

**SYSTEM SAFETY – ESOH
MANAGEMENT EVALUATION
CRITERIA
FOR DOD ACQUISITION**

(Version 1.1)



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Preface

The Department of Defense (DoD) recognizes that System Safety is critical for acquisition Program Managers (PMs) to successfully meet objectives for total life-cycle systems management. System Safety, as defined by MIL-STD-882D, *the Standard Practice for System Safety*, is DoD's Systems Engineering (SE) methodology for identifying environment, safety, and occupational health (ESOH) hazards, eliminating hazards or mitigating the risks to an acceptable level, and accepting risks at the management levels defined in DoDI 5000.2 (see the [Defense Acquisition Guidebook \(DAG\), chapter 4.4.11 – 4.4.11.3](#)).

In May of 2003, the Secretary of Defense established the goal of reducing preventable accidents by 50%. In order to manage DoD's efforts to achieve this goal, the Deputy Secretary of Defense established the Defense Safety Oversight Council (DSOC). The DSOC is supported by multiple task forces, including the Acquisition and Technology Programs Task Force (ATP TF), chaired by the Director of Systems and Software Engineering. One of the initial ATP TF efforts focused on enhancing the implementation of DoD acquisition System Safety-ESOH policy and guidance. To accomplish this, the ATP TF has provided senior leadership support to the ongoing efforts of the DoD Acquisition ESOH IPT, chaired by ODUSD(I&E).

An initial accomplishment of the ATP TF was the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD AT&L) 23 Sep 04 Memorandum, *Defense Acquisition System Safety*. The memorandum reinforced existing policy and provided additional direction that included the use of MIL-STD-882D and review of the status of ESOH risks at technical and program reviews.

To assess acquisition program implementation of the DoD acquisition ESOH policy, the Director of Defense Systems directed the ATP TF to develop evaluation criteria to use in program reviews. The purpose of this guide is to document the evaluation criteria and their application throughout the system's life cycle. The criteria are focused on assessing an acquisition program's overall management of System Safety-ESOH as an integral part of the systems engineering process. This guide does not address specific ESOH risks associated with ESOH hazards (technical risk) as identified and managed through the methodology in MIL-STD-882D. This guide assumes a basic understanding of DoD acquisition systems engineering and System Safety-ESOH principles and practices (for additional guidance, see the [System Safety in Systems Engineering Defense Acquisition University \(DAU\) Continuous Learning Module CLE009](#)).

The information presented within this guide is not mandatory. However, Milestone Decision Authorities (MDAs), Program Executive Offices (PEOs), and PMs are encouraged to utilize these criteria for all acquisition efforts—both large and small—and for all elements of a program (system, subsystem, hardware, and software). These criteria are being incorporated into the Defense Acquisition Program Support (DAPS) SE Assessment Methodology.

The offices of primary responsibility (OPR) for this guide are ODUSD(I&E)/OADUSD(ESOH) and OUSD(AT&L) Systems and Software Engineering, Enterprise Development (OUSD(AT&L) SSE/ED). To provide feedback, please e-mail the office at ATL-ED@osd.mil.

Table of Contents

1. Key Terms, Descriptions, and Principles.....	1
1.1 System Safety Objective.....	1
1.2 Key Terms	1
2. System Safety-ESOH Evaluation Criteria.....	2
3. Key Category - ESOH Planning.....	3
3.1 Concept Refinement.....	3
3.2 Technology Development.....	3
3.3 System Development and Demonstration.....	3
3.4 Production and Deployment	4
3.5 Operations and Support.....	4
4. Key Category - ESOH Hazard Identification, Analysis, and Risk Acceptance	5
4.1 Concept Refinement	5
4.2 Technology Development.....	5
4.3 System Development and Demonstration	5
4.4 Production and Deployment	5
4.5 Operations and Support	6
5. Key Category – ESOH Requirements for the System and Associated Infrastructure.....	7
5.1 Concept Refinement	7
5.2 Technology Development.....	7
5.3 System Development and Demonstration	7
5.4 Production and Deployment	7
5.5 Operations and Support	8
6. Key Category - Personnel and Funding for ESOH.....	9
6.1 Concept Refinement	9
6.2 Technology Development.....	9
6.3 System Development and Demonstration	9
6.4 Production and Deployment	9
6.5 Operations and Support	9
7. Calculating the Overall System Safety-ESOH Program Rating	11

