

Environmental Excellence in Weapons System Acquisition
Long Range Discrimination Radar, Clear Space Force Station, Alaska
National Environmental Policy Act Team

Introduction:

The 2014 National Defense Authorization Act required the Missile Defense Agency (MDA) to deploy a Long Range Discrimination Radar (LRDR) system to improve the U.S. defense against ballistic missile threats. The LRDR is capable of midcourse identification, classification and discrimination of missile threats.

The LRDR National Environmental Policy Act (NEPA) Team was established by the Missile Defense Agency (MDA) as a highly effective multi-agency “Program Management Strategy” to deliver the required NEPA documents on an extremely tightly schedule to deploy this congressionally mandated system. Team composition: MDA as the Lead Agency; Department of the Air Force (DAF) and Federal Aviation Administration (FAA) as Cooperating Agencies; U.S. Army Corps of Engineers (USACE) as the NEPA Executing Agent; and each organizations’ supporting contractors. Team members are shown below:

<i>Name</i>	<i>Title or Position</i>	<i>Employing Organization</i>
Buff Crosby	MSRN (Env.) Director	MDA
Chris Smith	Environmental Engineer	MDA
Catherine Spencer	Environmental Engineer	MDA TEAMS Support
Melissa Krah	Environmental Specialist	MDA TEAMS Support
Frank Pichler	Technical Director	MDA
Ryan Keith	Public Affairs Specialist	MDA
Jonathan Williams	LRDR Product Manager	MDA
Brian Ochs	Airspace and Procedures Manager	FAA
Elizabeth Healy	Aviation Systems Tech Specialist	FAA
Martha Wilkinson	Branch Chief, Airfield Operations	DAF
Lt. COL Kuester	NW Mtn Regional U.S. Air Force (USAF) Rep	DAF
Cynthia Van Rassen	General Counsel	MDA
Hans Bjornson	General Counsel	FAA

Key NEPA Team members shown above include the MDA’s LRDR Product Manager and Technical Director, as well as MDA, DAF and FAA Senior General Counsel Representatives and Subject Matter Experts.

Background:

In 2016, the Missile Defense Agency (MDA) and Air Force Space Command completed a joint Environmental Assessment (EA) to support the LRDR basing decision at Clear Air Force Station

(Clear AFS), Alaska—now Clear Space Force Station (Clear SFS). Potential environmental impacts of LRDR construction and operation were evaluated, resulting in a Finding of No Significant Impact (FONSI). The USAF subsequently signed a Basing Decision Memorandum in July 2016 authorizing MDA to proceed with LRDR basing at Clear AFS.

Mission critical facilities consist of the Mission Control Facility (MCF); LRDR Equipment Shelter (LES) and foundation; an entry control facility with a secure boundary; restricted perimeter and animal control fences; power plant; and a fuel storage system. Mission support facilities, located outside the restricted area, consist of a maintenance facility, calibration antennas and infrastructure (see Photo 1). The construction and upgrades of several non-mission, non-LRDR support facilities including the



Photo 1 - Aerial photograph of the Long Range Discrimination Radar (LRDR) at Clear Space Force Station, Alaska, July 19, 2019. Temporary structures provide protection during radar installation and integration.

construction of a new fire station, lane widening at the main gate, consolidation of civil engineering facilities and demolition of the previous Ballistic Missile Early Warning System (BMEWS) radar and associated facilities. The infrastructure consists of electrical services that include an onsite electrical substation, water, sewer, paving, sidewalks, storm drainage, fire protection and alarm systems, telecommunications point of presence, and information management systems.

When the 2016 EA was developed, the operational concept for the LRDR was to maintain the LRDR in a readiness posture with limited operations. Following completion of the 2016 EA and FONSI, the operational concept for the LRDR changed and operations would be continuous due to emerging threats to the U.S.

