G26 Isle-Verte Disaster

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After attending this presentation, attendees will understand the importance of a well-orchestrated operations plan in order to navigate the unexpected conditions at a mass disaster site and the need for collaboration between forensic experts for a successful identification outcome.

This presentation will impact the forensic science community by helping attendees gain information on both procedural solutions to complicated climactic and site conditions in a mass disaster situation and on the lessons learned from two mass disasters occurring within months of one another, each with unique environmental issues.

The fatal fire of Résidence-du-Havre, Isle-Verte, Quebec, Canada, which occurred on January 23, 2014, struck the seniors' residence at 12:05 a.m., resulting in 32 deaths. Firefighters were called to the Résidence-du-Havre in sub-zero temperatures with a wind chill factor of -35°F which culminated in a cascading ice castle encasing the building's debris and victims alike. This presented major challenges for the recovery team.

The Isle-Verte tragedy fell on the heels of the Lac-Megantic, Quebec, fatal train derailment in 2013, less than six month's earlier, where an unattended 72-car freight train operated by the United States-based "*Montreal, Maine and Atlantic Railway*" (MMA) carrying over two million United States gallons of crude oil broke away, derailed, and caught fire with multiple explosions in the center of the town resulting in 47 deaths.

The Montreal-based forensic team was cohesive and well coordinated following the Lac-Megantic Disaster and cross-functional teams were well established to face the Isle-Verte tragedy.[1]

The on-site forensic identification team included two pathologists, an experienced denar, and an anthropologist. Participants will learn the complex process of extracting cremated human remains under extreme environmental conditions. Once extracted, the human remains were bundled, packaged, numbered, and shipped to Montreal where pathologists, dentists, and DNA experts further analyzed the remains at the central forensic laboratory. The average age of the victims was 89 and most had few or no teeth. Two victims were 99 years of age. All human remains were photographed, examined, underwent fluoroscopy, and medical and dental radiography. Through the collaboration of the pathologists, odontologists, and DNA experts, 28 of the 32 victims were successfully identified. Dental identification was primarily based on trabecular bone pattern.

The Lac-Megantic and Isle-Verte tragedies will be compared statistically and lessons learned will be shared.

Reference:

1. Dorion RBJ, Desranleau S, Laforte S, Perron MJ, Ruest A. The Lac-Mégantic Disaster. Proceedings of the American Academy of Forensic Sciences, 65th Annual Scientific Meeting, Washington, DC. 2013.

Forensic Odontology, Mass Disaster Management, Positive Identification