

## Paper for the 2010 DDESB Seminar

### Explosives Safety Planner Community Development and Sustainment

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](mailto:johnathan.r.stacy@navy.mil)

Co-Author: Karen Jones, Community Planner  
Naval Facilities Engineering Command, Washington  
1314 Harwood Street SE  
Washington Navy Yard, DC 20374-5018  
(202) 685-8027  
[karen.l.jones@navy.mil](mailto:karen.l.jones@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 of environmental remediation, and 9 years in facilities planning and explosives safety siting for the Navy.

Abstract: The Naval Ordnance Safety and Security Activity (NOSSA) and Naval Facilities Engineering Command (NAVFAC) are examining approaches to developing a sustainable community of explosives safety (ES) planners. Unique to the Navy, our ES policies and guidance mandate the participation of our facility engineering/planning professionals in the explosives safety site approval (ESA) process. Traditionally, the planning community has been fairly stable at the installation level. With transformation to enterprise management of Navy facilities, the planning community is now more mobile, while at the same time we are demanding they master new enterprise tools, such as the DDESB's automated site planning tool (ASPT) and Navy's geographical information system (GIS). Experience within the Navy and the other Services has shown that an ad hoc approach, driven at the installation level, results in gaps in support for the development of ESA documentation and does not provide a clear chain of command to defend resources to support manpower and enterprise tools. The structure of NAVFAC provides a clear chain of command to defend resources, and provides personnel on the ground at the installation level, with Regional resources to backfill gaps at the installation. Effective Community Management, though, requires active participation with clear roles and responsibilities at all levels, from the installation to the Echelon II command. This paper will explore approaches to assure a stable work force with the required skills.

| Report Documentation Page                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |                                     |  | Form Approved<br>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<br><b>JUL 2010</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                    | 2. REPORT TYPE<br><b>N/A</b>        |  | 3. DATES COVERED<br><b>-</b>             |                                  |                                 |
| 4. TITLE AND SUBTITLE<br><b>Explosives Safety Planner Community Development and Sustainment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |                                     |  | 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)<br><b>Naval Ordnance Safety and Security Activity Farragut Hall, 3817 Strauss Ave, Suite 108 Indian Head, MD 20640-5151</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |                                     |  | 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<br><b>Approved for public release, distribution unlimited</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                    |                                     |  |                                          |                                  |                                 |
| 13. SUPPLEMENTARY NOTES<br><b>See also ADM002313. Department of Defense Explosives Safety Board Seminar (34th) held in Portland, Oregon on 13-15 July 2010, The original document contains color images.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |                                     |  |                                          |                                  |                                 |
| 14. ABSTRACT<br><b>The Naval Ordnance Safety and Security Activity (NOSSA) and Naval Facilities Engineering Command (NAVFAC) are examining approaches to developing a sustainable community of explosives safety (ES) planners. Unique to the Navy, our ES policies and guidance mandate the participation of our facility engineering/planning professionals in the explosives safety site approval (ESA) process. Traditionally, the planning community has been fairly stable at the installation level. With transformation to enterprise management of Navy facilities, the planning community is now more mobile, while at the same time we are demanding they master new enterprise tools, such as the DDESBs automated site planning tool (ASPT) and Navys geographical information system (GIS). Experience within the Navy and the other Services has shown that an ad hoc approach, driven at the installation level, results in gaps in support for the development of ESA documentation and does not provide a clear chain of command to defend resources to support manpower and enterprise tools. The structure of NAVFAC provides a clear chain of command to defend resources, and provides personnel on the ground at the installation level, with Regional resources to backfill gaps at the installation. Effective Community Management, though, requires active participation with clear roles and responsibilities at all levels, from the installation to the Echelon II command. This paper will explore approaches to assure a stable work force with the required skills.</b> |                                    |                                     |  |                                          |                                  |                                 |
| 15. SUBJECT TERMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                    |                                     |  |                                          |                                  |                                 |
| 16. SECURITY CLASSIFICATION OF:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                    |                                     |  | 17. LIMITATION OF ABSTRACT<br><b>SAR</b> | 18. NUMBER OF PAGES<br><b>19</b> | 19a. NAME OF RESPONSIBLE PERSON |
| a. REPORT<br><b>unclassified</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | b. ABSTRACT<br><b>unclassified</b> | c. THIS PAGE<br><b>unclassified</b> |  |                                          |                                  |                                 |

