CLOSE CALL/HAZARD REPORT

Firefighter Mayday
1803 Hunting Cove Place
September 6, 2008

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Executive Summary:

On Saturday, September 6, 2008, at 1731 hours, Fairfax County Fire and Rescue Department units and units from the City of Alexandria Fire Department responded to a house fire in Box 1191 at 1803 Hunting Cove Place, in the New Alexandria neighborhood of Fairfax County.

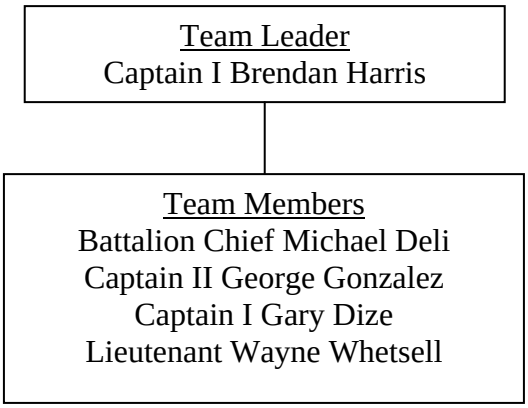
The Operations Deputy Chief and his Aide, a Battalion Chief in training as the Relief Operations Deputy Chief, were only a few blocks from the incident when it was dispatched. They responded to the incident and arrived on scene first, reporting no fire evident. The Operations Deputy Chief remained in his vehicle in the street, established command, ordered the Aide to perform a physical reconnaissance of the structure and situation (take a lap) and report his findings. As the Aide approached the structure, he was met by the occupants of the home who reported that all occupants were out of the home and an automobile inside an attached two-car garage was on fire. The Aide reported this information via radio to Command and requested an attack line be stretched up the driveway to the garage. The garage was on side Alpha, located on the basement level of the two-story home with both overhead doors in the up or open position. The Incident Commander appointed the Aide as the Fire Attack Group Supervisor. The Aide positioned himself in the driveway on side Alpha and the first-due firefighting companies soon began to arrive at his location.

Engine, Truck, and Rescue 411 arrived at the Fire Attack Group Supervisor's location simultaneously. An attack line was stretched to the garage by Engine 411. Before the attack line was charged, the Officer-In-Charge of Engine 411, in full PPE with SCBA donned, entered the garage alone to clear a path to the front of the auto to access the engine compartment for extinguishment. Neither of the two overhead garage doors was secured in the open position. Shortly after Engine 411's OIC entered the garage, the overhead garage doors closed under the power of their electric motors, trapping Engine 411's OIC in the garage alone, without hose line protection. Once realized, the Fire Attack Group Supervisor sent a Mayday message to the Incident Commander and ordered the crews of Engine, Truck, and Rescue 411 to focus entirely on the rescue of Engine 411's OIC.

The closed overhead doors were quickly breached with hand tools and Engine 411's OIC was removed. E411's Officer was uninjured during the event however; one firefighter received smoke inhalation during the rescue effort and was transported by Medic 411 to Mt Vernon hospital for further treatment. A routine course of action followed that quickly extinguished the fire and brought the incident under control

Investigation Team:

The Firefighter Injury Investigation Team was activated on September 7, 2008, to investigate the circumstances that occurred during the incident. The team was assembled under the direction of Battalion Chief Daniel Gray who appointed Captain I Brendan Harris as the Team Leader.



Investigative Tasks

- Review all written statements.
- Conduct follow-up interviews as needed.
- Review pictures.
- Review information regarding similar incidents within the fire service.
- Review all relevant departmental procedures, operational manuals and other pertinent documents for insight into the need for preventative action and procedural changes by the department.

Incident Information

Date:	September 6, 2008
Dispatch Time:	1730 Hours
Incident number:	20082502238
Incident Address:	1803 Hunting Cove Place
Fire Box number:	1191

Weather[1]:

Time	1730 Hours
Temperature:	75.2° F
Precipitation:	None
Wind:	NW 24.2 MPH
Sky:	Overcast
Humidity:	78%

1. Wunderground.com, Dulles Airport, VA.

Dispatch Information:

House Fire: 1803 Hunting Cove Place.

First Alarm Units:

17:30: E411, E205, E409, E201, T411, T204, M411, EMS 405, EMS 402, BC405, BC212

Additional units added on to call: DFCO-C, SAF401, R411, A411

Second Alarm Units:

17:39: E204, E207, E414B, TL424, M205, LA207, CAN402 EMS404**,** BC212

Investigations:

18:30: IV06, IV03

Findings, Contributing Factors, and Recommendations:

1. Command:

Findings:

Rescue 411's crew received conflicting orders by the Fire Attack Group Leader after receiving an assignment from the Incident Commander.

