

**Prince William County
Fire and Rescue Association**

**Line of Duty Death
Investigative Report**



Firefighter Recruit Cecilia Turnbough

November 9, 2008

On November 9, 2008, Firefighter Recruit Cecilia Turnbough of the Dale City Volunteer Fire Department died during an entry level Firefighter I certification class that was being conducted at the Prince William County Public Safety Training Center.

Cecilia Turnbough (Robles) was born on October 13, 1966 in Redondo Beach, California, the youngest of six sisters. She graduated from Mira Costa High School in Redondo Beach in 1984. She attended two years at a local community college before marrying Chris Turnbough, her high school sweetheart, on September 20, 1987.

When Chris decided to join the United States Marine Corps, Cecilia accompanied him throughout his career, with assignments at Camp Pendleton, California; San Angelo, Texas; and Molesworth England. Her son Richie was born in Long Beach, California in 1989 and is now serving in the United States Navy. Her daughter Rebecca was born in England in 1996, and her son Jack was born in England in 1997.

Following her husband's career, the Turnbough family ultimately settled in Dale City, Virginia in 1999. Always civic minded, Cecilia joined the Dale City Volunteer Fire Department in 2000 where she successfully completed Emergency Medical Technician – Basic (EMT-B) training.

Cecilia also worked at the Mount Vernon Ladies' Association as a Guest Services representative and Accounting representative. Using her EMT training, she served as a First Responder supporting both visitors and staff at Mount Vernon (George Washington's Homestead).

Wishing to further her civic volunteer efforts, Cecilia was undergoing Firefighter I training with the Dale City Volunteer Fire Department at the time of her untimely and unfortunate death.

She is survived by her three children: Rich, Rebecca and Jack.

The entire Fire and Rescue family would like to express its condolences to Firefighter Recruit Turnbough's family.



Executive Summary

This Line of Duty Death (LODD) Investigative Report is dedicated to Firefighter Recruit Cecilia Turnbough.

This report was developed in a coordinated effort between agencies within Prince William County and other fire and rescue departments similar to Prince William County. The objective of the LODD Investigation Team was to examine the events that occurred at the Prince William County Public Safety Training Center and to identify the factors involved with the line-of-duty death of Firefighter Recruit Cecilia Turnbough. The Investigation Team has reviewed all available information at the time of publication and documented the factual findings, discussions, and recommendations in an effort to prevent another incident of this magnitude from occurring again.

To aid in preventing similar incidents, an assessment of the cause of death and the organization as a whole was necessary. This report represents an extensive effort to analyze the procedures, policies, training curriculum, and instructor program with recommended improvements. These organizational improvements vary in complexity and many may have long-term impacts on the service as a whole. This report provides recommendations, that when enacted, will improve the health and safety of the students and instructors assigned to the Public Safety Training Center and the entire fire and rescue system.

The National Institute for Occupational Safety and Health (NIOSH) has performed an independent investigation of the training incident and will be filing their own report. The Virginia Occupational Safety and Health (VOSH) has elected not to investigate this event.

As a result of the interviews and a study of the documentation, the Investigation Team has separated the recommendations into the following six categories:

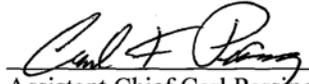
- Medical Evaluation
- Health and Safety
- SCBA/Respiratory Protection
- Firefighter I Maze/Training Props
- Firefighter I Training Program
- Instructor Cadre Program

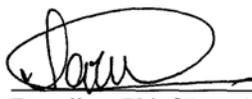


LODD Investigation Team

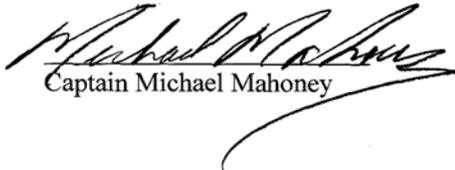
As members of the LODD Investigation Team for Firefighter Recruit Cecilia Turnbough, we agree with the findings and recommendations outlined within this report. We respectfully submit this report to the Fire and Rescue Association in hopes that the recommendations will be acted upon in order to prevent another tragic event from occurring in the future.


Battalion Chief Tim Keen

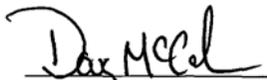

Assistant Chief Carl Persing

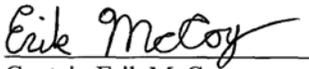

Battalion Chief Dennis Wenner


Assistant Chief Tony Carroll


Captain Michael Mahoney


Captain Shawn Crispin


Captain Doug McCabe


Captain Erik McCoy

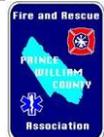


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Acknowledgements

The Prince William County Fire and Rescue Association wishes to thank the following individuals for their effort through the process of examining the circumstances involved in Firefighter Recruit Cecilia Turnbough's line of duty death. By sharing this report, it is the Fire and Rescue Association's goal to educate all first responders and improve the health and safety of training activities.

LODD Investigation Team Members

Battalion Chief Tim Keen, Team Leader
Prince William County Department of Fire and Rescue
Office of Health and Safety

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Dale City Volunteer Fire Department
Dale City Volunteer Fire Department Representative

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Prince William County Department of Fire and Rescue
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Captain Doug McCabe
Prince William County Department of Fire and Rescue
Office of Health and Safety

Captain Erik McCoy
Prince William County Department of Fire and Rescue
Operations



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Prince William County Department of Fire and Rescue
Fire Marshal's Office

Prince William County Police Department
Crime Scene Unit and Violent Crimes Unit

Prince William County Office of Public Safety Communications

Prince William County Department of Fire and Rescue
Breathing Apparatus Services Shop

Prince William County Department of Fire and Rescue
Management Services Staff

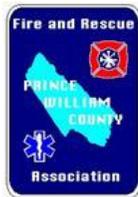
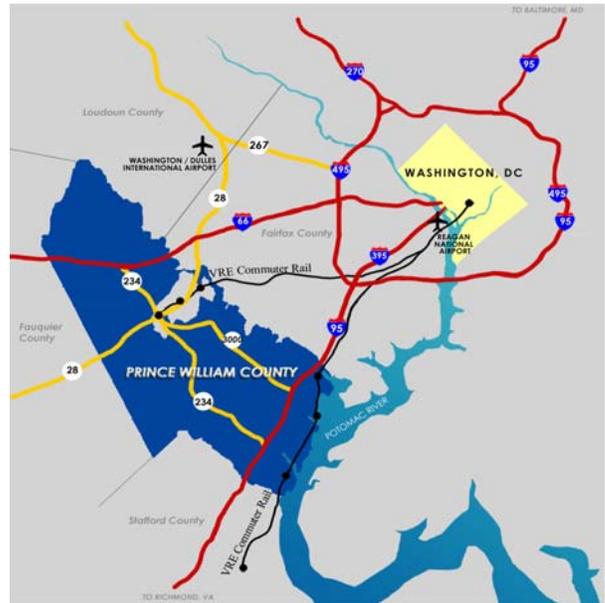


Fire and Rescue Service Overview

Prince William County, Virginia

Prince William County is a rapidly developing urban, suburban and rural community located 35 miles southwest of Washington, D.C. The County encompasses 348 square miles with two independent cities, a Marine Corps base, and two National Parks. The current population is estimated at 381,221.

Prince William County's fire and rescue services are provided by a combination career and volunteer system. The career Department of Fire and Rescue and twelve independent volunteer fire and rescue organizations¹ make up the Fire and Rescue Association where collectively they work together to staff 20 fire stations 24 hours a day, seven days a week. In Fiscal Year 2008, Fire and Rescue responded to 38,316 incidents which encompassed an estimated 81,816 unit responses.