## ***Navy ES Planning***

ES Planning is the Navy's approach to manage explosives facilities throughout their life cycle, from initial planning through decommissioning the facility, by combining the knowledge of ES criteria and community/facility planning methods. The Navy institutionalizes this philosophy through Navy guidance, OPNAVINST 8020.14, NAVSEA OP 5, NAVFACINST 11010.45, and pending NOSSAINST 8020.22, that require facility planner participation in generation and management of explosives safety site approvals (ESA), in addition to requiring Public Works Officer (PWO) and Explosives Safety Officer (ESO) approvals of all explosives safety site approval requests (ESAR).

## ***NAVFAC Involvement***

NAVFAC involvement is critical for compliance with ES criteria. NAVFAC provides facility life-cycle management—acquisition, sustainment, and disposal—as well as land management for Naval installations. ES starts with requirements' development and continues through strategic planning and work induction. While the ESO is responsible for providing ES oversight during project development and execution, the ESO must first know a project is planned. Key to identifying projects that require ES evaluation by the ESO, NOSSA, and the DDESB is notification from NAVFAC that a project is being developed. NAVFAC is also a key technical player for the development of facility requirements, review of designs, and monitoring construction. Finally, NAVFAC maintains GeoReadiness data (enterprise GIS) – maps) and Real Property Inventory (RPI), both critical in ESAR documentation development and land-use management.

## ***Land Use Management and Work Induction***

Land use management and work induction are the key to assuring facilities and land use are in compliance with ES criteria. Land-use controls prevent incompatible facilities from encroaching on explosives operations. Evaluation of proposed projects for ES considerations—determine if they involve facilities or facility components requiring, or covered by, ES criteria—at work induction/approval assures that ES criteria is addressed before resources are committed to the project. This prevents both encroachment on explosives facilities and unnecessary costs of retrofitting facilities to meet ES criteria post construction.

## ***Site Approval Development Team (SADT)***

No single person or job description has all of the skills or knowledge to address all of the mission and ES requirements for an explosives facility. Most explosives operations and facilities involve trade-offs between mission and ES in order to meet the best balance. As such, Navy guidance will require, at a minimum, the participation of the following in the development of ESARs:

- ESO;
- Facilities planner; and
- An operational technical representative—user of the proposed facility.

Depending on the complexity of the facility, the team may include Department of Defense (DoD) blast design agency (Naval Facilities Engineering Service Center (NAVFAC ESC) or the U.S. Army Engineering and Support Center, Huntsville (USAESCH)), and NOSSA.

### ***Key ES Planning Skills***

When developing an ESAR package, the installation-level planner is key to the process. They provide an understanding of:

- Facility, and master and regional planning;
- Facility acquisition processes and requirements;
- Basic GIS/mapping, using GeoReadiness (enterprise GIS);
- Facility-related ES criteria—Explosives Safety for Naval Facility Planning course—AMMO-36

Of these skills, the typical ESO would only be skilled in ES criteria.

### ***Responsibilities***

In the Navy ESA process, the NAVFAC planner has the following responsibilities:

- Team with ESO to generate ESAR documentation and manage life-cycle of land/facilities having ES considerations.
- Develop explosives safety quantity distance (ESQD) maps required for ESAR and master planning.
- Coordinate the acquisition of required design data with the facility acquisition process.
- Ensure changes in land-use are compatible with explosives land-use requirements (i.e., prevent encroachment on explosives facilities and operations).
- Support ES requirements and mitigate potential land use and operational conflicts through effective strategic and master planning efforts; ensure Master and Regional Plans incorporate and address ES considerations.

