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Rapid Intervention Options for the Non-Career Department

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used language, ideas, expressions, or writing of another.

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Abstract

The research problem is that the Clyde Fire Department (CFD) is experiencing difficulty in manning its rapid intervention team (RIT) regulation, thus adding to the risks of immediately dangerous to life and health (IDLH) entries.

The research questions were:

- 1.) Should the CFD re-evaluate any/all of its RIT regulation?
- 2.) Do other like departments have experience with this problem and to what extent?
- 3.) How, specifically, have like departments corrected the problem?
- 4.) Would CFD personnel “buy-in” to having RIT services provided by others?

Descriptive research was used to collect data by means of questionnaires, interviews, and reviewing literature. The results showed that the CFD needed to re-evaluate its RIT regulation and that numerous like departments had experience with the same problem and to a very large extent. The major recommendation of the research was to enter automatic-aid agreements with neighboring departments. It is believed that this would take a significant amount of “buy-in” from city administration, neighboring departments, and even the CFD personnel but the benefits would surely outweigh any costs.

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Introduction

The concept of the rapid intervention team (RIT) has been known around the fire service for approximately two decades. This concept, though, gained national attention in January 1998 when it became synonymous with the federal Occupational Safety and Health Administration's (OSHA) new respiratory protection standard, also known as the "two-in two-out" rule. Paragraph 29 CFR 1910.134(g)(4) of the standard specifically pertains to firefighters when entering an immediately dangerous to life or health (IDLH) atmosphere.

OSHA (1998) defines an IDLH atmosphere as one occurring in any structure which is involved in a fire beyond the incipient stage. The standard further states that when dealing with an IDLH atmosphere, the employer shall ensure the following:

- 1.) At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times.
- 2.) At least two employees are located outside the IDLH atmosphere and available for emergency rescue duties.
- 3.) All employees engaged in interior structural firefighting use self-contained breathing apparatus (SCBA).

From the outset of the new regulation and specifically after the National Fire Protection Association (NFPA) included requirements corresponding to the "two-in two-out" rule in its NFPA 1500 standard, the debate throughout the fire service was on. The debate covered everything from the safety of the general public, to forcing departments to hire and/or recruit additional firefighters, to whom the standard actually applies. The United States Fire Administration (USFA) discusses a number of these debated topics in

its *Special Report: Rapid Intervention Teams and How to Avoid Needing Them*, released in March of 2003. The USFA (2003) tells us that nothing in the standard precludes firefighters from performing an emergency rescue before a RIT has been assembled when a confirmed life hazard in a structure exists. They further and specifically state that OSHA's respiratory protection standard does not require fire departments to hire additional firefighters, and it does not require four-person engine companies or four-person truck companies.

The debated topic of whom the standard protects or applies to is actually dependant on the state in which the department operates. Given that fact, the topic is beyond the scope of this report. The fire service truly wants to take care of its own, and a professional "standard of care" is dictated by such organizations as the NFPA and OSHA regardless of state boundaries. The Volunteer Firemen's Insurance Services (2000) stresses that it is imperative for departments to develop, adopt, and utilize a policy that provides for a RIT at all emergency incidents. The problem is that the Clyde Fire Department (CFD) is experiencing difficulty in manning its RIT regulation (see Appendix A), thus adding to the risks of IDLH entries.

The purpose of this research is to recommend a solution(s) to the above mentioned manning problem. The research questions are:

- 1.) Should the CFD re-evaluate any/all of its RIT regulation?
- 2.) Do other like departments have experience with this problem and to what extent?
- 3.) How, specifically, have like departments corrected the problem?
- 4.) Would CFD personnel "buy-in" to having RIT services provided by others?

Descriptive research will be used to collect data in order to answer all of the research questions. A literature and law review will be conducted to answer the first research question. A questionnaire will be mailed to numerous like departments to provide answers to the second and third research questions. The third research question could be further clarified, if needed, by conducting personal interviews with specific departments based on questionnaire answers. Finally, the attitudes and opinions of CFD personnel would be assessed through questionnaires or polls to answer the fourth research question. Based on answers to all four of the research questions, a recommendation(s) will be made to correct the research problem.

Background and Significance

The Clyde Fire Department provides fire/rescue protection and hazardous materials response to a population of approximately 15,000 over an area of 70 square miles. In addition to the city of Clyde, the CFD provides these services (by contract) to the majority of Green Creek, Riley and York Townships in Sandusky County, Ohio. The fire district ranges from residential to heavy industry and includes numerous major highways, the Ohio Turnpike, two major railways, a regional airport, the Sandusky River and the world's largest washing machine manufacturing facility. The department is staffed by 34 paid-on-call firefighters operating out of two fire stations. It operates one aerial platform truck, two engines, two tankers, two grass trucks, and a heavy rescue vehicle. The CFD responds to approximately 94 calls to service per year.

The current five-year average shows that 23 of the 94 CFD calls for service per year are structure fires. On average, 17 firefighters responded to each call for service over the same five-year period. Structure fires are categorized to be in conformance with

the National Fire Incident Reporting System (NFIRS). It is important to note that the CFD does not provide any Emergency Medical Service (EMS) in its fire district and does not respond to motor vehicle accidents (MVAs) unless there is a confirmed entrapment. Emergency Medical Services are provided at the county level in Sandusky County, Ohio.

The Clyde Fire Department has been very fortunate during its 136 year history to never have suffered a major on-scene injury or line-of-duty death (LODD). Two very serious near-misses have occurred in the past 13 years, though, thus bringing the author to this report. Both near-misses occurred at “working” structure fires with firefighters operating in IDLH atmospheres. A rapid intervention team was not assembled at either incident.

The first near-miss occurred on May 1, 1996, in the city of Clyde. The incident involved a 2-story balloon frame single-family dwelling that measured approximately 2,200 square feet. Interior firefighters were performing search/rescue and suppression operations while at the same time, venting was underway on the roof. Upon completion of the roof vent, a Clyde firefighter was involved in a partial roof collapse and could not perform a self-rescue. The remaining vent crew removed the trapped firefighter, without the need of additional equipment, from the roof without any further complications.

The second near-miss occurred on January 16, 2008, in rural Green Creek Township. The fire structure was a 2-story balloon frame farmhouse that was approximately 100 years of age. Heavy winds, in excess of 30 miles per hour, hampered suppression activities, but the CFD was gaining ground at the time of a large collapse on the first floor. An interior firefighter found himself trapped in the rubble in the basement, and although able to free himself from the debris, he was unable to self-rescue from the

below grade location. A total of 9 firefighters already operating in the structure or staged at the point of entry, as a back-up crew, successfully performed the firefighter rescue. The difference in this near-miss and the first was that a significant amount of valuable time was wasted while retrieving needed equipment from varying pieces of apparatus.

The Clyde Fire Department's current Policy Manual was adopted on February 4, 2003. Each regulation is detailed and concise, specifically written so that it would be referred to often by members of an on-call department. The intent was that it would be used to control the majority of the department's emergency situations but would not encompass every situation that would be encountered. With regard to rapid intervention, it was felt that the RIT regulation in addition to the general responsibilities regulation (see Appendix B), had the CFD in conformance with the "two-in two-out" rule. The problem, as stated above, was simply that the CFD could not repeatedly man the regulation. Solving the research problem would be extremely beneficial to the Clyde Fire Department's operation. It would allow the CFD to further contribute on the local level to the National Fallen Firefighters Foundation's "Everybody Goes Home" campaign. The CFD had two very serious near-misses that could have devastated the small and close knit community of Clyde. In both cases a rapid intervention team was, luckily, not needed because one was not assembled. The simple act of gathering needed rescue tools at the Green Creek Township incident wasted time that could have been needed from an air management perspective. A RIT, though, with the tools assembled would have added an additional factor of safety to these incidents.

This research project ties directly with the course work for the Executive Fire Officer Program's (EFOP), Executive Analysis of Fire Service Operations in Emergency

Management (EAFSOEM) course (United States Fire Administration [USFA], 2007).

The USFA (2007) states that the goal of the course is to train senior fire officers in the administrative functions necessary to manage a fire department effectively from the operational end. Having the ability to recommend and possibly implement an operational change that would allow the CFD to conform to a national standard would, without a doubt, meet that goal.