Fire and Rescue Association

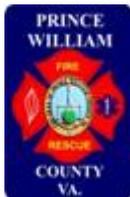
The Fire and Rescue Association consists of the Department of Fire and Rescue and each volunteer fire and rescue company lawfully established and organized in the County. The Chief of the Department of Fire and Rescue and an elected Volunteer Chief serves as chairman and vice-chairman of the Fire and Rescue Association. The Fire and Rescue Association's Board of Directors consists of the Department's next senior ranking uniformed officer and one uniformed employee below the rank of

¹ The narrative represents the organizational structure at the time of the incident. On January 16, 2008, the Board of County Supervisors dissolved the Gainesville Volunteer Fire Department (GVFD) and directed the Department of Fire and Rescue (DFR) to maintain facility and administrative operations. The two fire stations in this former district are now owned and operated by Prince William County. As a result of this action, there are 11 volunteer companies and 14 members of the Fire and Rescue Association.



lieutenant, along with the chiefs of each volunteer company. Including the chairman, there are 15 members on the Board of Directors².

The Fire and Rescue Association is the governing body of all fire and rescue services in the County. It provides for the administration and coordination of all these services. It makes recommendations as to the boundaries of any fire and rescue service areas and evaluates the overall facility, equipment, and budgetary needs of the total fire and rescue system. The Fire and Rescue Association formulates policies, standards and guidelines for the location, design, and construction of new stations, and the acquisition and disposition of apparatus. The County's Capital Improvement Program identifies investments to construct new fire stations and renovate existing fire stations to improve fire and rescue response times. While the Fire and Rescue Association is responsible for the overall facility and equipment needs, the volunteer departments maintain autonomy and routinely exceed the base standards established by the Fire and Rescue Association thereby customizing their stations, apparatus, and equipment.



Department of Fire and Rescue

The Department of Fire and Rescue is led by Chief Kevin McGee. The Prince William County Department of Fire & Rescue is a dynamic organization that is rapidly expanding to meet the needs of the citizens and visitors of Prince William County. The approximately 500 plus men and women of the Department of Fire and Rescue, in partnership with the Fire and Rescue Association, staff 20 fire and rescue stations. The Department has a relatively small fleet of apparatus consisting mainly of advanced life support units, training apparatus, and staff vehicles. The majority of the stations have volunteer owned apparatus that are staffed and operated by career personnel. The Department provides staffing for administrative sections, a training center, logistics/supply warehouse, Candidate Physical Ability Test (CPAT) center, and a Self Contained Breathing Apparatus (SCBA) repair and maintenance facility. The highly-trained staff is assigned to one of four divisions which are Community Safety, Office of the Chief, Operations, and Systems Support. These divisions help the Department reach its goals, which support the County's Strategic Plan.

² The narrative represents the organizational structure at the time of the incident. On January 16, 2008, the Board of County Supervisors dissolved the Gainesville Volunteer Fire Department (GVFD) and directed the Department of Fire and Rescue (DFR) to maintain facility and administrative operations. The two fire stations in this former district are now owned and operated by Prince William County. As a result of this action, there are 11 volunteer companies and 14 members of the Fire and Rescue Association.



Public Safety Training Center

The Prince William County Public Safety Training Center (PSTC) is a combined Police and Fire and Rescue Academy. The Fire and Rescue operation at the facility is managed by a Department of Fire and Rescue Battalion Chief who oversees the day to day operations of the center. The PSTC is in operation seven days a week, approximately 350 days a year.

The Prince William County Department of Fire and Rescue Training Division is responsible for fire, rescue and EMS training for career and volunteer members. The PWCDFR is a Delegated Authority for the Virginia Department of Fire Programs and is an accredited EMS Training Facility as outlined by the Virginia Office of EMS.

Firefighting classes that the PSTC is authorized to teach include Firefighter I & II, Driver Operator, Instructor 1 & 2, Officer 1 & 2, and several other fire related courses. Emergency Medical Service classes that the PSTC is authorized to teach include EMT-I, EMT-B, ALS and BLS Protocols, CPR and several other related courses. These fire and rescue courses are instructed by both an Instructor Cadre group that mainly instructs the firefighting class and an outside contractor that conducts EMT-B and EMT refresher classes for the volunteers as well as the CME program for the ALS providers.



Incident Summary

On November 9, 2008, a Volunteer Firefighter I training program was being conducted at the Prince William County Public Safety Training Center. On this day, the students were being instructed on the proper techniques to overcome obstacles and entry into the maze while using full PPE and SCBA. The components for this class consisted of the following:

- Classroom
- PPE Dressing Drills
- Hose Maze
- SCBA skill station/low profile
- Maze practical

Firefighter Recruit Cecilia Turnbough was a student in this Volunteer Firefighter I class and had completed all components leading up to the maze practical.

Firefighter Recruit Turnbough started breathing air from her SCBA at 1414 hours and entered the maze at approximately 1417 hours with 4260 pounds of air in her SCBA cylinder. While moving through the maze, the instructors remained in voice contact with Firefighter Recruit Turnbough up to the point where she entered the incline/decline section of the maze.

At approximately 1438 hours, the instructors realized Firefighter Recruit Turnbough was having some problems in the maze, and they went into the incline/decline section of the maze to remove her.

According to the information from her MSA ICM, Firefighter Recruit Turnbough stopped breathing air from her SCBA at 1438 hours and her PASS alarm activated due to lack of motion at 1439 hours.

When the instructors reached Firefighter Recruit Turnbough, she did not respond to verbal commands and was unresponsive. The two instructors inside of the maze attempted to remove Firefighter Recruit Turnbough prior to notifying the other instructors of the emergency. When the third instructor entered the maze, he was informed of the emergency and was directed to call 911. The fourth instructor dialed 911 at 14:45:35. Firefighter Recruit Turnbough was removed from the maze at approximately 1449 hours and CPR was started by the instructors. Medic 525 arrived on the scene and started Advanced Life Support care. Firefighter Recruit Turnbough was transported to Prince William Hospital where resuscitation efforts continued. Firefighter Recruit Turnbough was pronounced dead at 1537 hours.



Cause of Death

Due to the circumstances involving Firefighter Recruit Cecilia Turnbough's death, Prince William Hospital contacted the Virginia State Medical Examiner's Office and asked that an autopsy be performed. The Medical Examiner's Office agreed and took custody of her body on November 10, 2008.

The autopsy report, number 575-08, Office of the Chief Medical Examiner of Virginia, listed several pathological diagnoses. These diagnoses were:

- Arrhythmogenic Right Ventricular Cardiomyopathy/Dysplasia
- Obesity
- Asthma
- Hypertension
- Hypothyroidism
- No significant injury

The medical examiner determined the cause of death to be Arrhythmogenic Right Ventricular Cardiomyopathy/Dysplasia and the manner of death to be natural.

Pre-Incident Information

Temperature: 57 degrees Fahrenheit
Wind: North 7 MPH
Skies: Overcast
Dew point: 32 degrees Fahrenheit

Conditions were within acceptable limits based on FRA policy 9.1.3... *Training Guidelines During Extreme Environmental Conditions.*

Emergency Recommendation

At the December 8, 2008 Fire and Rescue Association Executive Committee meeting, the LODD Investigation Team presented an interim report with an emergency recommendation. The emergency recommendation was to suspend all training that requires a student to be in full PPE with SCBA and/or in an Immediately Dangerous to Life and Health (IDLH) environment until the following nine critical tasks are completed, processes developed, and in place.



Critical Tasks

1. All instructors, facilitators and members shall receive a medical evaluation, based on NFPA 1582, prior to being placed in training programs that require full PPE with SCBA and/or an IDLH environment.**

The medical evaluation of these members shall include a medical history, physical examination, and any laboratory tests required to detect physical or medical condition(s) that could adversely affect his/her ability to safely perform the essential job tasks.

