St Martins Fire Department
Standard Operating Guidelines

SOG # 4-013

Subject:
4-013 - Chimney Fires

Approved:	Office of the Fire Chief	**Fire Chief Signature:**	
Initiated Date:	Feb 19, 2025	**Date of Approval:**	Feb 20, 2025
Last Reviewed / Revised:		**Next Review Date:**	Feb 20, 2028

1. Scope:

1.1. This SOG applies to all SMFD personnel working at chimney fires.

2. Purpose

2.1. Chimney fires can quickly become fully involved structure fires, even with a quick response and attack. The purpose of this SOG is to:

- ensure adequate apparatus and fire personnel response to a reported chimney fire;
- improve safety and vision of personnel working in the structure and on the roof at flue fires
- help reduce the chance of a hidden fire rekindling and prevent the fire from spreading to other structures or property;
- promote promote efficiency and enhance our public image

3. Responsible Parties

3.1. The Fire Chief shall be responsible for ensuring firefighter compliance with this guideline. The FC will also be responsible for ensuring apparatus are prepared for chimney fire season at the appropriate time of the year, which is typically from mid September to mid April.

3.2. Firefighters on scene shall be responsible for following the guideline, and recognize that safety is a priority at all calls.

4. Applicable Standards

4.1. Some sections of the following standards or codes may provide insight to the development of this SOG:

4.1.1. NFPA 1001: Standard for Fire Fighter Professional Qualifications

4.1.2. NFPA 1500: Standard on Fire Department Occupational Safety and Health Program

4.1.3. NFPA 1981: Standard on Open-circuit Self-Contained Breathing Apparatus (SCBA)

4.1.4. NFPA 1932: Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders

5. Training

5.1. Training for chimney fires will occur early in the fall season, preferably around September. This is to ensure personnel are informed before the wood/oil burning season begins.

5.2. Training documentation includes:

5.2.1. LP 4-009: Water Operations: Chimney Fires

6. Guideline

6.1. Apparatus and Personnel Response

6.1.1. **All reported chimney fires are to be treated as a structure fire until verified otherwise by ~~a Fire Officer or Senior Firefighter~~the on-scene Incident Commander.**

6.1.2. As Tanker 23 currently carries the only 3 fly extension ladder, it should be the first apparatus to leave the station.

6.1.3. All fire apparatus are to respond with fire personnel, Driver/Operator and a Fire Officer or Senior Firefighter. If no one else is at the hall within a reasonable amount of time the Driver/Operator will call on the radio and checked to see if other responding personnel and if there is no one, the Driver/Operator will advise on the radio they are responding with the ("Unit #) and responding "1 On-board" and confirming the address with dispatch.

6.1.4. All fire apparatus are to respond until the first arriving apparatus is on scene with a Fire Officer or Senior Firefighter who has assessed with a 360 degree check. A Thermal Imaging Camera is to be used to assist with and confirm that is a False Alarm or a Working Structure Fire.

6.1.5. Trucks can be turned back enroute if not required.

6.1.6. Other resources can be requested (IE: Mutual Aid for water shuttle, personnel, or RIT/C Team, also Ambulance NB, NB Power, RCMP) any or all requests can be canceled once an SMFD Officer is on scene.

6.2. Assignments

6.2.1. **Incident Command**

- The first arriving Fire Officer or Senior Firefighter will complete a 360-degree of the structure, and if occupants are still in the building have them exit, confirm that all occupants are accounted for and give a report to incoming crews and actions he/she is requesting.
- If occupants are trapped in the building, the first priority is to locate and remove victims from the building. Have a RIT team ready to assist if required to assist an injured firefighter.

6.2.2. **Pump Operator**

- The pump operator will immediately engage the pump, circulate water and stretch an attack line to the primary entry point.
- The fire attack line is to be kept present with enough hose line to gain entry into the structure and charged, with a fire crew of two personnel with air packs ready to perform any fire attack duties.
- A ladder should be erected immediately, with a second ladder erected before roof operations begin.
- The pump operator should prepare a staging area if possible.
- A porta-tank or relay line should be deployed as soon as possible.

6.2.3. **Water Supply**

- A water supply location should be determined immediately. If necessary, deploy a crew of two personnel to the closest water fill site, preferably using the portable fire water pump.

6.2.4. **Entry Crew**

- Incident Commander will assign a working crew to the fire source including a firefighter, and a Fire Officer or Senior Firefighter with a tool, radio, TIC, fire bucket and a water

supply.

- A maximum of three members, wearing full PPE including bunker gear and SCBA, will enter the structure. The crews should have a TIC, fire box for the cleanout of the wood stove, have a water or dry chem extinguisher and radio communication with command.
- When possible, tarps and floor runners are to be used to protect household contents.

6.2.5. **Exterior Crew**

- Another working crew, wearing full PPE including bunker gear and SCBA, will throw a ladder (if not already complete) to access the roof and the nearest point for access to the chimney, crew of at least two firefighters with a radio, and small hand tools to remove a chimney topper, and at least 3 bags of fire retardant powder.

6.2.6. **Rapid Intervention Team**

- A fire attack line is to be kept present with enough hose line to gain entry into the structure and deemed necessary charged with a fire crew of two personnel with air packs ready to perform any fire attack duties. (Remember that during cold temperatures you may need to flow water through the nozzle to prevent freezing)

6.2.7. **Safety Officer**

- A Safety Officer will be designated as soon as possible. The SO will be responsible for overall scene safety, and has the authority to stop any work deemed unreasonably safe.
- The SO will report directly to IC.
- The SO should be experienced on the fireground.

