**United States Air Force Explosives Site Plan Report and Explosives Safety Program Support Initiatives**

Albert Webb
Explosives Site Planning Team Chief
Headquarters Air Force Safety Center, Kirtland Air Force Base, New Mexico

7 June 2010

## *Introduction*

During the past two years Headquarters Air Force Safety Center (HQ AFSC) eliminated a long-standing explosives site plan (ESP) review backlog while keeping pace with elevated ESP submission levels throughout the 2008 – 2010 time periods. This success resulted from four actions taken by HQ AFSC to improve the ESP development, submission, and review processes. Implemented actions included publication of a revised Air Force Manual (AFMAN) 91-201, *United States Air Force (USAF) Explosives Safety Standards,* that clearly defines ESP submission expectations to the USAF explosives safety oversight community; streamlined internal processes designed to improve HQ AFSC ESP review efficiency; increased ESP review team levels at HQ AFSC that are commensurate with historical ESP submission levels; and utilization of an ESP support contract to perform installation- and Major Command (MAJCOM)-level ESP development and associated quality review activities.

Improvements in the USAF ESP review process and elimination of HQ AFSC's historical ESP backlog also provided a welcomed opportunity to address long-standing explosives safety program management challenges. These actions included resolution of dated DDESB survey findings, improved tracking of quantity-distance exception periodic reviews, and heightened oversight of automated explosives safety siting (ESS) software development in preparation for the upcoming USAF deployment of this software in 2012. Additionally, the HQ AFSC ESP team initiated new efforts to improve USAF explosives (weapons) safety manager training by developing a series of web-based explosives safety courses on topics ranging from ESP development to assessments of glass breakage potential and electromagnetic radiation hazards, and courses for improving USAF leadership understanding of explosives safety requirements.

In summary, specific actions taken by HQ AFSC's ESP team have improved the USAF ESP development, submission, and review process and provided the necessary opportunity to advance USAF explosives safety program management.

## *Background*

### *USAF ESP Development and Submission Process – 2008 to Present*

The USAF's ESP process typically starts at the USAF installation with ESP development performed by the on-site weapons (explosives) safety manager (WSM). This process currently

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involves the use of the Assessment System for Hazard Surveys (ASHS) automated ESP software program. The use of ASHS involves importing the installation GeoBase map and facility data from a variety of sources and additional manual database population efforts to resolve data gaps. Once validation of the ASHS map and facility data are complete, the ASHS program is used to assess compliance with prescribed explosives quantity-distance (QD) criteria followed by production of Air Force (AF) Forms 943, *Explosives Site Plan*, and associated maps. In addition to performing QD assessments, ESPs may involve analysis of facility design features to include glass breakage potentials, lightning protection system (LPS) design compliance, and personnel protective characteristics (i.e. substantial dividing walls). The remaining ESP elements may also involve development of risk assessments, compensatory measures, and transmittal memorandums for subsequent review by ESP approval authorities.

Within the USAF developed ESP packages are submitted by the installation (Wing) WSM to higher headquarter organizations for subsequent quality reviews at the Numbered Air Force (NAF), MAJCOM, and HQ AFSC before final submission to the Department of Defense Explosives Safety Board (DDESB) for approval. Figure 1 below provides a visual depiction of the USAF process from initial development to final DDESB approval.

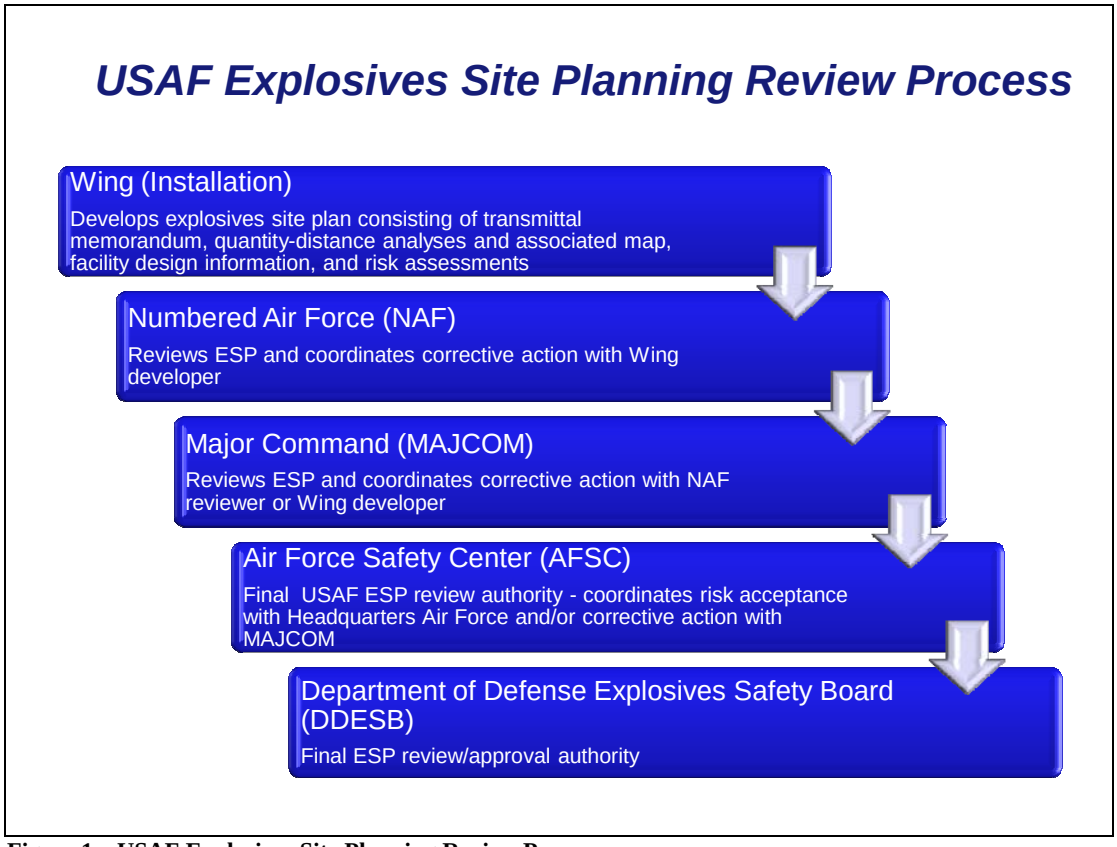


**Figure 1 – USAF Explosives Site Planning Review Process**

***August 2008 Report - ESP Backlog Report***

As reported during the previous 2008 DDESB Seminar HQ AFSC had a 507-ESP review backlog level with a 540-ESP average computed over a 12-month time period. Also reported was HQ AFSC objective to reduce the backlog below 125 ESPs to ensure timely support for domestic and overseas initiatives. Figure 2 below is the slide presented at the 2008 Seminar depicting the ESP backlog levels reported over a 12-month timeframe from 1 September 2007 and the desired HQ AFSC 125-ESP target objective.

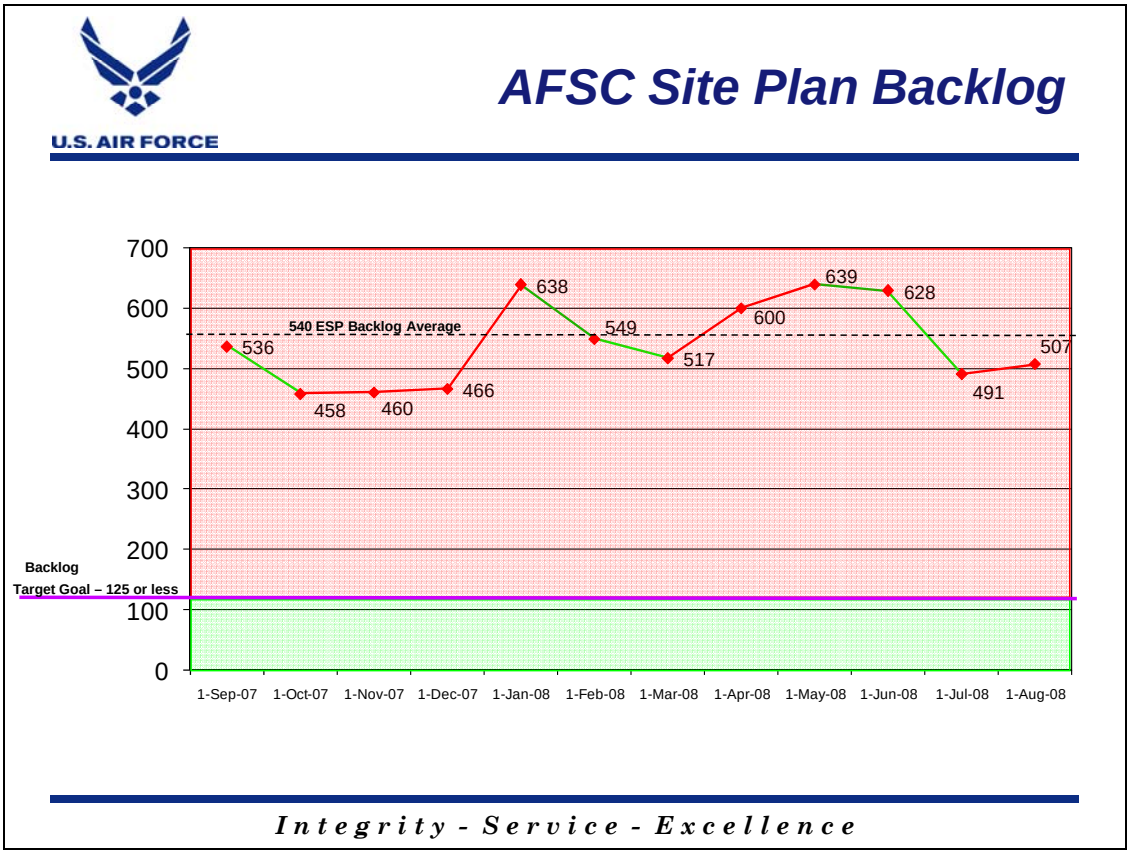


**Figure 2 – 1 September 2007 through 1 August 2008 ESP Backlog Statistics**

***August 2008 Report – Annual ESP Receipt Volume***

In 2008 the reported annual volume of ESPs received at HQ AFSC averaged 901 annually over a ten-year period in which the lowest amount occurred initially in 1998 during the pre-deployment of the ASHS software and the highest in 2004 during the height of an AF-wide ESP development initiative to secure DDESB approval for all USAF potential explosion sites. Figure 3 on the following page is the slide presented during the 2008 Seminar depicting the annual ESP submission received at HQ AFSC in 1998 through 1997 and the amount received from 1 January 2008 through 1 August 2008.