**After the initial medical evaluation prior to training, which is required in all circumstances, future medical evaluations will be age based until an annual medical evaluation program can be established.

2. All instructors, facilitators, and members shall have an annual fit test and medical questionnaire completed and on file prior to being placed in training programs.
3. Develop a more extensive and formal lesson plan for SCBA to include:
 - Train-the-Trainer program for instructors
 - Skill test for students
4. Create a centralized location for recordkeeping.
5. Develop a formal written Emergency Action Plan (EAP) for the Public Safety Training Academy and train all instructors in the plan.
6. Evaluate the effectiveness and overall benefit of the maze as a training tool in light of the absence of any state standards or guidance. Specifically, consider increasing access, egress and emergency lighting. The maze shall remain closed until a full evaluation is completed.
7. Develop a formal written standard for instructor authority lines, train all instructors in the standard, and adhere to the standard.
8. Develop a standardized safety briefing to be utilized for all training activities and train all instructors in giving safety briefings.
9. Develop a formal written Incident Command System (ICS) for IDLH training programs, to include a designated Safety Officer. Train all instructors in the ICS.



Findings, Discussions, and Recommendations



Medical Evaluation

Overview:

The National Fire Protection Association (NFPA) 1500, *Standard on Fire Department Occupational Safety and Health Program*, requires fire department members who engage in emergency operations to be annually evaluated and certified by the fire and rescue department as meeting the 13 critical job tasks listed in NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*.

Physicians providing input regarding medical clearance for fire-fighting duties should be knowledgeable about the physical demands of fire fighting and familiar with the consensus guidelines published in NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*. Frequently, private physicians are not familiar with a member's job duties or with guidance documents such as NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*. To ensure physicians are aware of these guidelines, fire and rescue departments often provide guidance to members' private physicians by providing a copy of the NFPA standard.

In addition, fire and rescue departments carefully evaluate the opinion of the member's private physician regarding return to work to ensure that the private physician is following all applicable standards of NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*. This decision requires knowledge not only of the member's medical condition but also of the member's job duties. All return-to-work clearances should be reviewed by a fire and rescue department contracted physician. The final decision regarding a fit-for-duty medical clearance for a member lies with the Authority Having Jurisdiction (AHJ) of the fire and rescue department with input from many other sources including the employee's private physician. For the Prince William County Department of Fire and Rescue (PWCDFR), the Fire Chief is the AHJ for NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*.



Findings:

1. Current Standards, Policies and Procedures recommend or require medical evaluations and/or medical questionnaires.

Discussion:

The following standards state that a medical evaluation shall be performed on individuals that engage in providing firefighter services or training in firefighter activities:

- National Fire Protection Association
 - NFPA 1001, *Standard for Firefighter Professional Qualifications* Chapter 4, 4.1 (3)
 - NFPA 1404, *Standard for Fire Service Respiratory Protection Training* Chapter 6, 6.1.5
 - NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program* Chapter 10, 10.1.3
 - NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments* Chapter 4, 4.1.1
Chapter 6, 6.1, 6.1.1
Chapter 7, 7.1.1
- Occupational Safety and Health Administration
 - OSHA 29 CFR 1910.134, *Respiratory Protection* 1910.134 (c)(1)(ii)
- Prince William County Fire and Rescue Association
 - FRA Procedure 9.1.2, *Respiratory Protection Program* Section 3.10

2. Career members of the FRA receive a NFPA 1582 medical evaluation prior to being hired and age based NFPA 1582 medical evaluations once employed.

Discussion:

As a condition of employment, career firefighter/EMTs are required to successfully pass a NFPA 1582 medical evaluation before they become full time employees.



Once they are full time employees, they receive age based NFPA 1582 medical evaluations through PWC Employee Health.

3. Volunteer members of the FRA may or may not receive medical evaluations, as they are self-regulated.

Discussion:

The LODD Investigation Team received limited information as to what level of medical physicals were being provided to volunteer members. Based on the information that was received, it was determined that the level of medical evaluations offered by volunteer companies within the FRA varies from organization to organization.

Some volunteer companies require a NFPA 1582 medical evaluation for new members to be on active duty. Other companies require either a NFPA 1582 medical evaluation or regular medical physical for new members, but not their incumbents.

Many companies offer, but do not require, a NFPA 1582 medical evaluation for their incumbents and their new members. Other volunteer organizations do not require any type of medical evaluation for new members or incumbents.

4. Other combination fire and rescue systems also have varying levels of medical screenings within their organization.

Discussion:

Twelve other career/volunteer combination systems similar to PWC were surveyed to find out what type of medical evaluation program they had in place for its members. The organizations were asked who received medical evaluations, what type of evaluations were given and when did the members receive their medical evaluations.

Of the twelve organizations, eight organizations performed annual NFPA 1582 medical evaluations for their career personnel and three organizations performed aged based medical evaluations for their career personnel. One organization does not require any type of medical evaluation for its career personnel.

Of the same twelve organizations, five organizations performed annual NFPA 1582 medical evaluations for their volunteers, but two organizations do not currently enforce the practice. Two organizations perform a regular medical evaluation for its volunteers, while one organization sends out only a questionnaire. Four organizations do not require any type of medical evaluation for its volunteers.



5. Cadre Instructors are not required to show proof of a NFPA 1582 medical evaluation.

Discussion:

Career members of the FRA that are instructors, have proof of their medical evaluation on file at PWC Employee Health facility and the DFR Health & Safety Office. There is no standard recordkeeping of medical evaluations for volunteer members of the FRA that are instructors.

Recommendations:

- 1.1 All FRA members shall receive an entry level medical evaluation in accordance with NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.
 - 1.1.1 After their initial medical evaluation, all FRA members shall receive an annual medical evaluation in accordance NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.
- 1.2 If an instructor has been deemed to need a medical evaluation, then that evaluation shall be performed in accordance with NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.



Health and Safety

Overview:

The fire and rescue community has always recognized the vital importance of safety on emergency incidents, training environments and other day to day operations of fire and rescue agencies. With the complexity of emergency incidents and training environments ever increasing, fire and rescue agencies have addressed these new complexities by establishing divisions, offices and positions solely dedicated to the health and safety of its members. Safety has also been recognized as a high priority in the Incident Command System (ICS) that has been adopted by the National Incident Management System (NIMS), a federally mandated program. In the ICS model, the Safety Officer answers to the Incident Commander (IC) only.

The PWCDFR has a Health & Safety Office that consists of a Battalion Chief, a Captain, three Lieutenants, Behavioral Health Specialist, and a Wellness Coordinator. The Captain and three Lieutenants act as Incident Safety Officers on emergency incidents. The Health and Safety Office also provides oversight to the FRA.

During live career burns, a Safety Officer from the Office of Health & Safety is present. During other training scenarios at the Public Safety Training Center (PSTC), a Safety Officer from the Office of Health & Safety is not required. However, an instructor may be assigned to be the Safety Officer during the training scenario. Some departments within the FRA also have their own designated Safety Officer.

Findings:

- 1. There is no standard safety briefing given consistently during classes. Some high-hazards classes receive no briefing at all.**

Discussion:

During class presentations, instructors do comment on safety concerns within lectures, but there is no formal safety brief given during the class. The safety concerns that are covered are different from instructor to instructor.



2. Prior to the incident, no formalized Emergency Action Plan (EAP) was in place at the PSTC.

Discussion:

On the day of the incident, an Emergency Action Plan (EAP) was not in place in the event of a true emergency. OSHA 1910.38 requires an EAP be in place for training props. This plan must include at a minimum:

- Means of egress during evacuation
- Procedures to be followed by employees performing rescue or medical duties
- Fire emergencies
- Procedures for accountability of students after an evacuation
- Procedure for reporting a fire or other emergency.

