



**JEFFERSON LAB EH&S COMMITTEE MEETING**  
**October 8, 2004**  
**9:00 AM - 10:00 AM, CEBAF Center Room A110**

JEFFERSON LAB EH&S Committee Members:

James Murphy (Chairman)	Robert May
Carter Ficklen	Dennis Skopik
John Kelly	Sandy Prior*

JEFFERSON LAB EH&S Committee Advisors:

Bruce Ullman

Others Attending:

Linda Even	John Musson
Eric Hanson	Hugh Williams
Charles Hightower	Dena Polyhronakis (for Mark Waite)
Barbara Morgan	

1. Agenda was accepted as written.
2. Updates:
  - a. Suspect/Counterfeit Item Training Enrollment - DOE-sponsored training has been set up for Nov 4, 2004. A team from DOE and its S/CI training sub-contractor, Technical Services Associates, will present three classes:
    1. S/CI Senior Management (3 enrolled)
    2. S/CI Crafts for those who use and inspect parts that could be suspect. (5 enrolled)
    3. S/CI General Overview for engineers, procurement, shipping receiving, purchase card holders, QA, etc. (28 enrolled)

Procurement, OA and the DOE Site Office are well represented among the enrollees.

To register, go to <https://training.jlab.org/aspn/main.asp?Pos=nav> and click on "Training Catalog." Then select the link to the class you want on the calendar
  - b. Five AEDs have been received and are scheduled for placement in the Test Lab, EEL, ARC, Counting House, and Building 89. Smitty Chandler has been authorized to order three more units and asked the committee for input regarding their placement. The committee believes that Dr. Chandler's initial recommendation of building priority is still appropriate.
3. Roadway Safety On Site
  - a. Bicycle Helmets – 54 employees have ordered helmets for use on site. A total of 150 helmets have been ordered; this includes those needed by the users who have JLab bikes, BEAMS staff, and an initial supply for the stockroom.

## MINUTES OF MEETING

### PAGE 2

## JEFFERSON LAB EH&S COMMITTEE MEETING

October 8, 2004

9:00 AM - 10:00 AM, CEBAF Room A110

- b. Sidewalks – Rusty Sprouse has included in the 10-Year Plan the addition of sidewalks from the CEBAF Center to the Guard Shack and from the Guard Shack to Building 87. The target for beginning construction is FY06; total cost is ~\$60k.
- c. Speeding – This is an on-going problem and enforcement is difficult. Suggestions for a uniform enforcement policy would be appreciated. Ideas discussed included:
  1. Reporting violators to their supervisors
  2. Have the security guards stop people

Speeding within the accelerator fence has been reduced. It was suggested we build on this improvement by sending an all-staff e-mail congratulating staff for this success and urging similar improvement on the rest of the site.

Vehicle safety involves more than obeying speed limits. Obeying stop signs and using turn signals are also important and this applies not just to automobiles. The rules also apply to bicycles, golf carts, truck, and forklifts. A feature in *On Target* was suggested as a means to remind staff of this.

4. EH&S Roles and Responsibilities of DOE Personnel – Barbara Morgan provided a brief explanation of the duties and responsibilities of the additional DOE Site Office staff. The Office of Science is asking for a higher level of oversight and awareness by Site Office staff. This means staff will be more visible on site. If they observe an unsafe situation and an ES&H person is with them, they will turn the matter over to the JLab safety person for follow-up. If a JLab person is not with them, they will try to find the names and organizations of those involved and notify the appropriate Division Safety Officer and copy the AD. If they cannot identify those involved, they will contact Jim Murphy and let him know what they saw and where it was. Site Office staff also have the responsibility to stop work when that is appropriate.
5. ORPS Reporting – Three of the four JLab events reported to the DOE occurrence reporting systems (ORPS) in 2004 had a common element: the timeliness of reporting did not meet JLab and DOE expectations. These three events were:
  - a. The Dec. 23, 2003 FEL kitchen electrical shock;
  - b. The March 26, 2004 “serious injury” to a Hiller Systems worker; and
  - c. The Sept. 1, 2004 CEBAF Center buried natural gas line break by Va. Natural Gas.