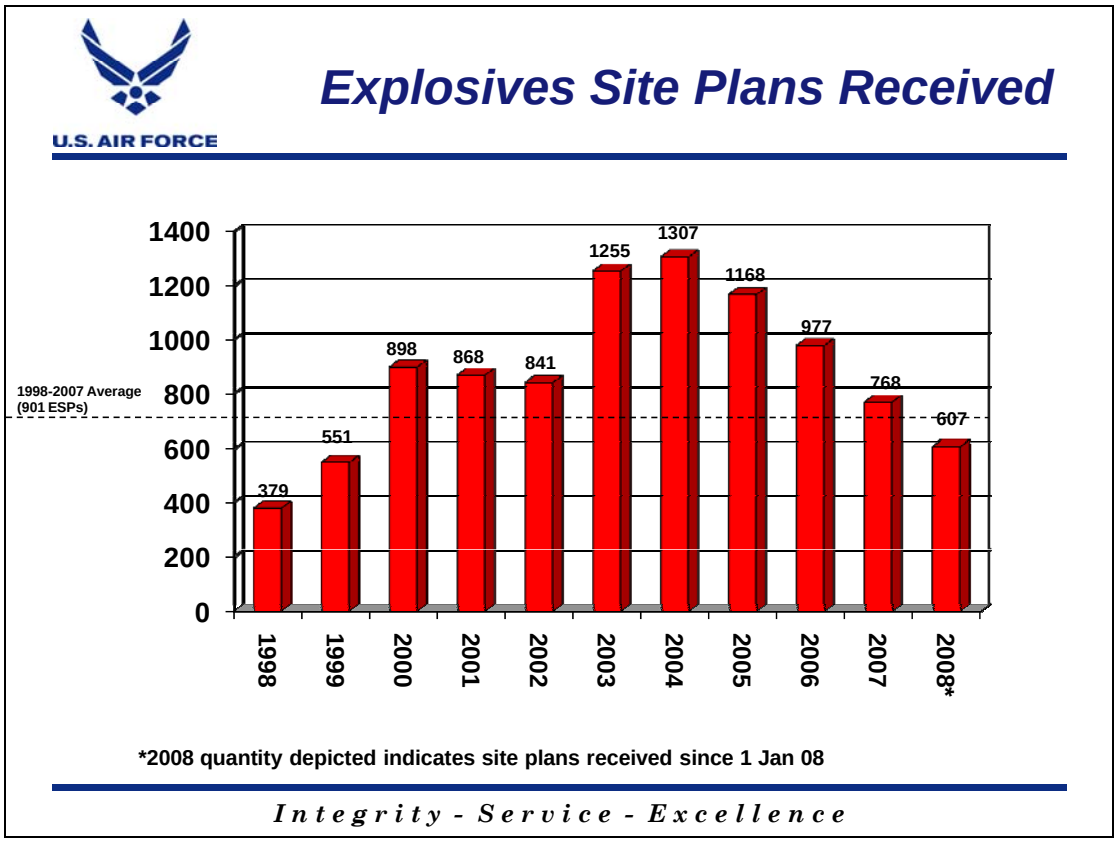


**Figure 3 – 1 January 1998 through 1 August 2008 Explosives Site Plan Volume**

### *HQ AFSC Explosives Site Planning Team Composition in August 2008*

In 2007 a complete civilian, active duty, and contract personnel turnover occurred for all HQ AFSC explosives site planning team positions. As a result the ESP team chief had been assigned for one year along with two active duty senior non-commissioned officers (SNCOs) and one contracted position at the time of the last DDESB Seminar presentation in 2008. Additionally, a second contracted position was vacated two months prior to the 2008 Seminar with no replacement selected to fill the vacancy. This condition along with other competing assigned tasks is seen as the greatest contributing factor to the high 2008 ESP backlog reported in preceding paragraphs. Figure 4 on the following page depicts HQ AFSC's 2008 ESP team organization for civilian, active duty, and contract positions.

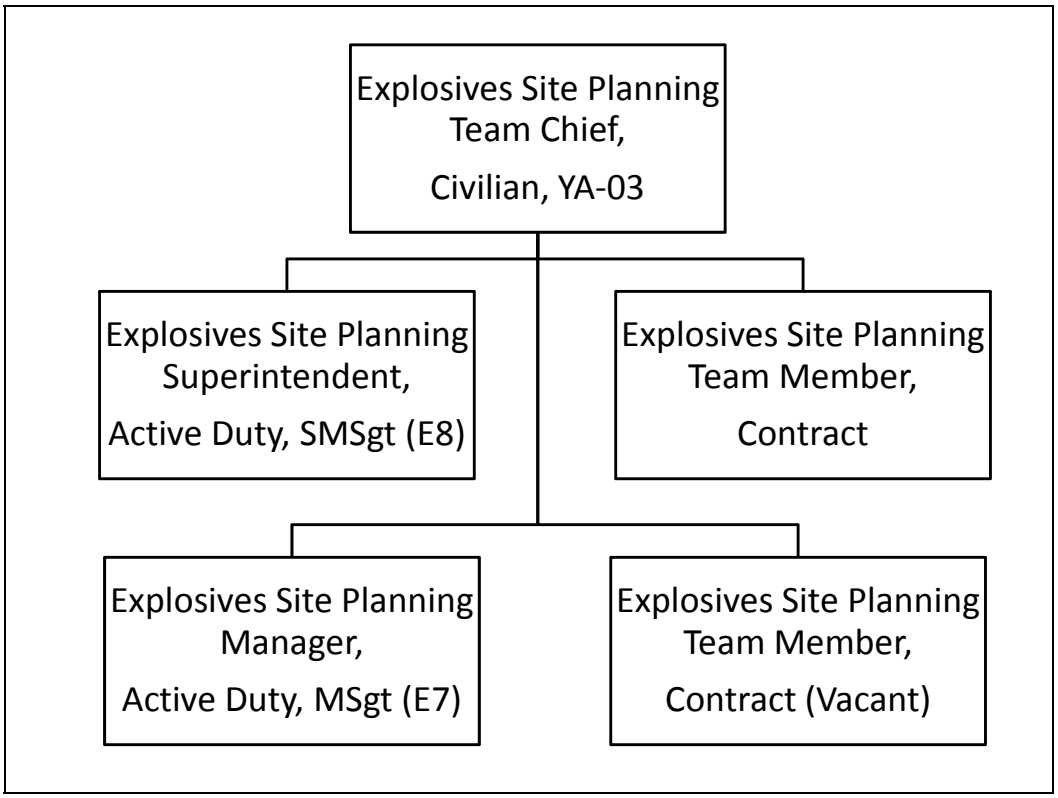

**Figure 4 – August 2008 HQ AFSC Explosives Site Planning Team Organization Chart**

### *Significant ESP Backlog Reduction Initiative Events*

#### *AFMAN 91-201, USAF Explosives Safety Standards, Revision Publication*

In August 2008 the current AFMAN 91-201 publication was dated 18 October 2001 and contained several deficiencies departing from the current DoD 6055.09-STD, *DoD Ammunition and Explosives Safety Standards.* Additionally, its USAF-unique formatting complicated incorporation of DoD Standard criteria changes resulting in a HQ AFSC decision to completely restructure the document resulting in the extensive cover-to-cover revision of AFMAN 91-201 to correct. Completion of this effort was the responsibility of the HQ AFSC ESP team and competed with ESP review activities from 2005 through 2008, which significantly impacted the team's ability to address the ongoing ESP review backlog. However, this effort was completed with the publication of the latest AFMAN 91-201 revision on 17 November 2008 enabling the team to redirect attention to ESP backlog.

In addition to enhancing AFMAN 91-201 criteria alignment with DoD 6055.09-STD, the revised USAF publication expanded ESP development, composition, and submission expectations improving the quality of ESP products received at HQ AFSC. More specifically, additional information was incorporated on glass breakage potential assessments from explosives effects, lightning protection system design specifications, and explosives risk assessments which were systemic deficiencies noted during most HQ AFSC-level ESP reviews during the 2007 timeframe. The new structure of AFMAN 91-201 facilitated the introduction of DoD 6055.09-

STD criteria changes and proved easier for users to navigate in comparison to preceding revisions.

***Internal ESP Review Process Improvements***

Prior to 2008 ESP review comments resolution tracking lacked consistency between assigned ESP review personnel resulting in MAJCOM- and Wing-level uncertainty of specific HQ AFSC expectations, and the absence of mandated deadlines for comment resolution resulted in a stagnated review process with ESPs remaining at HQ AFSC for up to 12 months. Additionally, it was noted the high internal coordination level often added several weeks to the review process before final submission for DDESB approval consideration.

To correct internal review deficiencies the ESP team 1) established a common format for formal memorandums submitted to the DDESB; 2) implemented a consistent review comment response process for MAJCOM action; 3) negated the practice of querying Wing-level organizations directly without MAJCOM concurrence; 4) implemented a 45-day return policy for unresolved requests; 5) established an efficient and effective peer review hierarchy; and 6) delegated final coordination authority to the ESP team chief. In combination these actions significantly improved the quality and consistency of ESP products submitted to the DDESB and reduced HQ AFSC's ESP review timelines from weeks to days and in some instances hours.

