

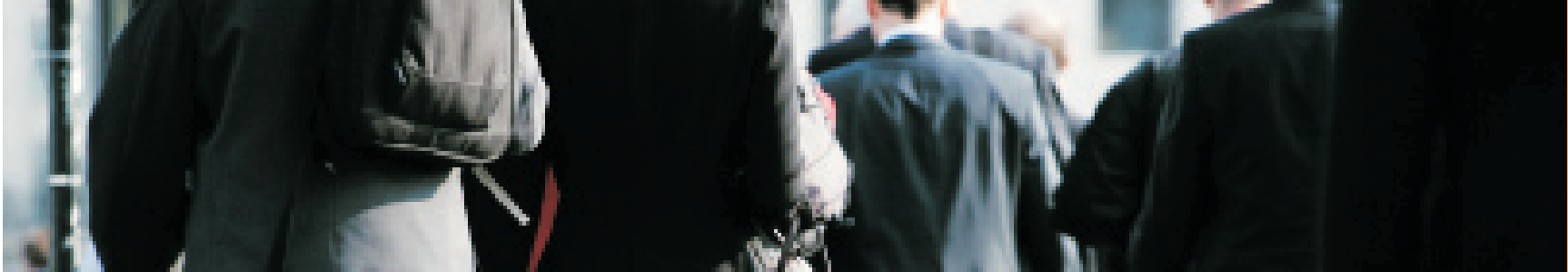
Everyday,

millions of people go to work, secure in the belief that they are safe from a chemical or radiological threat.



Turns out

they're wrong!



Today, your building and the innocent people inside are not protected from an airborne toxic industrial chemical, warfare agent, biological, or radiological attack – or even an accidental release.

Counter-terrorism experts within the DHS, CDC, and NIOSH are vexed by building vulnerability. An office building has a high concentration of human life encapsulated in a small space; an ideal target for today's merciless terrorist. The experts repeatedly identify the HVAC system as the most likely distribution point for a toxic attack. Authorities predict that a future attack against our country's infrastructure will involve Toxic Industrial Chemicals or a Dirty Bomb because the material is so easy for a terrorist to obtain, carry and disperse. These toxins can be easily released into a building's outside fresh air intake, or into an interior return air intake on any floor. The lethal air will be distributed throughout the entire building via the HVAC system in just 3-5 minutes... before anyone is aware that anything has happened. Death, serious injury, and enormous property damage will be the result...

will you be ready?



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Key SAFETY Act Paragraphs

The goal of the SAFETY Act is to encourage the development and deployment of new and innovative anti-terrorism products and services by providing liability protections. For more details, see the at www.safetyact.gov

DEPARTMENT OF HOMELAND SECURITY

Office of the Secretary

6 CFR Part 25

[USCG-2003-15425]

RIN 1601-AA15

Regulations Implementing the Support Anti-Terrorism by Fostering Effective Technologies Act of 2002 (the SAFETY Act)

AGENCY: Office of the Secretary, Department of Homeland Security.

ACTION: Final rule.

EFFECTIVE: July 10, 2006

D. Exclusive Federal Jurisdiction and Scope of Insurance Coverage.

The Act creates an exclusive Federal cause of action "for any claim for loss of property, personal injury, or death arising out of, relating to, or resulting from an act of terrorism when qualified anti-terrorism technologies have been deployed in defense against or response or recovery from such act and such claims result or may result in loss to the Seller." § 863(a)(2); See also § 863(a)(1). This exclusive "Federal cause of action shall be brought only for claims for injuries that are proximately caused by sellers that provide qualified antiterrorism technology." § 863(a)(1). The best reading of § 863(a), and the reading the Department has adopted, is that (1) Only one cause of action exists for loss of property, personal injury, or death for performance or nonperformance of the Seller's Qualified Anti-Terrorism Technology in relation to an Act of Terrorism, **(2) Such cause of action may be brought only against the Seller of the Qualified Anti-Terrorism Technology and may not be brought against the buyers, the buyers' contractors, downstream users of the Qualified Anti-Terrorism Technology, the Seller's suppliers or contractors, or any other person or entity,** and (3) Such cause of action must be brought in Federal court...

