Joint Project Manager for Decontamination

Presentation to the

Joint Chemical Biological Decontamination & Protection Conference & Exhibition

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Conference Theme

“Creative Acquisition to Combat Existing and Emerging World Threats Through State-of-the-Art Decontamination and Protection.”

Question

How is JPM-Decon pursuing Creative Acquisition?
JPM Decon Challenge

• To decontaminate personnel and equipment to reduce or eliminate the risk to personnel and to make equipment serviceable without degrading equipment or harming the environment

• Designated three levels of decontamination (not including clearance)
  – Immediate: Minimizes causalities and limits spread of contamination
  – Operational: Sustains operations by reducing contact hazard
  – Thorough: Reduces decontamination to lowest detectable level
Near-Term Objectives

- Build good strategic partnerships with DTRA, JRO, Services and other stakeholders to focus on proper characterization of threats, operational concepts and well-defined requirements to allow technology insertions utilizing a system-of-systems approach.

- Focus S&T and RDT&E efforts on decontaminants and not on mechanical engineering challenges.

- Strengthen acquisition results by executing approved acquisition strategies using incentive based contracts and performance based logistics to increase capabilities while reducing operational burdens.

- Upgrade acquisition professionalism through training, education and personal development of the individual and the team.
Mid-Term Objectives

• Leverage S&T results to upgrade fielded decontamination capabilities; begin new program starts, as appropriate. Explore strippable coatings and other non-traditional approaches.

Long-Term Objectives

• Optimize material self-decontamination capabilities; plan spiral system development and fielding (plug-&-play).
JPM Decon Organization

Joint Program Executive Office for Chemical and Biological Defense

JPM Decontamination

Deputy JPM Decontamination

Joint Program Analyst

PM JSTDS  PM JSPDS  PM JMDS

Technical Support Staff

Chief Business/Finance  Chief ACQ/OPNs  Chief Test Management  Chief Science and Technology

Chief LOG/Lifecycle Mgmt  Chief Sys Engineering

Tasking  Tasking  Tasking  Tasking

LCCE  Training  ESOH  Security  Science/Tech

Matrix Support Staff
Decon Legacy Systems

M17A3
Decontamination of equipment and material exposed to nuclear biological or chemical agents. It is used with water and also water mixed with decontaminant. When using decontaminants, the injector system must be used. The unit also provides a shower for personnel use.

M12A1
Decontamination of large areas, vehicle exteriors and provide personnel showers. The system was originally fielded in the 1960s. Currently, only the M12A1s are embedded in Army Decontamination units. A modernization effort by Rock Island Depot to upgrade the engine components on the system is continuing.
Decon Legacy Systems

M100 Sorbent Decon
Sorbent powder that removes gross liquid contamination, limits the spread of chemical agent, preserves the integrity of MOPP gear, and minimizes casualties. Provides vehicle and crew serve weapon operators (50 caliber and larger) the capability to perform operator wipe-down (previously referred to as operator spray-down) during immediate decontamination operations.

M295 Individual Decontamination Kit
Used to decontaminate the individual’s personal equipment (i.e., protective gloves, mask, hood, NBC overboots, helmet, load carrying equipment, and weapon), when it has been contaminated by liquid chemical agents. The M295 will provide the soldier the ability to decontaminate personal equipment quickly and easily for removal of liquid contamination.
Decon Legacy Systems

**M291 Skin Decon Kit**
Used to decontaminate the skin when it has been contaminated by liquid chemical agents. Can be used in an emergency to decontaminate the outside of the protective mask, butyl rubber gloves, hood, and an individual weapon. Contents of the decontamination pad are rubbed over exposed skin area to transfer contaminants within the active particles of the resin.

**Falcon**
Effectively deploys decontamination formulations as either liquid, air aspirated foam, or compressed air foam. As a decontamination system, it allows the user to effectively apply decontamination for exterior building applications as well as contaminated ground and pavement, equipment or vehicles.
Decon Legacy Systems

Lightweight Multi-Purpose Decontamination System (LMDS)
The LMDS will be used in-lieu-of the M17 for immediate and operational decontamination, as well as personnel shower capability until the Joint Service Transportable Decontamination System-Small Scale (JSTDS-SS) is fielded. The LMDS will be upgradeable to the JSTDS-SS.

Multi-Purpose Decontamination System (MPDS)
MPDS will be used in-lieu-of the M17 for immediate and operational decontamination, as well as personnel shower capability until the JSTDS-SS is fielded.
DF200
Decontamination foam used against chemical and biological agents
Joint Personal Decontamination Systems (JSPDS)

Immediate decon of skin, masks and mask hoods, chemical protective gloves and boots, and individual and crew served weapons under .50 caliber.

Joint Service Transportable Decontamination System – Small Scale (JSTDS-SS)

Transportable off-road over any terrain, JSTDS-SS decontaminates agents to below tactical detector levels. Used to decontaminate tactical vehicles, crew-served weapons, small aircraft, shipboard surfaces, and limited facilities and terrains.
Programs of Record

Joint Material Decontamination System (JMDS)

Decontamination system for sensitive equipment and the interiors of vehicles, aircrafts, ships, and fixed site facilities that have been exposed to CBRN warfare agents. JMDS is a single technical solution to the Joint Service Equipment Decontamination (JSSED) and Joint Platform Interior Decontamination (JPID) and Capability Development Documents.
Future Acquisition Initiatives

Joint Service Transportable Decontamination System – Large Scale (JSTDS-LS)

- Provides the capability to conduct operational and thorough decontamination of medium to large non-sensitive equipment (mobile or fixed), aircraft, facilities, terrain, seaports of debarkation (SPODs) and aerial ports of debarkation (A PODs).

