



CBRN DEFENSE

Joint Chemical, Biological, Radiological, and Nuclear Defense

PROGRAM ANALYSIS AND
INTEGRATION OFFICE

CBRN Survivability

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- Background
 - Why CBRN Survivability?
- DoD Policy and Procedures
 - What is CBRN Survivability?
- Oversight
 - We are here to help

The Government Accountability Office (GAO) issued report GAO-03-325C, *Chemical and Biological Defense: Sustained Leadership Attention Needed to Resolve Operational and System Survivability Concerns*, May 2003

- found each Service had its own approach to CB Contamination Survivability
- recommended the DoD develop a formalized, systematic, and enforceable approach for all of the Services
- and resulted in the...

Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005

- SEC. 1053. Survivability of Critical Systems Exposed to Chemical or Biological Contamination

GAO issued report GAO-06-592, *Chemical and Biological Defense: DoD Needs Consistent Policies and Clear Processes to Address the Survivability of Weapon Systems Against Chemical and Biological Threats*, April 2006

DoD Directive S-5210.81, *United States Nuclear Weapons Command and Control, Safety, and Security (U)*, August 8, 2005

National Security and Homeland Security Presidential Directive (NSPD 51, HSPD 20), *National Continuity Policy*, May 9, 2007

- The Secretary of Defense, in coordination with the Secretary of Homeland Security, shall provide secure, integrated, Continuity of Government communications to the President, the Vice President, and, at a minimum, Category I executive departments and agencies

DoD Policy and Procedures

DoD Instruction 3150.09, *The CBRN Survivability Policy*,
September 17, 2008 incorporating Change 1, August 17, 2009

– It is DoD policy that:

- CBRN mission-critical systems be CBRN survivable IAW their capabilities documents' survivability requirements

– CBRN Survivability

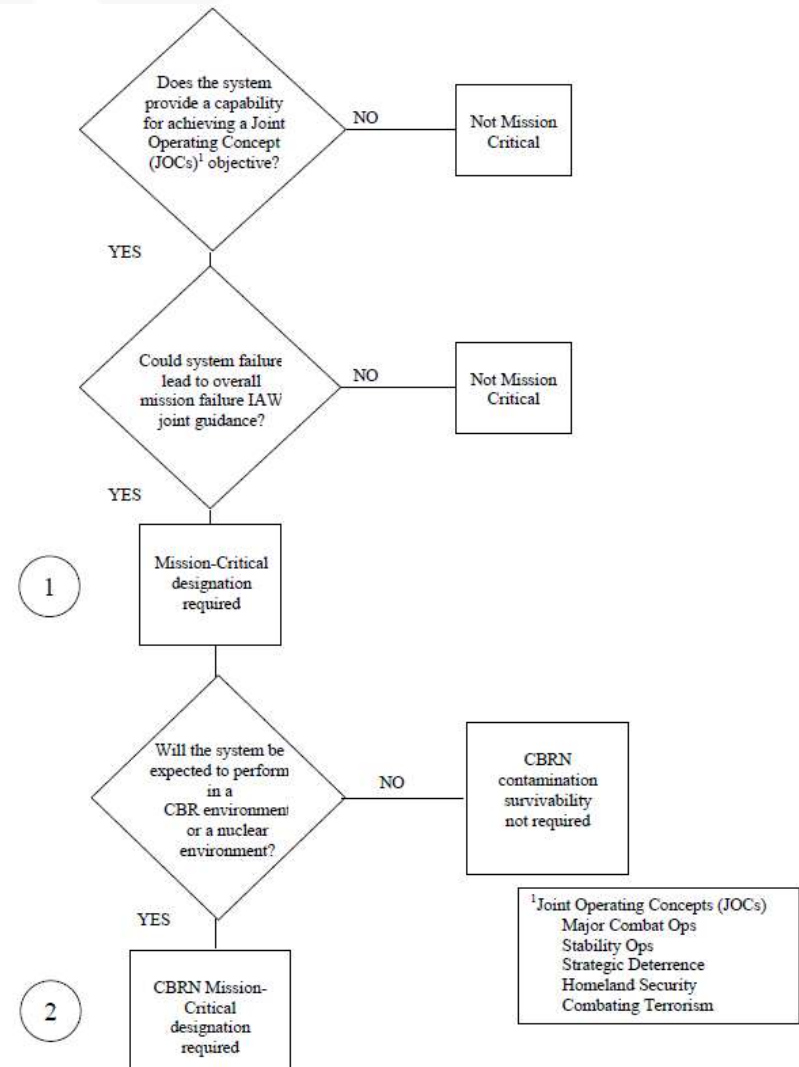
- The capability of a system to avoid, withstand, or operate during and/or after exposure to a CBR environment (and relevant decontamination) or a nuclear environment, without losing the ability to accomplish the assigned mission. CBRN survivability is divided into CBR survivability, which is concerned with CBR contamination including fallout, and nuclear survivability, which covers initial nuclear weapons effects, including blast, EMP and other initial radiation and shockwave effects.