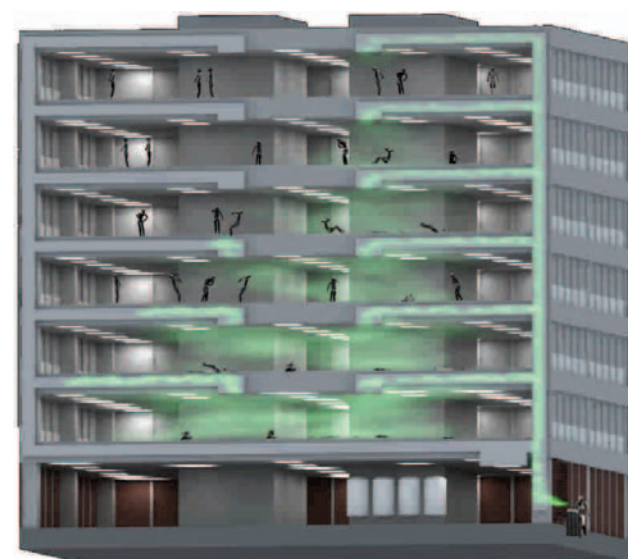
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Turns out
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Introducing the Building Sentry One™ ...



UNPROTECTED BUILDING



PROTECTED BUILDING

The Building Sentry One™ is the first **complete** system designated by the Department of Homeland Security capable of quickly and reliably **detecting** toxins then **taking immediate action** to protect a building, it's assets, and the innocent people inside. With detection in milliseconds, the Building Sentry One's sensor array network, strategically placed in the supply and return air ducts, automatically directs the building management system to shut down the air distribution system **in seconds**. With the toxin isolated, the Building Sentry One™ contacts first responders and relays real-time toxin and location data, enabling rescue teams to handle the problem effectively – protecting occupants and expediting a safe building recovery.

- 1 The robust design allows the Building Sentry One™ to operate in harsh commercial building environments, **eliminates false-positives**, and requires no sensor calibration, thus eliminating costly maintenance issues. The system's modular engineered design allows for simple installation, flexible to any building architecture, and provides a backbone system for easy expansion.
- 2 Developed under the guidance of the best minds in national defense and acknowledged leaders in infrastructure design and system deployment, BPSI's Building Sentry One™ constantly monitors the air supply within commercial properties for the toxic chemicals and over one-hundred twenty radiological isotopes deemed by the Department of Homeland Security and other risk agencies as most threatening to the workplace.
- 3 The Building Sentry One™ is **SAFETY Act Designated**, Qualified Anti-Terrorism Technology which **limits your liability**.

"Terrorist Activities have resulted in the heightened awareness of the vulnerabilities of US workplaces, schools... Of particular concern are the building's HVAC systems" – NIOSH, 2003

Features

High Speed Detection and Shut Down in seconds – Critically providing detection-to-HVAC shutdown in seconds.

Elimination of False Positives – Redundant design coupled with proprietary firmware and software algorithms generate a 99.7% confidence level.

Automated Response – Eliminating human intervention for HVAC shutdown.

Robust Design, Field-proven Technology – Built for the harsh building environment using base technologies which have been in use every day for over a decade.

Broad Spectrum Sensing – Providing a 120+ radiological isotope library and a huge TIC spectrum offer the most reliable sensing available today.

Flexible, Modular "Plug and Play" Design – Creating a backbone detection system that is simple to install into any architecture, and inexpensive to maintain and upgrade.

24/7/365 Remote Monitoring – Keeping an eye on your building and providing first responders with useful real time data to expedite a safe building rescue.

Multi-level Security Protection – Multi-key access and continuous real-time monitoring insure that your system is up and operating accurately.

Developed by building infrastructure professionals and experts in Nuclear and Chemical detection.

UL 508A Compliant.

SAFETY Act Designated Technology.

Benefits

Save Innocent Lives

Protect Assets

Limit Business Interruption

Reduce Clean-up & Abatement Costs

May Reduce Insurance Premiums

Workers Compensation
Terrorism Insurance
Property Insurance
Business Interruption Insurance
Third Party Liability

Cost Effective – Modular design makes for simple, seamless installation with no interruption to commerce.

Limit Your Liability via the Product Designation by the DHS as defined in the SAFETY Act of 2002.

"Early detection of and response to biological or chemical terrorism are crucial" – CDC, 2000

Finally, you have a choice. With the **Building Sentry One™** you can once again feel secure; protecting your people, assets, and business from a chemical or radiological targeted terrorist attack or accidental industrial release. The choice is clear...

