SVN: docs/reviews/ExperimentalReadinessReview_HallD/ERG
June 29, 2017

# HALL D WORKER SAFETY AWARENESS TRAINING (SAF113)

## Updates and Revisions

June 29, 2017

- page 1: Added change log
- page 10: Replaced emergency response procedures to version 06/2017

**Purpose** Familiarize users with safety hazards and protection systems in the Counting House, Hall D and Tagger Hall.

**Training** All users must take the guided walkthrough covering the Hall D Counting House, Hall D and Tagger Hall using the latest update of the Emergency Response Guidelines (ERG) document for the hall. For this, the user should contact the person responsible for the training

Hall D/SAF113 - Tom Carstens (867-3940, carstens@jlab.org) or
Mark Stevens (310-1576, stevensm@jlab.org) or
Elton Smith (269-7625, elton@jlab.org)

The guided training will, at a minimum, go over the likely hazards as well as the protection and emergency systems and procedures outlined in Appendix A of the ERG that one finds in the Counting House, personnel access stairs/tunnel, Hall D and the Tagger Hall. The JLab Skill Requirements List (SRL) tracking system (i.e. training) will be used to track the training status. The SAF113 training does not have an expiration date. If however, the conditions of a hall are deemed to have changed sufficiently by the Division Safety Officer, the SAF113 training will be invalidated (forced to expire). The training tracking system will, like with any other training, notify all those affected so that they can make arrangements to take again the guided SAF113 training. SAF113 training is required for unescorted access to the hall and to be able to take shifts in the Counting House. "Escorting" of shift personnel is not allowed.

# Emergency Response Guideliness (ERG) for Hall D

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# 1 Introduction

As part of the Experiment Readiness Review Process and Approval, every experiment is required to submit, in addition to the Conduct-of-Operations (COO), Experiment Safety Assessment Document (ESAD) and, Radiation Safety Assessment Document (RSAD), a document that summarizes the location of major hazards in the hall, the location of the various emergency systems as well as emergency procedures and egress routes during that experiment: the Emergency Response Guidelines (ERG), this document. Shift personnel and anyone else wishing access to the hall during the duration of the experiment, must read and sign to indicate they have understood the COO, ESAD, RSAD and ERG of the experiment. Anyone feeling in doubt with the information contained in the ERG should contact the person responsible for the Hall Worker Awareness Training and schedule guided refresher training.

# 2 Purpose and Requirements

The purpose of this document is to familiarize users with safety hazards and protection systems in the Counting House, Hall D and Tagger Hall. An overview of the layout of the counting house and experimental hall can be found in Fig. 1. It includes a map of the safety equipment and a sketch of the emergency plan for the area. Further details about the Counting House can be found in Fig. 2, details of the experimental hall in Fig. 3 and information about the tagger area in Fig. 4. The list of likely hazards and emergency systems can be found in Appendix A. A summary of emergency response procedures can be found in Fig. 5.

## 2.1 Prerequisites to access the halls without escort

- ES&H Orientation (SAF100)
- Rad Worker I Training (SAF 801C, SAF801T, SAF801P) and been issued a dosimeter by JLab
- ODH training (SAF103)
- General Access Radiological Work Permit [RWP] (SAF801kd)
- Hall D Worker Safety Awareness Training (SAF113)

## 2.2 Reminders

- **No one under 18 years may enter the Hall**
- **No sandals or open toe shoes in the Hall**
- **No food or drinking inside the Hall**

- **Check postings at the entrance to the hall for special requirements** (e.g. long pants may be required during extended shutdowns). **If in doubt, please contact the Hall Work Coordinator or his/her designee,** Hall D - Tom Carstens

- Check that all work or test setups follow the work controls indicated in the ESH&Q manual [1] and on the supplemental Physics Division Work Planning Guidance [2]. **If in doubt, consult the Safety Warden of the area (T. Carstens, or alternate J. Foyles) in which the work will take place, the Physics Division ESH&Q coordinator (B. Manzlak) or the Physics Division Safety Officer (P. Rossi).**

