

Enhanced Performance of Fire/CO Detectors for Healthy Homes

Principal Investigators: William Grosshandler Thomas Cleary
Telephone: 301-975-2310 301-975-6858
Email: william.grosshandler@nist.gov thomas.cleary@nist.gov

The objective of this project is to measurably increase the protection of residents in low-cost urban housing from injuries and deaths from fires and CO poisoning. The project will involve examining current fire and CO detection technologies that are suitable for urban residences and developing a prototype fire/CO detector. The prototype detector will be assembled from current sensors (CO, particulate, and temperature), by utilizing an existing smoke detector housing and smoke sensor as a starting point. The prototype will be evaluated in the NIST fire emulator to determine its ability to detect CO and fire products, and its immunity to nuisance sources (e.g., dust, moisture, cooking and cleaning aerosols). A demonstration will be conducted in a full-scale room in which a standard fire has been set. Following a successful demonstration, a contract will be issued to manufacture up to 50 units and install them in HUD-approved housing. At the end of the test period, the detectors will be examined in the NIST fire emulator to determine if they are functioning, and the false and/or true alarm data tabulated.