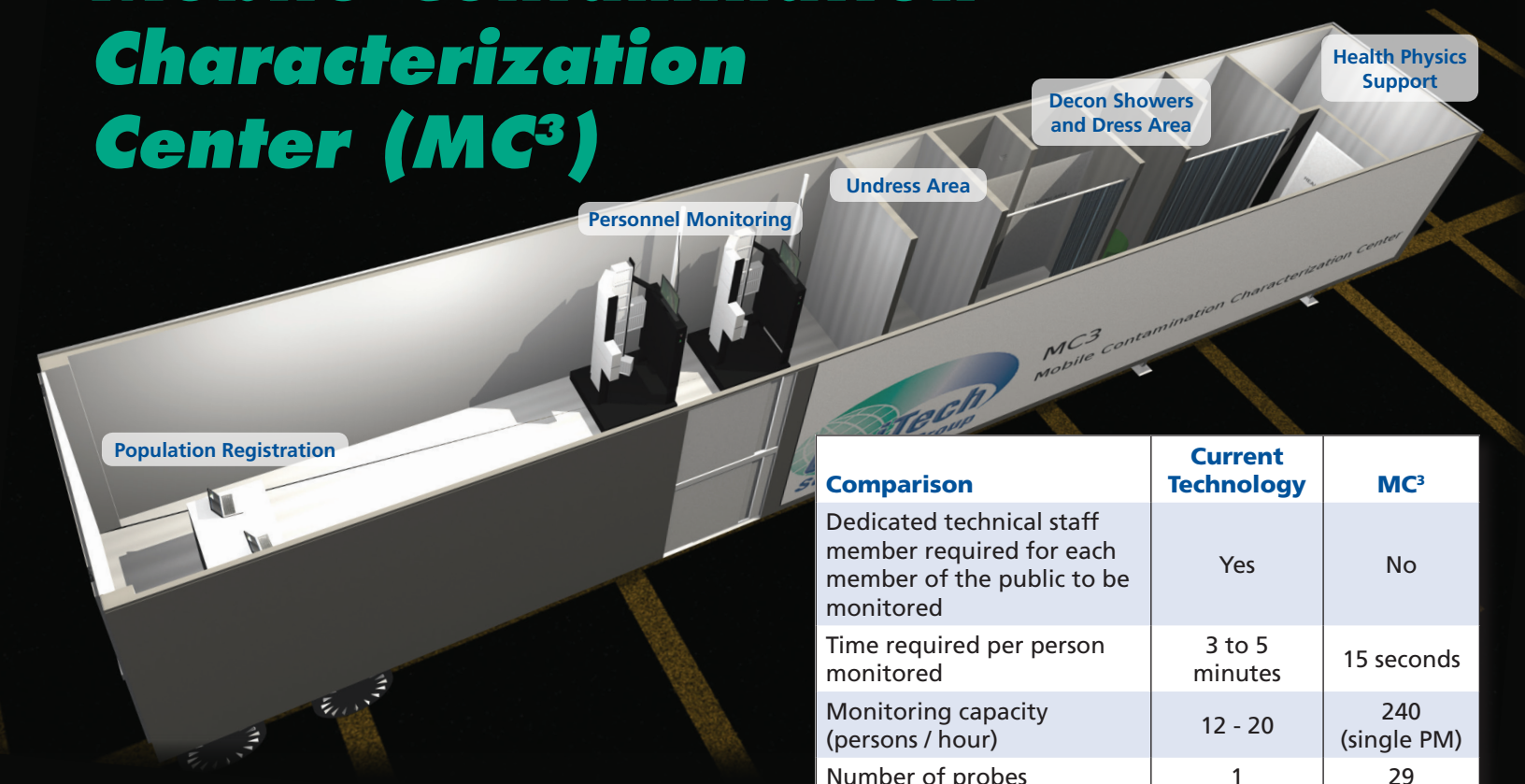
Mobile Contamination Characterization Center (MC³)



Comparison	Current Technology	MC³
Dedicated technical staff member required for each member of the public to be monitored	Yes	No
Time required per person monitored	3 to 5 minutes	15 seconds
Monitoring capacity (persons / hour)	12 - 20	240 (single PM)
Number of probes	1	29
Probe area (square inches)	2 – 16	64
Effective area monitored (square inches per 5 second count period)	10 - 40	1856

You are familiar with Einstein's Theory of Relativity: $E = mc^2$. Now UniTech brings relativity to Population Monitoring for Radiological Emergency Response:

Preparedness = Mobile Contamination Characterization Center (P = MC³)

The problem: **In a nuclear terrorist scenario – for example, the detonation of a Radiological Dispersion Device (RDD, aka Dirty Bomb) or Improvised Nuclear Device (IND) – there will be tens to hundreds of thousands of individuals evacuating the event epicenter.**

- Emergency responders want the evacuation to minimize the spread of contamination, demanding a quarantined perimeter
- Population must be individually monitored for radiological contamination at the perimeter then channeled appropriately for action
- Delays increase the amount of time radioactive material remains on people
- Danger of public hysteria and panic rises as the situation continues unresolved

Armed only with conventional instrumentation, today's radiological emergency responders would be faced with a daunting or impossible task to monitor, sort and clear population in response to terrorist scenarios involving nuclear materials.

