BY ORDER OF THE
SECRETARY OF THE AIR FORCE

DEPARTMENT OF THE AIR FORCE
PAMPHLET 32-7003

9 SEPTEMBER 2021

Civil Engineering

OPERATIONAL RANGE ASSESSMENT
PROGRAM MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY:

RELEASABILITY: There are no releasability restrictions on this publication.

This Department of Air Force Pamphlet (DAFPAM) supports Department of Defense Instruction 4715.14, *Operational Range Assessments*. This DAFPAM provides formal non-directive environmental guidance for the Air Force Operational Range Assessment Program (ORAP) in order to monitor and manage potential environmental contamination at active test, training and small arms ranges. It is intended for personnel who manage, maintain, or support operational ranges; assist in accomplishing operational range assessments; and report or communicate environmental matters pertaining to test, training, or range areas. Managers may use this ORAP DAFPAM to augment test, training, and range sustainability efforts. The DAFPAM sets forth procedures for conducting an operational range assessment, providing a mechanism for evaluating munitions constituents (MC) migration; assessing risks to human health and the environment; and responding to environmental impacts from range activities and munitions use. AF/A4CA and Air Force Civil Engineer Center (AFCEC) developed this formal non-directive environmental guidance for the AF ORAP in order to monitor and manage potential environmental contamination at active test, training and small arms ranges. This DAF issued publication will supplement Air Force Manual (AFMAN) 32-7002, *Environmental Compliance and Pollution Prevention*, with new non-directive guidance on the ORAP, and expand on ORAP compliance statements in AFMAN 13-212, Volume 1, *Range Planning and Operations.* This will ensure effective implementation of DoDI 4715.14, *Operational Range Assessments*, and provide the overarching structure of the ORAP so as to enable the DAF to execute the ORAP efficiently and effectively. This Management Pamphlet (guidance) applies to the entire DAF within the United States and its territories, including all members of the Regular DAF, United States Space Force (USSF), the Air Force Reserve (AFRC), the Air National Guard (ANG), AFIMSC, AFCEC, DAF installations and USSF Garrisons (formerly USSF Bases), and geographically separated units (GSU). This ORAP

DAFPAM applies to all stand-alone ranges and range complexes associated with US bases only, and does not apply to DAF ranges overseas.

Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, 23 March 2020, and are disposed of in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to SAF/AQXS using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Forward all comments regarding this DAFPAM to: **usaf.pentagon.saf-aq.mbx.saf-aqxs-policy-workflow@mail.mil**.

Chapter 1

INTRODUCTION

1.1. Purpose. This Department of the Air Force Pamphlet (DAFPAM) defines roles and responsibilities for implementing the DAF Operational Range Assessment Program (ORAP). It provides an overview of the methodology for assessing DAF owned test, training, or range assets under the ORAP.

1.2. Applicability. This Management Pamphlet (guidance) applies to the entire DAF, including all members of the Regular DAF, United States Space Force (USSF), the Air Force Reserve (AFRC), the Air National Guard (ANG), AFIMSC, AFCEC, DAF installations and USSF Garrisons (formerly USSF Bases). It applies non-directive standards across the DAF, including the USAF, and the USSF and is applicable to MAJCOMs, Field Commands (FIELDCOMs), DAF Installations and USSF Garrisons. It is intended for personnel who manage, maintain, or support operational ranges; assist in accomplishing operational range assessments; and report or communicate environmental matters pertaining to test, training, or range areas.

1.3. Version History. The DAF ORAP was established in 2006 to fulfill requirements identified implicitly or explicitly in DoD policy. Historically, the DAF provided ORAP management and the implementation of roles and responsibilities in guidance addressing the methodology for conducting an assessment under the ORAP. However, this is the first publication of the *Operational Range Assessment Program Management Plan Pamphlet*.

1.4. Program Overview. Department of Defense (DoD) policy requires preservation of access, maintenance of operational use, and implementation of measures to sustain test and training areas; as well as manage the potential and actual environmental impacts from activities at military munitions on ranges.

1.4.1. The Department of the Air Force (DAF) needs to sustain a safe and operationally relevant environment that promotes combat readiness. Installations are expected to operate, manage, and maintain ranges that, as an aggregate, support the full scope of military readiness. These ranges can be used to perform testing or training activities. These resources need to be operated in compliance with applicable laws and regulations, and to the greatest extent possible, with reasonable measures implemented to mitigate detrimental impacts on human health and the environment when using range assets.

1.4.2. The ORAP augments test, training, and range sustainability efforts. The ORAP assists in integrating mission requirements and sound resource management principles, and enhances the ability to address environmental as well as health and safety concerns due to munitions use and range activities. The ORAP sets forth procedures for conducting an operational range assessment (ORA); and provides a mechanism for evaluating munitions constituents (MC) migration; assessing risks to human health and the environment; and responding to environmental impacts from range activities and munitions use. Details on execution for performing an ORA are provided in a separate document, *ORAP Assessment Methodology Guide Version 4.0*, maintained at AFCEC/CZ.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Background. Implementation of the ORAP requires a cooperative approach among a multitude of personnel at various levels. The roles and responsibilities for implementing the Air Force Program and conducting assessments under the ORAP are discussed in **paragraph 2.2** through **paragraph 2.12** The Under Secretary of Defense for Acquisition and Sustainment, USD (A&S) has the overall responsibility for oversight related to DoDI 4715.14, *Operational Range Assessments.*

2.2. SAF/IE. The Assistant Secretary of the Air Force for Installations, Environment and Energy (SAF/IE) shapes policy direction, conducts oversight and liaisons with the Office of the Secretary of Defense, Congress, federal agencies and external organizations. The Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure (SAF/IEE) is the office of primary responsibility within SAF/IE. SAF/IEE provides oversight of matters pertaining to the review and execution of plans, policies, guidance, and budgets for the ORAP; ensures ORAP requirements are integrated into appropriate and relevant policy; coordinates with the USD (A&S) regarding significant ORAP findings; and submits DAF ORAP information to USD (A&S) as necessary.

2.3. AF/A4C. The Directorate of Civil Engineers (AF/A4C) assists in formulating and promulgating broad environmental implementation guidance and instructions for programs. Asset Management (A4CA) is the office of primary responsibility, and AF/A4CA provides oversight, monitors performance, and advocates for resources pertaining to the ORAP. A4C coordinates with SAF/IEE regarding significant ORAP findings, transmits report of DAF ORAP information to SAF/IEE, and coordinates with other headquarters staff offices (e.g., AF/A4L, AF/A4S, AF/A3T) regarding implementation of the ORAP and dissemination of information to all appropriate organizational levels.

2.4. AF/A3T. The Director of Air Force Training and Readiness (AF/A3T) assists in ensuring the operational range inventory, identified in the ORAP, including air-to-air/space; air-to-ground; and air-to-water ranges utilized by the DAF. It is the Office of Primary Responsibility (OPR) for AFMAN 13-212, *Volume 1, Range Planning and Operations*. It also facilitates coordination and information dissemination with operational units, range management offices (RMOs), and/or range operating agencies (ROAs) to support execution of the ORAP with minimal effect on range operations; and advocates for the implementation of sustainment measures.

2.5. AFOTEC. The Air Force Operational Test and Evaluation Center (AFOTEC) assists in ensuring the operational range inventory identified in the ORAP, and accurately includes test and evaluation areas utilized by the DAF. It facilitates coordination and information dissemination, as required with detachments to support execution of the ORAP with minimal effect on operations; and advocates for the implementation of sustainment recommendations.

2.6. AFIMSC. Under the Air Force Material Command (AFMC) the Air Force Installation and Mission Support Center (AFIMSC) provides environmental program management support to implement environmental policies. AFIMSC acts as a liaison between AF/A4CA and the Air Force Civil Engineer Center (AFCEC). It oversees the planning, programming, budgeting, and

execution process for the ORAP; and assists in the dissemination of ORAP information to other primary subordinate units.