The research also has a definitive link to at least two of the five United States Fire Administration Operational Objectives. The project will support Operational Objective No. 3: To reduce the loss of firefighter's lives by fire. It will also support Operational Objective No.5: To respond appropriately and in a timely manner to emerging issues in the fire service (USFA, 2006). It has been 5 years since the 2004 Firefighter Life Safety Summit, and we still have not made any improvement in the LODD numbers so this emerging issue will need to be continually addressed.

Literature Review

The scope of the project changed almost immediately upon starting the literature review for the project. During the proposal phase of this project, it had not occurred to the author to question the concept or theory of the rapid intervention team. As mentioned above, the department as a whole felt that it had the OSHA respiratory protection standard covered and simply needed a solution to the manning problem. This change in the project led to the addition of a research question. Specifically, Question No. 1: Should the CFD re-evaluate any/all of its RIT regulation?

Any research on the concept/theory of rapid intervention teams will lead you to the Southwest Supermarket fire in Phoenix, Arizona on March 14, 2001. Assistant Fire

Chief, Steve Kreis (2003) tells us that the Southwest incident claimed the life of Phoenix Firefighter Brett Traver despite the truly heroic efforts of the members of the Phoenix Fire Department (PFD). The Assistant Chief (AC) goes on to say that the theory of rapid intervention was tested that day and it was unsuccessful for a number of reasons. The bottom line, according to Chief Kreis, is that rapid intervention simply is not rapid.

In a series of articles for *FireRescue* magazine, Phoenix Battalion Chief (BC) Nick Brunacini (2003) echoes Chief Kreis's feelings when he explains that rapid intervention is not only not rapid, it is not intervention either. Brunacini (2004a) continues with his belief that rapid intervention is not an antidote for anything and that it is purely a reactionary mechanism used during mayday situations. Finally, Brunacini (2004b) concludes with the fact that nothing makes him believe that rapid intervention works. The training drills and experiments following the Southwest fire convinced him that rapid intervention cures nothing and does not make incident scenes any safer. The BC explains that scene safety is directly related to solving the incident problem. By putting the fire out, the scene almost always becomes safer. As far as firefighter rescue, Brunacini says that most of the rescues that he has been involved with or read about were accomplished by firefighters already operating in the hazard zone. Ultimately, they were in the best position to intervene because of their forward deployment.

The training drills/experiments that the BC refers to are explained throughout his three part series for *FireRescue* magazine and by Assistant Chief Kreis (2003). The Chiefs explain that in the aftermath of Firefighter/Paramedic Traver's death, every piece of the Phoenix Fire Department's Operations Manual was scrutinized. It became the

mission of the PFD to test its ability to save firefighters from inside burning buildings. This recovery process became the longest running critique in the history of the PFD.

The drills, numbering over 250, were completed by every member of the Phoenix Fire Department's Operation Division. There were no tricks or gimmicks built into the drills, and they were meant to be very similar to the Southwest Supermarket incident. The drill scenario was that two firefighters who had used approximately one-half (1/2) of a standard "30-minute" SCBA had called in a mayday. Firefighter 1 was mobile, running out of air, still in contact with the attack line, and could communicate on his/her radio. Firefighter 2 was approximately 40 feet off of the attack line with his/her Personal Alert Safety System (PASS) activated, not mobile, running out of air, and not able to communicate on his/her radio. The structures used were three vacant commercial buildings ranging from 5,000 to 7,500 square feet. It is important to note that no heat, fire, or smoke was used in the drills, but the structures were dark and rescuers' SCBA masks were obstructed with window tint. The PFD drills were meant to test their rapid intervention concept, which basically involves a relay effort performed with a total of 12 members making up the entire RIT. The PFD search team component (six members) of the RIT was to locate Firefighters 1 and escort this firefighter from the structure using two members while the remaining four members searched for Firefighter 2. Once the remaining members of the search team component of the RIT located Firefighter 2, they began to package this firefighter, handled any air management issues, and started the extrication procedure. The rescue team component (4 members) of the RIT completed the extrication once the "relay" transfer was coordinated by the rescue sector component (2 members) of the RIT.

Assistant Chief Kreis (2003) highlights three very important findings from the over 250 PFD drills/experiments. First, it was determined, that a standard “30-minute” SBCA cylinder allows for 18.5 minutes of air consumption on average. Next, they determine that it takes 21.8 minutes to locate, package, address air management, and extricate a downed firefighter from a commercial structure. Finally, to successfully complete such a rescue, 12 experienced firefighters are needed for the RIT.

The Southwest Supermarket fire was truly a tragic event, and it appears that the concept/theory of rapid intervention failed Firefighter/Paramedic Traver. The review of literature, though, provides numerous documented cases where the concept/theory is credited with firefighter saves. Multiple firefighter rescues were even documented in several cases.

In the early morning hours of January 25, 2009, the Richland Township Fire Department near Johnstown, Pennsylvania, responded to a working fire at Carmen’s Wholesale Tires. The fire was burning out of control at this commercial occupancy and the response involved 22 fire departments. Faher (2009) explains that after being on scene for approximately two hours, 17-year fire service veteran Ethan Kabler fell through the roof while attempting to execute a trench cut. Kabler landed on his back and, in doing so, damaged his SCBA to the point that it would not function. He knew his location could be pinpointed, so he did not attempt to move. He also knew that his department’s RIT would be activated because he was, after all, the coordinator for it. Faher concludes his article by pointing out that Kabler credits his life to his department’s RIT training and the heroic efforts of his fellow firefighters.

Greto (2008) details how 7 firefighters from the Five Points and Elsmere Fire Companies in New Castle County, Delaware, were rescued by a rapid intervention team on January 5, 2008. Several fire companies from New Castle County, Delaware, had responded to the two-story duplex at 561 Homestead Road in Wilmington, Delaware, with heavy smoke and fire showing. The 7 firefighters were performing fire suppression on the second floor when fire burned through their attack line, leaving them with no water supply. The now trapped firefighters immediately issued a “mayday” which activated the four-person rapid intervention team from Wilmington Engine 1 which was on-scene as the established RIT. Greto tells that the RIT took approximately five minutes to get all 7 of the trapped firefighters out of the structure. Angeli (2008) describes the same incident saying that all 7 had little or no breathing air left in their cylinders, thus showing the importance and effectiveness of RIT on the fireground.

Tulsa, Oklahoma, was the site of another RIT save on November 17, 2005. Marshall (2005) tells how Fire Equipment Operator Joe Carollo was rescued from below grade after he fell approximately 12 feet into the basement following a floor collapse. District Chief Eddie Bell instantly deployed the RIT to rescue Carollo, saying that they train for these sorts of events so they can react quickly if a rescue becomes a reality at an incident. The below grade rescue is even more impressive when Carollo’s stature is considered since he stands 6 feet 1 inch tall and weighs in at 350 pounds. Carollo suffered a torn bicep and injuries to his back and shoulders from the fall, but Marshall concludes by pointing out that the response was so quick; his only thermal injury was a small burn on his thigh.

The literature review concluded with a personal interview of Fire Chief Jerry Kirker of the West Union Volunteer Fire Department (WUVFD) in Adams County, Ohio. Chief Kirker stated that the WUVFD implemented their RIT policy in late 2007 or early 2008 (J. Kirker, personal communication, February, 25, 2009). He said that the department, as a whole, felt that a RIT policy had become a necessity, and it became even more obvious in April, 2008 when the double LODD in Cincinnati, Ohio, was so close to home. That incident endured by the Colerain Township Fire Department in Hamilton County, Ohio, took the lives of Captain Robin Broxterman and Firefighter Brian Schira. The two firefighters were performing suppression operations and became trapped following a collapse of the first floor.

Chief Kirker related that it did not take the WUVFD long to realize that they could not man a rapid intervention team with their own firefighters. The WUVFD has an average response of 14 firefighters per call for service, and once all of the fire suppression duties are allocated, there simply is not enough bodies for RIT manning according to the Chief. West Union quickly approached surrounding fire departments with an automatic-aid proposition which Kirker stated, had two benefits not found with mutual-aid. The first and main benefit was that automatic-aid as opposed to mutual-aid put the RIT on-scene in the quickest fashion so they are assembled prior to entry. Secondly, automatic-aid can add to your overall manning with respect to the fire department's Insurance Service Office (ISO) grading if other criteria are met.