# 3 The two-person rule

Performing work in Hall D may require that personnel work on teams of at least two people. The two-person rule must be followed when performing a task that requires two-persons as indicated by the applicable general JLab safety rules or task OSP/TOSP. Examples of tasks that require two-persons would be operation of the hall crane within 10 ft of the cryogenic transfer lines,"safeing-out" the high current power supplies, or welding/grinding requiring a fire watch. **If in doubt, contact the Hall Work Coordinator or his/her designee.**

# 4 Undergraduate Students in the Experimental Halls

Regardless of hall or task, undergraduate students must follow the two-person rule during their first three-months at JLab. During that period, undergraduate students are allowed to work in the hall if (a) their work in the hall is always under the supervision of a hall-authorized "buddy (the "buddy can not be another undergraduate) and, (b) a permanent JLab staff member is cognizant of the work to be done, has supervisory responsibility for their work and approves of the "buddy." As with all work, the work coordinator will be informed of the work.

# A Appendix A

This appendix lists likely hazards, protection and emergency systems used and emergency procedures to be reviewed during the Hall Worker Awareness Training

## A.1 Hazards

- Fire (electrical equipment, breaker panels, paper, trash, cables)
- Tripping and overhead hazards
- Falling hazards
- Elevated work
- High-pressure systems including low-conductivity water distribution
- Radiation hazards (beam-on, contaminated and activated areas)
- Loud noise hazards (thin vacuum windows)
- Flammable gasses (Hydrogen)
- Cryogenic (ODH and "cold-bite")
- Magnets and magnetic fields
- Electrical
  - AC & DC (various voltages)
  - Magnet power supplies and their current distribution systems
  - High-Voltage supplies

## A.2 Protection and Emergency systems and procedures

- Signs and postings,
  - Radiological areas
  - Hearing protection requirements
  - Exit signs
  - Exit routes (evacuation plans)
  - Oxygen Deficiency Hazards
- Personnel Protection Requirements (e.g. earplugs, safety glasses, )
- First Aid kit and Emergency Defibrillator

- Telephone locations with emergency numbers
- Fire
  - Detection systems (e.g. the Very Early Smoke Detection Apparatus [VESDA])
  - Alarm pull boxes
  - Fire alarm bells
  - Extinguishers
  - Evacuation routes and muster points
- Electrical
  - Power shutoff switches
  - Circuit breaker panels
- Weather related hazards
  - Tornado emergency response
  - Severe weather shelter locations
- Emergency lights
- Beam status, interlock and abort
  - Machine State Status Indicators,
  - Magenta/purple beacons,
  - Access doors to hall
  - Key interlocks
  - Run/Safe boxes
- Oxygen Deficiency Hazard condition detection
  - Sensors locations
  - Blue beacons and alarms locations
- Radiation Monitors (Controlled Area Radiation Monitors  CARMs)
- RadCon staging areas for equipment to be removed from hall
- Red beacons for hazards (e.g. energized magnets)
- Yellow beacons for warning or caution (e.g. energized lasers, forklifts)
- Cabinets for storing flammable materials

Figure 1: Overview of the layout of the Hall D counting house and experimental hall indicating safety equipment and emergency plan.

