Overview

- DoD and industry collaboratively revised the Hazardous Material Management Program (HMMP) Standard ("NAS411") and created NAS411-1 Hazardous Material Target List (HMTL)
  - Consistent with MIL-STD-882E, but available for commercial contracts
  - NAS411 (Rev3) and NAS411-1 published 30 Sept 2013

- NAS411-1 provides a standard HMTL for the DoD to use as guidance for new programs
  - Contains prohibited, restricted, and tracked HAZMAT
  - Expected to be tailored to meet program needs
Definitions

- **Prohibited HAZMAT** - material that cannot be included or used in Products and Services unless prior customer approval is obtained for each specific application or process. (HAZMATs in this category have been determined to pose potentially unacceptable ESOH, cost, schedule, or performance risks and typically have technically and economically feasible alternatives.)

- **Restricted HAZMAT** - material that the contractor is required to target for elimination or minimization.

- **Quantify** – obtaining an estimate of the amount of HAZMAT, based upon readily available data and/or engineering judgment. The quantity can be in various terms that can be used to assess relative risk, such as weight percent, pieces of hardware or measure of weight.

- **Tracked HAZMAT** - material that does not require specific contractor action other than tracking and reporting to the customer.
NAS411-1 HAZMAT

Prohibited HAZMAT are

- Asbestos
- Class I ODS
- Hexavalent Chromium
- Mercury and Mercury Compounds
- Polychlorinated Biphenyls (PCBs)

Restricted HAZMAT includes

- Beryllium and beryllium compounds
- Cadmium and cadmium compounds
- Nickel compounds
- Lead and lead compounds
NAS 411-1 Harmonization

- Harmonize externally with International Aerospace Environmental Group (IAEG*)
  - Aerospace-Defence Declarable Substance List (AD-DSL)

- Harmonize internally
  - Logistics Product Data
  - Hazard Tracking System
  - NAS 411 (Hazardous Materials Management System)
  - MIL STD 882

*http://www.iaeg.com/workgroups/wg1/addsl/
Hazard Analysis Guidance

- Develops a hazard analysis guidance consistent with MS 882 methodology (Task Section 200 - Analysis)
- Considers chemical hazards for environmental, and occupational safety
Exceptions

- When prohibited or restricted HAZMAT needs to be used to support program objectives, then consider incorporating appropriate exceptions in the contract.

Examples:

- Except hexavalent chromium required for use per a customer requirement (e.g., coatings required per program Finish Specification) or not subject to 48 CFR 223.73 DFARS (e.g., conversion coating, chromic acid anodize, and adhesive bonding primer) shall be categorized as restricted material.

- Except lead in electrical and electronic applications, sealed maintenance-free batteries, lead ballast for vessel stability, and industry standard metal alloys with lead ≤ 4% shall be tracked material.

- Except beryllium in electrical/electronic components or mirrors shall be categorized as tracked materials.

- Except nickel compounds in batteries, electronic/electrical applications, plating, catalysts, coatings, dyes and seals shall be categorized as tracked material.
NAS411 WG Next Steps

- Continue industry and DoD collaboration to improve NAS 411 and NAS 411-1 through the AIA
- NAS411 and NAS411-1 will be periodically reviewed and updated as needed
- NAS 411-1 Revision expected by 1st Quarter 2016
  - Contains a separate “Tracked HAZMAT” list
  - Contains chemical names and CAS numbers for NAS411-1 compounds
- Continue facilitating identification, communication, and implementation of alternatives early in the design – collaborate with DoD and industry SMEs
Questions???