***ESP Team Composition Change***

From calendar years 2000 through 2008 the ESP team was comprised of one civil servant team chief, two SNCOs, and one to three contract personnel depending on the level of available funding at the beginning of each fiscal year. With the exception of the civil servant position, the remaining team positions experienced a high turnover history impacting the stability of the ESP review workforce. This condition also resulted in severe team shortages during periods when two or more personnel turnovers occurred simultaneously, which was further compounded by replacement personnel delays and extensive training periods for new arrivals.

Although personnel turnovers will always be prevalent with the active duty SNCO positions due to normal military rotation schedules, the contract positions were ideal candidates for contract-to-civilian conversions to increase long term workforce stability. This conversion methodology also supported USAF cost saving initiatives and eliminated the ESP team chief's requirement to manage contract performance. In addition to the successful conversion of three contract positions to DoD civilians the ESP team leadership secured an additional two temporary student-hire civilian positions to work demanding administrative tasks traditionally performed by ESP review personnel.

In comparison to the organizational structure presented in figure 4, the ESP review team workforce increased from four to six personnel with two additional temporary personnel to perform administrative duties. Figure 5 on the following page depicts HQ AFSC's current ESP team organization for civilian and active duty positions.

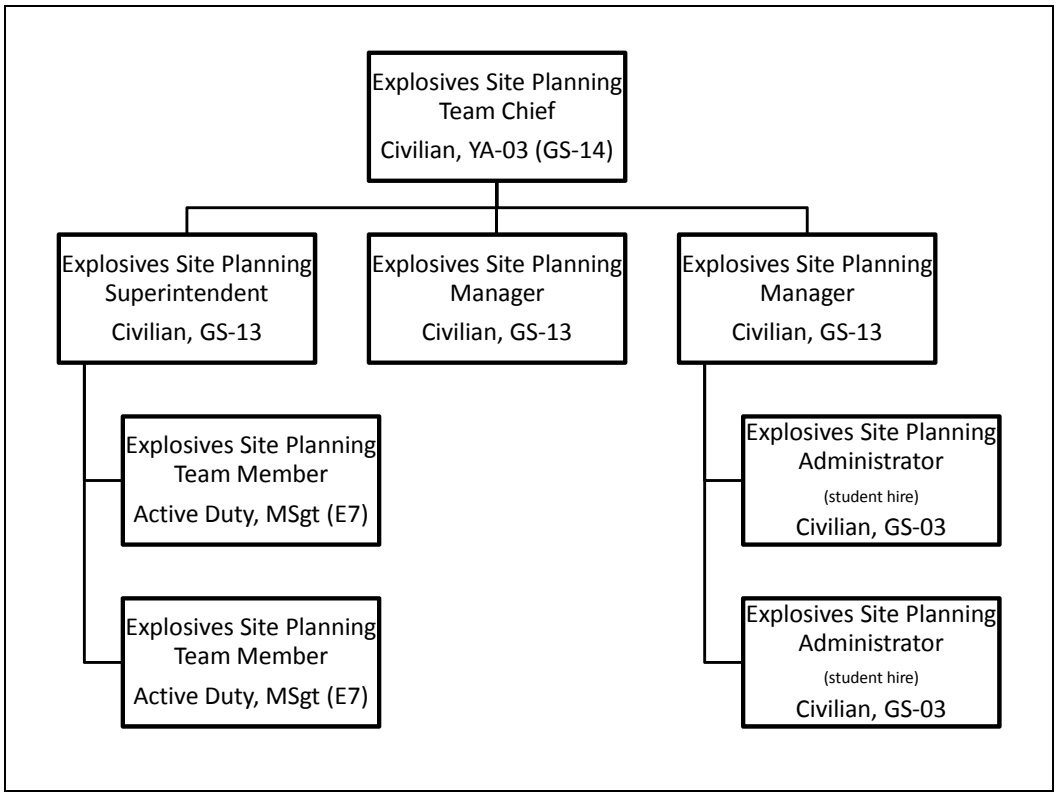


***Figure 5 – Current HQ AFSC ESP Team Composition***

### *ESP Development and Review Support Contract*

As presented in the preceding paragraphs the positive effects resulting from new comprehensive guidance, improved internal processes, and workforce gains were realized immediately at HQ AFSC. However, several MAJCOMs still had significant ESP review backlogs resulting from personnel turnovers and numerous unresolved ESP-related initiatives. To compensate HQ AFSC leveraged an existing ESP support contract to address key locations. This effort temporarily added two additional off-site contract personnel to the HQ AFSC workforce to address targeted MAJCOM workloads. In addition, HQ AFSC agreed to perform multi-level (MAJCOM and HQ AFSC) reviews to temporarily eliminate this duplicative review process. The dedicated contract support and temporary review bypass effort allowed several MAJCOMs to clear extensive ESP backlog queues while working to establish new personnel positions to keep pace with historic ESP submission rates.

### *Results*

As reported previously HQ AFSC's ESP review backlog balance was approximately 507 ESPs on 1 August 2008 with a 540-ESP backlog average at the beginning of each month measured over the course of the previous year. However, completion of a challenging AFMAN 91-201 revision, streamlining internal ESP-related processes, and ESP team workforce increases resulted in significant reductions in ESP processing timelines. Figure 6 on the following page depicts the ESP backlog balance tracked over the past two years with the last data point measured on 1 June 2010. The current backlog is primarily ESPs awaiting MAJCOM response to review queries.

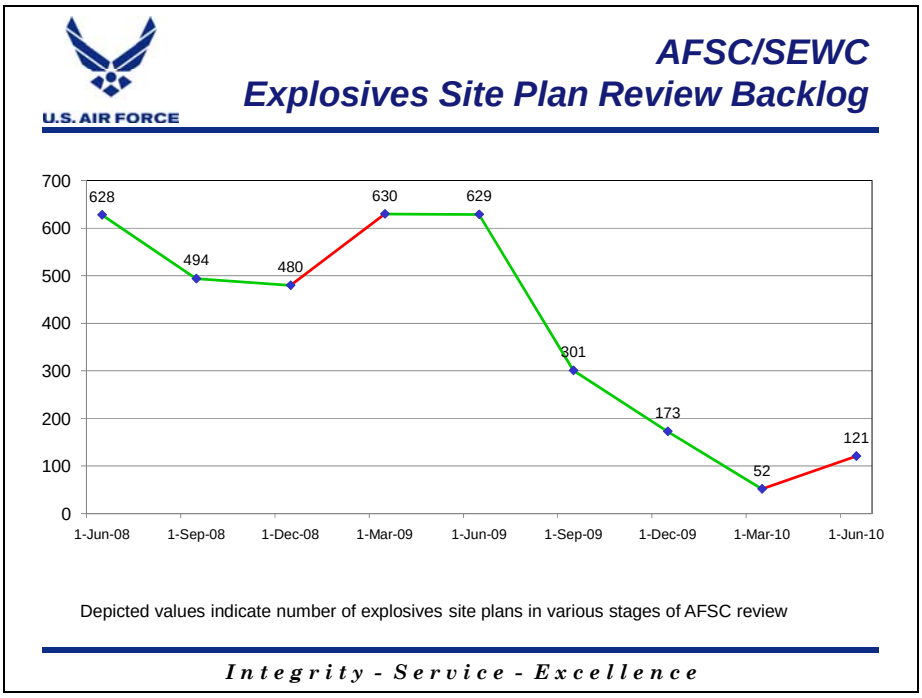


**Figure 6 – HQ AFSC Two-year ESP Review Backlog Statistics**

Another noteworthy aspect of this reduction is that it occurred during a period of increased ESP submission activity in which the amount of ESPs received in 2009 (1,275 ESPs) by HQ AFSC for review was over the ten-year average (1,033 ESPs). Figure 7 below depicts the amount of ESP submission received at HQ AFSC in calendar years 2000 through 2009 and the amount received from 1 January through 1 June 2010.

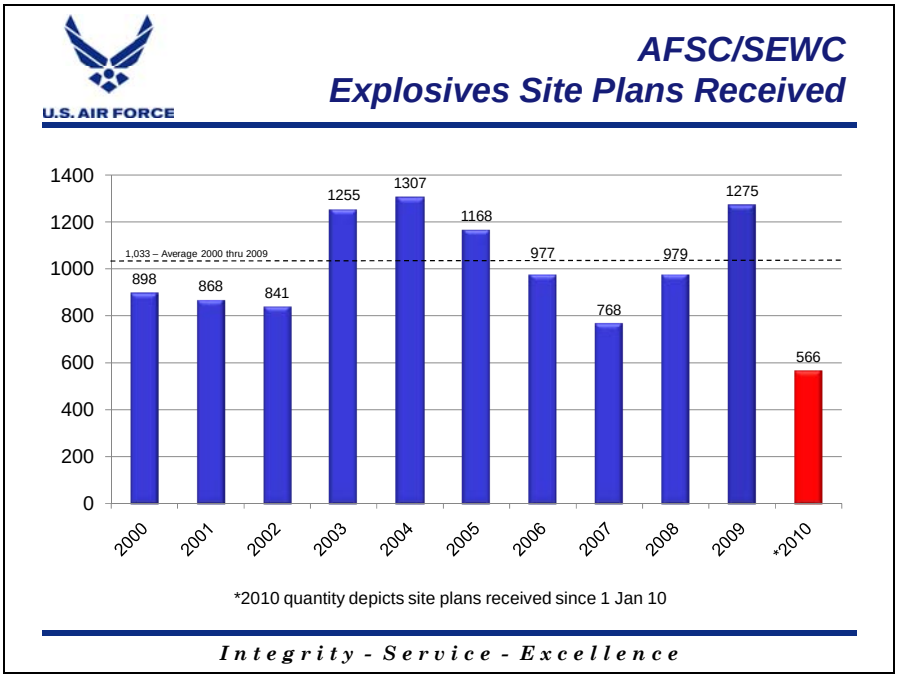


**Figure 7 – 1 January 2000 through 1 June 2010 Explosives Site Plan Volume**

## *Explosives Safety Program Management Improvement Initiatives*

### *DDESB Survey Finding Resolution*

Since 2007 HQ AFSC has collaborated with MAJCOMs to resolve numerous pre-2007 DDESB survey findings; however, demanding ESP review efforts competed with this initiative. Based on ESP team organization and internal review process improvements reported previously the ESP team was able to shift focus back to this task resulting in a reduction of open DDESB survey findings from 194 in September 2009 to 114 in June 2010. Given the current level of effort and resolution rate it is anticipated the remaining findings will be formally resolved in early 2011 allowing the USAF to focus more attention on the newly implemented DDESB Explosive Safety Management Program evaluation process as described in Department of Defense Instruction (DODI) 6055.16, *Explosives Safety Management Program*.