2.7. AFCEC. The AFCEC is a subordinate unit of the AFIMSC.   The Environmental Management Directorate (AFCEC/CZ) provides environmental program management and subject matter expertise, centralized execution and oversight, and technical support to implement policies. The AFCEC Environmental Quality Technical Support Branch (AFCEC/CZTQ) is the office of primary responsibility.   AFCEC, through the chain of command, coordinates with AF/A4CA regarding significant ORAP findings and annual Program reporting. It coordinates with AFIMSC, through chain of command, and other subordinate units regarding implementation of the ORAP; and communicates with other AFCEC directorates to disseminate Program information to all appropriate organizational branches. The Real Property Accountability Directorate (AFCEC/CIT), in accordance with AFIs 32-9002, *Management of Real Property*, 18 December 2020, and 32-9005, *Real Property Accountability and Reporting,* 03 February 2020, provides Real Property program management and subject matter expertise, centralized execution and oversight, and technical support to implement policies.

2.7.1. AFCEC/CZT. The ranges subject matter expert (SME) provides technical oversight of the ORAP for the entire Air Force (Regular, Reserve, and Guard); and centrally executes the program for the active Air Force and Reserves. AFCEC/CZTQ conducts an annual end of fiscal year range inventory data call in conjunction with the semi-annual environmental quality (EQ) data call using the environmental reporting module and prepares response to the USD (A&S) annual ORAP data call. The AFCEC/CZTQ also participates in a program management review with USD (A&S), as well as plan, program, budget, and execute assessments under the ORAP as necessary. In addition, the AFCEC/CZTQ monitors development of or changes to applicable statutes, regulations, directives, instructions, manuals, or other policies that affect assessments under the ORAP. It also establishes and maintains procedures for conducting assessments under the ORAP, and updates assessment methodologies whenever significant changes occur. In addition, AFCEC/CZTQ programs and validates ORAP funding requirements in accordance with environmental programming guidance contained in AFI 32-7001, *Environmental Management*, and utilizing the Automated Civil Engineering System–Program Management (ACES-PM), the Enterprise, Environmental, Safety & Occupational Health Management Information System (EESOH-MIS), or other NexGen IT systems. AFCEC/CZTQ provides technical support, as needed, in the planning, implementation, and/or review of range assessments and sustainment concerns in support of all levels of the DAF; and interfaces with the other Military Services, higher headquarters, and non-DoD entities in the execution of AFCEC responsibilities as a center of expertise in range sustainability, and informs higher headquarters (e.g., AF/A4CA, SAF/IEE, and USD (A&S) of any significant ORAP findings. AFCEC/CZTQ coordinates as necessary, with installation contacts as well as with other stakeholders in order to implement the ORAP and execute assessment projects. It also maintains a record repository of final assessment reports and other documents developed under the ORAP.

2.7.2. AFCEC/CZO. The Operations Division (AFCEC/CZO) provides support teams to assist installations in planning and programming, developing permits and plans, and executing projects. AFCEC/CZO assists in the identification of installation ORAP points of contact and facilitates communication with installation level personnel; assists in quality assurance/quality control of data submitted as part of the EQ Data Call; and when needed, assists in the

implementation of ORAP projects by review of deliverables and/or oversight of on-site (installation) activities. In addition, it assists in the implementation of sustainment recommendations to address noted environmental concerns through planning, programming, budgeting, and execution.

2.7.3. AFCEC/CXD. The Explosive Ordnance Disposal Division (AFCEC/CXD) that falls within the Readiness Directorate provides technical experts to enable explosive ordnance disposal (EOD) forces to meet current and projected missions. AFCEC/CXD assists in ensuring the operational range inventory, identified in the ORAP, accurately includes areas used by EOD personnel. It facilitates coordination and information dissemination with operational units to support execution of the ORAP with minimal effect on operations, and as appropriate, advocates for the implementation of sustainment recommendations to address noted explosive safety concerns. EOD guidance is provided in AFMAN 32-3001, *Explosive Ordnance Disposal (EOD) Program* and explosive safety standards are in the Defense Explosives Safety Regulation (DESR) 6055.09_AFMAN 91-201, *Explosives Safety Standards*.

2.7.4. AFCEC/CO. The Operations Directorate (AFCEC/CO) provides support and small arms range subject matter expertise for construction, operation, and sustainment of close combat areas, small arms ranges, grenade ranges, and other training areas utilized by Security Forces. The Operations Directorate Support Center (AFCEC/COSC) maintains the unified facilities design criteria and provides review of all new and rehabilitated small arms ranges. AFCEC/CO assists installations in assessing, planning/programming, validating requirements and executing projects. The AFCEC/COSC also assists the AF/A4S in developing the required annual occupational and operational safety inspection checklist and works with the AFSFC to mitigate deficiencies that threaten operational range capability.

2.8. AFSFC. The Air Force Security Forces Center (AFSFC) is a subordinate unit of the AFIMSC. AFSFC is responsible for force protection, law enforcement, base defense operations, and combat arms programs. AFSFC assists in ensuring the operational range inventory identified in the ORAP accurately includes close combat areas, small arms ranges, grenade ranges, and other training areas utilized by Security Forces. It facilitates coordination and information dissemination with operational units, range managers, and/or range operators to support execution of the ORAP with minimal effect on combat arms operations, and advocates for the implementation of sustainment recommendations to address noted safety and/or health concerns.

2.9. USSF. The primary mission of the USSF as directed by Congress, is to maintain, protect, and expand the U.S. fleet of advanced military satellites that form the backbone of U.S. global military operations in order to provide support in meeting the DoD military mission through instantaneous communication across battle-zones, identification of enemy positions and movements, tracking weather patterns, and guiding navigational systems that allow for precision strikes. The USSF, through FIELDCOMs, facilitates communication with installation level personnel, other FIELDCOM-level offices, and higher headquarters, and advocates for measures that facilitate range asset accountability and sustainment. References to the USSF herein refer to the Service, and not the MAJCOM that previously existed within the DAF of the same name.

2.10. MAJCOMs/FIELDCOMs. The major commands (MAJCOMs) and field commands (FIELDCOMs) provide support and assist installations in meeting the DoD and DAF military mission. MAJCOMs/FIELDCOMs facilitate communication with installation level personnel,

other MAJCOM/FIELDCOM-level offices and higher headquarters, and advocate for measures that facilitate range asset accountability and sustainment.

2.10.1. ANG. The Air National Guard (ANG) centrally manages the ORAP for Air Guard installations and facilities. The OPR is the National Guard Bureau. The ANG interfaces with AFCEC in the management, execution, and review of ORAP project deliverables; and plans, programs, budgets, and executes assessments under the ORAP as appropriate. The ANG also assists in the identification of installation ORAP points of contact and facilitates communication with installation level personnel. It reviews data submitted by ANG installations as part of the EQ Data Call and verifies ANG data included in the USD (A&S) annual ORAP submission.

2.10.2. AFRC. The Air Force Reserve Command (AFRC) interfaces with AFCEC in the management, execution, and review of ORAP project deliverables; and plans, programs, budgets, and executes assessments under the ORAP as appropriate. AFRC also assists in the identification of installation ORAP points of contact and facilitates communication with installation level personnel. It reviews data submitted by AFRC installations as part of the EQ Data Call and verifies AFRC data included in the USD (A&S) annual ORAP submission.

2.11. Installations/Garrisons. A multitude of installation/garrison offices provide support to range assets such as but not limited to safety, bioenvironmental, environmental, real property, and geobase. As such, various responsibilities associated with range assets are often outlined in a number of different DAF instructions and/or manuals. The following installation roles and responsibilities pertain only to implementation of the ORAP and accomplishment of ORAs.

2.11.1. Installation/Garrison Commander. The Installation/Garrison Commander, or designated individual, facilitates communication with installation level personnel and higher headquarters; advocates for measures that support range asset accountability and sustainment; and in coordination with legal office, disseminates information to local, state, and federal agencies regarding the ORAP. The Installation/Garrison Commander, or designated individual, also provides through appropriate channels and in coordination with AFCEC, information on significant findings under the ORAP.

2.11.2. Civil Engineer. The OPR for the ORAP is the Civil Engineer. The Civil Engineer coordinates with other installation offices to support implementation of the ORAP and reviews assessment deliverables. The Civil Engineer works to ensure that range assets and data reported as part of the EQ Data Call are accurate; facilitates communication of findings to higher headquarters through the chain of command; helps to facilitate the dissemination of ORAP information to local, state, and federal agencies; as well as assist in advocating for and implementing measures that support range asset accountability and sustainment.

