

# **Airborne Hazards and Open Burn Pit Registry (AHOBPR)**

## **Requirements Specification Document**



**Department of Veterans Affairs**

**December 2014**

**Version 1.3**

## Revision History

Note: The revision history cycle begins once changes or enhancements are requested after the Requirements Specification Document has been baselined.

Date	Version	Description	Author
30 Dec 2014	1.3	Updated with Option Period One and Two information	ASM Research
2 Dec 2014	1.2	Updated	ASM Research
13 Nov 2014	1.1	Updated	ASM Research
23 Oct 2014	1.0	Initial	ASM Research

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# 1. Introduction

The Veterans Health Administration (VHA) Office of Public Health (OPH) requests an Information Technology (IT) solution for the Environmental Health Registries, specifically the Airborne Hazards and Open Burn Pit Registry.

The currently deployed interim Web Mobile Solution (WMS) Burn Pit Registry (BPR), referred to as WMS or WMS BPR throughout this document, provides Operation Enduring Freedom/Operation Iraqi Freedom Veterans and other eligible individuals health surveillance and evaluation processes and tracking to improve quality of VHA services for Veterans exposed to airborne hazards during deployment, such as open burn pits, which were used to dispose of waste, including potentially hazardous material. The WMS BPR consists of (a) a public self-registration web portal, which veterans or service members use to complete a health related questionnaire, a Clinician portal to enable users with CPRS credentials to view the questionnaire, and (b) a Mongo database, which stores the data entered from the web portal.

A new end-to-end enterprise Airborne Hazards and Open Burn Pit Registry (AHOBPR) is needed to more effectively and efficiently capture and process AHOBPR demographic, exposure, and health related data that may determine long-term health impacts to Veterans. The AHOBPR will include the WMS BPR interim solution, build upon the CRS platform data store, and provide a new intranet-only accessible web portal to manage the registry and facilitate the care of the participants. The AHOBPR data store will be tied to other VA and DoD services end points for clinical, demographic, contact and scheduling data. The AHOBPR will include the following items: (a) self-registration via a public facing portal, (b) automating Veteran eligibility for registry inclusion, (c) the ability for Veterans to electronically (via a public facing portal) enter health assessment data and respond to questionnaires, (d) provide analysis and reporting capability, (e) provide VHA Central Office, Office of Public Health (OPH), staff and VHA field staff (clinicians, providers, health care personnel) intranet web portal access to the AHOBPR back end database, (f) update VistA health record via CRS integration (e.g. CPRS, MDWS, ETL) (g) a AHOBPR user interface to automated data collection from external systems such as the Computerized Patient Record System (CPRS), the Corporate Data Warehouse (CDW), Medical Domain Web Services (MDWS), VistA, and the DoD (such as occupational exposure data, Individual Lifetime Exposure Record (ILER)), and (h) be integrated with the VHA Support Service Center (VSSC) so that the VSSC can obtain AHOBPR data that for analyzing health outcomes, for outreach, for reports to Congress, and for other stakeholders, to generate research hypotheses, and to determine the effectiveness of VHA health services to these specific Veteran populations.

The finished end-to-end enterprise AHOBPR product will consist of (a) a database, (b) a web-based portal that includes a public facing (Internet) portal and a VA facing (Intranet) portal, and (c) a reporting, analysis and data cube capability. Development will include: (a) re-using/refactoring the current WMS BPR public self-registration web portal code, (b) porting the existing registrant (Mongo) data base to the new end-to-end AHOBPR data base, (c) building upon the Converged Registry Solution (CRS) platform, (d) building an intranet web portal by which VA providers, clinicians, and AHOBPR staff,

and (e) interfacing or integrating with various VA services and end points such as DoD, Veterans Health Information Systems and Technology Architecture (VistA), Enrollment Systems Redesign (ESR), Veteran Information/Eligibility Reporting System (VIERS), Converged Registry Solution (CRS), Computerized Patient Record System (CPRS), VHA Support Service Center (VSSC) Corporate Data Warehouse (CDW) functions, Identity and Access Management (IAM), eBenefits, Administrative Data Repository (ADR). Reference Appendix D for acronyms and abbreviations.

## **1.1. Purpose**

The purpose of this document is to define, at a high level, the requirements for the Airborne Hazards and Open Burn Pit Registry (AHOBPR) project. Additional requirements elaboration will be needed as this document has been written at a high level.

## **1.2. Scope**

The following is a summary of the scope for the Base Period of the AHOBPR project:

1. Develop a Clinician portal for viewing, reviewing and reporting information in the AHOBPR Clinician portal.
  - a. Develop, as part of the Clinician portal, Registry management for managing access to the AHOBPR Clinician portal.
  - b. Develop, as part of the Clinical portal, the ability to view questionnaire responses.
  - c. Develop, as part of the Clinician portal, standard and Ad Hoc reports that display results by individual and aggregated by location or time.
  - d. Develop, as part of the Clinician portal, the ability to flag registrants' records for search and reporting purposes.
  - e. Develop, as part of the Clinician portal, the ability to manually reconsider non-eligible registrants.
2. Update the secured, public facing web Participant portal for Veterans and Service Members to enter information (self-identify) regarding their possible exposure to Open Burn Pits during their time in the service.
  - a. Update the Participant portal by porting the existing (Mongo DB) data base to the new end-to-end AHOBPR data base.
  - b. Update the Participant portal by integration with eBenefits via SSO redirect.
  - c. Update the Participant portal Registrant login
  - d. Update the Participant portal Eligibility Check
  - e. Develop, as part of the Participant portal, the ability for the registrant to update communication data.

- f. Develop, as part of the Participant portal, the ability to collect process metrics.
- 3. Develop system interfaces to:
  - a. Provide the ability to import participant demographic and clinical data from VA and DoD sources.
  - b. Provide the ability to export Registry data to central databases and DoD.
  - c. Provide the ability to export process metrics to central databases.
  - d. Provide the ability to import deployment and exposure data.
  - e. Provide the ability to export analytics data.

The following is a summary of the scope for the Option Period One of the AHOBPR project:

1. Update the Participant portal questionnaire usability enhancements
2. Develop, as part of the Clinician portal, the ability to supply subsets of eligible participants with online health risk communication and outreach information on an ongoing and recurring basis.
3. Develop, as part of the Clinician portal, the ability to electronically request additional information from eligible participants on an ongoing and recurring basis.
4. Develop a system interface to update contact information in/from ADR.

The following is a summary of the scope for the Option Period Two of the AHOBPR project:

1. Update the Participant portal to provide the ability to electronically schedule an in-person health concern and exposure evaluation via the web portal.
2. Update the Participant portal to provide the ability for a Veteran to request contact with a member of his/her assigned PACT via the web portal.
3. Develop, as part of the Clinician portal, the ability to monitor Veterans requesting in person clinical appointments and those who were scheduled and those who had completed appointments.
4. Develop, as part of the Clinician portal, the ability to report compensation status of registry participants.
5. Provide the ability for open burn pit exposure evaluation data to be integrated into the EHR.
  - a. Provide ability for facility providers to electronically enter evaluation data into the health record and improve integration of the Veteran-entered data into the provider workflow.
  - b. Provide the ability to view flags or notifications in the health record.
6. Provide the ability to export data to VBA for the compensation process.

## 1.3. References

New Service Request (NSR) #20121207

OBP Business Requirements Document

( [REDACTED] [OpenBurnPitRegistry/HREG\\_OBP\\_BRD.doc](#) )

AHOBPR Business Requirements Change Document

( [REDACTED] [OpenBurnPitRegistry/HREG\\_AHOBPR\\_BRCD.docx](#) )

AHOBPR PWS Contract

AHOBPR System Design Document (SDD)

AHOBPR Integrated Master Schedule

VA Enterprise Requirements Repository (ERR)

OMB 2900-XXX VA Form 10-10066 Airborne Hazards And Open Burn Pit Registry Self-Assessment Questionnaire (DRAFT 21 October 2013)

VA Handbook 6500 – Information Security Program

( [REDACTED] [vapubs/viewPublication.asp?Pub\\_ID=364&FTtype=2](#))

Public Law: 112-260 (S.3202) ([Link to Public Law](#))

FRN Registry Establishment Notice

## 2. Overall Description

### 2.1. Accessibility Specifications

	The Data Store application shall be developed in compliance with VA requirements for Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508
	Software shall comply with requirements in the 508 checklists found at [REDACTED]508workgroup/checklists.asp. Specifically, the software must comply with the following checklists:
	Software Applications and Operating Systems Requirements Checklist (§1194.21 of Section 508)
	Web-based Internet Information and Applications Requirements Checklist (§1194.22 of Section 508)
	Functional Performance Criteria Requirements Checklist (§1194.31 of Section 508)
	The following specific Section 508 requirements are mandated by the Registries Program:
	A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content). See 508 Checklist item 1194.21(d)1.

	<b>The Data Store application shall be developed in compliance with VA requirements for Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508</b>
	Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup. See 508 Checklist item 1194.21(h)3(i).
	When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology. See 508 Checklist item 1194.22(l).
	A method shall be provided that permits users to skip repetitive navigation links. See 508 Checklist item 1194.22(o).
	At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided. See 508 Checklist item 1194.31(a).
	When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet. See 508 Checklist item 1194.22(m).

## 2.2. Business Rules Specification

### 2.2.1. Base Period Business Rules Specification

<b>BN/OWNER Number</b>	<b>Business Need (BN)/Owner (OWNER) Requirement</b>
NEED1555 BN 1	Adhere to the Enterprise Level requirements
NEED/ARCH BN 2	Utilize nationally standardized terminology for all fields in the patient management tool/registry/information system where available.*  *Veteran-entered data is not meant to go into the Electronic Health Record (EHR) without provider interpretation to ensure that it is indeed healthcare data.
OWNER2.1	Provide the ability to express all content using nationally recognized reference and authoritative terminology standards.
OWNER2.2	Provide the ability to record observations using standardized terms.
OWNER2.3	Provide the ability for users to submit a request to Standards and Terminology Services STS for new standardized terms (e.g., via New Term Rapid Turnaround [NTRT] process).
OWNER2.4	Provide the ability for STS to distribute the newly standardized terms to each instance of the solution.



BN/OWNR Number	Business Need (BN)/Owner (OWNR) Requirement
NEED/ARCH BN3	Allow eligible Veterans and Service members (hereafter referred to as eligible participants) to self-register into the Airborne Hazards and Open Burn Pit Registry via an on-line secure Internet portal accessible from any location (which includes participants not currently registered in the VA health system) and store this data in a centralized location(s)/database(s).
OWNR3.1	Provide the ability for automatic authentication of registry participation eligibility for the Veteran or Service member via a secure online Internet portal.
OWNR3.1.1	Provide ability for eligible participants to enter their communications preferences, i.e. email address, mailing address, etc.
OWNR3.1.2	Provide the ability to access Internet web portal via <b>mobile device/application</b>
OWNR3.1.4	Provide the ability to view general information related to burn pits or the registry and/or be directed to another site containing this information (without having to log in).
OWNR3.2	Provide the ability for the system to determine eligibility for registry inclusion.
OWNR3.2.1	Leverage existing vetted criteria to provide ability to determine participant eligibility based on key data element comparison to other data sources (such as OEF/OIF/OND service in VA/DoD Identity Repository (VADIR))
OWNR3.2.2	Provide the ability to utilize a VA Identity Access Management (IAM) approved unique person identifier to identify Veterans and Service members.  (The Phase I WMS solution uses the EDIPI obtained via VA Mobile Framework Authentication Services (VAMF/AS) which uses DMDC DS Logon as the credential service provider brokered through IAM VAAFI services)
OWNR3.3	Provide ability to inform the Veterans electronically by email as to the outcome of their inclusion determination in the registry.
OWNR3.3.1	Provide the ability for the user to retrieve the information needed to create a letter to be mailed to Veteran or Service members' postal address.
WNR3.5	Provide the ability for authorized staff to identify ineligible participants as eligible (upon Veteran/Service member initiating the request).
OWNR3.6	Provide a web-based questionnaire/tool for eligible participants to self-report required data (such as demographic, health status summary and responses to questionnaires).
OWNR3.7	Provide ability for Veteran to request in-person health concern and exposure evaluation.
OWNR3.8	Provide ability for Veterans to consent authorizing VA to include health and administrative data in the registry for use in monitoring the long term effects of burn pit exposure.

<b>BN/OWNER Number</b>	<b>Business Need (BN)/Owner (OWNER) Requirement</b>
OWNR3.10	Provide the ability to collect process metrics data (such as – but not limited to- timeliness of survey completion and sequence of online registration and subsequent clinical appointment scheduling) from entries within the on-line portal.
OWNR3.11	Provide the ability for VHA staff to electronically review all eligible participants' self-reported/entered data from on-line portal.
OWNR3.11.1	Provide the ability for VHA providers and staff to electronically view the questionnaire by each major section.
OWNR3.11.2	Provide the ability for VHA providers and staff to electronically view responses determined as clinically relevant (separate from the rest of the questionnaire responses).
OWNR3.13.4	Provide the ability for an eligible participant to update their communication preferences on the web portal over time and as they change, i.e., email address, mailing address, etc.
OWNR3.15	Provide the ability to report data from the on-line portal database.
OWNR3.15.1	Provide the ability to generate reports demonstrating the historical state of the data (e.g. if statuses change over time, be able to report what those statuses were at an earlier date).
OWNR3.16	Provide the ability for authorized staff to electronically track and follow up on eligible participants who have made entries into the online portal.
OWNR3.16.1	Provide the ability for authorized staff to monitor Veterans and Service members requesting inclusion into the registry
OWNR3.16.2	Provide the ability for authorized staff to monitor Veterans and Service members determined to be eligible and non-eligible.
OWNR5.1	Provide user interface for entry of data directly into registry.
OWNR5.1.1	Provide the ability for the VHA Program Office and field staff to enter flags or notifications on a Veteran's registry record indicating the additional recording of administrative or follow up data.
OWNR5.2	Provide the ability for automated data feeds into/extracts out of registry on regular/recurring basis.
OWNR5.2.1	Provide an automated feed of Veteran-entered data from on-line portal into central registry databases.
OWNR5.2.2	Provide an automated feed of participant demographic and clinical data from health record, VistA, and/or other VHA databases.
OWNR5.2.3	Provide an automated feed of process metrics data (such as – but not limited to- timeliness of survey completion and sequence of online registration and subsequent clinical appointment scheduling) from on-line portal into central databases.

<b>BN/OWNER Number</b>	<b>Business Need (BN)/Owner (OWNER) Requirement</b>
OWNR5.2.4	Provide an automated feed of process metrics data (e.g. eligibility, enrollment status, appointments) from health record, VistA, and/or other databases such as CDW, VSSC, or VLER-DAS.
OWNR5.3.2	Provide the ability to access existing VA data from DoD via specific authorized data feeds and/or file transfers; to include at a minimum, a list of individuals deployed to Iraq and/or Afghanistan to determine registry eligibility.
OWNR5.3.3	Provide the ability to receive existing VA data from the DoD via specific authorized data feeds and/or file transfers; to include at a minimum, information about locations of exposure by individuals as well as exposure specific data.
OWNR5.3.5	Provide the ability to deliver registry data for Service members to DoD.
NEED1555 BN 6	Provide field staff with Airborne Hazards and Open Burn Pit Registry tools/utilities/user interfaces to retrieve, review, export, analyze and report data.
OWNR6.2.1	Provide aggregated standard reports by facility, VISN, national, or DoD Branch of Service.
OWNR6.2.2	Provide the ability to view aggregated standard reports by period of participation – weekly, monthly, quarterly, semi-annually, annually.
OWNR6.2.3	Provide standard reports by individual.
OWNR6.2.4	Provide the ability to view standard reports containing information about Veterans who are enrolled and are not enrolled in VHA care.
OWNR6.3	Provide ad hoc reports.
OWNR6.3.1	Provide the ability to run aggregated ad hoc reports by facility, Veterans Integrated Service Network (VISN), national.
OWNR6.3.2	Provide the ability to run ad hoc reports by individual.
OWNR6.3.3	Provide the ability to save ad hoc reports for future re-use.
OWNR6.3.4	Provide the ability to store and retrieve archived reports generated from the registry, demonstrating and capturing the historical elements of that data (e.g. if statuses change over time, be able to report what those statuses were at an earlier date).
OWNR6.4	Provide ability to export data to an analytics database such as CDW, VSSC, or VLER-DAS and provide ad-hoc business extracts to business owner (OPH).
OWNR6.5	Provide the ability to link to data cube functionality (data abstraction to evaluate aggregated data from a variety of viewpoints.)
OWNR6.7	Provide the ability to incorporate and report on DoD data within the registry.

### 2.2.2.Option Period One Business Rules Specification

ReqPro Tag BN/OWNR Number	Business Need (BN)/Owner (OWNR) Requirement
NEED1555 BN 1	Adhere to the Enterprise Level requirements
NEED/ARCH BN 2	Utilize nationally standardized terminology for all fields in the patient management tool/registry/information system where available.*  *Veteran-entered data is not meant to go into the Electronic Health Record (EHR) without provider interpretation to ensure that it is indeed healthcare data.
OWNR2.1	Provide the ability to express all content using nationally recognized reference and authoritative terminology standards.
OWNR2.2	Provide the ability to record observations using standardized terms.
OWNR2.3	Provide the ability for users to submit a request to Standards and Terminology Services STS for new standardized terms (e.g., via New Term Rapid Turnaround [NTRT] process).
OWNR2.4	Provide the ability for STS to distribute the newly standardized terms to each instance of the solution.
OWNR3.1.2A	Questionnaire needs usability enhancements (such as decrease scrolling).
OWNR3.12	Provide the ability for VHA staff to supply subsets of eligible participants with online health risk communication and outreach information on an ongoing and recurring basis.
OWNR3.12.1	Provide the ability to notify subsets of eligible participants with online health risk communication and outreach information on an ongoing and recurring basis.
OWNR3.13	Provide ability for VHA staff to electronically request additional information from eligible participants on an ongoing and recurring basis.
OWNR3.13.1	Provide the ability to electronically request additional information from an individual eligible participant.
OWNR3.1.1A	Will need interface with authoritative source (ADR) to update entered fields
OWNR3.13.2	Provide the ability to electronically request additional information from a select group of eligible participants.
OWNR3.13.3	Provide the ability for a Veteran to electronically enter requested additional information via the web portal.