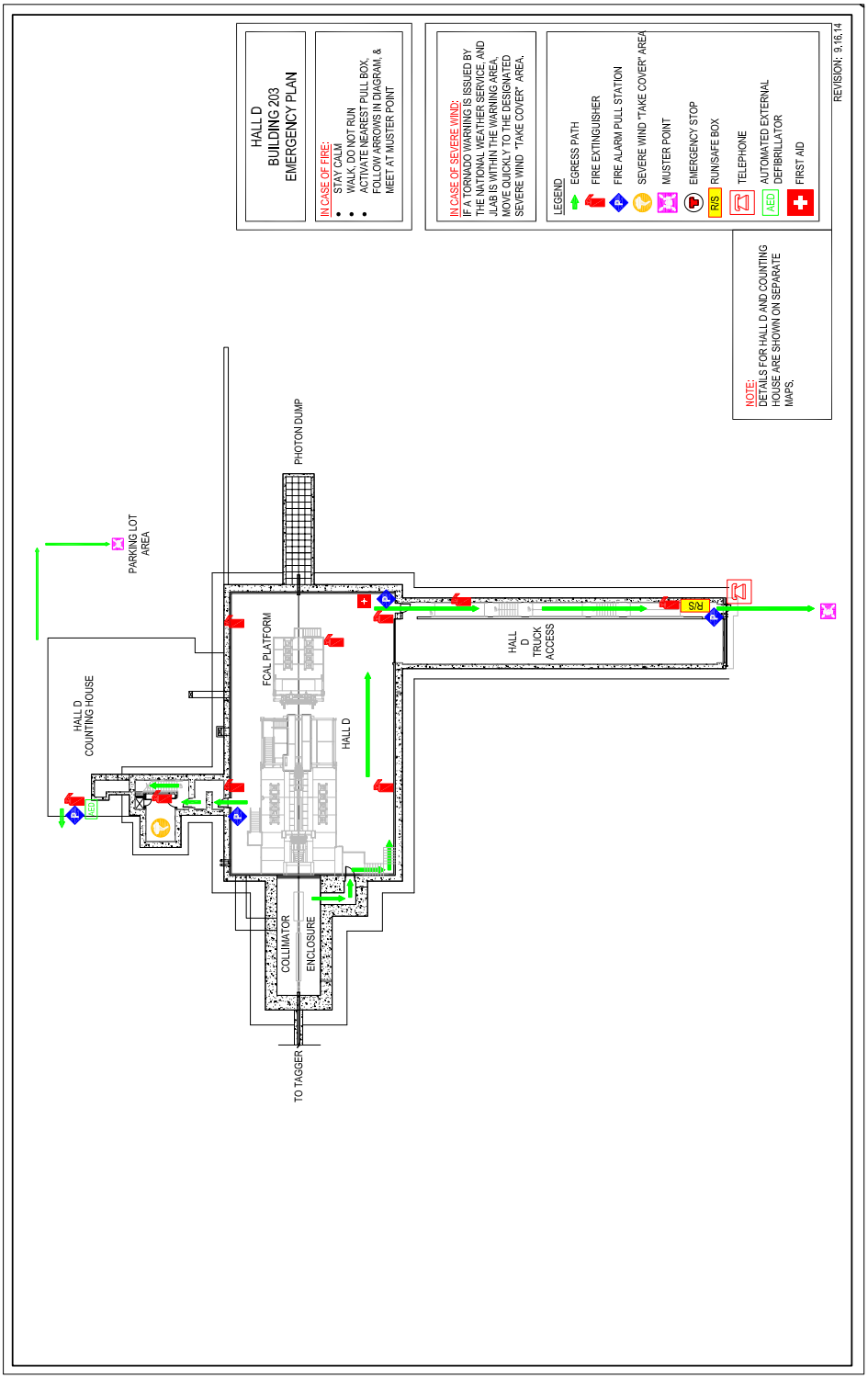

Figure 2: Layout of the Hall D counting house indicating safety equipment and emergency plan.