The WUVFD operates the automatic-aid RIT policy with five other departments in Adams County, Ohio. Firefighters participating in the RIT policy must have documented RIT training per the agreement. The department providing RIT protection

must provide one engine, four RIT firefighters, and an officer to work beside the Incident Commander (IC). The Adams County Central Dispatch coordinates the response of the automatic-aid partners. Chief Kirker closed the interview by saying that he now feels much more comfortable about his department's IDLH entries.

To summarize the literature review process, this research was definitely influenced by the Southwest Supermarket fire in Phoenix, Arizona. As stated earlier, the author had no plans of re-evaluating any and/or all of the CFD RIT regulation during the proposal phase of the project. The Phoenix incident necessitated the need for an additional research question and, as explained later, should make the CFD RIT regulation stronger.

Procedure

The USFA (2006) tells us that a research project begins with the literature review for three reasons. The first of those reasons is to find out what others have said or done previously that relates to the research problem. The second reason is to provide the researcher with others' perspectives and contrasting views of the problem and to gather ideas about possible ways to approach the research. The final reason is to avoid duplicating research that has already been done. These thoughts on literature review have shaped and guided all three of the author's applied research projects.

This project thus began with the first search at the Learning Resource Center (LRC) at the National Fire Academy and the discovery of numerous articles/journals on the Southwest Supermarket incident in Phoenix, Arizona. As mentioned earlier, that specific incident led to the addition of the one research question, the combining of two other questions, and the review of all pertinent compliance standards related to the

concept of RIT. The standards reviewed included NFPA 1500, NFPA 1720, and the OSHA respiratory protection standard (specifically paragraph 29 CFR 1910.134).

The next step of the project involved locating a significant but manageable number of fire departments similar to the CFD. It was decided that fire departments in the state of Ohio would be targeted, mainly because of the ease in locating them and also because the author felt that there would be no significant advantage from a research point of view by expanding beyond state lines. The Ohio Fire Marshal (OFM) has a “*Contact My Local Fire Department?*” link on their web-site, so it was known that some type of data base existed for that search mechanism. The OFM was contacted by e-mail, the purpose of this project was explained and the request was made for a data base of all Ohio fire departments. The OFM (2008) transferred their fire department directory, in Excel format, via e-mail to the author on October 8, 2008. The data base contained all relevant contact information as well as staffing levels and specifics on pay status for all members. This data was easily sorted in Excel to find 150 paid-on-call fire departments (see Appendix C) with staffing levels ranging from 24 to 71 members. Those departments with staffing levels closest to the CFD would obviously be the most relevant, but it was felt that 150 departments was a manageable number so that was ultimately decided upon.

Next, the project involved a bulk mailing to all 150 departments mentioned above. Included in the mailing was a cover letter (see Appendix D) and the rapid intervention team (RIT) Questionnaire (see Appendix E). The cover letters were printed by the author after a mail merge was completed in Microsoft Word using the completed Excel file. The cover letter stressed that responses would not be directly tied to a specific department

unless that department was contacted and permission was given. This was due to the author's belief that questionnaires would not be returned if the completed report showed that specific departments were in fact in violation of any type of compliance standards.

The questionnaires were also printed following a mail merge. The mailings also included a return envelope, pre-addressed to the Clyde Fire Department, and pre-stamped with the appropriate postage. The questionnaires were mailed on November 12, 2008. As the questionnaires were returned, all the data was reviewed and entered into the results worksheet (see Appendix F). The worksheet divides the results into two parts depending on the responders answer to, "Does your department assemble a rapid intervention team (RIT) in conformance with 29 CFR 1910.134, NFPA 1500, and NFPA 1720 at every incident requiring an entry into an immediately dangerous to life and health (IDLH) atmosphere?" A department that answered in the affirmative was asked to pick from four options to best describe how the assembly was accomplished. If a department did not assemble a RIT, they were asked to describe why, in their own words.

From the questionnaire responses, three fire departments were singled out for personal interviews. All three departments assembled a RIT at every needed incident, and they were very similar to the CFD in total manning per incident. Messages were left at their contact numbers reminding them of the questionnaires and explaining the desire for a follow-up interview. Unfortunately, only one individual returned a call and that was Fire Chief Jerry Kirker from the West Union Volunteer Fire Department in West Union, Ohio. Chief Kirker's interview lasted approximately 20 minutes and did not follow the pre-plan that had been designed for the interviews. It turned out to simply be a 20-minute

conversation about rapid intervention and how his department proudly solved their RIT manning problem.

Finally, once the data started to show that the majority of departments, who had corrected their RIT manning problem, did so with some type of “aid”, it was decided to leave the fourth research question in the project. In order to assess the attitudes and opinions of the CFD personnel, the Clyde Fire Department RIT/Mayday Questionnaire was created and can be viewed in Appendix G. There are currently 22 active SCBA wearers on the fire department and all were asked to participate in the questionnaire.

Limitations to the overall research project appear to be very minimal. From the beginning, the author was concerned about response rates. Compliance with national standards is not a subject that many small town fire chiefs wish to discuss, let alone fill out a questionnaire related to the subject. Response rates and how they compare to an earlier applied research project will be discussed in further detail, later in the report.

The Fire Marshal’s data base did have some inconsistencies in it when compared to questionnaire results, but these issues were determined to be insignificant for the purpose of this report. Some of the departments listed in the data base as paid-on-call turned out to be strictly volunteer departments per the departments’ returned questionnaires. For the purpose of resolving manning issues, data from a volunteer department should be equally as valuable as from a paid-on-call department; therefore any limitations with regard to this issue were also minimal.

Results

Research Question 1. Should the CFD re-evaluate any/all of its RIT regulation?

The answer to this question would be that the Clyde Fire Department must re-evaluate its

rapid intervention team (RIT) regulation. The simple fact that the regulation has not been consistently manned since it was included in the CFD Policy Manual in January, 2003 should dictate that a re-evaluation is needed. The minimum RIT manning numbers (two firefighters) called for in the CFD regulation must be re-evaluated in light of Phoenix Fire Department drills conducted in the aftermath of the Southwest Supermarket incident.

Research Question 2. Do other like departments have experience with this problem and to what extent? Departments similar to the Clyde Fire Department definitely have experience with this problem. As stated in the procedure section, 150 questionnaires were mailed to Ohio fire departments that were apparently similar to the CFD. In total, 56 departments responded to the questionnaires and the results are tabulated in Appendix F. In summary, 53 similar departments have experience with the problem of manning their rapid intervention team. Twenty-eight departments answered “No” to the question, “Does your department assemble a rapid intervention team (RIT) in conformance with 29 CFR 1910.134, NFPA 1500, NFPA 1720 at every incident requiring an entry into an immediately dangerous to life and health (IDLH) atmosphere?”. Twenty-five departments answered “Yes” to the above question but then explained that the RIT is manned at least in part with personnel from an “aid” department, showing that they also experience RIT manning issues but have corrected the problem. Three departments (5%) had no experience with the problem of manning their RIT in that they answered the above question in the affirmative and went on to explain that their RIT is manned by their own personnel.

Research Question 3. How, specifically, have like departments corrected the problem? The results in Appendix F show that all 25 departments who have corrected

their RIT manning problem, did so with some type of “aid” from a neighboring department. Three departments use mutual-aid in conjunction with their own personnel to man their teams. Seven Chiefs stated that they use mutual-aid exclusively to provide rapid intervention protection. Automatic-aid was the preference for the majority of the departments who had solved their RIT manning problems. Fifteen of the departments use automatic-aid exclusively to be in conformance with the standards related rapid intervention.

Research Question4. Would CFD personnel “buy-in” to having RIT services provided by others? The two question Clyde Fire Department RIT/Mayday Questionnaire can be viewed in Appendix G. The first question deals specifically with this project while the second question was added for the benefit of the author and some personal research being conducted for possible use in the future. As mentioned earlier, 22 CFD firefighters regularly wear a SCBA for IDLH entries. All 22 of these firefighters turned in questionnaires. Eleven said they would support the RIT regulation being manned by another department while eight said they would oppose that option. Three CFD firefighters had no opinion on the matter.

