamp
- 3) Breathe normally
- 4) Await further instructions from Foley Cellulose