

# Background of Responders and Emergency Management

<b>Emergency management in Ontario .....</b>	<b>8</b>
<b>Graduated problem solving and emergency response .....</b>	<b>8</b>
<b>The role of the municipality .....</b>	<b>9</b>
The municipal emergency management program .....	9
Municipal emergency control groups .....	10
Municipal emergency management program coordinator and committee .....	11
Declaration of an emergency by the municipality .....	11
Community emergency operations centres .....	11
Mutual aid system and municipal capacity expectations .....	12
Volunteers .....	12
<b>The role of the province .....</b>	<b>13</b>
Premier of Ontario .....	13
Lieutenant governor in council .....	13
Ministry of Community Safety and Correctional Services .....	13
Provincial Emergency Response Plan .....	15
The <i>Provincial Emergency Response Plan for Building Structural Collapse 2010</i> .....	15
Provincial Emergency Operations Centre .....	16
Emergency Management Ontario .....	17
Office of the Fire Marshal .....	18
Mutual assistance between provinces and territories .....	18
The role of the federal government .....	19
<b>Incident Management System: the system as it is intended to work .....</b>	<b>19</b>
<b>Background and purpose of the Incident Management System .....</b>	<b>19</b>
<b>The Incident Management System is not mandatory .....</b>	<b>20</b>
<b>Incident Management System organizational structure and management functions .....</b>	<b>20</b>
Command .....	21
The incident commander .....	21
Operations, planning, logistics, and finance and administration .....	22

The incident action plan.....	23
Planning cycle.....	24
Training .....	25
<b>Overview of key players in the Elliot Lake response .....</b>	<b>25</b>
<b>Elliot Lake Fire Department.....</b>	<b>25</b>
<b>Training and equipment.....</b>	<b>25</b>
Tactical priorities .....	26
<b>City of Elliot Lake .....</b>	<b>26</b>
Emergency response plan .....	26
Community Control Group.....	27
Responsibilities of some of the key players of the Community Control Group.....	28
Emergency Operations Centre .....	29
East Algoma OPP .....	29
<b>City of Toronto Heavy Urban Search and Rescue team .....</b>	<b>29</b>
Classification of Urban Search and Rescue teams .....	29
History of the Toronto HUSAR .....	30
Composition of the Toronto HUSAR.....	31
Training standards.....	31
Team member training .....	32
Mobilization of HUSAR/TF3 .....	33
<b>Ontario Provincial Police .....</b>	<b>34</b>
Composition of UCRT .....	34
Training of UCRT members .....	34
Deployment of UCRT.....	35
<b>The Ministry of Labour in an emergency response.....</b>	<b>35</b>
Why the Ministry of Labour may get involved in an emergency response .....	35
The applicability of the <i>Occupational Health and Safety Act</i> at the scene of an emergency response .....	36
The expected roles of Ministry of Labour personnel at an emergency response .....	36
<b>Ontario Mine Rescue – a successful emergency response organization .....</b>	<b>36</b>
Safety of responders is the first priority.....	37
Extensive training and equipment, similar to that of HUSAR/TF3 and UCRT.....	38
Response time: on site within 30 minutes .....	38
Chain of command .....	38
One official in charge.....	38
Support and information from the mine rescue officer and the emergency control group.....	39
Briefing officer as the liaison between the control group and the operations team .....	39
Team captain in charge of operations team .....	39

Planning is absolutely critical .....39

Briefing team members: in writing, with opportunity for questions.....40

Written logs and reports required .....40

Debriefings: essential and useful .....41

OMR’s experience: extensive and useful .....41

**Notes .....42**

To understand the response to the collapse of the Algo Mall, it is necessary to first review the way the province, the municipalities, and other responders are organized to deal with emergencies of this type. Accordingly, I will provide background information in this chapter on

- emergency management in Ontario;
- the Incident Management System;
- organizations that participated directly in the rescue; and
- organizations that provided support and advice.

The description of the emergency management structure in Ontario that follows reflects the one in place at the time of the Mall's collapse. Although there have been some administrative changes since then, it is my understanding that the framework remains essentially the same.

## Emergency management in Ontario

The primary provincial legislation dealing with emergency management is the *Emergency Management and Civil Protection Act* (EMCPA). It reflects the five pillars of emergency management:

- mitigation
- prevention
- preparation
- response
- recovery<sup>1</sup>

The Act defines “emergency” as “a situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, an accident or an act whether intentional or otherwise.”<sup>2</sup>

## Graduated problem solving and emergency response

**Where an emergency escalates beyond the capacities of the individual or family, the expectation is that the local community or municipality will take over. Communities assist as a matter of routine through emergency responders such as police, fire, and emergency medical services.**

The first response is almost always local: it begins with the individual or the family and evolves from there. The province's emergency response regime is designed to reflect this process. The Ontario government's Provincial Emergency Response Plan expects individuals and families to be able to respond to an emergency and be self-sufficient for the first 72 hours.<sup>3</sup> This approach is described as “graduated problem-solving.”<sup>4</sup> It is “bottom up” and meant to keep emergency response as localized as possible while ensuring that all the necessary resources are available in a timely fashion.

Where an emergency escalates beyond the capacities of the individual or family, the expectation is that the local community or municipality will take over. Communities assist as a matter of routine through emergency responders such as police, fire, and emergency medical services.<sup>5</sup>

Where the emergency in question overwhelms the capacities of the local municipality or community and its first responders, the next step is to seek mutual aid or assistance from neighbouring services, municipalities, and communities or from the local county or region. Mutual aid programs are unique to fire services and are required under the *Fire Protection and Prevention Act*.<sup>6</sup> Municipalities can also form agreements with neighbouring communities to provide assistance to each other in times of need for matters that are not related to fires. These agreements are called “mutual assistance.”<sup>7</sup>

Where the mutual aid or assistance system will not suffice, the local community can look to the Ontario government for further support. The Province of Ontario has emergency resources and expertise which may be used to deal with emergency response needs that are beyond the capabilities of local communities.<sup>8</sup> Indeed, the local community can ask for provincial assistance at any time, even where the mutual aid or mutual assistance systems are sufficient.<sup>9</sup>

The Province of Ontario has emergency resources and expertise which may be used to deal with emergency response needs that are beyond the capabilities of local communities.

Finally, and depending on the nature and severity of the incident in question, the province may require the assistance of the federal government or even international assistance. The nature of the emergency may also be such that jurisdiction falls automatically to the federal government.<sup>10</sup>

The provision of assistance from one level of government to another may require a declaration of emergency, unless normal powers and procedures will suffice. A declaration of emergency, in keeping with the graduated approach, should be at the lowest level of jurisdiction. As such, it should seldom be necessary to declare a provincial or federal emergency, even though resources from these jurisdictions will frequently be provided in support of an emergency declared by a municipality or a First Nation.<sup>11</sup>

## The role of the municipality

In accordance with the graduated problem-solving model, emergency response in Ontario is to be managed at the lowest level possible – at the community or municipality level. As such, Ontario municipalities are subject to a series of legislated responsibilities related to emergency response, chiefly pursuant to the *Emergency Management and Civil Protection Act*. The Act also sets out powers that may be exercised by the municipality and the province during an actual emergency, but without expressly defining the relationship between the province and the municipalities.<sup>12</sup>

All municipalities must have in place the following structure for emergency response. It includes the creation of community emergency management programs, emergency plans, control groups, emergency operation centres, and mutual aid arrangements.

## The municipal emergency management program

Every municipality in Ontario is required by law to develop and implement an emergency management program and to pass a by-law specifically adopting the program. It must include an emergency response plan, training programs, and exercise sessions for municipal employees and others as well as the procedures to be followed in emergency response and recovery activities. It must also provide for public education on the risks to public safety and on how the public can best be prepared for emergencies.<sup>13</sup> The training programs and exercises for municipal employees and others allow for the inclusion of non-governmental organizations that are expected to play a role in the emergency response plan – for example, the Salvation Army or the Red Cross.<sup>14</sup>

Dan Hefkey holds the position of commissioner for community safety, as he did when he appeared at the Inquiry. The fire marshal and the chief of Emergency Management Ontario both report directly to him. He explained that the *Emergency Management and Civil Protection Act* does not contain any provision dealing with non-compliance with the Act.<sup>15</sup> Although the Act requires municipalities to have an emergency management program that includes an emergency plan, there is no statutory penalty for those that do not comply. He testified, however, that there is almost complete compliance. At any time, on average, only four to eight municipalities in the province are deficient in some aspect of the requirements.<sup>16</sup>

Municipalities must conduct annual reviews of their emergency management programs and make recommendations to the local council about any revisions that are required.<sup>17</sup> The emergency management program must also assess various hazards and risks to public safety in the community which could give rise to emergencies and, in addition, identify facilities and infrastructure that are at risk of being affected by emergencies and for which the municipality is responsible.<sup>18</sup>

This process of hazard identification and risk assessment is expected to shape the plan. It identifies what the hazards are within the municipality and makes a judgment on the likelihood of an event happening as well as its consequences in terms of lives and property damage. Emergency Management Ontario, a branch of the Ministry of Community Safety and Correctional Services which is responsible for developing, promoting, and maintaining emergency programs, expects that each municipality will regularly revisit this assessment, simply because changes in circumstances require changes to emergency plans. Municipalities are not required to provide Emergency Management Ontario with a copy of their hazard identification and risk assessment.<sup>19</sup>

The emergency response plan sets out the procedures on how each particular municipality will respond to an emergency.<sup>20</sup> In addition, it lays out the responsibilities of municipal employees in carrying out the plan.\*

### **Municipal emergency control groups**

Municipalities are also required by regulation to have in place a municipal emergency control group – to direct the municipality's response in an emergency, including the implementation of the emergency response plan.<sup>21</sup> This group is more commonly referred to as the Community Control Group (CCG).<sup>22</sup>

Mr. Hefkey explained that the role of the CCG is to act in support of those who are actually dealing with the emergency. The group does not direct the responders – its concern is generally broader than the emergency incident itself and includes the effects and consequences of the emergency on the community.<sup>23</sup> The group must be composed of officials or employees of the municipality appointed by the municipal council, and it may include members of the City Council itself. All members of the group must complete annual training as required by the chief of Emergency Management Ontario.<sup>24</sup>

According to Mr. Hefkey, a CCG would typically include the mayor, deputy mayor, chief administrative officer, and the heads of the municipal departments such as public works, police, fire, emergency management services, public health, and social services.<sup>25</sup> When an emergency occurs, the municipality's emergency control group will usually convene to activate the emergency plan and, using that plan, access local resources to support emergency operations.<sup>26</sup>

• • • • •

\* *Emergency Management and Civil Protection Act*, O Reg 380/04, s 15.

Further instruction on minimum standards for municipal (and provincial) emergency management programs is found in Ontario Regulation 380/04, created to support the requirements in the *Emergency Management and Civil Protection Act*.

An incident commander may be appointed by the CCG to manage operations at the site of the emergency event. This commander is usually a senior officer from one of the local emergency services.<sup>27</sup> That said, an incident command structure will likely already have been in place at the onset of the emergency response, set up by the emergency first responders even before the declaration of emergency by the community.

### **Municipal emergency management program coordinator and committee**

The municipality must also designate an employee of the municipality or a member of the city council as its emergency management program coordinator. In addition, it must have in place an Emergency Management Program Committee (EMPC).<sup>28</sup>

The emergency management program coordinator manages the development and implementation of the municipality's emergency management program within the municipality and, to the extent possible, coordinates it with that of other municipalities, ministries of the Ontario government, and organizations outside government that are involved in emergency management.<sup>29</sup> The EMPC advises the municipal council on the development and implementation of the municipality's emergency management program. It also conducts an annual review of the program and makes recommendations to council for its revisions resulting from an updated hazard identification and risk assessment.<sup>30</sup>

### **Declaration of an emergency by the municipality**

Section 4 of the *Emergency Management and Civil Protection Act* provides that the head of the council in a municipality may declare that an emergency exists in either the whole or a part of the municipality. The council head will then take such action and make such orders as he or she considers necessary, and which are not contrary to law, to implement the municipality's emergency plan and to protect both the property and the health, safety, and welfare of the residents in the emergency area.<sup>31</sup> The declaration can be made whenever the head of council considers that an emergency exists. There is no condition precedent, or particular event, that must occur before the exercise of this power.<sup>32</sup> Of course, municipalities can (and do) take steps to respond to an emergency without making a formal declaration.<sup>33</sup>

**If a municipality declares an emergency, it must notify the province. On average, every year some 23 municipal emergency declarations are made in Ontario.**

If a municipality declares an emergency, it must notify the province.<sup>34</sup> On average, every year some 23 municipal emergency declarations are made in Ontario. However, no provincial emergency has been declared since the Act came into force in 2006.<sup>35</sup>

### **Community emergency operations centres**

During an emergency, municipalities are required to have a community Emergency Operations Centre (EOC) in place, operating under the direction of the municipal emergency control group.<sup>36</sup> From there the group manages the emergency. When an emergency situation arises, local municipalities are expected to follow their emergency plans and, where necessary, activate their EOC in order to coordinate local emergency response efforts.<sup>37</sup>

The municipality must appoint an emergency information officer to act as its primary media and public contact during an emergency.<sup>38</sup> That does not mean, however, that the emergency information officer has to be the spokesperson for the municipal emergency control group. It is expected that the designation of a spokesperson will be addressed within the emergency response plan.<sup>39</sup>

The municipality should have appropriate technological and telecommunications systems in place to ensure effective communication in an emergency. It must also have a procedure to inform the Provincial Emergency Operations Centre (PEOC) of an emergency and of possible requirements for assistance.<sup>40</sup>

### Mutual aid system and municipal capacity expectations

Within the gradual problem-solving approach, a municipality can rely on provincial mutual aid systems for fire departments when an emergency exceeds its capacity. The mutual aid system is established under the authority of the *Fire Protection and Prevention Act, 1997*, and administered by the Office of the Fire Marshal.

