THE NEED TO INCORPORATE EDUCAT3TT1.N T3TOT3TN HUMAN FACTORS T3TINTO TRAIT3TNING ANT3TD STANDARDT3TS FOR EFFECTIVE RADIO COMMUNICAT1.NS .N T5(THE FIRE)6(GR)6(OUN)4(D)]I

of the Bachelr of Scien(H)ce degree at

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Submitted to:

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May 3

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Communications on the fireground are essential and provide the vital link between the fire fighters on the interior and Incident Command (NIOSH, 1999).The crews must relay information about the interior conditions that they are experiencing back to the Incident Commander. Members of the crew should also communicate with each other to synchronize activities and determine if fellow crew members are in need of assistance (NIOSH, 1999). Based on the information provided by the crews and observed on scene; the Incident Commander is responsible for making risk assessment decisions throughout the duration of the incident.

Radio communications on the fireround are also used to carry out Personnel Accountability Reports during incidents. These reports allow incident commanders to keep track of the crews on scene and the operations they are carrying out. They may also be used as a to ko

oint where the transmission cannot be understood. With digital communications, other error-correcting methods must be used.

on a separate frequency. This is used to allow a low power radio to hear the signals coming from other radios, especially when there are obstructions between the radios in the system.

Conventional, non-

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Department Occupational Safety and Health Program also pertains to fire ground communicaeon. Chapter eight of the standard concerns emergency operat ions. Section 8.2

issues. At the end of the report they presented a list of recommendations. This list has been replicated below. Each suggestion has been numbered to aid in identification.

1. Ideally, all firefighters should be individ

radios,

Firefighters can reduce interference factors by turning down the volume on portable

C. Consider providing all fire fighters with portable radios or radios integrated into their face pieces.

D. Ensure that a tone or alert recognized by all fire fighters is transmitted immediately when conditions become unsafe for fire fighters.

E. Instruct and train fire fighters in initiating emergency traffic (mayday-mayday) and activating their personal alert safety system (PASS) device when they become lost, disoriented, or trapped.

F. Whenever a change in personnel occurs, make sure that everyone is briefed and understands the procedures and operations required for that shift, station, or duty.

G. Ensure that properly functioning communications equipment is available and can adequately support the volume of radio traffic at fire scenes.

H. Establish and maintain regional mutual-aid radio channels to coordinate and communicate activities involving units from multiplfightz0ctions.

Half of the suggestions, four of the eight, contained in this list address human factors related to standards and training. Suggestion A is also very similar to suggestions 3 and 6 in the previous list.

The *Voice Radio Communications Guide for the Fire Service* was created as a tool for the

Development of a Human Factors Taxonomy

A

Hall

How should you communicate?

How should you stay informed of communication?

Discipline

When communicating on the fire ground incident commanders and firefighters should

operating on to be cleared of all traffic not relating to the mayday. The incident reports showed

Bibliography

Demers, D. (1978). *Fire in Syracuse: four firefighters die.* National Fire Protection Association.

Firefighter Close Calls . (n.d.). *Safety "Hot Topic" Sheet .* Retrieved 2013, from Firefighter Close Calls : http://www.firefighterclosecalls.com/site/firefighterclosecalls/drills/FCC%20Vol%2011-124%20When%20to%20Call%20MAYDAY.pdf