### 2.2.3.Option Period Two Business Rules Specification

ReqPro Tag BN/OWNR Number	Business Need (BN)/Owner (OWNR) Requirement
NEED1555 BN 1	Adhere to the Enterprise Level requirements
NEED/ARCH BN 2	<p>Utilize nationally standardized terminology for all fields in the patient management tool/registry/information system where available.*</p> <p>*Veteran-entered data is not meant to go into the Electronic Health Record (EHR) without provider interpretation to ensure that it is indeed healthcare data.</p>
OWNR2.1	Provide the ability to express all content using nationally recognized reference and authoritative terminology standards.
OWNR2.2	Provide the ability to record observations using standardized terms.
OWNR2.3	Provide the ability for users to submit a request to Standards and Terminology Services STS for new standardized terms (e.g., via New Term Rapid Turnaround [NTRT] process).
OWNR2.4	Provide the ability for STS to distribute the newly standardized terms to each instance of the solution.
OWNR3.9	<p>Provide the ability to electronically notify the appropriate health care facility's staff to schedule an in-person health concern and exposure evaluation.</p> <p><b><i>Business Requirements Change Document (BRCD) April 2014 -&gt; Business Need 3.9: Appointment scheduling</i></b></p> <p>After completion of the self-assessment questionnaire, Veterans may request a free in-person medical evaluation with a Department of Veterans Affairs (VA) health care provider to discuss their concerns about exposures to airborne hazards and open burn pits. In order to schedule in-person medical evaluations, Veterans must follow one of two procedures: 1) if they are enrolled in VA health care, they must contact their primary care provider or Patient Aligned Care Team (PACT); 2) if they are not enrolled in VA health care they must contact their local Environmental Health Coordinator.</p> <p>In the existing WMS web/mobile partial registry solution, the Veteran or DoD Service member logs into the website utilizing DS Logon (Department of Defense Self-Service logon) credentials. Once eligibility is determined using data from VADIR/VIERS (VA/DOD Identity Repository/<i>Veterans Identity Eligibility Reporting System</i>) DoD service history and deployment history, the user enters responses to the self-assessment questionnaire. The current WMS solution does not provide a mechanism for a Veteran to request an appointment for evaluation.</p> <p>As part of the complete registry solution, there is a need to better provide Veterans with the ability to schedule evaluations, regardless of enrollment status. OPH requires support to explore the potential to leverage current and new systems to improve upon existing processes.</p>
OWNR3.9.1	Provide the ability for enrolled Veteran to have a clinical appointment scheduled with Primary Care Provider. (Coordinate with other VHA Connected Health efforts for scheduling purposes.)

ReqPro Tag BN/OWNR Number	Business Need (BN)/Owner (OWNR) Requirement
OWNR3.9.2	Provide the ability for non-enrolled Veteran to have a clinical appointment scheduled with Environmental Health Provider. (Coordinate with other VHA Connected Health efforts for scheduling purposes.)
OWNR3.14	Provide the ability for a Veteran to request contact with a member of his/her assigned PACT via the web portal.
OWNR3.16.4	Provide the ability to monitor Veterans requesting in person clinical appointments and those who were scheduled and those who had completed appointments.
NEED1555 BN 4	Provide the ability for open burn pit exposure evaluation data to be integrated into the EHR.
OWNR4.1	<p>Provide ability for facility providers to electronically enter evaluation data into the health record and improve integration of the Veteran-entered data into the provider workflow.</p> <p><i>(BRCD) April 2014 -&gt; Business Need 4.1: Integration with clinical templates and provider workflow</i></p> <p>Clinically relevant information from the self-assessment questionnaire must be leveraged during in-person medical evaluations and captured in the Computerized Patient Record Systems (CPRS). The self-assessment data is not considered part of the medical record.</p> <p>A CPRS dialog progress note template was created to promote appropriate scope of evaluation and documentation during the in-person medical evaluation. The template supplements data collected from the self-assessment questionnaire with embedded health factors gathering standardized information. These health factors are captured from all VistA systems into the Corporate Data Warehouse (CDW) on a regular basis. Many existing 'add on' features in CPRS synchronize with the patient record on the screen and no additional log in is required to pull additional patient information such as radiology results. This level of clinical integration – avoiding second- or third provider log ins – is a priority in order to promote efficiency and patient centeredness during a clinical encounter.</p> <p>The WMS website link to the self-assessment questionnaires for providers is embedded within the CPRS template. In the current WMS solution, providers must select this link and log in separately on the website with VistA access/verify code credentials (from their local VistA site) to access the self-assessment questionnaire data. It is important to optimize ease of access to the self-assessment by providers in a patient-specific context.</p> <p>These issues must be further explored and a technical solution must be designed and vetted. This requirement for integration of registry self-assessment questionnaire data into CPRS has parallels in the Military Health System (MHS).</p>
OWNR4.1.1	Provide the ability to collect, store and review Veteran self-assessment and exposure evaluation data in the health record as a progress note.
OWNR4.4	Provide the ability to view flags or notifications in the health record to facility providers indicating Veteran is recognized as having exposure to airborne hazards and open burn pits.
OWNR4.4.1	Provide the ability to view flags for special sub-populations in the registry.

ReqPro Tag BN/OWNR Number	Business Need (BN)/Owner (OWNR) Requirement
NEED1555 BN 5	Provide a VHA wide level (enterprise level) Airborne Hazards and Open Burn Pit Registry that contains Veteran self-reported data, demographics, health care health record data (this includes data from the on-line portal storage database as well as other VHA databases such as VistA), and data from external sources such as exposure data from the Department of Defense.
OWNR5.1.2	Provide the ability for the flags or notifications to be displayed in the appropriate Veteran's medical record.
OWNR5.3	<p>Provide data transfer mechanism to exchange automated exposure and other clinical data with the DoD on regular/recurring basis (minimum of weekly). Data elements to be exchanged are listed in BRCD Appendix A References, Data Transfer Agreement for Sharing of Environmental and Occupational Exposure Record-Level Data Between the U.S. Department of Defense and the U.S. Department of Veterans Affairs.</p> <p><i>(BRCD) April 2014 -&gt; Business Need 5.3: DoD data transfer</i></p> <p>MHS access to the completed self-assessment questionnaires is a high priority, short-term requirement.</p> <p>In the spring of 2013, VA coordinated closely with DoD to evaluate the usefulness of deployment data maintained by DoD for registry operations. Additional priority was the development of processes for Service member participation and associated voluntary in-person medical evaluations for Service members and retirees within MHS. Supporting data transfer requirements were clarified.</p> <p>Of note, the Joint Incentive Program (JIP) funded Individual Lifetime Exposure Record (ILER) developed its concept of operations throughout 2013 and early 2014. The original BRD included the high-level requirement of ILER integration as a means to transfer bi-directional registry data with DoD. Although ILER remains a medium- to long-term requirement, the immediate need is to link DoD healthcare providers with completed Service member questionnaires. This functionality may be met in the short-term through direct data transfers with existing DoD data systems.</p>
OWNR5.3.1	Provide the ability to receive existing VA data from DoD via specific authorized data feeds and/or file transfers; to include at a minimum, a list of individuals deployed to Iraq and/or Afghanistan to determine registry eligibility.
OWNR5.3.4	Provide the ability to access existing VA data from the DoD via specific authorized data feeds and/or file transfers; to include at a minimum, information about locations of exposure by individuals as well as exposure specific data.
OWNR5.4	Provide the ability to view Non VA mortality and morbidity data on a regular/recurring basis.
OWNR6.6	Provide the ability to export/transmit appropriate data from registry to VBA for the compensation process to aid in reporting service connection experience of registry participants.
OWNR6.8	Provide the ability to report compensation status of registry participants.

	<b>Non-Functional Requirements (NONF) Category</b>
	<b>System Performance Reporting Requirements</b> (Note: Each system developed by VA OIT <u>must</u> comply with the following mandatory requirements.)
NONF2811	Include instrumentation to measure all performance metrics specified in the Non-Functional Requirements section of the BRD. At a minimum, systems will have the ability to measure reporting requirements for Responsiveness, Capacity, and Availability as defined in the non-functional requirements section of this document.
NONF2812	Make the performance measurements available to the IT Performance Dashboard to enable display of “actual” system metrics to customers and IT staff.
	<b>Operational Environment Requirements</b>
	Backup, Disaster Recovery (DR), Continuity of Operations (COOP) for the operating environment must be in use per VA Handbook 6500.
	The internet web portal system shall respond to Veteran user actions in 5 seconds or less in 98% of the attempts, and never more than 20 seconds. Both the internet portal system and the registry shall respond to staff user actions in 10 seconds or less in 98% of the attempts. For system intense report queries, such as use of the data cube, it is expected the response time would be extended.
	VA approved Identity and Access mechanisms must be used per VA Handbook 6500. Currently, MAE VAMF Authorization Services provide a front end to VA authorized IAM for BPR phase 1.
	System response times and page load times shall be consistent with Office of Information and Technology (OIT) standards (for example, My Health <sup>e</sup> Vet or Health <sup>e</sup> Vet).
	Maintenance shall be scheduled during off peak hours or in conjunction with relevant operational environment maintenance schedules.
NONF1608	Information about response time degradation resulting from unscheduled system outages and other events that degrade system functionality and/or performance shall be disseminated to the user community within 30 minutes of the occurrence. The notification shall include the information described in the current Automated Notification Reporting (ANR) template maintained by the VA Service Desk. The business impact must be noted.
NONF1609	Provide a real-time monitoring solution during the maintenance windows or when technical issues/problems occur which may require a preventative back-up.
NONF1610	Notification of scheduled maintenance periods that require the service to be offline or that may degrade system performance shall be disseminated to the user community a minimum of 48 hours prior to the scheduled event.



	<b>Non-Functional Requirements (NONF) Category</b>
	<b>Documentation Requirements</b>
NONF1612	A technical training curriculum shall be developed and delivered to all levels of staff users.
	The training curriculum shall state the expected training time for primary users and secondary users to become productive at using the Airborne Hazards and Open Burn Pit Registry.
	All training curricula, user manuals and other training tools shall be updated by OIT and the OPH and delivered to all levels of users in advance of deployment. The curricula shall include all aspects of the application(s) and all changes to processes and procedures.
NONF1613	The training curriculum shall state the expected task completion time for primary and secondary users.
NONF2228	Updates shall be made, as necessary, to applicable user manuals and other training tools and shall be delivered to all levels of users. If no user documentation exists, it shall be produced.
	Updates shall be made, as necessary, to the applicable technical documentation including Operations and Maintenance (OM) Plans related to the Airborne Hazards and Open Burn Pit Registry located on the VA Software Documentation Library. If no User or OM documentation exists, it shall be produced.
	IT will provide the level of documentation required to support the system and maintain operations and continuity. Documentation shall represent minimal programmatic and lifecycle operations support documentation artifacts as defined by VA standards in ProPath and as required by the VA Enterprise System Engineering Lifecycle and Release Management office for sustained operations, maintenance, and support ( <a href="#">[REDACTED].aspx</a> ) prior to approval by any VA change control board and release into production.
	<b>Implementation Requirements</b>
	An implementation plan shall be developed for all aspects of the Airborne Hazards and Open Burn Pit Registry.
	Technical Help Desk support for the application shall be provided to users.
NONF1614	The IT solution shall be designed to comply with the applicable approved Enterprise Service Level Agreements (SLA).
	The Airborne Hazards and Open Burn Pit Registry will be implemented in a phased approach.
	The secure internet portal for self-registration, along with basic reporting capabilities, is required by law to be implemented within one year from the date the Public Law was signed (January 10, 2013).

	<b>Non-Functional Requirements (NONF) Category</b>
NONF1614	The IT solution shall be designed to comply with the applicable approved Enterprise SLA.
	<b>Data Protection/Back-up/Archive Requirements</b>
NONF1615	Provide a back-up plan for when the system is brought off-line for maintenance or technical issues/problems.
	Data protection measures, such as back-up intervals and redundancy shall be consistent with systems categorized as a <b>patient registry</b> .
	<b>Data Quality/Assurance Requirements</b>
NONF2229	A monitoring process shall be provided to ensure that data is accurate and up-to-date and provides accurate alerts for malfunctions while minimizing false alarms.
	<b>User Access/Security Requirements</b>
NONF1617	Ensure the proposed solution meets all VHA Security, Privacy, and Identity Management requirements including <a href="#">VA Handbook 6500</a> (see <a href="#">Appendix D</a> ).

## 2.3. Design Constraints Specification

It is estimated that approximately 200,000 participants will be using the internet to connect to the AHOBPR Participant portal and internet based browsers to view and complete the self-identification questionnaire. While the system will employ best practices and comply with VA mandated web-based design requirements, the following constraints are possible and beyond the control of the AHOBPR system:

- Internet speeds – A user who connects via satellite or DSL should expect slower response times than a user who connects via high-speed FIOS.
- Computer Systems – a user who has a very old computer system may experience performance issues.

Browsers – There are a multitude of browsers and browser versions available to the end user. Users using older versions of supported browsers or lesser known browsers may or may not experience browser-based issues when trying to access the OBR Participant portal.

## 2.4. Disaster Recovery Specification

The AHOBPR will be integrated into the current Converged Registries Services domain and will be covered by existing VA Disaster Recovery functions performed in that domain.

ID	Description
	The AHOBPR will be integrated into the current Converged Registries Services domain and will be covered by existing VA Disaster Recovery functions performed in that domain.
	Maintenance shall be scheduled during off peak hours or in conjunction with relevant CDCO maintenance schedules.

## 2.5. Documentation Specifications

ID	Description
NONF1612	A technical training curriculum shall be developed and delivered to all levels of staff users.
	The training curriculum shall state the expected training time for primary users and secondary users to become productive at using the Airborne Hazards and Open Burn Pit Registry.
	All training curricula, user manuals and other training tools shall be updated by OIT and the OPH and delivered to all levels of users in advance of deployment. The curricula shall include all aspects of the application(s) and all changes to processes and procedures.
NONF1613	The training curriculum shall state the expected task completion time for primary and secondary users.
NONF2228	Updates shall be made, as necessary, to applicable user manuals and other training tools and shall be delivered to all levels of users. If no user documentation exists, it shall be produced.
	Updates shall be made, as necessary, to the applicable technical documentation including Operations and Maintenance (OM) Plans related to the Airborne Hazards and Open Burn Pit Registry located on the VA Software Documentation Library. If no User or OM documentation exists, it shall be produced.
	IT will provide the level of documentation required to support the system and maintain operations and continuity. Documentation shall represent minimal programmatic and lifecycle operations support documentation artifacts as defined by VA standards in ProPath and as required by the VA Enterprise System Engineering Lifecycle and Release Management office for sustained operations, maintenance, and support ( ) prior to approval by any VA change control board and release into production.

## 2.6. Functional Specifications

The following is an overview of the functional specifications:

- 1) Build a complete back end AHOBPR DB on CRS platform, and integrate with Computerized Patient Record System CPRS, and be able to update the Electronic Health Record – Vista with national template progress notes.
- 2) Enhance the Veteran and Service member Public Facing Web Portal HTML 5 and Java code to meet VA requirements (such as branding requirements).
- 3) Port the WMS Mongo DB to AHOBPR RDMS SQL DB on the CRS platform.
- 4) Build an Intranet Portal to allow providers, clinicians, OPH, and other VA staff to have access to the back-end AHOBPRR to view self-registration questionnaire responses, view other pertinent data elements, and write to the AHOBPR DB.
- 5) Integrate with eBenefits, MVI (IAM), VIERS/VADIR, CRS, CPRS, and other end points.
- 6) Create a DoD Self-Registration questionnaire Flat File and export it to DoD.
- 7) Export pre-defined data elements from AHOBPR CRS Platform to CDW.

### 2.6.1. AHOBPR User Access Levels and Requirements

Name	Description	AHOBPR Access
Veteran Users	Eligible registry participants	Participant Portal: Enter Self-Assessment Questionnaire Responses, View completed Questionnaire, Access burn pit information, and schedule optional in-person exposure evaluations at VHA facilities.
Service Member Users	Eligible registry participants	Participant Portal: Enter Self-Assessment Questionnaire Responses, View completed Questionnaire, access burn pit information
VA Staff/Provider Users/Care Team	With appropriate authorization	Clinical Portal: View Veteran status, entered Self-Assessment Questionnaires for Veterans and Reports designated for VA Staff/Providers
OPH Staff Users	With appropriate authorization	Clinical Portal: View Self-Assessment Questionnaire responses and other registry data, add/modify registry flags, including reports, and data extracts

#### AHOBPR Clinical Portal User Role Matrix (Increment One)

Permission ↓	Role→	Care Team	Advanced User	Registry Manager
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View Questionnaire Data	X	X	X
Update Eligibility Determination		X	
Aging Report	X	X	X
Status Report by State	X	X	X
Participation Report	X	X	X
Selected Questionnaire Report	X	X	X
Non-VA Mortality & Morbidity Report	X	X	X
Ad Hoc Reports		X	X
Export Reports	X	X	X
Update Status/Data Fields			X
Add New Sub-Population Flags			X
Approve/Update/Disable Users			X
Export Registrant Postal Address	X	X	
Send email/message Communications	X	X	

Note: the User Stories below are high level drafts and will be refined as part of the agile software development therefore no acceptance criteria has been determined at this time.

## 2.6.2. Base Period User Stories

### AHOBPR Clinical Portal:

Unique ID	User Story
1004	AS A System Owner I WANT an intranet web portal for clinical users SO THAT they can view, manage, and report on AHOBPR registrant data.

#### User Administration

Unique ID	User Story
1004.1	AS A Registry Manager I WANT to be able to approve, update, and disable user access SO THAT I can manage users in the system.

#### Questionnaire Review

Unique ID	User Story
1004.2	AS A Clinical Portal user I WANT to be able to search for registrants SO THAT I can view their questionnaire responses.
1004.3	AS A Clinical Portal user I WANT to be able to view a summery page of the registrants' questionnaire responses SO THAT I can quickly make a preliminary assessment.
1004.4	AS A Clinical Portal user I WANT to be able to view the registrants' questionnaire responses SO THAT I can perform an exposure evaluation.

#### Add additional information to registrant record

Unique ID	User Story
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1004.5	AS A Clinical Portal user I WANT to be able to enter administrative flags to a registrant's questionnaire record SO THAT I can accurately track a registrant through the process.
1004.6	AS A Clinical Portal Advanced user I WANT to be able to manage flags SO THAT I ensure the list of options are current.
1004.7	AS A Clinical Portal user I WANT to be able to enter additional data related to the participant SO THAT I can capture clinical information not included in the initial template.