...the choice is the **Building Sentry One™**.



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Everyday,

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Building Sentry One™ / Metro Sentry One™ Specifications

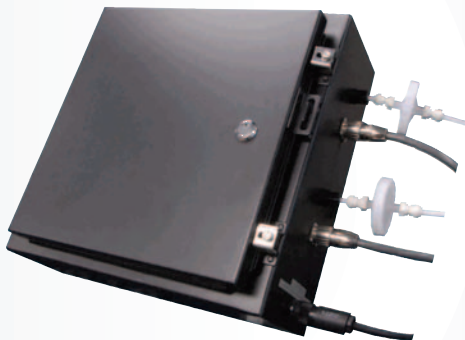
- **High-Speed Detection & Shutdown in under 5 Seconds**
- **Elimination of False Positives**
- **Automated Response**
- **Flexible, Modular “Plug & Play” Design**
- **24/7/365 Remote Monitoring Center**
- **Broad Spectrum Sensing**
- **Easily Interfaces with virtually all Building Management Control Systems**
- **Robust Design, Field-proven Technology**
- **Multi-level Security Protection**
- **SAFETYAct DT&E Designation 2006**
- **FDNY Site Specific Approval for MEA 2007**
- **SAFETYAct Designation 2008**
- **Made in the U.S.A.**

Developed under the guidance of the best minds in national defense and acknowledged leaders in infrastructure design and system deployment, BPSI takes a common sense approach; combining field-proven sensory equipment with state of the art technology to protect a building/public space and it's occupants against a targeted airborne toxic industrial chemical (TIC), biological, chemical warfare agent (CWA) or radiological/ nuclear terrorist attack.



Building Sentry One™ – Main Cabinet

- Location: Mechanical Room
- Mounting: Wall or Floor
- Dimensions: 30w x 43-1/4h x 14-1/2d inches
- Weight: 48 to 270 lbs
- Allen-Bradley PLCs and Components
- Touch Screen Interface
- Able to operate in the most challenging mechanical rooms
- Multi-Level Password Protected
- N+1 redundancy
- Fiber-Optic and Cat 5 capability
- IP-67 Connections
- UL 508a Compliant
- NEMA Rated Enclosures
- 120v/60Hz, 15 Amp or International
- UPS Battery Back-up



Chemical Sensor Array

- Location: Near or within the outside air intake and at optimal return-air location. Only the 1/4 inch sample draw tubes need penetrate the ductwork
- Mounting: Wall or Duct
- Dimensions: 16w x 16h x 6d inches
- Weight: 25 lbs
- Field-proven technology at system foundation
- Chemical Sensor Array (CSA) programmed to detect the “most likely” Toxic Industrial Chemicals (TICs) as identified by CDC and other agencies. Additional sensor capacity available
- Continuous drawn-air sampling
- Real-time reporting
- N+1 redundancy
- Self-calibrating sensors: temperature and drift
- Chemical Sensors retain an extended service life
- P-67 Connections
- UL 508a Compliant
- NEMA Rated Enclosures
- 120v/60Hz, 1 Amp or International
- UPS Battery Back-up



Radiological / Nuclear (RAD) Sensor

- Location: Inside the outside air intake duct and at optimal return-air duct location
- Mounting: In Duct
- Dimensions: 12w x 8h x 16d inches
- Weight: 12 lbs
- RAD sensors with 120+ isotope library, 25 year service life
- Real time response, fast cross correlation algorithms boost confidence to **+99.9%**
- Designed to operate in any background (high or low) including Bremsstrahlung or Compton in the continuum, with interference subtracted in real time
- Sensors self-calibrate for temperature and signal drift
- Stabilized with K40 to eliminate anomalies
- IP-67 Connections
- UL 508a Compliant
- NEMA Rated Enclosures
- 120v/60Hz, 1 Amp or International
- UPS Battery Back-up



