

Aeronautical Systems Center

Birthplace, Home & Future of Aerospace



U.S. AIR FORCE

Acquisition ESOH Programmatic Risk Tools (10 May 11)

Mr. Gene McKinley
ASC/WNV
(937) 255-3596
Gene.McKinley@wpafb.af.mil

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 10 MAY 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Acquisition ESOH Programmatic Risk Tools				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Aeronautical Systems Center,ASC/WNV,Wright Patterson AFB,OH,45433				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES Presented at the NDIA Environment, Energy Security & Sustainability (E2S2) Symposium & Exhibition held 9-12 May 2011 in New Orleans, LA.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 22	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



U.S. AIR FORCE

Aeronautical Systems Center



Birthplace, Home & Future of Aerospace

- **ASC Mission**
 - **Deliver affordable, sustainable and effective aerospace capabilities to US and International forces - on time, on cost**
- **ASC Strategic Principle**
 - **Dominant Air Power: Design for tomorrow...
Deliver today**
- **ASC Strategic Priorities**
 - **Successfully Restructure Our Organization**
 - **Implement Integrated Life Cycle Management**
 - **Develop and Care for Our People**
 - **Improve Our Business Processes**



ASC ESOH Risk Management



Birthplace, Home & Future of Aerospace





- **Institutionalize ESOH into Acquisition Process**
 - **AF Acquisition Strategy Panel (ASP) Member**
 - **ESOH Strategy**
 - **ESOH Council chaired by ASC/CV**
- **Institutionalize ESOH into Sys Engineering**
 - **Support Directorates, Divisions, Branches, SPOs**
 - **Assess impacts of updates to laws/regulations**
 - **Provide expertise for NEPA, PESHE, Deicing, Occ. Health**
 - **Training Courses, tool set, cross-feed**
 - **Material Substitution Projects for WS & GOCOs**
 - **Technology Investment**
 - **Occupational Health**

Program Manager ESOH Responsibilities

Birthplace, Home & Future of Aerospace

- Identify ESOH considerations early
- Structured risk management/acceptance
- Integrate ESOH into acquisition strategy
- Integrate ESOH into systems engineering
- Minimized ESOH risk across life cycle
- Provide system specific NEPA analyses data



A safety manager with the Louisiana National Guard's 159th Fighter Wing, describes how to inspect an augmentor nozzle on an F-15 Fighter aircraft

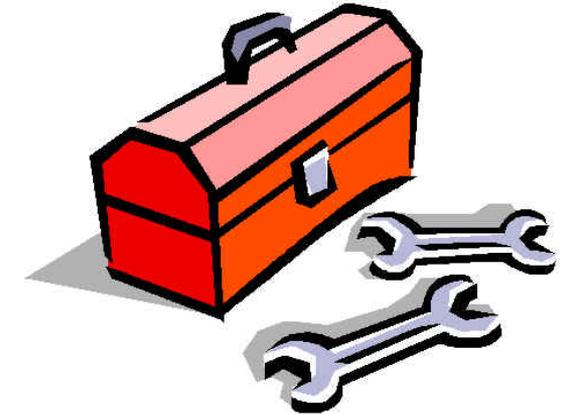


ASC Acquisition ESOH Tools



Birthplace, Home & Future of Aerospace

- **ESOH Programmatic Risk Model**
 - Lessons Learned
- **PESHE Templates**
 - PESHE Checklist
- **Other ASC Acquisition ESOH Tools**
 - Environmental Circular
 - NEPA Circular
 - NEPA Compliance Checklist
 - Environmental criteria for pre-award documents
 - Acquisition ESOH Training



Reduce ESOH risk through integration into the acquisition strategy & systems engineering



ASC ESOH Programmatic Risk Model



U.S. AIR FORCE

Birthplace, Home & Future of Aerospace

- **Assists PMs, ESOH Practitioners & Systems Engineers**
 - Manage ESOH over life cycle
 - Gauge effectiveness of ESOH management program
 - Integrate ESOH in acquisition strategy
 - Integrate ESOH in systems engineering
 - Provide data for the PESHE





ESOH Programmatic Risk Toolset Components



Birthplace, Home & Future of Aerospace

ESOH Lessons Learned for Program Acquisition, Version 4.0
Baseline and Settings - Baseline and Custom

This document identifies ESOH lessons learned for system Acquisition. These lessons relate to ESOH considerations and the program acquisition with the ESOH Programmatic Risk Toolset (PRT). Lessons are identified and grouped by PRT Impact area. Click on the top table of contents to navigate to the PRT template and associated lessons.