Fire coordinators, appointed by the Office of the Fire Marshal, are responsible for establishing and maintaining a mutual aid plan through which the various fire departments serving a designated area agree to assist each other in the event of an emergency.<sup>41</sup> Fire coordinators submit these mutual aid plans to the fire marshal for review and approval, and the Ministry of Community Safety and Correctional Services maintains a repository of all Ontario mutual aid plans for use in emergency situations.<sup>42</sup>

**The *Fire Protection and Prevention Act, 1997*, requires that municipalities provide fire protection services to their communities as necessary and in accordance with their needs and circumstances. Municipalities are not required to possess more extensive capacities such as urban search and rescue teams.**

The mutual aid can take the form of providing personnel and/or equipment to deal with the emergency. It also includes the provision of personnel from the neighbouring fire service to tend to the ongoing needs for fire protection services in the host community while the host fire service deals with the emergency.<sup>43</sup>

The *Fire Protection and Prevention Act, 1997*, requires that municipalities provide fire protection services to their communities as necessary and in accordance with their needs and circumstances. Municipalities are not required to possess more extensive capacities such as urban search and rescue teams.<sup>44</sup>

### Volunteers

Ontario's emergency response plan briefly addresses the role of volunteers and supporting organizations in an emergency response. Municipalities may require personnel, services, equipment, and/or material from non-profit or voluntary organizations and should include these types of considerations in their emergency response planning processes.<sup>45</sup>

The Provincial Emergency Response Plan makes the following cautionary comment about the use of volunteers during an emergency:

Municipalities and provincial ministries should carefully consider their need for, and the capabilities of, unaffiliated volunteer assistance during an emergency and systematically register all those who participate in the emergency response.<sup>46</sup>



## The role of the province

Where the municipal and local structure is insufficient to deal with an emergency, the municipality can look to the province for further resources and assistance.

The *Emergency Management and Civil Protection Act* contains organizational structures, roles, and responsibilities for all ministries that are analogous to those required of municipalities. For example, ministries must have a ministry emergency management coordinator and a ministry action group. The group's role and responsibilities are the same as those of a municipality's emergency control group.<sup>47</sup>

### Premier of Ontario

The *Emergency Management and Civil Protection Act* provides that the premier of Ontario may, if in his or her opinion the urgency of the situation requires that an order be made immediately, declare that an emergency exists throughout Ontario or in any part thereof.<sup>48</sup> If the emergency area or any part of it is within the jurisdiction of a municipality, the premier may, if deemed necessary, direct and control the administration, facilities, and equipment of the municipality in the emergency area<sup>49</sup> and may direct other municipalities to render assistance.<sup>50</sup>

The premier and the lieutenant governor in council may provide overall direction to the management of an emergency response when a provincial emergency has been declared, but not where the province has merely provided provincial resources or assistance to a municipality.<sup>51</sup>

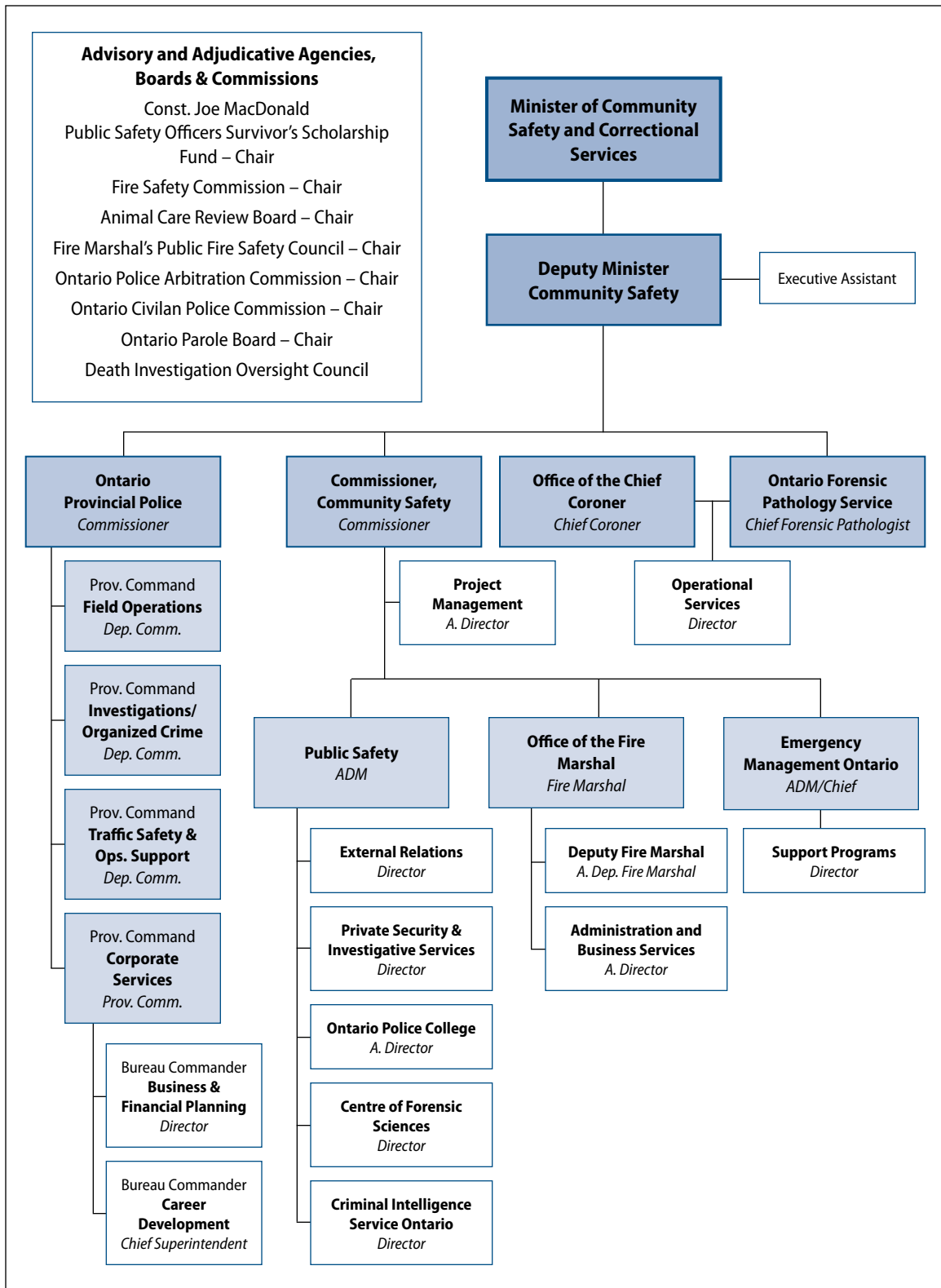
### Lieutenant governor in council

Powers to declare an emergency are also conferred on the lieutenant governor in council. While the premier may declare a provincial emergency only if the urgency of the situation requires that such a declaration be made immediately, the lieutenant governor in council may do so if the resources normally available to the government are considered insufficient to respond adequately to the crisis.<sup>52</sup>

### Ministry of Community Safety and Correctional Services

The key ministry within the Government of Ontario for emergency response is the Ministry of Community Safety and Correctional Services. It houses important players in the emergency response field, including Emergency Management Ontario and the Office of the Fire Marshal. In August 2013, these two divisions were merged to form the Office of the Fire Marshal and Emergency Management. According to a government press release, "[t]his new, integrated organization will strengthen the co-ordination and delivery of community safety programs, without impacting front-line services."<sup>53</sup> Figure 2.2.1 sets out an organizational chart for the Community Safety side of the ministry as it existed on June 1, 2012.

If several ministries require a coordinated effort, the Ministry of Community Safety and Correctional Services will coordinate the joint response, normally through the Provincial Emergency Operations Centre (PEOC) described below. In addition, the ministry has the primary responsibility for managing the consequences of any structural collapse of buildings in Ontario.<sup>54</sup>



**Figure 2.2.1 Organizational chart of the community safety side of Ministry of Community Safety and Correctional Services**

Source Exhibit 7886

## Provincial Emergency Response Plan

The Ontario government is responsible for protecting public health and safety, property, and the environment within its borders. It has primary responsibility for managing the consequences of an emergency, such as a building's structural collapse or a chemical spill, once the community or the municipality has exceeded its resources, and for implementing mutual aid agreements. The Provincial Emergency Response Plan, developed pursuant to the *Emergency Management and Civil Protection Act*, is used to coordinate the overall provincial emergency response. It outlines how Emergency Management Ontario and the ministries respond to widespread or large-scale emergencies.<sup>55</sup>

The stated purpose of the Provincial Emergency Response Plan is to “establish a framework for a systematic, coordinated and effective emergency response by the Province of Ontario to safeguard the health, safety, welfare and property of its citizens, as well as to protect the environment and economy of the area affected by an emergency, excluding nuclear emergencies.”<sup>56</sup> The Act requires the lieutenant governor in council to formulate a distinct emergency plan respecting emergencies arising in connection with nuclear facilities.<sup>57</sup>

### **The Provincial Emergency Response Plan for Building Structural Collapse 2010**

All ministries of the provincial government are required to develop an emergency management program that includes an emergency plan. All ministers must develop an emergency plan for any emergency that affects the continuity of operations and services in their respective ministries. In addition, 13 ministers have been given the responsibility to develop emergency plans with respect to specific types of emergencies set out in Order in Council 1157-2009. These plans, developed by the ministries, fit within the overall Provincial Emergency Response Plan.<sup>58</sup> The Ministry of Community Safety and Correctional Services was given responsibility to develop the emergency response plan for the structural collapse of buildings.<sup>59</sup>

The *Provincial Emergency Response Plan for Building Structural Collapse 2010* recognizes that the primary responsibility for managing an emergency resulting from a building's structural collapse rests with the community and with local resources. The plan addresses how the province is intended to respond to such an emergency. It does not require the declaration of a provincial emergency to become operational. In fact, it does not specifically require the declaration of a municipal emergency. Since the community has responsibility for managing the emergency, the province has a supporting role by providing assistance. This assistance may take the form of simply providing advice, but it may also expand to the provision of personnel, equipment, and other resources to assist the community in dealing with the cause of the emergency.<sup>60</sup>

The province, through the Office of the Fire Marshal, has access to a number of specialized teams that can assist in the response to a building collapse – urban search and rescue teams as well as chemical, biological, radiological, nuclear, and explosive teams. Nearly all these teams are operated by municipalities. The province has entered into a memorandum of understanding with all the municipalities which allows it to deploy these teams under specified circumstances.<sup>61</sup> When provincial resources are sent to support a local municipality, they come under the operational control of the local incident commander in accordance with the provincial Incident Management System (IMS) doctrine described later.<sup>62</sup>

In the event of a building's structural collapse, the province has access to two urban search and rescue teams. The first, known as Canada Task Force 3 (TF3), or Toronto HUSAR, is a heavy-level urban search and rescue team operated by the City of Toronto.<sup>63</sup> The Ontario Provincial Police (OPP) has an urban search and rescue team as well as a chemical, biological, radiological, nuclear, and explosive (CBRNE) team that is collectively known as UCRT.<sup>64</sup> The UCRT team is available to the province on request as long as it is not otherwise occupied.<sup>65</sup>

The OPP team is located in Bolton, Ontario, a few kilometres north of Toronto. Therefore, the province's entire inventory of urban search and rescue assets is located in the Greater Toronto Area. The cities of Ottawa and Thunder Bay each operate their own medium-level search and rescue team.\* The province has not signed a memorandum of understanding with either city, and, therefore, these teams are not deployable by the province.<sup>66</sup>

Municipalities in Ontario operate nine CBRNE teams in all. The cities of Toronto, Ottawa, and Windsor have level 3 teams,<sup>†</sup> and the cities of Sault Ste. Marie, Thunder Bay, Cornwall, Peterborough, North Bay, and Kitchener / Cambridge / Waterloo have level 2 teams.<sup>67</sup>

The cost of deployment by the province of any of the specialized teams, whether urban search and rescue or CBRNE, is borne by the province, not the municipality.<sup>68</sup>

### Provincial Emergency Operations Centre

The Provincial Emergency Operations Centre (PEOC) is located within the Ministry of Community Safety and Correctional Services in Toronto and is managed by Emergency Management Ontario. It is staffed at all times.<sup>69</sup> Ontario's Provincial Emergency Response Plan calls for potential or actual emergencies to be reported promptly to the centre. These reports may come from many sources, including municipalities or other ministries.<sup>70</sup>

Ontario has provided a description of how Emergency Management Ontario (EMO) and the PEOC respond to an emergency declaration:

When a Head of Council declares an emergency, the province must be notified. Typically a municipality will notify the province via a telephone call/fax to the 24/7 Duty Office in the Provincial Emergency Operations Centre (PEOC).

When the PEOC Duty Officer receives a declaration of an emergency, a series of questions are posed to the person notifying the PEOC to verify contact information, situational details and to determine if any provincial assistance is being requested by the municipality. If provincial assistance is required, the PEOC Duty Officer will notify the applicable provincial officials regarding the request and the circumstances thereof.

During normal business hours, Emergency Management Ontario staff in the PEOC and EMO's Operations Section will lead EMO's response to the emergency declaration. This will include creating an Emergency Information Notification (EIN) [replaced after May 2013 by an Incident Briefing Form], disseminating this document to designated provincial and ministry representatives, contacting ministry representatives who may be able to support response operations and scheduling a teleconference with impacted municipalities, ministry officials and, as necessary[,] federal departments and agencies.

Outside of normal business hours, this work follows a similar path, but is truncated due to fewer staff being readily available. The PEOC Duty Officer is in regular contact with an EMO Duty Operations Chief (DOC) and Duty Commander (DC) and these three officials would work collaboratively to create the necessary EINs and notify provincial staff of the emerging situation.<sup>71</sup>

When a municipality declares an emergency, all the various ministry emergency management coordinators are notified by the PEOC. A ministry may choose to send staff to the event if it has implications for its mandate.<sup>72</sup>

.....

\* Urban search and rescue teams are classified as heavy, medium, or light, based in part on their capacity to operate. These distinctions will be explained in greater detail later on in this Report.

† These levels refer to National Fire Protection Standard 472, which covers minimum competencies of persons responding to incidents involving hazardous materials. Level 3 refers to the technician level, whereas level 2 to operational level. Further details are explained later in the Report.