#### Reconsider Eligibility

Unique ID	User Story
1004.8	AS A Clinical Portal user I WANT to be able to view Veterans and Service Members by eligibility status SO THAT I can review non-eligible registrants.
1004.9	AS A Clinical Portal user I WANT to be able to view Veterans and Service Members requesting inclusion into the registry SO THAT I can make an eligibility determination.
1004.10	As a Clinical Portal user I WANT to be able change ineligible potential participants to eligible SO THAT the Veteran/Service Member may complete the questionnaire.
1004.11	AS A Clinical Portal user I WANT to the system to generate and send an email to a registrant that has been changed from Non-Eligible to Eligible SO THAT the registrant will know to complete the questionnaire.

#### Registrant Follow-up

Unique ID	User Story
1004.12	AS A Clinical Portal user I WANT to be able to track the status of eligible participants that have not completed the questionnaire SO THAT I can guide the registrants through the questionnaire process.
1004.13	AS A Clinical Portal user I WANT to be able to electronically follow up with eligible participants SO THAT I can guide them through the questionnaire process.
1004.14	AS A Clinical Portal user I WANT to be able to create a list of registrant addresses SO THAT I can mail letters to registrants postal addresses.

#### Registry Monitoring

Unique ID	User Story
1004.15	AS A Clinical Portal user I WANT to be able to view Participant Portal metrics SO THAT I can report on portal usage.
1004.16	AS A Clinical Portal user I WANT to be able to view clinical exposure evaluation statistics SO THAT I can report on registrants demographics.
1004.17	AS A Clinical Portal user I WANT to be able to view questionnaire process metrics SO THAT I can report registrant statistics.

#### **AHOBPR Reporting:**

<b>Unique ID</b>	<b>User Story</b>
1005	AS A System Owner I WANT to be able to retrieve, view, and export data from AHOBPR database SO THAT I can analyze and report statistics and manage registrant in AHOBPR.
1005.1	AS A Clinical Portal user I WANT to be able to view Registrant Status Aging data SO THAT I can report on the length of the questionnaire process.
1005.2	AS A Clinical Portal user I WANT to be able to view Status by Location data SO THAT I can report on registrant information by location.
1005.3	AS A Clinical Portal user I WANT to be able to view Participant data SO THAT I can report on completed questionnaires.
1005.4	AS A Clinical Portal user I WANT to be able to view Registrant data SO THAT I can report on questionnaires that have been started and not completed.
1005.5	AS A Clinical Portal user I WANT to be able to pull Ad Hoc reports by individual SO THAT I can monitor and track registrant data.
1005.6	AS A Clinical Portal user I WANT to be able to run Ad Hoc reports by location SO THAT I can monitor and track registrant data.

#### **AHOBPR Participant Portal:**

<b>Unique ID</b>	<b>User Story</b>
1006	AS A System Owner I WANT to enhance the existing Participant internet portal SO THAT it is more user friendly for the Veteran or Service Member.
1006.1	AS A Participant in the registry I WANT to be able to request an evaluation from within AHOBPR BECAUSE it will save me time and effort.

### **2.6.3. Option Period One User Stories**

#### **AHOBPR Clinical Portal:**

<b>Unique ID</b>	<b>User Story</b>
1004.18	AS A Clinical Portal user I WANT to be able supply subsets of eligible participants outreach information on an ongoing and recurring basis SO THAT I can I can guide the registrants through the questionnaire process.
1004.19	AS A Clinical Portal user I WANT to be able to electronically request additional information from eligible participants on an ongoing and reoccurring basis SO THAT I can I can gather information from the registrants throughout the questionnaire process.

#### **AHOBPR Participant Portal:**

<b>Unique ID</b>	<b>User Story</b>
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1006.2	AS A Participant in the registry I WANT to system enhancements to be able to quickly and easily navigate the AHOBPR questionnaire BECAUSE it will make the system more user friendly.
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## 2.6.4. Option Period Two User Stories

### AHOBPR Clinical Portal:

Unique ID	User Story
1004.20	AS A Clinical Portal user I WANT to be able to search for registrants with requested/scheduled/completed in-person clinical appointments SO THAT I can monitor registrants' appointments.
1004.21	AS A Clinical Portal user I WANT to be able to view data on compensation status of registrants SO THAT I can report on registrant status
1004.22	AS A Clinical Portal user I WANT to be able to view the registrants' questionnaire responses integrated into my clinical EHR workflow SO THAT I can perform an exposure evaluation.

### AHOBPR Participant Portal:

Unique ID	User Story
1006.3	AS A Participant in the registry I WANT to be able to schedule an in-person evaluation from within the AHOBPR web portal BECAUSE it will save me time and effort.
1006.4	AS A Participant in the registry I WANT to be able to request contact with a member of my assigned PACT from within the AHOBPR web portal BECAUSE it will save me time and effort.

### Integration with Provider Workflow

Unique ID	User Story
1007	AS A System Owner I WANT to improve integration of registry data into the Electronic Health Record (HER) SO THAT I can perform a more efficient exposure evaluation.
1007.1	AS A Provider I WANT to be able to view the registrants' questionnaire responses integrated into my clinical EHR workflow SO THAT I can perform an exposure evaluation.
1007.2	AS A Provider I WANT to be able to view flags entered into the Clinical Portal in the HER SO THAT I have all the information to perform an exposure evaluation.



## 2.7. Graphical User Interface (GUI) Specifications

### 2.7.1. AHOBPR General GUI Requirements

ID	Description
	The web interface shall meet all standard VA requirements as stated in the VA Graphics Standards Guide ([REDACTED])
	If any user interface remains idle for more than 15 minutes, a message shall display that the user has been logged off and the user shall be logged off from the AHOBPRR.
	Any internet user shall be able to navigate to any AHOBPR internet based web page via the http protocol.
	Only logged in, authorized users shall be able to navigate to AHOBPR intranet web page via https protocol.
	Any web pages requiring security certificates shall have the appropriate certificates issued so a user does not receive the invalid certificates web page warning.
	A logged in, authorized user shall be able to navigate to AHOBPR internet web pages and back to intranet based web pages without being logged off the AHOBPR Participant portal.
	If a session is terminated, unsaved work shall not be stored.
	The system shall end the user's session when clicking the Logout link.
	All GUI interfaces shall provide context level help screens.
	The system shall display standard navigation utilize the standard SRSS page navigation for reports when more records are returned than will display on in the users browser.

### 2.7.2. AHOBPR Participant Portal

ID	Description
	A service member, retiree or Veteran (participant) who wishes to be considered for inclusion in the AHOBPR shall have the ability to self-identify via a secure, web-based interface.
	Presence of the AHOBPR Participant portal shall require a static public IP address owned by VA.
	The AHOBPR Participant Portal shall be accessible via a VA supplied Domain Name. (for example, <a href="http://www.OBPRegistrantPortal.va.gov">http://www.OBPRegistrantPortal.va.gov</a> )
	The Participant portal shall maintain the look and feel of other service member web facing interfaces.

### 2.7.3. AHOBPR Clinical Portal

ID	Description
	The Clinical portal shall maintain the look and feel of other registry portals.
	A user shall have the ability to change the browser view default.
	The system shall display a message “No records found.” if no records match the search criteria.
	The system shall display a count of how many records are found if records match the search criteria.

## 2.8. Multi-divisional Specifications

Multi-divisional specifications are not applicable to this project.

## 2.9. Performance Specifications

ID	Description
	The internet web portal system shall respond to Veteran user actions in 5 seconds or less in 98% of the attempts, and never more than 20 seconds
	Both the internet portal system and the registry shall respond to staff user actions in 10 seconds or less in 98% of the attempts.
	For system intense report queries, such as Ad hoc queries, it is expected the response time would be extended.
	System response times and page load times shall be consistent with Office of Information and Technology (OIT) standards.
	The system shall be designed to support 200,000+ participants upon full implementation.
	The system shall be dynamic and allow for additional capacity in the event that the number of projected participants exceeds current projections.
	During standard Monday through Friday business hours, the system shall support 200+ clinical staff.

## 2.10. Quality Attributes Specification

ID	Description
	Application/services shall reference the Standard Data Services (SDS) as the authoritative source to access non-clinical reference terminology.
	Application/Services shall use the VA Enterprise Terminology Services (VETS) as the authoritative source to access clinical reference terminology.
	Applications recording the assessments and care delivered in response to an Emergency Department visit shall conform to standards defined by the VHA-endorsed version of C 28 – Health Information Technology Standards Panel (HITSP) Emergency Care Summary Document Using Integrating the Healthcare Enterprise (IHE) Emergency Department Encounter Summary (EDES) Component.

ID	Description
	Applications exchanging data summarizing a patient's medical status shall conform to standards defined by the VHA-endorsed version of C 32 – HITSP Summary Documents Using Health Level Seven (HL7) Continuity of Care Document (CCD) Component.
	The AHOBPR shall provide the ability for users to submit a request to Standards and Terminology Services STS for new standardized terms (e.g., via New Term Rapid Turnaround [NTRT] process).
	The AHOBPR shall provide the ability for STS to distribute the newly standardized terms to each instance of the solution.

## 2.11. Reliability Specifications

	Description
NONF1608	The notification shall include the information described in the current Automated Notification Reporting (ANR) template maintained by the VA Service Desk. The business impact must be noted.
NONF1609	Provide a real-time monitoring solution during the maintenance windows or when technical issues/problems occur which may require a preventative back-up.
NONF1610	Notification of scheduled maintenance periods that require the service to be offline or that may degrade system performance shall be disseminated to the user community a minimum of 48 hours prior to the scheduled event.
NONF1614	The IT solution shall be designed to comply with the applicable approved Enterprise Service Level Agreements (SLA).

## 2.12. Scope Integration

The data store for the AHOBPR will be developed utilizing the existing Converged Registry Solutions database and will integrate the necessary database schemas to incorporate the AHOBPR data store.

The Clinical portal will be developed based on exiting frameworks within the CRS used to develop other registry clinical portals. Identity Access Management (IAM) will be the solution for single sign on capabilities.

Reporting needs of the Clinical portal will be developed using the existing CRS (SSRS) reporting services and tools.

Web Mobile Solutions code will be reused for the veteran facing portal. This portal will be integrated with E-benefits. Existing WMS database (Mongo) will need to be loaded to the back end of CRS for the AHOBPR database.

The Participant portal will require new development and integration into the existing CRS. This will include the ability to store participant demographic data, participant deployment data and responses to a participants 100+ responses to the AHOBPR survey.

The Participant portal will also require the integration of the new secured, web-based interface that the participant will utilize to enter the self-identifying information.

## OPTIONAL – FOR VHA PROJECTS ONLY:

- Name: DSLOGON (read-only)
  - Integration Agreement (IA) number as appropriate :TBD
  - Version number: TBD
  - Purpose: Will be used to authenticate a participant before giving them access to the AHOBPR Participant portal. Participant must be able to authenticate against this system.
  - Interface: This is an existing API that will allow the AHOBPR software to verify the participant is or was an active service member. The API will provide the necessary information to pull the participants service record from VADIR.
- 
- Name: VADIR (read-only)
  - Integration Agreement (IA) number as appropriate: TBD
  - Version number: TBD
  - Purpose: The AHOBPR will use the information provided from the DSLOGON interface to retrieve the most current service members' deployment records to verify the service member's eligibility in the AHOBPR.
  - Interface: This existing API will be invoked each time the participant logs into the AHOBPR Participant portal to qualify the participant eligibility, based on their deployment record(s). Once qualified as eligible, no further looks-up will be performed in VADIR.
- 
- Name: CRS
  - Integration Agreement (IA) number as appropriate: TBD
  - Version number: TBD
  - Purpose: This is the existing data store for other registries used by VA. The AHOBPR will be integrated into this registry.
  - Interface: The existing CRS interface will be used to add/update/delete AHOBPR registry data.
- 
- Name: CDW
  - Integration Agreement (IA) number as appropriate :TBD
  - Version number: TBD
  - Purpose: Will be used to receive participant clinical, demographic, and appointment data from the health record and to export registry data for analytics.
  - Interface: TBD

- Name: VSSC
  - Integration Agreement (IA) number as appropriate: TBD
  - Version number: TBD
  - Purpose: Will be used to receive participant clinical, demographic, and appointment data from the health record and to export registry data for analytics. Interface: TBD
- 
- Name: VLER-DAS
  - Integration Agreement (IA) number as appropriate: TBD
  - Version number: TBD
  - Purpose: Will be used to receive participant clinical, demographic, and appointment data from the health record and to export registry data for analytics and to send Registry data to DoD
  - Interface: TBD

## 2.13. Security Specifications

ID	Description
	All VA security requirements will be adhered to. Based on Federal Information Processing Standard (FIPS) 199 and National Institute of Standards and Technology (NIST) SP 800-60, recommended Security Categorization is Moderate.
	The Security Categorization will drive the initial set of minimal security controls required for the information system. Minimum security control requirements are addressed in NIST SP 800-53 and VA Handbook 6500, Appendix D.
	The AHOBPR shall perform system level Audit logging based on the VA 6500 Security Guide.
	All VA Privacy requirements will be adhered to. Efforts that involve the collection and maintenance of individually identifiable information must be covered by a Privacy Act system of records notice.

## 2.14. System Features

### 2.14.1. AHOBPR Participant Portal (Secure, Web-Based Interface)

- Allow an authorized service member to enter self-identifying information for inclusion into the AHOBPR.

- Allow a participant to view and verify deployment data from their service record as part of the eligibility determination for inclusion in the AHOBPR.
- Allow the system to interrogate the service members' deployment record(s) for automatic determination for eligibility and inclusion into the AHOBPR.
- Allow participants who do not automatically qualify to:
  - View information on how to get their service record updated in VADIR.
  - Request a review by authorized OPH staff for inclusion into the AHOBPR.
- Allow an eligible participant to complete the AHOBPR survey:
  - Complete the survey and submit for use in the AHOBPR.
  - Start the survey, save work completed and return to the survey at a later date for completion.
  - View information on how to get follow-up care regarding possible AHOBPR exposure.
  - Schedule an in-person evaluation appointment

#### **2.14.2. AHOBPR Clinician Portal (CRS Interface)**

- Allow an user with appropriate permissions to:
  - Add/Update/Delete Clinical users.
  - Assign privileges
  - View participant information.
  - Communicate with a participant
  - Run reports
  - Extract data
  - Intergrate registry data with EHR

### **2.15. Usability Specifications**

There are two user interfaces for the AHOBPR. There is a Participant interface and there is a Clinician Interface.

Both interfaces will conform to the VA standards for web-based interfaces and assumes that any user who can navigate the web will be able to navigate the participant portal interface.

#### **2.15.1. Participant Interface (See GUI Specifications Also)**

The participant portal shall have field level, context sensitive level HELP sub-system so that the participant user will not require additional training.

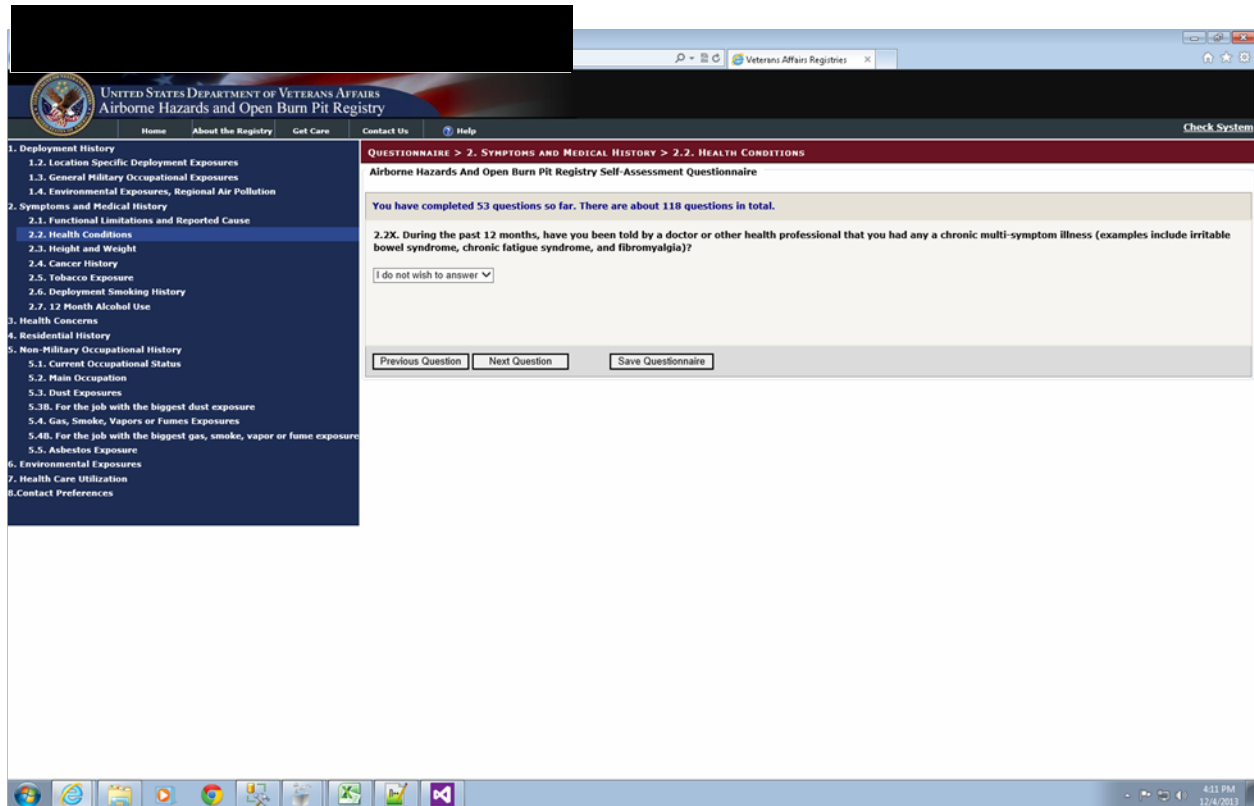
There are three types of navigation that a participant will need to perform:

- Standard browser navigations to view standard web pages (information) about the AHOBPR program.

- Standard browser based navigation to view/update participant specific demographic information.
- AHOBPR Survey specific navigation (see below).