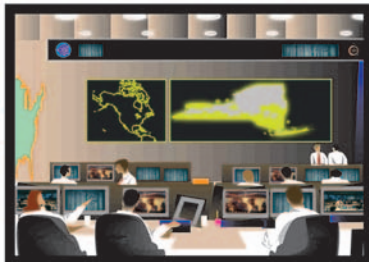
Remote Terminal Board

- Location: Optimal location between sensors
- Mounting: Wall
- Dimensions: 24w x 24h x 8d inches
- Weight: Up to 85 lbs
- Allen-Bradley PLCs and Components
- IP-67 Connectors
- UL 508a Compliant
- NEMA Rated Enclosures
- 120v/60Hz, 4.2 Amp or International
- UPS Battery Back-up
- Fiber-Optic and Cat 5 capable



Operator Interface Desktop Computer

- Location: Security Command Ctr/Engineering
- Offers only a view of the BSO, no change access available from the OIC terminal
- Pentium 4 Core 2 Duo
- 19 inch flat-panel screen
- 10,000 RPM hard drive
- Multi-level secure
- 120v/60Hz or International
- UPS Battery Back-up



24/7/365 Remote Monitoring Center

- Real-time system monitoring
- Secure asynchronous NOC
- Emergency response trained staff
- Contingency Operations support

* *Biological and Chemical Warfare Agent (CWA) sensors available*



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Threat Scenario: Dirty Bomb Explosion, Central Business District – Outside Air Intake

A jihadist steals Cesium 137 from one of over 2,000,000 points of medical/industrial radiological sources in the US. With enough radioactive material to fill a cylinder, the terrorist packs the object into his briefcase along with some explosives equipped with a simple timer. The terrorist, now fully exposed from handling the radiological material, continues on his quest to place the case in a central business district where the explosion will likely kill a few, but critically the plume cloud of deadly material generated by the



explosion will begin its journey through the city on the winds at a pace of 10-15 miles per hour.

BOOM!!! Every building in the path of this expanding plume cloud will be

sucking in the poisoned air via their outside air intakes and circulating the radiological toxins throughout the buildings. Thousands of office workers will unknowingly be breathing the toxic air into their lungs, and a fine radioactive dust will settle in the offices and on the desks of millions of square feet of prime office space. Clean-up and abatement will be in the billions of dollars and the long term ill effects of radiation poisoning may not appear for months, or even years. The lasting fear of entering a building or office that was contaminated will render the building virtually unleaseable, requiring an analysis of possibly tearing the building down and starting over.

If the Building Sentry One™ were deployed, the plume cloud would have come into contact with the Radiological sensor located in the outside air intake. Within seconds, the Building Sentry One™ would have detected the toxin and automatically shut down the HVAC system, mitigating the spread of the radioactive material throughout the building while simultaneously notifying first responders and building management with real-time isotope identification data. Building Management executes the appropriate Con-ops plan, which calls for sheltering-in-place, and coordinates with first responders to expedite a safe building rescue.

Toxin

25 gigabecquerels of Cesium 137

Commercial Cost

Stolen

Source

Hospital/Medical Lab/Food Irradiating Plant

Release Point

Central Business District

Estimated Loss of Life

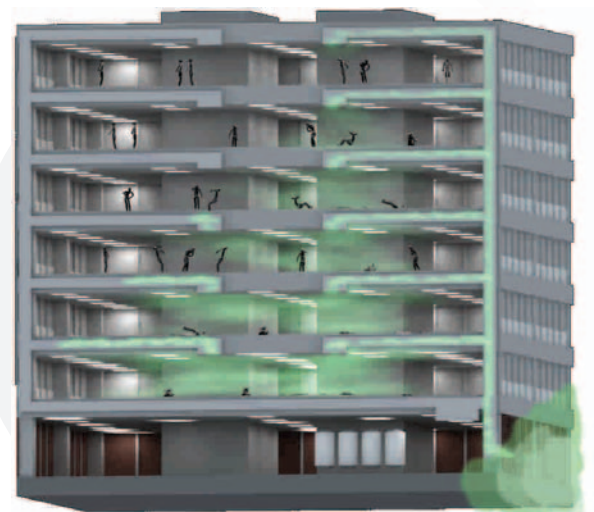
Unknown

Estimated Building Abatement Cost

\$200 Million – \$1 Billion

Estimated Liability

\$8 Billion – \$15 Billion



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Threat Scenario: Targeted Terrorist Attack – Outside Air Intake

A panel van painted with balloons and flowers pulls up next to a large commercial office building that has fresh air intake vents at the street level some 30 feet away from the panel van. The driver of the van opens the rear doors and removes six 150 cubic foot cylinders of Chlorine Gas that have been re-



painted and labeled to resemble helium for balloons. This person by means of a hand truck moves the cylinders to the side of the building employing the intake vents. This person, in the presence of innocent passer-bys removes the protective caps, points the outlets at the intakes and within 2 minutes, has all six cylinders open and emptying their contents into the building and has fled on foot or

in the van used to transport the toxic gases.