## Emergency Management Ontario

Emergency Management Ontario (EMO) is the organization within the Ministry of Community Safety and Correctional Services with the responsibility to monitor, coordinate, and assist with the promotion, development, implementation, and maintenance of emergency management programs in Ontario at both the municipal and the provincial ministry levels. This responsibility includes the coordination of these programs with the federal government. In fulfilling this special coordination role, EMO coordinates provincial emergency response through the PEOC when required and provides advice and assistance to communities and ministries in all areas of emergency management. This assistance includes regular contact with municipalities to assess their compliance with the requirements of their particular emergency management program.<sup>73</sup>

EMO also maintains the Provincial Emergency Response Plan and the Provincial Nuclear Emergency Response Plan. The Provincial Emergency Response Plan must be fully reviewed, amended, and brought forward for ministerial approval at least once every four years.<sup>74</sup> As discussed, EMO has also developed an emergency response plan specifically for structural collapses – the *Provincial Emergency Response Plan for Building Structural Collapse 2010*.<sup>75</sup>

The *Emergency Management and Civil Protection Act* provides for the appointment of a chief of EMO, who, under the direction of the minister of community safety and correctional services, “is to be responsible for monitoring, coordinating and assisting in the development and implementation of municipal and provincial emergency management programs throughout Ontario.”<sup>76</sup>

EMO has field officers throughout the province who live and work in the geographical area they serve. They can offer subject matter expertise, support, and advice to the community emergency management program coordinators located within their respective areas.<sup>77</sup>

During an emergency, whether declared or not, an EMO representative may be deployed to a community to act as a liaison and to provide emergency management advice to council and senior staff. Other provincial staff may be deployed to provide additional advice, assistance, and services, under the coordination of EMO.<sup>78</sup> Such deployed staff are referred to by the Government of Ontario as the EMO Provincial Emergency Response Team (PERT), primarily made up of EMO field officers.<sup>79</sup>

EMO also has training available for all emergency management personnel in Ontario (including provincial and local emergency management personnel and first responders). Some of the courses available are as follows:<sup>80</sup>

- Basic Emergency Management Course, which covers all the basic principles of emergency management.
- Basic Emergency Management Instructor Course, which enables the candidate to be a certified basic emergency management instructor.
- Community Emergency Management Coordinators Course, which provides specific training to enable the designated community emergency management coordinator to administer the municipality’s emergency management program.
- Incident Management System (IMS) courses, which provide a progressive learning system to train emergency responders in how to perform specific emergency management functions on a coordinated basis during emergency operations. Five IMS courses were available in Ontario at the time of the Commission hearings.

## Office of the Fire Marshal

The Office of the Fire Marshal, along with the Ontario Provincial Police and Emergency Management Ontario field officers, may be one of the first provincial-level actors involved with emergency response at the local level, either monitoring or responding directly to the emergency.

As mentioned earlier, the fire marshal is responsible for appointing “fire coordinators” for designated areas. These, in turn, establish and maintain mutual aid plans under which the fire departments that serve a designated area agree to assist each other in the event of an emergency and to perform other duties the fire marshal may assign.<sup>81</sup>

In addition to overseeing the implementation of mutual aid plans, the Office of the Fire Marshal has an Emergency Preparedness and Response Unit. This unit is designed to deal with situations where individual fire departments need to respond to incidents beyond their capabilities and beyond the capabilities of the mutual aid system.<sup>82</sup>

The unit responds on a full-time (24/7) basis to requests for assistance from municipal fire departments, including heavy urban search and rescue. Personnel in the Office of the Fire Marshal assess the need of a particular situation to ensure that the appropriate resource is deployed. In addition, program specialists from the unit are available to be deployed principally for liaison and for supporting the operations.<sup>83</sup>

Carol-Lynn Chambers was the operations manager of the Emergency Preparedness and Response Unit at the Office of the Fire Marshal at the time of the collapse. She explained that, typically, a local fire chief would contact the Provincial Emergency Operations Centre, which in turn would contact the operations manager. She would then get the phone number of the fire chief and call the chief directly to discuss what was needed, activate the appropriate response, and, if desirable, allocate any of her staff. She would then advise the Provincial Emergency Operations Centre of the appropriate response, which in turn would advise the commissioner of community safety.<sup>84</sup>

Other resources available through the Office of the Fire Marshal include

- advice, technical assistance, and equipment for hazardous material emergencies; and
- support for other major emergencies, in various forms, including portable lighting and generator support, radio / communications equipment, and incident documentation.<sup>85</sup>

Finally, the Office of the Fire Marshal can be involved with the operation and deployment of the Toronto Heavy Urban Search and Rescue team, as discussed further below.<sup>86</sup>

## Mutual assistance between provinces and territories

There are also mutual assistance agreements between the provinces and territories in Canada. A Memorandum of Understanding on Jurisdictional Emergency Management Assistance has been approved by all provinces and territorial ministers responsible for emergency management. This memorandum provides the framework within which provinces and territories would provide support to other Canadian jurisdictions.<sup>87</sup>

Heavy urban search and rescue teams are located in Toronto, Vancouver, Calgary, and Brandon, Manitoba.<sup>88</sup> If a province needed the assistance of any of these teams, a province-to-province request would be made under this memorandum of understanding. The expectation is that the team will be deployed if it is available.<sup>89</sup>

## The role of the federal government

If an emergency requires support or resources beyond what a municipality or the province is capable of providing, the province can make a formal request for assistance from the federal government. Municipalities may not apply directly for federal emergency assistance, which would include assistance from the military.<sup>90</sup>

The federal government intervenes in an emergency in a province only when requested to do so by provincial emergency management organizations or when an emergency clearly will have an impact on areas of federal jurisdiction<sup>91</sup> – such as emergencies created by acts of terrorism.<sup>92</sup>

## Incident Management System: the system as it is intended to work

The Incident Management System (IMS) is a doctrine sponsored by the Government of Ontario which is intended to provide a single, province-wide system for emergency management and to be used by the various response organizations in the province. In this section of the Report, I describe in summary form how IMS is intended to operate. I will not, at this time, comment either on its efficacy or the extent to which it was followed in the response to the collapse of the Algo Mall. That analysis will come later in the Report.

## Background and purpose of the Incident Management System

The Government of Ontario developed the IMS doctrine in an attempt to coordinate emergency management among the affected community and the related organizations, institutions, and industries. The stated objective is to provide a “flexible, scalable and consistent IMS structure and process for all levels of government, emergency response organizations, communities, ministries, NGOs and the private sector.”<sup>93</sup>

The IMS was sponsored by Emergency Management Ontario and developed by a steering committee and several working groups made up of representatives from organizations involved in emergency response, including fire services, police services, and governmental departments. Their work produced the IMS doctrine, a 140-page document in which the system is described. The IMS doctrine was ultimately approved on January 30, 2009, by the Ontario government.<sup>94</sup>

The impetus for developing this doctrine arose following the terrorist attacks in New York City, Pennsylvania, and Washington, DC, in September 2001. In the wake of that event, as well as other more recent emergencies including the 2003 Severe Acute Respiratory Syndrome (SARS) pandemic, the provincial government struck a commission to review Ontario’s emergency response capabilities and to make recommendations for improvement.<sup>95</sup> The commission noted that the response to SARS, which was principally a health emergency, involved many different disciplines, including police and fire services. In view of the myriad organizations that can be called upon to respond to an emergency in Ontario, the commission recommended that a common protocol system be put in place so that the management of an emergency involving different response organizations could be coordinated more easily.<sup>96</sup>

The IMS doctrine was originally premised on a similar emergency response regime, the Incident Command System (ICS), which had been developed by the fire service.<sup>97</sup> The IMS was developed for the purpose of expanding the ICS so that other responding organizations could be similarly organized in an emergency.<sup>98</sup>

In emergencies such as SARS and, indeed, the response to the collapse of the Algo Mall, different response organizations, which do not typically coordinate their operations, are called upon to work together. The IMS purports to coordinate a uniform response protocol among entities responding to a particular emergency. It seeks to establish a standardized organizational structure that may be distinct from the individual responding organization's day-to-day administrative structures. The stated purpose of having a standardized organizational structure is to help different organizations work together in an emergency response – including by establishing clear terminology and roles.<sup>99</sup>

## The Incident Management System is not mandatory

As noted, one of the stated primary purposes behind the development of the IMS doctrine was to provide one standardized emergency response system across Ontario so that different entities, individuals, and organizations can more effectively respond to emergency incidents.<sup>100</sup> Indeed, the provincial government “recommends” that the IMS be used for managing *all* incidents.<sup>101</sup> However, the IMS is not mandatory; rather, it is voluntary.<sup>102</sup> In fact, it provides that responders are able to use only those aspects of the doctrine that are suited to a given incident.<sup>103</sup>

One of the stated primary purposes behind the development of the IMS doctrine was to provide one standardized emergency response system across Ontario so that different entities, individuals, and organizations can more effectively respond to emergency incidents.

As a practical matter, therefore, organizations that are involved in emergency response – such as fire, police, and emergency management services – are not required to use the IMS doctrine in their day-to-day operations. It exists theoretically and may be used within emergency response organizations selectively, or, presumably, not at all. In his evidence before the Commission, Mr. Hefkey was not able to advise what percentage of emergency response organizations in the province actually use the IMS doctrine in their operations.

It follows that certain emergency response organizations use IMS more than others do and have a correspondingly greater familiarity with its components. Accordingly, not all response organizations share the same level of understanding of the doctrine.

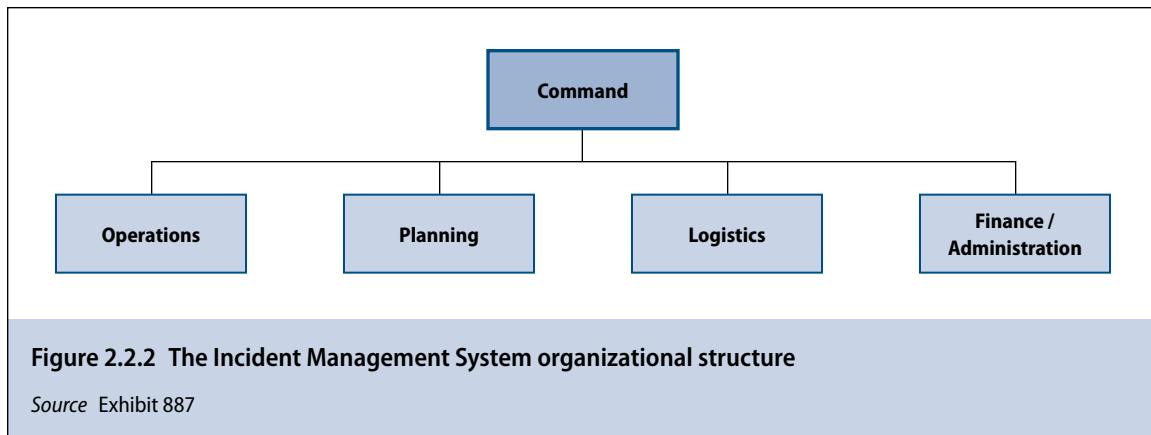
In introducing the doctrine, the province recognized that achieving a standardized IMS that “cuts across organizational boundaries may necessarily involve cultural shifts, over time, among some incident management practitioners.” The province also stated that “province-wide implementation is envisaged over time ... The expectation is that gradually all of Ontario's response organizations will implement the IMS and will train their personnel in the content of this doctrine to the extent deemed necessary by their respective organizations.”<sup>104</sup>

The extent to which Ontario's emergency responders exhibited familiarity with the IMS will be considered later in this Report.

## Incident Management System organizational structure and management functions

Five major management functions provide the foundation on which the IMS is structured. These five are command, operations, planning, logistics, and finance and administration.<sup>105</sup> These functions must form part of every incident response.<sup>106</sup> The IMS literature depicts the structure as in figure 2.2.2.





## Command

Command is the paramount organizational component of the IMS structure. It is the act of directing, ordering, or controlling the operation of an emergency response.<sup>107</sup> Incident command is responsible for managing the response to an emergency event.

Under the IMS doctrine, there are two models of incident command that may be used during an incident: single and unified. A single command model may be arrived at by default when only one jurisdiction or organization is involved; by the nature of the emergency; or by legislation, if the responsibility is legally that of a single jurisdiction or organization.<sup>108</sup>

In a unified command situation, two or more organizations that are participating in the emergency response designate members to be a part of the unified command. Those participants are intended to work together to establish and implement a common set of objectives. It is, in essence, command by committee. Unified command is to be used on rare occasions when incident decision-making is complex, interdependent, and a single command cannot be established.<sup>109</sup>

## The incident commander

The individual who exercises the command function is known as the incident commander. An incident commander has overall authority and responsibility for conducting emergency response operations and is responsible for the management of all operations at the location of the incident. In a single command situation, only one person will exercise the function of the incident commander at any one time. Therefore, while several jurisdictions may respond, there will be only one incident commander.<sup>110</sup>

The IMS is intended to operate so that all responders from different jurisdictions and organizations are working toward a common goal. It contemplates the integration of resources and personnel, with the result that the incident commander may be from a different service than many of the other responders. This arrangement creates a cultural anomaly where persons can be commanded by individuals who are not from their own organization or who may even hold a lower rank.

Assuming incident command means taking overall responsibility for managing the incident and providing the overall leadership. According to the IMS doctrine, command must be clearly established at the beginning of an incident and maintained until the end.<sup>111</sup>

Although there is only one incident commander, that function may transfer from one individual to another. Any such transfer of command always requires that there be a full briefing for the incoming incident commander and notification to all personnel that a change in command is taking place.<sup>112</sup>

The incident commander's responsibilities include

- ensuring the safety of all responders;
- assessing and reassessing the situation, which may require obtaining information from other levels of response;
- determining goals, strategies, objectives, and priorities appropriate to the level of response;
- establishing an appropriate command structure using the IMS;
- coordinating all incident management activities;
- coordinating overall incident activities with other levels of response;
- establishing and maintaining liaison with supporting or assisting organizations;
- providing information to and briefing senior and elected officials as required;
- establishing or activating Incident Management System facilities;
- establishing an operational planning cycle;
- approving an incident action plan (described in greater detail below);
- managing incident resources;
- authorizing the release of emergency information to the public in co-operation with the other levels of response, including information that would be disseminated by a Community Control Group; and
- ordering incident demobilization.<sup>113</sup>

### **Operations, planning, logistics, and finance and administration**

Under the incident commander are the operations, planning, logistics, and finance and administration spheres of responsibility. Each of these sections is commanded by a section chief. The section chiefs may well be from different services than the incident commander.