3. Currently, not all instructors are required to show proof of liability insurance or workman's compensation insurance.

Discussion:

The current organizational structure of the cadre treats the members of the cadre differently depending on what organization they belong to within the FRA. PWCDFR members are provided liability insurance and workman's compensation insurance. FRA members that are part of a volunteer organization are considered outside vendors. Outside vendors are not covered by PWC's liability insurance or workman's compensation insurance.

4. Firefighter Recruit Cecilia Turnbough exhibited signs of physical and mental distress and fatigue.

Discussion:

During the course of events throughout the day, some students recognized that Cecilia showed signs of distress and fatigue. This was based on their observations of her physical performance the previous Saturday during SCBA/PPE drills at the burn building in comparison with her physical performance on the day of the incident. Instructors present on the day of the incident had limited base line knowledge of her physical capabilities. With this limited knowledge, instructors felt she could complete the maze in her current condition.



Recommendations:

- 2.1 Develop a consistent safety briefing, both verbal and written, to be communicated to the students prior to the beginning of the course and re-iterate it through the duration of the course. This briefing should also include the EAP for both students and instructors.
- 2.2 Ensure the instructors have met qualifications for the classes they are teaching.
- 2.3 Risk assessments shall be performed on all classes at the Public Safety Training Center to determine the following:
 - 2.3.1 Which classes require a Safety/Compliance Officer appointed and/or present during the class.
 - 2.3.2 Which training props shall have a Train-the-Trainer developed before the instructor is permitted to use it in a class.
 - 2.3.3 Which classes instructors can teach without having a medical evaluation in accordance with NFPA 1582.
- 2.4 Immediately require centralized reporting and record keeping mechanisms for all industry standard maintenance, testing and industry compliance.
 - 2.4.1 An audit of all records is to be performed and items found not in compliance are to have corrective actions taken.
- 2.5 Develop a written Incident Command System for IDLH training programs to include a designated Safety Officer. Ensure all instructors are trained in the ICS system.
- 2.6 Develop a minimum set of certifications to be a designated Safety Officer at live burns.
- 2.7 To ensure that all Cadre Instructors have proper insurance coverage, Workman's Compensation and Liability, they should be hired as part-time employees.



SCBA/Respiratory Protection

Overview:

The utilization of Self-Contained Breathing Apparatus (SCBA) is required by all fire and rescue personnel during operations involving an Immediately Dangerous to Life and Health (IDLH) environment. SCBA protects personnel from the acute and chronic health effects from exposure to the various inhalation and respiratory hazards present at all IDLH atmospheres. The SCBA used in Prince William County during the incident was a Mine Safety Appliance (MSA) 4500 psi SCBA. This SCBA was equipped with an ICM Personal Alert Safety System (PASS) which was incorporated into the pneumatics of the SCBA.

The Fire and Rescue Association has a Respiratory Protection Program required by the Occupational Safety and Health Association (OSHA). The Respiratory Protection Program outlines the care, maintenance, and testing requirements for all SCBA in the system. A comprehensive maintenance, repair, and testing program will ensure that each SCBA will operate effectively and reduce the risk of failure and is required by OSHA, NFPA 1852 *Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)*, and Fire and Rescue Association Procedure 9.1.2 titled *Respiratory Protection Program*.

Findings:

1. **Firefighter Recruit Turnbough's MSA SCBA flow test was within normal operating parameters pre and post event.**

Discussion:

Documentation of the flow tests were provided by the Dale City Volunteer Fire Department (DCVFD). The annual flow tests documented that the SCBA was operating within the manufacturer's operating parameters prior to and during the incident. During the course of the investigation, Firefighter Recruit Turnbough's SCBA was inspected and flow tested by the PWCDFR Breathing Apparatus Repair Shop and was found to be within the manufacture's operating parameters prior, during and post incident.



- 2. Firefighter Recruit Turnbough's fit test results on both MSA MMR facepieces were within normal operating parameters. All fit test records were maintained by the Dale City Volunteer Fire Department.**

Discussion:

Annual fit tests were provided by DCVFD. Firefighter Recruit Turnbough had two fit tests performed, one fit test on a medium face piece and one fit test on a small face piece. Both fit tests were within the manufacture's operating parameters prior to and during the incident. Firefighter Recruit Turnbough used her medium mask the day of the incident. During the course of the investigation, Firefighter Recruit Turnbough's medium and small face pieces were inspected and flow tested by the PWCDFR Breathing Apparatus Repair Shop and both were found to be within the manufacture's operating parameters prior, during and post incident.

- 3. Air sampling tests for cascade systems at the Public Safety Training Academy, Dale City Volunteer Fire Department and Occoquan, Woodbridge, Lorton (OWL) Fire Department were within normal parameters.**

Discussion:

Air sampling records were provided to the LODD Investigation Team upon request by all three agencies. These records showed that all air samples within the cascade systems were within normal parameters; however, OWL's quarterly air tests were out of date.

- 4. Air sampling tests for the SCBA cylinders from Dale City Volunteer Fire Department and Occoquan, Woodbridge, Lorton (OWL) Fire Department were within normal parameters.**

Discussion:

Air samples from the SCBA cylinders were sent to a third party for testing. The air samples were obtained from the bottles by the Prince William County Breathing Apparatus Services Shop in accordance with the protocols of the third party. The samples were then sent for testing.



- 5. The Dale City Volunteer Fire Department did not provide Firefighter Recruit Turnbough with an annual medical questionnaire as required by OSHA, NFPA and FRA policy.**

Discussion:

When the LODD Investigation Team requested a copy of the annual medical questionnaire from Dale City Volunteer Fire Department, they were unable to provide a copy of the questionnaire. It was determined that at the time of the incident, Dale City Volunteer Fire Department did not provide this questionnaire to its members.

- 6. Students are not required to present a current fit test record prior to participating in training programs that require the use of a respirator.**

Discussion:

When students at the PSTC participate in a training program that require the use of a respirator, it is assumed that the respective organization is in compliance with annual fit testing as specified in OSHA 1910.134 and FRA Policy 9.1.2.

- 7. Cadre Instructors are not required to present a current fit test record prior to participating in training programs that require the use of a respirator.**

Discussion:

When instructors at the PSTC participate in a training program that require the use of a respirator, it is assumed that their respective organization is in compliance with annual fit testing as specified in OSHA 1910.134 and FRA Policy 9.1.2.

Career members of the FRA, that are instructors, have proof of the fit test on file at the PWCDFR Breathing Apparatus Repair Shop. There is no standard recordkeeping of fit test records for volunteer members of the FRA that are instructors.



8. FRA members receive varying levels of training on the use of SCBA both inside and outside of the Firefighter I program.

Discussion:

Currently there are two separate curriculums taught at the PSTC for the usage of SCBA, one for career students and one for volunteer students. The career program dedicates 32 hours of SCBA training, while the volunteer program dedicates 16 hours of SCBA training.

9. Firefighter recruits do not complete a daily SCBA check sheet.

Discussion:

Per FRA Policy 9.1.2, OSHA 1910.134, NFPA 1852 4.5.8 (2)(3), NFPA 1852 7.1.1.1 and Mine Safety Appliances (MSA) instructions, any time a respirator is used it shall be checked in accordance with the manufacture's recommendation prior to its use and documented. Many of the SCBA used on 11/09/08 did not have documentation to support that they had been checked out prior to use.

10. Six students had no proof of a fit test and it is assumed that no medical questionnaire was filled out and on file with their respective organization.

Discussion:

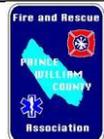
OSHA 1910.134 and FRA Policy 9.1.2 require that medical questionnaires be completed by individuals prior to being fit tested for the use of a respirator.