The solution: **Speed up and optimize population monitoring and radiological decontamination using MC³ technology.**

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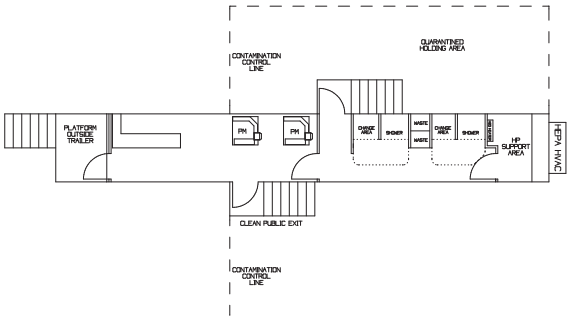
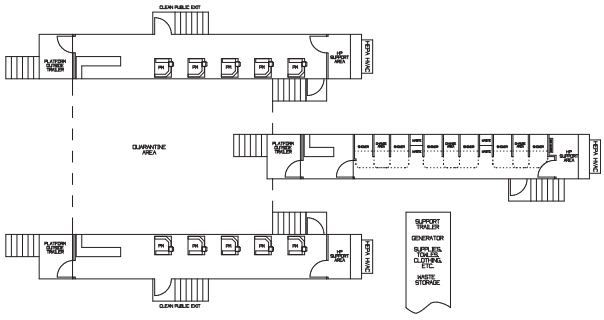
Benefits of the P = MC³ Solution

- Customized to either a single container or multiple container arrangement; can incorporate both whole-body monitoring equipment and decontamination showers
- Specialized, sensitive equipment
- Mobility: Completely mobile including truck, rail and vessel
- Helicopter deployment available in the optional intermodal container design
- Can be supplied with automated leveling devices for uneven surfaces
- Storage: Service options include maintenance of equipment in an ever-ready state
- Quick set-up: Delivered units can be operational in as little as two hours
- Flexible utility service connections adaptable to varied electrical, water supply and wastewater discharge modalities
- Optional modules incorporate capabilities for electrical generation, portable water supply and waste water filtration or retention
- Computerized data systems for individual tagging and tracking (by indelible stamp, RFID, bar code, bracelet, necklace or other means)
- Decontamination facilities incorporate paired, individual shower and dress stalls for private showering and subsequent donning of clean, uncontaminated clothing
- Air handling (HVAC) and filtration systems minimize potential for airborne contamination, facilitate radiological cleanliness and thus reduce downtime
- Health physics support, administrative and supply areas
- Workflow maximizes throughput and minimizes radiological hazards

Available in Various Configurations



Monitoring capability: 500 people per hour



Monitoring capability: 2,500 people per hour

Units can be combined for additional throughput.

For more information, contact your UniTech account manager or our corporate office. See a brief capabilities video at www.UniTechUS.com/MC3.shtml.

Specifications PMAB: Mechanical: 35"W x 40"D x 81"H approx. 800 lbs. • **Electrical:** 120 Volts AC, 60 Hz, 5 Amps • **Detectors:** 29 Model 9090, 410 cm2, window 0.85 mg/cm2 • **Electronics:** System C96, PC-based, optically isolated • **Counting gas:** P-10 (10% methane, 90% argon) flow rate 0.5 scfh • **Alternate counting gas:** C-15 (15% CO_2, 85% argon) • **Gas Flow Rate:** typical 0.5 scfh (0.25 lpm) • **Beta MDA:** ~4000 dpm Cs-137 at 4 second count time per side (in beta mode) • **Alpha MDA:** –1000 dpm Am-241 at 4 second count time per side (in alpha mode). In alpha/beta mode the alpha and beta count occur sequentially automatically.

Patent No. US 8,637,842 B2

Plant Locations

Springfield, Massachusetts
Royersford, Pennsylvania
Oak Ridge, Tennessee
Barnwell, South Carolina
Macon, Georgia
Morris, Illinois
Santa Fe, New Mexico
Ontario, California
Richland, Washington
Laar, Germany
Coevorden, Netherlands
Oakdale, UK
La Bouilladisse, France

UT-14-002

ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026
Certificate Number 968
ISO 9001, ISO 14001

UniTech Services Group
A Subsidiary of UniFirst Corporation

UniTech Corporate Headquarters
295 Parker Street • P.O. Box 51957 • Springfield, MA 01151
Toll free: 800-344-3824 • Tel: 413-543-6911 • Fax 413-543-6989
www.UniTechUS.com • www.ShopUniTech.com • www.UniTechCDN.com