### *Explosives Quantity-Distance Exception Tracking*

As prescribed in DoD 6055.09-STD and AFMAN 91-201, all explosives QD exemptions must be reviewed every five years to revalidate the environment, risk assessment, and justification used to obtain the original approval. Unfortunately USAF accomplishment of this mandated requirement has been sporadic and impacts the accuracy of annual QD exception reporting to the DDESB. To address this deficiency HQ AFSC performed a USAF-wide audit of active QD exceptions in June through September 2009 reaffirming the total number of current USAF exceptions while eliminating 33 due to noted mission changes and new ESP initiatives. Additionally it was noted several QD exceptions were overdue 5-year periodic reviews, which are currently being addressed by MAJCOM organizations. It is anticipated completion of all review actions will occur in early 2011 and forwarded to the DDESB using the Hybrid Safety Submission process as prescribed in DoDI 6055.16.

### *Explosives Safety Siting (ESS) Software Development Support*

As reported during the 2008 DDESB Seminar, the USAF is participating in ESS software development with plans to begin the ASHS-to-ESS transition in fiscal year (FY) 2012. To facilitate USAF success of this initiate HQ AFSC and the ASHS software developer, Integrated Systems Analysts, Inc. (ISA) provided extensive input during the development of the ESS functional system requirements document to ensure all USAF automated explosives site planning expectations are address during the program's development. The most critical aspect of the program's functionality will be the ability to use ASHS output data already established throughout the USAF community to initially populate the ESS facility database and map during the implementation phase. Additionally, HQ AFSC, ISA, Naval Facilities Engineering Support Center (NAV FAC ESC) , and DDESB collaborated extensively during the assessment of DoD and USAF criteria via a formal flowcharting process to ensure QD assessment formulas programmed into ESS accurately reflect that prescribed in published DoD and USAF standards.

In preparation for the projected FY2012 ESS software deployment HQ AFSC advised all MAJCOMs to complete current and forecasted ESP development initiatives using the ASHS program to reduce the software transition impact should initial ESS performance deficiencies

occur. Additionally, HQ AFSC is in the implementation planning phase and anticipates publication of the formal plan early in FY2011.

### *Web-based Weapons (Explosives) Safety Manager Training*

Weapons safety managers in the USAF are required to attend a 6-week in residence course of instruction at Lackland Air Force Base (AFB), Texas to satisfy initial WSM training requirements. However, actual performance of several tasks taught during the in residence course may not actually be performed until several months after the WSM returns to the field. As a result many WSMs require refresher training on a variety of complex tasks (i.e. assessment of electromagnetic radiation environments, glass breakage assessments from potential blast overpressure effects, mishap investigation, risk assessments, etc.). Based on the costs of classroom instruction and associated student travel a web-based training approach was deemed the most cost effective and practical supplemental training methodology for WSM refresher training. Additionally, with the exception of the AWST-100, Introduction to Weapons Safety course listed in Figure 8, all others are intended to complement the formal in-residence course and not intended to replace attendance at the formal course.

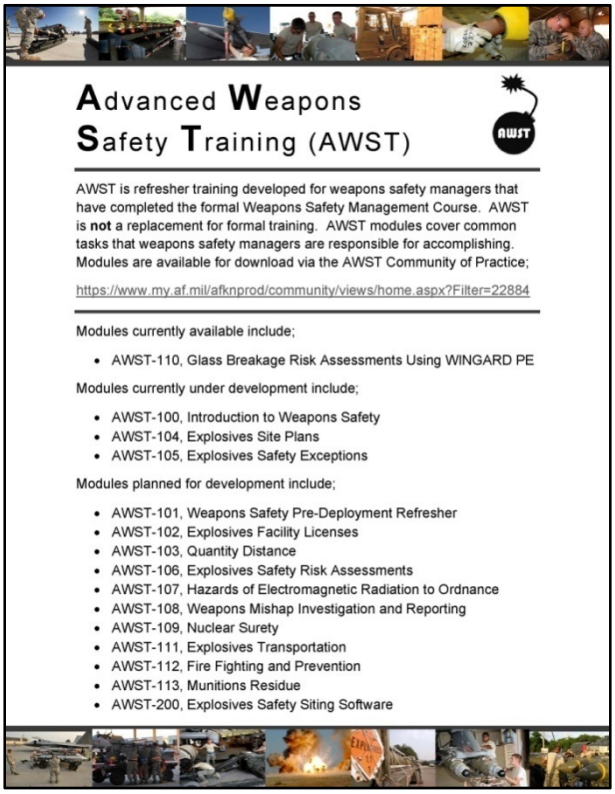


**Figure 8 – Advanced Weapons Safety Training Pamphlet**

Currently the AWST-110, Glass Breakage Risk Assessments Using WINGARD PE course is available to USAF personnel via the web-site listed in Figure 8. It is anticipate the next three courses (Introduction to Weapons Safety, Explosives Site Plans, and Explosives Safety Exceptions) will be available in September 2010 with three additional courses from the remaining list completed by January 2011.

### *Air Force Safety Automated System (AFSAS) Conventional Weapons Safety Module*

Headquarters AFSC currently uses a Microsoft Access database to track ESP status upon receipt; however, MAJCOM-, NAF-, and Wing-level personnel do not have visibility of the HQ AFSC database often resulting in numerous queries to determine ESP location and review status. Likewise, HQ AFSC does not have visibility of ESPs submitted into the review process until they arrive negating the ability to make advanced workload projections. Additionally, given the absence of a centralized filing system for ESPs numerous duplicative filing processes are used at the HQ AFSC-, MAJCOM-, NAF-, and Wing-levels.

The USAF currently uses the web-based AFSAS program for all mishap reporting, storage of mishap reports, and data/statistic retrieval. Given the inherence data processing, storage, and query capability in AFSAS it was determined a separate conventional weapons safety module could be developed to support the current ESP process.

Design of the functional system requirements document is occurring for this new capability in which the program will be designed to replace current antiquated email/attachment methodology with a web-based staffing mechanism that alerts each review organization and tracks the outcome of each review to final DDESB approval. In addition, the module will be the centralized USAF repository for active and inactive ESPs thus eliminating USAF-wide duplicative ESP filing processes.

***Extended HQ AFSC ESP Development Assistance***

An extended HQ AFSC-led ESP development effort was initiated in October 2008 in which HQ AFSC, MAJCOM, Wing, and contracted ESP team members performed a collaborative ESP development and review effort to eliminate problematic ESP backlog scenarios. More specifically, over the course of one year the team succeeded in eliminating an estimated 325-ESP MAJCOM backlog which had resided in a long term queue for a period of up to five years. This effort allowed the MAJCOM to direct focus on higher priority weapons safety management activities while the ESP backlog was eliminated. Additionally, the MAJCOM weapons safety organization was able to secure four additional personnel positions to prevent future ESP backlogs from occurring.

Currently HQ AFSC and contracted ESP team members are focusing on several other field-level initiatives to accelerate ESP development initiatives in preparation for the upcoming ESS software deployment. The objective is to establish DDESB-approved ESPs for all existing USAF potential explosion sites by FY2012.

## *Conclusion*

During the last DDESB Seminar it was reported HQ AFSC had an extensive 507-ESP backlog with the goal of reducing the monthly backlog levels to 125 ESPs or less. As of 1 June 2010 the ESP backlog quantity is 121 and over 70 percent are ESPs awaiting MAJCOM resolution of HQ AFSC review queries. Given current efficiencies, it is anticipated the amount assessed at the beginning of each month will remain below 125.

The significant ESP backlog reduction occurred due to actions taken by HQ AFSC to reduce timelines associated with review activities. Actions included 1) completion of an extensive AFMAN 91-201 revision initiative, 2) streamlining HQ AFSC ESP review processes, 3) establishment of three additional civilian positions and two temporary student hire civilian positions, and 4) use of an ESP support contract to perform Wing-, NAF, and MAJCOM-level ESP development and associated quality review activities.

The elimination of the ESP backlog provided an outstanding opportunity to focus on several new initiatives designed to improve WSM program management throughout the USAF. These include 1) resolution of pre-2007 DDESB survey findings, 2) implementation of explosives QD tracking and periodic review program, 3) assistance in ESS development and USAF preparation for software deployment in FY2012, 4) development of web-based WSM refresher training courses, 5) development of an AFSAS conventional weapons safety module, and 6) extended field-level ESP development support. Completion of all these initiatives is programmed to occur during the FY2011 timeframe.

A follow up report on the outcome of these initiatives is already planned for the 2012 DDESB Seminar and will highlight the impact of the initiatives described in this report along with new initiatives designed to improve weapons (explosives) safety program management throughout the USAF.