2.11.2.1. Real Property Office. The Real Property Office is responsible for maintaining accurate installation real property records and a complete real property inventory. A complete real property inventory consists of all sites, including lands and facilities, for which the DAF has real property accountability, regardless of the organization using or funding the facility or land. The Real Property Office reviews and validates range asset information and obtains key supporting documents (to include, but not limited to DD Form 1354, *Request for Changed Use of Real Property*, deed, appropriate real property in-grant instrument, etc.) for accuracy before placing the range data in the Accountable Property System of Record (APSR) in order to add to the Air Force Real Property Inventory. The

Real Property Office also assists, as necessary, to clarify document requirements for data entry and/or correcting existing range data in the APSR. It works to ensure all unclassified real property assets (in which the DAF has legal interest) are assigned a facility number, appropriate category code, and Real Property Unique Identifier (RPUID) and that the RPUID is related to other installation system data such as geospatial location. The Real Property Office is also responsible for developing grant instruments packages for staffing through AFCEC/CIT and coordinating with other offices to gather the required documentation to support a grant transaction such as the Environmental Office. If a commercial or local, state or other federal entity seeks to use the range or to extend a range use agreement, the Real Property Office is responsible for getting the approval from SAF/IEI, Wing, Garrison, and /or the Wing/Garrison Commander for staffing the final grant package for signature.

2.11.2.2. GeoBase. The Geo Integration Office (also be known as GeoBase) is responsible for the Geospatial Information and Services Program. GeoBase enables the management of natural and built infrastructure to support military readiness including the operation and sustainment of military test and training ranges. It provides geospatial asset visibility (location-based context and awareness) to various functional areas such as but not limited to comprehensive planning, encroachment management, explosive safety, and real property. GeoBase implementation (data development and maintenance) is a cross-functional enterprise residing at all levels. The GeoBase Office assists with development, maintenance, and quality assurance of geospatial data in accordance with the applicable guidance. It provides guidance and support to data owners regarding Installation Geospatial Information and Services data maintenance, services, products, and capabilities; and it provides appropriate technical or procedural support to ensure successful use of geospatial technologies.

2.11.3. Range Operators. The Range Manager, Range Operator, or Officer in Charge assists in implementing the ORAP. They review deliverables, and coordinate with the Civil Engineer as well as other installation offices to ensure range assets and associated data (e.g., real property, geobase, etc.) are accurately documented. In addition, Range Operators facilitate communication of significant findings to higher headquarters, through the appropriate chain of command, and assists in advocating for and implementing measures that support range asset accountability and sustainment.

2.11.4. Bioenvironmental Engineering (BE). BE will support Civil Engineering's ORAP assessments by conducting risk assessments, in accordance with AFI 48-145, *Occupational and Environmental Health Programs,* for potential or confirmed occupational, radiological and environmental health-related exposure pathways, and determine surveillance requirements and frequencies.

2.12. ORA Team. The assessment team is comprised of contracted personnel. Contract personnel should implement the ORAP at the installation level by performing evaluations and documenting findings under the Program. However, in order to successfully accomplish assessments, contract personnel rely on information provided by installation stakeholders. The level of effort necessary to accomplish an assessment is dependent on the availability of information and data as well as the assessment phase. As such, the involvement required by stakeholders will vary pending on data needs. Further information on conducting operational range

assessments may be obtained by reviewing the USAF ORAP *Assessment Methodology Guide version 4.0,* and can be found on eDASH (see URL web address in **paragraph 7.4**).

Chapter 3

THE DAF ORAP

3.1. Mission. The primary mission of the ORAP as set forth by DoD policy is to assess a range to determine if there is a release of MC to an off-range area and whether the release creates a potential unacceptable risk to human health or the environment; and to address a release or substantial threat of a release identified as a result of an operational range assessment. Included in this mission is consideration of on-range proactive management practices to prevent a release or substantial threat of a release of MC from a range to an off-range area. Such proactive management practices would help to limit potential hazards; assist in resolving any conflicts between environmental and explosive safety requirements with the primary objective of minimizing safety hazards; and support the long-term sustainability of DoD ranges in accordance with mission requirements while protecting human health and the environment.

3.2. Vision. The DAF vision for the ORAP is to enhance the ability to address environmental as well as health and safety concerns due to range activities and munitions use; assist in management and maintenance of range assets; and facilitate sustainment to support current and future test and training requirements while protecting human health and the environment.

3.3. Drivers. The ORAP is not regulatory driven, it is a voluntary program implemented by the DAF in accordance with military policy. The following provides an overview of program specific policy documents, it is not an all-inclusive list of environmental or safety compliance requirements.

3.3.1. DAFPD 32-70. *Environmental Considerations in DAF Programs and Activitie*s. This policy establishes an approach to and framework for environmental management within the DAF, and implements various DoD instructions and directives including DoDI 4715.14.

3.3.2. DoDI 4715.14. *Operational Range Assessments.* This pamphlet establishes policy and prescribes procedures to assess the potential human health and environmental impacts to off-range receptors from the use of military munitions on operational ranges, and augments guidance in DoDD 3200.15.

3.3.3. DoDD 3200.15. *Sustaining Access to the Live Training and Test Domain*. This directive indicates it is policy to preserve access and operational use of the live training and test domain; sustain the capacity of areas used for training and testing; maintain an inventory of operational ranges; and assist in preventing encroachment.

3.3.4. AFI 90-2001, *Mission Sustainment*. Guidance for installations to ensure appropriate actions to manage/report hazards that pose both current and future risks to Air Force mission operations.

3.4. Range Assets. The ORAP inventory is a subset of the larger DAF range asset list, as some assets are specifically excluded from an assessment under the ORAP due to type or location. Refer to **Attachment 1** for definition of terms.

3.4.1. Range List. Per DoD policy, the ORAP applies to all assets reported in the Component's operational range inventory in accordance with DoDD 3200.15. Per this directive, Components are required to maintain an inventory of operational ranges. DoDD 3200.15 applies to all operational ranges and associated facilities, training areas, test areas, sea space, and military

airspace that the DoD owns, operates, leases, or controls for training, testing, research, or development to include public lands withdrawn for DoD purposes, and live training and test domains outside of the United States. Ranges used to solely support contingency operations are excluded.

3.4.2. ORAP List. DoDI 4715.14 specifies the ORAP applies to those assets identified in **paragraph 3.4.1** which are located in the United States. This pamphlet specifically excludes assets located outside the United States, areas used solely to support contingency operations, as well as indoor ranges. Additionally, the DAF has deemed ranges used solely for recreational purposes as ineligible for an assessment under the ORAP. Essentially, all range assets used for munitions-related activities which are owned, leased, or operated by the DAF are potentially subject to the requirements of the DAF ORAP. Assets in which the DAF does not have real property accountability, and provided no cost or liability is incurred by the DAF are excluded from the DAF Program unless otherwise agreed upon in writing. Although such assets may be excluded from the DAF ORAP, the asset may be subject to an assessment under a Sister Service Program. The ORAP also exempts some areas due to infeasibility to evaluate (e.g., comprised only of air or water) or by basis of a limited MC source (i.e., contamination is of such miniscule quantity as not to present a threat of release or risk).

3.5. Assessments. The following provides an overview of the ORAP assessment methodology. The ORAP Assessment Methodology Guide, version 4.0, provides detailed information, primarily for contractors (the ORA Team), on conducting assessments under the DAF ORAP.

3.5.1. ORA Objective. The primary objective of an assessment under the ORAP is to evaluate impacts of test and training activities, specifically munitions use, on the environment. An assessment should ascertain if there is a release or substantial threat of a release of MC beyond the defined range boundary, and if such MC transport creates an unacceptable risk to human health or the environment. If an ORA determines a release or substantial threat of an off-range release exists, no matter if it poses an unacceptable risk to humans or the environment, further evaluation and, if necessary, implementation of mitigation measures may be performed under the DAF ORAP. A secondary objective of an assessment under the DAF ORAP is to appraise the overall condition of the operational range by evaluating compliance with environmental, health, and safety requirements as well as sustainability by identifying constraints or restrictions on use. If the ORA identifies compliance or sustainment concerns, recommendations should be made to address the noted concerns; however, implementation of such measures are not within the scope of the DAF ORAP. Refer to paragraph 3.6..