Table of Contents

PROGRAM PROBLEMS

(1) PROGRAM PROBLEMS IDENTIFICATION AND PREVENTION

(2) ESOH Development and Use

(3) Program - Contract Integration

(4) Program - Contract Integration - Early Contract

(5) Program - Contract Integration - Government/Plan Lessons

ESOH TEAM RESPONSIBILITIES AND SUPPORT

(6) ESOH Team - Government/Plan Lessons

(7) ESOH Team - Government/Plan Lessons

(8) ESOH Team - Government/Plan Lessons

(9) ESOH Team - Government/Plan Lessons

(10) ESOH Team - Government/Plan Lessons

(11) ESOH Team - Government/Plan Lessons

(12) ESOH Team - Government/Plan Lessons

ACQUISITION STRATEGIES INTEGRATION

(13) ESOH Acquisition Strategy Integration - Addressing Risk

(14) ESOH Acquisition Strategy Integration - Addressing Risk

(15) ESOH Acquisition Strategy Integration - Addressing Risk

(16) ESOH Acquisition Strategy Integration - Addressing Risk

(17) ESOH Acquisition Strategy Integration - Addressing Risk

(18) ESOH Acquisition Strategy Integration - Addressing Risk

CONTRACT OPERATIONS

(19) ESOH Contract Operations - Addressing Risk

(20) ESOH Contract Operations - Addressing Risk

(21) ESOH Contract Operations - Addressing Risk

SYSTEM SAFETY RISK: HAZARD IDENTIFICATION AND MANAGEMENT

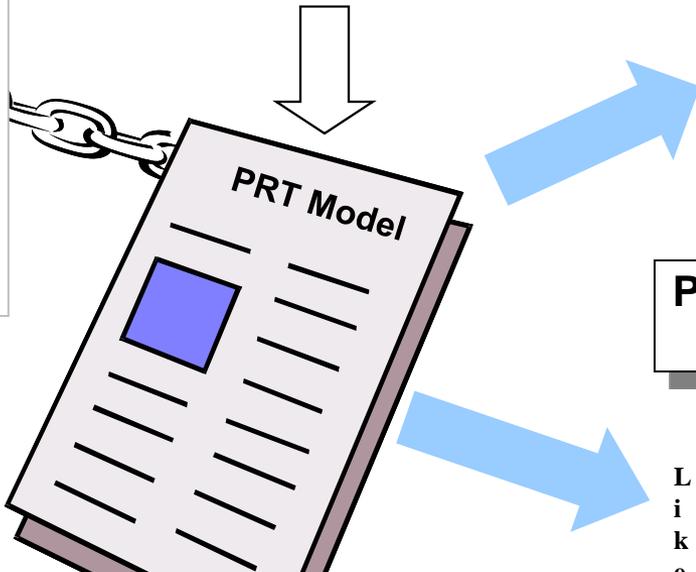
(22) ESOH System Safety Risk - Addressing Risk

(23) ESOH System Safety Risk - Addressing Risk

(24) ESOH System Safety Risk - Addressing Risk

Lessons Learned

Responses to Questions



Your Program Name: ESOH Pgm Evaluation (*)

ESOH Process Risks

A.1.1 Concept Refinement

A.1.1 Initial ESOH Planning

A.1.2 ESOH Teams

A.1.3 Tech Development Strategy Integration

A.1.4 Contract Integration

A.1.5 ESOH SE Planning Integration

A.2.1 Technology Development

A.2.1 ESOH Planning

A.2.2 ESOH Teams

A.2.3 Acquisition Strategy Integration

A.2.4 Contract Integration

A.2.5 ESOH Risk Mgmt

A.2.6 ESOH Systems Engineering Integration

A.2.7 ISSI/2 Assessment

A.2.8 ESOH & MPA Compliance Planning

A.3.1 ISSI/2 Assessment

Programmatic Evaluation Scorecard

U.S. AIR FORCE

Programmatic Environment, Safety and Occupational Health Evaluation

for the

[Insert Name] Program

[Insert Date]

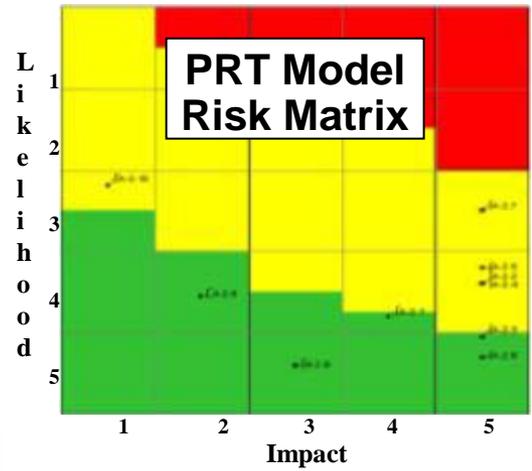
APPROVED BY:

[Insert Signature Block]

