

6 June 2019

**NDIA Systems Engineering Division Meeting
Environment, Safety, and Occupational Health
(ESOH) Committee Report**

MILITARY STANDARD 882E, "STANDARD PRACTICE FOR SYSTEM SAFETY," DEFINES "ESOH" AS:

"An acronym that refers to the combination of disciplines that encompass the processes and approaches for addressing laws, regulations, Executive Orders (EO), DoD policies, environmental compliance, and hazards associated with environmental impacts, system safety (e.g., platforms, systems, system-of-systems, weapons, explosives, software, ordnance, combat systems), occupational safety and health, hazardous materials management, and pollution prevention."

Status Update



2019 Tasks	Status	Accomplishments (deliverables, etc.)
<p>1. Develop practical guidance for integrating ESOH into Digital Engineering (DE)/Model Based Systems Engineering (MBSE)</p> <ul style="list-style-type: none"> - Focus on providing ESOH risk and requirements data inputs and extracting ESOH-related data - Evaluate Industry/Government efforts - Participate in relevant meetings and initiatives - Work with AIA Hazardous Materials Committee responsible for NAS411 and NAS411-1 to develop a method to exchange digital Hazardous Materials (HAZMAT) data between the system model, hazard tracking system, and logistics product databases - Using HAZMAT management as pathfinder for integrating full scope of ESOH considerations into DE/MBSE 	In Progress	<ul style="list-style-type: none"> • Initiated concept development of the Hazardous Materials (HAZMAT)/ National Aerospace Standard (NAS)411-1 SysML Model Library • Developed representative framework to create SysML model structure to organize data, and apply informational attributes to fully characterize all hazardous material items of concern • Vetted initial concept with Boeing and Raytheon representatives • HAZMAT/NAS411-1 SysML Model Library initiative supports DoD digital engineering goals of using models to inform program decision making, provide authoritative source of truth, and transforms ESOH workforce that supports systems across the life cycle (development and sustainment) • Participated in DoD and AIA Working Group (WG) meetings on National Aerospace Standard 411 and 411-1 on Hazardous Materials • Continued discussions on the digital exchange and standardization of electronic HAZMAT data using IPC-1754, <i>Materials Declaration Standard</i>, • Mapping data elements of IPC-1754, NAS411, MIL-STD-882E, and Logistics Product Data to standardize the HAZMAT data provided by industry to DoD • Revised MIL-STD-882 HAZMAT Risk Management Guide provided to NAS411 WG
<p>2. Assess impact of DoD Reorganization of "Operational Safety" to USD (P&R) from USD (R&E) and USD (A&S)</p>	In Progress	<ul style="list-style-type: none"> • DoD centralized operational safety and health under USD (P&R) • DoD has Acquisition System Safety in USD (R&E) and Acquisition Environmental Management in USD (A&S) • DoDI 5000.02 rewrite in process; provided ESOH recommendations to Enclosure 6, Life-Cycle Sustainment (linking SEP ESOH content to LCSP)
<p>3. ESOH Committee Meeting</p>	In Progress	<ul style="list-style-type: none"> • 34 participants in the April 2019 ESOH Committee meeting: Industry 7 (21%), OSD 2 (6%), Army 3 (9%), Navy 8 (24%), Marine Corps 0 (0%), Air Force 10 (29%); DCMA 4 (12%) • Holding ESOH Committee meeting this afternoon
<p>4. NDIA SE Conference ESOH Track</p>	In Progress	<ul style="list-style-type: none"> • Continuing solicitation of abstracts; 8 formally submitted; total of 12 committed to submitting so far; pursuing more diverse topics

ESOH Committee Meeting Information



- **Date:** June 6, 2019
- **Time:** 1430 – 1600 EDT
- **Location:** Booz Allen Hamilton, 1550 Crystal Drive, Arlington-Crystal City, 11th Floor (check-in and badge), 5th Floor – Room 4508 (for those attending in person; most participate via teleconference)
- **POCs:** Karen Gill and Lucy Rodriguez
- **Call-in Number:** 877-885-1087; Access Code 7706930636#
- **Web Link:** <https://connect.apan.org/june2019indiaesoh/>
- **Meeting Agenda:**
 - Updates from David Asiello, USD (A&S)/ASD (S)/ENV on ESOH Reorganizations at OSD and DoDI 5000.02 Rewrite (Goal of 5 pages total)
 - Program Support Management emphasis on ESOH
 - Linkage between SEP and LCSP ESOH content
 - Sustainment - where ESOH risks realized; drives emphasis on effective ESOH risks and requirements management during development
 - Hazardous Materials/NAS411-1 SYSML Model Library – Characterizing Applicable ESOH Data and Adapting It for Use with Digital Engineering Tools
 - NDIA Systems & Mission Engineering Conference – ESOH Track Planning

ESOH Committee - 2019 Task Plan



2019 Tasks:

1. Develop practical guidance for integrating ESOH into Digital Engineering (DE)/Model Based Systems Engineering (MBSE)
 - Focus on providing ESOH risk and requirements data inputs to the model and extracting ESOH-related data
 - Evaluate Industry/Government efforts
 - Participate in relevant meetings and initiatives
 - Develop a method to exchange digital Hazardous Materials data between the system model, hazard tracking system, and logistics product databases
2. Assess impact of DoD Reorganization of "Operational Safety" to USD(P&R) from USD(R&E) and USD(A&S)
3. Conduct ESOH Committee Meetings
4. NDIA SE Conference ESOH Track

Deliverables / Products:

1. Draft Document with recommended guidance for integrating ESOH data into DE/MBSE and revision to AIA NAS411 addressing utilizing digital data for Hazardous Materials management and reporting
2. Work with DoD Acquisition ESOH IPT to assess need for Acquisition Systems Engineering policy changes
3. Quarterly ESOH Committee Meetings
4. ESOH Track at the October 2019 NDIA SE Conference

Schedule / Resources:

1. ECD December 2019 / OUSD(R&E), OASD(EI&E), DoD Acquisition ESOH IPT/WGs, NDIA Mission Engineering, NDIA M&S, OSD/Service Digital Engineering WGs, DEIXWG, DoD-AIA NAS411 WG, and Industry
2. ECD December 2019 / DoD Acquisition ESOH IPT
3. Bi-monthly meetings in 2019 following the NDIA SE Division meetings / DoD and Industry Participants
4. ECD October 2019 / Government and Industry Participants

Issues / Concerns:

1. Challenging when Government in early stages of implementation / Funding, timing, and availability of staff.
 - Identifying programs using DE/MBSE with ESOH integrated into the model that would be willing to participate / funding, timing, and availability of staff
 - Challenging to determine data transfer mechanism and consensus on approaches / Funding, timing, and availability of personnel with experience
2. DoD Acquisition Systems Engineering ESOH policy not considered in discussions to move "Operational Safety" to P&R
3. Recruiting Presenters
4. Recruiting presenters