List of Figures

Figure 1. System-Safety ESOH Evaluation Program Rating Equation	11
Figure 2. Metric Weighting Matrix.....	11
Figure 3. Numeric/Color Ratings and Roll-Up Summary Evaluation Designations	12

Appendices

Appendix A – SYSTEM SAFETY – ESOH MANAGEMENT EVALUATION CRITERIA	14
Appendix B - ACRONYMS	18

1. Key Terms, Descriptions, and Principles

1.1 System Safety Objective - The PM shall eliminate ESOH hazards where possible, and minimize ESOH risks where they cannot be eliminated. PMs accomplish this through SE using the System Safety methodology as defined in MIL-STD-882D.

1.2 Key Terms

1.2.1 ESOH - The term ESOH refers to all of the individual, but interrelated, disciplines that encompass environment, safety, and occupational health. The System Safety process is used across the ESOH disciplines to identify hazards and mitigate risks through the systems engineering process.

1.2.2 PESHE - Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE) is the Program Office's acquisition documentation of the ESOH aspects of a Program. The PESHE is required at Program Initiation for Ships, Milestone B, Milestone C, and Full-Rate Production Decision Review. The PESHE includes the following:

- Strategy for integrating ESOH considerations into SE
- Identification of ESOH responsibilities
- Method for identifying, documenting and tracking ESOH hazards (to include hazardous materials) and their associated risks, and the formal risk acceptance
- National Environmental Policy Act (NEPA)/Executive Order 12114 Compliance Schedule
- Method for tracking progress - these criteria can be utilized to fulfill this requirement)

1.2.3 System Safety - The application, throughout all phases of the system life cycle, of engineering and management principles, criteria, and techniques to achieve acceptable risk, within the constraints of operational effectiveness and suitability, time, and cost. This is DoD's systems engineering approach for eliminating ESOH hazards or minimizing ESOH risks across the entire system life cycle.

1.2.4 Systems Engineering - The overarching process that a program team applies to transition from a stated capability to an operationally effective and suitable system. SE encompasses the application of SE processes across the acquisition life cycle (adapted to each and every phase) and is intended to be the integrating mechanism for balanced solutions addressing capability needs, design considerations and constraints, as well as limitations imposed by technology, budget, and schedule. The SE processes are applied early in concept definition, and then continuously throughout the total life cycle.

1.2.5 Systems Engineering Plan - A description of the program's overall technical approach including processes, resources, metrics, applicable performance incentives, and the timing, conduct, and success criteria of technical reviews.

2. System Safety-ESOH Evaluation Criteria

These criteria provide MDAs, PEOs, and PMs a method to evaluate the progress a program is making in implementing DoD acquisition ESOH policy and guidance. The evaluation criteria assess the following four basic categories of System Safety-ESOH efforts.

- ESOH Planning
- ESOH Hazard Identification, Analysis, and Risk Acceptance
- ESOH Requirements for the System and Associated Infrastructure
- Personnel and Funding for ESOH

For each category in each life cycle phase, the criteria select a single effort that is a strong indicator of the health of the System Safety-ESOH program(s). The selection is based upon DoD policy and guidance and the DAU System Safety in Systems Engineering course. The criteria describe the activities associated with each selected effort, and the metrics enable the assessment of progress in completing activities.

The criteria are structured in the form of questions that identify the key System Safety-ESOH activities. The questions support the assessment of a program's progress in completing the activities and a color-coded rating (G/Y/R). This color-coded rating is the assessment of the category for this life cycle phase as outlined in sections 3 through 6 below. For example, in System Development and Demonstration (SDD), a program could have the following ratings: ESOH Planning - red; ESOH Hazard Identification, Analysis, and Risk Acceptance - yellow; ESOH Requirements for the System and Associated Infrastructure - green; and Personnel and Funding for ESOH - yellow. The red, yellow, and green color-coded ratings are each assigned a constant numeric value as follows: red = 4; yellow = 2, and green = 1. Appendix A provides a quick reference summary of sections 3 through 6.

