Department of the Navy Explosives Safety Site Approval Process Improvement Initiative

Presenter: Johnathan Stacy, Facilities Certification Branch (N547)
Naval Ordnance Safety and Security Activity
Farragut Hall, 3817 Strauss Ave, Suite 108
Indian Head, MD 20640-5151
(301) 744-6059
johnathan.r.stacy@navy.mil

Biography: Johnathan Stacy currently works as a Senior Explosives Safety Engineer for the Naval Ordnance Safety and Security Activity (NOSSA). He is the Navy's representative to the Department of Defense Explosives Safety Board (DDESB) Automated Site Planning (ASP) Working Group and Explosives Safety Siting (ESS) Configuration Control Board, and Co-Leader of the Department of the Navy (DON) Explosives Safety Site Approval (ESA) Process Improvement Integrated Product Team (IPT). He has 15 years of RDT&E experience in support of explosives manufacturing processes, 3 years in environmental remediation, and 9 years in facilities planning and explosives safety siting for the Navy.

Abstract: Starting in 2008, the Naval Ordnance Safety and Security Activity (NOSSA), in partnership with the Naval Facilities Engineering Command (NAVFAC), Marine Corps Systems Command (MARCORSYSCOM), and Headquarters, Marine Corps (HQMC) identified a series of initiatives to reduce the time it takes to obtain explosives safety site approval (ESA) and to increase the consistency in ESA documentation received at NOSSA for review. These initiatives include:

1. Establishing the DON Explosives Safety Site Approval (ESA) Process Improvement IPT.
2. Establishing a quality evaluation process and metrics for ESAs.
3. Drafting an instruction on the generation, management, and oversight of ESAs.
4. Establishing a requirement to use enterprise data for development of ESA packages.
5. Establishing an explosives safety (ES) database to track facilities-related ES data.
6. Establishing processes to validate facilities are built or modified as specified in the ESA, including requirements to inspect and certify ES systems.

This paper provides the status of these initiatives.

At the 2008 DON Explosives Safety Conference, a breakout group composed of representatives from the ES and facilities planning communities held an open discussion on the problems with the ESA process. This forum evolved into the DON ESA Process Improvement IPT. The IPT is a Navy-Marine Corps cross-organizational team. The signatory members are:

- NOSSA, Operations Directorate
- NAVFAC) Headquarters, Asset Management
- MARCORSYSCOM, PM AMMO
- HQMC, Facilities and Services Division (LF)

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14. ABSTRACT
Starting in 2008, the Naval Ordnance Safety and Security Activity (NOSSA), in partnership with the Naval Facilities Engineering Command (NAVFAC), Marine Corps Systems Command (MARCORSYSCOM), and Headquarters, Marine Corps (HQMC) identified a series of initiatives to reduce the time it takes to obtain explosives safety site approval (ESA) and to increase the consistency in ESA documentation received at NOSSA for review. These initiatives include: 1. Establishing the DON Explosives Safety Site Approval (ESA) Process Improvement IPT. 2. Establishing a quality evaluation process and metrics for ESAs. 3. Drafting an instruction on the generation, management, and oversight of ESAs. 4. Establishing a requirement to use enterprise data for development of ESA packages. 5. Establishing an explosives safety (ES) database to track facilities-related ES data. 6. Establishing processes to validate facilities are built or modified as specified in the ESA, including requirements to inspect and certify ES systems.

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Non-signatory members include:

- Commander, Navy Installations Command (CNIC)
- Naval Munitions Command (NMC)
- Marine Corps Installation West (MCI WEST)

The IPT represents the following communities:

- Explosives Safety Officers (ESOs) (Installation/Regional)
- NAVFAC/Marine Corps Installation Public Works Planners
- NAVFAC Echelon IV and MARCORSYSCOM Technical Reviewers
- NAVFAC Capital Improvements (CI)
- Mission Technical Experts, including RDT&E

The overarching IPT provides cross-organizational support for Explosives Safety Site Approval Process (ESAP) to:

- Lead continuous process improvement
- Review inter-organizational issues, and
- Identify and champion inter-organizational resource requirements.

The IPT sponsors Sub-teams to perform detailed analysis of specific steps in the process and make recommendations for process improvements. Additionally, three standing sub-teams were formed to coordinate ES planning software deployment and sustainment within the DON for:

- Automated Site Planning Tool (ASPT)—ESSv6
- WebSAR
- Explosives Safety Database

The issues, identified by the IPT, that are driving the need for process improvement can be summarized as current ESA process time lines do not meet facility acquisition needs, jeopardizing Navy and Marine Corps mission capability, and facilities were not built/modified as specified in final site approval. For the last year and a half, the IPT has been leading efforts to improve the ESA process.