Discussion

It has been exactly five years since the Firefighter Life Safety Summit in Tampa, Florida. Some of the best and brightest in the American Fire Service met on those two days in March and set goals of lowering line-of-duty deaths by 25% in five years and 50% in ten years. We should have, therefore, ended 2008 with approximately 75 LODDs. That number ended up being well over 100, and if not for a rapid intervention team on the morning of January 5, 2008, in Wilmington, Delaware, the year end total could have easily been higher.

Angeli (2008), after all, reported that all seven of the trapped firefighters were either low on or out of air.

Brunacini (2004b) concluded that nothing makes him believe that rapid intervention works. Assistant Chief Kreis (2003) says that the bottom line is that rapid intervention simply is not rapid. Both, in part, seem to base their harsh conclusion on the fact that the Phoenix RIT(s) failed to save Firefighter/Paramedic Traver at the Southwest Supermarket fire.

During the literature review, though, dozens of successful RIT deployments were discovered during a short two hour Internet search using just one of the popular search engines. The three success stories reference in this project could have been replaced with any number of other ones. The Wilmington, Delaware incident clearly shows that the RIT concept works, as a four person RIT saved seven firefighters who had no water supply, little or no air left in their cylinders, and were trapped above the fire. Greto (2008) reported that this rescue took approximately five minutes to complete, leaving this author wondering if the seven firefighters thought it was rapid enough.

The two other successful RIT deployments referenced in this project also show that a rapid intervention team does in fact provide intervention and it is delivered in a rapid fashion. Marshall (2005) stressed that Carrollo's rescue in Tulsa, Oklahoma, was so quick that his only thermal injury was a small burn on his thigh. Faher (2009) who reported on the Carmen's Tire incident near Johnstown, Pennsylvania, pointed out that trapped Firefighter Kabler credited his life to his department's RIT training. Kabler was "down" in a warehouse full of burning tires without a functioning SCBA and after a brief trip to the hospital was back on-scene that same day. The intervention appears to have been "rapid".

The Clyde Fire Department's near-misses do agree with Brunacini's experiences in regard to firefighter rescues. Brunacini (2004b) says that most of the rescues that he has been involved with were accomplished by firefighters already operating in the hazard (IDLH) zone. Both of the CFD rescues discussed early were successfully made by firefighters operating in close proximity to the trapped firefighters. These experiences should not negate the need for an assembled RIT at every IDLH entry. Nor should they support an effort to place more operating firefighters in the hazard zone.

The literature review highlighted the importance of the CFD RIT regulation, but it also exposed the major weakness. The regulation was "written" to conform to standard but manning a RIT with a minimum of two firefighters now seems totally inadequate, inherently dangerous, and not in conformance with "best practices" in the fire service. Chief Kirker shared the exact same views that this author has shared with CFD personnel over the years and that is, once you assign all of the suppression duties you don't have enough bodies left to assemble a RIT. Assistant Chief Kreis (2003) stated that the first policy change for the PFD following the Southwest incident was to increase RIT manning by two on residential alarms and by eight (including a BC and his/her aid) on commercial alarms. Chief Kirker and the West Union Volunteer Fire Department's automatic-aid increases RIT manning by four to residential responses. Two extremely different departments from totally different parts of the country, same basic solution. All the rest is just semantics, but it does lead to the fact that the CFD RIT regulation needs to be re-visited.

This research turned up numerous departments similar to CFD that have experience with RIT manning problems and to a great extent. Fifty-six departments returned questionnaires with half of them (28) not establishing a RIT per standard (for IDLH entries).

The author could list a dozen more in Sandusky County, Ohio, alone and strongly feels that the majority of non-returned questionnaires would have also been a “*NO*” response. As stated earlier, it is very difficult to admit to non-compliance, especially when it is requested in writing.

Twenty-five departments have experienced RIT manning problems but have corrected the problem. All of these departments corrected the problem by using some type of “aid” from neighboring departments. Three of the twenty-five used mutual-aid to supplement their own members in assembling a RIT. Seven departments use a mutual-aid department to completely cover their rapid intervention needs. The remaining fifteen departments rely on automatic-aid contracts to ensure that they are in compliance with standard. Three departments in the study, apparently have no experience with the research problem in that they man their RIT exclusively with their own firefighters.

USFA (2006) tells us that we should expect a 20% non-response rate to these types of questionnaires/surveys. The questionnaires for this research went to an occupation specific group, were very brief, were pre-addressed for return, had postage on them and still had a 63% non-response rate. These response rate results compared almost identically with the rates received for this author’s first applied research project. That project displayed a 60% non-response rate and also requested information related to compliance with an NFPA standard. That research dealt with physical fitness programs in non-career fire departments and an affirmative answer to operating a successful fitness program held the chance of a follow up interview. Much like the findings in that research, I believe the fire service as a whole is much farther behind in complying with standards than we want to believe.

The implications of this research for the Clyde Fire Department will be significant and have already started to be realized. As stated earlier, the CFD has had a RIT regulation since 2003 but could not repeatedly assemble a team. As Assistant Chief of the CFD, the author is as much to blame for this as anyone else and that fact was the driving force behind this research. This project was proposed for the sole purpose of bringing the problem to the forefront of issues needing to be addressed in the current year. Since that time the department has gone through some difficult times, and the author has been named to the position of Fire Chief for the city of Clyde. With that appointment, some of the major recommendations that were forthcoming from this research have already been implemented. As Chief of department, the author requested increasing the staffing level from 34 to 40 firefighters over the next year and that request was granted. The Fire Chief will also be increasing the manning in the RIT regulation from two to a recommended four (absolute minimum of three). This change only needs the signature of the Fire Chief and the annual review of the policy manual is occurring at this time.

The increase in the recommended RIT manning will allow the CFD RIT regulation to function in a way very similar to the Phoenix Fire Department RIT drills. The CFD regulation, since its inception, calls for an additional RIT to be assembled if the original RIT is deployed/activated. This will allow the second RIT to act as the rescue component (as in the Phoenix drills) if the original RIT cannot complete the extrication.

The addition of six new firefighters will add, from experience, four to five personnel on scene for each call for service. This is due to the fact that new firefighters consistently make ninety percent of the calls for service during their first five years. These new firefighters can perform all fire ground functions with the exception of RIT, thus enabling

experienced rapid intervention firefighters the ability to man the team. The new firefighters will not completely solve the RIT manning problem, but they will certainly help.

The results of the CFD RIT/Mayday Questionnaire definitely surprised the author in that only 50% of the respondents would support RIT services being provided by others. In numerous follow-up discussions with CFD personnel, a lack of trust in others training seemed to be a driving force in their non-support. The Clyde Fire Department regularly runs mutual-aid with its neighboring departments and this issue has never been brought to light in the past.

Recommendations

To ultimately correct the research problem, the author is recommending that the Clyde Fire Department enter into automatic-aid agreements with its neighboring departments. This recommendation will need “buy-in” from numerous stakeholders including but not limited to, the city of Clyde administration, the neighboring fire departments, and even the CFD personnel. This project will serve as the persuasive component for the “buy-in” phase and the agreement details would then have to be worked out with the stakeholders if approval can be achieved. Countless automatic-aid agreements were discovered during the research and any of these could be used as a starting point for the CFD.

The author feels that the reciprocation component of an automatic-aid agreement will be an area of contention for stakeholders. City administration will/should question the removal of an engine and crew from service in the city of Clyde. Neighboring departments might question a non-proportionate reciprocation rate as the CFD has a much higher call volume for structural fires than any neighboring department. In

addition to the trust issues revealed with the CFD questionnaire, Clyde firefighters might also question additional runs required for reciprocation and additional training required with the automatic-aid departments.

The author would suggest that future readers/researchers establish a much larger survey sample for looking at RIT conformance. The response numbers for this project were too small to have much confidence in any conclusions. In closing, though, it is the author's opinion that rapid intervention works. If the fire service wishes to eventually meet the goals of the Firefighter Life Safety Summit, it must work much harder at implementing and perfecting the practice. This research showed that if not for rapid intervention, numerous firefighters would *not* have gone home.

