



Loudoun County, Virginia
Department of Fire, Rescue, and Emergency Management



Communications and Support Services Division
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DATE: September 13, 2008

TO: Chief Joseph Pozzo
Chief of the Department

FROM: Division Chief Richard Bowers *RB*
Meadowood Court Investigative Team Leader

SUBJECT: Meadowood Court Significant Injury Investigative Report

On behalf of the Investigative Team, I am transmitting, the final comprehensive Significant Injury Investigative Report for the Meadowood Court fire incident. The report is a fact based and contains 64 recommendations aimed at improving the Loudoun County Fire and Rescue System.

The report presents an opportunity for the Loudoun County Fire and Rescue System to embrace the contents and implement the recommendations. It is suggested that an Implementation Officer be appointed to oversee and execute the recommendations contained within the report.

The Meadowood Court Investigation Team has also reviewed and ranked the report's recommendations and submits the attached list of priorities for your consideration. The following criterion was used to prioritize the recommendations:

- A rating of 1 indicates a recommended implementation time frame of 12 months or less
- A rating of 2 indicates a recommended implementation time frame of 12 to 18 months
- A rating of 3 indicates a recommended implementation time frame of 18 to 24 months

Certainly, some of the priority recommendations have associated budgetary impacts and their full implementation may need to be phased in over multiple fiscal years.

Also attached is a suggested list of activities for station level personnel. We recommend the list be distributed early next week as personnel read the report, become familiar with recommendations, and focus on what can be implemented at their level and within their control.

I want to take this opportunity to acknowledge the outstanding work performed by the Investigative Team members. The Team remained focused during the process and was goal oriented to provide a comprehensive report. I am proud of their efforts! Additionally, I want to thank you for my opportunity to be involved with this process. Feel free to contact me if you have any questions regarding the content of this transmittal memo or the Investigative Report.

Attachments (2)

Recommendations – Prioritized

Rating Scale:

- 1 = initiate and/or complete within 12 months
- 2 = initiate and/or complete within 12 -18 months
- 3 = initiate and/or complete within 18 – 24 months

Operations		Rating
1.	Increase the System-wide minimum staffing level to at least four qualified firefighters on all fire suppression units, including engine, truck, and rescue companies.	1
2.	Develop and implement System-wide procedures that address modifications to the arrival sequence and/or original dispatch complement.	1
3.	Develop and implement System-wide policies and procedures that address the actions required of EMS units upon arrival at a structure fire.	2
4.	Develop and implement System-wide training that addresses the roles and responsibilities of EMS officers during fire incidents	2
5.	Review the County’s EMS protocols, specifically those related to helicopter transports and burns.	2
6.	Increase staffing at the Command Post by developing incident management teams.	1
Firefighter Safety		
7.	Develop and implement formal, System-wide, policies and procedures related to Two-In/Two-Out compliance	1
8.	Reiterate the importance of visualizing the entire structure prior to making entry.	1
9.	Develop a System-wide training program that focuses on situational awareness, particularly how to “read” interior and exterior smoke conditions to identify the location and predicted spread of a fire.	1
10.	Implement ongoing, mandatory, System-wide training on NOVA MAYDAY procedures and self-survival techniques	1

11. Develop System-wide quick-reference guides for all command vehicles that address low-frequency, high-risk incidents, including MAYDAY situations, building collapse, etc.	1
12. Reprogram the portable radios so that the microphone is automatically open for a period of time after the EA is depressed.	1
13. Develop ongoing, System-wide training programs to reiterate the importance of transmitting an EA as soon as firefighters realize they are in trouble.	1
14. Develop and implement formal, System-wide policies and procedures addressing the withdrawal and emergency evacuation of firefighters from structures during emergency incident operations.	1
15. Reiterate that Incident Commanders must take care not to issue conflicting orders on the fireground (e.g., evacuating the structure while sending in a Rapid Intervention Team).	1
16. Develop ongoing, System-wide training programs that reinforce the actions expected of units assigned RIT, which are consistent with the NOVA <i>RIT Manual</i> .	2
17. Adopt policies and procedures that require the formation of a RIT Group as soon as the RIT is activated.	1
18. Develop ongoing, System-wide training programs that reinforce the importance of acknowledging assignments on the fireground by echoing the transmission over the radio or face-to-face.	2
19. Develop and implement System-wide policies and procedures related to personnel accountability.	1
Communications	
20. Perform a comprehensive gap analysis of policies and procedures in the ECC and establish policies, procedures, and processes as necessary.	1
21. Modify the radio channel template to group, or "band," radio channels together by incident.	2
22. Modify the CAD nature codes so that structure fires automatically generate a law enforcement response for scene and traffic control.	3