3.5.2. ORA Methodology. The investigative approach prescribed under the DAF ORAP is similar to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process as described in AFI 32-7020, *Environmental Restoration Program*. The utilization of an existing comparable process promotes defensibility of the assessment approach and provides a scientific basis for data collection and analysis. A crosswalk between ORAP and CERCLA phases is provided in Table 3.1. Per DoD policy, assessments are required to be conducted at a minimum of every five years, or sooner, if significant changes occur that may affect determinations made during a previous assessment. Refer to **paragraph 4.0** pertaining to the centralized management schedule.

Table 3.1. Comparison of DAF ORAP and CERCLA Phases.

Phase	ORAP	CERCLA
1	Qualitative Assessment	Discovery / Preliminary Assessment
2	Quantitative Assessment	Preliminary Assessment / Site Investigation
3	Migration Evaluation	Remedial Investigation / Feasibility Study
4	Mitigation Measures	Remedial Design / Remedial Action

The ORAP is implemented installation-wide in order to confirm the DAF range asset and verify ORAP lists (refer to **paragraph 3.4**). The DAF ORAP methodology encompasses a multi-phase assessment process. Each subsequent phase is implemented based on previous assessment findings. A brief summary of each phase is presented below.

3.5.2.1. Qualitative Assessment, Phase 1: Phase 1 efforts include comprehensive records search and review of existing information; interviews; and visual surveys. Phase I assessment efforts are used to discern if further evaluation of an asset is necessary due to a potential threat of release (move to Phase 2), or if no additional analysis is warranted (schedule mandated five-year periodic Phase 1).

3.5.2.2. Quantitative Assessment, Phase 2: Phase 2 efforts include all elements of a Phase 1 with the addition of environmental media sampling. Phase 2 assessment efforts are used to confirm prior assessment findings and identify if further evaluation of an asset is necessary due to a known or suspected release (move to Phase 3), or if no additional analysis is warranted (schedule mandated five-year periodic Phase 2).

3.5.2.3. Migration Evaluation, Phase 3: Phase 3 efforts include the assessment of risk, consistent with the risk assessment that occurs during the CERCLA Remedial Investigation phase. Phase 3 efforts work to confirm Phase 2 findings; characterize the nature and extent of contamination; identify and evaluate response alternatives; and the selection of measures to mitigate contaminant migration and risks posed to human health or the environment. Evaluation efforts are used to verify prior assessment findings and indicate if an on-range response action is necessary (move to Phase 4), or if no additional action is warranted (ensure mandated five-year Phase 2 scheduled). If findings confirm a release, the off-range area of concern should be identified for further investigation under an appropriate DAF program.

3.5.2.4. Mitigation Measures, Phase 4: Phase 4 efforts implement the Phase 3 selected contaminant migration mitigation measures to address a known or substantial threat of release, and reduce or eliminate risks to human health and/or the environment. Upon verification that measures are working as designed, no further action is recommended (ensure mandated five-year Phase 2 scheduled). Actions to address off-range areas of concern should be taken, when necessary, under an appropriate program.

3.6. Sustainment. DoD policy requires the sustainment of range assets through comprehensive planning; incorporation of sound environmental principles; and integration of sound resource management. During implementation of the DAF ORAP an appraisal of the overall condition of an asset is performed to facilitate sustainment efforts. Although sustainment concerns may be documented under the ORAP and recommendations made to address noted concerns, the implementation of such operational, management, maintenance, or compliance measures is beyond the scope of the Program. The planning, programming, budgeting, and/or execution of sustainable management practices is the responsibility of the installation or installation support branch.

Chapter 4

PROGRAM MANAGEMENT

4.1. Background. Management of the DAF ORAP (active and reserve) transitioned to AFCEC from installations and MAJCOMs in FY2013. The ORAP is managed by the Range SME, AFCEC/CZTQ, for the active DAF and Reserves. The ANG maintains central control of their ORAP, with stakeholder roles and responsibilities outlined in **paragraph 2.0** of this pamphlet.

4.1.1. Program Requirements. AFCEC and the ANG plan, program, and budget to execute operational range assessments under the ORAP as well as monitor and oversee execution and progress of assessments.

4.1.2. Centralized Schedule. The AFCEC and the ANG developed a centralized assessment schedule consisting of five groups. This centralized management strategy calls for execution of a single group in a given fiscal year, with the subsequent group being executed in the next fiscal year. See **Table 4.1** below. The cyclic nature of the centralized assessment schedule ensures compliance with the minimum five-year periodic assessment required by DoD policy. DoD policy indicates an accelerated assessment may be required when significant changes occur that affect determinations made during a previous assessment. It is the responsibility of installation stakeholders to identify a need for an accelerated assessment schedule to the AFCEC and/or ANG Program contacts. The DAF ORAP centralized schedule for active, reserve, and guard facilities is provided in **Attachment 2**.

Table 4.1. ORAP Centralized Assessment Schedule.

Group	Fiscal Year1				
1-A	2013	2018	2023	2028	2033
2-B	2014	2019	2024	2029	2034
3-C	2015	2020	2025	2030	2035
4-D	2016	2021	2026	2031	2036
5-E	2017	2022	2027	2032	2037

[1]Project executed (awarded) within specified fiscal year.

4.2. Information Management. AFCEC has developed a range module within the Enterprise, Environmental, Safety and Occupational Health Management Information System (EESOH-MIS). The Range Module is used to track and maintain the range asset list and the DAF ORAP inventory, refer to **paragraph 3.4** This module also captures basic site information primarily obtained through an assessment under the ORAP; and essential data requirements for planning, programming, budgeting and execution. For additional information on data management, refer to **paragraph 7.0**.

4.2.1. Data Call. The Ranges Program conducts an annual fiscal year data call. The installation data request is collected during the end-of-year Semi-Annual EQ data call using the EESOH-MIS Environmental Reporting Module. At present, Range Program data are not required to be validated during the mid-year data call. AFCEC/CZTQ utilizes installation validated and/or updated data from the EQ data call as well as data from final ORA reports to respond to the Annual ORAP data call issued by the Deputy Assistant Secretary of Defense (DASD) for Environment.

4.3. Management Review . The Range SME performs an annual internal management review to ensure program requirements are appropriately budgeted based on ORA findings and input from installations. As required, a formal Program Management Review is conducted with the Office of the Secretary of Defense. Program accountability is crucial to ensure compliance with DoD requirements. The following provides information on DAF ORAP key data accountability elements.

4.3.1. Inventory. The DoD assigns ORAP responsibility to the component having real property accountability, unless otherwise agreed upon in writing. The system of record for range asset accountability for real property is the host installation's Accountable Property System of Record (APSR) Real Property. All assets, not only those deemed applicable to the ORAP should be correctly classified, coded, and issued a real property unique identifier. The Real Property Office works to maintain real property data. However, the using organizations should identify any issues regarding real property category code classification, description, unit of measure, etc. and work with appropriate personnel to correct concerns.

4.3.2. Boundary. The full extent of an asset boundary, should be accurately and consistently defined. A clearly defined range boundary – that is the determination between on-range and off-range – is essential to successfully conducting an assessment under the ORAP. The full extent of an asset may not be physically marked (e.g., fenced) as range assets often require additional space (air, water, or land) which may or may not be restricted. The defined boundary should include any space needed to safely operate and use the range asset (i.e., safety zones, exclusionary areas, etc.). The total area encompassed by a range asset may only truly be visualized using geospatial data.

4.3.3. The Geo Integration Office (may also be identified as GeoBase) is responsible for ensuring access to common, accurate, and current geospatial information for installation property and ranges. However, the using organizations should identify any concerns regarding representation of use areas and provide information when needed to correct issues. Geospatial data can be linked to real property data which further supports inventory accountability.

4.3.4. Activities. Data on the type of activities, munitions expended, and weapon systems used are fundamental to evaluating the impacts of range-related activities and munitions use on the environment. Accurate information on activities and munitions expenditures is required to identify chemical contaminants (i.e., MC) that are suspected to be present in the environment due to intended use. In addition to current expenditure data and activities, information on historic activities, munitions use, and practices can influence ORAP applicability decisions (i.e., Program inventory).