Recommendations:

- 3.1 All students shall complete an annual medical questionnaire in accordance with FRA Policy 9.1.2 and OSHA 1910.134. Proof of the completed questionnaire shall be provided to the Public Safety Training Center and to the DFR Health and Safety Office prior to starting Firefighter I programs.
- 3.2 All students shall have an annual fit test performed in accordance with FRA Policy 9.1.2 and OSHA 1910.134. Proof of the completed fit test shall be provided to the Public Safety Training Center and to the DFR Health and Safety Office prior to starting Firefighter I programs.
- 3.3 All levels of SCBA training shall be standardized within the FRA to include, but not limited to, beginner/entry level, continuing education, and future upgrades.



- 3.3.1 Develop a SCBA Train-the-Trainer program for instructors.
- 3.3.2 Develop a SCBA skill test for students.
- 3.4 All SCBA, to include training airpacks, shall have a log book in order to facilitate the documentation of the required daily check.
- 3.5 The Public Safety Training Center shall re-evaluate how SCBA are distributed to students, both career and volunteer, and develop a process for dissemination.
- 3.6 If an instructor has been deemed to need a fit test, then that fit test shall be performed in accordance with OSHA 1910.134. A copy of the completed annual fit test shall be provided to the Public Safety Training Center and to the DFR Health and Safety Office.



Firefighter I Maze/Training Props

Overview:

On November 9, 2008 the Firefighter I training program was scheduled to perform Self Contained Breathing Apparatus (SCBA) training at the Public Safety Training Center (PSTC). Activities performed during the day included:

- Classroom
- PPE Dressing Drills
- Hose Maze
- SCBA skill station/low profile
- Maze practical

The maze exercise is required by Fire and Rescue Association (FRA) Policy 4.5.3, Critical Performance Standards for Firefighter I Program and supported by NFPA 1001 - Professional Qualifications for Firefighters. The maze at the PSTC was built in 2007 and has been used by all FRA and DFR Firefighter classes since that time. Prior to the maze being built at the PSTC, three other mazes were approved for use by the FRA Policy. The Harrisonburg, Fairfax City, and Occoquan, Woodbridge and Lorton (OWL) Fire Departments have mazes that were approved to be used by this policy. The Fairfax City maze has been in use since 1982 and had been the Firefighter I standard for PWC. The location and lack of availability of these mazes necessitated the construction of the maze at the PSTC that is currently used to assess Fire Fighter I program students. The maze training prop is used to test students for claustrophobia, Firefighter I critical performance standards and obstacle negotiation listed in NFPA 1001 5.3.1(B) & 5.3.5(B). The maze is also used as a confidence building tool for students as they become familiar with using their SCBA.

Findings:

1. **The maze at the PSTC was built by Department of Fire and Rescue (DFR) personnel using the Fairfax City maze as the model.**

Discussion:

The maze that is at the PSTC was built to ease the logistical requirements for the Firefighter I class taught for both career and volunteer classes. As Firefighter classes grew both in the number of participants and the frequency being taught, an on-site maze was constructed. Once completed, it was no longer necessary to drive students off site to other mazes or coordinate the delivery of mobile training mazes to the PSTC.



2. **The Training Division does not have an adequate outline of the maze curriculum that can be used to provide consistent training to students.**

Discussion:

At the time of the incident, there were two maze curriculums used to teach students the maze portion of Firefighter I. There is a training outline for volunteer students and a training outline for career students.

3. **There was no safety briefing provided by the instructors to inform the students of potential hazards or “what to do” instructions in the event of an actual emergency.**

Discussion:

On the morning of the incident, instructors at the PSTC did meet with students to detail the day's activities. This lecture included the various practicals that students would participate in and how to negotiate the props safely. However, no stand alone safety brief was given to the class specific to the day's activities.

Recommendations:

- 4.1 A safety assessment on all training props, to include the maze, needs to be completed and approved by PWC Risk Management and the DFR Health and Safety Office. The maze is to remain closed until the safety assessment is completed.
- 4.2 All training props shall be inspected and repaired as needed prior to being used for training as per NFPA 1402, Chapter 11.3.2.
- 4.3 Access and egress points need to be identified on props and emergency lighting needs to be installed in accordance with NFPA 1402, Chapter 14.
- 4.4 Training and learning objectives need to be defined for the maze.
- 4.5 All programs that require an instructor be certified as a Train-the-Trainer shall only be taught by an instructor that has the proper Train-the-Trainer certification.
- 4.6 A safety brief needs to be developed for each high hazard training class taught at the PSTC. The safety brief should include, at a minimum: a site review for hazards; verifying appropriate safety equipment; the correct use of the safety



equipment (PPE); and the correct way to identify and declare a true emergency that necessitates the activation of the EAP.



Firefighter I Training Program

Overview:

The Firefighter I & II classes conducted at the Public Safety Training Center for the career and volunteer recruits are instructed in accordance with the Virginia Department of Fire Programs (VDFP) guidelines which are required as a delegated authority. The career classes are held during the day Monday thru Friday while the volunteer classes are conducted evenings and weekends. The VDFP requires a minimum of 99 hours of classroom and practicals for the Firefighter I class and 40 hours of classroom and practical for the Firefighter II class. The classes are to be taught in compliance with the minimum guidelines outlined by the VDFP Firefighter I and II curriculum. To successfully complete these classes and obtain this certification, each student must pass all written and practical skills evaluations, as well as meet administrative requirements such as attendance, homework, etc.

Findings:

- 1. Two different sets of skill sheets are used for Firefighter I practicals, one for PWCDFR students and another set for volunteer firefighter students.**

Discussion:

During the Firefighter I & II program taught to the PWCDFR recruit class, instructors utilize the student skill sheets (tests) from the State Department of Fire Programs to test students on their job performance requirements. During the volunteer Firefighter I & II program, instructors utilize practical skill sheets provided by DELMAR to test students on their job performance requirements.

- 2. The DFR exceeds the state requirements for Firefighter I, while the volunteer program does not meet the minimum hours for each subject area in Firefighter I.**

Discussion:

While performing an audit of the Firefighter I program, contact hours for each category did not match the state minimum requirements. The DFR program exceeded the state minimums, while the volunteer program fell short in contact hours in some categories.



- 3. Currently the FRA allows for a volunteer corporation to independently contract with a vendor to teach a Firefighter I program.**

Discussion:

This does not allow for consistency on how the volunteer program is being taught and there is no way of knowing if the critical performance tasks outlined in FRA Policy 5.4.3 Critical Performance Standards are being met.

- 4. A volunteer member can attend a Firefighter I program at any outside jurisdiction and become state certified.**

Discussion:

When attending a Firefighter I program in an outside jurisdiction, the volunteer member may or may not be trained on the same equipment that they will utilize within PWC. Standards listed in FRA Policy 5.4.3 Critical Performance Standards are not being met. Volunteers having a Firefighter I certificate from another jurisdiction must complete the four Critical Performance Standards prior to being released as a Firefighter I in Prince William County.

- 5. Lesson plans and the PowerPoint presentations that support the Firefighter I program are not the same for career and volunteer students.**

Discussion:

Since the cadre instructors use different lessons plans and PowerPoint presentations when they teach their respective topics, inconsistencies have been identified between career and volunteer classes. Some instructors have been allowed to bring in their own PowerPoints, which has created additional inconsistencies within the program.

- 6. There is no Health & Wellness class being taught during the volunteer Firefighter I program.**

Discussion:

There is a fire ground safety class for the Firefighter I program, but it does not include a health and wellness component. This component would include, but not be limited to, nutrition, physical fitness, healthy lifestyles, mental well being and presumption laws.



7. There is a physical fitness assessment based on NFPA 1582 performed for career recruits prior to starting any portion of the Firefighter I program.

Discussion:

Prior to starting the Firefighter I program, career recruits must perform a physical fitness assessment to identify any physical weaknesses they may have. Once these weaknesses are identified, they are placed in a physical fitness program that will help them overcome these weaknesses. This helps mitigate the chances that the physical weaknesses will be the direct cause of an injury to the recruit as they progress through the physical portions of the program.