23. Evaluate and adjust ECC staffing levels to support the System's emergency communications needs.	1
24. Review current ECC policies, procedures, and processes to reduce dispatch delays.	1
25. Develop and implement formal policies and procedures that define when to establish a Command Channel.	1
26. Reevaluate existing policy and current practice, which allow units to add-on or divert to calls at any point in the incident	1
27. Develop and implement formal policies and procedures that define NIMS-compliant Task Forces, Strike Teams, and other specialized dispatch complements.	2
28. Number units according to the station to which they are assigned.	2
29. Adopt a NIMS-compliant mechanism to type apparatus and assign designations, consistent with the system adopted by the Metropolitan Washington Council of Governments (MWCOG).	2
30. Reiterate that personnel must be cognizant of the assigned radio channel and ensure that their portable radio is on the correct channel.	1
31. Develop and implement System-wide training programs that reinforce the importance of radio discipline.	2
32. Check all of the consoles in the ECC to ensure that the pre-emption switches are activated and functioning properly.	1
33. Have a subject matter expert perform a detailed technical analysis of the radio system and all of its components to identify and correct deficiencies.	3
34. Develop System-wide training programs that reinforce the importance of accurately repeating messages over the radio.	1
Behavioral Health	
35. Develop and implement formal policies and procedures that define situations where CISM should be requested, how the Team should be notified, and the Team's roles and responsibilities.	2
36. Develop standardized training for Department employees and supervisors identifying services available through EAP and methods to access those services.	2

37. Develop a System-wide behavioral health program which includes immediate, short, and long-term counseling services for fire and rescue personnel and their families.	1
Training	
38. Develop and implement System-wide, entry-level and ongoing firefighter self-survival training that at a minimum addresses RIT, flashover, MAYDAY procedures, crew integrity, ladder bails, emergency SCBA procedures, firefighter drags and carries, and practical scenario-based evolutions.	1
39. Review and enhance the System's entry-level and ongoing training on building construction to emphasize the unique characteristics of lightweight construction and associated special hazards. (e.g., open floor plans, Herculite ®, etc.).	1
40. Develop and implement an ongoing, System-wide officer development training and continuing education program.	1
41. Develop and implement a centralized, standardized System-wide record-keeping system for all training-related records.	2
Apparatus and Equipment	
42. Develop System-wide policies and procedures that address the responsibilities associated with each riding position on fire/rescue apparatus and the tools and equipment to be carried, based on call type.	2
Uniforms and PPE	
43. Develop a System-wide policy that requires personnel to wear two layers of 100 percent cotton garments.	2
44. Develop and implement System-wide policies and procedures that require personnel to properly don PPE before entering an IDLH atmosphere.	1
45. Adopt System-wide policies and procedures that prohibit personnel from wearing PPE that is not issued.	1
46. Develop and implement a System-wide procedure that requires the regular inspection, repair, and cleaning of issued PPE.	1