Contributing Factors:

Battalion 406-C was riding with DFCO-C for training and was acting as his aide. Upon their arrival at the incident scene, the DFCO assumed command and sent the aide (BC406) to make a lap of the structure. When BC406 reported back to command he was assigned the Fire Attack Group Supervisor.

Rescue 411 checked in with the Incident Commander and was given the task of controlling utilities under the Fire Attack Group Supervisor. As R411's crew reported to the Fire Attack Supervisor, they were given the order to enter the structure and check the interior door leading from the garage. This created confusion because the conflicting order was given to the crew members and not the unit officer.

Recommendations:

Orders should be given to unit officers to ensure they are understood and carried out as requested. When conflicting orders are issued, company officers need to inform the Division Leader of the conflicting order. The Division leader can then confer with the Incident Commander and confirm the correct order to be carried out. This will avoid confusion and further ensure crew accountability.

Reference:

Northern Virginia Fire and Rescue Department's Command Book:

1.12.2.2 *It is imperative that the strategy is communicated down through Operations to the Division, Group, and Single Resource level. This is essential if supervisors are to coordinate incident tactics and tasks. More specifically, the IC and Operations Chief must ensure that all resources are cognizant of the mode of operations whether it be offensive, defensive, or in transition between one of the two modes.*

2. Water Supply:

Findings:

Engine 411 did not lay a supply line into the incident scene.

Contributing Factors:

Engine 411 did not lay a supply line requiring the driver to hand drag a supply line back to the hydrant. On the scene, an attack line was deployed by the Engine crew. The line was not properly deployed, which resulted in other members on the scene having to assist with clearing and removing kinks in the line to be charged. Additionally, when the order was given to charge the line, the driver was away from the pump panel completing the water supply and did not hear the order. This caused a delay in getting the line in service to attack the fire.

Recommendations:

Engine Operations Manual

Reinforce Engine Company Operations 4.11.2 *It is the first-due engine's responsibility to lay the supply line. When possible, the first-due engine company should forward lay the supply line. However, in some situations this may be impractical and a reverse or split lay may be utilized. The old adage, "WHEN IN DOUBT, LAY IT OUT" seems to apply.*

3. Crew Continuity:

Findings:

Engine 411's Officer entered the IDLH by himself to remove obstacles around the vehicle to allow access for extinguishment without the protection of a hose line.

Contributing Factors:

The OIC elected to enter the garage alone to prepare for the fire attack. At this time, the garage doors were raised and visibility was good with moderate smoke conditions. Moments later, the doors closed and the officer was trapped in the garage separating him from his crew. Conditions worsened reducing visibility and posing greater danger created by the vehicle burning inside the now closed garage.

Recommendations:

The two-in/two-out rule is applicable to those incidents (during the initial stages of operations) where there may be a hazard to firefighters entering an immediately dangerous to life and health (IDLH) area

As stated in the Personnel Accountability System Chapter 4.

All firefighters operating within any hazardous are required to:

1. Operate in teams of two or more.
2. Maintain constant communication with each team member through visual, audible, and physical safety devices or electronic means.
3. Maintain close proximity to each other to provide assistance in case of an emergency.

4. Mayday Procedures:

Findings:

Engine 411's Officer entered the garage alone under good visibility to clear a pathway and make an access point on the engine compartment for the hose line stream. The garage doors closed, trapping the officer inside while conditions rapidly changed to zero visibility.

Contributing Factors:

The Fire Attack Group Supervisor was unaware that Engine 411's Officer was inside the garage, until he was advised by other firefighters. Simultaneously, the Fire Attack Group Supervisor heard someone kicking the garage door from the inside. The Fire Attack Group Supervisor advised command that he was declaring a Mayday for Engine 411's Officer trapped in the garage. Although the Fire Attack Group Supervisor declared a Mayday, the majority of firefighters on the scene were unaware of the Mayday event. Engine 411's Officer did not call for a Mayday once he realized he was trapped in the garage.

Recommendations:

The proper Mayday procedure found in the Rapid Intervention Team Command and Operational Procedures Manual lists the proper "Mayday" procedure as follows:

Activate the Emergency Activation Button (EAB), if possible, and use the established "Mayday" procedure. By activating the EAB, the dispatcher will be alerted that the unit is in trouble and can notify command of the alert. This will help increase the awareness Level of the "Mayday" and decrease the possibility of command not hearing the "Mayday" calls. Anyone can call a MAYDAY, but proper procedures need to be followed ensuring the greatest chance that it will be acknowledged.