EH&S Chapters 5300, Occurrence Reporting, documents the DOE requirement that an ORPS-reportable event is to be categorized by EH&S Reporting within two hours of event recognition. EH&S Reporting then has to notify the designated Site Office staff member within two hours of categorizing the ORPS event. In order to meet these timelines a safety professional who becomes aware of an EH&S or operational event that may be ORPS reportable should report it immediately to EH&S Reporting. Please contact: Linda Even x7308, pager 584-7308; or Carter Ficklen x7007, pager 584-7007; after business hours or during a weekend or holiday, please

## MINUTES OF MEETING

PAGE 3

### JEFFERSON LAB EH&S COMMITTEE MEETING

October 8, 2004

9:00 AM - 10:00 AM, CEBAF Room A110

immediately call cellular phone: (757) 876-1750. Even if unsure about whether the event will be ORPS reportable, notify EH&S Reporting immediately.

4. Emergency Management Exercise – John Kelly provided a brief summary of the recent Emergency Management Exercise: "Tornado Warning – Trailer Occupants Take Shelter." The exercise was conducted on September 30, 2004. Approximately three fourths of those in the trailers at the time of the exercise correctly identified the appropriate action to be taken in this type of emergency. The final report including lessons learned is currently in process.
5. LTT Audit – Dennis Skopik asked that the Committee discuss the recent LTT Audit that did not include administrative lockouts. Reports in past years have included these. It was agreed that next year's audit should include administrative lockouts to ensure that they are being utilized properly. The Committee members are to notify the Chair by COB 10/11 whether the 2004 LTT Audit, which does not include administrative lockouts, should be accepted.
6. DART & TRC – Dennis Skopik provided radar charts showing JLab's DART and TRC statistics by division for the last four years. The charts showed that DOE expectations and JLab outcomes are not in line, a situation that needs to be changed.
7. Equipment Specific Lock Tag and Try Procedures are required under the circumstances described in the EH&S Manual Chapter 6110. An injury investigation in 2003 identified problems in the Lab's equipment specific LTT procedures. To be certain that these procedures exist it was suggested that Safety Wardens should verify that the required equipment specific LTT procedures are in place in their areas. Division EH&S Officers will provide their Safety Wardens any needed training. Attached is a template (supplied by John Kelly) that may facilitate this effort.

The DSOs agreed that this verification could be completed by the end of the year; regular updates will be requested during the monthly JEHSC meetings.

# JLab Occurrence Reporting Timelines

- Three of the four JLab events reported to the DOE occurrence reporting systems (ORPS) in 2004 had a common element; the timeliness of reporting did not meet JLab and DOE expectations.
- The three ORPS events with late notification reported in 2004 were:
  - The Dec. 23, 2003 FEL kitchen electrical shock;
  - The March 26, 2004 “serious injury” to a Hiller Systems worker; and
  - The Sept. 1, 2004 CEBAF Center buried natural gasline break by Va. Natural Gas.
- EH&S Chapters 5300, Occurrence Reporting (PDF version) states that an ORPS-reportable event is to be categorized by EH&S Reporting **within two hours** of event recognition.
- EH&S Reporting has to then notify the designated Site Office staff member **within two hours** of the ORPS event.

# JLab Occurrence Reporting Timelines

## SUMMARY

- If you are notified of an EH&S or operational event and are unsure about if it is ORPS reportable, please immediately contact one of the staff:

Linda Even    x7308    pager 584-7308

Carter Ficklen   x7007    pager 584-7007

- If after business hours or during a weekend or holiday, please immediately call cellular phone:

(757) 876-1750

- Occurrence reporting briefings will be conducted for individual division staff and regular JLab meetings (such as the 8:00 a.m. MCC meeting) during October and November.