Recommendations:

- 5.1 Career and volunteer Firefighter I programs need to be the same (practical and classroom) and meet the state and county requirements, as a minimum, in order to ensure student and instructor safety.
- 5.2 Develop consistency within the class syllabus and schedule that is not deviated from class to class. Classes shall be taught in the order specified on the syllabus.
- 5.3 Develop a validation process for FRA members that attend training through a vendor or receive certification through another jurisdiction.
- 5.4 FRA Policy 4.5.3 *Critical Performance Standards*, needs to be reviewed and updated to include the same critical performance standards as the career recruit school.
- 5.5 Develop a physical fitness assessment, based on NFPA 1582, for all entry level students (career and volunteer) to identify strengths and weaknesses prior to starting the Firefighter I program.
- 5.6 Develop a Health and Wellness component to be included in the safety class that is taught in the Firefighter I program. This component should include, but not be limited to the following:
 - Nutrition
 - Physical Fitness
 - Healthy Lifestyle
 - Mental Well Being
 - Presumption Laws



5.7 To ensure that training programs are standardized in content and delivery, a non-uniform curriculum coordinator should be hired. This position would have responsibility for the following:

- Training program development
- Curriculum review
- Ensure State requirements are met



Instructor Cadre Program

Overview:

The Fire and Rescue Association (FRA) provides fire and rescue services to the citizens of Prince William County. To ensure that these services are provided in a safe and efficient manner, training is required for the member departments that provide these services. The FRA Training Officers Committee provides oversight and manages the volunteer training program. This committee is made up of fifteen individuals, twelve of which are volunteers from within the FRA. To assist with the financial burden of providing the necessary fire and rescue training, the Department of Fire Programs (VDFP) allocates state funds to localities throughout the state based on their geographic population. These state funds are called Aid to Localities (ATL). This ATL goes directly to Prince William County, and is provided to the Department of Fire and Rescue (PWCDFR). The PWCDFR provides training to all member departments through the Public Safety Training Center (PSTC). Due to the demand of classes, a group of instructors have been identified to provide this training. This group of instructors (cadre instructors) is composed of members of the organizations within the FRA. Testing is done of prospective cadre members to ensure that they meet minimum requirements as an instructor. The cadre members instruct in all aspects of firefighting classes. As the training program expanded over the years, a full time career lieutenant position was authorized at the PSTC to serve as a Volunteer Training Coordinator. The coordinator's scope of work is to oversee all aspects of volunteer training to include, but not limited to, scheduling of classes, oversight of cadre members, and ensuring that pre-requisites for classes are met.

Findings:

- 1. The Volunteer Training Coordinator has evolved over time into an administrative position focused primarily on scheduling.**
- 2. The Volunteer Training Coordinator provides limited oversight for the cadre instructor program.**

Discussion:

After reviewing the current cadre program and interviewing the Volunteer Training Coordinator it is evident that the Volunteer Training Program has not had adequate oversight to ensure that the following items were adhered to:

- Minimum number of didactic and practical hours for all VDFP classes are met.
- Cadre members had the proper qualifications to teach firefighter classes.



- Classes are being taught consistently by cadre members.
- Lesson plans are being updated.
- Assurance that instructor qualifications are maintained.

3. There is no ongoing evaluation process in place for instructors who are teaching classes and practicals.

Discussion:

Once an instructor completes the initial formalized evaluation process to become a cadre member, there is no further testing done to ensure that the instructors are delivering the proper instructions for practicals and didactic portions of classes.

4. There is no continuing education program for instructors.

Discussion:

Once new skills are introduced and current skills are refined, there is no mechanism in place to ensure that instructors are given new skills, or that current skills are maintained.

5. There is no formalized Train-the-Trainer program for utilization of training props at the Public Safety Training Center. These props include:

- **Burn Building**
- **Car Fire Simulator**
- **Fire Extinguisher Simulator**
- **Flashover Simulator**
- **Forcible Entry Simulator**
- **Liquid Propane Gas Simulator**
- **Maze**
- **Rapid Intervention Simulator**
- **Roofing Simulator**

Discussion:

Some training props have Train-the-Trainer classes to ensure that instructors are thoroughly familiar with the equipment used in training classes. Some training props at the PSTC do not have any formalized training to help facilitate their use during training.



- 6. Currently, not all cadre members that teach the firefighter program have a VDFP Train-the-Trainer certification for that program.**

Discussion:

The PSTC is a delegated authority of VDFP; many have incorrectly interpreted this as meaning that the PSTC is a self-certifying agency. With the false impression of being a self-certifying agency, it was believed that as long as the instructors went through an internal cadre process, they would be allowed to teach VDFP classes in which we were self-certified. With the internal cadre process in place, cadre members no longer became certified as Train-the-Trainers in the respective classes that they teach at the PSTC.

- 7. The process for selecting Cadre Instructors is not clearly defined or formalized.**

Discussion:

The LODD Investigation Team received conflicting information on how cadre instructors are selected and what process they may have to go through in order to become an instructor.

- 8. Cadre Instructors have no scope of authority to formally pull students from class for discipline infractions, safety or medical issues.**

Discussion:

There is no documented scope of authority for instructors who are teaching a volunteer program at the PSTC. Instructors have no documented authority as a Cadre Instructor to exclude students from classes for discipline infractions, safety or medical issues. Historically, Cadre Instructors have been told by FRA members that they have no authority to pull students from class.



Recommendations:

6.1 Revise the existing Instructor Cadre Program to determine instructor eligibility to include, but not limited to:

- Years of service in the FRA
- Career, volunteer, retired, life member, outside jurisdiction, adjunct status
- Prerequisites to enter the cadre process
- Minimum qualifications

➤ Should include state requirements at a minimum

6.2 An Instructor Handbook should be developed to define the following:

6.2.1 Expectations of instructors

6.2.2 Roles and Responsibilities of instructors

6.2.3 Scope of Authority for instructors over students to include, but not limited to:

- When an instructor can remove a student from the class/program for:

- Medical issues
- Safety concerns
- Discipline infractions

- Who can remove the student from class/program:

- Program manager
- Lead instructor
- Assistant Instructor

- When the student can be placed back in the class/program and who has the authority:

- Program manager
- Lead instructor
- Assistant instructor

6.3 Development and implementation of a continuing education program for all instructors at the Public Safety Training Center to ensure that:

6.3.1 New teaching methods and practical skills can be taught in a manner that creates and maintains consistency between all the instructors.



- 6.3.2 Current instruction methods and practical skills are maintained and refined in a manner that creates and maintains consistency between all instructors.
 - 6.3.3 Instructors are taught the proper way to use training props at the PSTC.
 - 6.3.4 On-going evaluations of instructors are performed.
- 6.4 To ensure that adequate oversight is being provided to both the career and volunteer Firefighter programs, the Training Division shall review its current organizational structure.