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Appendix A

Clyde Fire Department Field Regulation 72007-021

CLYDE FIRE DEPARTMENT
FIELD REGULATION 72007-021

Subject: Rapid Intervention Team (RIT)

Effective Date: January 1, 2003

No. Pages: 1

- 1.) A RIT shall be assembled at every incident where personnel are operating in positions that present an immediate danger of injury, in the event of equipment failure.
- 2.) The RIT shall consist of at least two members and shall be available for rescue of firefighters.
- 3.) The RIT shall be fully equipped with appropriate PPE, SCBA, and any specialized rescue equipment that could be needed. (See Appendix C)
- 4.) The RIT should stage near the point of entry or with the IC.
- 5.) The RIT should ensure that the structure is laddered to each story.
- 6.) If activated, the RIT shall operate with the following goals...
 - a.) locate firefighter(s)
 - b.) access firefighter(s) and attempt to manage injuries
 - c.) stabilize situation
 - d.) avoid additional risks
 - e.) extricate firefighter(s)
- 7.) If the original RIT is activated, a new RIT shall be assembled.
- 8.) The IC should assemble additional RITs commensurate with the needs of the situation.

Appendix B

Clyde Fire Department Field Regulation 72007-000

CLYDE FIRE DEPARTMENT
FIELD REGULATION 72007-000

Subject: General Responsibilities

Effective Date: January 1, 2003

No. Pages: 1

- 1.) Employees shall respond promptly and safely to all emergency duties. "Due-regard" for the public shall be exercised while operating personal vehicles and department apparatus.
- 2.) Employees shall have their personal vehicles equipped with a light and siren pursuant to the Ohio Revised Code, Section 4511.24. If not, they shall obey all traffic laws and traffic control devices when responding to an emergency.
- 3.) Employees shall not allow any persons (except FD personnel) into or near the scene of an emergency without the permission of the IC.
- 4.) Employees shall be held responsible for the prompt mitigation of all emergencies.
- 5.) Employees shall obey all orders of their superior officers.
- 6.) Employees shall not leave or neglect their emergency duties unless excused by the IC.
- 7.) Employees shall wear all required personal protective equipment (PPE) while traveling on department apparatus and at the scene of an emergency.
- 8.) The required PPE will be issued and includes: Boots, Bunker pants, Coat, Gloves, Nomex hood, and Helmet.
- 9.) Self contained breathing apparatus (SCBA) shall be worn in all hazardous environments.
- 10.) SCBAs shall not be worn when conditions prevent a good face seal.
- 11.) Employees shall not respond to the scene of a known Hazardous Materials (HazMat) incident unless they have received their HazMat Technician training as outlined in 29 CFR 1910.120 and taken their yearly 8 hour Refresher course.
- 12.) Employees shall perform their emergency operations in accordance with the department's regulations.
- 13.) Radio traffic shall be limited to information needed to assist the IC with his/her action plan.
- 14.) Radio traffic from interior crews shall have top priority.
- 15.) Employees shall not be under the influence of alcohol and/or drugs.