### ***DDESB ASPT***

DDESB has issued a mandate that all ESARs be prepared with the use of an ASPT by 2015. The Navy must submit an implementation plan to the DDESB by 30 December 2010. Facility planners, who have completed the AMMO-36 course, have the basic skills to understand ASPT concepts/application, but will need an additional course that includes use of ASPT to develop an ESAR package.

## ***Community Management***

To assure successful implementation of ASPT, NAVFAC must develop and manage an ES Planning Community in order to assure ES Planning Community maintains the needed qualifications and certifications. Development of the required ES Planning and ASPT skill sets, through mentoring, course training, and experience will take time. A 2-year track to full development is likely, but the optimum timeline is yet to be determined. To assure an adequate work force is available to meet projected ES planning work load, cross-training and skill-set redundancy, including reach back and supplemental services, will be required to address ES Planning turnover at the installation (PWD) and Facility Engineering Commands (FECs) Echelon IV levels. Successful Community Management may require an Echelon III (NAVFAC LANT/PAC) role.

### ***FEC ES Planning Community Leader***

To manage the ES Planning Community, the DON ESA Process Improvement IPT recommends that NAVFAC move implementation of FEC-level technical review of ESARs from the IPTs to a Core Business Development (BD) position, with IPT ES Planners trained to provide reach back, project development, and master planning. Core BD position would be responsible for:

- FEC technical review of ESARs;
- FEC representation on Explosives Safety Inspections (ESIs) and Ammunition and Hazardous Materials (AMHAZ) Handling Review Boards’
- FEC-level ES planning and ASPT “help desk”/mentoring for the PWDs;
- FEC reach back support for Public Works Departments (PWD)s;
- FEC monitoring and managing ES Planning Community development and sustainment;
- FEC coordinating w/PWD planners; and
- FEC ES subject matter expert (SME) on planning studies.

The key requirement is that an individual position be identified at the FEC (regional) level that has both ES planning (ESAR development and ES-related master planning) and ES Planning Community Management duties as a core component of their position. Successful ES planning and ASPT implementation, at the FEC level, cannot be left as a collateral duty.

### ***NAVFAC HQ ES Planning Leadership***

ES planning community development/sustainment and ASPT implementation will require dedicated NAVFAC HQ-level leadership. A position needs to be identified and staffed to:

- Provide Navy-wide ES Planning Community Leadership and ES Program Management;

- Identify and champion resources for ASPT implementation and ES Planning;
- Co-Chair DON ESA Process Improvement IPT; and
- Provide leadership for implementation of ASPT.

The Navy's commitment to an enterprise approach to facilities management, with predictable and defensible resource requirements and standardized business practices, cannot be achieved without HQ-level leadership.

### ***Summary***

Good ES Planning requires leadership at NAVFAC HQ and the FECs and is a core facility management function. While the ESOs and NOSSA provide oversight of ES criteria, execution of facilities-related criteria is NAVFAC's responsibility. Successful ASPT implementation, ES facilities life-cycle management, and ES strategic planning services require an ES Planning Community equipped with the required skills, including ASPT. Maintaining an ES Planning Community to meet projected workload will require leadership and must be a core function—not a collateral duty.

# Navy Explosives Safety Planning Community Sustainment Concept



Johnathan Stacy

Naval Ordnance Safety & Security Activity

Karen Jones

Naval Facilities Engineering Command





# *Agenda*



- Navy Explosives Safety (ES) Planning
- Land Use Management and Work Induction
- Key ES Planning Skills
- Department of Defense Explosives Safety Board (DDESB) Automated Site Planning Tool (ASPT)
- Community Management



# *Navy Explosives Safety Planning*



- Explosives Safety (ES) Planning—combining knowledge of ES criteria and community/facility planning methods to manage explosives facilities
- Navy guidance requires facility planner participation in generation of explosives safety site approval requests (ESAR)
- Public Works Officer (PWO) and Explosives Safety Officer (ESO) must sign ESAR