APPENDICES

Cecilia Turnbough November 9, 2008



Consolidated Recommendation Matrix

Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
Section 1: Medical Evaluation				
1.1 All FRA members shall receive an entry level medical evaluation in accordance with NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.				X
1.1.1 After their initial medical evaluation, all FRA members shall receive an annual medical physical in accordance with NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.				X
1.2 If an instructor has been deemed to need a medical evaluation, then that evaluation shall be performed in accordance with NFPA 1582. A copy of the physician release form shall be provided to the Department of Fire and Rescue Health and Safety Office.				X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
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Section 2: Health and Safety				
2.1 Develop a consistent safety briefing, both verbal and written, to be communicated to the students prior to the beginning of the course and re-iterate it through the duration of the course. This briefing shall include the EAP for students and instructors.		X	X	X
2.2 Ensure the instructors have meet qualifications for the classes they are teaching.		X	X	X
2.3 Risk assessments shall be performed on all classes at the Public Safety Training Center to determine the following:		X	X	X
2.3.1 Which classes require a Safety/Compliance Officer appointed and/or present during the class.		X	X	X
2.3.2 Which training props should have a Train-the-Trainer developed before the instructor is permitted to use it in a class.		X	X	X
2.3.3 Which classes instructors can teach without having a medical evaluation in accordance with NFPA 1582.				X
2.4 Immediately require centralized reporting and record keeping mechanisms for all industry standard maintenance, testing, and industry compliance.		X	X	X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
2.4.1 An audit of all records is to be performed and items found not in compliance are to have corrective actions taken.		X	X	X
2.5 Develop a written Incident Command System for IDLH training programs to include a designated Safety Officer. Ensure all instructors are trained in the ICS system.	X	X	X	X
2.6 Develop a minimum set of certifications to be a designated Safety Officer at live burns.	X	X	X	X
2.7 To ensure that all cadre instructors have proper insurance coverage, workman's compensation and liability; they should be hired as part time employees.				X
Section 3: SCBA/Respiratory Protection				
3.1 All students shall complete an annual medical questionnaire in accordance with FRA Policy 9.1.2 and OSHA 1910.134. Proof of the completed questionnaire shall be provided to the Public Safety Training Center and the DFR Health & Safety Office prior to starting Firefighter I programs.				X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
3.2 All students shall have an annual fit test performed in accordance with FRA Policy 9.1.2 and OSHA 1910.134. Proof of the completed fit test shall be provided to the Public Safety Training Center and the DFR Health & Safety Office prior to starting Firefighting I programs.				X
3.3 All levels of SCBA training shall be standardized within the FRA to include, but not limited to, beginner/entry level, continuing education, and future upgrades.				X
3.3.1 Develop a SCBA Train-the-Trainer Program for instructors.				X
3.3.2 Develop a SCBA skill test for students.				X
3.4 All SCBA, to include training airpaks, shall have a log book in order to facilitate the documentation of the required daily check.		X	X	X
3.5 The Public Safety Training Center shall re-evaluate how SCBA are distributed to students, both career and volunteer, and develop a process for dissemination.		X	X	X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
3.6 If an instructor has been deemed to need a fit test, then that fit test shall be performed in accordance with OSHA 1910.134. A copy of the completed annual fit test shall be provided to the Public Safety Training Center and the DFR Health & Safety Office.		X	X	X
Section 4: Maze/Training Props				
4.1 A safety assessment on all training props, to include the maze, needs to be completed and approved by PWC Risk Management and the DFR Health & Safety Office. The maze is to remain closed until the safety assessment is completed.				X
4.2 All training props should be inspected and repaired as needed prior to being used for training as per NFPA 1402, Chapter 11.3.2.	X	X	X	X
4.3 Access and egress points need to be identified, on all training props, and emergency lighting shall be installed in accordance with NFPA 1402, Chapter 14.	X	X	X	X
4.4 Training and learning objectives need to be defined for the maze.		X	X	X
4.5 All programs that require an instructor to be certified as a Train-the-Trainer shall only be taught by an instructor that has the proper Train-the-Trainer certification.		X	X	X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
<p>4.6 A safety brief needs to be developed for each high hazard training class taught at the PSTC. The safety brief shall include, at a minimum: a site review for hazards; verifying appropriate safety equipment; the correct use of the safety equipment (PPE); and the correct way to identify and declare a true emergency that necessitates the activation of the EAP.</p>		X	X	X
Section 5: Firefighter I Training Program				
<p>5.1 Career and volunteer Firefighter I programs need to be the same (practical and classroom) and meet the state and county requirements, as a minimum, in order to ensure student and instructor safety.</p>		X	X	X
<p>5.2 Develop a consistency within the class syllabus and schedule that is not deviated from class to class. Classes shall be taught in the order specified on the syllabus.</p>		X	X	X
<p>5.3 Develop a validation process for FRA members that attend training through a vendor or receive certification through another jurisdiction.</p>				X
<p>5.4 FRA Policy 4.5.3 Critical Performance Standards needs to be reviewed and updated to include the same critical performance standards as the career recruit school.</p>				X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
5.5 Develop a physical fitness assessment, based on NFPA 1582, for all entry level students, career and volunteer, to identify strengths and weaknesses prior to starting the Firefighter I program.	X	X	X	X
5.6 Develop a Health and Wellness component to be included in the safety class that is taught in the Firefighter I program. This component should include, but not be limited to the following: <ul style="list-style-type: none"> • Nutrition • Physical Fitness • Healthy Lifestyle • Mental Well Being • Presumption Laws 	X	X	X	X
5.7 To ensure that training programs are standardized, in content and delivery, a non-uniform curriculum coordinator should be hired. This position would have responsibility for the following: <ul style="list-style-type: none"> • Training program development • Curriculum review • Ensure State requirements are met 				X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
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Section 6 : Cadre/Instructor Program				
<p>6.1 Revise existing Instructor Cadre Program to determine instructor eligibility to include, but not limited to:</p> <ul style="list-style-type: none"> • Years of service in the FRA • Career, volunteer, retired, life member, outside jurisdictions, adjunct status • Prerequisites to enter the cadre process • Minimum qualifications <p>➤ Should include state requirements at a minimum</p>		X	X	X
<p>6.2 Instructor Handbook should be developed to define the following:</p>		X	X	X
<p>6.2.1 Expectations of Instructors</p>		X	X	X
<p>6.2.2 Roles and Responsibilities of Instructors</p>		X	X	X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
<p>6.2.3 Scope of Authority for instructors, over students, to include, but not limited to:</p> <ul style="list-style-type: none"> • When an instructor can remove a student from the class/program for: <ul style="list-style-type: none"> ➤ Medical issues ➤ Safety concerns ➤ Discipline infractions • Who can remove the student from class/program: <ul style="list-style-type: none"> ➤ Program manager ➤ Lead instructor ➤ Assistant instructor • When the student can be placed back in the class/program and who has the authority: <ul style="list-style-type: none"> ➤ Program manager ➤ Lead instructor ➤ Assistant instructor 		X	X	X
<p>6.3 Development and implementation of a continuing education program for all instructors at the Public Safety Training Center to ensure that:</p>		X	X	X



Recommendation	National Initiative	State Initiative	Regional Initiative	PWC Initiative
6.3.1 New teaching methods and practical skills can be taught in a manner that creates and maintains consistency between all the Instructors.		X	X	X
6.3.2 Current instruction methods and practical skills are maintained and refined in a manner that creates and maintains consistency between all instructors.		X	X	X
6.3.3 Instructors are taught the proper way to use training props at the PSTC.		X	X	X
6.3.4 On-going evaluations of instructors are performed.		X	X	X
6.4 To ensure that adequate oversight is being provided to both the career and volunteer Firefighter I programs, the Training Division shall review its current organizational structure.				X



Glossary

Accountability: A system to track the number of members and their areas of operation.

Ambulance: A transport unit that provides basic life support (BLS) care to patients. The letter "A" is in their unit designation.

Arrhythmogenic Right Ventricular Cardiomyopathy/Dysplasia: a cardiomyopathy characterized by fibro-fatty infiltration of the right ventricle leading to the progressive right ventricle failure.

Authority Having Jurisdiction: An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or procedure.

Battalion: A geographical area containing a group of stations within the County.

Cadre: A military expression for a group around whom a training staff is formed.

Cadre Instructor: Instructors that are part of the cadre at the Public Safety Training Center.

Command: An incident command system position responsible for overall management of the incident. The term Command is synonymous with the Incident Commander.