In 2020, MDA, in cooperation with the DAF and FAA, prepared an EA to evaluate the potential environmental impacts associated with conducting time-constrained performance testing for the LRDR and associated airspace and flight restrictions. To comply with the Congressional mandate to deploy the LRDR by the end of 2020, the EA analyzed the potential environmental impacts that would occur during implementation of the MDA proposed action to conduct performance testing of the LRDR capabilities and functions to support continuous operations.

In 2021, MDA, in cooperation with the DAF and FAA, prepared an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts associated with the proposed continuous operation of the LRDR at Clear AFS. The Proposed Action consisted of both MDA

and FAA actions. Due to emerging threats, the MDA proposed to modify the LRDR operational requirements and procedures to reflect continuous operations.

Summary of Accomplishments:

The 2020 EA analyzed potential effects to the following environmental categories: airspace; air quality; biological resources; cultural resources; environmental justice; hazardous materials and wastes; health and safety; land use; natural resources and energy supply; noise; socioeconomics; visual resources; and water resources. Airspace analysis included the potential impacts of limiting use of the affected airspace, through a Temporary Flight Restriction (TFR), to protect aircraft from encountering LRDR high-intensity radiated fields (HIRF) that exceed FAA's HIRF certification standards for aircraft electrical and electronic systems. The TFR features the same overall dimensions as the proposed, permanent Restricted Areas, but with additional operational restrictions to afford maximum navigable airspace in the vicinity of Clear Airport.

A FONSI was signed by MDA and DAF in July 2020. The FAA signed their FONSI in August 2020 and subsequently issued a Special Security Instruction authorizing establishment of TFRs around Clear AFS to support LRDR Integration and Test activities. This EA allowed MDA to continue testing activities while the EISs were being prepared to support the long-term operations and restricted airspace expansion.

The 2021 EIS, evaluated the potential environmental impacts to the following 14 environmental categories associated with the proposed continuous operation of the LRDR at Clear AFS: airspace management; air quality; biological resources; climate; hazardous materials, solid waste, and pollution prevention; historical, architectural, archaeological, and cultural resources; land use; natural resources and energy supply; noise and compatible land use; safety; socioeconomics and environmental justice; subsistence; visual effects; and water resources. The potential for cumulative impacts was also evaluated in the EIS. The operational concept would change from the initial concept to maintain the LRDR in a readiness posture with limited operations and no additional airspace restrictions. Because of the proposed changes to LRDR operations, airspace restrictions at Clear AFS were necessary to ensure aircraft would not encounter HIRF resulting from the LRDR operations that exceed FAA's HIRF certification standards for aircraft electrical and electronic systems. The proposed airspace restrictions include expanding the existing Restricted Area at Clear AFS by adding six new Restricted Areas. If necessary, the FAA would implement temporary TFRs until those Restricted Areas were put into effect. The FAA also proposes changes to federal airways and instrument flight procedures to accommodate the new Restricted Areas. The layered Restricted Areas' design demonstrates distinct "technical merit" in using innovative techniques and technologies to ensure safety to aircraft in the vicinity of the LRDR, while likewise ensuring public access to the national airspace and LRDR mission integrity at all times.

Due to the importance of aviation in Alaska, MDA conducted public outreach via scoping meetings and other stakeholder meetings with aviation associations and local elected officials in Anchorage, Fairbanks, and Anderson, Alaska, to determine the range of actions, alternatives, and potential areas of impact that should be addressed in the EIS. Scoping comments focused primarily on aviation navigational safety; added flight times and expense; human safety; and

potential impacts on private airstrips, Clear Airport and U.S. Air Force Auxiliary Civil Air Patrol Alaska Wing Glider Academy (CAP Glider Academy) for youth.

A series of stakeholder meetings were held with local representatives (including the Denali Borough, and Clear Mayors) as well as key stakeholders such as the Alaska Airmen's Association. MDA/FAA/DAF maintained regular outreach and provided updates as the project progressed. These meetings allowed for key concerns, such as airspace design, to be discussed as well as potential impacts on the local communities to be considered in the EIS development.