PESHE Template

- Pgm Risk ID/Manager
- Data Repository

Completing the PRT Model does NOT produce a PESHE



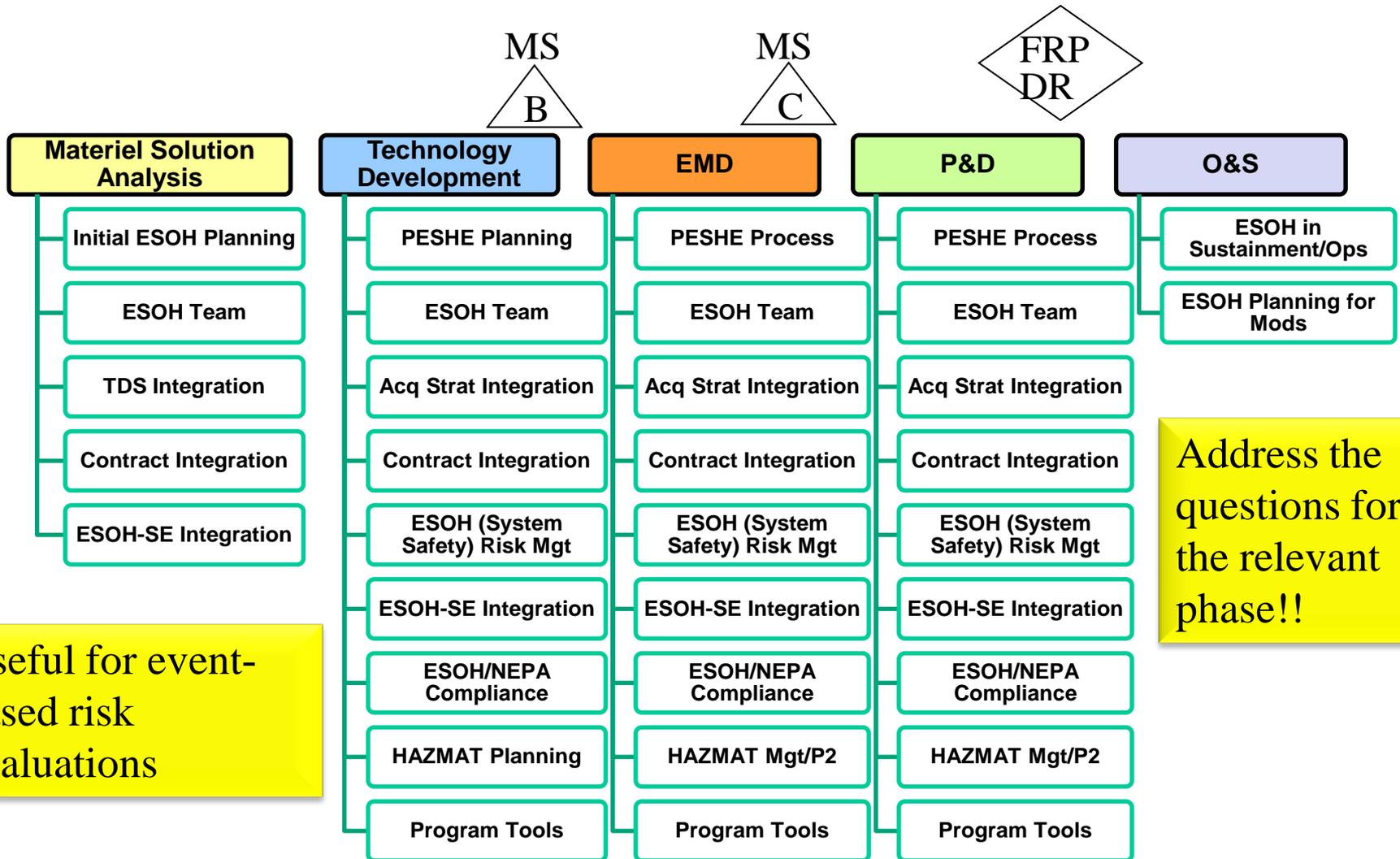


ESOH PRT Model Work Breakdown Structure

Birthplace, Home & Future of Aerospace



Has a Program developed an effective ESOH risk management approach?



Useful for event-based risk evaluations

Address the questions for the relevant phase!!



ESOH PRT Model Example Questions for TD



Birthplace, Home & Future of Aerospace

A-6 PESHE Planning

A-6.1 Has the PM developed an initial PESHE to identify the ESOH risk management approach per MIL-STD-882, a strategy for integrating ESOH considerations into SE, ESOH responsibilities, risk acceptance authorities, a method for tracking progress and the NEPA compliance schedule? (DoD ESOH Management Evaluation Criteria)

A-6.2 Has the Program Office documented the initial ESOH hazards/risks and management actions in the PESHE, i.e., identified and assessed compliance requirements and hazards/risks, including hazardous materials and the results from the DoD ESOH Management Evaluation Criteria? (AFI 63-101, 3.49.3, 3.49.7)

A-7 ESOH Team Responsibilities & Support

A-7.1 Have ESOH responsibilities (govt and contract) been assigned and effectively implemented to ensure ESOH criteria, requirements and risks are being managed and integrated into Program contractor processes and products? (DoD ESOH Risk Mgt Evaluation Criteria)

A-7.2 Where appropriate, has a System Safety Group and/or ESOH Integration Process Team (IPT) been established, chartered and manned to achieve Program ESOH objectives and requirements and integrate ESOH across disciplines? (AFI 91-202, 9.3.5.11 and 9.4)

A-8 Acquisition Strategy Integration

A-8.1 Does the acquisition strategy (Life Cycle Management Plan or equivalent document) include a summary of the ESOH integration strategy, criteria, requirements and risks documented in the PESHE? (DoDI 5000.02, E 6a; AFI 63-101, 3.39.3.4.32; DoD ESOH Risk Mgt Evaluation Criteria)

A-8.2 Have significant ESOH considerations such as hazard-related and programmatic risks, NEPA compliance, PESHE status, ESOH compliance and hazardous material management been addressed at strategy sessions and considered for inclusion in the Acquisition Strategy Panel briefing? (ASC ASP process)

A-9 Contract Integration

A-9.1 Has the Program Office integrated ESOH criteria, requirements, and the initial ESOH risk assessment into the system specification, source selection planning process and resulting contract solicitation documents being developed for EMD? (DoD ESOH Risk Mgt Evaluation Criteria)

A-9.2 Has the Program Office tailored the Contract Data Requirements List and accompanying Data Item Descriptions to obtain contractor-produced plans, studies, data, and support that satisfy Program ESOH needs? (DoD ESOH Risk Mgt Evaluation Criteria)

A-10 ESOH (System Safety) Risk ID/Mgt

A-10.1 Has the PM employed an ESOH risk management program that applies the system safety risk management standard practice methodologies using MIL-STD-882 to identify and control ESOH hazards/risks? (AFI 91-202, 9.3.3.5 and 9.3.5.1; AFMCI 91-202, 2.3.7, 9.2.3, and 9.3.3.5)

A-7.2 Where appropriate, has a System Safety Group and/or ESOH Integration Process Team (IPT) been established, chartered and manned to achieve Program ESOH objectives and requirements and integrate ESOH across disciplines?
(AFI 91-202, 9.3.5.11 and 9.4)



Environment, Safety, and Occupational Health (ESOH) in Acquisition

Integrating ESOH into Systems Engineering



ESOH Programmatic Risk Toolset



U.S. AIR FORCE

Birthplace, Home & Future of Aerospace

The ESOH PRT Model is linked to ESOH-Acquisition *Lessons Learned*

Provides lessons learned

- Benefits for managing risks
- Burdens for not addressing risks
- At least one lesson for each cross-cutting WBS element
 - Over 70 Army, Navy, AF, NASA, FAA examples
 - Benefits/Savings
 - Burdens/Costs
 - Process Lessons

ESOH Lessons Learned for Systems Acquisition, Version 5.2
Benefits and Savings / Burdens and Costs

This document identifies ESOH lessons learned for system acquisitions. These lessons relate to ESOH considerations and the templates associated with the ESOH Programmatic Risk Toolset (PRT). Lessons are identified and grouped by PRT template titles. Use the following table of contents to navigate to the PRT templates and associated lesson(s).