The Mayday transmission shall follow this sequence in order to assure good information and the flow of command.

"Mayday, Mayday, Mayday
Unit number repeated three times (Engine 407, Engine 407, Engine407)
Location (we are on floor 12, quadrant B-Baker)
Nature of emergency (we have been cut off by collapse, one member is missing etc)
Mayday, Mayday, Mayday, command acknowledge"

After calling a "MAYDAY", activate the microphone on your portable and briefly transmit the PASS device alarm to get the attention of other firefighters or command. After making the radio transmission, turn your PASS device to the "on" position to sound the alarm.

Additionally, a procedure should be in place for members transmitting a Mayday for a fellow firefighter. In situations where it is known or suspected that a Firefighter is lost, trapped or in imminent danger, the timely transmission of a Mayday is crucial. A procedure that defines the action steps and radio transmissions necessary to effectively transmit a Mayday for an endangered Firefighter should be included in the Rapid Intervention Team Command and Operational Procedures Manual

5. Garage Doors:

Findings:

Both garage doors closed under their own power trapping Engine 411's Officer inside the garage.

Contributing Factors:

Crews failed to secure the open garage doors upon their arrival. Both of the garage door controllers were preprogrammed to the vehicle's computer and located in the engine compartment. Investigation reveals that fire originated in the engine compartment where the door sensors were located supplying powering the garage door opener.

Recommendations:

EMERGENCY OPERATIONS MANUAL VOLUME II - STRUCTURAL FIREFIGHTING: Single-Family Dwellings

1) ***6.8.1*** *The objective when attacking fires that originate in an attached garage is to confine and extinguish the fire from the unburned area of the structure, secure the overhead door in the open position, and prevent extension of the fire to the living area.*

2) ***6.8.8*** *Breaching the overhead door in the center about three quarters of the way up from the bottom, can at times provide access to the overhead door manual release. If the manual pull cord is still intact, it may be within reach of the opening made in the door. Pull the cord to disengage the door from the motor, and allowing the door to then be raised.*

EMERGENCY OPERATIONS MANUAL VOLUME II – STRUCTURAL FIREFIGHTING: Residential and Commercial Townhouse Fires

1) ***4.3.11*** *Overhead garage doors, if not chocked open, can close on crews operating on the interior of the garage, trapping them inside.*

2) ***6.8.1*** *The objective when attacking fires that originate in an attached garage is to confine and extinguish the fire from the unburned area of the structure, secure the overhead door in the open position, and prevent extension of the fire to the living area.*

6. PPE/SCBA:

Findings:

A member of Rescue 411's crew failed to properly don his PPE/SCBA prior to assisting in rescue operations in the IDLH.

Contributing Factors:

Upon learning that Engine 411's Officer was trapped inside the garage, a member of R411 proceeded to assist with the rescue attempt in gaining access through the garage doors without properly donning his protective clothing and SCBA. During the process of gaining access, the Firefighter received cuts to the hands and suffered smoke inhalation requiring him to be transported to the hospital for evaluation.

Recommendations:

Crews attempting to force or gain entry into an IDLH must be prepared for toxic conditions and don PPE prior to any attempt to gain entry.

RESPIRATORY PROTECTION PROGRAM MANUAL (2nd Edition)
29 CFR 1910.134

1) ***5.2 Interior Structural Firefighting***. *All personnel engaged in interior structural firefighting shall use department-approved SCBAs.*

2) ***5.2.1 IDLH atmospheres***. *An IDLH atmosphere is any area where the atmosphere poses an immediately danger to life and health. It is further defined as an atmosphere where the need for SCBA or SABA is needed in order to sustain life.*

7. Tools and Equipment for Rescue:

Findings:

Supplemental information stated that a vehicle was on fire in a garage. Crews arrived at the structure with only basic hand tools.

Contributing Factors:

Garage doors are constructed of many different materials; hand tools alone may not be sufficient for forcible entry. Tools should also be utilized to ensure the doors are secured open, i.e., channel locks, pike poles and chain saws. Additionally, vehicle(s) parked inside pose an additional threat of a running fuel fire or related flammable liquids fire.