The criteria also provide a mechanism, described in section 7 below, for combining the four category metrics into a single overall System-Safety ESOH Evaluation Program Rating for a specific life cycle phase. In order to do so, each of the four category metrics is weighted and the overall rating is calculated using the figures and equation in section 7. For example, for the above combination of SDD ratings, the overall System Safety-ESOH Program Rating during SDD would be 1.91, red. Section 7 also provides a detailed example calculation.

3. Key Category - ESOH Planning

The first key category in the criteria is ESOH Planning. For this category, the criteria include questions that identify the key effort and underlying activities for each of the following life cycle phases, and the associated metrics.

3.1 Concept Refinement

Does the Systems Engineering Plan (SEP), Technology Development Strategy (TDS), and Test and Evaluation (T&E) Strategy address integration of environment, safety, and occupational health (ESOH) considerations into the systems engineering process, using MIL-STD-882D?

Green – Yes, addressed in two or more documents

Yellow – Only addressed in one of the three documents

Red – Not addressed in any of the three documents

3.2 Technology Development

Is the PESHE completed per DoDI 5000.2, E.7, does the SEP include a current ESOH integration strategy, and does the Test and Evaluation Master Plan (TEMP) include ESOH considerations to support Milestone (MS) B?

Green – Yes

Yellow – The PESHE is completed, but ESOH considerations have been incorporated into only one of the other two documents

Red – The PESHE has not been completed. Or, even if the PESHE has been completed, ESOH considerations have not been incorporated into either the SEP or TEMP.

3.3 System Development and Demonstration

Is the PESHE updated per DoDI 5000.2, E.7 to support MS C; does the Integrated Master Schedule (IMS) include ESOH activities (e.g., reviews/approvals/certifications, analyses, safety releases, and NEPA/E.O. 12114 analyses/documentation); and are ESOH considerations included in demilitarization/disposal plans?

Green – Yes

Yellow – The PESHE is updated, but ESOH considerations have been incorporated into only one of the other two documents

Red – The PESHE has not been updated. Or, even if the PESHE has been updated, ESOH considerations have not been incorporated into either the IMS or the demilitarization/disposal plans.

3.4 Production and Deployment

Does the Total System Product Support Package address system ESOH risks?

Green – Yes

Yellow – Not all the applicable documents include the appropriate ESOH risks

Red – No

3.5 Operations and Support

What are the mishap rates for class B and C mishaps during the current calendar year, and how many class A mishaps for the system or subsystem occurred during the current calendar year?

Green – No class A mishaps; no increase in mishap rates for either class B or C as compared to the prior calendar year

Yellow – No class A mishaps; Mishap rate increasing for either class B or C mishaps as compared to the prior reporting period

Red – One or more class A mishaps reported in the current calendar year.

4. Key Category - ESOH Hazard Identification, Analysis, and Risk Acceptance

The second key category in the criteria is ESOH Hazard Identification, Analysis and Risk Acceptance. For this category, the criteria include questions that identify the key effort and underlying activities for each of the following life cycle phases, and the associated metrics.

4.1 Concept Refinement

Is there a Preliminary Hazard List (PHL) developed for each concept and is it used in developing the Analysis of Alternatives (AoA)?

Green – Yes

Yellow – Incomplete PHL or complete PHL, but not used to influence the AoA

Red - No

4.2 Technology Development

Does the updated PHL evaluate enabling/critical technologies?

Green – Yes

Yellow – Some, but not all, of the enabling/critical technologies have been assessed for ESOH hazards

Red – No

4.3 System Development and Demonstration

Are the appropriate levels of hazard analyses completed and presented at each major design review? For example, is the Preliminary Hazard Analysis (PHA) completed and status of hazards presented at Preliminary Design Review (PDR), the majority of hazard analyses completed and presented at Critical Design Review (CDR), and status of ESOH risks presented at Production Readiness Review (PRR)/System Verification Review (SVR)?

Green – Yes

Yellow – Not all the necessary hazard analyses have been completed, and/or presented at the design reviews

Red – No, hazard analyses have not been completed in time to influence the design review process

4.4 Production and Deployment

Has the program (1) continued to evaluate the system's test and operational performance to identify new hazards, (2) continued to track all hazards, and (3) obtained formal acceptance, at the appropriate management levels, of all residual ESOH risks and communicated those risks to the receiving activities?