6.2.8. **Probationary Members/Non Firefighter I**

- At no time shall a non level 1 personnel enter the hot zone, unless requested by an officer, and then must be accompanied by an officer at all times.
- Probationary members will be used for any task outside the fire zone. This will include air bottle exchanges, performing rehab (if First Aid certified), managing the staging area, and any other task deemed necessary by the IC.

6.3. **Extinguishment**

- When responding to chimney fires the fire in the fire box should be extinguished and the fuel removed using the portable steel fire box, and fire blankets should be used to protect the floors and immediate area.
- Extinguish the fire in the chimney and connecting pipes using the preferred method of dry chemical.

6.4. **Ventilation/Salvage/Overhaul**

- Ventilation is only performed after the source of the fire is removed and all doors in non affected areas are closed and windows are opened . The owner of the home should be consulted if present.
- All fire personnel entering the structure or accessing the roof will have an air pack and wear the face piece until the air is clear inside the house.

6.5. **Wrap-up**

- Once the fire is deemed out, the IC will perform a review with the homeowner and advise that the chimney, associated piping, and firebox should be inspected by a WETT certified inspector prior to use.
- If the persons living in the home are unable to heat the home and have no one locally to stay with the IC should contact the Canadian Red Cross for assistance with a place for the evening. The Canadian Red Cross can be reached through Comm Center.
- If necessary, an officer will contact 1-800-Board-Up to begin the process of securing the building.

- If necessary for insurance purposes, the Office of the Fire Marshal must be contacted, and the building must be secured by security personnel. At no time can the structure be left unsecured. If required, personnel from SMFD must remain on site until RCMP or security has arrived.

7. Maintenance and Record Keeping

7.1. Apparatus will be checked prior to the fire season for readiness. Truck checks will be recorded and submitted to an officer for review. These records will be permanently retained with the FIre Chief.

7.2. Missing equipment must be recorded and an officer must be made aware immediately for replacement.

7.3. Damaged equipment must be taken out of service immediately and tagged as such. An officer must be made aware immediately so as to have the equipment repaired or replaced.

Attachment 4-013(a): Forced Air Wood Furnace Troubleshooting Guide

St Martins Fire Department

Forced Air Wood Furnace Troubleshooting Guide

Failure / Hazard	Common Causes	Fire & Life Safety Risk	FD Indicators	Fire Department Actions
Smoke backing into living space	Blocked flue (creosote, nests, snow), damper closed, poor draft, negative pressure, door gasket failure	Smoke inhalation, CO exposure	Smoke at registers, soot at furnace door, smoke smell strongest near furnace or returns	Shut down combustion air, shut off blower, ventilate, check CO, inspect flue
Chimney / flue fire	Heavy creosote, overfiring, lack of maintenance	Structure fire, roof/attic extension	Roaring sound, sparks/flames at chimney, rapid heat rise	Control air intake, deploy chimney fire tactics, check attic/walls, request resources
Heat transfer to combustibles	Inadequate clearances, single-wall pipe too close, missing shields, storage near furnace	Ignition of walls, ceilings, contents	Charring, discoloration, hot spots on TIC	Open concealed spaces, remove combustibles, monitor for extension
Blower spreading smoke	Blower wired continuous, limit switch failure, power restoration during smoldering fire	Rapid smoke & CO distribution	Smoke throughout house, blower running during incident	Shut off power, stop airflow before ventilation
Ductwork failure / involvement	Leaking returns, rusted plenums, disconnected ducts, ducts too close to firebox	Smoke distribution, hidden fire spread	Smoke strongest at returns, hot duct runs	Check duct chases, open vertical runs, isolate return air

Insufficient combustion air	Tight homes, blocked intake, competing exhaust appliances	Backdrafting, CO buildup	Smoke rollout, CO alarms, improvement when doors opened	Provide makeup air, ventilate, monitor CO
Improper fuel use	Garbage, plastics, treated wood, wet/green wood, overloading	Toxic smoke, creosote buildup, chimney fire	Acrid/chemical odor, unusual residue	Extinguish fire if needed, advise against reuse until inspected
Overfiring	Excessive air intake, door left open, improper operation	Extreme temperatures, structural ignition	Glowing stovepipe, extreme heat	Control air, monitor structure, check for extension
Limit switch / safety failure	Failed or bypassed controls, aging systems	Overheating, duct or structure fire	Furnace extremely hot, blower not activating	Secure power, treat as rekindle risk, recommend service
Cracked heat exchanger	Thermal stress, corrosion, age	CO entering living space	CO alarms without smoke, occupant illness	Evacuate, ventilate, tag furnace out of service
Flue pipe separation / failure	Corrosion, poor installation, vibration	Smoke & flame escape into structure	Smoke at joints, rust holes	Extinguish fire, isolate system, inspect for extension
Cold flue / startup backdraft	Exterior chimney, low fire temperature	Smoke entering home	Smoke at startup only	Ventilate, control combustion, educate occupant
Improper return air location	Return grille in furnace room	Smoke pulled directly into system	Smoke increases when blower runs	Disable return, shut blower, ventilate
Ash or ember escape	Overfilled ash pan, improper ash disposal	Fire spread to floor or contents	Burning smell near furnace base	Extinguish embers, check floor framing
CO without visible smoke	Smoldering fire, restricted airflow, backdraft	CO poisoning	CO alarms, symptoms	Evacuate, ventilate, monitor until safe