The Operations Section is intended to implement the incident action plan.<sup>114</sup> This section is responsible for assigning and supervising all resources assigned to an incident, and it should work closely with Command to coordinate operational activities.<sup>115</sup>

The Planning Section is intended to develop the incident action plan. Its responsibilities may include collecting, evaluating, analyzing, and disseminating information related to the emergency response, as well as maintaining incident documentation, tracking resources assigned to the incident, and conducting long-range and/or contingency planning.<sup>116</sup>

The Logistics Section is intended to provide supporting resources to the emergency response. Such support could include electronic communications, equipment, medical-related assistance, and other supplies such as food.

The Finance and Administration Section is intended to provide the financial and cost analysis support to the incident.<sup>117</sup>

The IMS is designed to be an organizational model that is scalable – that is, adjustable to respond to the magnitude of a response. It attempts to provide a template of how the organizational structure within these primary management functions can expand and contract as the situation dictates.

## The incident action plan

Establishing an incident action plan is one of the major responsibilities for an incident commander. Although it is developed by the Planning Section, it must be approved by the incident commander. Every incident must have an incident action plan. Its purpose is to provide *all* incident supervisory personnel with direction for the actions that are to be implemented in the course of the emergency response.<sup>118</sup>

The essential elements of an incident action plan, as stated in the IMS, are

- a statement of objectives expressing in a measurable manner what is expected to be achieved;
- clear strategic direction;
- the tactics to be employed to achieve each overarching incident objective;
- a list of resources that are assigned;
- the organizational structure / chart; and
- safety guidelines or requirements.<sup>119</sup>

While an incident action plan is required in all incidents, the nature of a given emergency response should dictate the level of detail in which the plan is prepared. According to the IMS doctrine, incident action plans can be oral or written. An oral plan may be sufficient when managing a simple incident, but a written plan should be used when dealing with complex incidents.<sup>120</sup> A simple incident is one that can be handled routinely, requires few resources, and is relatively short in duration. Managing simple incidents does not normally require dependence on resources outside those that are available in the immediate area.<sup>121</sup>

Complex incidents typically arise in one of two ways: they are either immediately complex (for example, a tornado that passes through a community), or they become complex (as in an isolated disease that becomes a pandemic). Complex incidents usually have some or all of the following characteristics:

- prolonged duration requiring major changes in personnel or involving successive operational periods;
- breadth of scale requiring a large number of resources;
- multiple jurisdictions involved;
- special knowledge and/or training required to resolve;
- significant risk to the responders or the jurisdiction as a whole;
- potential to cause widespread damage;
- more complex organizational structure required; and
- formal planning necessary.<sup>122</sup>

Whether for a simple or a complex emergency response, an incident action plan is developed through the following steps:

- assessment of the situation: “size-up” the situation to determine the nature of the problem;
- establish incident objectives and strategy: determine the overall plan to meet the objectives of the emergency response;
- develop the plan: ascertain the tactics that will be required to carry out the strategy, including detailing how resources will be deployed and developing an organizational structure for the response;
- implement the plan: orders and directives are issued from incident command and the Operations Section for the purpose of carrying out the incident action plan; and
- evaluation: constantly assess and re-evaluate objectives, strategies, and tactics to ensure the effectiveness of the plan’s implementation.<sup>123</sup>

## Planning cycle

As part of the development and implementation of the incident action plan, the IMS provides for a planning cycle. Its primary purpose is to facilitate, through designated meetings and forms, continuous evaluations and assessments of the objectives, strategies, and tactics that are developed in the plan and that are implemented in the course of the emergency response.<sup>124</sup>

As depicted in IMS literature, the planning cycle is intended to function in accordance with the organogram set out in figure 2.2.3:

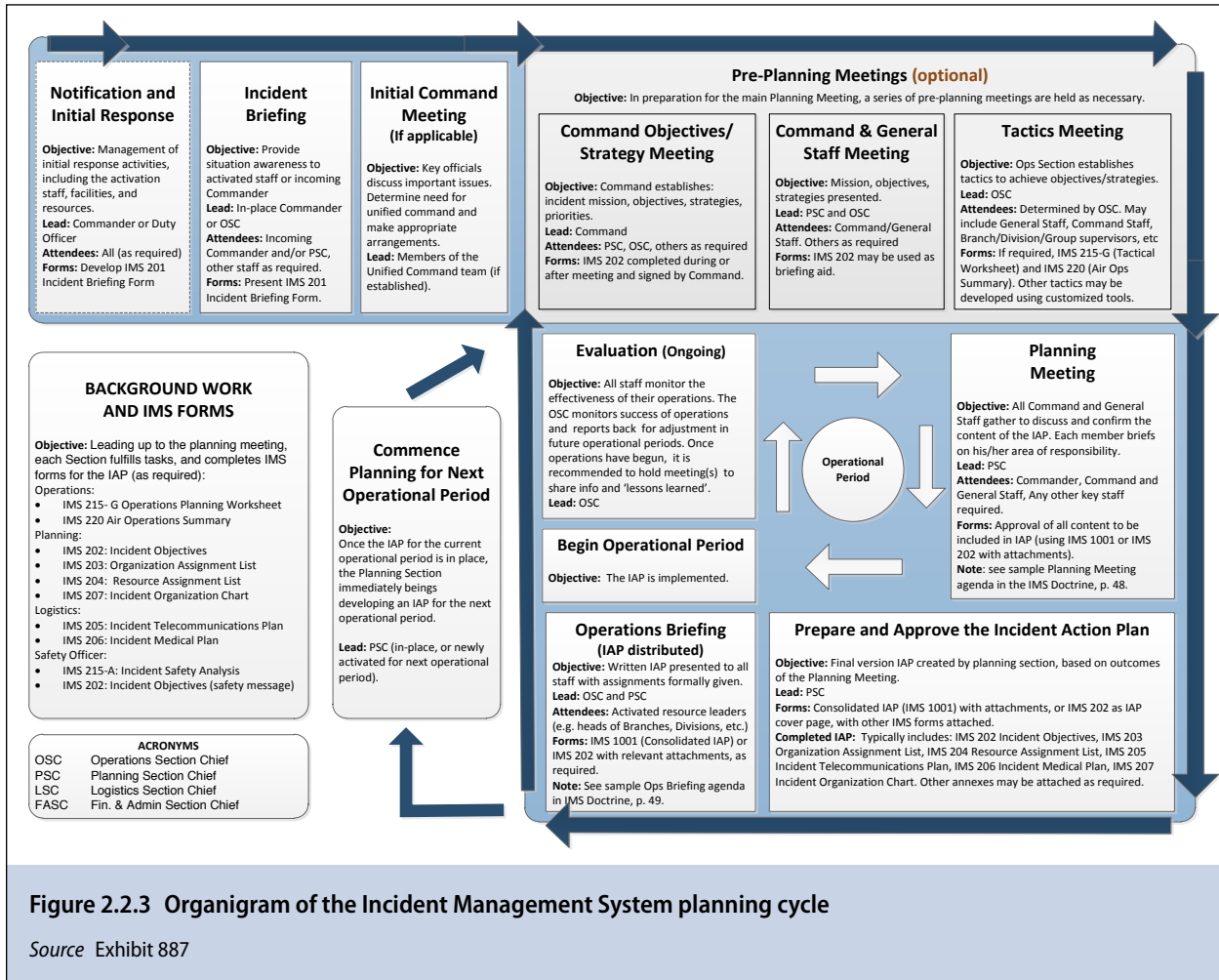


Figure 2.2.3 Organogram of the Incident Management System planning cycle

Source Exhibit 887

The incident action plan is to be developed at a planning meeting. Individuals involved in the command and operations of the emergency response are to attend the meeting. Following the meeting, an incident action plan is to be prepared and approved. As noted, the plan can be written or oral. However, the more complex the incident, the greater the necessity for the plan to be written.<sup>125</sup>

Following preparation and approval of the incident action plan, the next suggested step in the IMS planning cycle is an operations briefing. It is intended to ensure that everyone in the emergency response structure is aware of the strategy and the tactics that will be deployed in the execution of the plan.<sup>126</sup>

Once the operation has started, a subsequent element of the planning cycle is referred to as ongoing evaluation. Its intended purpose is to ensure that the operation is focused and refined so that the incident command can determine whether any strategies or tactics need to be altered.<sup>127</sup> It is in the on-going evaluation process that the incident command considers contingency plans, or “Plan Bs,” as necessary.<sup>128</sup>

## Training

The Government of Ontario currently provides training courses in the Incident Management System doctrine. These courses include

- IMS 100, an introduction to the doctrine;
- IMS 200, a two-day course that trains people in dealing with the application of the IMS to simple incidents;
- IMS 300, an intermediate three- to four-day course on the application of the IMS involving multiple response organizations; and
- IMS 400, which is still under development and which is intended to be an advanced course related to complex emergency responses.<sup>129</sup>

## Overview of key players in the Elliot Lake response

### Elliot Lake Fire Department

The Elliot Lake Fire Department is a composite fire service made up of both full-time and volunteer firefighters.<sup>130</sup> In 2012, it was composed of the chief, his assistant, eight full-time, and about 20 volunteer firefighters.<sup>131</sup> Chief Paul Officer testified that the department follows the Incident Management System.

### Training and equipment

The Elliot Lake Fire Department does not train for structural collapses because such events are not part of its mandate. Pursuant to section 2(1)(b) of the *Fire Protection and Prevention Act*, the municipal council sets the level of service that the local fire department delivers to a municipality. That said, the firefighters would receive, through their regular training, an awareness level of competency for structural collapses.<sup>132</sup>

Because the Mall collapse was beyond the mandate and training level of the Elliot Lake Fire Department, it is not surprising – as will be reviewed in detail later in the Report – that it did not have the equipment necessary to deal with the collapse. Chief Officer pointed out that the fire service in neither Sudbury nor Sault Ste. Marie had any equipment that would have been of assistance in dealing with the collapse.<sup>133</sup>

Although the Office of the Fire Marshal provides a common radio frequency that allows different fire services to communicate with one another, there was no common frequency that would allow the Elliot Lake Fire Department to communicate with other non-fire service responders.<sup>134</sup>

Full-time firefighters participate in on-the-job training. In general, they are expected to spend more time training than do volunteer firefighters. Anyone wanting to become a volunteer firefighter must undergo a background check and meet the physical fitness requirements. All candidates must complete a 24-hour course that, for the most part, acquaints them with the personal protective equipment typically used in the course of a firefighter's duties. Completion of this training does not, at that point, enable volunteers to respond to fire calls. Rather, candidates are referred to as reserves, in an introductory phase that takes, on average, about three months to

complete. During that time, they are integrated into the service's training before they are judged competent to attend at a fire, albeit in a very limited capacity. Ultimately through training programs, courses, and experience attending at fires, volunteers can achieve a provincial certification and thereby become eligible for full-time employment as firefighters in Ontario.<sup>135</sup>

There is an expectation that volunteers will attend a minimum of eight hours of training a month – a commitment that gradually lessens to four hours a month as they become more experienced. This training is augmented by the experience gained by attending fires.<sup>136</sup>

Since Paul Officer became the chief of the Elliot Lake Fire Department, all new full-time firefighters hired have come from the ranks of the department's volunteers. City Council has insisted on an open competition, so the volunteers compete against community college graduates, and the volunteers have consistently scored higher.<sup>137</sup>

### Tactical priorities

When responding to a call, firefighter safety is a top priority. The overall tactical priorities of the fire department are expressed in the following phrases from Chief Officer's testimony:<sup>138</sup>

- We will risk our lives a lot, in a highly calculated manner, to protect saveable lives.
- We will risk our lives a little, in a highly calculated manner, to protect saveable property.
- We will *not* risk our lives at all, to save lives or property that are already lost!<sup>139</sup>

Consequently, the decisions made about how an emergency will be dealt with involve weighing the risk against the reward.\*

### City of Elliot Lake

As described above, the *Emergency Management and Civil Protection Act* requires every municipality in Ontario to develop and implement an emergency response plan. In this section of the Report, I will provide an overview of the plan developed by the City of Elliot Lake. I will discuss later in the Report how the plan was actually implemented in the response to the Mall collapse.

### Emergency response plan

Since 1970, the City has had an emergency response plan in one form or another.<sup>140</sup> The plan in place at the time of the collapse was originally adopted through a by-law in 2005 and was amended in 2006 in response to the implementation of the *Emergency Management and Civil Protection Act*.<sup>141</sup>

The plan is a 42-page document<sup>142</sup> and was created using a template provided by Emergency Management Ontario.<sup>143</sup> The introduction to the plan states:

The emergency response plan (ERP) has been developed in order to facilitate a timely and effective mobilization of resources in order to respond to an emergency. Every official, municipal department and agency must be prepared to carry out assigned responsibilities in an emergency and are [*sic*] expected to be familiar with those responsibilities.<sup>144</sup>

.....

\* Officer testimony, August 21, 2013, pp. 21532–3; Roger Jeffreys, the provincial engineer with the Ministry of Labour, testified to the same effect: “[T]he level of risk that a worker would expose himself or herself to would appropriately be higher than in a situation where they were not attempting a rescue.” Jeffreys testimony, October 3, 2013, pp. 28061–2.

The plan was prepared to provide key City officials, agencies, and departments with important emergency response information related both to arrangements, services, and equipment and to roles and responsibilities during an emergency.<sup>145</sup>

The plan is supplemented by an annex – a more detailed document than the plan itself. The annex provides direction on how things are to be done, rather than simply identifying the responsibilities of a group or a person.<sup>146</sup> For example, it provides detailed instructions on how actually to set up an emergency operation centre during an emergency, and it contains an emergency information plan that includes step-by-step instructions for organizing a news conference.

### Community Control Group

The plan defines the Community Control Group (CCG) as the group of officials who are responsible for coordinating the provision of essential services necessary to minimize the effects of an emergency on a community. The members are as follows:

- mayor
- chief administrative officer, as the emergency operations manager
- OPP
- East Algoma emergency management coordinator
- fire chief
- East Division supervisor of the Emergency Medical Services
- public health inspector
- director of operations of the City
- director of growth and opportunity development, as duty officer, and
- emergency management coordinator

The plan provides that the CCG may add resource personnel to its membership as required, including a Red Cross representative, the emergency information officer, an Emergency Management Ontario representative, liaison staff for provincial ministries, and any other officials, experts, or representative from the public or private sector as deemed necessary.<sup>147</sup>

The plan identifies various responsibilities of the CCG including

- advising the mayor on the need to designate all or part of a city an emergency area;
- ensuring support to the incident commander by offering staff, equipment, and resources as required;
- ordering, coordinating, and/or overseeing the evacuation of residents;
- arranging for services and equipment from local agencies not under community control; and
- arranging for the expenditure of money required to deal with the emergency.