HISS, the air distribution system will, without regard to the ensuing loss of human life, circulate the toxins throughout the

building killing and injuring thousands in under 6 minutes...before anyone knows what is happening...

If the Building Sentry One™ were deployed, the gas cloud would come in contact with the sensor array located in the outside air intake. Within seconds the system will automatically shut down the air circulation system, while simultaneously notifying building personnel and first responders with real time data. Building Management executes the appropriate protocol based on the Con-ops plan, and with assistance of the BPSI Remote Monitoring Center coordinates with first responders to expedite a safe building rescue.

Toxin

(6) 150 lb cylinders Liquid Chlorine (CL2)

Commercial Cost

\$1,500

Source

Pool Supply Store

Release Point

Street level fresh Air Intakes -
600,000 sq. ft. Class A Office Building

Building Occupancy

3,500

Estimated Loss of Life

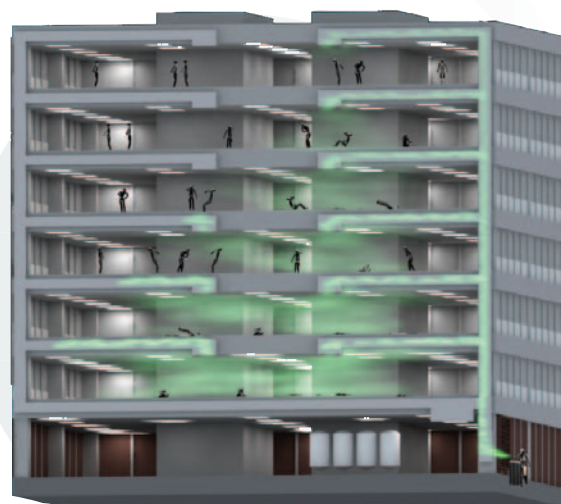
500 – 1,500 dead, 500-2,000 permanent disability

Estimated Building Abatement Cost

60 days at \$1.5MM

Estimated Liability

\$200MM - \$1B



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Threat Scenario: Targeted Terrorist Attack – Inside Air Intake

A terrorist disguised as a landscape technician enters a large commercial building, hotel, or hospital with a 40 gallon remote plant watering dolly that has been modified so the tank is capable of holding a much higher pressure (ASME style tank) filled with Arsine (AsH₃). The terrorist enters the center of the building, sets the timer of a small detonating device able to rupture the tank and leaves undetected before the attack unfolds.

BOOM!!! The bomb detonates and the Arsine is vaporized into the lobby. The air distribution system will, without regard to the ensuing loss of human life, bring the toxic air into the return air intake and continue to pump the toxins throughout the entire building until such time that the HVAC is manually shutdown. The toxic air will have been breathed in by thousands of innocent people before anyone knew what was happening. Death and serious injury will be the result.

If the Building Sentry One™ were deployed, the gas cloud would come into contact with the Chemical sensor array located in the return air plenum. Within seconds the system will detect the toxin and automatically shut down the air circulation system, while simultaneously notifying building personnel and first responders with real time data. Building Management executes the appropriate protocol based on the Con-ops plan, which calls for evacuating people out the opposite side of the building, and with assistance of the BPSI Remote Monitoring Center coordinates with first responders to expedite a safe building rescue.