Table of Contents

PEMIE PROCESS		1
(1) PROGRAMMATIC ESOH EVALUATION (PEMIE) PROCESS	.....	1
(2) PEMIE DEVELOPMENT AND USE	.....	1
(3) PEMIE - OSD REVIEW COMMENTS	.....	2
(4) PEMIE - SAF ACRIE REVIEW COMMENTS	.....	2
(5) PEMIE - OSD REVIEW COMMENTS	.....	3
(6) PEMIE - IQ ACCT FINDING - MANAGEMENT PLAN LACKING	.....	3
(7) PEMIE - IQ ACCT, ACQUISITION OF THE FIRSTORDER (AN-119-47) RADAR	.....	4
ESOH TEAM RESPONSIBILITIES AND SUPPORT		4
(8) ESOH TEAMS - EFFECTIVE COORDINATION	.....	4
(9) ESOH TEAMS - SYSTEM SAFETY PLANNING	.....	4
(10) ESOH TEAMS - SYSTEM SAFETY - SYSTEMS ENGINEERING INTEGRATION	.....	5
(11) IPT'S WORKING GROUP SUPPORT - INTEGRATING ESOH CONSIDERATIONS	.....	5
(12) IPT'S WORKING GROUP SUPPORT - ESOH TEAM RESPONSIBILITIES SUCCESSFUL	.....	5
(13) IPT'S WORKING GROUP SUPPORT - EARLY USER INPUT	.....	6
ESOH-ACQUISITION STRATEGY INTEGRATION		6
(14) ESOH-ACQUISITION STRATEGY INTEGRATION	.....	6
(15) ESOH-ACQUISITION STRATEGY INTEGRATION - ESOH OBJECTIVES AND THRESHOLD	.....	7
(16) ESOH-ACQUISITION STRATEGY INTEGRATION - INTEGRATING ESOH INTO OVERALL PROGRAM GOALS	.....	7
(17) ESOH-ACQUISITION STRATEGY INTEGRATION - DOCUMENTING ESOH OBJECTIVES	.....	7
(18) ESOH-ACQUISITION STRATEGY INTEGRATION - ESOH GOALS	.....	8
CONTRACT INTEGRATION		8
(19) ESOH-CONTRACT INTEGRATION - INCLUDE ESOH CONSIDERATIONS IN CDRAs	.....	8
(20) ESOH-CONTRACT INTEGRATION - INTEGRATING SYSTEM SAFETY	.....	9
SYSTEM SAFETY RISK / HAZARD IDENTIFICATION AND MANAGEMENT		10
(21) SYSTEM SAFETY RISK HAZARD ID AND MIT - QUALIFYING CORRECTING RISK	.....	10
(22) SYSTEM SAFETY RISK HAZARD ID AND MIT - HEALTH HAZARD ASSESSMENT	.....	10
(23) SYSTEM SAFETY RISK HAZARD ID AND MIT - MIT REVIEW OF SYSTEM SAFETY	.....	11
(24) SYSTEM SAFETY RISK HAZARD ID AND MIT - SECURING USER FEEDBACK	.....	12
(25) SYSTEM SAFETY MSBAP - MQ-1B LESSON	.....	12
(26) SYSTEM SAFETY MSBAP - F-35 LESSON	.....	12
(27) SYSTEM SAFETY MSBAP - B-7 LESSON	.....	13
(28) SYSTEM SAFETY MSBAP - F-117 LESSON	.....	13
(29) SYSTEM SAFETY MSBAP - MQ-1L PREDATOR LESSON	.....	13
(30) SYSTEM SAFETY HAZARD CULTURE	.....	14
(31) SYSTEM SAFETY USE OF CUSTOMER FEEDBACK	.....	14
(32) SYSTEM SAFETY - USING LEGACY SYSTEM DATA	.....	15
(33) SYSTEM SAFETY - USING LEGACY SYSTEM DATA TO IMPROVE SYSTEM DESIGN	.....	15
SYSTEMS ENGINEERING INTEGRATION		15
(34) ESOH-SYSTEMS ENGINEERING INTEGRATION - ESOH DATA TO DIPPON'S SE	.....	15
(35) ESOH-SYSTEMS ENGINEERING INTEGRATION - SYSTEM SAFETY AND SOFTWARE ENGINEERING	.....	16

ESOH Programmatic Risk Tool - Lessons Learned as of Aug 10

Lessons Learned



Example Lesson Learned

HAZMAT Management

Birthplace, Home & Future of Aerospace



Template:	HAZMAT Management/P2 – HAZMAT Impact on Demil/Disposal Costs
Title:	Planning for Demil and Disposal
Process:	HAZMAT Management
Description:	Ground-to-ground missiles were designed containing numerous components with hazardous materials.
Burden/ Cost/ Impact:	The failure to incorporate non-hazardous materials in missile systems greatly increased demilitarization and disposal costs. When the missiles were destroyed to comply with the Intermediate-Range Nuclear Forces Treaty, disposal of the hazardous materials used in the missile increased program costs by over \$100 million!
Source:	<i>Environmental Considerations in the Systems Acquisition Process</i>