A common responsibility for all members is that they keep a personal log of all actions taken.<sup>148</sup> The annex stresses the importance of the CCG meetings. They provide the opportunity to bring members up to date as to what has occurred and what has been accomplished.<sup>149</sup>

The plan allows only members of the CCG or their alternates to initiate the process of notifying the CCG's membership of a real or potential emergency. The CCG member with the information contacts the Elliot Lake Fire Department, asking it to inform all other members by means of the pre-prepared notification list.<sup>150</sup>

## Responsibilities of some of the key players of the Community Control Group

As set out in the plan, the mayor or acting mayor is charged with

- providing overall leadership in responding to the emergency;
- declaring an emergency within the designated area;
- notifying Emergency Management Ontario of the declaration of both the emergency and the termination of the emergency;
- ensuring that the members of council are advised of the declaration and the termination of an emergency and are kept informed of the emergency situation;
- ensuring that the public and other government agencies are kept informed by issuing news releases and public announcements on advice from the CCG; and
- declaring the emergency terminated (council may also terminate the emergency).<sup>151</sup>

In addition, the mayor or an alternate acts as the media spokesperson.

The plan provides that in an emergency, the City's chief administrative officer becomes the Emergency Operations Centre manager, whose duties include

- coordinating all operations within the Emergency Operations Centre;
- chairing the CCG in the absence of the mayor or deputy mayor;
- ensuring an operating cycle for CCG members to gather at regular intervals;
- checking the operational status of each department;
- ensuring council is kept informed; and
- approving major announcements in conjunction with the head of council and approving media releases in consultation with the CCG and the emergency information officer.<sup>152</sup>

The OPP East Algoma emergency management coordinator's responsibilities include

- establishing a site command post with communications to the Emergency Operations Centre;
- establishing and providing security for the inner and outer perimeters;
- ensuring crowd management; and
- assisting with compiling a vital services directory and updating the directory annually.<sup>153</sup>

The fire chief's responsibilities include

- activating the emergency notification system through the Elliot Lake Fire Department; and
- providing the CCG with information and advice on firefighting and rescue matters.<sup>154</sup>

The Emergency Operations Centre duty officer's responsibilities include

- ensuring that all important decisions and actions taken by the CCG are recorded;
- coordinating all logistical needs of the Emergency Operations Centre;
- ensuring that the personal log books for all CCG members are made available to them; and
- maintaining a personal log of all actions taken.<sup>155</sup>



The emergency information officer's responsibilities include

- liaising with the CCG to obtain up-to-date information for media releases;
- drafting media releases for approval;
- coordinating interviews and organizing press conferences;
- establishing a regular communication link between the CCG and any other media coordinators; and
- ensuring that all information released to the media and the public is consistent and accurate.<sup>156</sup>

## Emergency Operations Centre

As noted earlier, a municipality's Emergency Operations Centre is where the CCG meets for the purpose of supporting the response to the emergency. The annex sets out both a primary and an alternate location for the Emergency Operations Centre. In Elliot Lake, the primary location was the ground-floor committee room at city hall. Supplies are kept there to allow the centre to be set up quickly. These items include the personal log books for all members of the CCG.<sup>157</sup>

## East Algoma OPP

The general policing functions in the City of Elliot Lake are carried out by the members of the OPP's East Algoma detachment. This detachment was under the control of Insp. Percy Jollymore at the time of the collapse.

## City of Toronto Heavy Urban Search and Rescue team

The City of Toronto operates a Heavy Urban Search and Rescue team that is known by various names. It is referred to as Toronto HUSAR, Canada Task Force 3, or TF3. The latter two names are how it is known within the national urban search and rescue program. In this Report, I will use HUSAR/TF3 to refer to this team. However, at the Commission's hearings, all three names were used interchangeably by witnesses and counsel. Consequently, the other two names may occasionally appear in this Report.

The primary purpose of HUSAR/TF3 is to rescue persons trapped in collapsed structures.<sup>158</sup> "Urban search and rescue" is the generic term used to describe a group of specialized rescue skills supplemented by search, medical, and structural assessment resources combined in a mobile, highly integrated team.<sup>159</sup>


**The primary purpose of HUSAR/TF3 is to rescue persons trapped in collapsed structures.**

Tony Comella is a captain with the Toronto Fire Service. He is also the team coordinator for HUSAR/TF3. He provided the Inquiry with background information concerning the team in a PowerPoint presentation.<sup>160</sup>

## Classification of Urban Search and Rescue teams

Public Safety Canada has developed a Canadian urban search and rescue (USAR) classification guide which is set out in part below. The guide describes the capabilities that USAR teams at the light, medium, and heavy levels bring to disaster response. HUSAR/TF3 is classified as a heavy urban search and rescue team (fig. 2.2.4).<sup>161</sup>


## General Team Notes




- All National HUSAR task forces, including CAN-TF3 Toronto HUSAR, meet the national Urban Search and Rescue (USAR) classification guide for Heavy USAR operations level as directed by Public Safety Canada.
- 76 personnel is a full deployment for CAN-TF3. If responding by road in Ontario, we would add eight logistics drivers for a total of 84 personnel.

### Light/Medium/Heavy USAR Capabilities

Operational USAR Level and area of response	Time Period (sustained response)	Structural Response (type of construction teams are equipped and trained to search and stabilize)	Medical Response
Light – Within jurisdiction	One operational shift – 12 hours	<ul style="list-style-type: none"> <li>•Structural wood systems</li> <li>•Light metal components</li> <li>•Un-reinforced masonry which supports floors, other wall cladding and roofing systems</li> </ul>	<ul style="list-style-type: none"> <li>•Ability to deal with minimum/maximum</li> <li>•Medical support to Team</li> <li>•Medical triage &amp; assistance to victims</li> </ul>
Medium – Within mutual aid boundaries	One operating day - 24 hours	<ul style="list-style-type: none"> <li>•All collapsed or failed structures</li> <li>•Includes search and rescue operations for heavy timber, reinforced masonry construction, or steel frame</li> </ul>	<ul style="list-style-type: none"> <li>2 Critically injuries</li> <li>5 Moderate injuries</li> <li>10 Minor injuries</li> </ul>
Heavy – Across Canada	Up to 10 operating days - Re-supplied within 3 days	<ul style="list-style-type: none"> <li>•All collapsed or failed structures</li> <li>•Includes structural engineering and rigging for massive structural collapse</li> </ul>	<ul style="list-style-type: none"> <li>10 Critical injuries</li> <li>15 Moderate injuries</li> <li>25+ Minor injuries</li> </ul>



Public Safety  
Canada



Sécurité publique  
Canada

5

Figure 2.2.4 The Urban Search and Rescue organizational structure

Source Exhibit 9278

### History of the Toronto HUSAR

HUSAR/TF3 was first conceived in 1999, though at that time, it had no team members and no equipment.<sup>162</sup> The events of September 11, 2001 (9/11), provided the impetus for funding<sup>163</sup> which allowed HUSAR/TF3 to make capital expenditures such as the purchase of the necessary equipment to begin its training program and its availability to deploy.<sup>164</sup> The federal funding came through the Joint Emergency Preparedness Program (JEPP).<sup>165</sup>

The financial support of the federal and provincial governments, as well as the City of Toronto, allowed the team to purchase the equipment and train its members to the extent that it is (at least for now) capable of deployment anywhere in Canada to respond to structural collapses.<sup>166</sup> In this capacity, HUSAR/TF3 is part of Canada’s national urban search and rescue program.<sup>167</sup> Provincial deployments are governed by a memorandum of understanding between the province and the City of Toronto.<sup>168</sup>

The significant milestones in the history of the HUSAR/TF3 team include the following events:

- 2002: The future team instructors begin their structural collapse training in Vancouver.<sup>169</sup>
- 2003: The training of team instructors in structural collapse is completed at Texas A&M University
  - The team is able to deploy its instructor group and equipment locally.
- 2004: Component agencies (Toronto Fire Service, Toronto Police Service, Toronto Emergency Medical Services, and Toronto Water) begin to supply members to the team.
- 2005: The team receives funding from the province for training.<sup>170</sup>
  - 109 team members receive the required level of training to deploy to a structural collapse.
  - Doctors are integrated into the team.
  - The team and its equipment are now deployable anywhere within the province.
- 2006: The team and the equipment are deployable nationally.
- 2011: The team is deployed by the province to Goderich for a structural collapse caused by a tornado.
- 2012: The team deploys to Elliot Lake for the collapse of the Algo Mall.
- 2013: Funding from the federal government ends.<sup>171</sup>

In 2012, the federal government announced the end of the JEPP funding, which came into effect in April 2013. The annual federal funding for HUSAR/TF3 varied between a high of \$1.4 million and a low of \$460,000. The money was used mainly for the purchase of equipment, while the provincial contributions were reserved for training.<sup>172</sup>

The effect of the loss of the federal funding will be felt when capital expenditures have to be made to replace equipment. In addition, other sources of funding will have to be found when costs associated with maintaining the national presence need to be incurred (e.g., transportation for training evaluation and meetings).<sup>173</sup>

## Composition of the Toronto HUSAR

The Toronto HUSAR team is composed primarily of persons employed by the City of Toronto. The search component, which includes the use of canine units and technical equipment, is staffed by members of the Toronto Police Service. The rescue component is the responsibility of the Toronto Fire Service. The medical component uses paramedics from Toronto Emergency Medical Services and doctors from the Sunnybrook Osler Centre for Pre-hospital Medicine. Toronto Water manages the heavy equipment, which includes rigging but not the actual operation of heavy equipment. Structural engineering services are provided by Stephenson Engineering.<sup>174</sup> The primary responsibilities of the structural engineer are to determine the stabilization requirements of a structure which are beyond the scope of the team's technical knowledge. The structural engineer is not expected to make conclusions about the structure's safety – which is understood not to be safe.<sup>175</sup>

This division of responsibilities takes advantage of the specific skills and training that each organization possesses. The team has more than 100 members in all, with approximately 70 from the fire service.<sup>176</sup> Rescue is the primary component in most deployments.<sup>177</sup>

## Training standards

The training of HUSAR/TF3 members is related primarily to structural collapse. The training standard that has been adopted is that developed by the US National Fire Protection Association (NFPA).<sup>178</sup> Two related standards in particular are relevant to structural collapse: NFPA 1670, "Standard on Operations and Training for Technical Search and Rescue Incidents," and NFPA 1006, "Standard for Technical Rescuers Professional Qualifications."<sup>179</sup> NFPA 1670 is an organization standard, and NFPA 1006 is a standard for individuals.<sup>180</sup>

NFPA 1670 establishes three levels of functional capability for organizations conducting operations at technical search and rescue incidents: awareness, operations, and technician, with the last being the most advanced.<sup>181</sup>

According to Capt. Comella, for the organization to function at the technician level, there is no need for all

**In the case of structural collapse, the organization, in addition to the skills specifically enumerated for that category, must operate at the technician level in rope rescue, confined space search and rescue, vehicle search and rescue, trench and excavation search and rescue, and machinery search and rescue.**

members of the organization to have technician-level training. Not all members of HUSAR/TF3 have that level of training.<sup>182</sup> NFPA 1670 identifies a number of search and rescue categories, one of which is structural collapse. Each type of search and rescue has its own requirements for achieving the different levels of capability. In the case of structural collapse, the organization, in addition to the skills specifically enumerated for that category, must operate at the technician level in rope rescue, confined space search and rescue, vehicle search and rescue, trench and excavation search and rescue, and machinery search and rescue.<sup>183</sup>

In NFPA 1006, the qualifications are expressed as level 1 and level 2. According to Capt. Comella's presentation, the level 1 technical qualification is the functional equivalent to achieving the awareness / operations level of NFPA 1670, whereas level 2 is equivalent to the technician standard of NFPA 1670.<sup>184</sup>

Rescue Systems 1 and 2, programs delivered by commercial providers, constitute another pair of competency standards used by some search and rescue personnel. They do not correspond exactly to NFPA standards. Rescue System 1 aligns roughly with awareness / operations, whereas Rescue System 2 corresponds to technician level. Texas A&M Engineering Extension Service (TEEX) is one of the providers that uses that nomenclature.<sup>185</sup>

### Team member training

HUSAR/TF3 has its own training facility, designed specifically for technical rescue training. All current instruction of members is done in-house by a group of previously trained team members. The instructors group is drawn from the first members of HUSAR/TF3, all of whom received their training from outside providers.<sup>186</sup> The first step in the training of new team members is a four-hour orientation session to familiarize them with the organization's structure and mandate.<sup>187</sup> It is followed by a 40-hour structural collapse course that takes members to the operations level in those skills specific to structural collapse.<sup>188</sup>

The technical level curriculum for structural collapse consists of five core courses: shoring and stabilization (floor), shoring and stabilization (wall), breaching techniques (clean / cutting), breaching techniques (alternate / chipping), and heavy object / lift and move.<sup>189</sup> All team members, regardless of background, receive the core training.<sup>190</sup> Each core course is 20 hours long.<sup>191</sup>

Once the core training is completed, the members are expected to take skills maintenance (refresher) training.<sup>192</sup> Minimum annual training includes completing a skills maintenance course and 10 hours of online training in order to maintain good standing.<sup>193</sup> In addition, complementary training is available which allows members to be exposed to skills beyond their usual skill set.<sup>194</sup>

In an emergency, team members who have completed only one core course could be deployed.<sup>195</sup> However, they are not expected to work in the hot zone (rubble pile) unless they have completed their core training.<sup>196</sup>

According to the team training matrix (fig. 2.2.5), the goal is to have all team members trained to the technician level. However, this objective refers only to the actual skills specific to structural collapse. With respect to those other skills referred to in NFPA 1670 – for example, rope rescue – only members of the rescue component are expected to have technician-level skills.<sup>197</sup>

