

Weapon System Environmental, Safety, and Occupational Health (ESH) Checklist

All items on this list may not apply to every weapon system program. The list is intended to increase awareness of environmental, safety, and occupational health (ESOH) issues and to promote ESOH integration into the acquisition and systems engineering process.

Program Milestones	Associated Environmental Events
Pre-Milestone A: Concept Refinement Milestone A: Technology Development - Pre-Systems Acquisition	Begin ESOH analysis development & include in system design <ul style="list-style-type: none"> • Develop ESOH input for acquisition strategy • Consider environmental management, consequences and mitigation for alternatives • Provide input to the Capability Development Document (CDD) as applicable - include ESOH constraints • Consider ESOH and Demilitarization and Disposal (D&D) costs in Total Ownership Cost (TOC) estimate • Include RFP requirement to allow offeror proposals of less hazardous, alternative processes, chemicals and material substitutes • Verify that ESOH objectives are included in Request for Proposal (RFP) preparation and source selection documents • Develop D&D Strategy - describe approach • Consult with DoD Demilitarization Logistics Manager • See D&D Plan Guidelines • Design for Demilitarization
Program Initiation	<ul style="list-style-type: none"> • Form/Activate Program ESOH Working Group • Initiate National Environmental Policy Act (NEPA) process via the AF Form 813 • Develop/draft Programmatic Environmental, Safety and Occupational Health (ESOH) Evaluation (PESHE) document • Revise acquisition strategy considering environmental management, consequences and mitigation • Provide input to Integrated Logistics Support Plan (ILSP) or comparable document - include operations environmental issues • Provide input to Test and Evaluation Master Plan (TEMP) -consider user testing environmental issues • Provide input to ILSP or comparable document - consider operations ESOH issues • Assist with identifying hazardous material (HAZMAT) alternatives/considerations in trade studies • Monitor contractor HAZMAT acquisition/use • Participate in System Requirements Review - address ESOH requirements • Participate in System Functional Review -life cycle cost analysis to include ESOH • ESOH Working Group identification of ESOH issues • Consider ESOH and D&D costs in TOC estimate • Plan for demilitarization and disposal (D&D) and demonstrate technologies required - include a D&D Section within the PESHE • Identify D&D requirements • Consult with DoD Demilitarization Logistics Manager • See D&D Plan Guidelines

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	<ul style="list-style-type: none"> • Develop D&D coding/instructions and coordinate with DLIS • Provide input to the RFP and assist with the selection of contractors
<p>Milestone B: System Development & Demonstration - Systems Acquisition</p>	<ul style="list-style-type: none"> • Provide input to the Capability Production Document (CPD) as applicable - include ESOH constraints • Review/update NEPA documentation • Assist with revising the acquisition strategy • Review and update PESHE, if required • Provide input to TEMP -consider ESOH issues • Provide input to ILSP or comparable document - consider operations ESOH issues • Assist with identifying HAZMAT alternatives/consider in trade studies • Monitor contractor HAZMAT acquisition/use • Participate in Design Readiness Review - examine ESOH issues in planned manufacturing • Participate in preparation of Human System Integration Plan • ESOH Working Group identification of ESOH issues • Include appropriate ESOH and D&D costs in TOC estimate • Provide input to the RFP and assist in the selection of contractors • Include D&D Strategy in SAMP • Consult with DoD Demilitarization Logistics Manager • See D&D Plan Guidelines • Review/revise D&D coding, as necessary, and coordinate with DLIS
<p>System Design Reviews (SDRs)</p>	<ul style="list-style-type: none"> • Identify ESOH program concerns and requirements • Assess ESOH risks • Develop Hazardous Material Management Program (HMMP) Plan (or similar contractor document) • Determine HAZMAT requirements, include health review of HAZMAT requirements and complete flow down to associate subcontractors/suppliers and operations and maintenance activities on/at government/military facilities and installations • Complete ESOH Hazard Assessments
<p>Design Readiness Review (DRR)</p>	<ul style="list-style-type: none"> • Publish draft HMMP Plan and Report (or similar contractor documents), include mishap procedures and training requirements • Complete preliminary identification of ESOH risks • Update ESH Hazard Assessment Reports (or similar contractor document) • Verify ESOH actions are implemented, listed in program documentation, and appropriately costed • Perform environmental analysis - document economic and risk analysis of ESOH decisions (compliance, protection and waste management) • Present pollution prevention trade study results and incorporate pollution prevention in the systems engineering process
<p>System Demonstration</p>	<ul style="list-style-type: none"> • Update and publish final HMMP Plan (or similar contractor document) • Publish ESOH Hazard Assessment Reports (or similar contractor document)