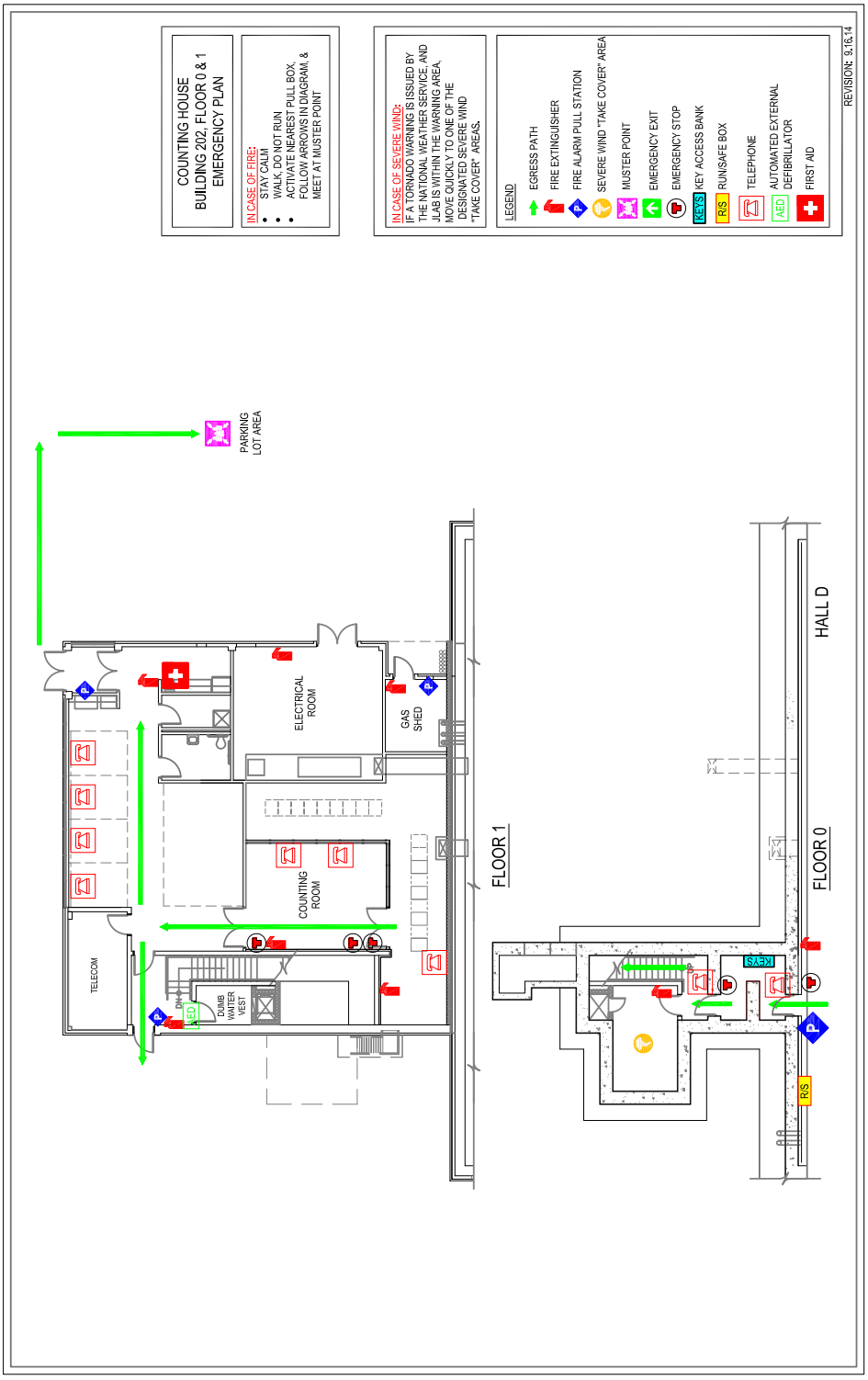

Figure 3: Layout of the Hall D experimental hall indicating safety equipment and emergency plan.

