

Vancouver Fire Rescue Services  
Occupational Health, Safety & Wellness Division  
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On March 8, 2024, Vancouver Fire Rescue Services (VFRS) made a purchase order through Associated Fire to facilitate the transition to a new structural firefighting bunker gear, free from cancer-causing PFAS materials.

This new gear meets NFPA 1971 Standards (2018 – current edition), which is the industry standard for Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

Transitioning to new structural firefighting bunker gear represents a proactive approach to mitigating known cancer and health risks for our firefighters, while maintaining the high NFPA performance standards.

This transition makes VFRS the first North American Fire Department to ever have Non-Fluorinated (PFAS Free) Structural Fire Fighting Bunker Gear.

**VFRS structural fire fighting bunker gear information:**

Structural firefighting bunker gear is composed of three layers: an outer shell, moisture barrier and thermal liner. PFAS is a major component within the moisture barrier across North America and is used as a durable water repellent finish/coating to provide water and oil repellency.

Starfield LION Structural firefighting bunker gear currently used by VFRS has outer shells and thermal liners manufactured by Safety Components. Since early 2021, our outer shells and thermal liners have not contained PFAS products. However, our old moisture barrier (W.L. Gore - Crosstech 2F), was manufactured with PFAS.

Our old moisture barrier manufactured with PFAS are in the layers of material that are in consistent contact with firefighters' skin in daily use and in periods of extreme heat conditions (structure building fires, vehicle fires, dumpster fires and other emergency events), combined with high physical exertion. VFRS believes there is a risk of dermal absorption of dangerous PFAS chemical being absorbed through firefighters' skin and traveling throughout their bodies, therefore increasing the risk of cancer and other health complications.

With our transition, all three layers: the outer shell, moisture barrier and thermal liner will be manufactured using Non-Fluorinated (PFAS Free) material. Our new moisture barrier which is manufactured by Stedfast is under the trade name "Stedair Clear."

The VFRS believes the transition will enhance our firefighters' safety by minimizing exposure to PFAS from within a firefighter's protective gear and therefore mitigating all health risks associated with PFAS

exposure (cancer risks, behavioral development, metabolism, and the circulatory, digestive, endocrine, immune, neurological, and reproductive systems). In addition, it reinforces VFRS' reputation as a responsible steward of firefighter occupational health, safety and wellness.

### **Other news in the Transition:**

In addition, the VFRS Occupational Health, Safety and Wellness Team has worked closely with our vendor, Associated Fire, on innovative products new to the fire service that we believe will be the new Gold Standard of Cancer Prevention with structural firefighting bunker gear.

This includes:

- A **Carcinogen Mitigation Indicator** located on the Storm Flap and Collar Closure which gives visual reference to ensure all bunker gear while in use at a structure fire is closed from all carcinogens.
- We have designed and created a **Off-Gas/Particulate Control Bag** which is an upgrade from our older porous canvas bag. These bags have been manufactured and designed to mitigate exposure from gear enclosed in the bag off-gassing and contaminating breathing air in the surrounding area.
- We designed a **Rear, Side, and Chest outside visual indicator** (VFRS specific) to identify our Non-Fluorinated (PFAS Free) gear. To ensure we have visual reference while transitioning our Department to Non-Fluorinated (PFAS Free) Structural Fire Fighting Bunker Gear.
- We **have revamped the Re-Certification indicator label** located within the inner liner. This will be a visual indicator to confirm annual service compliance in accordance with Workers Compensation Act British Columbia Part 31
- The manufacturing label on the wearer's left on the inside liner will state "Stedair Clear" ensuring the member knows it Non-Fluorinated (PFAS-free).

With these advancements, VFRS is proud to lead the industry in protecting firefighter wellness and continues to innovate and advocate for our crews health and safety long-term.

### **Contact Information:**

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