Toxin

(2) 150 lb cylinders Arsine (AsH₃)

Commercial Cost

\$3,000

Source

Internet / Industrial Gas Supply

Release Point

Inside the Main Hotel Lobby/Casino, or any floor of a Class A Office Building or Hospital

Building Occupancy

4,000 - 9,500

Estimated Loss of Life

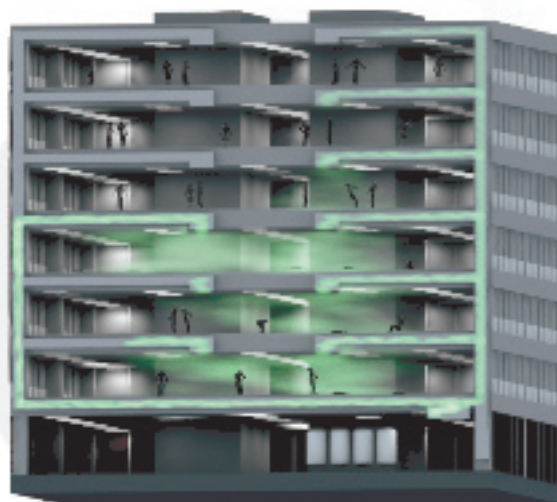
2,000 - 8,000 dead, 1,500 - 3,000 permanent disability

Estimated Building Abatement Cost

140 days at \$300MM

Estimated Liability

\$8.5 - \$14B



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Building Sentry One™ Applications

- **Class “A” Office Space**
- **Hospitals**
- **High-Rise Residential**
- **Hotels**

The Building Sentry One™ is the first complete system designated by the Department of Homeland Security capable of quickly and reliably detecting toxins then taking immediate action to protect a building, it's assets, and the innocent people inside. With detection in milliseconds, the Building Sentry One's sensor array network, strategically placed in the supply and return air ducts, automatically directs the building management system to shut down the air distribution system in under 5 seconds and activate the appropriate Con Ops plan protocols. Simultaneously, the Building Sentry One™ contacts first responders and relays real-time toxin and location data, enabling rescue teams to handle the problem effectively – protecting occupants and expediting a safe building recovery.

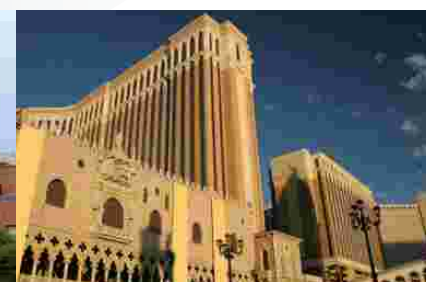
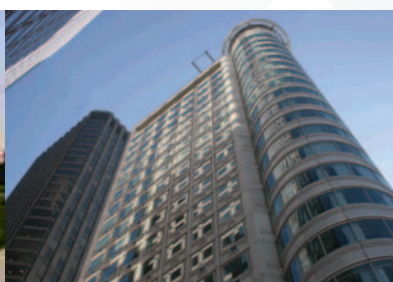
The robust design allows the Building Sentry One™ to operate in harsh commercial building environments, eliminates false-positives, and requires no sensor calibration, thus eliminating costly maintenance issues. The system's modular engineered design allows for simple installation flexible to any building architecture, and provides a backbone system for easy expansion.

- Save Lives
- Protect Assets
- Reduce Clean-up & Abatement
- Limit Liability via SAFETYAct



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Metro Sentry One™ Applications

- **Transit Stations**
- **Airports**
- **Shopping Centers**
- **Casinos**
- **Central Business Districts/Grid**
- **Conference Centers**
- **Arenas**
- **Stadiums**
- **Theaters**
- **Campus Facilities**
- **Perimeter Toxin Detection**

The Metro Sentry One™ is the first complete system designated by the Department of Homeland Security capable of quickly and reliably detecting toxins then taking immediate action to protect the innocent people gathered at a public place. Modular design allows for the strategic placement of Metro Sentry One's sensor array network in the air space. With detection in milliseconds, the Metro Sentry One™ automatically directs the existing controls management system to activate the appropriate Con-Ops protocol within seconds of toxin detection. (That protocol might be to stop all trains to eliminate the "piston effect" of a subway tube to push toxins to the next station, and evacuate the stations on the line adjacent to the release point. Or, in another setting the protocol might be to halt the movement of air in a controlled space...) The Metro Sentry One™ simultaneously contacts first responders and relays real-time toxin and location data, enabling rescue teams to manage the problem effectively – protecting occupants and expediting a safe rescue.

The robust design allows the Metro Sentry One™ to operate in harsh environments, eliminates false-positives, and requires no sensor calibration, thus eliminating costly maintenance issues. The system's modular engineered design allows for simple installation flexible to any architecture, and provides a backbone system for easy expansion.

- Real-Time Information
- Programmed Response to your Control System
- Save Lives



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