Human Remains Decon System (HRDS)

- Used for evacuation of contaminated remains within theater and decontamination of the remains at the mortuary affairs collection point.

Joint Portable Decontamination System (JPDS)

- Man-portable system consisting of applicators and decontaminants. Will be used to augment thorough decontamination operations.
Conference Theme: JPM Decon is pursuing Creative Acquisition by:

• S&T focused on revolutionary technologies while maintaining progress through evolutionary solutions for current programs of record

• Open communication with other Government agencies, DoD labs, and Industry for legacy, current, and future acquisition programs
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JPM-Decon
Science and Technology
JPM Decon S&T

- Decon S&T must support creative acquisition process
- Leverage partnerships – JSTO, Labs, Industry
- Identify and qualify new technologies
- Insert/transition as needed
- Investigate/optimize new decon processes
S&T Capabilities Development

**Past**
- Vehicles
- Equipment
- Terrain
- Fixed Sites: DS2, Bleach, Hot Soapy water, HTH/STB
- IPE: M295
- Personnel: M291, SERPACWA
- Upgrades to existing capabilities: DF 200 → DF 300, RSDL, M100 (SDS)

**Present**
- TICs, NTAs, Rads
- Wounds
- Human Remains
- Sensitive Equipment, Aircraft
- mVHP?

**Future**
- Next Generation Decontaminant
  - Fully integrated with IP & other equipment
  - Self-decontaminating coatings
  - Decons TICs, NTAs, Rads
  - Indicates presence of contamination/level of decontamination
  - Pretreatments
  - Non-soiling surfaces
  - Low logistics burden
  - Rapid acting
  - Easy to use
  - Environmentally friendly
  - “System of Systems”
Decon Capabilities Taxonomy

Personnel
- Wounds
- Human remains

Personal equipment
- CB detectors

Vehicle Exterior
- Vehicle Interior

Aircraft Exterior
- Aircraft Interior

Fixed Site
- Buildings
- Contaminated Terrain
- Ships

Sensitive Equipment
- Electronics
Technology Insertion

Acquisition Programs

Requirements Assessment

JRO

Field Input

ICD

Requirements
Technology Insertion

Joint Program Executive Office for Chemical and Biological Defense

- **Acquisition Programs**
- **Requirements Assessment**
- **Field Input**
- **ICD**

- **Requirements**
- **Programs**
- **Gaps**
- **S&T**

JRO, JMDS, JPDS, HRDS, JSTDS-SS, JSTDS-LS, JSPDS
Technology Insertion

- Requirements
- Programs
- Gaps
- S&T
- Technology Transition

Increment 1 Upgrade
Increment 2 Upgrade
Fielding
Milestone
Milestone
Milestone
Production
Test
Development
JPM Decon Capability Gaps
(Priority Order)

- **Universal Decon**: CWA/BWA decontaminant (all hazards): fast-acting, non-corrosive, environmentally benign, effective on multitude of surfaces, easy to use, reduced logistics burden, reduced time and labor to use, deployable with existing application equipment

- **Strippable** barrier coatings

- **Indicator** coatings

- **NTA decons**

- **Self-decon coatings** (10 g/m², 2 - 3 hrs)

- Quantify CWA *post mortem effects*

- **Wound decons**

- **Porous/Sorptive materials decon** (i.e. silicone, rubber, elastomers etc.)

- **TICs decons**

- **Aircraft decon**

- Analytical and predictive *models*

- **Reduced logistics/Increased throughput decon**

- **Reduced water/Waterless decon**
## JPM Decon Capability Gaps
*(Priority Order)*

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<th>How will GAP be addressed?</th>
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<tr>
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<td>Initiate partnerships</td>
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<td>Indicator</td>
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<td>NTA</td>
<td>Prepare plan w/ ECBC, JSTO</td>
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<td>Self-decon coatings</td>
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<td>Post mortem effects</td>
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<td>Reduced logistics</td>
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<td>Reduce/eliminate water</td>
<td>Prepare plan w/ ECBC &amp; JSTO</td>
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JPM Decon and S&T

--- Partnerships with Key Centers of Excellence

- Leverage S&T efforts / Reduce redundancy / Provide synergy
- Enhance visibility / Increase awareness / Industry liaison
- Address Capability Gaps

--- Steering Committee/Tech Panel:

- Acquisition & S&T personnel
- Meet ~3 or 4 times per year to:

  - Identify leveraging opportunities
  - Review Capability Gaps / Resolve Programmatic S&T Issues
  - Evaluate JPM-Decon S&T Strategy and Initiatives
  - Review S&T Alignment with Acquisition Programs
JPM Decon and S&T

- **S&T Market Awareness**
  - Market Surveys
  - Tech Watch

- **User feedback/Support JRO activities**
  - Hazard Level Standardization
  - Shield ICT

- **JSTO activities/partnership**
  - Rock Drill
  - TTAs, TRLs
  - Proposal evaluation, Quarterly reviews etc.
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