Green – Yes

Yellow – Satisfying two of the three criteria

Red – Satisfying one or none of the three criteria

4.5 Operations and Support

What is the highest risk category, are there any system level hazards with formally accepted high risks, and are there any system level hazards without formal risk acceptance?

Green – No hazards with formally accepted high risks and no hazards without formal risk acceptance

Yellow – One or more hazards with formally accepted high risks, or any hazards with medium and low risks that have not been formally accepted

Red – One or more hazards with serious or high risks that have not been formally accepted

5. Key Category – ESOH Requirements for the System and Associated Infrastructure

The third key category in the criteria is ESOH Requirements for the System and Associated Infrastructure. For this category, the criteria include questions identify that the key effort and underlying activities for each of the following life cycle phases, and the associated metrics.

5.1 Concept Refinement

Are the (1) applicable system ESOH criteria and (2) associated ESOH asset requirements per DoDD 4715.1E being identified?

Green – Yes, both (1) and (2) are being identified

Yellow – Only one of the two are being identified

Red – Neither being identified

5.2 Technology Development

Are ESOH criteria and requirements identified in the System Performance Specification for inclusion in future Statement of Objectives, solicitations and contracts?

Green – Yes

Yellow – ESOH criteria and requirements have been identified, but not fully incorporated into the System Performance Specification

Red – No

5.3 System Development and Demonstration

Are ESOH critical system requirements and related ESOH asset requirements included in requirements tracking and verification systems, detailed design specifications, test plans/procedures, inspection plan, maintenance concepts, and Total Systems Product Support Package?

Green – Yes

Yellow – ESOH critical system and asset requirements have been identified, but not incorporated into all appropriate documentation

Red – Have not identified ESOH critical system and asset requirements

5.4 Production and Deployment

Are ESOH asset requirements for testing and basing/homeporting/fielding being met as scheduled?

Green – Yes

Yellow – The requirements are being met, but are behind schedule or new requirements have been identified and not met

Red – No

5.5 Operations and Support

How many open technical data change requests (e.g. Technical Orders, Technical Manuals, etc.) have been submitted through the formal technical data change system to resolve hazardous material or safety issues for the system?

Green – All open requests were received during the last six months

Yellow – One or more requests have been open for six to 12 months

Red – One or more requests remained open for more than 1 year

6. Key Category - Personnel and Funding for ESOH

The fourth key category in the criteria is Personnel and Funding for ESOH. For this category, the criteria include questions that identify the key effort and underlying activities for each of the following life cycle phases, and the associated metrics.

6.1 Concept Refinement

Is the responsibility assigned for ESOH integration into systems engineering?

Green – Yes

Yellow – Not formally assigned

Red – No

6.2 Technology Development

Are the ESOH requirements, analyses, and documentation resourced?

Green – Yes

Yellow – Partially resourced

Red – No

6.3 System Development and Demonstration

Are the ESOH activities identified on the Integrated Master Schedule (IMS) resourced to a level necessary to meet the schedule?

Green – Yes

Yellow – Partially resourced

Red - No

6.4 Production and Deployment

Are there resources in place to continue to identify, track and manage ESOH hazards and associated risks to affect system design?

Green – Yes

Yellow – Partially resourced

Red - No

6.5 Operations and Support

What is the level of effort (LOE) in man-years (recurring) expended by the program (organic, matrix, and contract) for ESOH management?

Green – constant LOE compared to the prior fiscal year
Yellow – decreasing LOE compared to the prior fiscal year
Red – zero LOE

7. Calculating the Overall System Safety-ESOH Program Rating

The criteria provide a mechanism for combining the four individual category ratings (G/Y/R) into a single overall System-Safety ESOH Program Rating for a specific life cycle phase. Figure 1 illustrates the equation used to calculate the overall numerical System Safety-ESOH Program Rating for a given life cycle phase.

$$SSE_{LCP} = \sum_{N=1}^4 (W_{LCP-N} * M_{LCP-N})$$

Where:
 SSE = System Safety-ESOH Evaluation Program Rating (a numerical value)
 LCP = Life Cycle Phase (CR, TD, SDD, P&D, and O&S)
 N = Metric Category, from 1 to 4, whereby 1 = Planning; 2 = Hazard; 3 = Requirements; 4 = Funding
 M = Metric score for a given LCP, where red = 4, yellow = 2, and green = 1
 W = Weight assigned to a given metric score, from 0 to 1.0

Figure 1. System-Safety ESOH Evaluation Program Rating Equation

The color-coded ratings for each category are each assigned a constant numeric value of red = 4, yellow = 2, and green = 1; this metric score is represented as M in the equation.