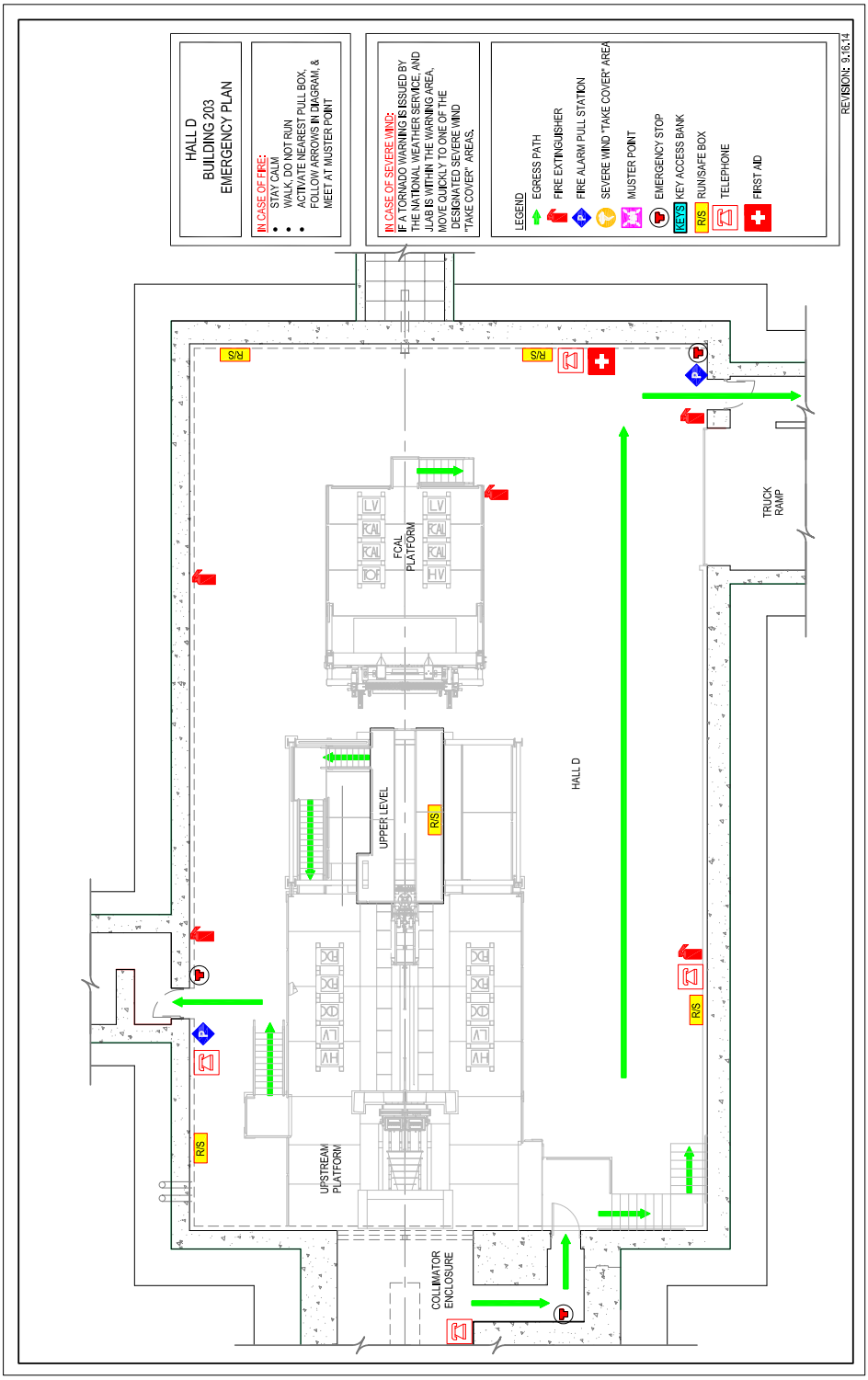

Figure 4: Layout of the Hall D tagger hall indicating safety equipment and emergency plan.