Appendix C

Questionnaire Mailing List

FDNAME	FDCHIEF	FDADDRESS	FDCTY	FDSTATE	FDZIP1	FDPHONE
ANNA FIRE DEPARTMENT	TIMOTHY J BENDER	515 S PIKE ST	ANNA	OH	45302	(937) 394-2116
ARLINGTON HTS FIRE DEPARTMENT	JOSEPH M GEHRING	601 ELLIOTT AV	ARLINGTON HTS	OH	45215	(513) 821-1100
AUBURN VOL FIRE DEPARTMENT INC	JOHN L PHILLIPS	10950 WASHINGTON ST	CHAGRIN FALLS	OH	44023	(440) 543-4133
AVR FIRE DISTRICT	BRETT T MEYERS	221 S MAIN ST	ATTICA	OH	44807	(419) 426-8862
BAINBRIDGE TWP FIRE DEPARTMENT	BRIAN A PHAN	17822 CHILLICOTHE RD	CHAGRIN FALLS	OH	44023	(440) 543-9873
BARNESVILLE FIRE DEPARTMENT	ROBERT G SMITH	125 E CHURCH ST	BARNESVILLE	OH	43713	(740) 425-3054
BASIL JT FIRE DISTRICT	ROB COOLEY	410 WASHINGTON ST	BALTIMORE	OH	43105	(740) 862-8596
BATTLE RUN FIRE DISTRICT	JEFF GOOD	209 BATTLE ST	PROSPECT	OH	43342	(740) 494-2355
BELOIT FIRE DEPARTMENT	SCOTT A DEAN	17893 5TH ST	BELOIT	OH	44609	(330) 938-9305
BERNE TWP FIRE DEPARTMENT	DAVID HAMMOND	101 FIRST ST	SUGAR GROVE	OH	43155	(740) 746-8244
BETHESDA FIRE DEPARTMENT	NEIL HUNT	103 E SPRING ST	BETHESDA	OH	43719	(740) 484-4573
BIG WALNUT JT FIRE DEPARTMENT	ACTING CHIEF DOUG DEWERT	4600 ST RT 229	MARENGO	OH	43334	(419) 946-7976
BOTKINS FIRE DEPARTMENT	LARRY DIETZ	207 W STATE ST	BOTKINS	OH	45306	(937) 693-3314
BRADY TWP FIRE DEPARTMENT	RANDY BORTON	300 S MAIN ST	WEST UNITY	OH	43570	(419) 924-2345
BREMEN-RUSHCREEK TWP FIRE DEPT	JOSEPH L WESTENBARGER	201 MARIETTA ST	BREMEN	OH	43107	(740) 569-4826
BREWSTER VOL FIRE DEPARTMENT	DALE STARCHER	110 E MAIN ST	BREWSTER	OH	44613	(330) 767-4212
BRIMFIELD FIRE DEPARTMENT	ROBERT KELLER	1333 TALLMADGE RD	KENT	OH	44240	(330) 678-9244
BROOKLYN HTS FIRE DEPARTMENT	MIKE LASKY	345 TUXEDO AVE	BROOKLYN HEIGHTS	OH	44131	(216) 351-3542
BRUNSWICK HILLS TWP FIRE DEPT	FRANK L CSEH JR	1918 PEARL RD	BRUNSWICK	OH	44212	(330) 225-2211
BST & G FIRE DISTRICT	EUGENE M HOGG	350 W CHERRY ST	SUNBURY	OH	43074	(740) 965-3841
BUCKEYE LAKE VILLAGE FIRE DEPT	RICHARD LEINDECKER JR	10920 HEBRON RD SE	BUCKEYE LAKE	OH	43008	(740) 928-3473
C B & S JT FIRE DISTRICT	JEFF BURRER	11 N DELAWARE ST	SHILOH	OH	44878	(419) 896-3966
CAMDEN-SOMERS TWP FIRE & RESCUE	SCOTT MICHAEL	111 W CENTAL AV	CAMDEN	OH	45311	(937) 452-1239
CANAL FULTON FIRE DEPARTMENT	RAY GREEN	1165 LOCUST ST S	CANAL FULTON	OH	44614	(330) 854-2456
CARDINGTON FIRE DEPARTMENT	JAMES ULLOM	215 PARK AVE	CARDINGTON	OH	43315	(419) 864-3111
CAREY VOL FIRE DEPARTMENT	JAY GRETZINGER	127 N VANCE	CAREY	OH	43316	(419) 396-7400
CARROLLTON VILLAGE FIRE DEPT	ROBERT HERRON	135 3RD ST SW	CARROLLTON	OH	44615	(330) 627-2889
CENTRAL TWP FIRE DEPARTMENT	BRIAN BENNINGTON	75 MIDDLE ST	LONDON	OH	43140	(740) 852-3393
CLINTON TWP FIRE DEPARTMENT	MARVIN SMITH	PO BOX 511	SHREVE	OH	44676	(330) 567-3411
CLINTON-WARREN JT FIRE & RESCUE	ROBERT L WYSONG	82 SPRINGHILL RD	CLARKSVILLE	OH	45113	(937) 289-3427
CLYDE FIRE DEPARTMENT	JAMES M ANDREWS	2322 N MAIN ST	CLYDE	OH	43410	(419) 547-8357
COLUMBIA TWP FIRE DEPARTMENT	RAYMOND T ANTHONY	25540 ROYALTON RD	COLUMBIA STATION	OH	44028	(440) 236-8812
CONTINENTAL FIRE DEPARTMENT	STEVEN W ELKINS	PO BOX 993	CONTINENTAL	OH	45831	(419) 596-4346
COVINGTON FIRE DEPARTMENT	CHARLES W WESTFALL	12 E SPRING ST	COVINGTON	OH	45318	(937) 473-2101
CYGNET FIRE DEPARTMENT	GARY CHAMBERLAIN	325 FRONT ST	CYGNET	OH	43413	(419) 655-2715
DELTA COMMUNITY FIRE DEPT	CHARLES HUDSON	PO BOX 268	DELTA	OH	43515	(419) 822-4626
EAST HOLMES FIRE AND EMS	GARY MELLOR	5257 CO RD 77	BERLIN	OH	44610	(330) 893-2117
EATON TWP FIRE DEPARTMENT	PHILLIP G SLACK	35955 ROYALTON RD	GRAFTON	OH	44044	(440) 748-3301
EDGERTON FIRE DEPARTMENT	SCOTT K BLUE	108 E INDIANA ST	EDGERTON	OH	43517	(419) 298-2552
ELM VALLEY JT FIRE DISTRICT	DALE A LIPPS	3 N HARRISON ST	ASHLEY	OH	43003	(740) 747-2510
ELYRIA TWP FIRE DEPARTMENT	WAYNE A EPPLEY	41416 GRISWOLD RD	ELYRIA	OH	44035	(440) 324-2973
ERHART-YORK TWP FIRE DEPARTMENT	KEN BARRETT	6609 NORWALK RD	MEDINA	OH	44256	(330) 725-4641
FAYETTEVILLE FIRE DEPARTMENT	ERIC WOLFER	100 N APPLE ST	FAYETTEVILLE	OH	45118	(513) 875-2202
FIRST CONSOLIDATED FIRE DISTRICT	RANDY STAFFORD	15 N HIGH ST	CALEDONIA	OH	43314	(419) 845-3332
FRANKLIN TWP FIRE DEPARTMENT	STEVE BISHOP	3773 ROBINSON-VAIL RD	FRANKLIN	OH	45005	(513) 746-9811
FREDERICKTOWN COMMUNITY FD	SCOTT MAST	139 COLUMBUS RD	FREDERICKTOWN	OH	43019	(740) 694-9701
GATES MILLS VOL FIRE DEPARTMENT	THOMAS ROBINSON	1470 CHAGRIN RIVER RD	GATES MILLS	OH	44040	(440) 423-4405
GLENDALE FIRE DEPARTMENT	MICHAEL D FINNEY	30 VILLAGE SQ	CINCINNATI	OH	45246	(513) 771-7864
GORHAM-FAYETTE FIRE DEPARTMENT	THOMAS G FRANKS	128 E MAIN ST	FAYETTE	OH	43521	(419) 237-2716
GRAFTON TWP FIRE & RESCUE	BOB RICHARDS	17109 ST RT 83	GRAFTON	OH	44044	(440) 926-2166
GRAFTON VILLAGE FIRE DEPARTMENT	JOHN S CUTTER III	1013 CHESTNUT ST	GRAFTON	OH	44044	(440) 926-2075
GRAND RIVER FIRE DEPARTMENT	BOB LLOYD	205 SINGER AVE	GRAND RIVER	OH	44045	(440) 352-9133
GRANGER TWP FIRE DEPARTMENT	JOHN G HADAM	3737 RIDGE RD	MEDINA	OH	44256	(330) 239-2111
GREENTOWN VOL FIRE DEPARTMENT	VINCENT J HARRIS	10100 CLEVELAND AV NW	UNIONTOWN	OH	44685	(330) 494-3002
HAMBDEN VOL FIRE DEPARTMENT	SCOTT A HILDENBRAND	9867 OLD STATE RD	CHARDON	OH	44024	(440) 285-3329
HAMERSVILLE FIRE DEPARTMENT	DENNIS SCHNEIDER	224 BANK ST	HAMERSVILLE	OH	45130	(937) 379-1822
HANOVER VOL FIRE DEPARTMENT	BRIAN J SPELLMAN	198 NEW HOME DR	NEWARK	OH	43055	(740) 763-4674
HARPERSFIELD FIRE DEPARTMENT	EVERETT C HENRY	5516 CORK COLD SPR. RD.	GENEVA	OH	44041	(440) 466-1064
HICKSVILLE VOL FIRE DEPARTMENT	WILLIAM D ELWOOD	111 S MAIN ST	HICKSVILLE	OH	43526	(419) 542-1348
HINCKLEY FIRE DEPARTMENT	BILL HORTON	1705 BELLUS RD	HINCKLEY	OH	44233	(330) 225-4574
HURON RIVER JOINT FIRE DISTRICT	RONALD STANG	155 MONROE ST	MONROEVILLE	OH	44847	(419) 465-2721
JACKSON TWP FIRE DEPARTMENT	WILLIAM WIEDERHOLD	3261 US RT 50	WILLIAMSBURG	OH	45176	(513) 625-1333
JEROMESVILLE VOL FIRE DEPARTMENT	MAX FULK	HURON ST	JEROMESVILLE	OH	44840	(419) 368-6811
JERUSALEM TWP FIRE DEPARTMENT	DICK NISSEN	9501 JERUSALEM RD	CURTICE	OH	43412	(419) 836-7302
KALIDA VOL FIRE DEPARTMENT	THOMAS J RAMPE	PO BOX 4	KALIDA	OH	45853	(419) 532-3335
LAFAYETTE TWP FIRE & RESCUE	JAMES E SHEPPARD	6776 WEDGEWOOD RD	MEDINA	OH	44256	(330) 722-4965
LAGRANGE FIRE & RESCUE	JAMES L RADER	123 PUBLIC SQUARE	LAGRANGE	OH	44050	(440) 355-6868
LAKESIDE VOL FIRE DEPARTMENT	ED COCHENOUR	9551 E HARBOR RD	LAKESIDE	OH	43440	(419) 798-5219
LEETONIA FIRE DEPARTMENT	KENNETH E GARLOUGH	300 E MAIN ST	LEETONIA	OH	44431	(330) 427-2310
LEIPSIC VOL FIRE DEPARTMENT	DAVE GOODWIN	326 S BELMORE ST	LEIPSIC	OH	45856	(419) 943-2000
LISBON VOL FIRE DEPARTMENT	DAVID L LEWTON	113 S JEFFERSON ST	LISBON	OH	44432	(330) 424-9613
LORDSTOWN VILLAGE FIRE DEPT	JAMES WISHART	1595 SALTSPPRINGS RD	WARREN	OH	44481	(330) 824-2321
LOUDONVILLE FIRE DEPARTMENT	JAMES J DANNER	200 N MARKET ST	LOUDONVILLE	OH	44842	(419) 994-4000
LYNCHBURG AREA JT FIRE & AMB	RANDY MCNEIL	8123 ST RT 135	LYNCHBURG	OH	45142	(937) 364-2915