Mission-Critical System*

- A system whose operational effectiveness and operational suitability are essential to successful mission completion or to aggregate residual combat capability. If this system fails, the mission likely will not be completed. Such a system can be an auxiliary or supporting system, as well as a primary mission system

CBRN Mission-Critical

- That subset of mission-critical systems with operational concepts requiring employment and survivability in a CBR environment or a nuclear environment



*Original source DAU; codified in DoDI 3150.09

– CBRN Survivable Systems

- All CBRN mission-critical systems under development are required to address CBRN survivability at each milestone
- Legacy CBRN mission-critical systems undergoing capability document review are also required to address CBRN survivability
- All other legacy CBRN mission-critical systems may be made CBRN survivable
- NC2 CBRN mission-critical systems must be nuclear hardened and have a continuing HM/HS program

- CBR or N survivability may be accomplished by hardening, timely resupply, redundancy, mitigation techniques (including operational techniques), or a combination thereof

– CBR Contamination Survivability

- The capability of a system to withstand CBR contaminated environments, decontaminants, and decontamination processes, without losing the ability to accomplish the assigned mission.
- A CBR contaminated survivability system is hardened against chemical or biological agent(s) or radiological contamination and decontaminants. It can be decontaminated and is compatible with individual protective equipment.
- The three elements of CBR contamination survivability are CBR hardness, CBR compatibility, and CBR decontaminability.

– Nuclear Survivability

- The capability of a system to withstand exposure to a nuclear environment without suffering loss of ability to accomplish its designated mission throughout its life-cycle.

Military Departments are required to

- **Validate sponsor's designation of CBRN mission-critical systems in capabilities documents**
- Identify legacy CBRN mission-critical systems and develop and implement a plan to assess their survivability
- Ensure an HM/HS program is established and maintained
- Provide an annual report to OSD and JS
- **Establish CBRN survivability criteria for threshold and objective requirements IAW Service standards, standardization agreements, or CBRN Survivability Oversight Group standards**
- **Test and evaluate CBRN survivability**
- Ensure that survivability requirements are addressed in acquisition strategies, program baselines, and T&E master plans
- Ensure that doctrine and training to support the policy are reflected in force-on-force simulations
- Provide representation to the CBRN Survivability Oversight Group

Chairman of the Joint Chiefs of Staff is required to

- Appoint a principal POC to coordinate the DoD CBRN Survivability Policy
- **Review CBRN mission-critical systems' capabilities documents** to ensure CBRN survivability is addressed
- Ensure that, for programs identified as "JROC interest," the JROC will **validate the system designation** as CBRN mission critical (and change it as necessary) and **validate the CBRN survivability requirements**
- Ensure multi-Service CBRN mission-critical systems have integrated CBRN survivability requirements
- **Provide guidance to MilDeps and COCOMs** in the identification of legacy CBRN mission-critical systems that should be CBRN survivable
- Ensure that joint doctrine and training support the DoD CBRN Survivability Policy in force-on-force simulations and wargames
- **Establish mandatory KPP for nuclear survivability**
- Review the CBRN survivability reports provided by the MilDeps
- Provide representation to the CBRN Survivability Oversight Group