Programmatic ESOH Evaluation (PESHE) Templates

Birthplace, Home & Future of Aerospace



- Three template types based on program size
- Provides instructions and outline for PESHE
- Documents ESOH risk management approach/strategy
- Summary of ESOH risk/hazard data
- Documents NEPA Compliance

DoDI 5000.02 PESHE	
ESOH risk mgt approach	NEPA Schedule
Strategy for integrating ESOH considerations into SE	Identification/status of ESOH risks/mitigations



PESHE transitions from ESOH strategy to a synopsis of residual risk and mitigation measures



PESHE Structure



Birthplace, Home & Future of Aerospace

Our Suggested Approach

Executive Summary

Chapter 1 PESHE Introduction and Program Information

Chapter 2 Approach for Integrating ESOH into SE

Chapter 3 ESOH Risk Management Approach

Chapter 4 Regulatory Compliance Processes

Chapter 5 Hazardous Material Management Approach

Appendix A – Hazardous Material Use Summary

Appendix B – National Environmental Policy Act Schedule

Appendix C – ESOH Risk Summary

- **System Info in Chapter 1 ... help put ESOH info in context**
- **Planning info in Chapters 2-5 ... the Program's ESOH Risk Mgt Plan**
 - Stable information
- **Risk info in Appendices**
 - Dynamic data
 - Update when changes occur ... the “living document”



ASC PESHE Checklist



Birthplace, Home & Future of Aerospace

- **Simple MS Excel Tool -- 24 Questions**
- **Provides a quick check on ESOH planning and integration – for milestone reviews**
 - Program ESOH Responsibilities
 - Acquisition Strategy, Contract Documents
 - SE, T&E, Demil & Disposal Integration
 - ESOH Risk Management,
 - NEPA Compliance,
 - HAZMAT Management
 - Based on AFI 63-101, AFI 63-1201, DoDI 5000.02, Def Acquisition Guidebook

PESHE assertions should be traceable to acquisition and contract documents

(Pgm Name)		
Programmatic Environment, Safety and Occupational Health Evaluation (PESHE) Scorecard		
Category	Percent Compliant	Assessment
Program Office Activities	71%	Y
PESHE Management	100%	G
Acquisition Strategy Integration	43%	R
Systems Engineering Integration	100%	G
ESOH Risk Management	88%	G
NEPA Compliance Schedule	90%	G
HAZMAT Management	75%	Y
PESHE Assessment		
Overall Compliance with DoDI 5000.2 and DAG		
PESHE % Compliant 79% 0% 20% 40% 60% 80% 100%		



DoD Milestone Review PESHE Assessment

Birthplace, Home & Future of Aerospace



DUSD(I&E) Programmatic ESOH Evaluation Review Checklist

Program#	RECAPITALIZATION PROGRAM#	Doc. Date#	26AUG2009#	Supports MS-C# #
Reviewer#	DUSD(I&E)#	Review Date#	14SEP2009#	OVERALL RED - Fails to describe the Program Office's "hybrid" System Safety process for managing ESOH risks. - Does not include any specific information on known ESOH risks. - Only describes what the Program Office plans to do, not what it has done.#
System Description#	airframe with COTS, GOTS, NDI#			
Item No.#	Review Criteria#	Citation#	PESHE paragraph#	Comments#
			GLOBAL RED	The document is written almost exclusively in the future tense, describing what the Program will do to manage ESOH risks. The PESHE for a MS-C program should describe how the Program Office is actively managing ESOH risks as part of the Systems Engineering process and document completed hazard analyses and risk assessments.#
1#	Strategy for integrating ESOH considerations into the systems engineering process.#	DoDI 5000.02, E12.6# DAG 4.4.7.1#	4.0, 8.3 YELLOW#	Indicates that the strategy is in the SEP and SEMP, but fails to provide the detailed description of the strategy that should be in the PESHE. Basic approach seems to be to manage ESOH risks through the XXXX System Safety Working Group, but does not describe how the XXXX RECAP program is organized to integrate ESOH into the SE process.#
2#	Identification of who is responsible for implementing the ESOH strategy.#	DoDI 5000.02, E12.6.a# DAG 4.4.7.1#	4.1.1 - 4.1.6 GREEN#	Provides the basic information, but is written in future tense which which is appropriate for program at Milestone C.#
3#	Approach to identifying and mitigating ESOH hazards and managing the associated risks in accordance with MIL-STD-882D.#	DoDI 5000.02, E12.6.a# DAG 4.4.7.1#	5.2 - 5.5, 5.7.1 YELLOW#	Says risks managed in accordance with the Risk Management and Mitigation Plan. This section lacks a clear description on how ESOH hazards are managed. Does state the program uses MIL-STD-882D methodology; although it's unclear whether the environmental engineer uses MIL-STD-882D. Fails to describe the "hybrid" risk management approach described in the program's System Safety Program Plan.#
4#	Approach to acceptance (and user concurrence) of ESOH risks pursuant to DoD Instruction 5000.02.#	DoDI 5000.02, E12.6# DAG 4.4.7.1#	5.7.7 YELLOW#	Risk acceptance authorities are correct level. Does not address risk acceptance for events such as DT/OT (event risk).#



ESOH Circular

Birthplace, Home & Future of Aerospace



- **ASC WNV Support Team**
- **Acquisition Strategy Integration**
- **Sys Engineering Integration**
 - **Sys Engineering Plan & process**
 - **PESHE**
 - **HAZMAT Management**
 - **ASC Pollution Prevention**
 - **ESOH PRT**
- **ASC ESOH Council**

**Addresses requirements, responsibilities,
resources & lessons learned**



National Environmental Policy Act (NEPA) for Acquisition

Birthplace, Home & Future of Aerospace



- **NEPA Circular**
 - Responsibilities for NEPA in ASC
 - NEPA Planning Approach (PESHE)
 - Example NEPA Compliance Schedule
- **NEPA Compliance Checklist**
 - Unique for acquisition

ASC NEPA Compliance Checklist for System Acquisition Programs

The Checklist helps guide the Program Office in developing the National Environmental Policy Act (NEPA) Compliance Schedule.