CAN-TF3 Toronto HUSAR Training Matrix															Legend:			
Revised: May 2009															Minimum level required			
															Available to team member			
															Not available for team member to take			
															Not required by AHJ at this time			
															Future curriculum			
Team Colour Code	NFA 1670 Skills																	
	Structural Collapse S&R	Rope Rescue	Confined Space S&R	Vehicle Extrication / S&R	Water / Ice S&R	Wilderness S&R	Trench (Straight, L, T) S&R	Machinery S&R	Cave S&R	Mine & Tunnel S&R	Helicopter S&R							
	<b>A = Awareness</b> <b>O = Operations</b> <b>T = Technicians</b>																	
	Skill Level:																	
	A	O	T	A	O	T	A	O	T	A	O	T	A	O	T	A	O	T
Team Position																		
Engineer																		
Haz Mat Specialist																		
Heavy Equipment Manager																		
Heavy Equipment Specialist																		
K9 - Search Team Specialist																		
Logistics Manager																		
Logistics Specialist (Comms)																		
Logistics Specialist (Mechanic)																		
Logistics Specialist (Medical)																		
Logistics Specialist (Stores)																		
Paramedic																		
Paramedic Manager																		
Rescue Manager																		
Rescue Specialist																		
Rescue Squad Leader																		
Safety Officer																		
Search Team Leader																		
Search Team Manager																		
Search Team Specialist / K9																		
Site Commander																		
Special Teams Manager																		
Team Doctor																		
Technical Manager																		
Technical Information Specialist																		

Figure 2.2.5 HUSAR/TF3 training matrix

Source Exhibit 9278

### Mobilization of HUSAR/TF3

Once approval for a deployment has been given through the City of Toronto or the province, a call goes out to the team members. The Toronto Police Service members are on pagers, but the fire service and EMS members have to be contacted individually. If some members are working at that time, they may not be able to be pulled off the job. Because being a member of HUSAR/TF3 is a volunteer position, it is expected that everyone called will attend if available.<sup>198</sup>

The determination of personnel and equipment needed on any given deployment will depend on a number of factors, such as the anticipated length of the operation, weather conditions, or if any other search and rescue teams are participating.<sup>199</sup> A full deployment within Ontario would be 76 members and eight drivers.<sup>200</sup> That said, the team management will not know in advance who is available and what their individual skill sets are on a particular deployment.<sup>201</sup> The members who are available are instructed to go to a muster point, where they are given a physical examination. Once cleared medically, they receive their uniforms and personal protective equipment. Meanwhile, the drivers will pick up, from a rental facility, the tractors that will be used to transport the equipment trailers.<sup>202</sup>

HUSAR/TF3 has a mandated “stand-up time,” or mobilization time, of six hours after receiving orders to deploy. The team does not dispatch an advance team. In fact, it travels in a convoy, with most members travelling in a bus.<sup>203</sup>

On deployment, the site commander, also known as the task force commander, is the leader of the deployed team.<sup>204</sup> HUSAR/TF3 uses the Incident Management System.<sup>205</sup> Consequently, all four section chiefs report to the site commander.<sup>206</sup> The team assists the incident commander.<sup>207</sup> As was mentioned earlier, HUSAR/TF3 should report to, and be under the command of, the incident commander.

Following a deployment, HUSAR/TF3 does not conduct a formal debriefing or prepare an after-action report, though Capt. Comella agreed that both are valuable tools for improving future performance. They are not done because no funds are allocated to get the team together for a debriefing.<sup>208</sup>

## Ontario Provincial Police

The terrorist attacks of September 11, 2001, caused many governments and organizations to examine their ability to manage a terrorist incident or a major disaster. For its part, the OPP established a Provincial Emergency Response Team (PERT) in an effort to ensure that the province had the resources to strengthen and protect public safety. In 2010, the team was reorganized and given the name UCRT. As mentioned earlier, the OPP's UCRT unit combines the skills of urban search and rescue with chemical, biological, radiological, nuclear, and explosive (CBRNE) response. All its members are dedicated to their UCRT duties on a full-time basis.<sup>209</sup>

The UCRT team, as of August 2013, had funding for 28 members. When it was initially formed, it had funding for 32 members but has subsequently been downsized.<sup>210</sup> Because it is a smaller team than HUSAR/TF3, the UCRT team can deploy more quickly and can arrive at an emergency scene before HUSAR/TF3.<sup>211</sup>

The OPP has created a standard operating procedure manual (the UCRT Manual). It explains the work of urban search and rescue (USAR) as follows:

USAR teams locate trapped persons in collapsed structures and other entrapments using search dogs and electronic search equipment. USAR also involves breaching, shoring, lifting and removing structural components, the use of heavy construction equipment to remove debris, and the medical treatment and transfer of victims. USAR is a general term for a group of specialized rescue skills that are integrated into a team that includes search, medical and structural assessment resources.<sup>212</sup>

## Composition of UCRT

There are two elements within UCRT, each with responsibility for one of its two primary functions: USAR and CBRNE. On the day of the collapse, UCRT's available operating complement was 23 members.<sup>213</sup> The team included two canine handlers and five advanced-care paramedic specialists from agencies who are deployed on a part-time basis with UCRT when called out to assist. They are referred to as tactical medics.<sup>214</sup>

The command structure within UCRT is as follows: the unit commander, a staff sergeant, is in charge of the entire UCRT team. Below the unit commander, a sergeant leads both the urban search and rescue and the CBRNE elements of the team. In addition, a third sergeant is assigned in an administrative and operational support role.<sup>215</sup>

## Training of UCRT members

The UCRT Manual provides that those members of UCRT assigned as USAR specialists are to be trained and are expected to maintain the technician level of skills. Those members who are CBRNE specialists are expected to complete initial USAR training to the technician level but to maintain operations-level training.<sup>216</sup> Both elements are cross-trained in the other's skills, except for explosives.<sup>217</sup>

According to Sgt. Jamie Gillespie, the administrative sergeant of UCRT, members are all trained to the technician level of NFPA 1670 in structural collapse rescue, confined space rescue, high-angle rope rescue, and technical search.<sup>218</sup>

Originally, all the training a member received was at Texas A&M Engineering Extension Service (TEEX). In the last few years, however, only the structural collapse rescue training has been done there. At present, new members receive only level 2 (technician) training at TEEX. Before going there, they get in-house training at the OPP facility in Bolton, Ontario.<sup>219</sup> Ongoing training is also offered at the Bolton facility. In addition, the team conducts many exercises of its own and participates in provincial exercises.<sup>220</sup>

UCRT and HUSAR/TF3 have similar expertise in dealing with structural collapse issues. However, HUSAR/TF3, being a much bigger team, can sustain its operations for a longer period.<sup>221</sup>

### Deployment of UCRT

The UCRT unit can be deployed as a result of a request from within the OPP or from other police services, municipalities, or the province. All requests, however, must be approved through the OPP chain of command<sup>222</sup> and in particular by the manager of the OPP Field Support Bureau's Emergency Management and Planning Section. The UCRT unit commander has the ultimate responsibility to determine what resources are deployed once approval has been given. In the case of a response to a structural collapse, it is expected that the USAR sergeant or a senior USAR technician will be consulted in making that decision.<sup>223</sup>

The USAR sergeant or his or her substitute in command activates the required personnel and decides whether an advance team is required for reconnaissance purposes. Before deployment, or as soon as practicable thereafter, a briefing is conducted so that all responders receive all the relevant information.<sup>224</sup>

On arriving at the scene of an emergency, the USAR sergeant is expected to go to the command post, if there is one, and receive a briefing. Once briefed, it is suggested that the team's personnel attempt to begin search and rescue operations as quickly as possible. According to the UCRT Manual, previous experience has shown that most survivors are rescued early in the course of an emergency response.<sup>225</sup>

The OPP has adopted the Incident Management System as the emergency management tool it will employ.<sup>226</sup>

### The Ministry of Labour in an emergency response

It may come as a surprise to some readers that the Ministry of Labour cannot only play a role but is conferred with specific authority at the scene of an emergency response. Indeed, the scope of the ministry's legislative powers at a rescue may even surprise some of Ontario's first responders. In this section, I briefly summarize the ministry's powers at the scene of an emergency response and, later in this Report, describe the extent to which these powers were known to those who participated in the response to the collapse of the Algo Mall.

### Why the Ministry of Labour may get involved in an emergency response

The Ministry of Labour is commonly notified of an emergency or a developing emergency at a workplace. This notification, as required under the *Occupational Health and Safety Act*,<sup>227</sup> typically comes through a variety of ways, such as direct contact from Emergency Management Ontario or from first responders, local governments, the media, or individuals reporting a worker fatality or critical injury. On notification of such an emergency, the ministry would, in the ordinary course, conduct a reactive inspection of a workplace involved in the emergency situation. It is important to note that ministry personnel typically conduct visits to the site of a workplace injury or fatality after a rescue or recovery of any victim.<sup>228</sup> Put another way, they do not usually arrive on the scene until the emergency response has ended.

## The applicability of the *Occupational Health and Safety Act* at the scene of an emergency response

There are instances, however, where the Ministry of Labour may attend at a scene while the emergency response is ongoing. Although the ministry is not directly involved in an emergency response, the *Occupational Health and Safety Act* nevertheless provides for minimum health and safety standards in *all* workplaces under provincial jurisdiction at all times, and the Act may be enforced by the ministry at any such workplace. This application includes a workplace at which an emergency response is under way. In short, the Act applies irrespective of whether the workplace in question is an emergency response and the workers are first responders. An emergency response scene is the workplace of the responders.<sup>229</sup>

The *Occupational Health and Safety Act* applies at all times to safeguard human life in emergency scenarios – even in a situation involving structural collapse and including work done by first responders. The Act has no provisions that exempt personnel involved in an emergency response, or their employers, from its general applicability.\* It applies whether the emergency response is a rescue or a recovery.

## The expected roles of Ministry of Labour personnel at an emergency response

In general terms, Ministry of Labour policy provides that its personnel perform dual roles in an emergency response: they can act in their usual capacity as the regulatory agency responsible for enforcing occupational health and safety standards as far as rescue workers are concerned, and they can provide technical support to those individuals in the emergency response.<sup>230</sup>

The *Occupational Health and Safety Act* empowers a ministry inspector to issue a “stop work” order in the event that there is a contravention of the Act which poses an imminent danger to the health or safety of a worker. In addition, the inspector may order that the contravention be remedied immediately for a specified period.<sup>231</sup> These powers can be enforced at a workplace where there is an ongoing emergency rescue or recovery.<sup>232</sup> The ministry expects that its personnel will exercise their legislated authority to enforce the *Occupational Health and Safety Act* with appropriate discretion, given the facts that may present themselves at a rescue scene.<sup>233</sup>

The Commission heard evidence that, at the time of the collapse of the Algo Mall, the Ministry of Labour did not have training, regulations, or policies in place that would assist its personnel in understanding rescue operations and how to exercise their statutory authority and discretion prudently at the scene of an emergency response. I will comment further on this issue later in the Report.

## Ontario Mine Rescue – a successful emergency response organization

Ontario Mine Rescue (OMR) is an organization that trains and supervises volunteers who respond to emergencies in approximately 40 underground mines in Ontario. It did not take part in the Elliot Lake response. However, I considered the evidence about it important because a number of individuals suggested that not only could OMR have helped but that its organization, training, and practices provide a valuable example of a successful emergency response organization from which lessons can be learned.

.....

\* Exhibit 9907. It should be noted that section 43(1)(2)(3) of the *Occupational Health and Safety Act* exempts first responders who have occupational responsibilities for the lives and safety of others from the right to refuse work.



OMR responds to two to three dozen emergencies a year.<sup>234</sup> Most are fires,<sup>235</sup> but others include rock bursts and underground collapses. This organization has been in existence since 1929. Formerly part of the Ministry of Labour, it is now part of Workplace Safety North (WSN),<sup>236</sup> an independent not-for-profit organization funded from Workplace Safety and Insurance Board premiums paid by the workplaces with which WSN deals. Effectively, the mines are paying for the cost of OMR.<sup>237</sup>

OMR was originally created as a result of a massive fire at the Hollinger Consolidated Gold Mine in Timmins in 1928 which resulted in the death of 39 mine workers.<sup>238</sup> At the time, Ontario did not have the capability to respond to such emergencies and, consequently, rescue teams from Pittsburgh, Pennsylvania, responded to the event. Justice T.E. Godson was appointed as the commissioner of a public inquiry into the disaster. He made a number of recommendations, including that persons be appointed to acquire and maintain rescue equipment and to train mine workers to respond to mine emergencies. That recommendation resulted in the formation of what eventually became Ontario Mine Rescue.<sup>239</sup> Subsequent serious incidents to which OMR responded led to further improvements in the way it operated, including province-wide mine rescue standards, better equipment, and expanding the firefighting role of OMR as well as its training and response to non-fire emergencies.<sup>240</sup>

OMR divides the province into eight regions, so that resources can be deployed effectively and efficiently. Each region is serviced by a mine rescue officer employed by OMR. These officers must have considerable mining experience, including supervisory positions, and have been involved for a minimum of seven years in mine rescue. The necessary equipment, owned by Workplace Safety North, is located in 34 mine rescue stations and substations found at every underground mine in Ontario.<sup>241</sup> The mine rescue officers are all trained in the use of the equipment, and they in turn provide training to volunteers, who are employed by the mines in the region.<sup>242</sup> They provide information during an emergency but not direction.<sup>243</sup>

The first responders in any mine emergency come from the approximately 875 mine rescue volunteers strategically distributed across the province.<sup>244</sup> They are called out to work for underground incidents only and are paid for their response work by the mines that employ them.<sup>245</sup>

### **Safety of responders is the first priority**

OMR has rigorous training and performance standards, which are set out in a compact portable handbook kept by the volunteers while on the job.<sup>246</sup>

The handbook lists the four main objectives of mine rescue and recovery work, in order of importance. They are listed as follows:

- To ensure the safety of mine rescue and recovery teams.
- To find trapped or missing miners and bring them to the surface.
- To respond to and resolve fire and non-fire emergencies.
- To examine the mine for dangerous concentrations of any noxious gases that would prevent normal operations in any part of the mine.<sup>247</sup>

When asked whether, as some have suggested, mine rescue workers would “walk into death’s door” to save the lives of workers trapped in a mine, Alex Gryska, the executive director of OMR, responded:

They will go a long ways. However, they will not put their people at risk. They will not. We have an incredible track record, and it is not by luck or chance; it is by design.