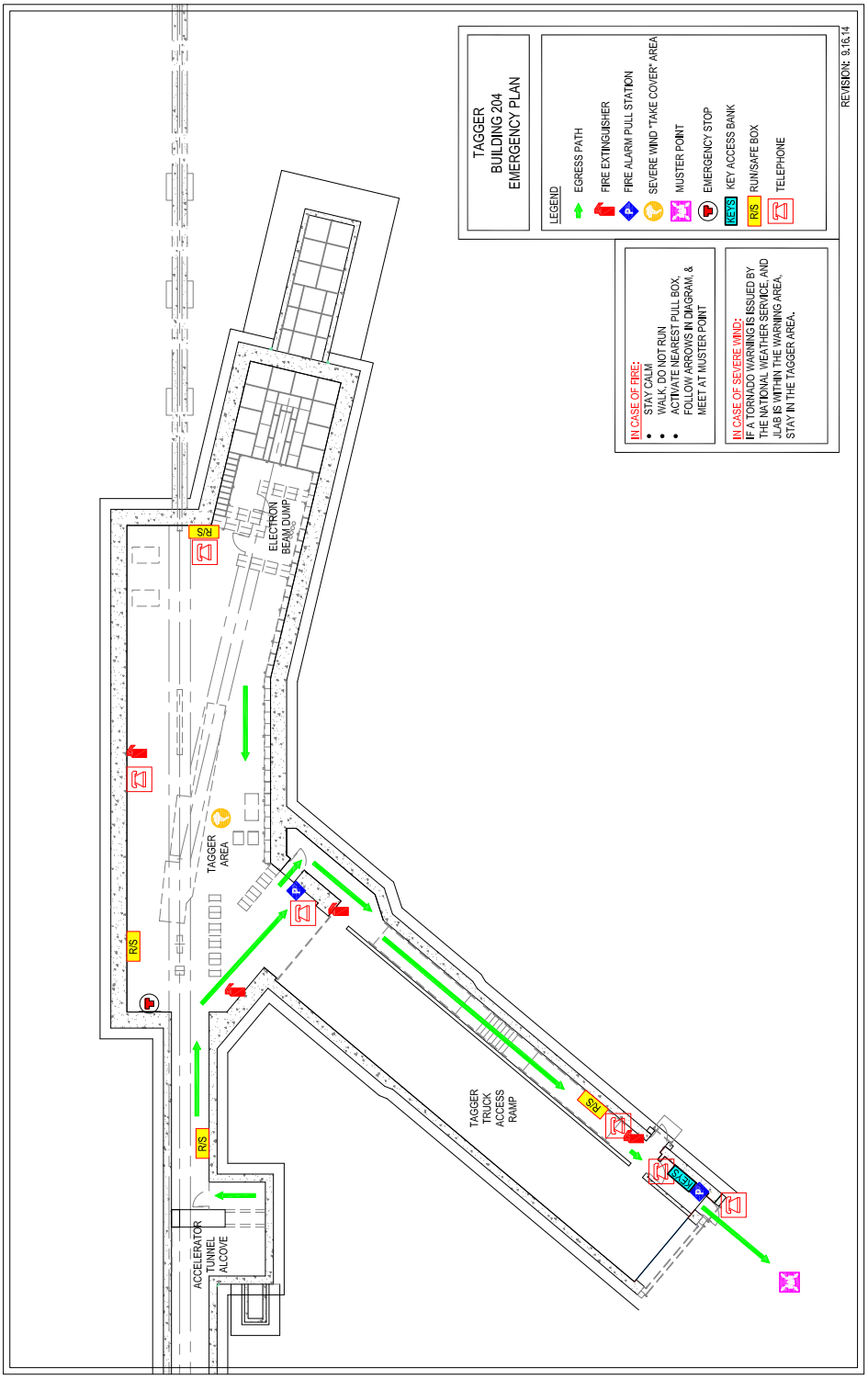

Figure 5: Summary of proper response to various emergency situations.

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Thomas Jefferson National Accelerator Facility