The IPT is currently pursuing the following process improvement initiatives:

- Revised ESA guidance
    - Explosives Safety Site Approval (ESA) Instruction, NOSSAINST 8020.22
    - NAVFAC Business Management System (BMS) guidance for ESA process
- New Potential Explosion Site (PES)/Exposed Site (ES) Relationship Form
- Explosives Safety Information System (ESIS) Database
- ESSv6 Implementation Plan
- Review of acquisition processes for explosives facilities
- Site Plan Evaluation (SPE) Form and Metrics

Explosives Safety Site Approval (ESA) Instruction (NOSSAINST 8020.22) will define the roles and responsibilities for the generation, review, approval, and life cycle management of ESAs and the technical requirements for ESAs and associated data. Prior to the new instruction, the roles of the ESOs and the Public Works Officers (PWO) in the ESA process were not clearly defined. The instruction now defines their roles and responsibilities throughout the life cycle of an ESA. The following is an example of the PWO's role and responsibilities:

PWO approval and signature of the Explosives Safety Site Approval Request (ESAR) signifies the following conditions have been met:

- The project has been approved by the Host-activity Commanding Officer (CO) and any required Regional planning boards.

- All maps are accurate and up-to-date, with current existing field conditions validated by a site visit, and generated using the Navy's GeoReadiness or Marine Corps' GeoFidelis geographic information system (GIS).

- Building functions described in the ESAR are consistent with the real property inventory, internet Naval Facilities Assets Data Store (iNFADS).

- All applicable existing land-use restrictions, such as explosives safety quantity distance (ESQD) arcs, Hazards of Electromagnetic Radiation to Ordnance (HERO) zones, air field safety zones, and munitions response program sites are noted in the ESAR.

- PWO will have in place a written process to monitor the design and construction phases of the project as follows:

    - Ensure construction does not begin until the ESA has been received from NOSSA.

    - Ensure all personnel that monitor the design and construction phases of the project, or make decisions in regards to change-orders or de-scoping, have been familiarized with the requirements of the ESA and specific aspects of the project that involve ES criteria.

    - Ensure construction is completed per conditions of the ESA. Any changes to the project, that affect ESQD or ES criteria, require re-submittal of the ESA, via the chain of approval for NOSSA or the Department of Defense Explosives Safety Board (DDESB) approval, depending on the extent of the change to the project.

- After turnover of the facility to the user, PWO will provide the following continued ongoing oversight:

    - Ensure facility and associated ESQD arc data is maintained in the Navy or Marine Corps enterprise mapping system, GeoReadiness or GeoFidelis.

- Ensure that new construction, modifications of existing structures, or changes of function within 110% of the inhabited building distance (IBD) of the sited facility, is not approved without first obtaining an ESA.

- Ensure that new construction or modification of facility components covered by ES criteria, such as barricades, substantial dividing walls, protective construction (including windows, doors, and other hardened building components), and electrical/grounding/bonding/lightning protection systems (LPS), is not implemented without first obtaining an ESA.

The role of the PWO is highlighted here to show the importance that facility management takes in the ES program. If processes are not in place to identify projects with ES implications at the work induction/approval stage, the ESO remains in a reactive mode, many times not becoming aware of projects until after contracts are awarded or the projects have started. Bringing facilities into compliance with ES criteria after the fact leads to costly modifications to the facility, or results in the Service having to issue a deviation (Waiver/Exemption/Secretarial Certification) in order to meet mission requirements.

Changes in the ESAR include replacing the NAVFAC 11010/31 Part II form with the NOSSA 8020/22 Part II form. The new NOSSA form will be a definitive table of contents to the ESAR, providing a list of all documents with versioning—date of last revision—that are included in the ESAR package, allowing for easier reconstruction of the ESA documentation in the future. Additionally, DON is adopting a PES/ES Relationship Form that follows the joint format developed by the DDESB ASP Working Group. DON is adopting this format before implementing ASP, to prepare for the transition to ASP and provide consistency in ESAR documentation. Traditionally, each installation has developed its own methods of showing PES/ES relationships, relying on spaghetti-style ESQD maps. This approach required the reviewers at NOSSA and DDESB to learn each installation's approach to showing these relationships, in order to validate that ESQD criteria was met. Additionally, the transition to GIS mapping from AutoCAD-based mapping has made the former methods of displaying PES/ES relationships extremely time consuming.