SECTION I - PROGRAM INFORMATION	
1. Provide program name:	
2. Provide program title (if different from program name):	
SECTION II - PROGRAM DESIGN BASIS - Provided for Review input when the System Interface with the Environment	
Review questions 1-7 are flow through questions 8-11	YES NO
1. Does using, operation or maintenance of the system produce or involve the storage use of materials with hazardous characteristics (e.g., toxic, corrosive, explosive, or flammable)?	<input type="checkbox"/> <input type="checkbox"/>
2. Does operation or maintenance of the system involve the use or potential release of ozone-depleting substances?	<input type="checkbox"/> <input type="checkbox"/>
3. Does operation or maintenance of the system result in the potential release of air contaminants (solid, liquid, gaseous, heat, particulate, etc.)?	<input type="checkbox"/> <input type="checkbox"/>
4. Does operation or maintenance of the system result in the potential release of water contaminants (thermal, sediment, organo-chlorine chemicals, pesticides, herbicides, asbestos, radionuclides, or heavy metals, etc.)?	<input type="checkbox"/> <input type="checkbox"/>
5. Does operation, maintenance, or abandonment of the system involve the potential release of hazardous waste or large amounts of solid waste (greater than the value of the waste)?	<input type="checkbox"/> <input type="checkbox"/>
6. Would testing of the system have a potential negative environmental impact?	<input type="checkbox"/> <input type="checkbox"/>
7. Have other potential ECHO risks been identified during the Systems Engineering process, (see which shall potentially pose a threat to the environment)?	<input type="checkbox"/> <input type="checkbox"/>
8. CONCLUSION: Based on the answers in 1-7 above, would the system have a potential adverse impact when it interfaces with the environment?	<input type="checkbox"/> <input type="checkbox"/>
If "Yes", continue completing the form. If "No", complete the coordination (Section III) and file with the PESHE.	
SECTION III - NEPA Compliance Schedule	
9. Will the system interface with the environment for testing or test/eval?	<input type="checkbox"/> <input type="checkbox"/>
CONCLUSION: If the answer to question 9 is "Yes," also Section 10, 11, and 12, and complete the Section of Acquisition of the program to be tested and evaluated. The program should develop a NEPA Compliance Schedule and obtain the following data:	
<ul style="list-style-type: none"> • Exports or imported materials throughout the life of the Program that may require preparation of NEPA documentation • A Program for each imported/exported material • The anticipated start and completion dates for the NEPA document • The anticipated start and completion dates for the final NEPA document • The specific approval authority for the documents 	
10. Provide the NEPA document title, number, and approval date (month/year):	
11. Provide the NEPA document title, number, and approval date (month/year):	
12. Provide the NEPA document title, number, and approval date (month/year):	
13. Provide the NEPA document title, number, and approval date (month/year):	
14. Provide the NEPA document title, number, and approval date (month/year):	
15. Provide the NEPA document title, number, and approval date (month/year):	
16. Provide the NEPA document title, number, and approval date (month/year):	
17. Provide the NEPA document title, number, and approval date (month/year):	
18. Provide the NEPA document title, number, and approval date (month/year):	
19. Provide the NEPA document title, number, and approval date (month/year):	
20. Provide the NEPA document title, number, and approval date (month/year):	
21. Provide the NEPA document title, number, and approval date (month/year):	
22. Provide the NEPA document title, number, and approval date (month/year):	
23. Provide the NEPA document title, number, and approval date (month/year):	
24. Provide the NEPA document title, number, and approval date (month/year):	
25. Provide the NEPA document title, number, and approval date (month/year):	
26. Provide the NEPA document title, number, and approval date (month/year):	
27. Provide the NEPA document title, number, and approval date (month/year):	
28. Provide the NEPA document title, number, and approval date (month/year):	
29. Provide the NEPA document title, number, and approval date (month/year):	
30. Provide the NEPA document title, number, and approval date (month/year):	
31. Provide the NEPA document title, number, and approval date (month/year):	
32. Provide the NEPA document title, number, and approval date (month/year):	
33. Provide the NEPA document title, number, and approval date (month/year):	
34. Provide the NEPA document title, number, and approval date (month/year):	
35. Provide the NEPA document title, number, and approval date (month/year):	
36. Provide the NEPA document title, number, and approval date (month/year):	
37. Provide the NEPA document title, number, and approval date (month/year):	
38. Provide the NEPA document title, number, and approval date (month/year):	
39. Provide the NEPA document title, number, and approval date (month/year):	
40. Provide the NEPA document title, number, and approval date (month/year):	
41. Provide the NEPA document title, number, and approval date (month/year):	
42. Provide the NEPA document title, number, and approval date (month/year):	
43. Provide the NEPA document title, number, and approval date (month/year):	
44. Provide the NEPA document title, number, and approval date (month/year):	
45. Provide the NEPA document title, number, and approval date (month/year):	
46. Provide the NEPA document title, number, and approval date (month/year):	
47. Provide the NEPA document title, number, and approval date (month/year):	
48. Provide the NEPA document title, number, and approval date (month/year):	
49. Provide the NEPA document title, number, and approval date (month/year):	
50. Provide the NEPA document title, number, and approval date (month/year):	
51. Provide the NEPA document title, number, and approval date (month/year):	
52. Provide the NEPA document title, number, and approval date (month/year):	
53. Provide the NEPA document title, number, and approval date (month/year):	
54. Provide the NEPA document title, number, and approval date (month/year):	
55. Provide the NEPA document title, number, and approval date (month/year):	
56. Provide the NEPA document title, number, and approval date (month/year):	
57. Provide the NEPA document title, number, and approval date (month/year):	
58. Provide the NEPA document title, number, and approval date (month/year):	
59. Provide the NEPA document title, number, and approval date (month/year):	
60. Provide the NEPA document title, number, and approval date (month/year):	
61. Provide the NEPA document title, number, and approval date (month/year):	
62. Provide the NEPA document title, number, and approval date (month/year):	
63. Provide the NEPA document title, number, and approval date (month/year):	
64. Provide the NEPA document title, number, and approval date (month/year):	
65. Provide the NEPA document title, number, and approval date (month/year):	
66. Provide the NEPA document title, number, and approval date (month/year):	
67. Provide the NEPA document title, number, and approval date (month/year):	
68. Provide the NEPA document title, number, and approval date (month/year):	
69. Provide the NEPA document title, number, and approval date (month/year):	
70. Provide the NEPA document title, number, and approval date (month/year):	
71. Provide the NEPA document title, number, and approval date (month/year):	
72. Provide the NEPA document title, number, and approval date (month/year):	
73. Provide the NEPA document title, number, and approval date (month/year):	
74. Provide the NEPA document title, number, and approval date (month/year):	
75. Provide the NEPA document title, number, and approval date (month/year):	
76. Provide the NEPA document title, number, and approval date (month/year):	
77. Provide the NEPA document title, number, and approval date (month/year):	
78. Provide the NEPA document title, number, and approval date (month/year):	
79. Provide the NEPA document title, number, and approval date (month/year):	
80. Provide the NEPA document title, number, and approval date (month/year):	
81. Provide the NEPA document title, number, and approval date (month/year):	
82. Provide the NEPA document title, number, and approval date (month/year):	
83. Provide the NEPA document title, number, and approval date (month/year):	
84. Provide the NEPA document title, number, and approval date (month/year):	
85. Provide the NEPA document title, number, and approval date (month/year):	
86. Provide the NEPA document title, number, and approval date (month/year):	
87. Provide the NEPA document title, number, and approval date (month/year):	
88. Provide the NEPA document title, number, and approval date (month/year):	
89. Provide the NEPA document title, number, and approval date (month/year):	
90. Provide the NEPA document title, number, and approval date (month/year):	
91. Provide the NEPA document title, number, and approval date (month/year):	
92. Provide the NEPA document title, number, and approval date (month/year):	
93. Provide the NEPA document title, number, and approval date (month/year):	
94. Provide the NEPA document title, number, and approval date (month/year):	
95. Provide the NEPA document title, number, and approval date (month/year):	
96. Provide the NEPA document title, number, and approval date (month/year):	
97. Provide the NEPA document title, number, and approval date (month/year):	
98. Provide the NEPA document title, number, and approval date (month/year):	
99. Provide the NEPA document title, number, and approval date (month/year):	
100. Provide the NEPA document title, number, and approval date (month/year):	