4.3.5. Installation organizations associated with munition or ordnance are required to track and report annual expenditure information. Although not specifically required by policy, information regarding munition use and expenditures by other non-DAF entities should be captured. Inaccurate or incomplete information on current and historic activities and expenditures can affect the ORA process and findings.

Chapter 5

COMMUNICATION PLAN

5.1. Key Message. The DAF ORAP has multiple stakeholders at all levels, which requires an established process for communicating information. The overarching key message for all communications employed for informing stakeholders, internal and external, about the DAF ORAP is that the ORAP is geared to support mission requirements by assessing environmental impacts of range-related activities, specifically pertaining to munitions use, and assist in sustainment of all test, training, and range areas through sound resource management.

5.2. Information Flow. AFCEC, in coordination with higher headquarters, should distribute program communication products and other information through the civil engineer channel. Representatives within each level of the DAF should communicate the information to relevant stakeholder groups at their organizational level (e.g., horizontal / cross flow of information). Information should be distributed to established or designated points of contact. These primary contacts will likely be Civil Engineers from the Environmental Flight. In turn, the Environmental Flight should communicate information with other installation offices, units, and personnel as necessary (e.g., Installation Commander, legal, safety, etc.). Information is also meant to flow up as well as down the chain of command – from higher headquarters through the appropriate chain of command to installation stakeholders; and from installation stakeholders back to higher headquarters.

5.3. Information Exchange. In order to disseminate information in a timely fashion and permit access by a diverse group of stakeholders at all levels, the following communication methods are utilized. The primary method should be electronic, typically by e-mail and website access.

5.3.1. Work Groups. No DAF work group or panel has been established specifically pertaining to the ORAP. The DoD hosts an ORAP Work Group with representatives from all Services. The DAF Program technical lead (AFCEC Range SME) as well as personnel from AF/A4CA, SF/S4I and SAF/IEE, participate in these ad-hoc meetings. Information from this group is disseminated through the appropriate channels to other stakeholders.

5.3.2. Share Point. The Ranges Program website on eDASH, refer to **paragraph 7.3**, is a centralized location for stakeholders to obtain information regarding the ORAP. The site identifies AFCEC points of contact and enables stakeholders to receive announcements and submit inquiry requests. Information on the status of the ORAP and associated assessment findings are posted to this site.

5.3.2.1. Workspace. AFCEC maintains a ranges workspace on eDASH. The workspace is a dedicated area intended to address specific communication needs to include information associated with significant findings under the ORAP. As needed, stakeholders should be granted access to this workspace. E-mails. Informational e-mails pertaining to the ORAP should be sent to identified installation and installation support section points of contact within the Civil Engineer, through the civil engineer channel, Environmental Flight. These contacts should, as appropriate, further distribute information through established channels and/or e-mail distribution lists to stakeholders.

5.3.3. E-mails. Informational e-mails pertaining to the ORAP should be sent to identified installation and installation support section points of contact within the Civil Engineer, through the civil engineer channel, Environmental Flight. These contacts should further distribute information through established channels and/or e-mail distribution lists to stakeholders.

Chapter 6

REPORTING PROCESS

6.1. Process Background. The following outlines the internal and external reporting process pertaining to ORAP assessment activities and notification of significant findings. The ORAP is a voluntary program being implemented by the DoD, as such external status reporting to the regulatory or public community, and the involvement of such communities in ORAP actions are not mandated.

6.2. Significant Finding. A release or substantial threat of release of MC, beyond the range boundary, regardless of risk to human health or the environment is a significant finding under the DAF ORAP. Stakeholders have the opportunity to review and comment on ORAP findings prior to Program technical lead (AFCEC Range SME) acceptance of final reports documenting determinations.

6.3. Internal Reporting. DoD policy requires the Office of the DASD for Environment be notified immediately, through the chain of command, if a release of MC from an operational range to an off-range area exceeds applicable regulatory reporting standards; or a release of MC from an operational range to an off-range area creates a potential unacceptable risk to human health or the environment.

6.3.1. Memo for Record. To satisfy internal reporting requirements, the ORAP technical lead (AFCEC Range SME), based on final assessment report findings should develop a Memorandum for Record (MFR) to formally record release and risk determinations. The MFR is routed to the range and installation contacts who were provided the opportunity to review and comment on assessment findings. The signed MFR is disseminated, as necessary, by range and installation contacts as well as routed through the AFCEC chain of command to higher headquarters. Under the DAF Program, all determinations of a release or substantial threat of release no matter the risks to human health or the environment should be documented with a MFR and provided through the chain of command to AF/A4CA. It is the responsibility of AF/A4CA to coordinate with SAF/IEE regarding the determinations, and when appropriate notify USD (A&S).

6.4. External Notification. All external notification requests and dissemination of information outside of the DAF should be identified to the ORAP technical lead (AFCEC Range SME) for informational awareness. Prior to external notification, all internal communication should be completed.

6.4.1. Assessment Activities. Findings under the ORAP are posted to DoD Environment, Safety and Occupational Health Network and Information Exchange (DENIX), refer to **paragraph 7.3** Upon request, program final reports as well as the centralized assessment schedules may be shared with external stakeholders. However, all documents should be reviewed by security to ensure release of information is appropriate and acceptable. Draft assessment documents may be provided to the regulatory community, upon written request and for informational purposes only. Documents developed based on further evaluation efforts due to a significant finding under the ORAP should be provided to the regulatory community as necessary.

6.4.2. Regulatory Notice. DoD policy specifies Components should notify the regulatory authorities as appropriate and in compliance with applicable laws, regulations, or permits if a substantial threat of release of MC from an operational range to an off-range area may create a potential unacceptable risk to human health or the environment; if a release of MC from an operational range to an off-range area exceeds applicable regulatory reporting standards; or if a release of MC from an operational range to an off-range area creates a potential unacceptable risk to human health or the environment.

6.4.2.1. Notification. The ORAP technical lead (Range SME) should coordinate with the DAF/JA-Operations and International Law/Environmental Law and Litigation Division-Environmental Law Field Support Center (Environmental Law Field Support Center) in order to ascertain external reporting requirements and identify appropriate regulatory authorities on a case-by-case basis.   The content of an external notification (e.g., memorandum, letter, or e-mail) should be developed in coordination with Environmental Law Field Support Center, installation contacts, and other internal stakeholders. The notification should be signed out/issued at the appropriate level through established external communication procedures. As many installations already have existing external communication processes, the dissemination of information pertaining to significant ORAP findings should follow these established regulatory agency interaction protocols. In general, the Installation Commander or designated individual has the responsibility to communicate with the regulatory community. However, AFCEC should provide external notification assistance as requested.

Chapter 7

RECORDKEEPING

7.1. Introduction. This chapter identifies the systems and/or platforms used to manage records and data. AFCEC is the designated organization to retain reports, findings, and supporting documentation generated under the DAF ORAP. Records should be maintained in compliance with DAF requirements.

7.2. Range Module. The EESOH-MIS Range Module is used to assist in program management and reporting. The module aids in tracking inventory lists, capturing relevant range data (e.g., real property data, acreage (boundary), etc.), and assessment findings. Access to the EESOH-MIS Ranges Module may be obtained by contacting the AFCEC Range SME for a System Authorization Access Request (SAAR) form. Data in the Ranges Module is updated upon DAF acceptance of a final ORA report. Additionally, data is validated by the installation at least annually during the end-of year EQ data call conducted through the Environmental Reporting Module. Data within the Ranges Module is updated based on end-of year installation input, refer to **paragraph 4.2.1**.

7.3. Report Repository. The DAF ORAP Report Repository contains final reports dating back to the inception of the ORAP. However, the repository is not publicly accessible. Copies of final reports issued under the DAF ORAP may be obtained by contacting the AFCEC Range SME.

7.4. DENIX. DoD Components should provide a fact sheet summarizing findings from the latest operational range assessment. Summary sheets are to be posted to the DENIX. DAF ORAP fact sheets are based on approved finalized reports retained in the DAF ORAP Report Repository. DENIX Operational Range Assessment Program Page: **https://denix.osd.mil/orap/home/**

7.5. eDASH . Program information should be maintained and disseminated by the AFCEC Range SME on the 'Ranges, Environmental Programs' section of eDASH. The ranges page provides various resources, tools, and topics as well as a work space area. eDASH Ranges Page:

https://cs2.eis.af.mil/sites/10040/WPP/ProgramPage/ProgramPage.aspx?Program=Ranges.
Additionally, installations may provide supplemental data and/or post information regarding installation-specific ORAP efforts (e.g., final reports) on the Installation Ranges Program Area.