The NOSSAINST 8020.22 will require the use of enterprise data for generation of ESARs. Primary will be the requirement to use enterprise GIS mapping systems, GeoReadiness (Navy) and GeoFidelis (Marine Corps) for all ESQD maps. By shifting to an enterprise GIS mapping system, we will eliminate the multiple versions of facility maps per installation that have traditionally resulted in mapping inaccuracies, in favor of one mapping standard that controls data versioning and sets minimum standards of mapping accuracy.

The new instruction requires DON installations to move to a standard explosives facility database (Explosives Safety Information System—ESIS) format. This will prepare the DON to transition to ASP and provide a basis to develop an overarching DON database to track, DON-wide, facilities' related ES data, such as number of PESs, number of PESs that are grandfathered or not sited, number of facilities under a deviation, and the cost of bringing facilities under deviation into compliance. The installation-level ESIS will:

- Track all PESs and ESs within 110% of IBD from any PES
- Track explosives limits
- Track and link to facilities:
    - ESAs
    - Deviations (Waivers/Exemptions/Secretarial Certifications)
    - Engineering Analyses
    - Compensatory Measures
- Administrative Record for ESA
- Configuration/Data Control of facility-related ES data for ASPT

The NOSSA level roll-up of the installations' ESIS databases will:

- Quantify (count) facility ES data, such as number of ESAs, grandfathered facilities, facilities not sited, and facilities under deviations
- Track the overall health of facility's ES program

DON is preparing an implementation plan for ASP for submittal to the DDESB by 30 December 2010. At this point, the following principles are guiding the development of the implementation plan:

- Use DDESB ASPT (ESSv6)
- Use only validated data
    - Enterprise GIS (GeoReadiness/ GeoFidelis)
    - Enterprise Real Property Data (iNFADS)
    - Installation ESIS Database
- ES Planning Community Sustainment critical to long-term implementation
- Leverage past work to maximum extent possible
- Validate ESSv6 and implementation processes before considering siting large areas or entire installations
- Follow ASP Working Group guidance on Joint-Service formats for PES/ES relationship ESQD maps

Showing that facilities meet ESQD criteria is only part of the ESAR process. The Service must show that the facilities also meet non-ESQD criteria, such as lightning protection and electrical requirements in the DoD 6055.09 STD and NFPA 780, any required protective construction, and risk evaluations. To address these requirements, the ESO, planner, and facility operator must coordinate with the acquisition/execution side of NAVFAC and Marine Corps facility management organizations to develop ES facility requirements and designs. These requirements must be determined before acquisition contracts for design or design-build are issued. Additionally, realistic timelines for acquiring the necessary design documentation and NOSSA/DDESB ESAR review and approval must be incorporated into the acquisition strategy. Obtaining design documentation for explosives facilities is frequently a bottleneck for obtaining ESA. To facilitate coordination between the ESA and acquisition processes, the IPT is revising site approval and facility acquisition processes to streamline overall timeline, to include restricting the use of Design-Build contracts to time-critical projects, such as late-add MILCONs,

and developing guidance in the NAVFAC Business Management System (BMS) for coordinating planning and acquisition processes. The planning and acquisition BMSs will identify cross-over processes and key events that require direct coordination between planning and acquisition personnel. To assure that the facility is built or modified as required in the ESA, the IPT is identifying ES- related inspection requirements and taking action to secure resources in the MILCON process to support inspections at appropriate milestones during construction, such as inspecting the rebar placement and connections, prior to pouring concrete for a substantial dividing wall.

The above provides a brief summary of the DON's efforts to improve the ESA process throughout the lifecycle of explosives facilities, from initial planning through eventual closure. This effort is not a single improvement event, but is a continuous improvement process driven by a cross-organizational team involving representatives from the ES, planning, facility acquisition, and operational communities for the Navy and Marine Corps, and demonstrates the DON's continuing effort to balance ES and mission execution.