Category \ LCP	CR	TD	SDD	P & D	O & S
Planning	.4	.25	.14	.25	.4
Hazards & Risks	.3	.1	.38	.25	.4
Requirements	.1	.4	.37	.25	.1
Funding	.2	.25	.11	.25	.1

Figure 2. Metric Weighting Matrix

The relative importance of each of the category efforts in relation to the overall system safety-ESOH program was weighted; this value is represented as W in the equation. Figure 2 defines the relative life cycle phase weighting assigned to each category metric.

To calculate the Overall System Safety-ESOH Program Rating during a particular life cycle phase, insert the appropriate numerical values into the equation from Figure 1. Individual category ratings should be assigned the appropriate constant value M, and the appropriate category weighting for the phase from Figure 2 should be applied. The final numeric value derived from the equation is then cross-referenced using Figure 3 to obtain the color-coded (G/Y/R), Overall System Safety-ESOH Program Rating for that life cycle phase.

<u>Concept Refinement SSE</u>	<u>Production and Deployment SSE</u>
Green: 0.00 – 1.30	Green: 0.00 -1.25
Yellow: 1.31 – 2.00	Yellow: 1.26 – 1.74
Red: 2.01+	Red: 1.75 +
<u>Technology Development SSE</u>	<u>Operations and Support SSE</u>
Green: 0.00 – 1.30	Green: 0.00 – 1.30
Yellow: 1.31 – 2.00	Yellow: 1.31 – 2.00
Red: 2.01 +	Red: 2.01+
<u>System Development and Demonstration SSE</u>	
Green: 0.00 - 1.33	
Yellow: 1.34 – 1.85	
Red: 1.86 +	

Figure 3. Numeric/Color Ratings and Roll-Up Summary Evaluation Designations

The following example illustrates the equation for a program during the Operations and Support life cycle phase:

Single System Safety-ESOH Program Rating During Operations and Support = (0.4 * Q#1 numeric value color rating) + (0.4 * Q#2 numeric value color rating) + (0.1 * Q#3 numeric value color rating) + (0.1 * Q#4 numeric value color rating)

As shown in Figure 2, each System Safety-ESOH metric [question (Q) #1-4] for the Operations and Support phase is weighted as follows: Q#1 - 40%, Q#2 - 40%, Q#3 – 10%, and Q#4 - 10%. The red, yellow, green ratings are each assigned a numerical value as follows: red = 4, yellow = 2, and green = 1. For each of the four metrics, multiply the question weighting factor by the numeric color rating and add the product of each metric together. Cross-reference the final numeric value derived from the equation using the Figure 3 to obtain the color-coded (G/Y/R), Overall System Safety-ESOH Program Rating for that life cycle phase.

For example, if the metric ratings for the Operations and Support life cycle phase were question #1: Red; question #2: Green; question #3: Green; and question #4: Green. Then the Single, Overall System Safety-ESOH Program Rating during Operations and Support would be determined as follows:

$(.4 * 4) + (.4 * 1) + (.1 * 1) + (.1 * 1) = 2.2$ which correlates to an Overall System Safety-ESOH Program Rating of **Red** during Operations and Support.