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Director of Civil Engineers

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoDD 3200.15, *Sustaining Access to the Live Training and Test Domain*, 18 December 2013

10 USC 2710, *Equal Opportunity Program*

DD Form 1354, *Request for Changed Use of Real Property*

AF Form 874, *Recommendation for Change of Publication*

DoDD 4715.1E, *Environment, Safety, and Occupational Health (ESOH)*, 19 March 2005

DoDI 4715.14, *Operational Range Assessments*, 15 November 2018

10 USC § 101, *Definitions*

40 CFR § 266.201, *Definitions*

AFI 32-7001, *Environmental Management*, 23 August 2019

AFMAN 13-212, *Volume 1, Range Planning and Operations*, 22 June 2018

AFI 32-7020, *Environmental Restoration Program*, 12 March 2020

AFI 32-9002, *Management of Real Property*, 18 December 2020

AFI 32-9005, *Real Property Accountability and Reporting*, 03 February 2020

AFI 32-10112, *Installation Geospatial Information and Services (IGI&S)*, 27 September 2018

AFMAN 32-3001, *Explosive Ordnance Disposal (EOD) Program*, 26 April 2019

AFI 33-322, Records Management and Information Governance Program, 23 March 2020

AFI 36-2654, *Combat Arms Program,* 15 April 2020

AFI 48-145, *Occupational and Environmental Health Programs,* 11 July 2018

AFI 90-2001, *Mission Sustainment*, 31 July 2019

DESR6055.09_AFMAN 91-201, *Explosives Safety Standards*, 28 May 2020

DAFPD 32-70, *Environmental Considerations in Air Force Programs and Activities*, 30 July 2018

USAF *Operational Range Assessment Program Assessment Methodology Guide,* 20 March 2019

Abbreviations and Acronyms

ACES-PM—Automated Civil Engineering System – Program Management

AF/A3T—Training and Readiness

AF/A4C—Directorate of Civil Engineers

AF/A4CA—Asset Management

AF/A4CX—Readiness

AF/A4L—Directorate of Logistics

AF/A4S—Security Forces Directorate

AFCEC—Air Force Civil Engineer Center

AFCEC/CIT—Real Estate Division

AFCEC/CXD—Explosive Ordnance Disposal Division

AFCEC/CZ—Environmental Management Directorate

AFCEC/CZO—Operations Division

AFCEC/CZTQ—Technical Support Branch

AFIMSC—Air Force Installation and Mission Support Center

AFMC—Air Force Material Command

AFOTEC—Air Force Operational Test and Evaluation Center

AFPD—Air Force Policy Directive

AFSFC—Air Force Security Forces Center

ANG—Air National Guard

BE—Bioenvironmental Engineering

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CFR—Code of Federal Regulations

DAF—Department of the Air Force

DAF/JA—Office of The Judge Advocate General

DASD—Deputy Assistant Secretary of Defense

DENIX—DoD Environment, Safety and Occupational Health Network and Information Exchange

DoD—Department of Defense

DoDD—Department of Defense Directive

DoDI—Department of Defense Instruction

eDASH—Electronic Dashboard

EESOH-MIS—Enterprise, Environmental, Safety and Occupational Health Management Information System

EOD—Explosive Ordnance Disposal

EQ—Environmental Quality

FIELDCOM—Field Command

MAJCOM—Major Command

MC—Munitions Constituents

MFR—Memorandum for Record

ORA—Operational Range Assessment

ORAP—Operational Range Assessment Program

RMO—Range Management Office

ROA—Range Operating Agency

§—Section

SAAR—System Authorization Access Request

SAF/IE—Assistant Secretary of the Air Force for Installations, Environment and Energy

SAF/IEE—Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure

SFB—Space Force Base

SME—Subject Matter Expert

U.S.—United States

USAF—United States Air Force

USSF—United States Space Force

USC—United States Code

USD (A&S)—Under Secretary of Defense for Acquisition and Sustainment

Terms

Access—Accessibility and availability to the live training and test domain in order to support doctrinal capability requirements. (DoDD 3200.15).

Active Range—The term means a military range that is currently in service and is being regularly used for range activities. [40 CFR § 266.201].

Compliance—Adherence to and attainment of all applicable federal, tribal, state, local regulatory, international agreement environmental requirements or standards. (AFPD 32-70).

Defense Site—Locations that are or were owned by, leased to, or otherwise possessed or used by the Department of Defense. The term does not include any operational range, operating storage or manufacturing facility, or facility that is used for or was permitted for the treatment or disposal of military munitions (also referred to as other-than-operational). (10 USC § 2710(e)(1)).

Encroachment—External, as well as internal, DoD factors and influences that constrain or have the potential to inhibit the full access or operational use of the live training and test domain. Examples include, but are not limited to, endangered species and critical habitat, unexploded ordnance and munitions, radio frequency spectrum, maritime or airspace restrictions, air quality, airborne noise, urban growth, physical obstructions, and renewable energy projects. (DoDD 3200.15).

Environment—Air, water, land, living things, built infrastructure, cultural resources, and the interrelationships that exist among them. (DoDD 4715.1E).

Explosive Ordnance—All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms ammunition; all mines, torpedoes, and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature. (AFMAN 32-3001).

Explosives Safety Distance (Quantity-Distance)—An expression of the quantity versus distance principle involved, or the toxic hazard distance used in determining acceptable separations between given explosives sources and given exposures to the hazard (may also be referred to as Quantity-Distance Arc). (DESR 6055.09_AFMAN 91-201).

Firearm—Any weapon designed to expel a projectile through a barrel by the action of a propellant or one you can readily convert to this purpose. (AFI 36-2654).

GeoBase—GeoBase supports the Air Force Civil Engineer mission by providing accurate, current, and timely satellite and aerial imagery and map data representing real-world features and conditions for AF installations, ranges and property. (AFI 32-10112).

Hazard Area—The composite area of all weapon danger zones to include directed energy; and surface danger zones to include lasers. (AFMAN 13-212v1).

Impact Area—The land area and associated airspace within a training complex intended to capture or contain ammunition, munitions, or explosives as well as resulting debris, fragments and components from various weapon system employments as defined in AFI 36-2654. Also, as defined in AFMAN 13-212v1, the area on a range immediately surrounding a target or designated mean point of impact that is approved for the actual delivery of ordnance. The impact area demarcation should normally be no less than a) 500 feet from the center of a target or desired point of impact approved for live ordnance, or b) 300 feet from the center of a target or desired point of impact used solely for inert or practice ordnance. (AFMAN 13-212v1).

Inactive Range—The term means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities. [40 CFR § 266.201].

Indoor Range—A range that is entirely enclosed by walls and a ceiling that uses an air filtration system so there is no potential for release into the environment, and is used exclusively for testing, training, or recreation with weapons (e.g., pistols, rifles, shotguns, machine guns) that fire small arms ammunition. (DoDI 4715.14).

Inert—Contains no explosives, active chemicals, or pyrotechnics, but is not necessarily noncombustible. (AFMAN 91-201).

Live Training Domain—The environment where the DoD executes training, with or without the use of munitions, under field conditions (land, air, or water) to achieve and sustain proficiency on training requirements. [DoDD 3200.15].

Live Test Domain—The actual field environment (land, air, water) where the DoD conducts testing in anticipation of the military's use of any weapons, equipment, munitions, systems, or their components. [DoDD 3200.15].

Military Munitions—The term "military munitions" means all ammunition products and components produced for or used by the armed forces for national defense and security, including

ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. Such a term includes the following: Confined gaseous, liquid, and solid propellants; Explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents; Chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, and demolition charges. Does not include devices and components of any item specified as Wholly inert items; Improvised explosive devices; Nuclear weapons, nuclear devices, and nuclear components; and other than nonnuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 (42 USC 2011 et seq.) have been completed. [10 USC § 101(e)(4)].