LYONS ROYALTON VOL FIRE DEPT	JOHN ARQUETTE	409 W MORENCI	LYONS	OH	43533	(419) 923-2841
MADISON TWP FIRE DEPARTMENT	DARRIN A DECKER	51 FIRST ST NE	NEWARK	OH	43055	(740) 763-3393
MANCHESTER FIRE DEPARTMENT	JAMES R BOWMAN III	29 W 3RD ST	MANCHESTER	OH	45144	(937) 549-3131
MCCOMB FIRE DEPARTMENT	DON COURTRIGHT	139 W MAIN ST	MCCOMB	OH	45858	(419) 293-2764
MCDONALD FIRE DEPARTMENT	ED WINTERBAUER	451 OHIO AV	MCDONALD	OH	44437	(330) 530-5472
MECHANICSBURG FIRE DEPARTMENT	GARY P SHONKWILER	18 N MAIN ST	MECHANICSBURG	OH	43044	(937) 834-2506
MIDDLE POINT FIRE DEPARTMENT	CRAIG KING	PO BOX 46	MIDDLE POINT	OH	45863	(419) 968-2441
MIDDLETON TWP FIRE DEPARTMENT	STEVE ASMUS	202 FINDLAY ST	HASKINS	OH	43525	(419) 823-1111
MILAN TWP FIRE DEPARTMENT	TED CRAWFORD	1 N CENTER ST	MILAN	OH	44846	(419) 499-2354
MILFORD TWP FIRE DEPARTMENT	CORBY HANSEL	5107 HUSTON RD	COLLINSVILLE	OH	45004	(513) 726-4311
MINERVA FIRE DEPARTMENT	RICHARD H MCCLELLAN	505 E LINCOLN WAY	MINERVA	OH	44657	(330) 868-5193
MINSTER-JACKSON TWP FIRE DEPT	DALE DUES	S JEFFERSON ST	MINSTER	OH	45865	(419) 628-4093
MONTVILLE VOL FIRE DEPARTMENT	WILLIAM D HOLBERT	9755 MADISON RD	MONTVILLE	OH	44064	(440) 968-3318
MOOREFIELD TWP FIRE DEPARTMENT	RICK FOREMAN	1616 MOOREFIELD RD	SPRINGFIELD	OH	45503	(937) 399-0770
MORGAN HOSE CO VFD	LAVERNE P GOODGE	3033 E WATER ST	ROCK CREEK	OH	44084	(440) 563-3000
MORRAL-SALT ROCK TWP FD	RONALD E SPICER	143 S GREEN ST	MORRAL	OH	43337	(740) 465-2005
NEW BAVARIA/PLEASANT TWP FD	ROBERTO GILL	936 WALNUT ST	NEW BAVARIA	OH	43548	(419) 653-4829
NEW BREMEN-GERMAN TWP FD	ROBERT D KUICK	214 N WASHINGTON ST	NEW BREMEN	OH	45869	(419) 629-3101
NEW CARLISLE FIRE DIVISION	RONALD GROUT	315 N CHURCH ST	NEW CARLISLE	OH	45344	(937) 845-8401
NEW LEXINGTON FIRE DEPARTMENT	MIKE BRINGARDNER	125 S MAIN ST	NEW LEXINGTON	OH	43764	(740) 342-4535
NEW MIAMI FIRE DEPARTMENT	GERALD COOK	191 RIVERSIDE DR	NEW MIAMI	OH	45011	(513) 895-3581
NEW WASHINGTON FIRE DEPARTMENT	RICHARD A ACKERMAN	119 E MANSFIELD	NEW WASHINGTON	OH	44854	(419) 492-2345
NEW WATERFORD VOL FIRE DEPT	BRYAN R HENDERSON	3766 E MAIN ST	NEW WATERFORD	OH	44445	(330) 457-2363
NIMISHILLEN TWP FIRE DEPARTMENT	RICHARD J PETERSON	4560 BROADWAY AVE NE	LOUISVILLE	OH	44641	(330) 453-5880
NORTH RANDALL FIRE DEPARTMENT	MARSHALL SHORTS	21937 MILES RD	NORTH RANDALL	OH	44128	(216) 587-9283
NORTHERN UNION CO JT FIRE & EMS	RANDY RIFFLE	602 N FRANKLIN ST	RICHWOOD	OH	43344	(740) 943-2715
NORTHFIELD CENTER FIRE DEPT	A/C DAVID ENZMAN	60 W AURORA RD	NORTHFIELD CENTER	OH	44067	(330) 467-7410
OAKWOOD VOL FIRE DEPARTMENT	KENNETH THOMAS	201 N 6TH ST	OAKWOOD	OH	45873	(419) 594-3381
OHIO CITY VOL FIRE DEPARTMENT	DARRELL SWANDER	103 S MAIN ST	OHIO CITY	OH	45874	(419) 965-2299
ORANGE VILLAGE FIRE DEPARTMENT	BRUCE WHITE	4600 LANDER RD	ORANGE VILLAGE	OH	44022	(440) 498-4402
OSNABURG TWP FIRE DEPARTMENT	DANIEL ADAMS	110 W CHURCH ST	EAST CANTON	OH	44730	(330) 488-6414
OXFORD FIRE DEPARTMENT	JOHN P DETHERAGE	101 EAST HIGH ST	OXFORD	OH	45056	(513) 524-8249
PAYNE VOL FIRE DEPARTMENT	DAVID P KROUSE	204 N LAURA ST	PAYNE	OH	45880	(419) 399-4835
PEMBERVILLE-FREEDOM FIRE DEPT	HERBERT W MARTIN	104 E FRONT ST	PEMBERVILLE	OH	43450	(419) 287-4593
PERRY TWP VOL FIRE DEPARTMENT	PHILIP E PANZOTT	2198 N ELLSWORTH AV	SALEM	OH	44460	(330) 332-4676
PERRY TWP VOL FIRE DEPARTMENT	RICK PHILLIPS	2408 E BREESE RD	LIMA	OH	45806	(419) 221-2345
PHILLIPSBURG FIRE DEPARTMENT	DAVID EVANS	16 E POPLAR ST	PHILLIPSBURG	OH	45354	(937) 884-7620
PIONEER FIRE DEPARTMENT	DENNIS FACKLER	205 S STATE ST	PIONEER	OH	43554	(419) 737-2614
PLEASANT HILL-NEWTON TWP JFD	JOE MARCHAL	8 W HIGH ST	PLEASANT HILL	OH	45359	(937) 676-2248
PLEASANT TWP FIRE DEPARTMENT	DANIEL HAYMAN	1035 OWENS RD W	MARION	OH	43302	(740) 389-6569
PLEASANT TWP FIRE DEPARTMENT	MIKE WILLIS	10 W PLEASANT ST	CATAWBA	OH	43010	(419) 828-1347
PLYMOUTH FIRE DEPARTMENT	TIMOTHY W REDDEN	20 PORTNER ST	PLYMOUTH	OH	44865	(419) 687-5101
PLYMOUTH VOL FIRE & RESCUE CO	WILLIAM E STRUBBE	1001 PLYMOUTH RD	ASHTABULA	OH	44004	(440) 993-4350
PORT CLINTON FIRE & RESCUE	KENT JOHNSON	1755 STATE ST	PORT CLINTON	OH	43452	(419) 734-3430
PORTAGE FIRE DISTRICT	JOHN HUMPHREY	242 W WATER ST	OAK HARBOR	OH	43449	(419) 898-3105
RADNOR TWP FIRE DEPARTMENT	RANDY A BUTTS	4061 ST RT 203	RADNOR	OH	43066	(740) 595-3464
REILY TWP FIRE DEPARTMENT	JOHN B QUILLEN	3330 LAW RD	OXFORD	OH	45056	(513) 523-1238
REMINDERVILLE FIRE DEPARTMENT	THOMAS A PLUNKETT	3382 GLENWOOD BLVD	REMINDERVILLE	OH	44202	(330) 562-2862
RICHFIELD TWP FIRE DEPARTMENT	RONALD L TATE	11450 W SYLVANIA AV	BERKEY	OH	43504	(419) 829-2055
RIPLEY FIRE DEPARTMENT	ROBERT A PFEFFER	119 WATERWORKS RD	RIPLEY	OH	45167	(937) 392-4737
ROCKFORD COMMUNITY FIRE DEPT	RALPH E RHOADES	400 EAST ST	ROCKFORD	OH	45882	(419) 363-3611
SCIOTO VALLEY FIRE DISTRICT	JOHN T BOYD	100 N FRONT ST	LA RUE	OH	43332	(740) 499-2545
SE HARDIN/NW UNION JT FIRE DISTRICT	W CHARLES MOWERY	212 S WHEELER ST	MT VICTORY	OH	43340	(937) 354-2345
SEBRING FIRE DEPARTMENT	JAMES R CANNELL	235 E OHIO AV	SEBRING	OH	44672	(330) 938-6575
SEVEN HILLS FIRE DEPARTMENT	A CHARLES HOSTA	7195 BROADVIEW RD	SEVEN HILLS	OH	44131	(216) 524-3321
SHARON TWP FIRE DEPARTMENT	ROBERT M HAAS	1274 SHARON COPLEY RD	SHARON CENTER	OH	44274	(330) 239-4992
SHEFFIELD TWP FIRE DEPARTMENT	FRANK A NORCROSS	5166 CLINTON AV	LORAIN	OH	44055	(440) 277-4380
SPENCER COMMUNITY FIRE DISTRICT	SCOTT A SCHMOLL	PO BOX 82	SPENCER	OH	44275	(330) 648-2724
SPRINGFIELD TWP FIRE DEPARTMENT	JOHN E ROEDER	3600 E NATIONAL RD	SPRINGFIELD	OH	45503	(937) 322-1142
SPRINGFIELD TWP STRYKER FIRE DEPT	CRAIG KOEPPPE	20275 ST RT 34	STRYKER	OH	43557	(419) 682-2402
ST MARYS TWP FIRE DEPARTMENT	CHAD S HICKS	10752 SR 364	ST MARYS	OH	45885	(419) 394-2834
SUGARCREEK FIRE DEPARTMENT	JAMES A HARRISON	154 S BROADWAY	SUGARCREEK	OH	44681	(330) 852-4316
TIPP CITY FIRE DEPARTMENT	STEVE C KESSLER	520 W MAIN ST	TIPP CITY	OH	45371	(937) 669-8477
TROY TWP FIRE DEPARTMENT	RICHARD COMPTON	199 W MAIN ST	LEXINGTON	OH	44904	(419) 884-3118
TURTLECREEK TWP FIRE & EMS	WILLIAM A STEVENS	670 N ST RT 123	LEBANON	OH	45036	(513) 932-4902
UNION CITY FIRE DEPARTMENT	DEAN HIATT	401 E ELM ST	UNION CITY	OH	45390	(937) 968-5605
VERMILION FIRE DEPARTMENT	CHRIS STEMPOWSKI	5467 OHIO ST	VERMILION	OH	44089	(440) 967-3977
WALHONDING VALLEY FIRE DISTRICT	MIKE R SNYDER	100 S BRIDGE ST	WARSAW	OH	43844	(740) 824-3100
WASHINGTON TWP FIRE & RESCUE	MATTHEW J HART	2469 SHORELAND AVE	TOLEDO	OH	43611	(419) 726-2453
WASHINGTON TWP FIRE DEPARTMENT	ROBERT HILL	106 GIBSON	ARCADIA	OH	44804	(419) 894-6754
WASHINGTON TWP FIRE DEPARTMENT	DAVID M COMPTON	2480 POSSUM RUN RD	MANSFIELD	OH	44903	(419) 756-8330
WASHINGTON TWP VOL FIRE DEPT	BRIAN MOZENA	PO BOX 68	TONTOGANY	OH	43565	(419) 823-8612
WAYNE TWP FIRE DEPARTMENT	DOUG HOIT	4575 MIDDLETOWN OX. RD	TRENTON	OH	45067	(513) 424-9710
WEST ALEXANDRIA FIRE DEPARTMENT	WILLIAM L BLISS	25 E DAYTON ST	WEST ALEXANDRIA	OH	45381	(937) 839-4668
WEST UNION VOL FIRE DEPARTMENT	JERRY KIRKER	57 LOGANS LANE	WEST UNION	OH	45693	(937) 544-3121
WESTERN RESERVE JT FIRE DISTRICT	DAVID C COMSTOCK JR	111 S MAIN ST	POLAND	OH	44514	(330) 757-8268

