

FIRE FIGHTERS GUIDANCE NOTE # 3-1

ISSUE: **REDUCING DIESEL FUMES IN FIRE STATIONS**

Incomplete combustion of diesel fumes as produced by diesel engines produces nitrogen dioxide (NO₂) and soot which contains polycyclic aromatic hydrocarbons (PAH). NO₂ is a toxic, brown gas that is irritating to the nose, throat and eyes at low concentrations, and may cause lung disease at high concentrations of exposure.

Air sampling for these hazards has been found to be difficult and expensive. Results of these tests have been inconsistent.

The following action should be taken to limit exposure:

- Ventilate the fire hall by opening doors. Allow sufficient time for fumes to clear
- Move trucks outdoors as soon as possible after start up. Trucks equipped with air brakes should be moved as soon as the low pressure warning devices deactivate
- Isolate living quarters from the trucks ensuring doors are self-closing and have adequate door seals. Pole holes should be protected by covers or be enclosed in vestibules with appropriate doors.
- Wash clothing, blankets, bedding, drapes and other surfaces contaminated with soot and other products of combustion.
- Have the Joint Occupational Health and Safety Committee review this guideline and suggest other measures appropriate to a particular fire station.

Exposure to diesel fumes can be reduced through engineering controls at the source. The discharge of air from any exhaust system should be in such a manner so as to prevent the return of contaminants to the workplace.

The Section 21 Committee strongly recommends the installation of direct capture type exhaust system extractors when stations are being renovated or newly constructed. Consideration should be given to having direct capture type exhaust extractors installed in all existing fire stations.

A reduction in soot discolouration of stations will be a visible indication that your controls are reducing exposure to fire fighters.