The AHOBPR participant survey is a 100 plus question survey for an ELIGIBLE participant to complete/update and has the following characteristics:

- Allows the participant to answer/update responses to individual questions using standard browser based navigation.
- Provides a progress indicator so the participant knows how far along they are in completing the survey.
- Time to complete the survey will vary between participants based on the number of qualifying deployments, reported health concerns and the number of responses to conditional questions.
- Allows a participant to save the responses completed and exit the system (partially completed surveys)
- Allows a participant to login to the system, return to their incomplete survey and continue their work on the survey.



*Figure 1 - Sample Screen – Survey Response Screen*

## 2.15.2. Clinician interface (See GUI Specifications Also)

The Clinician portal shall have field level, context sensitive level HELP sub-system so that the clinician will not require additional training to navigate the AHOBPR.

All clinicians will need to be able to perform:

- Standard browser navigations to view standard web pages (information) about the AHOBPR program.
- AHOBPR Survey question specific navigation.

If a clinician with advanced rights and privileges for the AHOBPR is familiar with the reporting tools used in other registries (SRSS reporting tools), no additional training should be required. New users with reporting rights will need to reference the AHOBPR Clinicians User Guide.

ID	Description
NONF2661	Left align content in table cells to facilitate quick visual scan.
NONF2662	Left align text for column headers to facilitate visual scan and make columns and content appear more organized.
NONF2663	Use mixed case instead of all caps whenever possible (e.g., dropdown list items, table data, table headers, hyperlinks, tab names). Limit the use of “all caps” throughout the application.
NONF2664	Simplify button labels. Re-label buttons to reflect standard terminology that is common in web interfaces and other applications (e.g., “Cancel”). Emphasize the action being performed in the most succinct way possible. Minimize redundancy in text/terminology that is used to convey the same action.
NONF2665	Left align page/section titles to anchor titles in consistent locations regardless of window sizing.
NONF2666	Labels for fields should be left aligned to facilitate quick visual scan and make forms and field groupings appear more organized.
NONF2667	Avoid using acronyms or abbreviations unless (a) they are widely understood/well known or (b) there is very limited space to display the full meaning. This supports naïve user understanding. If limited space results in using a non-common acronym/abbreviation, ensure it is specified within “Help” and/or as a tooltip.
NONF2668	Use colors such as red and green only for status driven content. Avoid using red for text/content, links, button labels, etc. This will reduce risk for user error, improve link discoverability, and facilitate understanding of differences in navigation/actions/content. It will also help users to isolate important status information (using red, green, etc.) from other less important information when viewing and processing information provided to them on a page.
NONF2669	Provide visual separation between the navigation space and the main content area.
NONF2670	Add field level validation and notification of missing information on the same page without launching a new window or navigating to another page.
NONF2671	Make all text hyperlinks appear consistent in style.
NONF2672	Make drop-down selection box widths appropriate for content and visual appeal.
NONF2673	Use standard and always visible radio buttons for “Yes/No” options instead of requiring the user to click in a drop down box and then click to select the “Yes” or “No” option.



ID	Description
NONF2674	Use standard date and time selection widgets. Where date and time are selected/picked from a standard widget, also provide direct data entry to support keyboard navigation. Enable field level validation immediately upon entry. Include instructional format text within the field entry box.
NONF2675	Provide standard sort behavior and visual indications on columns in all tables.
NONF2676	Define and adhere to a standard model for use and design of controls, buttons, hyperlinks, and navigation elements.
NONF2677	Ensure that text is sized to be readable (for example, by using the 007 Rule to assure text size is readable for users with 20/40 vision. The formula: Text height = .007 * distance between eyes and screen).
NONF2678	Place common navigation elements in consistent locations.
NONF2679	Place critical information “above the fold” (i.e., in the top portion of the screen that is immediately viewable).
NONF2680	Use consistent screen flow models, elements, and terms to support similar workflows.
NONF2681	Use consistently named buttons when actions are the same (e.g., Add vs. Save vs. Submit).
NONF2682	Enable users to print views from where they are in the interface. Avoid requiring the user to “run a report” in order to print something that is viewable on the screen.
NONF2683	Provide field entry tool tips at the field location. Ensure consistency across the application in field labels, formats, location of tooltips, and tool tip text.
NONF2684	Provide visual indication of required fields.
NONF2685	Display field labels in close proximity to entry elements.
NONF2686	Use consistent elements to filter data.
NONF2687	Use consistent elements to sort data.
NONF2688	Use a consistent model for display, layout, and grouping of data entry fields.
NONF2689	Provide alternate row shading in lengthy tables of data, form elements, etc.
NONF2690	Ensure that icons are recognized by users.
NONF2691	Provide some “white space” between status icons in report views, white board views, etc.
NONF2692	Auto-populate default values in entry/selection fields when possible and appropriate.
NONF2693	Visually differentiate status icons from clickable icons, when appropriate.
NONF2694	Define and support the appropriate user tab sequence through fields in forms in order to support keyboard navigation when entering data in forms.
NONF2695	Define and adhere to standard action button placement on screens, forms, etc.
NONF2696	Visually distinguish the primary action button on a page.
NONF2697	Consistently use screen elements, action elements, workflow sequences within/across screens, language, etc.

ID	Description
NONF2698	Provide error messages in user-centric language with specific instructions on the meaning of the error and how to recover from it. Use error messages and method of display consistently across the interface.
NONF2699	Provide context specific Help.
NONF2700	Do not use the term “sex” or any like abbreviations of that to represent gender.

### 3. Applicable Standards

- The Registries applications shall be developed in compliance with VA requirements for Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508 requirements are listed on the VA Section 508 Office website at [REDACTED]
- The Registry Program Convergence shall be developed in compliance with VA Directive 6500, Information Security Program. VA Directive 6500 may be found in its entirety at: [REDACTED] [viewPublication.asp?Pub\\_ID=637&FType=2](#).
- The Registry Program Convergence shall be developed in compliance with the Office of Management and Budget (OMB) Circular A-130, Appendix III, Security of Federal Automated Information Resources. Circular A-130 may be found in its entirety at: [http://www.whitehouse.gov/omb/circulars\\_a130\\_a130trans4](http://www.whitehouse.gov/omb/circulars_a130_a130trans4).
- The Registry Program Convergence application shall be developed in compliance with VA Handbook 6500.3, Certification and Accreditation of VA Information Systems. VA Handbook 6500.3 may be found in its entirety at: [REDACTED]

## 4. Interfaces

### 4.1. Communications Interfaces

Veteran facing portal shall run on the E-benefits server using an iframe portal using the web mobile framework.

VA staff GUI shall run on the CRS Windows servers.

VA Staff GUI shall communicate with Computerized Patient Record System (CPRS).

VA Staff GUI shall communicate with Identity Access Management (IAM) via Single Sign On.

#### Future Increments

Scheduling appointments.

Reporting capabilities.

## **4.2. Hardware Interfaces**

The hardware interfaces shall be defined in the design documents.

## **4.3. Software Interfaces**

The software interfaces shall be defined in the design documents.

## **4.4. User Interfaces**

The user interfaces shall be defined in the design documents.

# **5. Legal, Copyright, and Other Notices**

There are no applicable Open Burn Pit Registry Legal, Copyright, and Other Notices identified for this document revision. The establishment of this registry is a Public-Law 112-260.

# **6. Purchased Components**

VA should purchase/own the public IP address used to park the domain name specific to the AHOBPR Portal.

VA should purchase/own the domain name used for a participant or potential participant may use to access the Participant Portal. (For example: [REDACTED])

VA should purchase/own the necessary security certificates for the HTTPS Participant portal interface.

## **6.1. Defect Source (TOP 5)**

Create a graph to depict the Defect Source (Top 5) by showing the number of defects discovered by component.

# **7. User Class Characteristics**

There are several different classes of users who will use the AHOBPR.

- Participants – can be any service member active, retired, or a Veteran who served in Gulf War theaters of operations. These users will have varying education levels and computer skill levels. These users may also have disabilities that impact their ability to use the Participant Portal interface.
- Care Team Users – these users are expected to have adequate computer skills. Their use will be limited to running menu based reports and viewing registrant records. These users may include Quality Improvement staff and Research staff.
- Advanced Users – these authorized users are expected to have advanced educational training and adequate computer skills. They are trained in the use of the OBPR database. They will have full access to the AHOBPR database. They will be able to update specific information in the AHOBPR database, run standardized reports, and perform Ad hoc queries and other system functions.

- Registry Managers – are expected to have solid computer skills. They will manage the system, and add/update/delete users.

## **8. Estimation**

The AHOBPR Project is a firm fixed-price contract, so the detailed estimation approach is not in scope of this RSD.

## 9. Approval Signatures

REVIEW DATE: 12/31/14

SCRIBE: [REDACTED]

Signed:

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[REDACTED]	Integrated Project Team (IPT) Chair	Date
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[REDACTED]	ra, MD, Business Sponsor	Date
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[REDACTED]	Program Manager	Date
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[REDACTED]	, Project Manager	Date
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## Appendix A - Acronym List and Glossary

In addition to the acronyms defined below in Table 4, the OIT Master Glossary can be found at [REDACTED]

Through the life of the project, the project team will follow the prevailing use of acronyms within VA, as published on the VA Information Resource Center Acronym Lookup and Glossary [REDACTED]. In the event that the acronym is non-standard, the team will follow the practice of spelling out the words that make up the acronym and showing the acronym in parentheses, for example, Quality Assurance (QA).

Term	Definition
AD	Active Directory
AITC	Austin Information Technology Center
BN	Business Need
BRD	Business Requirements Document
CA	Certification and Accreditation
CCD	Continuity of Care Document
CCOW	Clinical Context Object Workgroup
CDCO	Corporate Data Center Operations
CDW	Corporate Data Warehouse
CFM	Comprehensive Flow Management
CPRS	Computerized Patient Record System
CRS	Converge Registry Solution
DOB	Date of Birth
DoD	Department of Defense
DSLOGON	DoD Self Service Logon
EDES	Emergency Department Encounter Summary
EDIS	Emergency Department Integration Software
EHR	Electronic Health Record
EM	Emergency Management
EMS	Environmental Management Service
EOC	Enterprise Operations Center
ERR	Enterprise Requirements Repository
ESE	Enterprise Systems Engineering
ESM	Office of Enterprise System Management
FIPS	Federal Information Processing Standard
FISMA	Federal Information Security Management Act
GUI	Graphical User Interface
HDS	Health Data System
HIG	Health Information Governance
HIM	Health Information Management
HIPAA	Health Insurance Portability & Accountability Act
HITSP	Health Information Technology Standards Panel
HL7	Health Level Seven

Term	Definition
HTML	Hypertext Markup Language
ICN	Integration Control Number
ID	Identification
IEC	International Electrochemical Commission
ILER	Individual Lifetime Exposure Record
IM/IT	Information Management/Information Technology
IPT	Integrated Project Team
ISO	International Organization for Standardization
IT	Information Technology
IT	Information Technology
LOINC	Logical Observation Identifiers, Names, and Codes
MDWS	Medical Domain Web Service
MU	Meaningful Use
MVI	Master Veteran Index
NIST	National Institute of Standards and Technology
NISTIR	National Institute of Standards and Technology Interagency Report
NSR	New Service Request
NTRT	New Term Rapid Turnaround
AHOBPR	Airborne Hazards and Open Burn Pit Registry
ODBC	Open Database Connectivity
OEF	Operation Enduring Freedom
OND	Operation New Dawn
OIA	Office of Information and Analytics
OIF	Operation Iraqi Freedom
OIT	Office of Information and Technology
OMB	Office of Management and Budget
ONC	Office of the National Coordinator for Health Information Technology
OPH	Office of Public Health
OWNR	Owner Requirement
PACT	Patient Aligned Care Team
PHI	Protected Health Information
PII	Personally Identifiable Information
PL	Public Law
PMAS	Project Management Accountability System
POC	Point-Of-Contact
RAEM	Requirements Analysis and Engineering Management
RMR	Requirements Management Repository
RSD	Requirements Specification Document
RTM	Requirements Traceability Matrix
SDD	System Design Document
SDS	Standard Data Services

Term	Definition
SM	Service Member
SME	Subject Matter Expert
SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms
SQL	Structured Query Language
SSN	Social Security Number
STS	Standards and Terminology Services
TBI	Traumatic Brain Injury
U.S.C.	United States Code
UCD	User Centered Design
UI	User Interface
VA	Department of Veterans Affairs
VACO	VA Central Office
VADIR	VA/DoD Identity Repository
VAMC	VA Medical Center
VAPii	Veterans Authorizations and Preferences Interface Improvement
VBA	Veterans Benefits Administration
VETS	VA Enterprise Terminology Services
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VistA	Veterans Information Systems Technology Architecture
VITAS	Veterans Implant Tracking and Alert System
VPI	Veterans Patient Index
VSSC	Veterans Support Service Center
VTA	Veterans Tracking Application

## Term Definitions

Term	Definition
ACTIVE DUTY Service member	A service member who is currently serving active duty in the U.S. military.
Active Directory (AD)	A directory service from Microsoft Corporation that also integrates with the user organization's domain name server structure and is interoperable with the Lightweight Directory Access Protocol. Active Directory uses a single database which a variety of services and applications can use to access and store a variety of information. Active Directory is used by system administrators to store information about users, assign security policies, and deploy software.
Airborne Hazards And Open Burn Pit Registry Self- Assessment Questionnaire	A questionnaire approved by OMB and completed to become a participant in the AHOBP registry.
Application Log	A log maintained by the AHOBPR that captures any changes to a participant record.
Assistive Technology	A generic term that includes assistive, adaptive, and rehabilitative devices for people with disabilities and includes the process used in selecting, locating, and using them.



Term	Definition
Audit Log	A log based on VA 6500 classification for logging System level auditable level events.
Beneficiary Status	A value that represents the individual's status as of the date that the participant is qualified as eligible or not-eligible for inclusion in the AHOBPR. Possible values are: ACTIVE, Non-activated reserve, non-activated guard, RETIREE and VETERAN.
Clinical Context Object Workgroup (CCOW)	<p>CCOW is an HL7 standard protocol designed to enable disparate applications to synchronize in real-time, and at the user-interface level. It is vendor independent and allows applications to present information at the desktop and/or portal level in a unified way.</p> <p>CCOW is the primary standard protocol in healthcare to facilitate a process called "Context Management." Context Management is the process of using particular "subjects" of interest (e.g., user, patient, clinical encounter, charge item, etc.) to 'virtually' link disparate applications so that the end-user sees them operate in a unified, cohesive way.</p> <p>Context Management can be utilized for both CCOW and non-CCOW compliant applications. The CCOW standard exists to facilitate a more robust, and near "plug-and-play" interoperability across disparate applications.</p> <p>Context Management is often combined with Single Sign On applications in the healthcare environment, but the two are discrete functions. Single Sign On is the process that enables the secure access of disparate applications by a user through use of a single authenticated identifier and password.</p>
Clinical Portal	<p>A web-based interface for authorized OPH staff to use to review, extrapolate report and manage AHOBPR participant information.</p> <p>VHA Staff – (OPH staff, Primary Care Providers, Ancillary Clinical Staff, Environmental Health Clinical Staff.)</p>
Computerized Patient Record System (CPRS)	A VistA computer application initially released in 1996. CPRS provides an integrated electronic patient record system for clinicians, managers, quality management staff, and researchers. CPRS enables electronic order entry and management of all information connected with any patient. The goal of CPRS is to create a user-friendly product that provides critical information through clinical reminders, results reporting, and system feedback so clinicians can make medical decisions regarding orders and treatment. Twenty-eight VistA software applications are integrated with CPRS, which allows clinicians to use CPRS to request laboratory tests, medications, radiology tests, and procedures. Additionally, clinicians can use CPRS to: record patient's allergies or adverse reactions to medications; request and track consults; enter progress notes, diagnoses, and treatments; and access clinical information from other VA medical facilities.
CRS	The registry data store used to manage a maintain information about multiple registries.
CRS AHOBPR Segment	The section of the CRS database and schema dedicated to the AHOBPR registry.
De-identify	A method used to strip any identifiable information from a record.
Demographic Data	Includes participant address, contact data and service data.
Department of Veterans Affairs (VA)	<p>The US Department of Veterans Affairs provides patient care and federal benefits to Veterans and their dependents. VA's mission is to fulfill President Lincoln's promise – "To care for him who shall have borne the battle and for his widow, and his orphan" – by serving and honoring the men and women who are America's Veterans.</p> <p>See <a href="#">about va/</a>.</p>
DSLOGON	A DoD interface for authenticating a service member's access to the VADIR system (database).

Term	Definition
Eligible Participant	<p>An individual who served in one or more of the following locations during the specified times while on active duty in the US Armed Forces (Army, Marine Corps, Navy, Air Force, National Guard, or the Coast Guard):</p> <p><b>Southwest Asia theater of operations</b> (as defined in 38 Code of Federal Regulations (CFR) 3.317)) after August 2, 1990: Iraq, Kuwait, Saudi Arabia, Bahrain, Gulf of Aden, Gulf of Oman, Oman, Qatar, United Arab Emirates, Waters of the Persian Gulf, Arabian Sea, and Red Sea.</p> <p><b>Djibouti, Africa or Afghanistan</b> after September 11, 2001.</p> <p><b>NOTE:</b> Serving in the airspace above these locations also makes an individual eligible to participate in the registry.</p>
Federal Information Security Management Act (FISMA)	<p>FISMA (44 U.S.C. § 3541, <i>et seq.</i>) is a United States federal law enacted in 2002 as Title III of the E-Government Act of 2002 (Pub.L. 107-347, 116 Stat. 2899). The act recognized the importance of information security to the economic and national security interests of the United States. The act requires each federal agency to develop, document, and implement an agency-wide program to provide information security for the information and information systems that support the operations and assets of the agency, including those provided or managed by another agency, contractor, or other source.</p> <p>FISMA has brought attention within the federal government to cyber security and explicitly emphasized a "risk-based policy for cost-effective security". FISMA requires agency program officials, chief information officers, and inspectors general (IGs) to conduct annual reviews of the agency's information security program and report the results to Office of Management and Budget (OMB). OMB uses this data to assist in its oversight responsibilities and to prepare this annual report to Congress on agency compliance with the act.</p>
Persian Gulf War Veteran (Veteran)	A Veteran with a deployment after August 3rd 1990 to the Southwest Asia theatre of operations as defined in 38 CFR..
Pre 9/11 Persian Gulf War Veteran (Veteran)	A Veteran with a Persian Gulf War deployment Prior to September 11th.. Major deployments that fall into this category include Operation Desert Shield/Storm, Operation Northern/Southern Watch.
Health Insurance Portability & Accountability Act (HIPAA)	<p>A bill enacted by Congress in 1996 which established a comprehensive and uniform federal standard for ensuring privacy of genetic information; HIPAA broadens the scope of existing fraud and abuse provisions, and penalties for fraud violations by health care providers.</p> <p>The HIPAA was enacted by the U.S. Congress in 1996. According to the Centers for Medicare and Medicaid Services (CMS) website, Title I of HIPAA protects health insurance coverage for workers and their families when they change or lose their jobs. Title II of HIPAA, known as the Administrative Simplification (AS) provisions, requires the establishment of national standards for electronic health care transactions and national identifiers for providers, health insurance plans, and employers. It helps people keep their information private.</p> <p>The Administration Simplification provisions also address the security and privacy of health data. The standards are meant to improve the efficiency and effectiveness of the nation's health care system by encouraging the widespread use of electronic data interchange in the U.S. health care system.</p>
Health Level 7 (HL7)	One of several American National Standards Institute (ANSI)-accredited Standards Developing Organizations operating in the healthcare arena. "Level Seven" refers to the highest level of the International Standards Organization's (ISO) communications model for Open Systems Interconnection (OSI)— the application level. The application level addresses definition of the data to be exchanged, the timing of the interchange, and the communication of certain errors to the application.