Appendix D

Questionnaire Cover Letter

Clyde Fire Department
Chief Mike Andrews



November 11, 2008

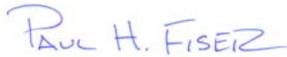
LOUDONVILLE FIRE DEPARTMENT
ATTN: JAMES J DANNER
200 N MARKET ST
LOUDONVILLE, OH 44842

Dear Chief:

The enclosed survey is part of the data collection phase of an applied research project for the U.S. Fire Administration's Executive Fire Officer Program. I am surveying approximately 150 paid-on-call fire departments in Ohio with regards to Rapid Intervention Team (RIT) assembly and deployment.

If you or a designee could please take a few minutes to complete the survey and return it in the stamped self-addressed envelope, it will be greatly appreciated. Depending on responses, I will be contacting specific departments for personal interviews. Please be advised that your responses will not be directly tied to your department unless I contact you and receive your permission. Please feel free to contact me at (419) 552-0141 or at cfid802@verizon.net if you have any questions or concerns. Thank you for your time regarding this initiative.

Sincerely,

A handwritten signature in blue ink that reads 'Paul H. Fiser'.

Paul H. Fiser
Assistant Fire Chief
City of Clyde (OH)

Appendix F

Rapid Intervention Team Results

FIRE DEPARTMENT	RIT ASSEMBLED	AUTO-AID	MUTUAL	OWN	OWN/MUTUAL	RIT ASSEMBLED	MANPOWER	TRAINING
DEPARTMENT 1						NO	X	
DEPARTMENT 2						NO	X	
DEPARTMENT 3	YES		X					
DEPARTMENT 4	YES	X						
DEPARTMENT 5	YES	X						
DEPARTMENT 6	YES		X					
DEPARTMENT 7	YES	X						
DEPARTMENT 8						NO	X	
DEPARTMENT 9	YES	X						
DEPARTMENT 10						NO	X	
DEPARTMENT 11	YES			X				
DEPARTMENT 12						NO	X	
DEPARTMENT 13						NO		X
DEPARTMENT 14	YES	X						
DEPARTMENT 15						NO		X
DEPARTMENT 16	YES	X						
DEPARTMENT 17	YES	X						
DEPARTMENT 18						NO	X	
DEPARTMENT 19						NO	X	
DEPARTMENT 20	YES	X						
DEPARTMENT 21						NO	X	
DEPARTMENT 22	YES	X						
DEPARTMENT 23						NO	X	
DEPARTMENT 24						NO	X	
DEPARTMENT 25	YES				X			
DEPARTMENT 26						NO	X	
DEPARTMENT 27	YES	X						
DEPARTMENT 28						NO	X	
DEPARTMENT 29						NO	X	
DEPARTMENT 30						NO	X	
DEPARTMENT 31	YES		X					
DEPARTMENT 32						NO		X
DEPARTMENT 33						NO	X	
DEPARTMENT 34						NO	X	
DEPARTMENT 35						NO		X
DEPARTMENT 36	YES		X					
DEPARTMENT 37						NO	X	
DEPARTMENT 38	YES		X					
DEPARTMENT 39	YES		X					
DEPARTMENT 40						NO	X	
DEPARTMENT 41	YES		X					
DEPARTMENT 42						NO	X	
DEPARTMENT 43						NO		X
DEPARTMENT 44	YES			X				
DEPARTMENT 45	YES				X			
DEPARTMENT 46	YES				X			
DEPARTMENT 47						NO		X
DEPARTMENT 48	YES	X						
DEPARTMENT 49						NO	X	
DEPARTMENT 50	YES	X						
DEPARTMENT 51						NO	X	
DEPARTMENT 52	YES	X						
DEPARTMENT 53	YES			X				
DEPARTMENT 54						NO	X	
DEPARTMENT 55	YES	X						
DEPARTMENT 56	YES	X						
	28	15	7	3	3	28	22	6

Appendix G

Clyde Fire Department RIT/Mayday Questionnaire

Clyde Fire Department RIT/Mayday Questionnaire

1.) How would you feel about our Rapid Intervention Team (RIT) regulation/policy being manned by another department at our scenes (assuming they are properly trained)?

- I would support it
- I would oppose it
- No opinion

2.) Check any items below which describes benchmarks you would use when deciding on the need to call for a mayday.

- The moment your low-air alarm starts
- After your low-air alarm has sounded for approximately two minutes or more
- The moment that you feel you are lost
- After approximately two minutes or more of feeling lost
- The moment you become entangled and/or trapped
- After being entangled and/or trapped for approximately two minutes or more
- At the point of mask removal due to any type of SCBA failure
- Other - If you have other bench marks that trigger a mayday please describe them. Please print.