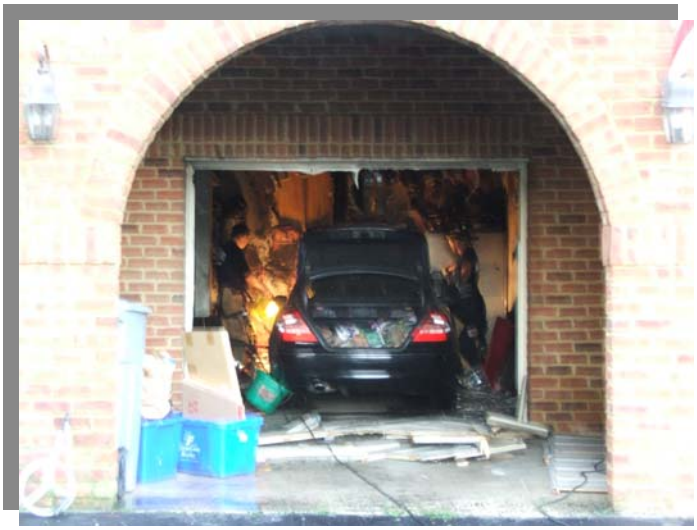
Recommendations:

Truck and Rescue companies should consider the need for power tools and specialty tools to safely secure open the doors when dealing with garage fires. The need for special tools and equipment should be part of the initial size up made by company officers prior to engaging in incident scene operations. Scenarios requiring tools for specific needs can also be addressed in station level training and multi-unit drills.

Photographs:

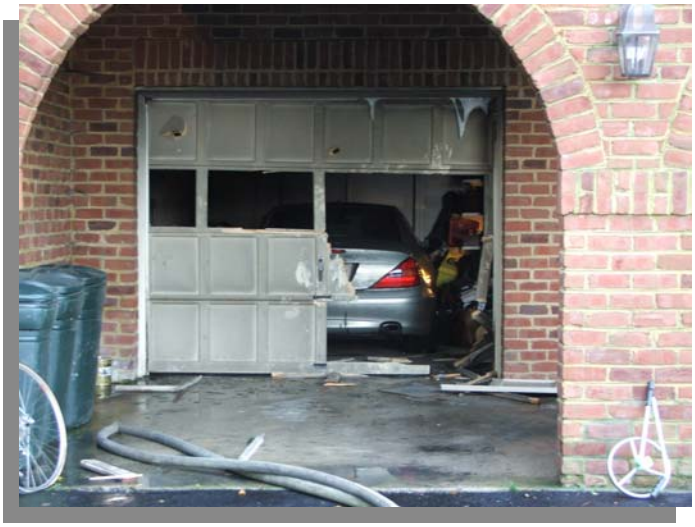
1803 Hunting Cove Place September 6, 2008

Garage Door Right



Door Opener Above Right Door

Garage Door Left



Alpha Side

Work Cited

1. Wunderground.com, Dulles Airport, VA

2. Northern Virginia Fire and Rescue Department's Command Book 1.12.2.2

3. Engine Operations Manual 4.11.2

4. NOVA "RIT Command and Operational Procedures"

5. Emergency Operations Manual Volume II – Structural Firefighting: Single-Family Dwelling 6.8.1

6. Emergency Operations Manual Volume II – Structural Firefighting: Single-Family Dwelling 6.8.8

7. Emergency Operations Manual Volume II – Structural Firefighting: Residential and Commercial Townhouse Fires 4.3.11

8. Emergency Operations Manual Volume II – Structural Firefighting: Residential and Commercial Townhouse Fires 6.8.1

9. Respiratory Protection Program Manual (2nd Edition) *5.2* (*29 CFR 1910.134)*

10. Respiratory Protection Program Manual (2nd Edition) 5.2.1 *29 (CFR 1910.134)*

Appendix B: Safety Position Statement

Safety Position Statement:

1. All Personnel should review policy and procedure to ensure safe and successful operations in the following:
    a. Laying supply hose lines at incident scenes.
    b. Receiving conflicting orders.
    c. Proper Personal Protective Equipment and SCBA use.
    d. May Day lost/trapped firefighter procedures.
    e. Garage doors – forcing and securing during emergency incidents.
    f. Personnel Accountability Manual.
    g. Responsibility of Tactical Command.

2. Policy and procedure review may be presented through in-station training, OARS, MUD drills, the Training Matrix or other mediums. Post Incident Critiques as well as a review of past Close Call reports is essential to recognize and prevent repeated infractions in promoting safety on all emergency incidents.

3. A procedure that defines the action steps and radio transmissions necessary to effectively transmit a Mayday for a fellow firefighter should be included in the Rapid Intervention Team Command and Operational Procedures Manual.