Term	Definition
	<p>The seventh level supports such functions as security checks, participant identification, availability checks, exchange mechanism negotiations and, most importantly, data exchange structuring. HL7 focuses on the interface requirements of the entire health care organization.</p> <p>Source: <a href="http://www.hl7.org/about/">http://www.hl7.org/about/</a>.</p>
Hypertext Markup Language (HTML)	A hypertext document format used on the World-Wide Web. HTML is built on top of SGML. "Tags" are embedded in the text. A tag consists of a "<", a "directive" (in lower case), zero or more parameters and a ">". Matched pairs of directives, like "<title>" and "</title>" are used to delimit text which is to appear in a special place or style.
Integration Control Number	The national VA patient record number.
Internet web page	Any web page that can be viewed by any user of the internet regardless if they are logged into an AHOBPR interface or not.
Intranet web page	A web page that can only be displayed to an authorized and logged in to the VA intranet.
Office of Enterprise System Management (ESM)	ESM works collaboratively with other OI components and VHA Program Offices to develop requirements for, implement and monitor the comprehensive portfolios of IT systems used by VA.
Office of Information and Technology (OI&T)	OI&T delivers available adaptable, secure and cost effective technology services to the Department of Veterans Affairs (VA) and acts as a steward for all VA's IT assets and resources.
Office of Management and Budget (OMB)	<p>OMB's predominant mission is to assist the President in overseeing the preparation of the federal budget and to supervise its administration in Executive Branch agencies. In helping to formulate the President's spending plans, OMB evaluates the effectiveness of agency programs, policies, and procedures, assesses competing funding demands among agencies, and sets funding priorities. OMB ensures that agency reports, rules, testimony, and proposed legislation are consistent with the President's Budget and with Administration policies.</p> <p>In addition, OMB oversees and coordinates the Administration's procurement, financial management, information, and regulatory policies. In each of these areas, OMB's role is to help improve administrative management, to develop better performance measures and coordinating mechanisms, and to reduce any unnecessary burdens on the public.</p>
Open Burn Pit	Used for disposing solid waste by burning in the outdoor air.
Operation Enduring Freedom (OEF)	<p>The official name used by the U.S. government for its military response to the September 11, 2001 attacks on the United States.</p> <p>The official name used by the U.S. Government for its War in Afghanistan, together with three smaller military actions, under the umbrella of its Global War on Terror (GWOT) (now Overseas Contingency Operation). The term typically refers to the war in Afghanistan.</p>
Operation Iraqi Freedom (OIF)	<p>The official name used by the U.S. government for its military response to the Iraq War.</p> <p>A military campaign which began on March 20, 2003 with the invasion of Iraq by a multinational force led by troops from the United States and the United Kingdom. Operations transitioned to Operation New Dawn.</p>
Participant	A participant is an individual who has completed and submitted the self-assessment questionnaire.
Personally Identifiable Information	Any information that can be used to identify a person.

Term	Definition
Protected Health Information (PHI)	Any information about health status, provision of health care, or payment for health care that can be linked to an individual. This is interpreted rather broadly and includes any part of a patient's medical record or payment history. It includes individually-identifiable health information maintained in any form or medium. Note: PHI excludes employment records held by a covered entity in its role as an employer.
Protected Health Information (PHI)	Any information about health status, provision of health care, or payment for health care that can be linked to an individual. This is interpreted rather broadly and includes any part of a patient's medical record or payment history. It includes individually-identifiable health information maintained in any form or medium. Note: PHI excludes employment records held by a covered entity in its role as an employer.
Participant Portal	The web-based interface used by a participant to participate in the AHOBP registry.
Participant Status	An indicator in the AHOBPR portal that distinguishes the eligibility status of the Registry participant.
Participant-Status-Date	A date field in the participant AHOBPR records that stores the last date the participant-status field was changed.
Reports - Detail	Reports that do include individual participant information based on criteria provided by the user running the report.
Reports - Summary	Reports that do not include individual participant information but totals and sub-totals based on criteria provided by the user running the report.
Retired Service Member	A service member who has retired from the military based on 20+ years of service.
RETIREE	A service member who retired from the military.
Section 508	Section 508 of the Rehabilitation Act as amended, 29 U.S.C. Section 794(d), requires that when Federal agencies develop, procure, maintain, or use electronic and information technology, they shall ensure that this technology is accessible to people with disabilities. Agencies must ensure that this technology is accessible to employees and members of the public with disabilities to the extent it does not pose an "undue burden." Section 508 speaks to various means for disseminating information, including computers, software, and electronic office equipment.
Service Member	A person who currently serves in active duty, research or guard military service.
Staff Portal	A web-based interface for authorized VHA staff to use to review, extrapolate report and manage AHOBPR participant information. VHA Staff – (OPH staff, Primary Care Providers, Ancillary Clinical Staff, Environmental Health Clinical Staff.)
Survey	For the purposes of this document, survey is VA Form 10-10066 – Airborne Hazards And Open Burn Pit Registry Self-Assessment Questionnaire.
VADIR	A DoD sponsored system used to verify a participant's service and provide other demographic information.
Eligible VETERAN	For the purpose of this project, a Service Member who was deployed to the Southwest Asia theater of operations (Iraq, Saudi Arabia, Bahrain, Gulf of Aden, Gulf of Oman, Oman, Qatar, United Arab Emirates, waters of the Persian Gulf, Arabian Sea, and the Red Sea) on or after August 2nd, 1990 or to Afghanistan or Djibouti on or after September 11, 2001 and are not currently serving on active duty.
Veterans Information Systems Technology Architecture (Vista)	Vista is a comprehensive, integrated health care information system composed of numerous software modules. See [REDACTED] [REDACTED]

Term	Definition
	VistA enables the creation of a comprehensive, integrated, electronic record for each patient that is viewable by all clinicians at VA medical facilities, thus eliminating the need for paper medical records. Approximately 100 separate applications are currently in use with VistA including: healthcare provider; registration; financial management; enrollment; patient data exchange and eligibility applications. In 2007, VistA Imaging was implemented which allows multimedia data (for example, radiology images) to be linked to patient's electronic medical records. VistAWeb allow clinicians to see health data from any other VA facility where the Veteran has received health care.

## Appendix B – Survey Questionnaire Standardized Responses - Example

Question	Stored Response	Text of Response	Positive	Source
Multiple	101	YES	YES	Assigned
Multiple	102	NO	NO	Assigned
Multiple	103	Never	NO	Assigned
Multiple	104			
Multiple	105			
Multiple	106			
Multiple	107	I do not wish to answer	NO	Assigned
Multiple	108	Not applicable	NO	Assigned
Multiple	109	Don't Know	NO	Assigned
Multiple	110	U.S. forces or Contractor	N/A	Assigned
Multiple	111	Coalition forces	N/A	Assigned
Multiple	112	Host nation	N/A	Assigned
Multiple	113	Never thought of this	N/A	Assigned
Multiple	114	I was not informed or aware of bad air quality	N/A	Assigned
Multiple	115	Not at all difficult	NO	Assigned
Multiple	116	Only a little difficult	YES	Assigned
Multiple	117	Somewhat difficult	YES	Assigned
Multiple	118	Very difficult	YES	Assigned
Multiple	119	Can't do it at all	YES	Assigned
Multiple	120	Do not do this activity	NO	Assigned
Multiple	121	Before deployment	NO	Assigned
Multiple	122	During deployment	YES	Assigned
Multiple	123	After deployment	YES	Assigned
Multiple	124	Better	NO	Assigned
Multiple	125	Worse	YES	Assigned
Multiple	126	About the same	NO	Assigned

Question	Stored Response	Text of Response	Positive	Source
1.4.B	01	Wore a mask, cravat, or bandana over your mouth or nose	YES	Survey
1.4.B	02	Spent less time outdoors	YES	Survey
1.4.B	03	Did less strenuous activities (i.e. avoided physical training (PT))	YES	Survey
1.4.B	04	Took medication	YES	Survey
1.4.B	05	Closed windows of your sleeping quarters	YES	Survey
1.4.B	06	Spent less time in convoy	YES	Survey
1.4.B	07	Canceled outdoor activities	YES	Survey
1.4.B	08	Exercised indoors instead of outdoors	YES	Survey
1.4.B	09	Used or changed air filter/air cleaner	YES	Survey
1.4.B	10	Other	YES	Survey
1.4.B	11	I did not do anything differently	NO	Survey
1.4.B	97	I do not wish to answer	NO	Survey
2.1.F	01	Vision/problem seeing	YES	Survey
2.1.F	02	Hearing problem	YES	Survey
2.1.F	03	Arthritis/rheumatism	YES	Survey
2.1.F	04	Back or neck problem	YES	Survey
2.1.F	05	Fracture, bone/joint injury	YES	Survey
2.1.F	06	Other injury	YES	Survey
2.1.F	07	Heart problem	YES	Survey
2.1.F	08	Stroke problem	YES	Survey
2.1.F	09	Hypertension/high blood pressure	YES	Survey
2.1.F	10	Diabetes	YES	Survey
2.1.F	11	Lung/breathing problem (for example, asthma and emphysema)	YES	Survey
2.1.F	12	Cancer	YES	Survey
2.1.F	13	Birth defect	YES	Survey
2.1.F	14	Brain injury, (for example, Traumatic Brain Injury/TBI, Intellectual disability)	YES	Survey
2.1.F	15	Other developmental problem (for example, cerebral palsy)	YES	Survey
2.1.F	16	Senility	YES	Survey
2.1.F	17	Depression/anxiety/emotional problem	YES	Survey
2.1.F	18	Weight problem	YES	Survey
2.1.F	19	Missing limbs (fingers, toes or digits), amputee	YES	Survey
2.1.F	20	Kidney, bladder or renal problems	YES	Survey

Question	Stored Response	Text of Response	Positive	Source
2.1.F	21	Circulation problems (including blood clots)	YES	Survey
2.1.F	22	Benign Tumors, Cysts	YES	Survey
2.1.F	23	Fibromyalgia, lupus	YES	Survey
2.1.F	24	Osteoporosis, tendinitis	YES	Survey
2.1.F	25	Epilepsy, seizures	YES	Survey
2.1.F	26	Multiple Sclerosis (MS), Muscular Dystrophy (MD)	YES	Survey
2.1.F	27	Polio(myelitis), paralysis, para/quadruplegia	YES	Survey
2.1.F	28	Parkinson's disease, other tremors	YES	Survey
2.1.F	29	Other nerve damage, including carpal tunnel syndrome	YES	Survey
2.1.F	30	Hernia	YES	Survey
2.1.F	31	Ulcer	YES	Survey
2.1.F	32	Varicose veins, hemorrhoids	YES	Survey
2.1.F	33	Thyroid problems, Grave's disease, gout	YES	Survey
2.1.F	34	Knee problems	YES	Survey
2.1.F	34-03	Knee problems - not arthritis (03)	YES	Survey
2.1.F	34-05	Knee problems - not joint injury (05)	YES	Survey
2.1.F	35	Migraine headaches (not just headaches)	YES	Survey
2.1.F	90	Other impairment/problem (Specify one) <b>Text Box</b>	YES	Survey
2.1.F	97	I do not wish to answer	YES	Survey
2.1.F	99	Don't know/Not sure	YES	Survey

## Appendix C – Location Tables - Examples

Table 1 - Location Tables - Examples

Country	Base Name	Type	Official Base Name
Afghanistan	00_PB	P	00_PB
Afghanistan	2 (2-8)	P	2 (2-8)
Afghanistan	2 TCP	P	2 TCP
Afghanistan	302	P	302
Afghanistan	4 Corners	P	4 Corners
Afghanistan	4 TCP	P	4 TCP
Afghanistan	5_OP	P	5_OP
Afghanistan	5TH ABP	S	5th ABP Compound
Afghanistan	5th ABP Compound	P	5th ABP Compound
Afghanistan	7171	P	7171
Afghanistan	87 PB	P	87 PB

Country	Base Name	Type	Official Base Name
Afghanistan	92 PB	P	92 PB
Afghanistan	95_OP	P	95_OP
Afghanistan	Ab Band	P	Ab Band
Afghanistan	ABP HQ	P	ABP HQ
Afghanistan	Achabeti	P	Achabeti
Afghanistan	ACS-2	P	ACS-2
Afghanistan	Adraskan	P	Adraskan
Afghanistan	Ahman Khan AP	P	Ahman Khan AP
Afghanistan	Ainsworth	P	Ainsworth
Afghanistan	Airborne	P	Airborne
Afghanistan	Al Maasak	P	Al Maasak
Afghanistan	Alamo_PB	P	Alamo_PB
Afghanistan	Alcatraz	P	Alcatraz
Afghanistan	Alizi	P	Alizi
Afghanistan	Almas	P	Almas
Afghanistan	Altoona	P	Altoona
Afghanistan	Amboy	P	Amboy
Afghanistan	Amir	P	Amir
Afghanistan	Amir Agha	P	Amir Agha
Afghanistan	Amoo	P	Amoo
Afghanistan	ANP Hill	P	ANP Hill
Afghanistan	ANP Station	P	ANP Station
Afghanistan	AP Haji Ramuddin II	P	AP Haji Ramuddin II
Afghanistan	AP Kolk	P	AP Kolk
Afghanistan	AP Makuan	P	AP Makuan
Afghanistan	AP Pa'in Kelay	P	AP Pa'in Kelay
Afghanistan	Ape Marcie	P	Ape Marcie
Afghanistan	Arghandab DCP	P	Arghandab DCP
Afghanistan	Arghandab OCCB	P	Arghandab OCCB
Afghanistan	Arian	P	Arian
Afghanistan	Aries 2	P	Aries 2
Afghanistan	Ashoque	P	Ashoque
Afghanistan	Atal	P	Atal
Afghanistan	Atal Yak	P	Atal Yak
Afghanistan	Athens	P	Athens
Afghanistan	Atlantic City	P	Atlantic City
Afghanistan	Azimijan Kariz AP	P	Azimijan Kariz AP
Afghanistan	Aziz	P	Aziz



Country	Base Name	Type	Official Base Name
Afghanistan	Aziz Ullah	P	Aziz Ullah
Afghanistan	Babaghday	P	Babaghday
Afghanistan	Bad Pakh	P	Bad Pakh
Afghanistan	Badger	P	Badger
Afghanistan	BAF	S	Bagram
Afghanistan	Baghtu	P	Baghtu
Afghanistan	Bagram	P	Bagram
Afghanistan	BAK	S	BAK DC
Afghanistan	BAK DC	P	BAK DC
Afghanistan	Bakhar	P	Bakhar
Afghanistan	Banadar	S	92PB
Afghanistan	Banadar	P	Banadar
Afghanistan	Bandar	S	Curry
Afghanistan	Bande Sarde	P	Bande Sarde
Afghanistan	Bandini	P	Bandini
Afghanistan	Barcha	P	Barcha
Afghanistan	Bariolai	P	Bariolai
Afghanistan	Barrows	P	Barrows
Afghanistan	Basha	P	Basha
Afghanistan	Baylough	P	Baylough
Afghanistan	Beatley	P	Beatley
Afghanistan	Beirut	P	Beirut
Afghanistan	Ben	S	Sockalosky
Afghanistan	Bishop	P	Bishop
Afghanistan	Blackbird	P	Blackbird
Afghanistan	Blackhawk	S	Nerkh
Afghanistan	Blue OP	P	Blue OP
Afghanistan	Boldak	P	Boldak
Afghanistan	Boris	P	Boris
Afghanistan	Bostick	P	Bostick
Afghanistan	Bouresches	P	Bouresches
Afghanistan	Bowri Tanah	P	Bowri Tanah
Afghanistan	Bowri Tanah Ap	P	Bowri Tanah Ap
Afghanistan	Bridge 3	P	Bridge 3
Afghanistan	Bullard	P	Bullard
Afghanistan	Bulldog	P	Bulldog
Afghanistan	Buman Demil	P	Buman Demil
Afghanistan	Burmohammad	P	Burmohammad

Country	Base Name	Type	Official Base Name
Afghanistan	Bury	P	Bury
Afghanistan	Camden	P	Camden
Afghanistan	Camel	P	Camel
Afghanistan	Camp Airborne	S	Airborne
Afghanistan	Camp Dand Patan	S	Dand Patan
Afghanistan	Camp Delorean	S	Delorean
Afghanistan	Camp Durani	S	Durani
Afghanistan	Camp Dwyer	S	Dwyer
Afghanistan	Camp Kolk	S	Kolk
Afghanistan	Camp Qal'eh-ye naw	S	Qal e Naw
Afghanistan	Camp Shewan Garrison	S	Shewan Garrison
Afghanistan	Camp Yosef Kheyl	S	Yosef Kheyl
Afghanistan	Camp Zerok	S	Zerok
Afghanistan	Carolina	P	Carolina
Afghanistan	Carwile	S	Sultan Kheyl
Afghanistan	Cemetary Tower	P	Cemetary Tower
Afghanistan	Center	P	Center
Afghanistan	Chak DC	P	Chak DC
Afghanistan	Chakaw	P	Chakaw
Afghanistan	Chamkani	P	Chamkani
Afghanistan	Char Bagh	S	Ware
Afghanistan	Charlie 77	S	Wazi Khwa
Afghanistan	Checkpoint 1	S	CP-1
Afghanistan	Checkpoint 2.5	S	CP 2.5
Afghanistan	Chergotah	P	Chergotah
Afghanistan	Chosin	P	Chosin
Afghanistan	Comanche	P	Comanche
Afghanistan	Compton	P	Compton
Afghanistan	COP Koshtay	S	Kostay PB
Afghanistan	COP Red Leg	S	Red Leg
Afghanistan	Coutu	P	Coutu
Afghanistan	Cowboy	P	Cowboy
Afghanistan	CP 11	P	CP 11
Afghanistan	CP 13-2	S	Johnston
Afghanistan	CP 2.5	P	CP 2.5
Afghanistan	CP 4	P	CP 4
Afghanistan	CP 72	P	CP 72
Afghanistan	CP 7-4	P	CP 7-4

