



CITY OF RICHMOND

REPORT TO COMMITTEE

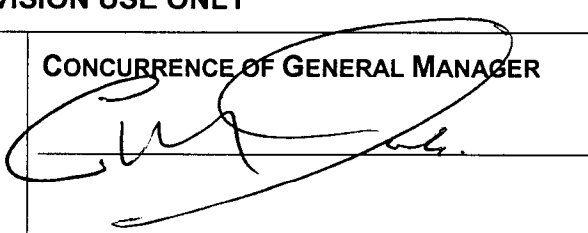
TO: Community Safety Committee
FROM: Reg Smith
Deputy Chief
RE: Shipboard Fire Fighting

DATE: January 2, 2002
FILE: -

STAFF RECOMMENDATION

That the report on Shipboard Fire Fighting be received for information.


Reg Smith
Deputy Chief

FOR ORIGINATING DIVISION USE ONLY		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Community Bylaws	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Emergency and Environmental Programs ..	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
R.C.M.P.	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

STAFF REPORT

ORIGIN

In 2000, Council directed the Fire Chief to review the types and levels of Technical Rescue Services provided by Richmond Fire-Rescue to determine if they were appropriate, given the risks, costs and benefits associated with each area in Richmond. The Technical Rescue Services to be reviewed include; Water-Rescue, Technical High Angle Rope Rescue, Shipboard Fire Fighting and Confined Space Rescue. This report reviews Shipboard Fire Fighting; it is the third in a series that have been brought forward to the Community Safety Committee.

ANALYSIS

City of Richmond fire risk

There is a low to moderate risk of commercial vessel fires in the Richmond Fraser Port which is located at the mouth of the Fraser River and is Canada's largest fresh water port. It covers the first 100 kilometres of the Fraser River, 227 kilometres of which is shoreline. The Port is comprised of navigable water within the harbour boundaries as well as uplands, foreshore, and water lots within the Fraser River Port Authority's jurisdiction. Many commercial vessels transit the Fraser River enroute to terminals handling container and breakbulk cargo. The City of Richmond is home to two commercial vessel terminals; Fraser Wharves Ltd., located at 13800 Steveston Highway and the B.C. Ferries - Deas Dock facility at 12800 Rice Mill Road.

Fraser Wharves Ltd. is the Canadian terminus for motor vehicles from Japan, bound for the rest of Canada. The ships arrive on average twice a week and are in dock for approximately twenty four hours. The ships are staffed at all times with crew members who have received marine fire fighting training to International Maritime Organization standards.

Deas Dock is the refit complex for B.C. Ferries. The facility operates from 7:30 a.m. to 10:30 p.m. Monday to Friday and can accommodate up to six large ferries at a time. The facility maintains twenty four hour security and during normal operating hours has an Emergency Response Team that have received fire fighting training.

The Steveston Harbour Authority is home to more than 600 commercial fishing vessels and is the largest commercial fishing harbour in Canada. The Harbour Authority is a non-profit society, which leases the harbour facilities from Small Craft Harbours Branch of Fisheries and Oceans.

What is marine fire fighting?

Marine fire fighting is a highly specialized and dangerous operation presenting land based fire fighters with many unique challenges including:

- Logistical problems in moving fire fighters and equipment to the vessel.
- Limited access.
- Mooring lines may burn allowing the vessel to drift away from the pier.

- A shipboard fire may have a very large, very compartmentalized steel-enclosed fire and therefore be very difficult to extinguish.
- A cargo vessel presents very difficult search and rescue, access, ventilation, and extinguishment situations.
- heat distortion of the vessels structure may cause doors and hatch covers to jamb.
- Vessels usually have high-voltage electrical systems and may have high-pressure hydraulics and steam systems.

Jurisdiction:

The issue of authority to board commercial vessels for fire fighting or any other reason is unclear. The Canadian Coast Guard is the authority having jurisdiction for commercial vessels at anchor. Richmond Fire-Rescue would not respond to a fire on a ship at anchor without a specific request from the Canadian Coast Guard.

Richmond Fire-Rescue however, will respond to commercial ship fires when the vessel is in dock as City property may be at risk. However, *suppression activities are limited to above decks*. Richmond Fire-Rescue would act in a support role for the ships emergency response team involved in fire fighting below decks. Vessel fires bring together at least three organizations with overlapping responsibility for incident management: the vessel crew, the fire department and the port authority. Control of an incident involving multiple agencies is accomplished through the use of a *unified command structure* involving the vessel master, the fire department and the port authority.

Richmond Fire-Rescue also responds to fires on commercial fishing vessels in dock. *Commercial fishing vessels and are not considered to be in the marine fire fighting category*. Standard structural fire fighting tactics generally apply to most commercial fishing vessels.

RFR will be consulting with other fire departments to determine if any specialized fire fighting tactics are required for Tall Ships.

The above listed marine fire conditions do not require Richmond fire fighters to receive any new or extended training. If, however, we decide to expand our role, for instance, below decks on commercial vessels, certain standards for training would have to be met.

A commercial vessel fire presents the land-based fire fighter with fire conditions, legal considerations and a command structure much different from those found in shoreside structural fire fighting situations. In 1995 the Technical Committee on Fire Service Training of the National Fire Protection Association (NFPA) produced NFPA 1405 *Guide for Land Based Fire Fighters Who Respond to Marine Vessel Fires*. The guide covers all subjects pertaining to shipboard fire fighting and the requirements of maritime regulatory organizations such as the U.S. Coast Guard, Canadian Coast Guard , and International Maritime Organization (IMO).

At this time, we believe that our training meets the demand to address current risks. We will continue to monitor changing conditions and report any future need to expand our skills should the risks require this training.

In 2002 Richmond Fire-Rescue will implement the following procedures:

- Fire crews will visit ships at Fraser Wharves and Deas Dock to establish a liaison with the ship's master, and develop a partnership so that ship personnel and land based fire fighters get to know each other.
- Set up fire safety talks with the ships' crews.
- Conduct joint drills where possible.

FINANCIAL IMPACT

None.

CONCLUSION

While the risk of a commercial vessel fire in Richmond may be low, marine vessel fire fighting is a highly specialized and dangerous operation. Co-operation between the fire department and maritime transportation companies is essential for safe and efficient fire fighting operations on board a ship. Implementing site visits and joint training exercises in 2002 will raise awareness and improve fire fighting operations. Ongoing monitoring of changing conditions will ensure future risks are being met.



Reg Smith
Deputy Chief

RS:hw