## Emergency Response Procedures

| | | | |
|---|---|---|---|
| **Important information**<br>**DIAL**<br>**9-911 or 911** | Both numbers will connect you to:<br>**City of Newport News' Emergency Dispatch Center** | If dialed from a land-line phone the following are automatically alerted:<br>• Jefferson Lab Security<br>• Occupational Medicine<br>• Other key Jefferson Lab Responders. | If dialed from a cell phone you will also need to call:<br>**Jefferson Lab Security**<br>**269-5822**<br>**Cell 342-9868** |
| **EVENT** → | **ACTION 1** → | **ACTION 2** → | **ACTION 3** |
| **Injury or acute illness** | **Call**<br>**9-911 or 911** | • Do not move the victim (unless they are in danger)<br>• Administer first aid/CPR if willing and trained<br>• Avoid contact with blood | • Stay with the victim while awaiting emergency responders |
| **Direct minor injuries to Occupational Medicine (Support Service Center, Bldg 28, Room 22) during regular business hours.**<br>Most buildings have one or more first-aid cabinets and AEDs for your convenience. There are pamphlets at these locations to assist you. | | | |
| **Fire Alarm** | **Evacuate to Muster Point**<br>(refer to the evacuation map for the location) | **Await "All-Clear Notification"**<br>From Fire Protection Engineer or Building Drill Coordinator before re-entry. | |
| SMOKE<br>Unexplained Odor or Natural Gas<br>FIRE<br>**See or Smell** | **Sound Alarm**<br>(use the nearest pull box)<br>FIRE ALARM<br>PULL DOWN | **Evacuate to Muster Point**<br>(refer to the evacuation map for the location) | **Await "All-Clear" Notification**<br>From Fire Protection Engineer or Building Drill Coordinator before re-entry. |
| CHEMICAL SPILL<br>OIL SPILL | **Evacuate Upwind**<br>(keep others away) | **Call**<br>**Jefferson Lab Security**<br>269-5822 | Only personnel trained and equipped are permitted to contain and control a spill. |
| **Suspect Item** | • **DO NOT** touch the item<br>• **DO NOT** change the environment (e.g. turn off lights or open window) | **Back Away**<br>(keep others away) | **Call**<br>**Jefferson Lab Security**<br>269-5822 |
| **Bomb Threat** | **Write Down:**<br>• Any demands/ instructions<br>• Caller's number if available<br>• Vocal characteristics<br>• Any other relevant details to identify the caller | **Call**<br>**Jefferson Lab Security**<br>269-5822 | Stand by for further instructions from Security or JLab Management |
| **Other Emergency Notifications**<br>(via cisco phone system, notification e-mail, outdoor siren, weather alert radio) | (e.g. Off-Site Emergency, Severe Weather Warning, Earthquake)<br>**Stay in Building** (unless told to evacuate)<br>**Abide by Instructions**<br>Refer to the evacuation map for appropriate locations | | |
| **ODH Alarm** or visible plume | **Evacuate to Muster Point** | **Call**<br>**Jefferson Lab Security**<br>269-5822 | **If on the Accelerator Site**<br>**Call the Crew Chief**<br>269-7045 |
| **Radiation Alarm** | If you see a<br>**Flashing RED Light**<br>and<br>**Hear an Audible Alarm** | **Evacuate to Muster Point**<br>(refer to the evacuation map for the location) | **If on Accelerator Site**<br>**Call the**<br>**Crew Chief** 269-7045 |
| **Hazardous Machine Operations** | **Hit**<br>"Push to Safe"<br>**RED**<br>Button | **Evacuate to Muster Point**<br>(refer to the evacuation map for the location) | **Call the**<br>**Crew Chief** 269-7045 |
| **Automobile Accident** | If anyone is injured<br>**Call**<br>**9-911 or 911** | **Call**<br>**Jefferson Lab Security**<br>269-5822 | **Call**<br>**Facilities Management**<br>269-7400 |
| **Intruders, Threatening or Abusive Behavior** other unauthorized conduct | **Call**<br>**Jefferson Lab Security**<br>269-5822 | **Protect Yourself to Ensure Your Personal Safety**<br>If not imminent danger, report the incident to your lab management ASAP! | |
| Requests for **Jefferson Lab Status**, or other information | You are not authorized to provide any information regarding Jefferson Lab status or conditions.<br>**Refer Requestor to Jefferson Communications Office 269-7689** | | |

Rev. 06/2017

# References

[1] Jefferson Lab. EH&S manual. http://www.jlab.org/ehs/ehsmanual. 3

[2] Jefferson Lab. Physics Division Work Planning Guidance. http://www.jlab.org/div_dept/physics_division/work_guidance_final.pdf. 3

AFTER READING THIS DOCUMENT

Employees Make arrangements with
Tom Carstens, cell: 757-876-3940 (carstens@jlab.org) or
Mark Stevens, cell: 757-310-1576 (stevensm@jlab.org) or
Elton Smith, office: 757-269-7625 (elton@jlab.org)
to schedule the guided walk-through.

Contractors Contact your SOTR to schedule the guided walk-through.