# Emergency Management Exercise Report

## *Tornado Warning – Trailer Occupants Take Shelter*

Conducted on September 30, 2004

---

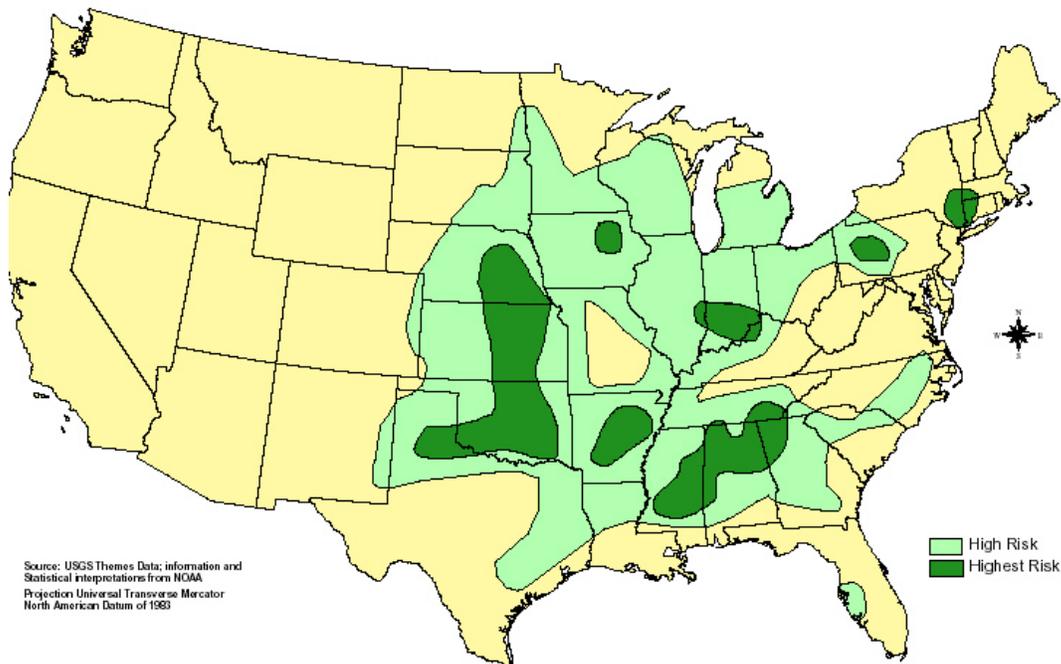
### Exercise Objectives:

1. Test prescribed procedures for responding to a National Weather Service (NWS) tornado warning received by the weather-alert (WX) radios in JLab portable structures. (See attached list.)
  - Re-familiarize WX radio custodians and other personnel on use and function of radios.
  - Evaluate effectiveness of “pass-the-word” process in multi-trailer facilities.
2. Establish a baseline for tenants’ response to be used in evaluating any future improvements to procedures and equipment.

---

### Background:

Mobile homes, office trailers, and other portable structures are notoriously vulnerable to wind damage. JLab has long relied upon portable structures for office and light technical work space. This has meant a vulnerability to high winds – especially tornadoes – and a threat to occupants who are unaware of an approaching storm or who cannot seek safe shelter in time.



Given the relative infrequency of tornadoes in the region (Virginia is 29th in ranking of tornado risk by state), the risk is low in terms of probability, but the potential consequences are serious.

- ◆ 38% of tornado fatalities occur in mobile homes
- ◆ 27% of tornado fatalities occur in permanent homes (which outnumber mobile homes by a wide margin)
- ◆ 11% in vehicles

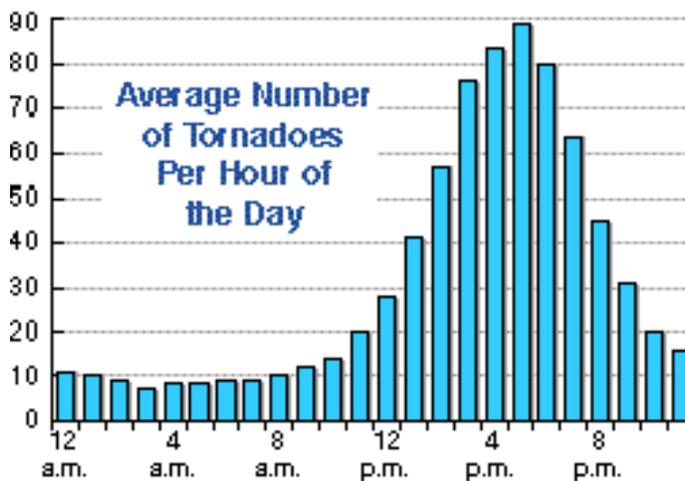
---

## Exercise Synopsis:

It is a normal workday, late afternoon (most probable time of day for severe thunderstorms and tornadoes). Most offices are occupied, though some of the occupants may not have returned from work in halls, tunnel, etc.

A pair of exercise evaluators enters the trailer, walks to the radio, and presses the “test” button. This activates the warbling alert tone. On radios with the feature, the volume is adjusted as required to ensure the tone can be heard throughout the near vicinity.

The evaluator is holding a sign or has placed it in a conspicuous position next to the radio. (Example is attached.) Occupants who respond to the alert are handed a response card (see below) and are asked to mark it according to the actions they would take had this scenario been an actual tornado warning.



©1997 Oklahoma Climatological Survey. All rights reserved.