DoD Instruction 3150.09, *The CBRN Survivability Policy* Procedures – Sponsors

- Decide whether a new system is CBRN mission-critical
- Include the system's designation and justification in capabilities documents
- Include objective, quantitative, measurable, and testable system CBRN survivability performance attributes with threshold and objective requirements
- Submit capabilities documents for review to the "Gatekeeper" of the JCIDS process

DoD Instruction 3150.09, *The CBRN Survivability Policy* Procedures – JROC

- JROC interest programs
 - Validate system designation (and may change the designation)
 - Validate CBRN survivability requirements
 - Validate CBRN survivability capabilities if identified as KPP
- If arbitration of a non-JROC interest program is required, FCB will adjudicate
- Service requirements authority will validate CBRN survivability requirements for non-JROC interest mission-critical systems

DoD Instruction 3150.09, *The CBRN Survivability Policy* Procedures – Materiel Developers

- Design an acquisition strategy that satisfies CBRN survivability requirements while balancing cost, schedule, and performance
 - MDAs shall assess compliance at each milestone decision review based on the approved AS and APB
- Work with the T&E community to develop T&E master plans that realistically address the requirement to test and evaluate, model, or assess CBRN survivability requirements
- Ensure test data are provided to DTIC for inclusion in the CB material effects database

ASD(NCB)/Hon. Weber

- Chairman of the CBRN Survivability Oversight Group (CSOG)

DATSD(Nuclear Matters)/Mr. Henry

- Chairman of the CSOG-NM
- CSOG-NM AO – Dr. John Kuspa (COMM: 703-693-9409, e-mail: John.Kuspa@osd.mil)

DATSD(Chemical and Biological Defense)/Dr. Parker

- Chairman of the CSOG-CBR
- CSOG-CBR AO – Ms. Helen Mearns (COMM: 410-436-5743, e-mail: helen.mearns@us.army.mil)



Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (excerpt)

SEC. 1053. Survivability of Critical Systems Exposed to Chemical or Biological Contamination

- (a) Requirement for Implementation Plan – Not later than 120 days after the date of the enactment of this Act, the Secretary of Defense shall submit to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives a plan, for implementation by the Department of Defense, that sets forth a systematic approach for ensuring the survivability of defense critical systems upon contamination of any such system by chemical or biological agents

Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (excerpt - continued)

SEC. 1053. Survivability of Critical Systems Exposed to Chemical or Biological Contamination

- (b)** Content – At a minimum, the plan under subsection (a) shall include the following:
- (1) Policies for ensuring that the survivability of defense critical systems in the event of contamination by chemical or biological agents is adequately addressed throughout the Department of Defense
 - (2) A systematic process for identifying those systems which are defense critical systems
 - (3) Specific testing procedures to be used during the design and development of new defense critical systems

Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (excerpt - continued)

SEC. 1053. Survivability of Critical Systems Exposed to Chemical or Biological Contamination

(b) Content – At a minimum, the plan under subsection (a) shall include the following:

(4) A centralized database that –

(A) contains comprehensive information on the effects of chemical and biological agents and decontaminants on materials used in defense critical systems; and

(B) is easily accessible to personnel who have duties to ensure the survivability of defense critical systems upon contamination of such systems by chemical and biological agents

Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (excerpt - continued)

SEC. 1053. Survivability of Critical Systems Exposed to Chemical or Biological Contamination

(C) Defense Critical System Defined – In this section, the term ‘defense critical system’ means a Department of Defense system that, as determined by the Secretary of Defense, is vital to an essential defense mission

DoD Instruction 3150.09, *The CBRN Survivability Policy*

- Assigns responsibilities for the execution of the policy
- Establishes processes for ensuring the survivability of CBRN mission-critical systems
- Describes how CBRN mission-critical systems will be identified, reviewed, and considered
- Provide definitions of decontaminability, hardness, compatibility, and decontamination
- Aligns with the Defense Critical Infrastructure Program to identify mission-critical systems
- Requires MilDeps and the Missile Defense Agency to report annually
- Establishes the CBRN Survivability Oversight Group
- Applies to all CBRN mission-critical systems regardless of ACAT