## Extensive training and equipment, similar to that of HUSAR/TF3 and UCRT

All volunteers must complete a competency-based five-day, 40-hour introductory training course and at least six eight-hour training sessions annually. They are trained in the use of equipment, including hydraulic spreaders typically used in extracting persons from automobiles, hydraulic splitters used to break rock, hydraulic bolt cutters, pneumatic bag-lifting systems used to prop up material to gain access, high-angle rescue and rappelling techniques to access trapped victims, and thermal-imaging cameras to locate missing persons. Shoring, with which miners are very familiar, is used in collapses along with jackhammers. Candidates must pass both a practical and a written exam with a mark of at least 70 percent. They must also pass periodic skill-based evaluations without any guidance or coaching. OMR provides advanced and technician training for experienced volunteers which involves further training and testing over at least two additional days every two years.<sup>248</sup>

Mr. Gyska testified that, at the Commission's request, he had asked Shawn Kirwan, OMR's emergency response specialist, to compare the training of the mine volunteers with that undergone by the members of HUSAR/TF3 and UCRT. Mine rescue volunteers are required to deal with collapses, both on the surface and underground, where large pieces of material have to be removed. They use the equipment I have described for cribbing and stabilization, among other things. While the mine rescue volunteers are trained to the awareness level or in some cases to the operations level for dealing with structural collapses, the HUSAR/TF3 and UCRT members are typically trained to the higher technician level. All mine volunteers are trained to the operations level and some to the technician level for rope rescues. Mine rescue team members are trained to the awareness level, and emergency response team members to the operations level, for confined space rescues.<sup>249</sup>

## Response time: on site within 30 minutes

OMR has performance standards for response time. The goal is for the first team to be on site in 30 minutes, and the second team in 45 minutes. The first team does not begin its mission until the second team is on site. By means of a mutual aid agreement, a third team will potentially be en route within an hour.<sup>250</sup> These timelines are devised to ensure as quick a response as possible because life is at stake. For each response, the time is recorded and, if the goals are not met, employers are advised that they need to take steps to improve their response times.<sup>251</sup>

OMR has learned from its own experience that, as a result of vacations, illness, or other reasons, not all volunteers are available when an emergency arises. It conducts frequent arbitrary "point in time" tests in which a mock call-out is conducted to determine the number of persons able to respond for each mine. OMR typically increases the required number of volunteers by 30 percent in order to ensure an adequate response.<sup>252</sup>

## Chain of command

### One official in charge

OMR has strict rules about the organization and procedure used during an emergency response. One person is designated as the "on-site official in charge," responsible for making critical decisions during the course of the emergency. Every mine has one such designated official, in advance of any emergency. Experience has taught OMR that this person must be someone with supervisory authority at the mine – somebody who knows the operation at that mine.<sup>253</sup>

## Support and information from the mine rescue officer and the emergency control group

A mine rescue officer is stationed at the mine during the rescue to serve as a consultant and to ensure that adequate equipment and supplies are available. That individual provides support and information, but not direction. Mine management is required to establish an “emergency control group” to provide advice. That group typically consists of experts such as structural engineers, ground control engineers, and hygienists.<sup>254</sup>

### Briefing officer as the liaison between the control group and the operations team

The briefing officer occupies an essential role in any OMR response. This person is the liaison between the control group and the team carrying out the underground operations and is responsible for maintaining communications with the working rescue team and the control room, following the team’s progress, and coordinating and overseeing the activities of all the personnel at the fresh-air base above ground, including the advisory committee. In addition, this person must obtain all the information about the site of the emergency, the type of emergency, the available equipment, the missing personnel, and the special skills required on the response team. Mr. Gryski testified that OMR had learned, over the 80 years of its existence, that having one individual responsible for communication between the control group and the team ensures good information flow. With one person being responsible, there is less room for error – plurality creates multiple opportunities for communication breakdown.<sup>255</sup>

### Team captain in charge of operations team

Each team of five volunteers carrying out operations in mine rescues is led by a “rescue team captain.” As the handbook states, he “shall take charge of, and be responsible for, the discipline, general safety and work performed by his team. He should take orders only from the briefing officer.” These team captains are experienced rescue volunteers who know the men and women on their team and understand each person’s abilities. Team captains take orders only from the briefing officer, because having a single conduit for communication minimizes opportunity for error.<sup>256</sup>

To summarize, mine rescues are organized in the following way: the volunteers work in teams; each team reports to a team captain, who reports to a briefing officer, who reports to the emergency control group, which, along with the mine rescue officer, provides advice to the official in charge – who has sole decision-making authority. There is a clear chain of command and communication.<sup>257</sup>

### Planning is absolutely critical

Mr. Gryski described the planning function in a rescue as “absolutely critical.” The safety of the rescuers is of paramount importance, and an effective plan is necessary before a mission is attempted. Urgency or lack of time is no reason not to plan. He testified:

[I]t will result in disaster if you don’t adequately plan. And certainly it is absolutely essential that you understand and anticipate the dangers, risks, and hazards that you will be exposing the teams to.<sup>258</sup>

### **Briefing team members: in writing, with opportunity for questions**

Briefing the members of the team about the task they are to carry out is an important part of the OMR system. The control group decides what the mission will be, and the briefing officer is the liaison with the team. The briefing is, if possible, to be carried out in a quiet room where the team members may ask questions and have the plan explained thoroughly without confusion or distraction. When asked why, he replied:

[I]mportant information is being exchanged, so obviously you want to ensure that there is clarity and understanding as to what the mission is going to be, clearly identifying to the teams where they need to go, what they need to do, and any distractions that might be in place could adversely affect their understanding of what needs to be done.<sup>259</sup>

Instructions to the team are required to be in writing. Mr. Gryska explained that the written instructions would typically be fairly brief. The requirement that they be in writing was to “reduce error obviously” and “so there is no misunderstanding as to what needs to be done.”<sup>260</sup>

Every briefing of a team should contain:

1. Information available
2. Persons missing, location and any trained persons
3. Action taken so far
4. Intention
5. Fresh air base location and standby teams
6. Communications
7. Installations such as air, water, electricity
8. Refuge stations
9. Route of travel
10. Conditions on route of travel
11. Ventilation
12. Visibility
13. Mine rescue equipment available
14. Firefighting equipment and hydrants
15. First aid equipment and stretcher
16. Tools and supplies
17. Time limit
18. Written instructions<sup>261</sup>

Mr. Gryska testified that in the organization’s experience, all these items are “absolutely critical elements that will affect the performance of the teams,” so they need to be addressed in the briefing. If not, there would be unacceptable potential for error.

### **Written logs and reports required**

The team captain is required to keep a log. The briefing officer is required to complete a detailed report setting out all the critical components of the mission, which is turned over to the control group. These documents are used to prepare a detailed report at the end of each mission.<sup>262</sup>

### **Debriefings: essential and useful**

A debriefing is held as soon after the incident as possible, but at most within a week. It is attended by the briefing officer, the team captain, the team members, the control group members, and persons from OMR or Workplace Safety. The debriefings can take several hours in some circumstances, depending on the number of issues encountered. Incident reports are produced and collected so that responses can be compared and improvements made. The debriefings are seen as a positive tool. They have resulted in changes in policies about how to conduct a response to a mine emergency.<sup>263</sup>

### **OMR's experience: extensive and useful**

A miner who is a victim of an incident in a mine has never been left underground in Ontario, although circumstances – such as the mine being sealed, for example – have required that miners be left underground in other places, as after the Westray mine collapse in Nova Scotia. Decisions made in responses to mine emergencies are always based first on the safety of the responding team.<sup>264</sup>

OMR has trained emergency responders in other countries. Mr. Gryska gave as an example the Caycli mine in Turkey, which is owned by a Canadian company. The owner asked OMR to train its workers to the Ontario standard. They did that, and in October 2011 the Turkish mine workers were asked to assist in rescuing victims caught in a five-storey student dormitory that had collapsed in an earthquake. Within 30 minutes, a team of 10 volunteers mobilized and drove 12 hours to the site of the collapse, successfully rescuing persons caught under the rubble.<sup>265</sup>

Mr. Gryska testified that the organization worked with HUSAR/TF3 during the collapse of a warehouse during a tornado in Goderich, Ontario.<sup>266</sup> OMR members from the Sifto Salt and Windsor Salt mines responded to the situation along with members from HUSAR/TF3, to remove a deceased individual.

OMR does not have an agreement with the Ontario government to provide assistance in emergencies occurring in places other than underground mines. It was not asked to help in Elliot Lake. It offered assistance in Elliot Lake, but its offers were ignored. Mr. Gryska testified that if it had been asked, it would have done so in co-operation with the engineers and other members of the HUSAR/TF3 and UCRT teams that were responding to the emergency. OMR would also have sent a mine rescue officer to assist in assessing the site. Mr. Gryska estimated that OMR would have been able to deploy a team of volunteers, with equipment in mine rescue vans, to assist in approximately two-and-a-half hours, given that the driving time from Sudbury, the mine location closest to Elliot Lake, is about two hours.<sup>267</sup>

## Notes

- <sup>1</sup> Hefkey testimony, August 8, 2013, pp. 20080–6.
- <sup>2</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 1.
- <sup>3</sup> Exhibit 5847–00001.
- <sup>4</sup> Exhibit 5847–00003.
- <sup>5</sup> Exhibit 5847–00003.
- <sup>6</sup> SO 1997, c 4, s 7.
- <sup>7</sup> Hefkey testimony, August 8, 2013, pp. 20092–3.
- <sup>8</sup> Exhibit 5847–00001.
- <sup>9</sup> Exhibit 5847–00002.
- <sup>10</sup> *Emergencies Act*, RSC 1985, c 22 (4th Supp.).
- <sup>11</sup> Exhibit 5847–00003.
- <sup>12</sup> Exhibit 5847–00002.
- <sup>13</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, ss 2.1 and 3.
- <sup>14</sup> Hefkey testimony, August 8, 2013, pp. 20143–4.
- <sup>15</sup> Hefkey testimony, August 8, 2013, pp. 20116–17.
- <sup>16</sup> Hefkey testimony, August 8, 2013, p. 20135.
- <sup>17</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 11(6).
- <sup>18</sup> Exhibit 5847–00004.
- <sup>19</sup> Hefkey testimony, August 8, 2013, pp. 20117–22.
- <sup>20</sup> Hefkey testimony, August 8, 2013, p. 20131.
- <sup>21</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 12(1)(4).
- <sup>22</sup> Hefkey testimony, August 9, 2013, p. 20418.
- <sup>23</sup> Hefkey testimony, August 8, 2013, pp. 20159–62.
- <sup>24</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 12(2)(3).
- <sup>25</sup> Hefkey testimony, August 8, 2013, pp. 20111–12 and August 9, 2013, p. 20421.
- <sup>26</sup> Exhibit 5847–00004.
- <sup>27</sup> Exhibit 5847–00004.
- <sup>28</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, ss 10–12.
- <sup>29</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 10(3).
- <sup>30</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 11(5)(6).
- <sup>31</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 4.
- <sup>32</sup> Hefkey testimony, August 8, 2013, pp. 20188–9.
- <sup>33</sup> Exhibit 5847–00002.
- <sup>34</sup> Exhibit 5847–00004.
- <sup>35</sup> Hefkey testimony, August 8, 2013, p. 20193; Exhibit 5847–00004.
- <sup>36</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, s 13(1).
- <sup>37</sup> Exhibit 5847–00001.
- <sup>38</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, ss 13(1) and 14.
- <sup>39</sup> Hefkey testimony, August 8, 2013, p. 20155.
- <sup>40</sup> Exhibit 5847–00001.
- <sup>41</sup> *Fire Protection and Prevention Act*, SO 1997, c 4, s 7.
- <sup>42</sup> Exhibit 5847.
- <sup>43</sup> Hefkey testimony, August 8, 2013, pp. 20097–100.
- <sup>44</sup> *Fire Protection and Prevention Act*, SO 1997, c 4, ss 2 and 5.
- <sup>45</sup> Exhibit 5847–00001.
- <sup>46</sup> Exhibit 5847–00001.
- <sup>47</sup> *Emergency Management and Civil Protection Act*, O Reg 380/04, ss 1–5.
- <sup>48</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 7.0.1(1).
- <sup>49</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 7.03(2).
- <sup>50</sup> Exhibit 5847–00002.
- <sup>51</sup> Exhibit 5847–00002.
- <sup>52</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 7.0.1.
- <sup>53</sup> Ministry of Community Safety and Correctional Services, News Release, “Building Safer Communities: Ontario Combining Emergency Management Ontario, Office of the Fire Marshal” (August, 15, 2013), online: <http://news.ontario.ca/mcscs/en/2013/08/building-safer-communities.html>.
- <sup>54</sup> Exhibit 5847–00003.
- <sup>55</sup> Exhibit 5847–00001.
- <sup>56</sup> Exhibit 5847–00001.
- <sup>57</sup> *Emergency Management and Civil Protection Act*, RSO 1990, c E.9, s 8.
- <sup>58</sup> Hefkey testimony, August 8, 2013, pp. 20166–9 and 20178–9; Exhibit 5847–00004.
- <sup>59</sup> Exhibit 5847–00003.
- <sup>60</sup> Exhibit 5847–00003.
- <sup>61</sup> Exhibit 5847–00003.
- <sup>62</sup> Exhibit 5847–00004.
- <sup>63</sup> Exhibit 5847–00003.
- <sup>64</sup> Exhibit 7847.
- <sup>65</sup> Hefkey testimony, August 8, 2013, 2013, pp. 20213–14.
- <sup>66</sup> Hefkey testimony, August 8, 2013, 2013, pp. 20216–24.
- <sup>67</sup> Exhibit 5847–00003.
- <sup>68</sup> Hefkey testimony, August 8, 2013, p. 20239.
- <sup>69</sup> Exhibit 5847–00002.
- <sup>70</sup> Exhibit 5847–00001.
- <sup>71</sup> Exhibit 5847–00004.
- <sup>72</sup> Hefkey testimony, August 9, 2013, pp. 20345–9.
- <sup>73</sup> Exhibit 5847–00004.
- <sup>74</sup> Exhibit 5847–00001.
- <sup>75</sup> Exhibit 5847–00003.
- <sup>76</sup> Exhibit 5847–00004.
- <sup>77</sup> Hefkey testimony, August 8, 2013, pp. 20126–8.
- <sup>78</sup> Exhibit 5847–00001.
- <sup>79</sup> Exhibit 5847–00004.
- <sup>80</sup> Exhibit 5847–00004.
- <sup>81</sup> *Fire Protection and Prevention Act*, SO 1997, c 4, s 7.
- <sup>82</sup> Chambers testimony, September 18, 2013, pp. 26068–70.
- <sup>83</sup> Chambers testimony, September 18, 2013, pp. 26068–70.
- <sup>84</sup> Chambers testimony, September 18, 2013, pp. 26074–6.
- <sup>85</sup> Exhibit 5847–00005.
- <sup>86</sup> Exhibit 5847–00003.
- <sup>87</sup> Exhibit 5847–00002.
- <sup>88</sup> Hefkey testimony, August 8, 2013, p. 20221.
- <sup>89</sup> Hefkey testimony, August 9, 2013, pp. 20466–9.
- <sup>90</sup> Exhibit 5847–00004.
- <sup>91</sup> Exhibit 5847–00004.
- <sup>92</sup> Exhibit 5847–00003.
- <sup>93</sup> Exhibit 8006.