# *Headquarters U.S. Air Force*

*Integrity - Service - Excellence*

# USAF Explosives Site Plan Report and Explosives Safety Program Support Initiatives

Year of the Air Force Family

**Albert Webb**
**Headquarters Air Force Safety Center,**
**Conventional Weapons Safety**
**July 2010**

# Overview

- USAF Explosives Site Planning (ESP) Process
- 2008 DDESB Seminar Report – ESP Review Status
- ESP Review Backlog
  - Largest Contributing Factor
  - Significant Backlog Reduction Events
- Current ESP Review Status
- Explosives Safety Program Support Initiatives

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# USAF Explosives Site Planning Process

## Wing (Installation)

Develops explosives site plan consisting of transmittal memorandum, quantity-distance analyses and associated map, facility design information, and risk assessments

## Numbered Air Force (NAF)

Reviews ESP and coordinates corrective action with Wing developer

## Major Command (MAJCOM)

Reviews ESP and coordinates corrective action with NAF reviewer or Wing developer

## Air Force Safety Center (AFSC)

Final USAF ESP review authority - coordinates risk acceptance with Headquarters Air Force and/or corrective action with MAJCOM

## Department of Defense Explosives Safety Board (DDESB)

Final ESP review/approval authority

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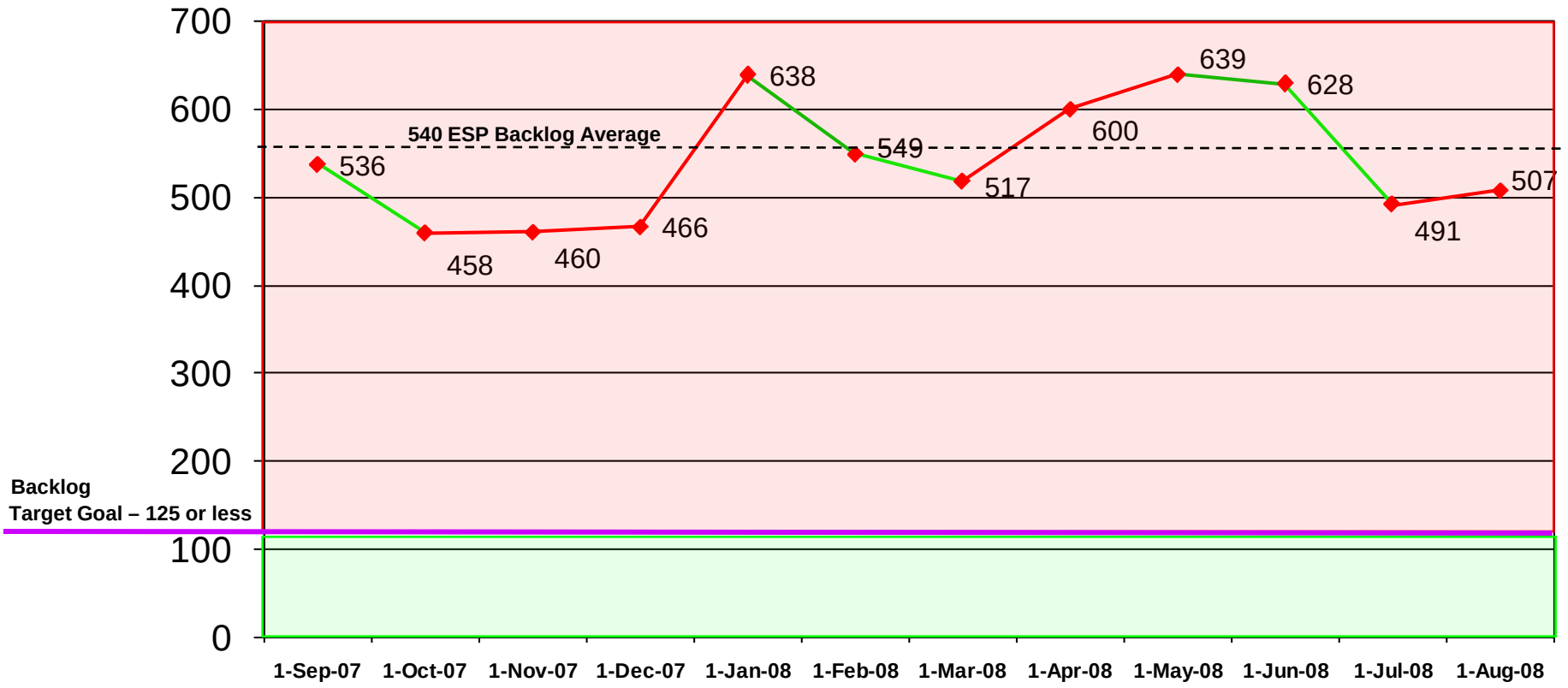
# 2008 DDESB Seminar Report

## Explosives Site Plan Backlog Status



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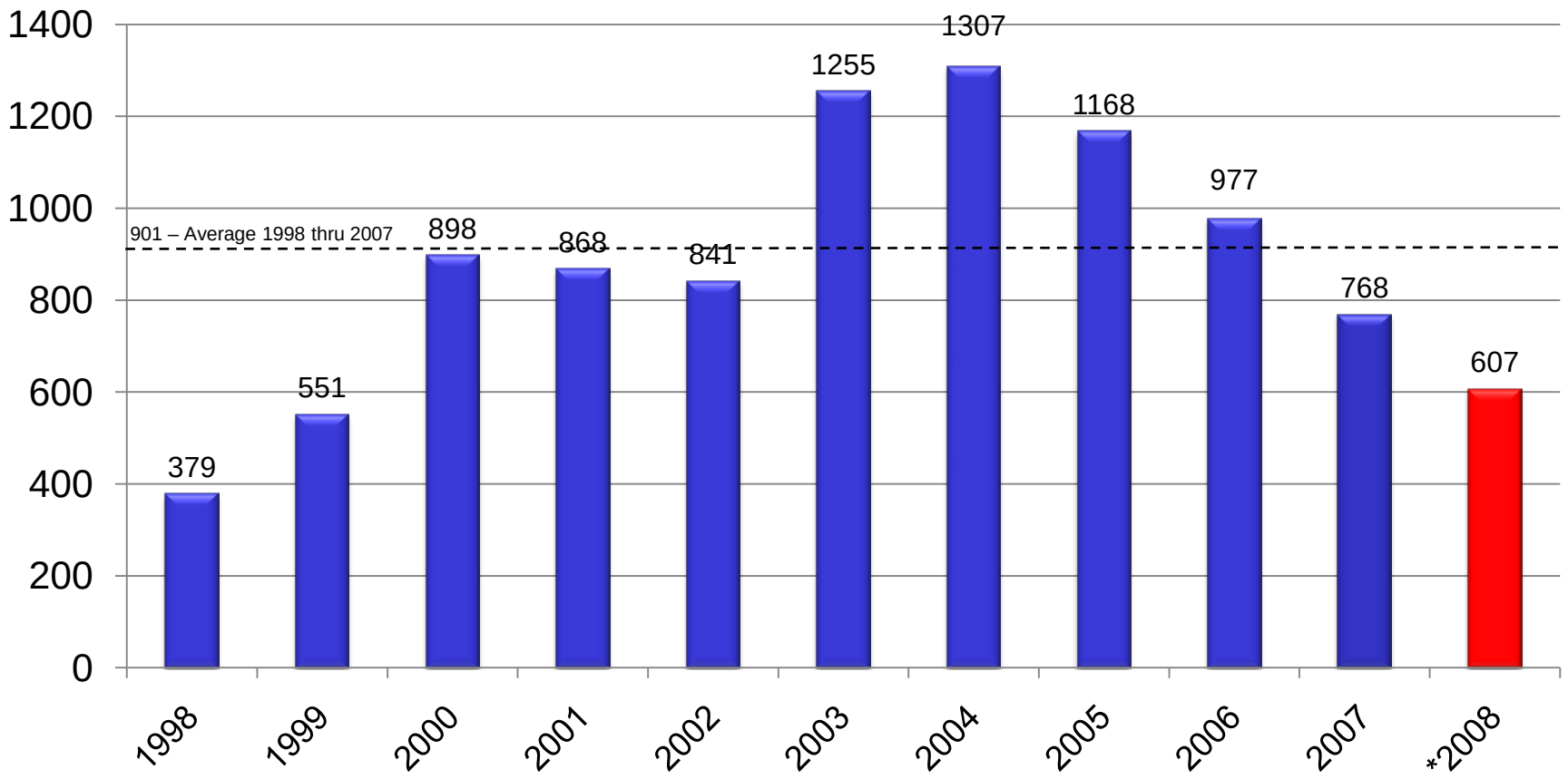
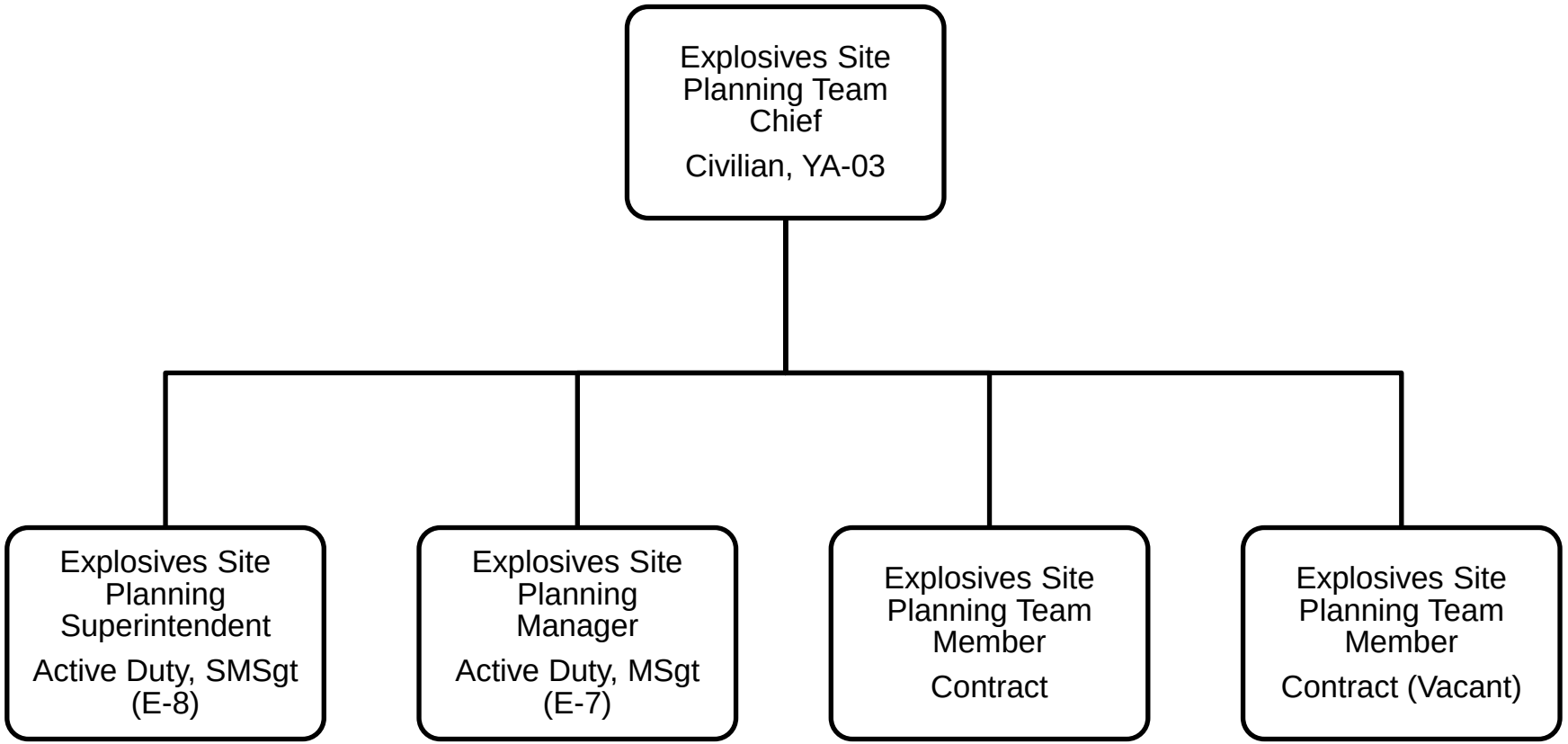
# 2008 DDESB Seminar Report