47. Reinforce the importance of proper PPE usage during emergency operations to ensure that personnel receive the highest protective benefit possible.	1
48. Modify gear specifications to relocate the reflective striping away from compression areas and require additional layers of thermal protection on the bunker coat sleeves.	2
49. Finalize, adopt, and implement a Respiratory Protection Program Manual.	1
50. Develop and implement a System-wide policy that requires personnel to don SCBA prior to entering an IDLH atmosphere or when they may be exposed to an IDLH atmosphere.	1
Additional Considerations	
51. Develop and implement System-wide administrative and operational procedural manuals.	2
52. Recommendation: Develop and implement a communication process to distribute newly adopted policies and procedures.	2
53. Develop and implement System-wide protocols that address the unique challenges of treating injured firefighters.	2
54. Develop and implement System-wide policies and procedures that address response to a serious firefighter injury or fatality, including required notifications and the investigation of the incident.	1
55. Establish a System-wide policy, which clearly defines the certifications required for entry into an IDLH atmosphere and provides mechanisms to readily differentiate personnel on the fireground.	1
56. Develop and implement ongoing, System-wide competency-based training for all rank levels.	2
57. Develop and implement a standardized System-wide apparatus specification and design standard and equipment inventory for fire, rescue and EMS units.	2
58. Develop and implement a standardized, System-wide apparatus and equipment check-out policy for all apparatus in the County.	1
59. The fire service should work with SCBA manufacturers to reduce the vulnerability of SCBA components, particularly those made of plastic and rubber, to heat and adverse conditions.	2

60. The fire service should work with the portable radio industry to make EA buttons more user-friendly while avoiding unintentional activations.	2
61. Encourage a national effort to minimize reflective striping on structural firefighting PPE from areas of possible compression (e.g. forearms).	2
62. Develop and implement a standardized community outreach fire and injury safety prevention program that addresses when and how to conduct community canvasses after significant fire events.	2
63. Develop and implement educational opportunities for citizens that provide direction on what to do in the event of an emergency in their home or community.	3
64. Encourage the development of a sprinkler ordinance through the legislative process.	1



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**Significant Injury Investigative Report
Recommendations for Station Level Actions**

Building Construction

- Visit active new construction sites and review building construction components. Coordinate visits with the site managers and wear appropriate PPE for site safety requirements.
- Visit existing structures and review building construction components.

Accountability

- Review accountability procedures and ensure unit passports are in compliance at the beginning of shifts and update when personnel changes occur.
- Ensure you know who to report while functioning within the incident command system.
- Ensure compliance with the Accountability System when operating on incidents.

Crew Integrity

- Maintain crew integrity during incidents.
- Ensure all fireground activities are coordinated.
- Maintain operational discipline.

Emergency Evacuation

- Comply with evacuation processes, and ensure no reentry without authorization from the incident commander.
- When acting as an incident commander, ensure you are prepared to call for an emergency evacuation.

MAYDAY

- If lost, disoriented, entangled, or any other situation where your immediate exit from an IDLH environment is hampered, make a MAYDAY radio transmission. Utilize the EA button.
- Perform training drills on calling a MAYDAY using the format in the NOVA RIT Manual (section 10.2.3).
- Practice strict radio discipline whenever there is an active MAYDAY on an incident.
- When acting as an incident commander, ensure you are prepared to respond to a MAYDAY call.

RIT/Rescue Operations

- Review and perform training drills on the NOVA RIT Manual.
- Ensure your company is aware of the roles and responsibilities of the RIT and be prepared to assume the duties if assigned. request a RIT Level II if you are running as the IC.

RIT/Rescue Operations (continued)

- When acting as an incident commander, ensure you assign resources as RIT as dictated by the incident.
- When acting as an incident commander, ensure you assign appropriate RIT group within the command system structure as dictated by the incident needs.

Strategy and Tactics

- Review and practice size-up and situational activities and reporting.
- Ensure you are prepared to change mode of operations and announce the same.

Incident Command

- Review incident command procedures with all personnel.
- Practice during drills.
- Review the communication chain to be utilized while operating within the incident command system.

Radio Operations

- Review radio operations.
- Ensure adequate inventory of working portables.
- Ensure every riding position has a portable.
- All personnel are to have a radio with a fresh battery at the beginning of the shift.
- Ensure you are on the correct radio channel.
- Ensure you echo orders and confirm accuracy of the transmission.
- If you are out of response position, announce response location when it may affect your order of arrival.

PPE

- Reinforce and ensure proper wearing of all PPE.
- Conduct monthly PPE inspections.
- Conduct appropriate cleaning of all PPE.

SCBA

- Reinforce and ensure performance of manufacturer's recommended functional check outs.
- Ensure you receive your annual fit test.
- Review the operations of the PASS device.
- Activate the PASS device if you are in a MAYDAY situation.
- Practice active listening on the incident scene for and PASS activations.
- Reiterate the need to evaluate any PASS activation.