

NEW SOUTH WALES FIRE BRIGADES OPERATIONS BULLETIN 2005/05



Salvage and Overhaul Operations — Hidden Fires

This Operations Bulletin emphasises the need to ensure that all areas within a fire damaged structure have been thoroughly checked for hidden fires prior to terminating an incident.

Poor salvage and overhaul techniques have resulted in concealed fires destroying the structure after the main fire was thought to be extinguished.

The following points are tactical considerations for all operational personnel at a structure fire:

- ✓ Consider all aspects of the fire e.g. front, rear, sides, top, bottom, and inside the structure.
- ✓ Consider likely paths for fire spread through concealed spaces e.g. wall, floor and ceiling cavities, roof voids, air conditioning ducts, exhaust vents, service ducts (e.g. electrical, plumbing), lift shafts and kitchen flues etc.
- ✓ Ensure all areas are checked for signs of heat and ensure proper extinguishment for embers that may cause fire spread or re-ignition some time later.
- ✓ When conducting mechanical or vertical ventilation, ensure this does not allow for fire extension in open or concealed areas.
- ✓ Check insulating materials in all cavities as they can contain embers that may smoulder for prolonged periods.

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Methods of Detection

Note: At all times, operational personnel should be mindful of scene preservation and the need to minimise damage. The following points are to be considered when conducting overhaul operations:

Sight

Look over the entire structure for any sign of hidden fires. Indicators include smoke issuing, smoke staining, discoloured materials, peeling paint, structural misalignment, cracked plaster etc. Examine roof voids and follow ducting to exit points.

Touch

Feel for heat with a gloved hand around walls, floors, ceilings and concealed voids.

Sound

Listen for popping or cracking of burning material within cavity walls and other voids in the structure.

Make openings to assess the fire spread

Consider using a ceiling hook to remove overhead sheeting where necessary. Gain access to underfloor areas or where necessary remove floor boards. Open and search inspection panels in all ducting.

Use a Thermal Imaging Camera (TIC)

Where available, use a TIC to determine the extent of fire spread in a structure. e.g. wall cavities, ceiling voids and ducting. At smaller fires, using the TIC will limit unnecessary damage when dealing with minor fires.

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Safety

- ✓ Salvage and Overhaul operations must be conducted with self contained breathing apparatus. Consider using a 4 head gas detector for atmospheric monitoring in all voids.
- ✓ P2 dust masks must be worn by all persons when re entering the structure post incident. Examples include FIRU personnel, NSW Police etc.
- ✓ When entering any roof void be aware of possible structural collapse.
- ✓ Always have a charged hose line available for overhaul operations.
- ✓ Confirm isolation of all utilities i.e. gas, water, electricity.
- ✓ Effective communication is essential for all personnel at an incident. Personnel must be informed of any change in incident conditions.
- ✓ The use of inappropriate ventilation can reignite a fire.

Further Recommended Reading:

S.O.G No. 4.4 Structure Fire Tactics

S.O.G No. 15.1 Thermal Imaging Camera

Firefighters Training Manual Volume 1 Topic 2 Section 13 Overhaul.

Cert 2 Module 1.11 Fire Suppression 1.

Cert 3 Module 2.15a Salvage and Overhaul.

Noted, Station Commander	A	B	C	D	Other

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Previous Operations Bulletin: 2005/4 Personal protective equipment- correct wearing of gloves.