Country	Base Name	Type	Official Base Name
Afghanistan	CP-1	P	CP-1
Afghanistan	Criss	P	Criss
Afghanistan	Cuba	P	Cuba
Afghanistan	Curry	P	Curry
Afghanistan	Dakota	P	Dakota
Afghanistan	Daman Distric HQs	P	Daman Distric HQs
Afghanistan	Dand Patan	P	Dand Patan
Afghanistan	Dangar	P	Dangar
Afghanistan	Darvishan	P	Darvishan
Afghanistan	Darvishan KHK District	P	Darvishan KHK District
Afghanistan	Dasht	P	Dasht
Afghanistan	Dashtu	P	Dashtu
Afghanistan	Daytona	P	Daytona
Afghanistan	De Young	P	De Young
Afghanistan	Deh Dadi I	P	Deh Dadi I
Afghanistan	Deh Karez	P	Deh Karez
Afghanistan	Deh Qobad	P	Deh Qobad
Afghanistan	Deh Qobad	P	Deh Qobad
Afghanistan	Dehanna Pass	P	Dehanna Pass
Afghanistan	Dehemozong	P	Dehemozong
Afghanistan	Dehli	P	Dehli
Afghanistan	Dehli Police HQ	P	Dehli Police HQ
Afghanistan	Delaram 1	S	Delaram I
Afghanistan	Delaram 2	S	Delaram II
Afghanistan	Delaram DC	P	Delaram DC
Afghanistan	Delaram District Center	S	Delaram DC
Afghanistan	Delaram I	P	Delaram I
Afghanistan	Delaram II	P	Delaram II
Afghanistan	Delaram AUP	P	Delaram AUP
Afghanistan	Delmar	P	Delmar
Afghanistan	Delorean	P	Delorean
Afghanistan	Demaiwand	P	Demaiwand
Afghanistan	Demaiwand AP	P	Demaiwand AP
Afghanistan	Detroit	P	Detroit
Afghanistan	Deysie	P	Deysie
Afghanistan	Didgori	P	Didgori
Afghanistan	Divlak	P	Divlak
Afghanistan	Diwar	P	Diwar

Country	Base Name	Type	Official Base Name
Afghanistan	Donahue	P	Donahue
Afghanistan	Doost	P	Doost
Afghanistan	Dorafshan	S	Buman Demil
Afghanistan	Dre Wazaran	P	Dre Wazaran
Afghanistan	Dukin	P	Dukin
Afghanistan	Duluth	P	Duluth
Afghanistan	Durani	P	Durani
Afghanistan	Durzay	P	Durzay
Afghanistan	Dwyer	P	Dwyer
Afghanistan	EBK	P	EBK
Afghanistan	Ebrahim Kheyl	S	EBK
Afghanistan	Edinburgh	P	Edinburgh
Afghanistan	Eiffel	P	Eiffel
Afghanistan	Emarat	S	Ainsworth
Afghanistan	Empire	P	Empire
Afghanistan	Enguri	P	Enguri
Afghanistan	Ensenada	P	Ensenada
Afghanistan	Eredvi	P	Eredvi
Afghanistan	Ertoba	P	Ertoba
Afghanistan	Faheem	P	Faheem
Afghanistan	Faizal	P	Faizal
Afghanistan	Faslodeen	P	Faslodeen
Afghanistan	Fathollah	P	Fathollah
Afghanistan	Fern Gulley	P	Fern Gulley
Afghanistan	Fiddlers Green	P	Fiddlers Green
Afghanistan	Fires	P	Fires
Afghanistan	Flint Kaserne	P	Flint Kaserne
Afghanistan	Florida	P	Florida
Afghanistan	FOB Naray	S	Bostick
Afghanistan	Folad	P	Folad
Afghanistan	Frontenac	P	Frontenac
Afghanistan	Gam Ser	S	ABP HQ
Afghanistan	Garbuz	P	Garbuz
Afghanistan	Garcia	P	Garcia
Afghanistan	Garda	P	Garda
Afghanistan	Gardez	P	Gardez
Afghanistan	Gardez RTC	P	Gardez RTC
Afghanistan	Garrett	P	Garrett

Country	Base Name	Type	Official Base Name
Afghanistan	Gators	P	Gators
Afghanistan	Georgetown	P	Georgetown
Afghanistan	Georgia	P	Georgia
Afghanistan	Gereshk	P	Gereshk
Afghanistan	Geronimo	P	Geronimo
Afghanistan	Gettysburgh	P	Gettysburgh
Afghanistan	Ghariban	P	Ghariban
Afghanistan	Ghazni	P	Ghazni
Afghanistan	Ghundy Ghar	P	Ghundy Ghar
Afghanistan	Ghundy Ghar	P	Ghundy Ghar
Afghanistan	Giro	P	Giro
Afghanistan	Glavey	P	Glavey
Afghanistan	Gomal	S	Curry
Afghanistan	Gorgan	P	Gorgan
Afghanistan	Gowragi	P	Gowragi
Afghanistan	Grand Rapids	P	Grand Rapids
Afghanistan	Greer	P	Greer
Afghanistan	Griffin	P	Griffin
Afghanistan	Grosse Point	P	Grosse Point
Afghanistan	Gumbatty	P	Gumbatty
Afghanistan	Gumbatty Tower	P	Gumbatty Tower
Afghanistan	Habib	P	Habib
Afghanistan	Hadrian	P	Hadrian
Afghanistan	Haji Achmed	P	Haji Achmed
Afghanistan	Haji Alilua	P	Hiha Alilus
Afghanistan	Haji Nizmadeen	P	Haji Nizmadeen
Afghanistan	Haji Ramuddin	P	Haji Ramuddin
Afghanistan	Haji Ramuddin 2	S	Haji Ramuddin II
Afghanistan	Haji Ramuddin II	P	Haji Ramuddin II
Afghanistan	Hand	P	Hand
Afghanistan	Hanjar	P	Hanjar
Afghanistan	Hanjar Do	P	Hanjar Do
Afghanistan	Hanjar Yak	P	Hanjar Yak
Afghanistan	Hanson	P	Hanson
Afghanistan	Harris	P	Harris
Afghanistan	Hasan Abad	P	Hasan Abad
Afghanistan	Herm	P	Herm
Afghanistan	Hernandez	P	Hernandez

Country	Base Name	Type	Official Base Name
Afghanistan	Herrera	P	Herrera
Afghanistan	Hill	P	Hill
Afghanistan	Himal	P	Himal
Afghanistan	Honaker-Miracle	P	Honaker-Miracle
Afghanistan	Honeycutt	P	Honeycutt
Afghanistan	Howz-E-Madad	P	Howz-E-Madad
Afghanistan	Howz-E-Madad	P	Howz-E-Madad
Afghanistan	Hue City	P	Hue City
Afghanistan	Husey	P	Husey
Afghanistan	Huskers	S	Huskers(SW)
Afghanistan	Huskers(SW)	P	Huskers(SW)
Afghanistan	Imam Sahib (S)	P	Imam Sahib (S)
Afghanistan	Inchon	P	Inchon
Afghanistan	Infante	P	Infante
Afghanistan	Inkerman	P	Inkerman
Afghanistan	Jaghato	P	Jaghato
Afghanistan	Jaker	P	Jaker
Afghanistan	Jalrez	P	Jalrez
Afghanistan	Jangealia	P	Jangealia
Afghanistan	Januup	P	Januup
Afghanistan	Jawkari	P	Jawkari
Afghanistan	JCOP Masaw	S	Masaw
Afghanistan	JCOP Sherzad	S	Comanche
Afghanistan	Jersey	P	Jersey
Afghanistan	Johnson	P	Johnson
Afghanistan	Johnston	P	Johnston
Afghanistan	Judge	P	Judge
Afghanistan	Jug Room	P	Jug Room
Afghanistan	Kabob	P	Kabob
Afghanistan	Kadalo Drab	P	Kadalo Drab
Afghanistan	Kakaran	P	Kakaran
Afghanistan	Kalagush	P	Kalagush
Afghanistan	Kandahar AF	P	Kandahar AF
Afghanistan	Kandalay	P	Kandalay
Afghanistan	Karimdad	P	Karimdad
Afghanistan	Kdle	P	Kdle
Afghanistan	Kelly	P	Kelly
Afghanistan	Kems	P	Kems

Country	Base Name	Type	Official Base Name
Afghanistan	Kessler	P	Kessler
Afghanistan	Khak-E Safed	P	Khak-E Safed
Afghanistan	Khalil	P	Khalil
Afghanistan	Khan Neshin Castle	P	Khan Neshin Castle
Afghanistan	Khayor Khot Castle	P	Khayor Khot Castle
Afghanistan	Khers	P	Khers
Afghanistan	Kherwar	P	Kherwar
Afghanistan	Kheyraabad	P	Kheyraabad
Afghanistan	Khiyal Zmekka	P	Khiyal Zmekka
Afghanistan	Khojibad	P	Khojibad
Afghanistan	Khyber	P	Khyber
Afghanistan	Kimmel	P	Kimmel
Afghanistan	KKC	S	Khayor Khot Castle
Afghanistan	KKC Super FOB	P	KKC Super FOB
Afghanistan	Kochynay Prong	P	Kochynay Prong
Afghanistan	Kolk	P	Kolk
Afghanistan	Kordala Drap	P	Kordala Drap
Afghanistan	Kostay CP	P	Kostay CP
Afghanistan	Kostay PB	P	Kostay PB
Afghanistan	Kowall	P	Kowall
Afghanistan	KT-4	P	KT-4
Afghanistan	Kuhak	P	Kuhak
Afghanistan	Kuhl	P	Kuhl
Afghanistan	Kunjak	P	Kunjak
Afghanistan	Kunjik	P	Kunjik
Afghanistan	Kupak	P	Kupak
Afghanistan	Kushamond	P	Kushamond
Afghanistan	Lagman	P	Lagman
Afghanistan	Lakaray	P	Lakaray
Afghanistan	Lakeside	P	Lakeside
Afghanistan	Lakhokhel	P	Lakhokhel
Afghanistan	Laki	P	Laki
Afghanistan	Lam	P	Lam
Afghanistan	Lamba Dand	P	Lamba Dand
Afghanistan	Lambert	P	Lambert
Afghanistan	Landay	P	Landay
Afghanistan	Lane	P	Lane
Afghanistan	Lashkar Gar	P	Lashkar Gar

Country	Base Name	Type	Official Base Name
Afghanistan	Lawara	S	Tillman
Afghanistan	Leatherneck	P	Leatherneck
Afghanistan	Leimbach	P	Leimbach
Afghanistan	████	P	████
Afghanistan	Lion	P	Lion
Afghanistan	Long beach	P	Long beach
Afghanistan	Lowell	P	Lowell
Afghanistan	Luke	P	Luke
Afghanistan	Luy Jolah	P	Luy Jolah
Afghanistan	Luy Kulay	P	Luy Kulay
Afghanistan	Luy Tsolar	P	Luy Tsolar
Afghanistan	Maboob	P	Maboob
Afghanistan	Mace	P	Mace
Afghanistan	Macthab	P	Macthab
Afghanistan	Mahafiz	P	Mahafiz
Afghanistan	Maher	P	Maher
Afghanistan	Makuan	P	Makuan
Afghanistan	Manassas	P	Manassas
Afghanistan	Margah	P	Margah
Afghanistan	Marjah	P	Marjah
Afghanistan	Marler	P	Marler
Afghanistan	Maryland	P	Maryland
Afghanistan	Masaw	P	Masaw
Afghanistan	Mashal	P	Mashal
Afghanistan	Masood	P	Masood
Afghanistan	Mata Khan	P	Mata Khan
Afghanistan	Mateen	P	Mateen
Afghanistan	Mateen Yak	P	Mateen Yak
Afghanistan	Matun Hill	P	Matun Hill
Afghanistan	May	P	May
Afghanistan	Maywand	P	Maywand
Afghanistan	McElhaney	P	McElhaney
Afghanistan	Mehraj	P	Mehraj
Afghanistan	Meis	P	Meis
Afghanistan	MIAN Poshtay	S	Sharp
Afghanistan	Michigan	P	Michigan
Afghanistan	Miri	P	Miri
Afghanistan	Mizan	P	Mizan



Country	Base Name	Type	Official Base Name
Afghanistan	Momenkhan	P	Momenkhan
Afghanistan	Monar	P	Monar
Afghanistan	Monitor	P	Monitor
Afghanistan	Montana	P	Montana
Afghanistan	Monti	P	Monti
Afghanistan	Moose	P	Moose
Afghanistan	Morales-Frazier	P	Morales-Frazier
Afghanistan	Mountain Top	S	Rostum
Afghanistan	Mubarez	P	Mubarez
Afghanistan	Muller	P	Muller
Afghanistan	Munoz	P	Munoz
Afghanistan	Musa Qal'ah	P	Musa Qal'ah
Afghanistan	Musazai	P	Musazai
Afghanistan	Mushan	P	Mushan
Afghanistan	Mustang	P	Mustang
Afghanistan	Najeel	S	Najil
Afghanistan	Najil	P	Najil
Afghanistan	Nalgham	P	Nalgham
Afghanistan	Nangalam	S	Nangalam Base
Afghanistan	Nangalam Base	P	Nangalam Base
Afghanistan	Narizah	P	Narizah
Afghanistan	Nawa Valley	S	CP 72
Afghanistan	Nejat	P	Nejat
Afghanistan	Nerkh	P	Nerkh
Afghanistan	New Jersey	P	New Jersey
Afghanistan	New York	P	New York
Afghanistan	Nolay	P	Nolay
Afghanistan	Nolen	P	Nolen
Afghanistan	Normandy	P	Normandy
Afghanistan	North	P	North
Afghanistan	North PB	S	North
Afghanistan	Norzai	P	Norzai
Afghanistan	Now Ruzi	P	Now Ruzi
Afghanistan	Now Zad	P	Now Zad
Afghanistan	OCC-P	S	Matun Hill
Afghanistan	Old PHQ	P	Old PHQ
Afghanistan	OP 102	P	OP 102
Afghanistan	OP 20	P	OP 20

Country	Base Name	Type	Official Base Name
Afghanistan	OP 22	P	OP 22
Afghanistan	OP 288	P	OP 288
Afghanistan	OP 288 Over watch	P	OP 288 Over watch
Afghanistan	OP 302	S	302
Afghanistan	OP 34	P	OP 34
Afghanistan	OP 37	P	OP 37
Afghanistan	OP 40	P	OP 40
Afghanistan	OP 41	P	OP 41
Afghanistan	OP Athens	S	Athens
Afghanistan	OP Bariolai	S	Bariolai
Afghanistan	OP Haji Achmed	S	Haji Achmed
Afghanistan	OP Hil	S	ANP Hill
Afghanistan	OP Hill	S	Hill
Afghanistan	OP-971	P	OP-971
Afghanistan	Oqab	S	OP-971
Afghanistan	Orbi	P	Orbi
Afghanistan	Orgun-E	P	Orgun-E
Afghanistan	Ouelette	P	Ouelette
Afghanistan	Pace	P	Qarabagh DC
Afghanistan	Pace	P	Pace
Afghanistan	Pacemaker	P	Kushamond
Afghanistan	Pacemaker	P	Pacemaker
Afghanistan	Padlek	P	Padlek
Afghanistan	Pa'in Kelay	P	Pa'in Kelay
Afghanistan	Palace	P	Palace
Afghanistan	Palacio	P	Palacio
Afghanistan	Panda Ridge	P	Panda Ridge
Afghanistan	Pasaw	P	Pasaw
Afghanistan	Paserlay	P	Paserlay
Afghanistan	Pashmul South	P	Pashmul South
Afghanistan	Pashmul South AP	P	Pashmul South AP
Afghanistan	Pay Banadar	P	Pay Banadar
Afghanistan	Paygal	P	Paygal
Afghanistan	Payne	P	Payne
Afghanistan	PB 13	P	PB 13
Afghanistan	PB 19	P	PB 19
Afghanistan	PB 6	P	PB 6
Afghanistan	PB 7	P	PB 7

Country	Base Name	Type	Official Base Name
Afghanistan	PB 7171	S	7171
Afghanistan	PB Almas	S	Almas
Afghanistan	PB Amoo	S	Amoo
Afghanistan	PB Ape-Marcie	S	Ape Marcie
Afghanistan	PB Aries 2	S	Aries 2
Afghanistan	PB Bakhar	S	Bakhar
Afghanistan	PB Bandini	S	Bandini
Afghanistan	PB Barcha	S	Barcha
Afghanistan	PB Barrows	S	Barrows
Afghanistan	PB Beatley	S	Beatley
Afghanistan	PB Beirut	S	Beirut
Afghanistan	PB Ben	S	Sockalosky
Afghanistan	PB Bishop	S	Bishop
Afghanistan	PB Bury	S	Bury
Afghanistan	PB Camel	S	Camel
Afghanistan	PB Center	S	Center
Afghanistan	PB Haji Achmed	S	Haji Achmed
Afghanistan	Penich	P	Penich
Afghanistan	Pennsylvania	P	Pennsylvania
Afghanistan	Pickard	P	Pickard
Afghanistan	Pinjadoo	P	Pinjadoo
Afghanistan	Pirtle King	P	Pirtle King
Afghanistan	Pittman	P	Pittman
Afghanistan	Pleiku	P	Pleiku
Afghanistan	Police Substation 3	S	PSS-3
Afghanistan	Police Substation 7	S	PSS-7
Afghanistan	PRDC	S	Pusht-e Rod
Afghanistan	Price	P	Price
Afghanistan	Prov.Res. QRF	P	Prov.Res. QRF
Afghanistan	Provincial Reserve	S	Prov.Res. QRF
Afghanistan	PSS-3	P	PSS-3
Afghanistan	PSS-7	P	PSS-7
Afghanistan	Pul	P	Pul
Afghanistan	Pul a Sayad	P	Pul a Sayad
Afghanistan	Pul-a-Sayad	S	Pul a Sayad
Afghanistan	Push Tebah	P	Push Tebah
Afghanistan	Pushtaysark	P	Pushtaysark
Afghanistan	Pusht-e Rod	P	Pusht-e Rod