- <sup>94</sup> Hefkey testimony, August 8, 2013, p. 20241.
- <sup>95</sup> Hefkey testimony, August 8, 2013, p. 20245.
- <sup>96</sup> Hefkey testimony, August 8, 2013, pp. 20244–6.
- <sup>97</sup> Exhibit 887, p. 20.
- <sup>98</sup> Chambers testimony, September 18, 2013, pp. 26226–7.
- <sup>99</sup> Exhibit 8006, p. 2.
- <sup>100</sup> Exhibit 887, p. 22.
- <sup>101</sup> Exhibit 887, p. 12.
- <sup>102</sup> Hefky testimony, August 8, 2013, pp. 20249–50.
- <sup>103</sup> Exhibit 887, p. 12.
- <sup>104</sup> Exhibit 887, pp. 20–21.
- <sup>105</sup> Exhibit 8006, p. 2.
- <sup>106</sup> Exhibit 887, p. 31.
- <sup>107</sup> Exhibit 887, p. 46.
- <sup>108</sup> Exhibit 887, p. 47.
- <sup>109</sup> Exhibit 887, p. 47.
- <sup>110</sup> Exhibit 8006, p. 3.
- <sup>111</sup> Exhibit 8006, p. 3.
- <sup>112</sup> Exhibit 887, pp. 52–3.
- <sup>113</sup> Exhibit 887, pp. 32–3; Hefkey testimony, August 8, 2013, pp. 20266–8.
- <sup>114</sup> Exhibit 887, p. 36.
- <sup>115</sup> Exhibit 887, p. 36.
- <sup>116</sup> Exhibit 887, p. 40.
- <sup>117</sup> Exhibit 8006, p. 3.
- <sup>118</sup> Exhibit 887, p. 54.
- <sup>119</sup> Exhibit 887, p. 54.
- <sup>120</sup> Exhibit 887, p. 55.
- <sup>121</sup> Exhibit 8006, p. 5.
- <sup>122</sup> Exhibit 887, p. 55.
- <sup>123</sup> Exhibit 8006, pp. 6–7.
- <sup>124</sup> Exhibit 7842, p. 8; Hefkey testimony, August 9, 2013, pp. 20298–303.
- <sup>125</sup> Hefkey testimony, August 9, 2013, p. 20304.
- <sup>126</sup> Exhibit 7842, p. 8; Hefkey testimony, August 9, 2013, pp. 20305–6.
- <sup>127</sup> Exhibit 7842, p. 8; Hefkey testimony, August 9, 2013, pp. 20306–9.
- <sup>128</sup> Hefkey testimony, August 9, 2013, pp. 20310–11.
- <sup>129</sup> Hefkey Testimony, August 9, 2013, pp. 20455–6.
- <sup>130</sup> Officer testimony, August 21, 2013, pp. 21519–20.
- <sup>131</sup> Thomas testimony, August 15, 2013, p. 20982.
- <sup>132</sup> Officer testimony, August 29, 2013, pp. 23350–4.
- <sup>133</sup> Officer testimony, August 22, 2013, pp. 21881–4.
- <sup>134</sup> Officer testimony, August 29, 2013, pp. 23356–60.
- <sup>135</sup> Officer testimony, August 21, 2013, pp. 21512–16.
- <sup>136</sup> Officer testimony, August 21, 2013, pp. 21517–18.
- <sup>137</sup> Officer testimony, August 20, 2013, pp. 21518–20.
- <sup>138</sup> Officer testimony, August 21, 2013, pp. 21524–5.
- <sup>139</sup> Exhibit 8053.
- <sup>140</sup> Exhibit 9673.
- <sup>141</sup> Rheume testimony, September 26, 2013, p. 27479.
- <sup>142</sup> Exhibit 8090.
- <sup>143</sup> Rheume testimony, September 26, 2013, pp. 27484–5.
- <sup>144</sup> Exhibit 8090.
- <sup>145</sup> Exhibit 8090.
- <sup>146</sup> Exhibit 8087.
- <sup>147</sup> Exhibit 8090.
- <sup>148</sup> Exhibit 8090.
- <sup>149</sup> Exhibit 8087.
- <sup>150</sup> Exhibit 8087.
- <sup>151</sup> Exhibit 8090.
- <sup>152</sup> Exhibit 8090.
- <sup>153</sup> Exhibit 8090.
- <sup>154</sup> Exhibit 8090.
- <sup>155</sup> Exhibit 8087.
- <sup>156</sup> Exhibit 8090.
- <sup>157</sup> Exhibit 8087.
- <sup>158</sup> Comella testimony, September 4, 2013, p. 23901.
- <sup>159</sup> Exhibit 5847–00009.
- <sup>160</sup> Exhibit 9278.
- <sup>161</sup> Exhibit 9278.
- <sup>162</sup> Comella testimony, September 4, 2013, p. 23896.
- <sup>163</sup> Comella testimony, September 4, 2013, p. 23987.
- <sup>164</sup> Exhibit 9278.
- <sup>165</sup> Comella testimony, September 4, 2013, pp. 23987–9.
- <sup>166</sup> Exhibit 9278.
- <sup>167</sup> Hefkey testimony, August 8, 2013, p. 20219.
- <sup>168</sup> Exhibit 768.
- <sup>169</sup> Unless otherwise noted, all references for these milestones are to be found Exhibit 9278.
- <sup>170</sup> Comella testimony, September 4, 2013, p. 23988.
- <sup>171</sup> Comella testimony, September 4, 2013, p. 23989.
- <sup>172</sup> Comella testimony, September 4, 2013, pp. 23989–90.
- <sup>173</sup> Comella testimony, September 6, 2013, pp. 24418–20.
- <sup>174</sup> Comella testimony, September 4, 2013, pp. 23905–8.
- <sup>175</sup> Exhibit 245.
- <sup>176</sup> Comella testimony, September 4, 2013, p. 23953.
- <sup>177</sup> Comella testimony, September 4, 2013, p. 23929.
- <sup>178</sup> Comella testimony, September 4, 2013, pp. 23932–3.
- <sup>179</sup> Exhibit 9278.
- <sup>180</sup> Comella testimony, September 4, 2013, pp. 23938–9.
- <sup>181</sup> Exhibit 7834.
- <sup>182</sup> Comella testimony, September 4, 2013, pp. 23940–2.
- <sup>183</sup> Exhibit 7834.
- <sup>184</sup> Exhibit 9278.
- <sup>185</sup> Comella testimony, September 4, 2013, pp. 23944–5.
- <sup>186</sup> Comella testimony, September 4, 2013, pp. 23962–4.
- <sup>187</sup> Comella testimony, September 4, 2013, p. 23961.
- <sup>188</sup> Comella testimony, September 4, 2013, p. 23962; Exhibit 9278.
- <sup>189</sup> Exhibit 9278.
- <sup>190</sup> Comella testimony, September 4, 2013, pp. 23965–8.
- <sup>191</sup> Comella testimony, September 4, 2013, p. 23971.
- <sup>192</sup> Comella testimony, September 4, 2013, pp. 23971–2.
- <sup>193</sup> Comella testimony, September 4, 2013, p. 24003–4.
- <sup>194</sup> Comella testimony, September 4, 2013, p. 23974.
- <sup>195</sup> Comella testimony, September 4, 2013, p. 23985.
- <sup>196</sup> Neadles testimony, September 10, 2013, pp. 25198–9.
- <sup>197</sup> Exhibit 9278.
- <sup>198</sup> Neadles testimony, September 10, 2013, pp. 25245–6.
- <sup>199</sup> Comella testimony, September 4, 2013, pp. 23914–16.
- <sup>200</sup> Exhibit 9278.
- <sup>201</sup> Comella testimony, September 4, 2013, p. 23922.
- <sup>202</sup> Comella testimony, September 4, 2013, pp. 24060–70.
- <sup>203</sup> Comella testimony, September 4, 2013, pp. 24070–6.
- <sup>204</sup> Comella testimony, September 4, 2013, p. 23918.
- <sup>205</sup> Comella testimony, September 4, 2013, p. 24019.
- <sup>206</sup> Neadles testimony, September 10, 2013, p. 25203.
- <sup>207</sup> Comella testimony, September 4, 2013, p. 23918.
- <sup>208</sup> Comella testimony, September 4, 2013, pp. 24010–12.

- 209 Exhibit 7847.
- 210 Bruce testimony, August 23, 2013, pp. 22114–15.
- 211 Waddick testimony, August 23, 2013, pp. 21967–8.
- 212 Exhibit 7844.
- 213 Gillespie testimony, September 3, 2013, pp. 23459–62.
- 214 Gillespie testimony, September 3, 2013, pp. 23509–10.
- 215 Gillespie testimony, September 3, 2013, p. 23463.
- 216 Exhibit 7844.
- 217 Cox testimony, August 26, 2013, pp. 22207–8.
- 218 Gillespie testimony, September 3, 2013, p. 23467; Exhibit 7850.
- 219 Gillespie testimony, September 3, 2013, pp. 23473–9.
- 220 Gillespie testimony, September 4, 2013, pp. 23809–10.
- 221 Gillespie testimony, September 3, 2013, pp. 23518–19.
- 222 Bruce testimony, August 23, 2013, pp. 22173–5.
- 223 Exhibit 7844.
- 224 Exhibit 7844.
- 225 Exhibit 7844.
- 226 Exhibit 7805.
- 227 Exhibit 9907.
- 228 Exhibit 9907.
- 229 Exhibit 9907.
- 230 Exhibit 9907.
- 231 *Occupational Health and Safety Act*, RSO 1990 c 0.1, s 57(1).
- 232 Exhibit 9907.
- 233 Exhibit 9907, referencing the Ministry of Labour Emergency Response Plan.
- 234 Gryska testimony, September 23, 2013, p. 26680.
- 235 Gryska testimony, September 23, 2013, p. 26681.
- 236 Gryska testimony, September 23, 2013, p. 26618.
- 237 Gryska testimony, September 23, 2013, p. 26619.
- 238 Gryska testimony, September 23, 2013, p. 26620.
- 239 Gryska testimony, September 23, 2013, pp. 26620–26621; for a copy of Commission Report, see [https://openlibrary.org/works/OL16279844W/in\\_the\\_matter\\_of\\_a\\_fire\\_that\\_occurred\\_in\\_the\\_Hollinger\\_Consolidated\\_Gold\\_Mines\\_Limited\\_and\\_in\\_the\\_ma](https://openlibrary.org/works/OL16279844W/in_the_matter_of_a_fire_that_occurred_in_the_Hollinger_Consolidated_Gold_Mines_Limited_and_in_the_ma).
- 240 Gryska testimony, September 23, 2013, pp. 26621–2.
- 241 Gryska testimony, September 23, 2013, pp. 26623–5, and 26685–7.
- 242 Gryska testimony, September 23, 2013, p. 26659.
- 243 Gryska testimony, September 23, 2013, p. 26659–60.
- 244 Gryska testimony, September 23, 2013, pp. 26625–6.
- 245 Gryska testimony, September 23, 2013, p. 26625.
- 246 Gryska testimony, September 23, 2013, p. 26627; Exhibit 5847–11.
- 247 Gryska testimony, September 23, 2013, pp. 26668–9; Exhibit 5847–11, p. 00182.
- 248 Gryska testimony, September 23, 2013, pp. 26628–34, 26638, and 26642–5; Exhibit 58347–11, pp. 059–63, 142, 145, 149, 151, 153, 161, 172; Exhibit 9694, p. 002.
- 249 Gryska testimony, September 23, 2013, pp. 26647–53; Exhibit 9750.
- 250 Gryska testimony, September 23, 2013, p. 26684.
- 251 Gryska testimony, September 23, 2013, p. 26685.
- 252 Gryska testimony, September 23, 2013, pp. 26654–6; Exhibit 5847–11, pp. 0040–1.
- 253 Gryska testimony, September 23, 2013, pp. 26656–8; Exhibit 5847–11, p. 0045.
- 254 Gryska testimony, September 23, 2013, pp. 26659–60; Exhibit 5847–11, pp. 0037 and 00187.
- 255 Gryska testimony, September 23, 2013, pp. 26661–4; Exhibit 5847–11, pp. 00189–90.
- 256 Gryska testimony, September 23, 2013, pp. 26664–5; Exhibit 5847–11, pp. 0193–4.
- 257 Gryska testimony, September 23, 2013, p. 26666.
- 258 Gryska testimony, September 23, 2013, p. 26667.
- 259 Gryska testimony, September 23, 2013, pp. 26671–2; Exhibit 5847–11, p. 0188.
- 260 Gryska testimony, September 23, 2013, pp. 26672–3.
- 261 Exhibit 5847–11, p. 0189–92.
- 262 Gryska testimony, September 23, 2013, pp. 26674–5; Exhibit 5847–11, p. 0192.
- 263 Gryska testimony, September 23, 2013, pp. 26675–7.
- 264 Gryska testimony, September 23, 2013, p. 26683.
- 265 Gryska testimony, September 23, 2013, pp. 26689–90; Exhibit 9702.
- 266 Gryska testimony, September 23, 2013, p. 26677.
- 267 Gryska testimony, September 23, 2013, pp. 26695–8.