Department of the Navy
Explosives Safety Site Approval Process Improvement

Johnathan Stacy
Facilities Certification Branch
Naval Ordnance Safety & Security Activity

Co-Chair Department of Navy Explosives Safety Site Approval Process IPT

Revised: 30 Jun 2010

Agenda

- Issues Driving Need for Process Improvement
- Navy Explosives Safety Site Approval Process Improvement IPT
- Current Process Improvement Initiatives
- DDESB Automated Site Planning Tool (ASPT)
- Future Initiatives

Issues Driving Need for Process Improvement

- Current approval process timelines are not meeting facility acquisition needs
- Failure to meet acquisition timelines jeopardizes Navy and Marine Corps mission capability
- Facilities not conforming to site approval

DON Explosives Safety Site Approval Process Improvement Integrated Product Team (IPT)

- Overarching IPT to provide cross-organizational support for Explosives Safety Site Approval Process (ESAP)
  - Lead continuous process improvement
  - Review inter-organizational issues
  - Identify and champion inter-organizational resource requirements
- Sub-teams
  - Perform detailed analysis of specific steps in the process—make recommendations for process improvements
  - Standing sub-teams to coordinate explosives safety planning software deployment and sustainment
    - Automated Site Planning Tool (ASPT)—ESSv6
    - WebSAR
    - Explosives Safety Database

IPT Membership

- Cross-organizational team:
  - Signatory members
    - NAVORDSAFSECACT, Operations Directorate
    - COMNAVFACENGCOM, Asset Management
    - COMMARCORSYSCOM, PM AMMO
    - Headquarters Marine Corps, Facilities and Services Division (LF)
  - Non-signatory members
    - CNIC
    - NMC
    - MCI
  - Represented communities
    - Explosives Safety Officers (Installation/Regional)
    - NAVFAC/Marine Corps Installation Public Works Planners
    - NAVFAC Echelon IV and MARCORSYSCOM Technical Reviewers
    - NAVFAC Capital Improvements (CI)
    - Mission Technical Experts, including RDT&E

Current Process Improvement Initiatives

- Revised Explosives Safety Site Approval guidance
  - Explosives Safety Site Approval (ESA) Instruction, NOSSAINST 8020.22
  - NAVFAC Business Management System (BMS) guidance for ESA process
- New Potential Explosion Site (PES)/Exposed Site (ES) Relationship Form
- Explosives Safety Information System (ESIS) Database
- ESSv6 Implementation Plan
- Review of acquisition processes for explosives facilities
- Site Plan Evaluation (SPE) Form and Metrics

Explosives Safety Site Approval Instruction (NOSSAINST 8020.22)

- Roles and responsibilities for the generation, review, approval, and life cycle management of Explosives Safety Site Approvals (ESAs)
- Technical requirements for explosives site plans and associated data
  - Explosives Safety Site Approvals
  - Explosives Safety Quantity Distance Maps
  - ESIS Database
  - Automated Site Planning Tool

New PES/ES Relationship Form

Section I - General Information					
Installation:	NAVAIRSTA Example	**Location:**	Buildings 2027 Weapons Assembly Building	**Date:**	

Section II - Data on Facility To Be Sited										
Facility Number	**Facility Description**	**Required IBD**	**Required PTR**	**Required IL**	**1.1**	**1.2.1 MCE**	**1.2.2**	**1.2.3 MCE**	**1.3**	**1.4**
2027	Explosive Operating Location (Weapon Assembly Building)	1,250	750	527	25,000	25,000 no MCE limit	25,000	0	25,000	MEQ

Section III - PES/ES QD Paired Relationships with Facilities Being Sited

All paired relationships within 1250 feet shown. Maximum sited explosive limits at any facility at NAS is 140,000 lbs 1.1. Unbarricaded intraline for 140,000 lbs 1.1 is 935 feet. Therefore, there are no explosive facilities outside of 935 feet that cause an encumberance on Building 2027 in violation of ESQD criteria.