---

### Planning &

Keith Welch	Bert Manzlak
Kris Burrows	Deborah Dowd
Bob May	Kim Kindrew
Jimmy Shaffer	John Kelly
Melissa Holloway	Dave Kausch

### Evaluation Teams:

Keith Welch	Bert Manzlak
Bob May	Kim Kindrew
Jimmy Shaffer	John Kelly
Kris Burrows	Deborah Dowd

---

## Results:

Number of Occupants Encountered:	<b>64</b>
Percent of Occupants Choosing Suitable Shelter:	<b>69.0%</b>
Percent Choosing Potentially Unsafe Shelter:	<b>24.9%</b>

Complete tabulation of results attached to this report. This includes evaluators' comments.

---

## Conclusions:

There was a higher-than-expected (by Team) level of knowledge about take-shelter precautions. The majority of trailer occupants would know how to respond in an actual tornado warning – if they heard it. Some radios were inaudible to all occupants. One radio was inside a locked office. Trailer City is especially problematic because of its long axis and many intersecting units.

Many radios do not have the relatively new feature of Specific Area Message Encoding (SAME) now provided by the National Weather Service with weather warnings. This feature allows a radio to be programmed to receive only those alerts that affect the area selected during the

radio's set-up procedure. This reduces greatly the quantity of warnings that do not apply, and it lowers the "aggravation factor" of frequent irrelevant warnings.

Lessons Learned & Other Action Items	Follow-up Responsibility	Target Date
Purchase and install more radios for Trailer City and Safety Lab.	Emergency Manager	12/04
Explore options for more robust alert system in Trailer City. Make recommendations to Senior management via the EH&S Committee	Emergency Management Subcommittee	3/05
Publicize results of exercise to (a) affected trailer occupants, and (b) to entire Lab as part of a severe weather update.	Emergency Manager in conjunction with EM Subcommittee and JLab Electronic Media	11/04

**This is an exercise to test the take-cover procedures for the occupants of this building.**



**Simulation:**

**The weather-alert radio is broadcasting a Tornado Warning for Upper Newport News.**

***A tornado has been sighted several miles to the southeast, traveling to the northwest – toward Jefferson Lab.***

**What would you do at this moment?**

Please take one of the response cards from the exercise facilitator or one of your colleagues. Fill it out and return it to the facilitator.

**This is only a drill, but your participation is needed.**

Poster displayed at each WX radio when the alert tone was activated.

**Locations of Weather Alert Radios**  
(Highlighted locations included in exercise.)

Building Name	Bldg & Room Numbers	Custodian
ARC	01/Lobby	J.T. Kelley
ARC	704-13	J.T. Kelley
CEBAF Center	12/Lobby	M. Hightower
CHL	08/control room	J. Wilson
Counting House/Halls	97; Halls A, B, C	W. Vulcan
Cryogenic Lab/ESR	98, 102	B. Murphy
<b>Cryo Trailer/CTF</b>	<b>10, 57</b>	<b>J. Wilson</b>
EEL	90	B. Kross
Electronic Tech Shop	59	M. Wissmann
FEL	18	G. Neil
<b>Hall A Trailer/Storage</b>	<b>101B, 72</b>	<b>E. Folts</b>
<b>Hall B Trailers</b>	<b>96B, 94A</b>	<b>S. Christo</b>
<b>Injector Trailer</b>	<b>53A</b>	<b>D. Green</b>
<b>Injector Trailer</b>	<b>53B</b>	<b>D. Green</b>

Building Name	Bldg & Room Numbers	Custodian
<b>Injector Trailer</b>	<b>53C</b>	<b>D. Green</b>
Machine Control Center	85/102B	H. Fanning
Machine Control Center	85/104	S. Suhring
MCC Annex	87	R. Gonzales
MCC Annex	89	S. Holben
<b>Physics Trailer</b>	<b>11B</b>	<b>M. Bennett</b>
<b>Physics Trailers</b>	<b>11 and 11A</b>	<b>M. Bennett</b>
<b>Radiation Lab</b>	<b>52, 52ABC, 54</b>	<b>B. Nevarez</b>
Residence Facility	6	R. Durham
<b>Safety Lab</b>	<b>35</b>	<b>P. Hunt</b>
Security Guard House	60	M. Lewellen
Test Lab	58/202, 31, 34	S. Thomas
<b>Trailer City</b>	<b>16/25</b>	<b>M. Bennett</b>
<b>Trailer City</b>	<b>16/172</b>	<b>D. Buckle</b>
VARC	28/Lobby	D. Kausch

**Tornado Warning,  
Take Shelter Exercise**

Building Number: \_\_\_\_\_

Action(s) you would take if there was an actual threat from an approaching tornado. Please check all that you would choose.