Country	Base Name	Type	Official Base Name
Afghanistan	Qal e Naw	P	Qal e Naw
Afghanistan	Qal e Now	S	Qal e Now PB
Afghanistan	Qal e Now PB	P	Qal e Now PB
Afghanistan	Qarabagh DC	P	Qarabagh DC
Afghanistan	Qargha	P	Qargha
Afghanistan	Qarib	P	Qarib
Afghanistan	Qual-I Now OP	P	Qual-I Now OP
Afghanistan	Qual-I Now(GBOSS)	S	Qual-I Now OP
Afghanistan	Quara Baugh	P	Quara Baugh
Afghanistan	Qurta	P	Qurta
Afghanistan	Rahman Kheyl	P	Rahman Kheyl
Afghanistan	Ramrod, Maiwand	S	Sakari Karez
Afghanistan	Rankel	P	Rankel
Afghanistan	Rashay	P	Rashay
Afghanistan	Reading	P	Reading
Afghanistan	Red Leg	P	Red Leg
Afghanistan	Regi Topa	P	Regi Topa
Afghanistan	Reilly	P	Reilly
Afghanistan	Ricketts	P	Ricketts
Afghanistan	Roadhouse	P	Roadhouse
Afghanistan	Robat Sangi	P	Robat Sangi
Afghanistan	Robinson	S	Talukan
Afghanistan	Robinson	P	Robinson
Afghanistan	Rogers	P	Rogers
Afghanistan	Rostum	P	Rostum
Afghanistan	RTC Gardez	S	Gardez RTC
Afghanistan	Ruhd	P	Ruhd
Afghanistan	Sabari	P	Sabari
Afghanistan	Sabit Qadam	P	Sabit Qadam
Afghanistan	Sabulughay	P	Sabulughay
Afghanistan	Saburi	P	Saburi
Afghanistan	Sacramento	P	Sacramento
Afghanistan	Saenz	P	Saenz
Afghanistan	Saiedabdulkhalil	P	Saiedabdulkhalil
Afghanistan	Saipan	P	Saipan
Afghanistan	Sakari Karez	P	Sakari Karez
Afghanistan	Salaam Bazaar	P	Salaam Bazaar
Afghanistan	Salerno	P	Salerno

Country	Base Name	Type	Official Base Name
Afghanistan	Salim	P	Salim
Afghanistan	Salor Lara	P	Salor Lara
Afghanistan	Samsher	S	Inkerman
Afghanistan	San Jose	P	San Jose
Afghanistan	Sanchez	P	Sanchez
Afghanistan	Sangin Badar	P	Sangin Badar
Afghanistan	Sangin Fulod	P	Sangin Fulod
Afghanistan	Sangsar	P	Sangsar
Afghanistan	Sarkari Bagh	S	Kessler
Afghanistan	Savannah	P	Savannah
Afghanistan	Schoolhouse	P	Schoolhouse
Afghanistan	Seattle	P	Seattle
Afghanistan	Senjaray	P	Senjaray
Afghanistan	Sham Shad	P	Sham Shad
Afghanistan	Shamalan	P	Shamalan
Afghanistan	Shamshad	S	Sham Shad
Afghanistan	Shamsher Char	P	Shamsher Char
Afghanistan	Shamsher Sey	P	Shamsher Sey
Afghanistan	Shanfield	P	Shanfield
Afghanistan	Sharana	P	Sharana
Afghanistan	Sharkstooth	P	Sharkstooth
Afghanistan	Sharp	P	Sharp
Afghanistan	Sheklay Kahor	P	Sheklay Kahor
Afghanistan	Shewan Garrison	P	Shewan Garrison
Afghanistan	Shindand	P	Shindand
Afghanistan	Shir Ghazay	P	Shir Ghazay
Afghanistan	Shoja	P	Shoja
Afghanistan	Shouz	P	Shouz
Afghanistan	Shrine	P	Shrine
Afghanistan	Shukvani	P	Shukvani
Afghanistan	Sian Choy	P	Sian Choy
Afghanistan	Sian Choy AP	P	Sian Choy AP
Afghanistan	Simmons	P	Simmons
Afghanistan	Smart	P	Smart
Afghanistan	Sockalosky	P	Sockalosky
Afghanistan	Sofla	P	Sofla
Afghanistan	Sol Tankhel	S	Sultan Kheyl
Afghanistan	Sopar Dostan	P	Sopar Dostan

Country	Base Name	Type	Official Base Name
Afghanistan	South Boston	P	South Boston
Afghanistan	South Station	P	South Station
Afghanistan	Sparrow Hawk East	P	Sparrow Hawk East
Afghanistan	Sparrow Hawk West	P	Sparrow Hawk West
Afghanistan	Spera	P	Spera
Afghanistan	Sperwan Ghar	P	Sperwan Ghar
Afghanistan	Spin Ghar	P	Spin Ghar
Afghanistan	SRE Kala	P	SRE Kala
Afghanistan	Stansbury	P	Stansbury
Afghanistan	Styx	P	Styx
Afghanistan	Sultan Kheyl	P	Sultan Kheyl
Afghanistan	Summerville	P	Summerville
Afghanistan	Sweeney	P	Sweeney
Afghanistan	Taber	P	Taber
Afghanistan	Tabilia	P	Tabilia
Afghanistan	Tagab	P	Tagab
Afghanistan	Taghaz	P	Taghaz
Afghanistan	Talibjan	P	Talibjan
Afghanistan	Talukan	P	Talukan
Afghanistan	Tangi	P	Tangi
Afghanistan	Tar	P	Tar
Afghanistan	Tarin Kowt	P	Tarin Kowt
Afghanistan	Tarin Kowt	S	Burman-Demil
Afghanistan	Tarnak	P	Tarnak
Afghanistan	Tellier	S	Wilderness
Afghanistan	Terezayi	P	Terezayi
Afghanistan	Theinhart	P	Theinhart
Afghanistan	Thomas	S	Shindand
Afghanistan	Tijuana	P	Tijuana
Afghanistan	Tillman	P	Tillman
Afghanistan	Timothy Johnson	P	Timothy Johnson
Afghanistan	Togueh Substation	P	Togueh Substation
Afghanistan	Toor Ghar	P	Toor Ghar
Afghanistan	Torbert	P	Torbert
Afghanistan	Torkham	P	Torkham
Afghanistan	Transformer	P	Transformer
Afghanistan	Troy	P	Troy
Afghanistan	Tuffin	P	Tuffin

Country	Base Name	Type	Official Base Name
Afghanistan	Turbett	P	Turbett
Afghanistan	Tynes	P	Tynes
Afghanistan	Typhoon 3	P	Typhoon 3
Afghanistan	Typhoon 4	P	Typhoon 4
Afghanistan	Typhoon 5	P	Typhoon 5
Afghanistan	Usman	P	Usman
Afghanistan	Vegas	P	Vegas
Afghanistan	VHA	P	VHA
Afghanistan	Virginia	P	Virginia
Afghanistan	Wakil Wazir	P	Wakil Wazir
Afghanistan	Walakan	P	Walakan
Afghanistan	Wali	P	Wali
Afghanistan	Walton	P	Walton
Afghanistan	Ward	S	Meis
Afghanistan	Ware	P	Ware
Afghanistan	Warrior	P	Warrior
Afghanistan	Watson	P	Watson
Afghanistan	Wazi Khwa	P	Wazi Khwa
Afghanistan	Weaver	P	Weaver
Afghanistan	Weikel	S	Herm
Afghanistan	West Bridge	P	West Bridge
Afghanistan	White	P	White
Afghanistan	White 10	P	White 10
Afghanistan	Whitehouse	P	Whitehouse
Afghanistan	Wilderness	P	Wilderness
Afghanistan	Wilson	S	Wilson(SW)
Afghanistan	Wilson(SW)	P	Wilson(SW)
Afghanistan	Wishtan	P	Wishtan
Afghanistan	Wolfpack	P	Wolfpack
Afghanistan	Wolverine	P	Wolverine
Afghanistan	Wood	P	Wood
Afghanistan	Wrightsmen	P	Wrightsmen
Afghanistan	Yahya Kheyl	P	Yahya Kheyl
Afghanistan	Yaka Tut	S	Herm
Afghanistan	Yazzie	P	Yazzie
Afghanistan	Yosef Kheyl	P	Yosef Kheyl
Afghanistan	Zaehringer	P	Zaehringer
Afghanistan	Zangabad	P	Zangabad

Country	Base Name	Type	Official Base Name
Afghanistan	Zeebruggee	P	Zeebruggee
Afghanistan	Zerok	P	Zerok
Afghanistan	Zhari Dasht	P	Zhari Dasht
Afghanistan	Zharif Kel	P	Zharif Kel
Afghanistan	Zormat	P	Zormat



Country	Base Name	Type	Official Base Name
Iraq	308	P	308
Iraq	AAK	S	Craw
Iraq	Abrams	P	Abrams
Iraq	ABU GHARAB	S	Mercury
Iraq	Abu Ghraib	P	Abu Ghraib
Iraq	Abu Ghraib Prison BCC	S	Abu Ghraib
Iraq	ABU GHURAYB	S	Mercury
Iraq	Abu Ghurayh	S	Abu Ghraib
Iraq	Abu Naji	P	Abu Naji
Iraq	Ad Diwaniyah	S	Echo - IZ
Iraq	Ad Diwanyah	S	Echo - IZ
Iraq	Adalla	P	Adalla
Iraq	Adam	P	Adam
Iraq	Adder	P	Adder
Iraq	ADL	P	ADL
Iraq	AG College	S	Combat Outpost
Iraq	Aggies	P	Aggies
Iraq	Aggressor	S	Freedom I
Iraq	Aitha	P	Aitha
Iraq	Akashat	P	Akashat
Iraq	Al Abarrah	P	Al Abarrah
Iraq	Al Aleel	P	Al Aleel
Iraq	Al Asad	P	Al Asad
Iraq	Al Asad Air Base	S	Al Asad
Iraq	Al Ashshar	P	Al Ashshar
Iraq	Al Aziziya	P	Al Aziziya
Iraq	Al Ezdehar	S	JSS Al Ezdehar
Iraq	Al Fahr	P	Al Fahr
Iraq	Al Fallujah	P	Al Fallujah
Iraq	Al Farahidy	P	Al Farahidy
Iraq	Al Fattah	P	Al Fattah
Iraq	Al Faw Peninsula	P	Al Faw Peninsula
Iraq	Al Habbaniyah	P	Al Habbaniyah
Iraq	Al Habbaniyah	P	Al Habbaniyah
Iraq	Al Hartha	P	Al Hartha
Iraq	Al Hayy	P	Al Hayy
Iraq	Al Hiedier	P	Al Hiedier
Iraq	Al Hillah	S	Alpha

Country	Base Name	Type	Official Base Name
Iraq	Al Hillah	S	Charlie
Iraq	Al Hussein	P	Al Hussein
Iraq	Al Iskandariyah	P	Al Iskandariyah
Iraq	Al Jadida	P	Al Jadida
Iraq	Al Khansa	P	Al Khansa
Iraq	Al Khidr	P	Al Khidr
Iraq	Al Kindi	P	Al Kindi
Iraq	Al Kisik	P	Al Kisik
Iraq	Al Kut	S	Delta - IZ
Iraq	Al Mahmudiyah	S	Mahmudiyah
Iraq	Al Meerah	P	Al Meerah
Iraq	Al Mina	P	Al Mina
Iraq	Al Muallimeen	P	Al Muallimeen
Iraq	Al Muthana	P	Al Muthana
Iraq	Al Qaim	P	Al Qaim
Iraq	Al Qurna	P	Al Qurna
Iraq	Al Ramadi	S	Ar Ramadi
Iraq	Al Saqr	S	Falcon
Iraq	Al Shaab	P	Al Shaab
Iraq	Al Sheeb	S	Apache - IZ
Iraq	Al Shorta	S	Khadairy
Iraq	Al Taillil	S	Adder
Iraq	Al Tib	P	Al Tib
Iraq	Al Tun Kapri	P	Al Tun Kapri
Iraq	Al Wahab	S	Apache - IZ
Iraq	Al Walid	P	Al Walid
Iraq	Al Zubidiyah	P	Al Zubidiyah
Iraq	Alamo	P	Alamo
Iraq	Albu Hyatt	P	Albu Hyatt
Iraq	Ali Air Base	S	Adder
Iraq	Alpha	P	Alpha
Iraq	Ameriyah	P	Ameriyah
Iraq	An Najaf	P	An Najaf
Iraq	Anaconda	S	JBB
Iraq	Andaloos	P	Andaloos
Iraq	Andrea	P	Andrea
Iraq	Angur	P	Angur
Iraq	Animal	P	Animal

Country	Base Name	Type	Official Base Name
Iraq	Annihilators	P	Annihilators
Iraq	Apache - IZ	P	Apache - IZ
Iraq	Aqur quf	P	Aqur quf
Iraq	AR	P	AR
Iraq	Ar Ramadi	P	Ar Ramadi
Iraq	AR Rumaythah	P	AR Rumaythah
Iraq	Ares	P	Ares
Iraq	Arlington	P	Arlington
Iraq	Arlington CEA Depot	S	Arlington
Iraq	Aruba	P	Aruba
Iraq	Aryes	S	Ares
Iraq	As Sadah	P	As Sadah
Iraq	As Sindiyah Bridge	P	As Sindiyah Bridge
Iraq	As Sindiyah MJB FL	S	As Sindiyah Bridge
Iraq	As Zubayr Port	P	As Zubayr Port
Iraq	As Zubayr Port	P	As Zubayr Port
Iraq	Ash Shura	P	Ash Shura
Iraq	Ashraf	S	Grizzly
Iraq	Ashreen	P	Ashreen
Iraq	Askari	S	Khadairy
Iraq	Assassin	P	Assassin
Iraq	Assassin Main	P	Assassin Main
Iraq	Atlas	P	Atlas
Iraq	Attack	P	Attack
Iraq	AZP	S	As Zubayr Port
Iraq	Aztec	P	Aztec
Iraq	Baath Party HQ	P	Baath Party HQ
Iraq	Bab Al-Mouadam	P	Bab Al-Mouadam
Iraq	Babil	P	Babil
Iraq	Babylon Palace	S	Alpha
Iraq	Badgerville	S	Cobra
Iraq	Badoush	P	Badoush
Iraq	Baghdad- Bandit Island	S	Baghdad Island
Iraq	Baghdad Central Detention Center	S	Abu Ghraib
Iraq	Baghdad Island	P	Baghdad Island
Iraq	Baharia	P	Baharia
Iraq	Baker	P	Baker
Iraq	Balad	S	JBB

Country	Base Name	Type	Official Base Name
Iraq	Balad BOS-1	S	Cobra
Iraq	Bali	P	Bali
Iraq	Bama	P	Bama
Iraq	Bandit Island	S	Baghdad Island
Iraq	Banzai	S	Justice
Iraq	Barbarian	P	Barbarian
Iraq	Barbarian	S	Grizzly
Iraq	BAS	S	Basrah Air Station
Iraq	Basrah Air Station	P	Basrah Air Station
Iraq	Basrah Maqal	P	Basrah Maqal
Iraq	Basrah Palace	P	Basrah Palace
Iraq	Bassam	P	Bassam
Iraq	Battle	P	Battle
Iraq	Bayji	P	Bayji
Iraq	Beladiyat	P	Beladiyat
Iraq	Bernstein	P	Bernstein
Iraq	Besmaya Range	P	Besmaya Range
Iraq	Besmiyah Range	S	Besmaya Range
Iraq	Black	P	Black
Iraq	Black Foot	P	Black Foot
Iraq	Black Lions	P	Black Lions
Iraq	Blackfoot	P	Blackfoot
Iraq	Blackhawk	P	Blackhawk
Iraq	Blue Diamond	P	Blue Diamond
Iraq	Bonzai DJSS	P	Bonzai DJSS
Iraq	Boom	S	Gabe
Iraq	BOR	P	BOR
Iraq	Border Fort 9	P	Border Fort 9
Iraq	BP Hassa	P	BP Hassa
Iraq	BP Hue City	P	BP Hue City
Iraq	Brassfield	P	Brassfield
Iraq	Bravo	P	Bravo
Iraq	Breadbasket	P	Breadbasket
Iraq	Broomhead	S	AR
Iraq	Bucca	P	Bucca
Iraq	Buckmaster	P	Buckmaster
Iraq	Buhritz	P	Buhritz
Iraq	Bulldog	P	Bulldog

Country	Base Name	Type	Official Base Name
Iraq	Bushmaster - IZ	P	Bushmaster - IZ
Iraq	Bushmaster 1	P	Bushmaster 1
Iraq	Bushmaster 2	P	Bushmaster 2
Iraq	Butler Range Complex	P	Butler Range Complex
Iraq	Buzz	P	Buzz
Iraq	Byers	S	Korean Village
Iraq	Cahill	P	Cahill
Iraq	Caldwell	P	Caldwell
Iraq	Callahan	P	Callahan
Iraq	Camp AL Saad	P	Camp AL Saad
Iraq	Camp Buffalo	P	Camp Buffalo
Iraq	Camp Constitution	S	Constitution
Iraq	Camp Cougar	P	Camp Cougar
Iraq	Camp Cowboy	S	Crusader Main
Iraq	Camp Daniels	P	Camp Daniels
Iraq	Camp Dragoon	S	Loyalty
Iraq	Camp Eagle	S	Hope
Iraq	Camp Eden	P	Camp Eden
Iraq	Camp Gator	P	Camp Gator
Iraq	Camp Hutch	P	Camp Hutch
Iraq	Camp Khalid	P	Camp Khalid
Iraq	Camp Payne	S	FTCP
Iraq	Camp Ruhlen	S	Assassin Main
Iraq	Camp Stephen	P	Camp Stephen
Iraq	Canal	P	Canal
Iraq	Carpenter	P	Carpenter
Iraq	Carver	P	Carver
Iraq	Cashe North	P	Cashe North
Iraq	Cashe South	P	Cashe South
Iraq	Castle	P	Castle
Iraq	Causey	S	Al Qaim
Iraq	Cavalier	P	Cavalier
Iraq	Cedar II	P	Cedar II
Iraq	Charlie	P	Charlie
Iraq	Cherokee	P	Cherokee
Iraq	Chindit	P	Chindit
Iraq	Choate	P	Choate
Iraq	Chosen	P	Chosen