Appendix A – SYSTEM SAFETY – ESOH MANAGEMENT EVALUATION CRITERIA

	Concept Refinement	Technology Development	System Development and Demonstration	Production and Deployment	Operations and Support
ESOH Planning	<p>Does the Systems Engineering Plan (SEP), Technology Development Strategy (TDS), and Test and Evaluation (T&E) Strategy address integration of environment, safety, and occupational health (ESOH) considerations into the systems engineering process, using MIL-STD-882D?</p> <p>Green – Yes, addressed in two or more documents</p> <p>Yellow – Only addressed in one of the three documents</p> <p>Red – Not addressed in any of the three documents</p>	<p>Is the Programmatic ESOH Evaluation (PESHE) completed per DoDI 5000.2, E.7, does the SEP include a current ESOH integration strategy, and does the Test and Evaluation Master Plan (TEMP) include ESOH considerations to support Milestone (MS) B?</p> <p>Green – Yes</p> <p>Yellow – The PESHE is completed, but ESOH considerations have been incorporated into only one of the other two documents</p> <p>Red – The PESHE has not been completed. Or, even if the PESHE has been completed, ESOH considerations have not been incorporated into either the SEP or the TEMP</p>	<p>Is the PESHE updated per DoDI 5000.2, E.7, to support MS C; does the Integrated Master Schedule (IMS) include ESOH activities (e.g., reviews, approvals, certifications, analyses, safety releases, and NEPA/E.O. 12114 analyses/documentation); and are ESOH considerations included in demilitarization/disposal plans?</p> <p>Green – Yes</p> <p>Yellow – The PESHE is updated, but ESOH considerations have been incorporated into only one of the other two documents</p> <p>Red – The PESHE has not been updated. Or, even if the PESHE has been updated, ESOH considerations have not been incorporated into either the IMS or the demilitarization/disposal plans</p>	<p>Does the Total System Product Support Package address system ESOH risks?</p> <p>Green – Yes</p> <p>Yellow – Not all the applicable documents include the appropriate ESOH risks</p> <p>Red - No</p>	<p>What are the mishap rates for class B and C mishaps during the reporting period, and how many class A mishaps for the system or subsystem occurred during the current calendar year?</p> <p>Green – No class A mishaps; no increase in mishap rates for either class B or C as compared to the prior calendar year</p> <p>Yellow – No class A mishaps; Mishap rate increasing for either class B or C mishaps as compared to the prior calendar year.</p> <p>Red – One or more class A mishaps reported in the current calendar year</p>

	Concept Refinement	Technology Development	System Development and Demonstration	Production and Deployment	Operations and Support
ESOH Hazard Identification, Analysis, and Risk Acceptance	<p>Is there a Preliminary Hazard List (PHL) developed for each concept and is it used in developing the Analysis of Alternatives (AoA)?</p> <p>Green – Yes</p> <p>Yellow – Incomplete PHL or complete PHL, but not used to influence the AoA</p> <p>Red - No</p>	<p>Does the updated PHL evaluate enabling/critical technologies?</p> <p>Green – Yes</p> <p>Yellow – Some, but not all, of the enabling/critical technologies have been assessed for ESOH hazards</p> <p>Red - No</p>	<p>Are the appropriate levels of hazard analyses completed and presented at each major design review? For example, is the Preliminary Hazard Analysis (PHA) completed and status of hazards presented at Preliminary Design Review (PDR), the majority of hazard analyses completed and presented at Critical Design Review (CDR), and status of ESOH risks presented at Production Readiness Review (PRR)/System Verification Review (SVR)?</p> <p>Green – Yes</p> <p>Yellow – Not all the necessary hazard analyses have been completed, and/or presented at the design reviews</p> <p>Red – No, hazard analyses have not been completed in time to influence the design review process</p>	<p>Has the program (1) continued to evaluate the system’s test and operational performance to identify new hazards, (2) continued to track all hazards, and (3) obtained formal acceptance, at the appropriate management levels, of all residual ESOH risks and communicated those risks to the receiving activities?</p> <p>Green – Yes</p> <p>Yellow – Satisfying two of the three criteria</p> <p>Red – Satisfying one or none of the three criteria</p>	<p>What is the highest risk category, are there any system level hazards with formally accepted high risks, and are there any system level hazards without formal risk acceptance?</p> <p>Green – No hazards with formally accepted high risks and no hazards without formal risk acceptance</p> <p>Yellow – One or more hazards with formally accepted high risks, or any hazards with medium and low risks that have not been formally accepted</p> <p>Red – One or more hazards with serious or high risks that have not been formally accepted</p>