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	<ul style="list-style-type: none"> • Define initial environmental impacts • Complete Environmental Protection Agency (EPA) regulatory compliance review • Complete Occupational Safety and Health Administration (OSHA) regulatory compliance review • Define requirements for HAZMAT waste and disposal, solid waste disposal, and materiel reuse and recycling • Review/update, as necessary, the D&D Strategy • Develop HAZMAT mishap procedures • Define HAZMAT training requirements
<p>Milestone C: Production & Deployment - Systems Acquisition</p>	<ul style="list-style-type: none"> • Review/update NEPA documentation • Update HMMP Plans/Reports • Review/Update PESHE • Assist with updating ILSP or comparable document • Assist with updating TEMP • Review/update ESOH and D&D costs in TOC estimate • Review/Update D&D Strategy • Review/revise demilitarization coding as needed • Include detailed instructions and technical data package to perform demilitarization process • Participate in RFP preparation and source selection
<p>Full-Rate Production (FRP) Decision Review</p> <p>Technical Order (TO) Reviews</p> <p>Maintainability Demonstrations</p> <p>Drawing Reviews</p>	<ul style="list-style-type: none"> • Review/update NEPA documentation • Bioenvironmental Engineering (BEE) review of contractor inputs • HMMP Plan, HMMP Report and Health Hazard Assessment Report (or similar contractor documents) updated • HAZMAT training implemented • Personal Protection Equipment (PPE) Verification/Validation • Benchmark for ESOH requirements in TOs and drawing packages (e.g., no Class I ODSs, minimization of Class II ODSs and HAZMATs, etc.) • Review/Update D&D Strategy • Review/revise demilitarization coding as needed • Update technical data package • Review/update ESOH and D&D costs in TOC estimate
<p>Modifications</p>	<ul style="list-style-type: none"> • Review/update NEPA documentation • Assess program impacts and provide input to program documents as detailed in Milestone blocks shown above • Assess compliance costs and reduce or eliminate if opportunity exists • Reduce or eliminate HAZMAT usage
<p>Operations and Support - Sustainment</p>	<ul style="list-style-type: none"> • Review NEPA documentation, update as needed and assess program impacts • Evolve and refine sustainment strategies • Work with system maintainers to reduce or eliminate compliance sites* • Review/Update D&D Strategy • Review/revise demilitarization coding as needed • Execute D&D activities and coordinate with local DRMO and/or DRMS

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	<ul style="list-style-type: none">• Review/update ESOH and D&D costs in TOC estimate
Demilitarization & Disposal (D&D)	<ul style="list-style-type: none">• DRMO executes D&D Strategy

* A compliance site is any regulated facility, regulated process, or a discharge to a regulated facility or process. This includes any discrete location under Air Force control wherein activity occurs that is subject to current or known future (resulting in known consequences) federal, state, and local statutes and regulations; Executive Orders; Department of Defense and Air Force policies; and the Overseas Environmental Baseline Guidance Document, Final Governing Standards and international agreements. Compliance sites include, but are not limited to, air emissions from each stationary source; points where hazardous waste is accumulated, treated, stored, or disposed; confirmed solid waste management units; underground storage tanks; aboveground storage tanks; potable water system components, treatment systems, major storage sites, and distribution systems; National Pollutant Discharge Elimination System and/or permitted storm water out falls and other permitted discharges; Emergency Planning and Community Right-to-Know Act (EPCRA) sites that exceed reporting thresholds defined under EPCRA, 42 U.S.C. 11022; storage and mixing facilities operated by certified pesticide applicators; on-installation solid waste permitted landfills; and Resource Conservation and Recovery Act Subpart X permitted or interim status sites.