Red Text = ESQD criteria not met and associated corrective action

Gray shading and bold text denotes controlling exposures below

FAC #	Facility Description	Distance Actual	Distance Required	Exposure	1.1	1.2.1 MCE	1.2.2	1.2.3 MCE	1.3	1.4
2026C	AGM--Ready Service Magazine OP5 Table 7-22 ILD	52	**50**	**2026C as PES to 2027 as ES AGM>>EOL**	0	0	0	0	0	**150**
	OP5 7-9.2.1.K	52	0	2027 as PES to 2026C as ES EOL>>AGM						
2026	Inert Storage Fire Seperation Distance	54	**50**	**2026 Inert to 2027 as ES IST>>EOL**	Inert	Inert	Inert	Inert	Inert	Inert
		54	0	2027 as PES to 2026 as ES EOL>>IST						
2026B	AGM--Ready Service Magazine OP5 Table 7-20 ILD	64	**50**	**2026B as PES to 2027 as ES AGM>>EOL**	0	0	0	0	**300**	0
	OP5 7-9.2.1.k	64	0	2027 as PES to 2026B as ES EOL>>AGM						
1140	Line Office for Weapons Assembly Building 2027 OP5 7-13.1	342	**50**	**1140 Inert to 2027 as ES Line Office>>EOL**	Inert	Inert	Inert	Inert	Inert	Inert
	OP5 7-13.1	342	0	2027 as PES to 1140 as ES EOL>>Line Office						
2024	EOL--Loading Dock[1] loading dock to EOL K=18 OP5 7-12.7 ILD	265	**685[1]**	**2024 as PES to 2027 as ES Loading Dock to EOL**	55,000	55,000 no MCE limit	55,000	0	55,000	MEQ
	EOL to loading dock OP5 7-12.7	265	0	2027 as PES to 2024 as ES EOL to Loading Dock						
1. Compensatory Measure (Administrative Control): Building 2027 and Loading Dock 2024 can not be used concurrently.										
2025	Inert Storage Fire Seperation Distance	425	**50**	**2025 Inert to 2027 as ES**	Inert	Inert	Inert	Inert	Inert	Inert
		425	0	2027 as PES to 2025 as ES EOL/Inert						
2001	ECM (Undefined) Barricaded IL (Table 7-11,	695	**605**	**2001 as PES to 2027 as ES R/EOL**	**125,000**	125,000 no MCE limit	125,000	0	125,000	MEQ

Mapping

- NOSSAINST 8020.22 will require that all ESAs and ESQD maps be created and maintained using only enterprise data from Navy GeoReadiness or Marine Corps GeoFidelis GIS

Explosives Safety Database

- Track all Potential Explosion sites (PESs) and Exposed Sites (ESs) within 110% of IBD from any PES
- Track explosives limits
- Track and link to facilities:
  - Explosives Site Approvals
  - Deviations (Waivers, Exemptions, Secretarial Certifications)
  - Engineering Analyses
  - Compensatory Measures

Explosives Safety Information System (ESIS) (Explosives Safety Database)

- Installation-level database
  - Administrative Record
  - Configuration/Data Control of facility related explosives safety data for ASPT
- Service-level rollup database
  - Health of Facility's Explosives Safety Program
  - Counting ESAs, grandfathered facilities, deviations,…

Coordination with Acquisition Processes

- Obtaining design documentation for explosives facilities is bottleneck for site approval
- Revising site approval and facility acquisition processes to streamline overall timeline
  - Restrict use of Design-Build
  - Validate explosives safety design requirements before issuing design contracts
- Inspections during construction

DDESB Automated Site Planning (ESSv6)

- Use only validated data
  - Enterprise GIS (GeoRediness/ GeoFidelis)
  - Enterprise Real Property Data (iNFADS)
  - Installation ESIS Database
- Implementation Plan by 30 December 2010
  - ES Planning Community Sustainment critical to long-term implementation
  - Leverage past work to maximum extent possible
- Not siting entire facilities/areas until ESSv6 and <u>implementation processes</u> validated by NOSSA and MARCORSYSCOM

Site Plan Evaluation (SPE) Form

Explosives Site Plan Quality Evaluation — **Revision 1**

Installation:
AMHAZ Area:
WebSAR Number/NOSSA Control Number:
Project Title:

	Date (MM/DD/YYYY)	Number of Days to
Date Site Plan Signed by ESO and PWO (last signature):	1/1/1900	
Date Site Plan Submitted to FEC (or MCSC) for Endorsement:	1/1/1900	PWO/ESO sign to FEC/
Date Endorsed by FEC/MCSC and Forwarded to NOSSA:	1/1/1900	FEC/
Date of NOSSA Action (Endorsement/Approval/Return):	1/1/1900	N
		Project Overall Cycl

	FEC or M Evalua Score: (
Overall Score From Evaluation On Next Page:	0.0

Comments:

Note:
Ratings:
5-Required information is present and easy to understand
4-Information available, but difficult to understand
3-Clarification was required via phone call or email
2-Minor corrections required. Corrections performed by Reviewer
1-Major corrections required. Corrections necessary from customer.
0-Information was not provided
N/A-Not Applicable

FEC=Facility
MCSC=Marir

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Installation:
WebSAR Number/NOSSA Control Number:
Project Title:

