

# METALLIC BUILDUP IN SCBA AIR PACKS

SAFETY ADVISORY • JUNE 2024



The International Association of Fire Fighters (IAFF) is issuing a safety alert to inform members of concerns about metal buildup in the air pack regulator of the Self-Contained Breathing Apparatus (SCBA).

The IAFF was recently contacted by a Local experiencing issues with SCBAs going into a low-air alert when the cylinder had adequate air remaining. An analysis initiated by the Local and conducted by the Department's certified SCBA technician identified a metallic substance on the O-Ring of the air pack.

After identifying the metallic substance, the Department conducted additional inspections and found metallic substances in a majority of units. Since this finding, other Locals have identified shaved pieces of metal in additional manufacturers' SCBAs.

Samples of the metallic substance were collected and sent to a local independent laboratory for further analysis. Eighteen separate metals were found in the substance. These 18 metals are Aluminum, Barium, Boron, Cadmium, Calcium, Chromium, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silicon, Sodium, Sulfur, Titanium, Vanadium, and Zinc.

Many of these metals may cause neurological, gastrointestinal, or respiratory issues, may result in lung and kidney damage, and may be potentially carcinogenic.

Due to the possible presence of these metals in SBCA units, the IAFF and our Subject Matter Experts are conducting independent analysis to identify if various manufacturers' SCBA units are experiencing metallic build-up in their air pack regulators and to assess corresponding potential air quality concerns.

**The IAFF recommends that all SCBA units be inspected and evaluated by certified SCBA technicians** for the presence of metal build-up in the air pack regulator. Additionally, all SCBAs should be thoroughly inspected to ensure proper maintenance and functionality.

If Locals identify any metallic substance build-up in their SBCA units or have additional questions, please contact the IAFF Science and Research Team at [researchteam@iaff.org](mailto:researchteam@iaff.org).

