14261 - Acquisition ESOH: An OSD Perspective

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Mr. David Asiello
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DUSD(I&E) Goals for Environment, Safety, and Occupational Health (ESOH) in Acquisition

Acquisition ESOH Today:
- Documentation streamlining impacts & the Defense Acquisition Guide (DAG) re-write
  - Strengths & Gaps
- Success Stories
  - Hexavalent Chromium Minimization & Workforce Education

Moving Forward: Objectives toward impacting the future
- Providing Necessary Policy & Guidance
- Developing or Improving Analytical Tools & Products
- Improving Program Oversight
- Enhancing the Effectiveness of the Workforce
Goals for ESOH in Acquisition

- Support the warfighter and DoD’s mission
  - Prevent loss of life or serious injury to personnel
  - Avoid damage to facilities or equipment
  - Prevent harm to the environment and the surrounding community
  - Avoid system failures that negatively impact mission capability or mission operability
Defense Acquisition Management System

ESOH Considerations Need to Span Life Cycle
Acquisition ESOH Today: Document Streamlining
Acquisition Documentation Streamlining (ADS) Task Force (TF)

- USD(AT&L) issued 14 SEPT 2010 Better Buying Power Memo
  - Identifies “Principal Actions to Improve Efficiency…in five major areas”
  - “Reducing non-productive processes and bureaucracy”
  - “Unnecessary and low-value added processes and document requirements are a significant drag on acquisition productivity and must be aggressively identified and eliminated.”

- USD(AT&L) directed overall effort in late 2010 - early 2011
  - Document owners manage efforts for their documents based on ADS TF recommendations

- Goal:
  - Eliminate non-value added content in acquisition documentation and increase value to organizations / decision makers.
    - Acquisition documents will be reviewed, streamlined or, where feasible, eliminated
    - Required reports will also be reviewed
    - The value and utility of all reports will be re-assessed
ADS TF Outcomes

AT&L issued “Expectations Memo” on 20 April 2011

- Programmatic ESOH Evaluation (PESHE):
  - Attached to Systems Engineering Plan (SEP) as a “hotlink”
  - Designated Component Acquisition Executive (CAE) as the approval authority for the document

- Acquisition Strategy:
  - Removed PESHE Summary and the National Environmental Policy Act (NEPA) / Executive Order 12114 Compliance Schedule

- Long Term:
  - Incorporate updates into DoDI 5000.02, Operation of the Defense Acquisition System, and the Defense Acquisition Guidebook
Currently, Gaps in Acquisition Policy and Guidance
  - Disconnect between when SEP and PESHE are required
DUSD(I&E) Recommendation to AT&L: Require a PESHE at MS-A

- **Rationale:**
  - Pre MS-B Preliminary Design Review (PDR) and Prototyping require ESOH involvement
    - ESOH risk management status reporting required at PDR
    - NEPA compliance required for Development and Test activities
  - With Technology Development (TD) activities moved to left, PESHE out of alignment with acquisition framework
  - Supports current initiatives for earlier Systems Engineering

- **Proposal:** Publish this as policy in next update to DoDI 5000.02
DUSD(I&E) Recommendation to AT&L: Maintain a PESHE at FRP

- Rational:
  - Need PESHE at Full Rate Production (FRP)
  - Decision to:
    - Capture ESOH data and requirements going into Operations and Support (O&S) phase
    - Capture design changes and lessons learned from manufacturing, operational test, etc.
    - Provide historic record of ESOH activities and decisions as well as plans for NEPA compliance and other ESOH activities going into O&S

- Proposal: Maintain this current policy in next update to DoD I 5000.02
Acquisition ESOH Today: Success Stories
CLR 030, ESOH in Joint Capabilities Integration & Development System (JCIDS)

- Course supports ESOH Subject Matter Expert (SME) understanding of and participation in the JCIDS process
- Three key components to course
  - Overview of the JCIDS process - focused on what ESOH SMEs will need
  - Developing and prioritizing appropriate ESOH capability statements
  - Effective participation in the JCIDS document development process

CLE 009, ESOH in Systems Engineering

- Overhauled entire course
- Renamed from “Systems Safety in Systems Engineering”
- Linked training to CLR 030, ESOH in JCIDS Course
MIL-STD-882E, Standard Practice Systems Safety

MIL-STD-882E published on May 11, 2012 following five year effort

- Changes include:
  - Clarifying terminology
  - Increasing dollar values for losses in severity descriptions
  - Adding “eliminated” to level for probability classifications
  - Adding software system safety techniques and practices
  - Re-introducing tasks and adding four new tasks
  - Worked with Aerospace Industries Association (AIA) to align National Aerospace Standard (NAS) 411 and MIL-STD 882E Task 108
  - Categorizes hazardous materials as Prohibited, Restricted, or Tracked
  - Updated NAS 411 to provide list of hazardous materials in these three categories
Factoring Sustainability into Acquisition Programs