These topics were addressed in the Draft EIS. Public comment meetings for the Draft EIS were held virtually and consisted of an online open house and a telephone public meeting to meet COVID-19 guidance and promote public accessibility. Commenters (individuals, agencies and organizations) requested changes to the proposed Restricted Areas, more information about communication methods if Restricted Areas are activated at unscheduled times, and mitigation for climate change and air quality impacts. The agencies worked cooperatively to find mutual solutions in design of the airspace allowing for key landmarks to be kept available to pilots and to minimize the space to the extent the mission allowed.

The comments were taken into consideration during preparation of the Final EIS. Clearly demonstrating the EIS's transparency and overall effectiveness and acceptance by key stakeholders and the general public, the LRDR EIS Online Open House won the Public Relations Society of America (PRSA), Alaska Chapter Award of Excellence for Website, 1st Place. MDA received no comments on the Final EIS or Record of Decision (ROD).

The Online Open House was a first for MDA. This Open House was designed as a virtual walkthrough like a public meeting would be conducted (see Photo 2). Any interested party could access from the LRDR website and browse the meeting room as if they were at the meeting. Key information was easily obtained upon entering and explanatory videos were available as part of the virtual walkthrough. Comment forms allowed the participant to enter each station and provide any feedback. The online Open House was advertised throughout Alaska and emailed to participants in the Scoping process to maximize communication and participation in lieu of the ongoing pandemic. Public feedback and comments were very positive including from the EPA and key stakeholders.

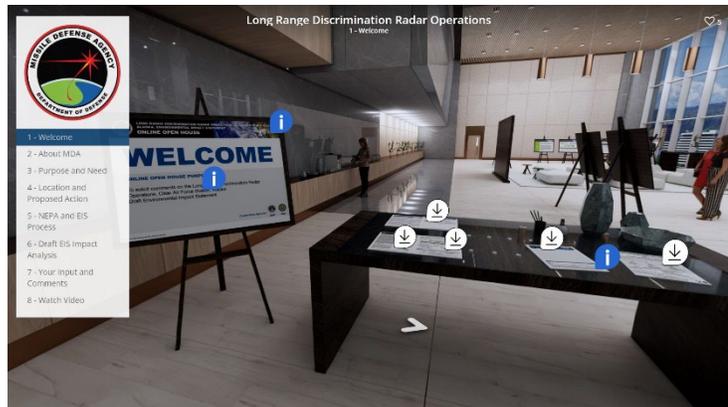


Photo 2 - Screen Shot of MDA's Virtual Public Meeting's Award Winning Website used to explain MDA's LRDR EIS Project and solicit public comments. This is the intro screen that provides the table of contents to the rest of the presentation and collects commenter's names and comments.

MDA and DAF issued a joint ROD published in the Federal Register in June 2021. The FAA EIS ROD was signed in July 2021 and published in the Federal Register in August 2021. The FAA

ROD signature allowed flight testing to begin of proposed modifications to airspace procedures that support establishing the permanent Restricted Areas in December 2022. Additionally, MDA developed the Transition Warning System (TWS) to support final FAA approval of the Restricted Areas. The TWS is designed to provide real-time notice to pilots when LRDR requires use of the low altitude airspace around Clear Airport during non-scheduled times to support a national defense emergency.

The fast-tracked preparation of the 2020 EA and 2021 EIS for what is now the Clear SFS, Alaska, LRDR, allowed this one-of-a-kind National Defense Asset to be “deployed on schedule” for its critical role in protecting the homeland during a global pandemic. The “Program Management Strategy” worked as the intense synchronization required across multiple federal agencies, other concerned stakeholders and the affected public, in record time, all in exact compliance with the NEPA “met the Congressional mandate ahead of the LRDR need date schedule” by a few months. Efforts to conduct virtual public outreach and for public engagement could serve as examples for other agencies to best serve the public. MDA is currently considering the success of the LRDR project and outreach efforts while conducting similar efforts across the US.