Seek shelter in an interior room of this building.

Attempt to get to your car to escape the approaching storm.

Seek shelter in the nearest depression or ditch, face-down, hands covering head.

Seek shelter in nearest designated "safe" building. (Indicate which one: \_\_\_\_\_)

Other (Please describe):

\_\_\_\_\_

\_\_\_\_\_

Response card provided to trailer occupants

**Emergency Management Exercise 9/30/04**  
**Tornado Warning; Trailer Occupants Take-Shelter**

Location of WX Radio	Bldg & Room Numbers	Response Option Choice						ID'd Suitable Shelter	Evaluators' Comments
		A	B	C	D	E	F		
Cryo Trailer	10				2		1	2	
CTF	57								Unoccupied
Hall A Trailer	101B				2			2	2 occupants only.
Hall A Storage	72								Unoccupied
Hall B Trailer	96D			1	4			4	Test feature on radio did not work correctly. Also, radio volume was turned down.
Hall B Trailer	94A								Unoccupied
Injector Trailer	53A				2			2	2 occupants
Injector Trailer	53B				1			1	One occupany only
Injector Trailer	53C			1	4	1		4	One occupant wearing headphones & could not hear alert tone.
Physics Trailer	11B				3			3	
Physics Trailer	11		1	2	2			1	
Physics Trailer	11A	1			1			1	
Radiation Lab	52 (A,B, & C), 54				3			3	2 occupants in 52B; one went quickly to warn others in adjacent bldg (52A).
Safety Lab	35				1			1	1 occupant only. Could not hear alert from location in nearby office (3 doorways away.)
Trailer City	16/25	2			3		4	3	Alert tone inadubible past Rm 57 and in Rm 13. Approx 4 people in vicinity (& within range of tone) did not respond. Others took as much as 5 minutes to respond.
Trailer City	16/172			2	13	1		13	Alert tone inaudible past the second intersecting hallway to the west.
<b>Totals:</b>		<b>3</b>	<b>1</b>	<b>6</b>	<b>41</b>	<b>2</b>	<b>5</b>	<b>40</b>	
<b>Total Occupant Participants:</b>		<b>58</b>							
<b>Response Options (✓ = suitable option)</b>									
<b>Percent Choosing Potentially Unsafe Shelter</b>		<b>23.4</b>		<b>A</b> Seek shelter in an interior room of this building.					
				<b>B</b> Attempt to get to your car to escape the approaching storm.					
<b>Percent Choosing Suitable Shelter:</b>		<b>69.0</b>		✓ <b>C</b> Seek shelter in the nearest depression or ditch, face-down, hands covering head.					
				✓ <b>D</b> Seek shelter in nearest designated "safe" building. (Indicate which one					
				<b>E</b> Other (Please describe):					

# IMPORTANT INFORMATION FOR LOCKOUT / TAGOUT

READ BEFORE SERVICING THIS EQUIPMENT

Equipment Description: \_\_\_\_\_

**This equipment is supplied by these energy sources:**

Energy type: voltage, compressed gas,	Location of isolation/ release/dissipation mechanical, etc.	Verification point: switch, terminal, valve, etc. device
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**All of these must be secured with Jefferson Lab-approved lockout/tagout methods prior to service or maintenance.**

For additional information about this equipment, contact::

Name: \_\_\_\_\_ Tel: \_\_\_\_\_

If checked, see reverse side for additional information.



# What equipment needs machine-specific LO/TO procedures?

**Specific, written procedures are required if any of the following are true:**

- The equipment can store or re-accumulate hazardous energy after shutdown.
  - Pressurized gases or fluids: boilers, refrigeration systems, air compressors
- There are multiple energy sources, or more than one LO/TO point is needed for safety.
  - Control circuits fed from other sources
  - Multiple line-voltage supplies
  - Mix of electrical, pressurized, mechanical energies
- Additional actions beyond LO/TO are needed before work can proceed safely.
  - Bleeding off pressure
  - Discharging motor capacitors
  - Cool-down period for heated surfaces or contents
  - Immobilizing moving parts (large fans, for example)
  - PPE if required
- LO/TO is not under the exclusive control of the person doing the work.
- The maintenance/service work can create hazards to others.
- There has been an accident involving the unexpected activation of this equipment during service.