	Concept Refinement	Technology Development	System Development and Demonstration	Production and Deployment	Operations and Support
ESOH Requirements for the System and Associated Infrastructure	<p>Are the (1) applicable system ESOH criteria and (2) associated ESOH asset requirements per DoDD 4715.1E being identified?</p> <p>Green – Yes, both (1) and (2) are being identified</p> <p>Yellow – Only one of the two are being identified</p> <p>Red – Neither being identified</p>	<p>Are ESOH criteria and requirements identified in the System Performance Specification for inclusion in future Statement of Objectives, solicitations, and contracts?</p> <p>Green – Yes</p> <p>Yellow – ESOH criteria and requirements have been identified, but not fully incorporated into the System Performance Specification</p> <p>Red – No</p>	<p>Are ESOH critical system requirements and related ESOH asset requirements included in requirements tracking and verification systems, detailed design specifications, test plans/procedures, inspection plan, maintenance concepts, and Total Systems Product Support Package?</p> <p>Green – Yes</p> <p>Yellow – ESOH critical system and asset requirements have been identified, but not incorporated into all appropriate documentation</p> <p>Red – Have not identified ESOH critical system and asset requirements</p>	<p>Are ESOH asset requirements for testing and basing/ homeporting/ fielding being met as scheduled?</p> <p>Green – Yes</p> <p>Yellow – The requirements are being met, but are behind schedule or new requirements have been identified and not met</p> <p>Red – No</p>	<p>How many open technical data change requests (e.g. Technical Orders, Technical Manuals, etc.) have been submitted through the formal technical data change system to resolve hazardous material or safety issues for the system?</p> <p>Green – All open requests were received during the last six months</p> <p>Yellow – One or more requests has been open for six – 12 months</p> <p>Red – one or more requests have remained open for more than 1 year.</p>

	Concept Refinement	Technology Development	System Development and Demonstration	Production and Deployment	Operations and Support
Personnel and Funding for ESOH	<p>Is the responsibility assigned for ESOH integration into systems engineering?</p> <p>Green – Yes</p> <p>Yellow – Not formally assigned</p> <p>Red – No</p>	<p>Are the ESOH requirements, analyses, and documentation resourced?</p> <p>Green – Yes</p> <p>Yellow – Partially resourced</p> <p>Red – No</p>	<p>Are the ESOH activities identified on the Integrated Master Schedule (IMS) resourced to a level necessary to meet the schedule?</p> <p>Green – Yes</p> <p>Yellow – Partially resourced</p> <p>Red - No</p>	<p>Are there resources in place to continue to identify, track and manage ESOH hazards and associated risks to affect system design?</p> <p>Green – Yes</p> <p>Yellow – Partially resourced</p> <p>Red - No</p>	<p>What is the level of effort (LOE) in man-years (recurring) expended by the program (organic, matrix, and contract) for environment, safety, and occupational health (ESOH) management?</p> <p>Green – constant LOE compared to the prior fiscal year.</p> <p>Yellow – decreasing LOE compared to the prior fiscal year.</p> <p>Red – zero LOE</p>

Appendix B - ACRONYMS

AoA – Analysis of Alternatives

ATP TF – Acquisition and Technology Programs Task Force

CDR – Critical Design Review

CR – Concept Refinement

DAPS – Defense Acquisition Program Support

DAU – Defense Acquisition University

DoD – Department of Defense

DoDI- Department of Defense Instruction

DSOC – Defense Safety Oversight Council

ESOH – Environment, Safety, and Occupational Health

IMS – Integrated Master Schedule

LOE – Level of Effort

MDA – Milestone Decision Authority

MS – Milestone

NEPA – National Environmental Policy Act

O&S – Operations and Support

OADUSD – Office of the Assistant Deputy Under Secretary of Defense

ODUSD(I&E) – Office of the Deputy Under Secretary of Defense, Installations and Environment

OPR – Offices of Primary Responsibility

P&D – Production and Deployment

PDR – Preliminary Design Review

PEO – Program Executive Offices

PESHE – Programmatic Environment, Safety, and Occupational Health Evaluation

PHA – Preliminary Hazard Analysis

PHL – Preliminary Hazard List

PM – Program Manager

PRR – Production Readiness Review

SDD – System Development and Demonstration

SE – Systems Engineering

SEP – Systems Engineering Plan

SSE/ED – Systems and Software Engineering, Enterprise Development

SVR – System Verification Review

T&E – Test and Evaluation

TD – Technology Development

TDS – Technology Development Strategy

TEMP – Test and Evaluation Master Plan

USD AT&L – Under Secretary of Defense Acquisition Technology and Logistics