Munitions Constituents—The term means any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosives and nonexplosive materials, and emissions, degradation, or breakdown elements of such ordnance or munitions. [10 USC § 2710(e)(3)].

Military Range—The term means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas. [40 CFR § 266.201].

Off-Range Area—An area outside the boundary of a range. (DoDI 4715.14).

Operational Range—The term "operational range" means a range that is under the jurisdiction, custody, or control of the Secretary of a military department and—A) that is used for range activities, or B) although not currently being used for range activities, that is still considered by the Secretary to be a range and has not been put to a new use that is incompatible with range activities. [10 USC § 101(e)(3)].

Other—**Than-Operational**—An area deemed no longer to be a range asset is defined as: a permanently closed (historic or former) range asset that has been taken out of service as a range and that has A) been put to new uses which are incompatible with range activities or B) is not considered by the military to be a potential current or future range asset. Paraphrased from Defense Environmental Restoration Program management guidance dated 2012.

Pathway—The environmental medium through which an MC of concern is transported from the source to the receptor. (DoDI 4715.14).

Phase 1—Qualitative Assessment

Phase 2—Quantitative Assessment

Phase 3—Migration Evaluation

Phase 4—Mitigation Measures

Range—The term "range", when used in a geographic sense, means a designated land or water area that is set aside, managed, and used for range activities of the Department of Defense.   Such term includes the following A) Firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and

exclusionary areas. B) Airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration. [10 USC § 101(e)(1)]. Also, an area reserved and normally equipped for qualification/practice in Small Arms and Light Weapons delivery and/or shooting at targets. (AFI 36-2654).

Range Activities—The term "range activities" means—A) research, development, testing, and evaluation of military munitions, other ordnance, and weapons systems; and B) the training of members of the armed forces in the use and handling of military munitions, other ordnance, and weapons systems. [10 USC § 101(e)(2)].

Range Assets—A test area, training area, or range that occupies any air, land or water space, utilizing any of the terms included in the definition of relevant terms and terminology. Any air, land or water space encompassed by the following terms: Range; Range Activities; Operational Range; Active Range; Inactive Range; Military Range; Live Training Domain; and Live Test Domain. These terms are defined in the glossary of terms (key terms) of this document.

Range Test and Training Activities—The land or sea encompassed within the hazard area or underlying an air-to-air range used for actual weapon employment should be protected by adequate physical safeguards, legally sufficient real property acquisition documentation (e.g., fee interest purchase, lease) or other means to ensure the safety of personnel, structures, and the public from expended weapons, laser and electromagnetic emissions, and target debris. (AFMAN 13-212v1).

Real Property—Land and improvements to land (e.g., buildings, structures, and linear structures). (AFI 32-9005).

Real Property Asset Management—Air Force real property asset management is the process of accurately accounting for, maintaining and managing real property in the most efficient and economical manner in accordance with Federal Real Property Council guidance, while ensuring that the Air Force has the real property it needs for sustaining current and projected missions. (AFPD 32-70).

Receptor—Human beings and animal or plant species that are exposed, or may be exposed, to MC. (DoDI 4715.14).

Shared Use—When the range operating authority authorizes non-DoD, private or government agencies or individuals to use range land or airspace concurrently or non-concurrently. (AFMAN 13-212v1).

Small Arms Ammunition—Ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller or intended for use in shotguns. (DoDI 4715.14).

Small Arms and Light Weapons—Small arms are broadly categorized as those weapons intended for use by individual members of armed or security forces. Light weapons are broadly categorized as those weapons designed for use by two or three members of armed or security forces serving as a crew, although some may be used by a single person. (Paraphrased from AFI 36-2654).

Source Area—An area where MC have been deposited, disposed, or placed. (DoDI 4715.14).

Stakeholder—The term 'stakeholder' is used throughout this document to refer to any person associated with range assets. The DoD defines a stakeholder as Federal and non-federal agencies, State, Indian tribal, or local governments, and non-government organizations including businesses or individuals from the private sector, who have an interest in, or may be affected by DoD training

and test activities. Stakeholders outside the United States may include international organizations, host nation government entities, and non-governmental organizations. (DoDD 3200.15).

Surface Danger Zone—The ground and airspace designated for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions. (AFMAN 13-212v1). As defined in AFI 36-2654: The area designed on the ground of a training complex (to include associated safety areas) for the vertical and lateral containment of projectiles, fragments, debris and components resulting from the firing, or detonation of weapon systems to include explosives.

Sustainability—The ability to operate in the future without decline, either in the mission or the natural and manmade systems that support it. (AFPD 32-70).

Sustainable Range Management—Management of a DoD range to support: National security objectives and maintain the operational readiness of the U.S. Armed Forces; and the long-term viability of DoD ranges while protecting human health and the environment on and off the operational range. (DoDI 4715.14).

Training Complex—Includes all firing ranges, training facilities, associated impact areas and maneuver training areas within the installation/community boundary. (Paraphrased from AFI 36-2654).

United States—The 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Marianas Islands, American Samoa, Guam, Johnston Atoll, Kingman Reef, Midway Island, Navassa Island, Palmyra Island, the U.S. Virgin Islands, Wake Island, and any other territory or possession over which the United States has jurisdiction, and associated navigable waters, contiguous zones, and ocean waters of which the natural resources are under the exclusive management authority of the United States. (DoDI 4715.14).

Weapon Danger Zone—The ground and airspace for lateral and vertical containment of a user-determined percentage of projectiles, fragments, debris, and components resulting from the firing, launching, and/or detonation of aviation delivered ordnance. (AFMAN 13-212v1).

Wholly Inert—Contains no explosives, pyrotechnics, propellants, or chemical agents (e.g., is noncombustible).

Attachment 2

THE DAF ORAP CENTRALIZED SCHEDULE

A2.1. Centralized Cyclical Schedule. The AFCEC and the ANG developed a cyclical centralized assessment schedule consisting of five groups to ensure compliance with DoD policy, See **Table A2.1** A single group is executed in a given fiscal year, with the subsequent group being executed in the next fiscal year.

Table A2.1. Centralized Schedule

Group	Fiscal Year						
1-A	2013	2018	2023	2028	2033	2038	2043
2-B	2014	2019	2024	2029	2034	2039	2044
3-C	2015	2020	2025	2030	2035	2040	2045
4-D	2016	2021	2026	2031	2036	2041	2046
5-E	2017	2022	2027	2032	2037	2042	2047

Note:
AFCEC implemented the centralized group schedule in FY2013
ANG implemented the centralized group schedule in FY2016

A2.2. Schedule Active and Reserves. The DAF ORAP centralized schedule for Active and Reserves is included at **Table A2.2**.

Table A2.2. AFCEC Centralized Schedule Grouping.

MAJCOM	ESSOH-MIS Installation Name[1]	State	EPA Region	Group Assignment[2]
AETC	ALTUS AIR FORCE BASE	OK	6	4-D
AFMC	ARNOLD AIR FORCE BASE	TN	4	3-C
AFGSC	BARKSDALE AIR FORCE BASE	LA	6	3-C
ACC	BEALE AIR FORCE BASE	CA	9	1-A
USSF	BUCKLEY SPACE FORCE BASE	CO	8	2-B
AFSOC	CANNON AIR FORCE BASE	NM	6	4-D
USSF	CAPE CANAVERAL SPACE FORCE STATION	FL	4	3-C
AETC	COLUMBUS AIR FORCE BASE	MS	4	3-C
ACC	CREECH AIR FORCE BASE	NV	9	1-A
ACC	DAVIS-MONTHAN AIR FORCE BASE	AZ	9	1-A
AFRC	DOBBINS AIR FORCE BASE	GA	4	3-C
AMC	DOVER AIR FORCE BASE	DE	3	5-E
AFGSC	DYESS AIR FORCE BASE	TX	6	4-D
AFMC	EDWARDS AIR FORCE BASE	CA	9	1-A
AFMC	EGLIN AIR FORCE BASE	FL	4	3-C
PACAF	EIELSON AIR FORCE BASE	AK	10	2-B
AFGSC	ELLSWORTH AIR FORCE BASE	SD	8	2-B
AMC	FAIRCHILD AIR FORCE BASE	WA	10	2-B
AFGSC	FRANCIS E WARREN AIR FORCE BASE	WY	8	2-B
AETC	GOODFELLOW AIR FORCE BASE	TX	6	4-D
ACC	GRAND FORKS AIR FORCE BASE	ND	8	2-B
AFRC	GRISSOM ARB	IN	5	5-E
AFMC	HANSCOM AIR FORCE BASE	MA	1	5-E
AFMC	HILL AIR FORCE BASE	UT	8	2-B
ACC	HOLLOMAN AIR FORCE BASE	NM	6	4-D
AFRC	HOMESTEAD AIR FORCE BASE	FL	4	3-C
AFSOC	HURLBURT FIELD	FL	4	3-C
AFDW	JB-ANDREWS	MD	3	5-E
AMC	JB-CHARLESTON-AIR	SC	4	3-C
AMC	JB-CHARLESTON-WEAPONS	SC	4	3-C
PACAF	JBER-ELMENDORF	AK	10	2-B
PACAF	JBER-RICHARDSON	AK	10	2-B
ACC	JBLE-EUSTIS	VA	3	5-E
ACC	JBLE-LANGLEY	VA	3	5-E
AMC	JBMDL-DIX	NJ	2	5-E