## Explosives Site Plans Received Annually




*2008 quantity depicts site plans received since 1 Jan 08

# Largest Contributing Factor
## Organization Size and Stability



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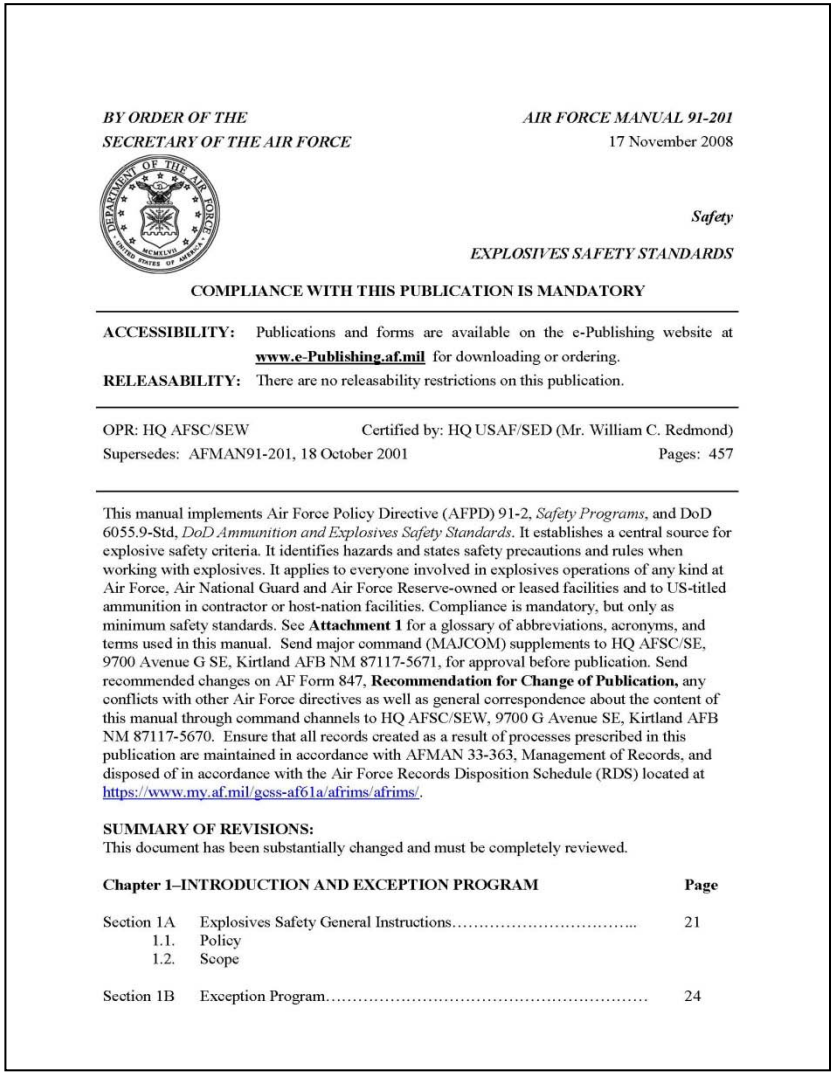
# Significant Events
## AFMAN 91-201 Revision Release

- **Previous 18 Oct 01 edition of AFMAN 91-201, *USAF Explosives Safety Standards,* outdated**
- **New revision released on 17 Nov 08**
  - **Revised format…more in line with DoD 6055.09-STD, *DoD Standard for Ammunition and Explosives***
  - **Expanded ESP development, composition, and submission expectations**
  - **Enhanced field guidance**
- **2008 release allowed AFSC team to focus more attention on ESP reviews**
- **2010 revision almost complete**



*BY ORDER OF THE*
*SECRETARY OF THE AIR FORCE*

*AIR FORCE MANUAL 91-201*
17 November 2008

*Safety*

*EXPLOSIVES SAFETY STANDARDS*

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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Supersedes: AFMAN91-201, 18 October 2001 — Pages: 457

This manual implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*, and DoD 6055.9-Std, *DoD Ammunition and Explosives Safety Standards*. It establishes a central source for explosive safety criteria. It identifies hazards and states safety precautions and rules when working with explosives. It applies to everyone involved in explosives operations of any kind at Air Force, Air National Guard and Air Force Reserve-owned or leased facilities and to US-titled ammunition in contractor or host-nation facilities. Compliance is mandatory, but only as minimum safety standards. See **Attachment 1** for a glossary of abbreviations, acronyms, and terms used in this manual. Send major command (MAJCOM) supplements to HQ AFSC/SE, 9700 Avenue G SE, Kirtland AFB NM 87117-5671, for approval before publication. Send recommended changes on AF Form 847, **Recommendation for Change of Publication,** any conflicts with other Air Force directives as well as general correspondence about the content of this manual through command channels to HQ AFSC/SEW, 9700 G Avenue SE, Kirtland AFB NM 87117-5670. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at https://www.my.af.mil/gcss-af61a/afrims/afrims/.

**SUMMARY OF REVISIONS:**
This document has been substantially changed and must be completely reviewed.

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1.2. Scope

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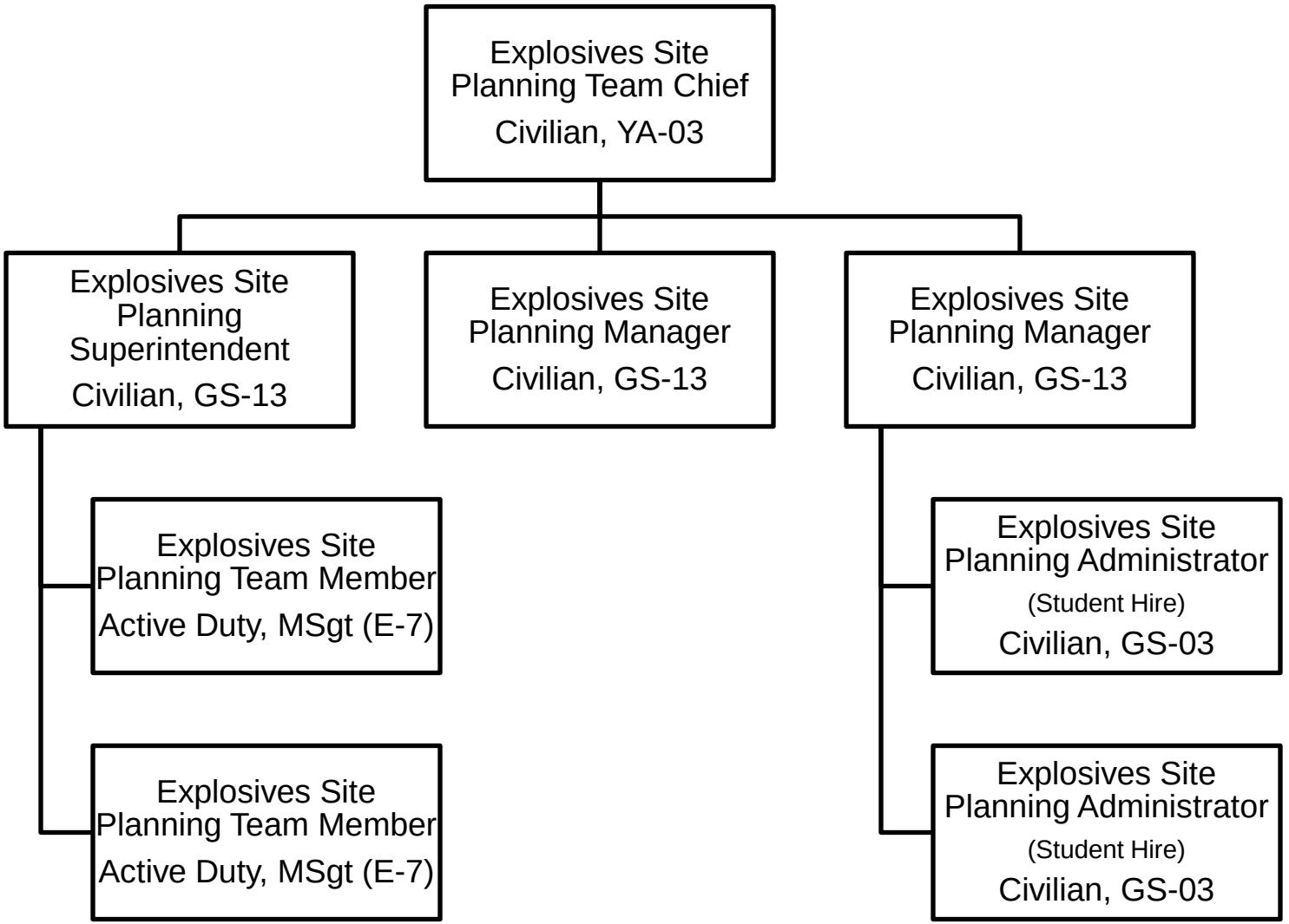
# Significant Events
## AFSC Review Process Improvements