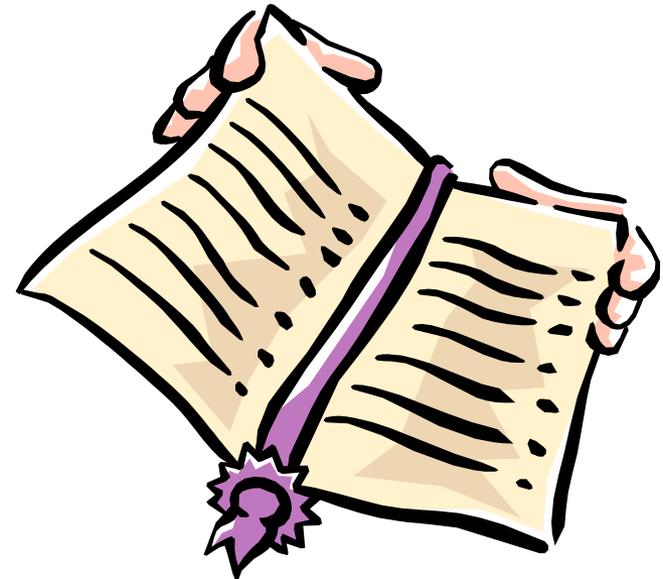
Title:	NEPA Compliance – Failure to Consider Abnormal Operation Forward Area Air Defense System (FAADS) Testing at White Sands Missile Range	
Description:	A drone helicopter being used in the FAADS testing crashed and caused a 5,000-acre range fire. The original environmental analysis did not address the potential for range fires.	
Burden/Impact:	Testing was subsequently delayed for two months while an Environmental Assessment was modified which implemented mitigation measures for possible range fires during testing.	
Source:	Guide to Development of the Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE)	May 04



ESOH Criteria for Pre-award



- ***Integrating Environmental Requirements into System Acquisition Contract Documents***
 - Briefly describes typical contract documents
 - Provides examples or explained inputs
 - SOO, SRD, TRD, SOW, Sections L&M
 - CDRL and DID examples