# *NAVFAC Involvement*



- Naval Facilities Engineering Command (NAVFAC)
  - Facility life-cycle management (acquisition, sustainment, and disposal)
  - Land management
  - Requirements Development, Work Induction, Strategic Planning
- Project Development and Execution
  - Key to identifying projects that require ES evaluation by ESO, Naval Ordnance Safety and Security Activity (NOSSA), and DDESB
  - Develops facility requirements, reviews designs, and monitors construction
- Maintains GeoReadiness data (enterprise geographic information system (GIS) – maps), and Real Property Inventory (RPI)



# *Land Use Management and Work Induction*



- Key to assuring facilities and land use are in compliance with ES criteria
- Land-use controls prevent incompatible facilities from encroaching on explosives operations
- Evaluate projects early for ES considerations (determine if they involve facilities or facility components requiring, or covered by, ES criteria)



# *Site Approval Development Team*



Navy guidance will require, at a minimum, the participation of the following in the development of ESARs:

- ESO
- Facilities Planner
- Operational technical representative—User of the proposed facility



# *Key ES Planning Skills*



- Understanding of facilities, and master and regional planning
- Understanding of facility acquisition processes and requirements
- Basic GIS/mapping using GeoReadiness (enterprise GIS)
- Understanding of facility-related ES criteria—Explosives Safety for Naval Facility Planning course—AMMO-36



# *Responsibilities*



- Team with ESO to generate ESAR documentation and manage life-cycle of land/facilities having ES considerations
- Develop explosives safety quantity distance (ESQD) maps required for ESAR and master planning
- Coordinate the acquisition of required design data with the facility acquisition process



# *Responsibilities (Con't)*



- Ensure changes in land-use are compatible with explosives land-use requirements (i.e., prevent encroachment on explosives facilities and operations)
- Support ES requirements and mitigate potential land use and operational conflicts through effective strategic and master planning efforts; ensure Master and Regional Plans incorporate and address ES considerations



# ***DDESB Automated Site Planning Tool (ASPT)***



- DDESB has issued a mandate that all ESARs be prepared with the use of an ASPT by 2015
- Navy must submit an implementation plan to DDESB by 30 Dec 2010
- Facility planners, who have completed AMMO-36 course, have the basic skills to understand ASPT concepts/application
- Need for additional course that includes use of ASPT to develop an ESAR package



# *Community Management*



NAVFAC develop and manage ES Planning Community—Assure ES Planning community maintains qualifications and certifications

- Develop required ES Planning and ASPT skill sets through mentoring, course training, and experience (2-year track?—full development timeline TBD)
- Cross-training and skill set redundancy optimum (reach back and supplemental services required to address ES Planning turnover at PWDs and Facility Engineering Commands (FECs), Echelon IV)
- Potential Echeon III (NAVFAC LANT/PAC) role



# *FEC ES Planning Community Leader*



- Recommend that NAVFAC move implementation of FEC-level technical review of ESARs from the IPTs to a Core Business Development (BD) position (w/IPT ES Planner trained as reach back: work closely w/IPT Planners on project development and master planning)
- Core BD position would be responsible for:
  - Technical review of ESARs
  - ESI and AMHAZ Handling Review Board FEC Representation
  - FEC-level ES Planning and ASPT “help desk”/mentoring for the PWDs
  - Providing reach back support for PWDs
  - Monitoring and managing ES Planning Community development and sustainment for the FEC
  - Coordinating w/PWD Planners, serve as FEC ES subject matter expert (SME) on Planning Studies



# *HQ ES Planning Leadership*



ASPT implementation will require dedicated NAVFAC HQ-level leadership

- Provide Navy-wide ES Planning Community Leadership and ES Program Management
- Identify and champion resources for ASPT implementation and ES Planning
- Co-Chair Department of the Navy (DON) Explosives Safety Site Approval (ESA) Process Improvement IPT
- Provide leadership for implementation of ASPT



# Summary



- Good ES Planning requires leadership at NAVFAC HQ and the FECs
- Successful ASPT implementation, ES facilities life-cycle management, and ES strategic planning services require an ES Planning Community equipped with the required skills to use ASPT
- ES Planning Community Leadership must be a core function - not a collateral