- Established a common AFSC transmittal memorandum format for correspondences to the DDESB
- Implemented consistent review feedback methodology to MAJCOMs and negated practice of querying Wing-level reviewers directly
- Implemented a 45-day return policy for unresolved queries
- Established an efficient and effective peer review hierarchy
- Delegated final coordination authority to ESP team chief

# Significant Events
## Revised Organization



# Significant Events
## Leveraged ESP Development Contract

- Modified existing ESP contract to allow off-site support
- Used contract to clear targeted MAJCOM backlogs
  - Revised dated ESP submissions
  - Performed MAJCOM-level reviews
- Results included…
  - Completed ESPs for problematic locations
  - Temporary elimination of duplicative review processes
  - Elimination of targeted MAJCOM backlogs

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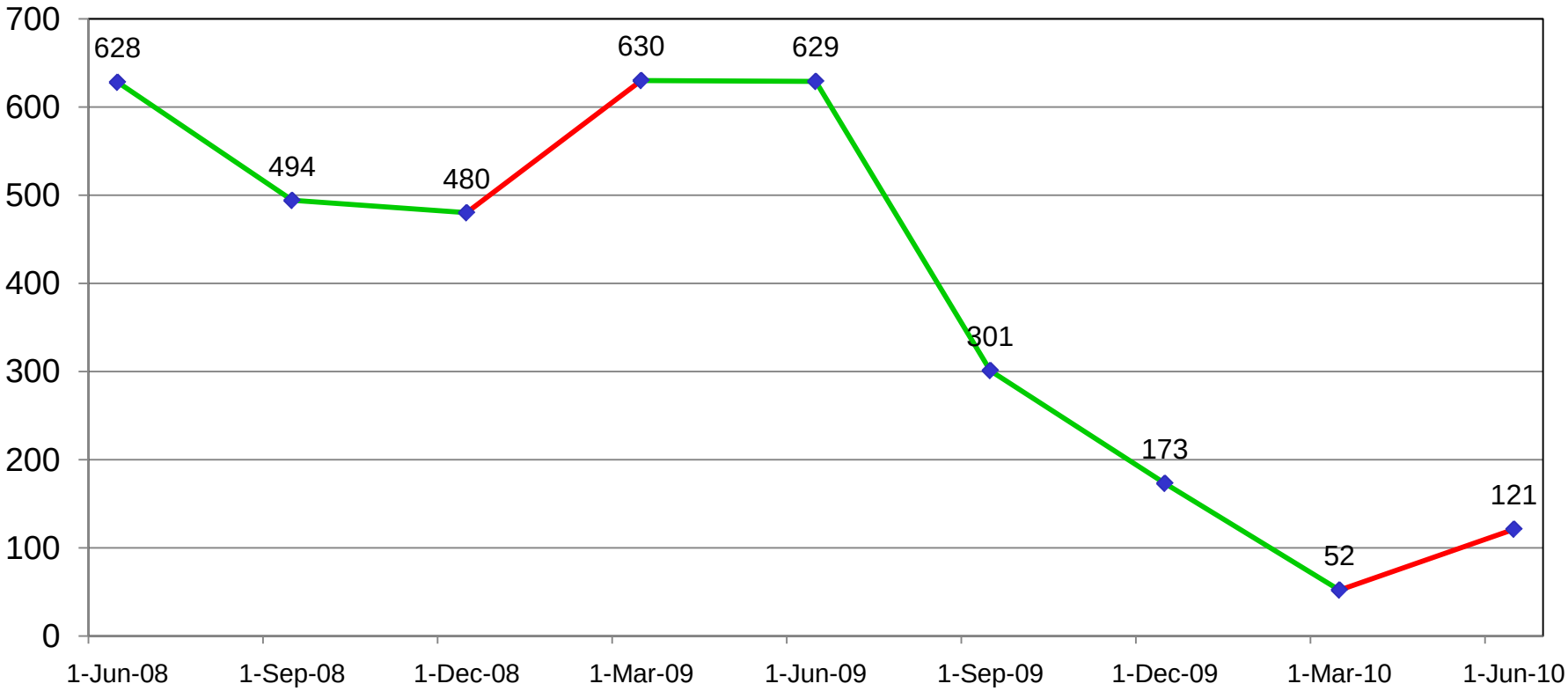
# 2010 DDESB Seminar

## Explosives Site Plan Review Status




Depicted values indicate number of explosives site plans in various stages of AFSC review

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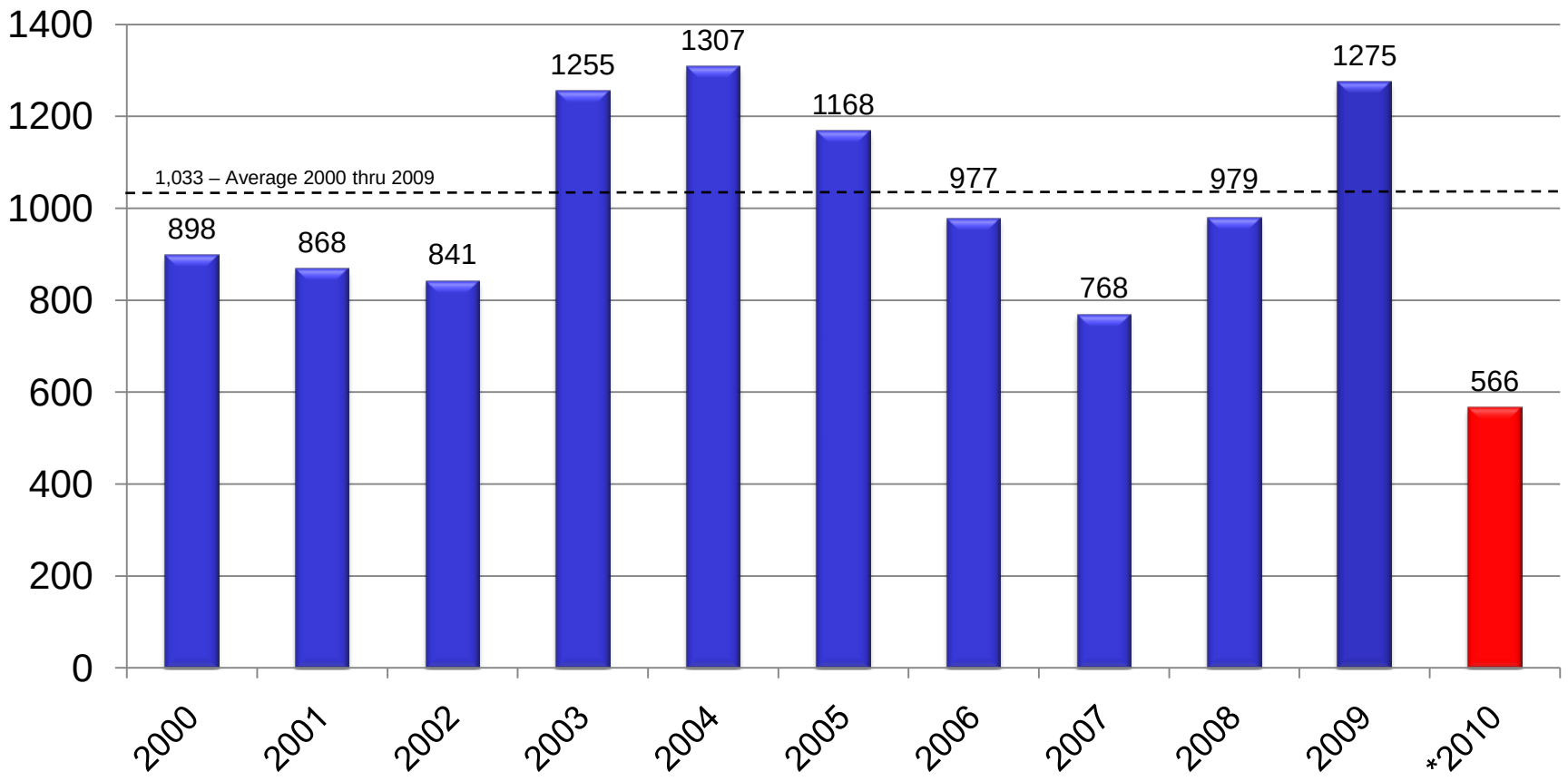
# 2010 DDESB Seminar

## Explosives Site Plans Received




*2010 quantity depicts site plans received since 1 Jan 10

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# Program Support Initiatives
## DDESB Survey Finding Resolution

- Numerous pre-2007 DDESB survey finding existing
- Finding resolution historically competed with ESP review activities
- Increased workforce provided the opportunity to focus attention on unresolved findings
- 194 unresolved findings existing in Sep 09
- 80 resolved (closed) between Sep 09 and Jun 10
- Anticipate formal closure of all findings in 2011

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# Program Support Initiatives
## Quantity-Distance Exception Tracking