Country	Base Name	Type	Official Base Name
Iraq	Chosin	S	Al Iskandariyah
Iraq	CLE Compound	S	Command Liason Element Compound
Iraq	Cleary	P	Cleary
Iraq	CMOC	P	CMOC
Iraq	Cobra	P	Cobra
Iraq	COL DMC	S	Diyala Media Center
Iraq	Cold Steel	P	Cold Steel
Iraq	Comanche	P	Comanche
Iraq	Combat Outpost	P	Combat Outpost
Iraq	Commanche	P	Commanche
Iraq	Command Liason Element Compound	P	Command Liason Element Compound
Iraq	Commando Bar	P	Commando Bar
Iraq	Condor	P	Condor
Iraq	Conqueror	P	Conqueror
Iraq	Constitution	P	Constitution
Iraq	COP 4	P	COP 4
Iraq	COP 727	P	COP 727
Iraq	COP 763	P	COP 763
Iraq	COP 799	P	COP 799
Iraq	COP 821	P	COP 821
Iraq	COP 828	P	COP 828
Iraq	COP 838	P	COP 838
Iraq	COP 9	P	COP 9
Iraq	COP Cashe North	S	Cashe North
Iraq	COP Hotel	P	COP Hotel
Iraq	COP Hotel	S	JSS Hotel
Iraq	COP North	P	COP North
Iraq	COP Nu Hamza	P	COP Nu Hamza
Iraq	COP South	P	COP South
Iraq	COP Subak Sur	P	COP Subak Sur
Iraq	COP Tash	P	COP Tash
Iraq	Corregidor	P	Corregidor
Iraq	COS Callahan	S	Callahan
Iraq	COS Irbil	P	COS Irbil
Iraq	Cottrell	S	Aitha
Iraq	Courage	P	Courage
Iraq	Craw	P	Craw

Country	Base Name	Type	Official Base Name
Iraq	Cross	P	Cross
Iraq	Crusader Main	P	Crusader Main
Iraq	CSH Warehouse	P	CSH Warehouse
Iraq	CTCP Support House	P	CTCP Support House
Iraq	Da Nang	P	Da Nang
Iraq	Dagger	P	Dagger
Iraq	Dahuk Training Center 1	P	Dahuk Training Center 1
Iraq	Dahuk Training Center 2	P	Dahuk Training Center 2
Iraq	Dakota	S	Justice
Iraq	Danger	P	Danger
Iraq	Delta - IZ	P	Delta - IZ
Iraq	Dezil	P	Dezil
Iraq	Diamondback	P	Diamondback
Iraq	Dibbis	P	Dibbis
Iraq	Diwanayah	P	Diwanayah
Iraq	Diyala Governance Center	P	Diyala Governance Center
Iraq	Diyala Media Center	P	Diyala Media Center
Iraq	D-Main	S	Courage
Iraq	Dogwood	P	Dogwood
Iraq	Dogwood FLB	S	Al Iskandariyah
Iraq	Dragon	P	Dragon
Iraq	Dreamland	S	Baharia
Iraq	Duke	P	Duke
Iraq	Dur Rajaib Bridge	P	Dur Rajaib Bridge
Iraq	Dur Rajaib MJB	S	Dur Rajaib Bridge
Iraq	Eagle Base	P	Eagle Base
Iraq	Eastern Barracks	P	Eastern Barracks
Iraq	Echo - IZ	P	Echo - IZ
Iraq	Eden	S	Hit
Iraq	Edge	P	Edge
Iraq	Ellis	P	Ellis
Iraq	Embassy Annex	P	Embassy Annex
Iraq	Endeavor	P	Endeavor
Iraq	Essayons	P	Essayons
Iraq	Ezdehar	S	JSS Al Ezdehar
Iraq	Falcon	P	Falcon
Iraq	Fallahat	P	Fallahat
Iraq	Fallujah	S	Baharia

Country	Base Name	Type	Official Base Name
Iraq	Family Quarters	S	Mittica
Iraq	Fat Boy Bridge	P	Fat Boy Bridge
Iraq	Fat Boy MJB LSB	S	Fat Boy Bridge
Iraq	Fernandez	P	Fernandez
Iraq	Ferrin Huggins	S	Falcon
Iraq	FOB Constitution	S	Constitution
Iraq	FOB Cougar	S	Camp Cougar
Iraq	FOB Daniels	S	Camp Daniels
Iraq	FOB Gator	S	Camp Gator
Iraq	Ford	P	Ford
Iraq	Fort	P	Fort
Iraq	Fort Atterbury	P	Fort Atterbury
Iraq	Fortitude - IZ	P	Fortitude - IZ
Iraq	Fortress Lines	P	Fortress Lines
Iraq	Foxtrot - IZ	P	Foxtrot - IZ
Iraq	Freedom	S	Camp Cougar
Iraq	Freedom	S	Courage
Iraq	Freedom Compound	P	Freedom Compound
Iraq	Freedom I	P	Freedom I
Iraq	Freedom II	P	Freedom II
Iraq	Freedom III	P	Freedom III
Iraq	Freedom Rest	P	Freedom Rest
Iraq	FTCP	P	FTCP
Iraq	Gabe	P	Gabe
Iraq	Gaines Mills	P	Gaines Mills
Iraq	Gannon	P	Gannon
Iraq	Gannon II	P	Gannon II
Iraq	Garry Owen	P	Garry Owen
Iraq	Gaspar	P	Gaspar
Iraq	Gator	P	Gator
Iraq	Gatorswamp Bridge	P	Gatorswamp Bridge
Iraq	Gatorswamp MJB LSB	S	Gatorswamp Bridge
Iraq	Gela	S	Al Iskandariyah
Iraq	Ghazaliyah	P	Ghazaliyah
Iraq	Ghazaliyah I	P	Ghazaliyah I
Iraq	Ghazaliyah II	P	Ghazaliyah II
Iraq	Ghazaliyah III	P	Ghazaliyah III
Iraq	Gimlet	S	Blackfoot



Country	Base Name	Type	Official Base Name
Iraq	Glory	S	Marez
Iraq	Golf	P	Golf
Iraq	Grant	P	Grant
Iraq	Green	P	Green
Iraq	Green Acres	P	Green Acres
Iraq	Green Zone	P	Green Zone
Iraq	Grierson	P	Grierson
Iraq	Grizzly	P	Grizzly
Iraq	Guerrero	P	Guerrero
Iraq	Habbaniyah	S	Al Habbaniyah
Iraq	Habur Gate	P	Habur Gate
Iraq	Haditha	P	Haditha
Iraq	Hadithah	P	Hadithah
Iraq	Hadithah Dam	S	Hadithah
Iraq	Hamid	p	Hamid
Iraq	Hammer	p	Hammer
Iraq	Hashimiyah	p	Hashimiyah
Iraq	Hateen	p	Hateen
Iraq	Hawas	p	Hawas
Iraq	Hawijah	p	Hawijah
Iraq	Hawk	p	Hawk
Iraq	Hawkes	p	Hawkes
Iraq	Hell Hound	P	Hell Hound
Iraq	Hit	P	Hit
Iraq	Hit Training Center	S	Hit
Iraq	Honor	P	Honor
Iraq	Hope	P	Hope
Iraq	Hor Al Bash	P	Hor Al Bash
Iraq	Hotel	P	Hotel
Iraq	Hound	S	Gabe
Iraq	Howell	P	Howell
Iraq	Hunte	S	Justice
Iraq	Hunter	P	Hunter
Iraq	Hurricane Point	P	Hurricane Point
Iraq	Hurriyah II	P	Hurriyah II
Iraq	Husaybah	S	Gannon
Iraq	Hussiniyah	P	Hussiniyah
Iraq	IBA	P	IBA

Country	Base Name	Type	Official Base Name
Iraq	Ibrahim Bin Ali	P	Ibrahim Bin Ali
Iraq	Imam Mansour	P	Imam Mansour
Iraq	IMN	P	IMN
Iraq	Independence	P	Independence
Iraq	India	P	India
Iraq	Inman	P	Inman
Iraq	Intisar	P	Intisar
Iraq	Irbil Residence Office	P	Irbil Residence Office
Iraq	Iron	P	Iron
Iraq	Ironhorse	S	Danger
Iraq	Ironhorse	S	Loyalty
Iraq	Iskan	P	Iskan
Iraq	Islanders	P	Islanders
Iraq	Istiqlal	P	Istiqlal
Iraq	IT2	P	IT2
Iraq	Italy	S	Mahmudiyah
Iraq	Jaguar	P	Jaguar
Iraq	Jalula	S	Cobra
Iraq	Janin Al Few Penninsula	S	Al Faw Peninsulsa
Iraq	JBB	P	JBB
Iraq	JCC Abu Ghraib	S	Joint Coordination Center Abu Ghraib
Iraq	Jenkins	P	Jenkins
Iraq	Joint Base Balad	S	JBB
Iraq	Joint Coordination Center Abu Ghraib	P	Joint Coordination Center Abu Ghraib
Iraq	Joint Security Station 18	S	JSS 18
Iraq	JSS 1	S	JSS Mutanabe
Iraq	JSS 18	P	JSS 18
Iraq	JSS 2	P	JSS 2
Iraq	JSS Adhamiyah	P	JSS Adhamiyah
Iraq	JSS Al Awad	P	JSS Al Awad
Iraq	JSS Al Ezdehar	P	JSS Al Ezdehar
Iraq	JSS Al Jameat	P	JSS Al Jameat
Iraq	JSS Al Qanat	P	JSS Al Qanat
Iraq	JSS Al Rashid	P	JSS Al Rashid
Iraq	JSS Al Rashid 2	P	JSS Al Rashid 2
Iraq	JSS Al Wahida	P	JSS Al Wahida

Country	Base Name	Type	Official Base Name
Iraq	JSS Anbar PGC	S	JSS Anbar Provisional Government Center
Iraq	JSS Anbar Provisional Government Center	P	JSS Anbar Provisional Government Center
Iraq	JSS Bab Al Sheihk	P	JSS Bab Al Sheihk
Iraq	JSS Basateen	P	JSS Basateen
Iraq	JSS Commanche	P	JSS Commanche
Iraq	JSS Deason	P	JSS Deason
Iraq	JSS Diamond	P	JSS Diamond
Iraq	JSS Hamiyah	P	JSS Hamiyah
Iraq	JSS Haswah	P	JSS Haswah
Iraq	JSS Hotel	P	JSS Hotel
Iraq	JSS Hurriyah	P	JSS Hurriyah
Iraq	JSS Iskan	S	Al Iskandariyah
Iraq	JSS Jabella	P	JSS Jabella
Iraq	JSS Jenkins	S	Jenkins
Iraq	JSS Jurf	P	JSS Jurf
Iraq	JSS Kumayt	P	JSS Kumayt
Iraq	JSS Lutifiyah	S	Lutifiyah
Iraq	JSS Mahmood	P	JSS Mahmood
Iraq	JSS Masafee	P	JSS Masafee
Iraq	JSS Mushada	P	JSS Mushada
Iraq	JSS Mutanabe	P	JSS Mutanabe
Iraq	JSS Mutanabi	P	JSS Mutanabi
Iraq	JSS Sadiyah II	S	COP 821
Iraq	JSS Salaam	P	JSS Salaam
Iraq	JSS Salamiyat	P	JSS Salamiyat
Iraq	JSS Scorpion	P	JSS Scorpion
Iraq	JSS Sheikh Marouf	P	JSS Sheikh Marouf
Iraq	JSS Siniyah	P	JSS Siniyah
Iraq	JSS Tal Abtah	P	JSS Tal Abtah
Iraq	JSS Thawra II	P	JSS Thawra II
Iraq	JSS Tomahawk	P	JSS Tomahawk
Iraq	JSS Umms ah	P	JSS Umms ah
Iraq	JSS Ur	P	JSS Ur
Iraq	JSS Wahida	P	JSS Wahida
Iraq	JSS Youngblood	P	JSS Youngblood
Iraq	Juiaba	P	Juiaba
Iraq	Juliet	P	Juliet

Country	Base Name	Type	Official Base Name
Iraq	Jumayah	P	Jumayah
Iraq	Junction City	S	Ar Ramadi
Iraq	Justice	P	Justice
Iraq	Juwarin AFB	P	Juwarin AFB
Iraq	K-1	P	K-1
Iraq	K-3	P	K-3
Iraq	Kaiser	P	Kaiser
Iraq	Kalsu	P	Kalsu
Iraq	Karada	P	Karada
Iraq	Karbala	S	India
Iraq	Key West	P	Key West
Iraq	Khadairy	P	Khadairy
Iraq	Khalis	S	Blackfoot
Iraq	KILO	P	KILO
Iraq	Kirkush Military Training Base	S	Caldwell
Iraq	Kirkush NIA Training Facility	S	Caldwell
Iraq	KMTB	S	Caldwell
Iraq	Korean Village	P	Korean Village
Iraq	Kulsu	S	Andrea
Iraq	Kut Al Hayy	S	Al Hayy
Iraq	Latham	S	Al Walid
Iraq	Loyalty	P	Loyalty
Iraq	LSA Diamondback	S	Diamondback
Iraq	Lutifiyah	P	Lutifiyah
Iraq	MacKenzie	P	MacKenzie
Iraq	Magic Mountain	P	Magic Mountain
Iraq	Mahmudiyah	P	Mahmudiyah
Iraq	Makhmur	P	Makhmur
Iraq	Malaab	P	Malaab
Iraq	Manchester	P	Manchester
Iraq	Manhatan	S	Al Habbaniyah
Iraq	Manhattan	S	Al Habbaniyah
Iraq	Marez	P	Marez
Iraq	Marlboro	P	Marlboro
Iraq	Martyrs Monument	P	Martyrs Monument
Iraq	MCAS Al Asad	S	Al Asad
Iraq	McHenry	P	McHenry
Iraq	Meade	P	Meade

Country	Base Name	Type	Official Base Name
Iraq	Melody	S	Choate
Iraq	Mercury	P	Mercury
Iraq	Midland	P	Midland
Iraq	Milledge	P	Milledge
Iraq	Miller	S	Hadithah
Iraq	Minden	P	Minden
Iraq	Mittica	P	Mittica
Iraq	Mobile	P	Mobile
Iraq	Mohawk	P	Mohawk
Iraq	Mora	S	Brassfield
Iraq	Morehead	P	Morehead
Iraq	Mosul Airfield	S	Diamondback
Iraq	Mosul Palace	S	Courage
Iraq	Motor Head Bridge	P	Motor Head Bridge
Iraq	Motor Head MJB Float Bridge	S	Motor Head Bridge
Iraq	Mountain	P	Mountain
Iraq	Mudaysis	P	Mudaysis
Iraq	Mujema	P	Mujema
Iraq	Mullalah	P	Mullalah
Iraq	Mullalah 2	P	Mullalah 2
Iraq	Muthana	S	Independence
Iraq	NAEA Training Center	S	Hit
Iraq	Najaf	S	An Najaf
Iraq	None	P	Khadra
Iraq	None	P	Khaffijayah
Iraq	None	P	Khatoon
Iraq	None	P	Knight
Iraq	None	P	Kubaysah
Iraq	None	P	LSA Geiger
Iraq	None	P	Lee
Iraq	None	P	Lima
Iraq	None	P	Lion - IZ
Iraq	None	P	Love
Iraq	Nuab Dubat	S	Al Muallimeen
Iraq	Pacesetter	S	MacKenzie
Iraq	Pathfinder	S	Bali
Iraq	Patriot	S	Fortitude - IZ
Iraq	Patriot	S	Loyalty

Country	Base Name	Type	Official Base Name
Iraq	Patrol Base B	S	Al Fallujah
Iraq	Patrol Base Lutifiyah	S	Lutifiyah
Iraq	PB Andrea	S	Andrea
Iraq	PB Barbarian	S	Barbarian
Iraq	PB Uvanni	S	Al Tib
Iraq	Performance	S	Marez
Iraq	Phantom	S	Andrea
Iraq	Raider	S	Dagger
Iraq	Raider Base	S	Dagger
Iraq	Ramadi	S	Ar Ramadi
Iraq	Rasheed	S	Bab Al-Mouadam
Iraq	Recon	S	JSS Al Wahida
Iraq	Regular	S	Freedom II
Iraq	Rifles Base	S	Al Asad
Iraq	Rifles West	S	Ar Ramadi
Iraq	Rock	S	Blackfoot
Iraq	Samarra	S	Al Tib
Iraq	Samarra	S	Camp Daniels
Iraq	Samarra	S	MacKenzie
Iraq	Scorpion Xray	S	Gabe
Iraq	South Palace	S	Basrah Palace
Iraq	Spartan Main	S	Choate
Iraq	St. Mere	S	Al Fallujah
Iraq	St. Michael	S	Mahmudiyah
Iraq	Stone	S	Andrea
Iraq	Taillil	S	Adder
Iraq	Taskforce Business Stability Operations	S	Command Liason Element Compound
Iraq	TFBSO	S	Command Liason Element Compound
Iraq	Tiger Base	S	Al Qaim
Iraq	Tuwaittha	S	Cashe North
Iraq	Tuz Military Airfield	S	Bernstein
Iraq	Ubaydah Bin Al Jarrah Airfield	S	Delta - IZ
Iraq	Vulturno	S	Baharia
Iraq	Waleed	S	Al Walid
Iraq	War Eagle	S	Hope
Iraq	Warhorse	S	Freedom I
Iraq	Warpath	S	COP 821

Country	Base Name	Type	Official Base Name
Iraq	Webster	S	Al Asad
Iraq	Widowmaker	S	Fortitude - IZ
Iraq	Wolfpack Base	S	Honor
Iraq	Wyatt	S	Carpenter
Iraq	Zahkho	S	Habur Gate
Iraq	Zawita Compound	S	Dahuk Training Center 1

