



Oil Facility RadWatch™ Overview

- Oil Facility RadWatch is comprised of Mobile and Static Detection Units (DUs) with ATS Radiological Sensors deployed together to form a dynamic ATS Radiological Surveillance Network over the entire Oil Facility.
- Static DUs are positioned in covert locations in the Oil Facility to provide targeted surveillance of stationary assets and entry/exit points, while person-carried DUs add resolution and redundancy. Vehicle-mounted DUs provide mobile and redeployable dynamic surveillance of the exterior Oil Facility areas.

Automatic Targeted Spectroscopic™ Radiological Sensor

- The Automatic Targeted Spectroscopic (ATS) Radiological Sensor is capable of detecting Radiological Dispersal Devices (“dirty bombs”) and Radiological Exposure Devices (“silent bombs”), and distinguishing these malicious devices from acceptable radiation sources routinely found in any environment under surveillance.

Detection Unit

- The Detection Units (DUs) collect gross gamma counts and ATS gamma counts from the sensors, augment these with location and timing data and send them to the RWS. The DU manages all encryption and communication to the RWS.

RadWatch Server™

- The RadWatch Server (RWS) simultaneously collects data from all DUs in the network, analyzes the “threat level” of the measurements based on background radiation determined from the location-based historical information and user defined criteria, and stores them in its database. This data is available to the RadWatch Manager and other linked security systems.

RadWatch Manager™

- The RadWatch Manager (RWM) is dynamic, GIS-based software that graphically displays measurement, location, time, and color coded “threat level” information retrieved from the RWS. It provides complete radiological threat information, including visual and audio incident alerts, in real-time to Oil Facility operations, security and emergency staff.

ATS Radiological Sensor

Spectroscopy: supports ATS detection
 Range: 640 m (3σ for 5 kCi Cs137)
 Volume: 2 L
 Physical Dimensions: 4” x 4” x 19.5”
 Weight: 7.5 lbs
 Operation Temperature: -40°C to +60°C

Detection Units

Supported Sensors:
 MDI ATS Radiological sensor
 any CBRNe RS232 sensor

Spectroscopy: supports ATS detection
 GPS Accuracy: <6m (50%), <9m (90%)
 Connectivity: Wireless (GPRS, WiFi), Ethernet
 Sampling Rate: 1 second
 Power:
 stationary units: 120V AC
 vehicle units: 12V DC (10.5V-16V, unregulated)
 person-carried units: 12V battery (8+ hours)
 current: 272 mA
 Physical Dimensions: 10”x 8” x 4”
 Weight: 12 lbs
 Operation Temperature: -40°C to +60°C

RadWatch Server

Processor: Pentium 4+, Xeon
 Hard Disk Space :
 software: 1 GB
 data storage: 10-100 GB
 RAM: 1 GB
 Operating System: Windows 2000, XP;
 Windows Server 2000, 2003; RedHat Linux 7.0+; AIX; Solaris
 Database Technology: Oracle, DB2, SQL Server, MySQL, PostgreSQL
 Bandwidth Required: 1 Mbps
 Applications Installed: Relay Server, Data Manager, Location Manager, Database, RadWatch Manager

RadWatch Manager

Processor: Pentium III+, Pentium M+
 Hard Disk Space: 50 MB
 RAM: 256 MB – 1 G
 Operating System: Windows 98, NT, 2000, XP; RedHat Linux 7.0+; AIX; Solaris
 Bandwidth Required: 52 kbps

Patents pending in US, Canada and Europe