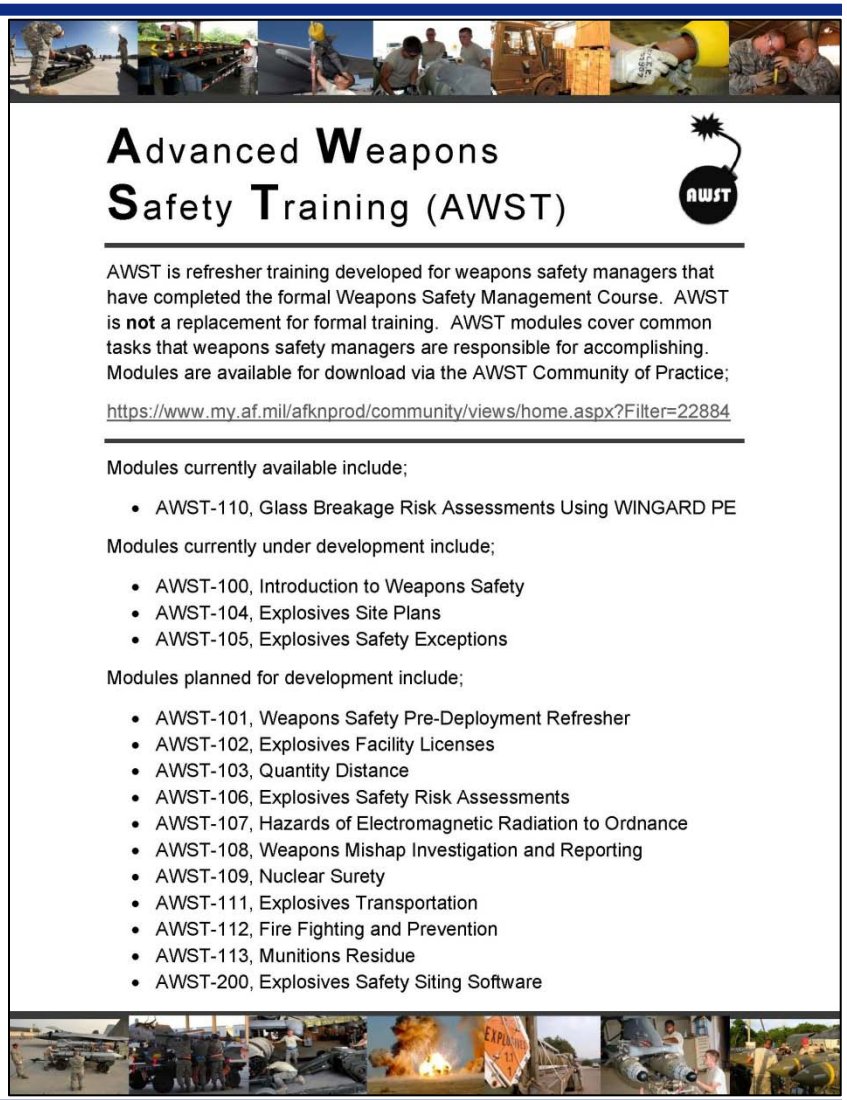
- DoD 6055.09-STD and AFMAN 91-201, existing quantity-distance (QD) exceptions must be reviewed periodically
- Periodic review performance questionable
- AFSC performed USAF-wide audit Jun – Sep 09
- 33 USAF QD exceptions eliminated during audit
- Overdue periodic reviews identified and MAJCOMs working to complete
- Anticipate resolution of all overdue reviews in 2011
- New process in place to monitor periodic review activities

# Program Support Initiatives
## Explosives Safety Siting Support

- 2008 – USAF joins Explosives Safety Siting (ESS) software development initiative
- Active AFSC membership in DoD Automated Explosives Site Planning Working Group and ESS Configuration Control Board
- USAF ESS implementation plan currently in development
- USAF will leverage existing Assessment System for Hazard Surveys (ASHS) databases to populate ESS program
- Beta testing scheduled in late fiscal year (FY) 2011
- Targeted USAF implementation scheduled in FY2012

# Program Support Initiatives
## Advanced Weapons Safety Training

- **Weapons safety managers attend formal 6-week classroom course**
- **Actual performance of some critical tasks may not occur until months after formal training**
- **Need for refresher training exists**
- **Web-based training methodology deemed most convenient and cost effective approach**
- **Glass Breakage Risk Assessments Using WINGARD PE was the pilot course…well received**
- **Three additional courses in final development phase with eleven additional courses planned**



**Advanced Weapons Safety Training (AWST)**

AWST is refresher training developed for weapons safety managers that have completed the formal Weapons Safety Management Course. AWST is **not** a replacement for formal training. AWST modules cover common tasks that weapons safety managers are responsible for accomplishing. Modules are available for download via the AWST Community of Practice;

https://www.my.af.mil/afknprod/community/views/home.aspx?Filter=22884

Modules currently available include;

- AWST-110, Glass Breakage Risk Assessments Using WINGARD PE

Modules currently under development include;

- AWST-100, Introduction to Weapons Safety
- AWST-104, Explosives Site Plans
- AWST-105, Explosives Safety Exceptions

Modules planned for development include;

- AWST-101, Weapons Safety Pre-Deployment Refresher
- AWST-102, Explosives Facility Licenses
- AWST-103, Quantity Distance
- AWST-106, Explosives Safety Risk Assessments
- AWST-107, Hazards of Electromagnetic Radiation to Ordnance
- AWST-108, Weapons Mishap Investigation and Reporting
- AWST-109, Nuclear Surety
- AWST-111, Explosives Transportation
- AWST-112, Fire Fighting and Prevention
- AWST-113, Munitions Residue
- AWST-200, Explosives Safety Siting Software

# Program Support Initiatives
## Air Force Safety Automated System

- **ESP tracking doesn't begin until reaching AFSC level using Microsoft Access database. Problems include…**
  - **Inability to track ESPs until AFSC arrival…no visibility of in-route work**
  - **ESP staffing using email…can be problematic for >10MB files**
  - **Current Access database has failure history for QD exception tracking**
  - **Current AFSC database not visible to Wings, NAFs, and MAJCOMs**
- **Air Force Safety Automated System (AFSAS) module will…**
  - **Replace email process with automated workflow staffing mechanism capable of accommodating large ESP files**
  - **Replace AFSC Access database with AFSAS platform accessible by all weapons safety managers**
  - **Replace duplicative filing processes with a single file repository**
  - **Track QD exceptions, deviations and compensatory measures**

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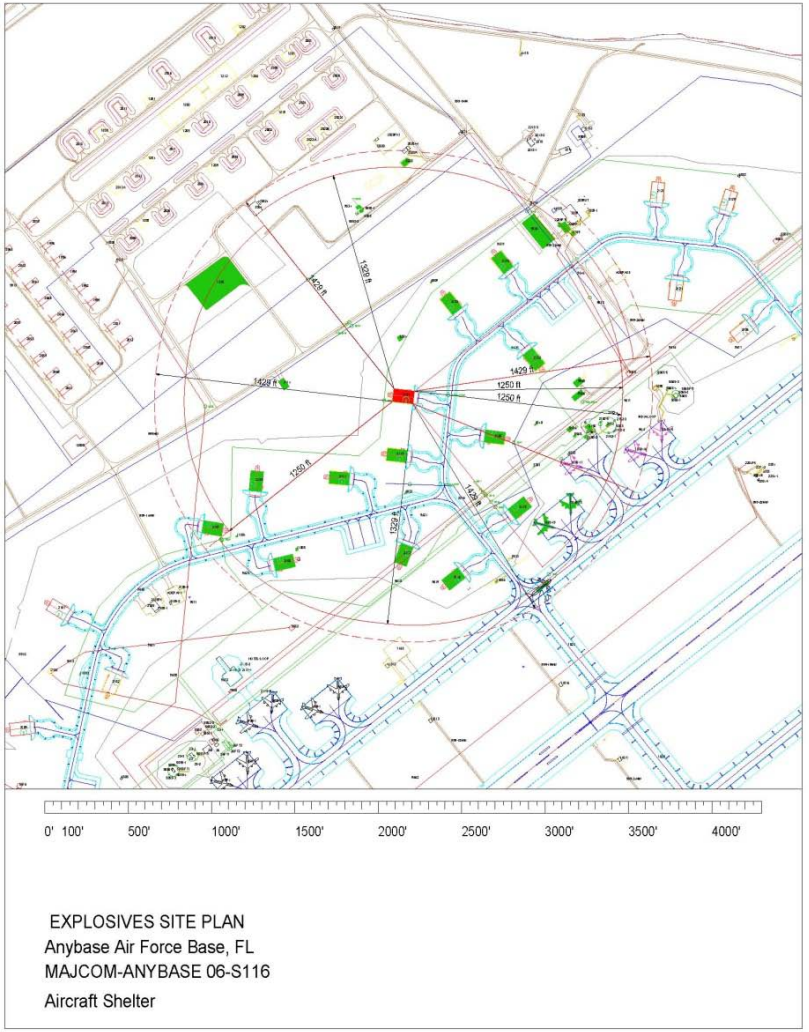
# Program Support Initiatives
## Expanded AFSC Site Planning Support

- To reduce ESS implementation risk AFSC instructed MAJCOMs to complete all outstanding ESP development initiatives before FY2012
- AFSC willing to assist in completion of ESP initiatives
- ESP development assistance includes highly qualified contracted support
- Several MAJCOMs benefiting from this effort



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# Conclusion

- HQ AFSC ESP review workforce levels were insufficient
- HQ AFSC implemented actions to improve ESP process to include…
  - release of AFMAN 91-201 revision in 2008
  - improvements to internal ESP review process
  - increasing size of ESP review workforce
  - leveraging existing contract support
- Reduced ESP backlog has allowed the HQ AFSC team to focus on…
  - resolving pre-2007 DDESB survey finding
  - improve tracking of USAF QD exceptions
  - ESS development and USAF deployment preparation
  - development of web-based WSM refresher training
  - development of AFSAS conventional weapons safety module
  - extending HQ AFSC ESP development to the field
- Update planned for 2012 DDESB Seminar

# Questions