Delegated Authority: The action by which an organization assigns part of their authority commensurate with the assigned task to another organization. While ultimate responsibility cannot be relinquished, delegation of authority carries with it the imposition of a measure of responsibility. The extent of the authority delegated must be clearly stated.

Department Rank Levels: The following rank levels are utilized in the Prince William County Department of Fire and Rescue:

Chief: The highest ranking officer in the Department of Fire and Rescue. The Fire and Rescue Chief also serves as the Chairman of the Fire and Rescue Association.

Assistant Chief (AC): The second highest ranking officer level in the Department of Fire and Rescue and is responsible for the oversight of a division.

Battalion Chief (BC): The third highest ranking officer level in the Department of Fire and Rescue and is responsible for the oversight of a battalion or major program area.



Captain (Capt): An officer level that functions as a station commander or is assigned to assist oversight and coordination of a major program area.

Lieutenant (Lt): An officer level that functions as a unit supervisor or is assigned to assist captains in program area coordination.

Technician II (Tech II): A technical rank that primarily functions as a driver operator and is capable of performing as a unit leader in absence of an officer. A Technician II may also be assigned to assist with program areas.

Technician I (Tech I): An entry level technical rank that is primarily assigned to emergency response apparatus.

Engine: Name given to fire apparatus in Prince William County that is used to supply hose lines and/or supply lines at a working fire. The letter "E" is used in their unit designation. The name "Engine" and "Wagon" are interchangeable in reference to fire ground capabilities.

Fire and Rescue Association Policy 9.1.3: A policy that addresses training during extreme environmental conditions.

Fire and Rescue Association Written Direction System: A written direction system promulgated by the Fire and Rescue Association for its members (twelve volunteer and one career department). The written direction system applies to and organizes the material by functional area for any retrieval and reference.

Policy: A form of written direction document which provides general statements of a course of action or desired effect which guides decision making to accomplish the organization's mission. A policy establishes parameters within which a decision shall be made. It establishes the "what to do." Policies do **not** include detailed instruction on how to carry out activities.

Procedure: A form of written direction document which provides a series of detailed steps which instruct the user of the desired way to implement policy. It establishes the "how to do it." Procedures can specify either **mandatory actions** or provide **guidelines for actions**.

Directive: A form of written direction, either regulatory or discretionary in nature, which specifies the desired way to implement policy. Directives also are "how to do it" documents. Directives are issued instead of procedure for one of three reasons:

- The contents are of an emergency nature which does not allow following the development process for procedures.



- The contents apply to a limited part of the organization.
- The contents have a limited effective life.

Note: In addition to the Fire and Rescue Association written direction system, the Department of Fire and Rescue maintains an additional written direction system for those policies, procedures, and directives specific to the career department only.

Fire and Rescue Policy 4.5.3: Policy that addresses Critical Performance Standards for Fire Fighter I Program

Fire and Rescue Policy 9.1.2: Policy that addresses Respiratory Protection Program

Firefighter I: A person who has demonstrated the Job Performance Requirements within the Firefighter I curriculum to function as an integral member of a fire-fighting team under direct supervision in hazardous conditions. This is a first level certification within Virginian Department of Fire Programs.

Firefighter II: A person who has demonstrated the Job Performance Requirements within the Firefighter II curriculum to function as an integral member of a fire-fighting team under direct supervision in hazardous conditions. This is a second level certification within Virginian Department of Fire Programs.

Fit Test: The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Immediately Dangerous to Life and Health (IDLH): An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Incident Action Plan (IAP): The incident action plan contains general control objectives reflecting the overall incident strategy and specific action plan for the given operational plan.

Incident Command System: A standardized on-scene emergency management concept specifically designed to allow it user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

Instructor: A teacher of a specialized subject that involves a skill like emergency medical technician, firefighter, emergency vehicle operator, etc.



Job Performance Requirement (JPR): A written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task.

Maze: A training prop used in Firefighter I class that is used to familiarize students with the use of their PPE and SCBA in a no visibility environment and build their self-confidence while doing so. It is also used to tests students on their ability to exit through narrow passages with their SCBA in accordance with NFPA 1001. The maze training prop consists of narrow passages, inclines, declines, and obstructions inside a no visibility environment.

Medic Unit: A patient transport unit that provides advanced life support (ALS) care to patients. The letter “M” is in their unit designation.

NOVA: Acronym for Northern Virginia. In this document it is referring to the Northern Virginia Fire Services Coalition.

NFPA 1001: Standard for Fire Fighter Professional Qualifications.

NFPA 1041: Standard for Fire Service Instructor Professional Qualifications.

NFPA 1402: Guide to Building Fire Service Training Centers.

NFPA 1403: Standard on Live Fire Training Evolutions.

NFPA 1404: Standard for Fire Service Respiratory Protection Training.

NFPA 1500: Standard on Fire Department Occupational Safety and Health Program.

NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments.

NFPA 1852: Standard on Selection, Care and Maintenance on Open-Circuit Self-Contained Breathing Apparatus.

Occupational Safety and Health Administration: The main federal agency charged with the enforcement of safety and health legislation.

OSHA Policy 1910.134: Part of the general industry standard that addresses the respiratory section of personnel protective equipment.

PAR Check: PAR is an acronym for Personnel Accountability Report. A PAR check is the process where the Incident Commander or division/group leader calls all assigned units to ensure the accountability of their personnel.



PASS Device: Acronym for a personal alert safety system. A PASS device is a personal safety piece of equipment used by firefighters entering a hazardous environment such as a burning building, which sounds a loud audible alert to notify others in the area that the firefighter is in distress. PASS devices may be integrated within the SCBA equipment or worn as a separate device.

Personal Protective Equipment (PPE): Equipment and clothing required to reduce the risk of injury from, or exposure to, hazardous conditions encountered during the performance of duty.

Safety Officer: Responsible for monitoring and assessing safety hazards, unsafe conditions, and developing measures for ensuring personnel safety during an incident.

Self Certifying: The ability for an organization to act as an authorizing agent to certify that an individual has been trained and shown proficiency in accordance with established requirements and or standards set forth within that organization.

Self Contained Breathing Apparatus (SCBA): An atmosphere supplying respirator for which the breathing air source is designed to be carried by the user.

Situational Awareness: The knowledge of being aware of a situation as it actually exists.

Span of Control: A supervisor's functional ability to monitor the activities of assigned subordinates and to communicate effectively with them. An effective span of control is between three and seven subordinates, with five being optimum and seven being the maximum.



Policies, Procedures, Standards and Laws Reviewed

Fire and Rescue Association Policy 4.5.3:

Critical Performance Standards for Fire Fighter I Program

Fire and Rescue Association Policy 9.1.2:

Respiratory Protection Program

Fire and Rescue Association Policy 9.1.3:

Training Guidelines During Extreme Environmental Conditions

National Fire Protection Association 1001:

Standard for Fire Fighter Professional Qualifications

National Fire Protection Association 1041:

Standard for Fire Service Instructor Professional Qualifications

National Fire Protection Association 1402:

Guide to Building Fire Service Training Centers

National Fire Protection Association 1403:

Standard on Live Fire Training Evolutions

National Fire Protection Association 1404:

Standard for Fire Service Respiratory Protection Training

National Fire Protection Association 1500:

Standard on Fire Department Occupational Safety and Health Program

National Fire Protection Association 1582:

Standard on Comprehensive Occupational Medical Program for Fire Departments

National Fire Protection Association 1852:

Standard on Selection, Care and Maintenance on Open-Circuit Self-Contained Breathing Apparatus

Occupational Safety and Health Administration Policy 29 CFR 1910.134:

Respiratory Protection Policy

Virginia Department of Fire Programs

Instructor Manual

Virginia Department of Fire Programs

Firefighter I Curriculum



Prince William County Department of Fire and Rescue
Recruit School Firefighter I Curriculum
Volunteer Firefighter I Curriculum