	Activity Checklist	Rating (see note):	FEC or MCSC Evaluation 0-5 or N/A	NOSSA Evaluation 0-5 or N/A
1. Project Overview		**Avg Score:**	0.0	0.0
a. Provides enough information for the reviewer to understand the		**Score:**		
(1) Project scope	☐ Included ☐ N/A			
(2) Facilities involved	☐ Included ☐ N/A			
(3) Construction/demolition involved	☐ Included ☐ N/A			
b. Describes the explosive hazard:		**Score:**		
(1) Types and quantities of explosives involved	☐ Included ☐ N/A			
(2) Types of operations involved	☐ Included ☐ N/A			
c. Identifies all deviations (Waivers, Exemptions, or Secretarial Certifications) affecting, or effected by, the project	☐ Included ☐ N/A	**Score:**		
2. Maps		**Avg Score:**	0.0	0.0
a. Labels/Legends clearly depicted:		**Score:**		
(1) Activity name	☐ Included ☐ N/A			
(2) Date Prepared/Date Revised	☐ Included ☐ N/A			
(3) Legend	☐ Included ☐ N/A			
(4) Scale bar and north arrow	☐ Included ☐ N/A			
b. All buildings and roads clearly depicted:		**Score:**		
(1) Project building depicted and oriented correctly	☐ Included ☐ N/A			
(2) Tabular data agrees with data on map	☐ Included ☐ N/A			
(3) Discrepancies between map and available aerial imagery explained	☐ Included ☐ N/A			
c. Inhabited building distance arc depicted	☐ Included ☐ N/A	**Score:**		
d. Utilities depicted	☐ Included ☐ N/A	**Score:**		
e. Installation boundary depicted	☐ Included ☐ N/A	**Score:**		
3. PES/ES Relationships		**Avg Score:**	0.0	0.0
a. Facility/area being sited as PES depicted/described in the package with the following:		**Score:**		
(1) Relationship between sited facility as PES to all facilities within inhabited building distance	☐ Included ☐ N/A			
(2) All inhabited facilities within 110% of IBD identified	☐ Included ☐ N/A			
b. Reverse relationship of sited building as ES from all PESs that encumber facility	☐ Included ☐ N/A	**Score:**		
c. Application of explosives safety quantity distance criteria, site layout, and balance between mission and safety	☐ Included ☐ N/A	**Score:**		
4. Design Drawings		**Avg Score:**	0	0
a. Appropriate design drawings included	☐ Included ☐ N/A	**Score:**		
b. Design drawings definitively identifiable—drawing number and date of revision	☐ Included ☐ N/A	**Score:**		
5. Safety Criteria		**Avg Score:**	0	0
a. Management of risk to/from constuction activities clearly addressed	☐ Included ☐ N/A	**Score:**		
b. Lightning protection, grounding, and bonding:		**Score:**		
(1) Design drawings	☐ Included ☐ N/A			
(2) Zone-of-protection drawings for mast and catenary lightning protection systems	☐ Included ☐ N/A			
c. Protective construction:		**Score:**		
(1) Structural design drawings for walls, roofs, and barricades	☐ Included ☐ N/A			
(2) Engineering analysis if structure provides equivalent protection	☐ Included ☐ N/A			
d. Windows engineering analysis demonstrating that windows will withstand blast from surrounding PESs	☐ Included ☐ N/A	**Score:**		
e. Fire Protection:		**Score:**		
(1) Description of types of fire protection to be installed	☐ Included ☐ N/A			
6. Enclosures, Attachments, and Exhibits		**Avg Score:**	0.0	0.0
a. Enclosures, Attachments, and Exhibits clearly labeled	☐ Included ☐ N/A	**Score:**		
7. Previous Site Approvals		**Avg Score:**	0.0	0.0
a. Appropriate DDESB-approved site approvals included with package	☐ Included ☐ N/A	**Score:**		
		Overall Score (0-100) :	0.00	0.00

Ratings:
5-Required information is present and easy to understand
4-Information available, but difficult to understand
3-Clarification was required via phone call or email
2-Minor corrections required. Corrections performed by Reviewer
1-Major corrections required. Corrections necessary from customer.
0-Information was not provided
N/A-Not Applicable

FEC=Facility Engineering Command
MCSC=Marine Corps System Command

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Future Initiatives

- Addressing ES issues earlier in the planning process
  - Required reviews—K9 barricaded intraline, protective construction, compensatory measures
  - Review of master plans
- Evaluate requirements and approval authority for Construction Worker Authorizations
- Comprehensive Work Approval Process at Work Induction Level
- ES Planning Community Sustainment