- Developing “Sustainability in Acquisition” Methodology based on three Levels of Life Cycle Assessment, which could be placed on contracts
- Communicating with stakeholders to identify improvements and gain support
- Programs would identify sustainability factors to be considered and the appropriate decision point
  - Use physical, chemical, and toxicity data to make smart choices
  - Possible weighting or scoring system for alternatives
  - Provide examples of the types of life cycle costs that need to be considered
- Could be used to support DoD Cost Analysis Improvement Group (CAIG) Cost Estimating Guide
Program Support Reviews (PSR)

- Funding obtained so DUSD(I&E) can continue to provide ESOH subject matter experts
- However, due to DoD budget constraints, there has been a reduction in number of PRS
- B-61 Tail Sub-Assembly (completed)
- TAO(X) – Fleet Replenishment Oil Tanker (began April 2012)
Program Oversight: Acquisition Information Repository (AIR) Concept of Operations

- AIR General User (AGU) – R
- AIR Local User (ALU) – R/W/Delete

- A step toward “write once, use many”, structured data, MS decision readiness, horizontal analysis, root-cause analysis, etc.

Authoritative source for AV, etc.
Moving Forward:
Future Objectives
Providing Necessary Policy & Guidance

- Participate in DoDI 5000.02 Update
- Support re-write of Defense Acquisition Guidebook (DAG)
- Develop a PESHE-writing Guide
- Work to better integrate ESOH considerations into the Systems Engineering Plan (SEP)
Developing or Improving Analytic Tools and Products

- Develop criteria for evaluating the sustainability of new systems regarding human health and the environment
  - Continue development of “Sustainability in Acquisition” Methodology to evaluate full life-cycle costs and human health and environmental implications of alternatives
  - Pilot draft methodology for Life Cycle Assessment with Boeing and Sikorsky (Involves Yale University experts and students)

- Develop ESOH Handbook for JCIDS documents
  - Develop example capability statements (ICD, CDD, and CPD) for the various DoD systems
  - Will supplement CLR 030, ESOH in JCIDS, continuous learning module
  - Joint effort by HISI and ESOH Communities
Improving Program Oversight

- Increase ESOH Subject Matter Expert Participation in Program Support Reviews (PSRs)
  - Dependent on the DASD(SE) PSR schedule
- Develop improved guidance for the Defense Acquisition Program Support (DAPS) methodology to improve ESOH coverage in PSRs
Enhancing Effectiveness of the Workforce

- Improve training of ESOH staff on the Acquisition process; and of the Acquisition corps on ESOH requirements by
  - Developing training on new PESHE guide (long term)
  - Updating ESOH Community on the Acquisition Community Connection (ACC) portal (DAG Chapter 4 re-write also a driver)
BACKUP SLIDES
Workforce Education

- CLR 030, ESOH in Joint Capabilities Integration & Development System (JCIDS)
- Developed online training to support ESOH Subject Matter Expert (SME) participation
- Three key components to course
  - Overview of the JCIDS process - focused on what ESOH SMEs will need
  - Developing and prioritizing appropriate ESOH capability statements
  - Effective participation in the JCIDS document development process
- Course Launched on Defense Acquisition University (DAU) Learning Management System (LMS) in March 2011
- JCIDS ESOH Policy Memo under development
  - ESOH Senior Leadership endorses all JCIDS documents
    - Acknowledges ESOH communities have opportunity to provide inputs
    - Raise awareness with leadership for support planning purposes
    - DoD Components establish internal processes
CLE 009, ESOH in Systems Engineering

- Overhauled entire course
- Renamed from “Systems Safety in Systems Engineering”
- Linked training to CLR 030, ESOH in JCIDS Course
- Updated terminology
- Made current with new Acquisition Integrated Framework Diagram and SE V-charts
- Incorporated lesson on risk management and risk reporting process
- Launched on DAU LMS in November 2011
Acquisition Policy & Guidance

- DoD Directive (DoDD) 5000.01, The Defense Acquisition System (May 12, 2003)
- DoD Instruction (DoDI) 5000.02, Operation of the Defense Acquisition System (December 08, 2008)
- Acquisition Community Connection, ESOH Special Interest Area, https://acc.dau.mil/esoh
Defense Acquisition Management System

Technology Opportunities & Resources

User Needs

Strategic Guidance  Joint Concepts  Capabilities - Based Assessment  ICD  MDD  Materiel Solution Analysis  Technology Development  CDD  Engineering & Manuf Development  CPD  Production & Deployment  O&S

Incremental Development

JCIDS  Acquisition Process

ESOH Considerations Need to Span Life Cycle
Graphic Depicts Gap Between PDR and MS B

- Require PESHE at Milestone A (MS-A)