Acquisition ESOH Training



Birthplace, Home & Future of Aerospace

- **ENV 101 – Intro to ESOH in Acquisition**
- **ENV 110 – ESOH Programmatic Risk Model**
- **ENV 120 – Developing the PESHE**
- **Integration of ESOH into System Engineering for Weapon System Acquisition**
 - **SYS 196* (Complete)**
 - **Overview**
 - **SYS 197* (Complete)**
 - **Material Solutions Analysis – Technology Development**
 - **SYS 198* (July 2011)**
 - **Eng Mfg Development – Disposal**



***AFIT Distance Learning Courses**

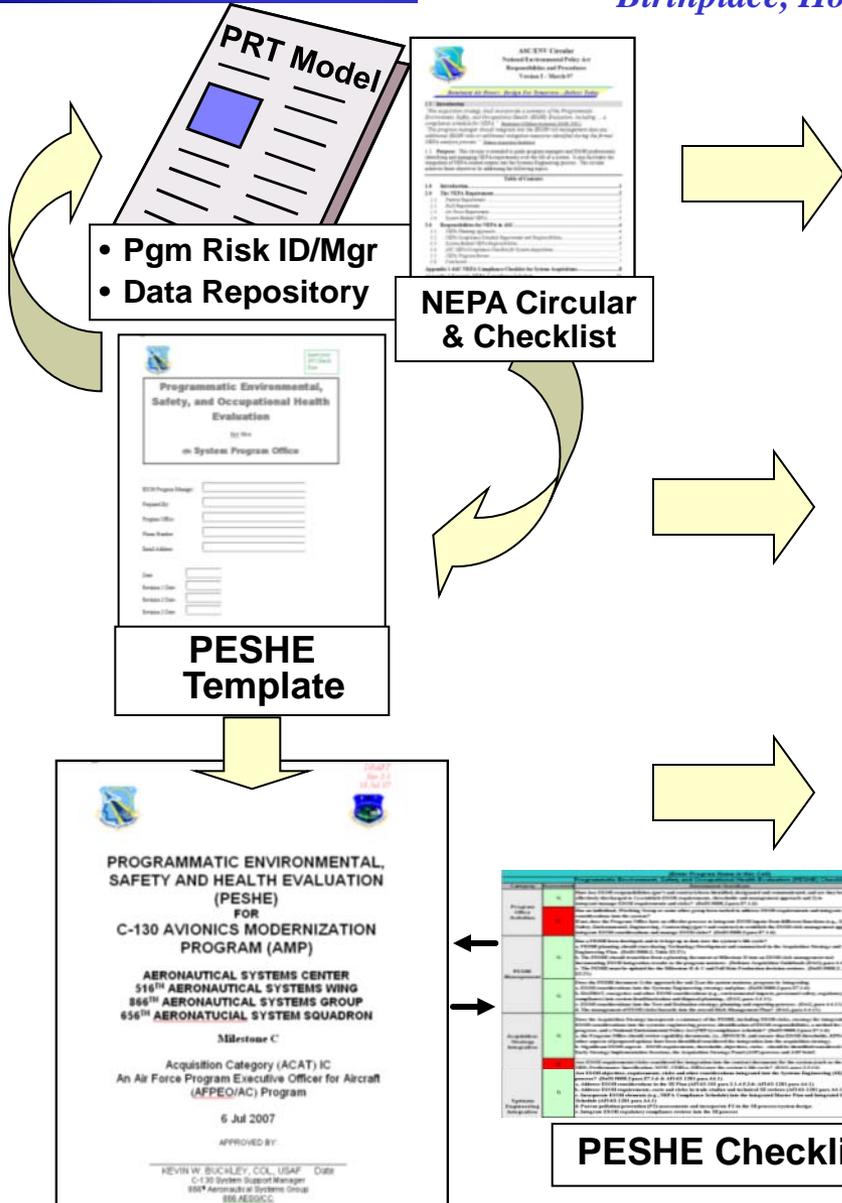


ASC ESOH/PESHE Tool Summary



U.S. AIR FORCE

Birthplace, Home & Future of Aerospace



Identify and assess ESOH programmatic risk
 – Can serve as ESOH data repository

Help develop the NEPA Compliance Schedule

Provides instructions and structure for the PESHE document
 – Addresses DoDI 5000.02 and DAG
 – ESOH risk mgt plan and integration
 – Risk management tool

Documents Program ESOH risk mgt approach
 – ESOH plan and integration
 – Risk management actions

Grades PESHE content
 – Gauges compliance w/ DoDI 5000.02, DAG, AFI 63-1201
 – Provides scorecard by question and major topic

PESHE Checklist

Program Office	Compliance	Assessment
Program Office	71%	Y
PESHE Management	100%	G
Acquisition Strategy Integration	93%	R
Systems Engineering Integration	100%	G
ESOH Risk Management	88%	G
NEPA Compliance Schedule	90%	G
HAZMAT Management	75%	Y

(Pgm Name) Evaluation

Programmatic Environment, Safety and Occupational Health Evaluation (PESHE) Scorecard

Category	Percent Compliant	Assessment
Program Office Activities	71%	Y
PESHE Management	100%	G
Acquisition Strategy Integration	93%	R
Systems Engineering Integration	100%	G
ESOH Risk Management	88%	G
NEPA Compliance Schedule	90%	G
HAZMAT Management	75%	Y

PESHE Assessment
 Overall Compliance with DoDI 5000.2 and DAG

PESHE % Compliant: 80% 20% 40% 60% 80% 100%



ASC Environmental & Health Risk Mgmt Branch (ASC/WNVV)



Weapon System Environment & Health Risk Footprint



ASC/WNVV supports System Acquisition Programs in managing these risks ...
promoting individual health, & protecting the environment