MAJCOM	ESSOH-MIS Installation Name[1]	State	EPA Region	Group Assignment[2]
AMC	JBMDL-LAKEHURST	NJ	2	5-E
AMC	JBMDL-MCGUIRE	NJ	2	5-E
AETC	JBSA-CAMP BULLIS	TX	6	4-D
AETC	JBSA-FORT SAM HOUSTON	TX	6	4-D
AETC	JBSA-LACKLAND	TX	6	4-D
AETC	JBSA-RANDOLPH	TX	6	4-D
AETC	KEESLER AIR FORCE BASE	MS	4	3-C
AFGSC	KIRTLAND AIR FORCE BASE	NM	6	4-D
AETC	LAUGHLIN AIR FORCE BASE	TX	6	4-D
AMC	LITTLE ROCK AIR FORCE BASE	AR	6	3-C
AETC	LUKE AIR FORCE BASE	AZ	9	1-A
AMC	MACDILL AIR FORCE BASE	FL	4	3-C
AFGSC	MALMSTROM AIR FORCE BASE	MT	8	2-B
AFRC	MARCH AIR FORCE BASE	CA	9	1-A
AETC	MAXWELL AIR FORCE BASE	AL	4	3-C
AMC	MCCONNELL AIR FORCE BASE	KS	7	2-B
AFRC	MINNEAPOLIS ARS	MN	5	5-E
AFGSC	MINOT AIR FORCE BASE	ND	7	2-B
ACC	MOODY AIR FORCE BASE	GA	4	3-C
ACC	MOUNTAIN HOME AIR FORCE BASE	ID	10	2-B
ACC	NELLIS AIR FORCE BASE	NV	9	1-A
AFRC	NIAGARA FALLS AIR FORCE BASE	NY	2	5-E
ACC	OFFUTT AIR FORCE BASE	NE	7	2-B
USSF	PATRICK SPACE FORCE BASE	FL	4	3-C
AFRC	PITTSBURGH ARS	PA	3	5-E
AFMC	ROBINS AIR FORCE BASE	GA	4	3-C
USSF	SCHRIEVER SPACE FORCE BASE	CO	8	2-B
AMC	SCOTT AIR FORCE BASE	IL	5	5-E
ACC	SEYMOUR JOHNSON AIR FORCE BASE	NC	4	3-C
ACC	SHAW AIR FORCE BASE	SC	4	3-C
AETC	SHEPPARD AIR FORCE BASE	TX	6	4-D
AFMC	TINKER AIR FORCE BASE	OK	6	4-D
ACC	TONOPAH AIR FORCE STATION	NV	9	1-A
AMC	TRAVIS AIR FORCE BASE	CA	9	1-A
ACC	TYNDALL AIR FORCE BASE	FL	4	3-C
USAFA	USAF ACADEMY	CO	8	2-B

MAJCOM	ESSOH-MIS Installation Name[1]	State	EPA Region	Group Assignment[2]
AETC	VANCE AIR FORCE BASE	OK	6	4-D
USSF	VANDENBERG SPACE FORCE BASE	CA	9	1-A
AFRC	WESTOVER AIR FORCE BASE	MA	1	5-E
AFGSC	WHITEMAN AIR FORCE BASE	MO	7	2-B
AFMC	WRIGHT PATTERSON AIR FORCE BASE	OH	5	5-E
AFMC	YOUNGSTOWN AIR FORCE BASE	NY	2	5-E
AFRC	YOUNGSTOWN-WARREN RAP ARS	OH	5	5-E

[1]Installations listed have identified/reported range assets. All installations with an asset are assigned to a Group no matter ORAP applicability. If an installation is not listed, no range-related assets have been reported or identified to AFCEC via the EQ Data Call. Please note, geographically separate units are encompassed under their respective installation.
[2]Group assignment based primarily on geographic location (e.g., state, region, etc.).

A2.3. Schedule for Guard. The centralized schedule for the Guards is **Table A.2.3**.

Table A2.3. ANG Centralized Schedule Grouping.

MAJCOM	ESSOH-MIS Installation Name[1]	State	EPA Region	Group Assignment[2]
ANG	ALPENA COUNTY REGIONAL AIRPORT	MI	5	4-D
ANG	ATLANTIC CITY MUN	NJ	2	5-E
ANG	BARNES MUNICIPAL AIRPORT	MA	1	5-E
ANG	BOISE	ID	10	2-B
ANG	DULUTH INTERNATIONAL AIRPORT	MN	5	1-A
ANG	EWVRA SHEPHERD FIELD (MARTINSBURG)	WV	3	3-C
ANG	FORT INDIANTOWN GAP	PA	3	5-E
ANG	FORT WAYNE	IN	5	3-C
ANG	FT SMITH	AR	6	3-C
ANG	GEN B MITCHELL	WI	5	4-D
ANG	GREAT FALLS INTERNATIONAL AIRPORT	MT	8	2-B
ANG	GREATER PEORIA AIRPORT	IL	5	1-A
ANG	GULFPORT BILOXI REGIONAL AIRPORT	MS	4	3-C
ANG	HANCOCK ANG	NY	2	5-E
ANG	HECTOR IAP	ND	8	1-A
ANG	HULMAN REGIONAL AIRPORT	IN	5	3-C
ANG	KLAMATH FALLS IAP (KINGSLEY FIELD)	OR	10	2-B
ANG	LAMBERT ST. LOUIS INTERNATIONAL AIRPORT	MO	7	2-B
ANG	MANSFIELD LAHM	OH	5	4-D
ANG	MCENTIRE AIR GUARD BASE	SC	4	3-C
ANG	MCGHEE/TYSON	TN	4	3-C
ANG	PEASE ANG NEW HAMPSHIRE	NH	1	5-E
ANG	PITTSBURGH ANGB	PA	3	5-E
ANG	PORTLAND	OR	10	2-B
ANG	RENO TAHOE INTERNATIONAL AIRPORT	NV	9	5-E
ANG	ROSECRANS MEM	MO	7	1-A
ANG	SALT LAKE CITY	UT	8	1-A
ANG	SAVANNAH INTERNATIONAL AIRPORT	GA	4	3-C
ANG	SCHENECTADY CO	NY	2	4-D
ANG	SELFRIDGE	MI	5	5-E
ANG	SIOUX CTY APT ANG	IA	7	1-A

MAJCOM	ESSOH-MIS Installation Name[1]	State	EPA Region	Group Assignment[2]
ANG	SMOKY HILL AIR NATIONAL GUARD BASE	KS	7	1-A
ANG	STEWART INTERNATIONAL AIRPORT	NY	2	5-E
ANG	VOLK FIELD AIR GUARD BASE	WI	5	4-D

[1]Installations listed have identified/reported range assets.   All installations with an asset are assigned to a Group no matter ORAP applicability. If an installation is not listed, no range-related assets have been reported or identified to AFCEC via the EQ Data Call. Please note, geographically separate units are encompassed under their respective installation.

[2]Group assignment based primarily on geographic location (e.g., state, region, etc.) and alignment with AFCEC Groups.