

FINDING OF NO SIGNIFICANT IMPACT

Name of Action: Luke Air Force Base Digital Airport Surveillance Radar

The Department of Defense (DoD) proposes to construct a Digital Airport Surveillance Radar (DASR) system at Luke Air Force Base (AFB) in Arizona. This proposed action is part of the DoD National Airspace System (NAS) Program, which involves the replacement of analog air traffic control systems with state-of-the-art digital air traffic control equipment on U.S. Army, U.S. Navy, and U.S. Air Force (USAF) bases throughout the country. The implementation of the NAS program, which also includes the installation of DoD Advanced Automation Systems (DAAS) and Voice Communications Switching Systems (VCSS) at DoD bases, was previously evaluated in a programmatic Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) (1995).

The EA for Luke AFB addresses the site-specific impacts of locating a DASR system on Luke AFB, and evaluates the consequences of the DASR system construction on both the natural and man-made environments. The DAAS and VCSS components of the NAS program at Luke AFB would be located within existing buildings, and impacts are anticipated to be minor. The primary consequences of the DASR system evaluated in the EA involve the construction and operation of an ASR-11 radar system on Luke AFB to replace the existing AN/GPN-12 radar.

The DASR system at Luke AFB is needed to replace the existing AN/GPN-12 airport surveillance radar. The ASR-11 will improve system reliability, provide additional weather data, reduce maintenance cost, improve performance, and provide digital data input to proposed new digital automation system air traffic controller displays. While the existing AN/GPN-12 at Luke AFB was installed in 1973, the proposed new ASR-11 will take advantage of the significantly increased capabilities of digital technology. The proposed new DASR system will serve to accurately locate aircraft in terms of range, azimuth, and latitude; provide information regarding aircraft identification code; identify emergency conditions; and report six discreet weather precipitation levels.

Three alternative sites (Site 2, Site 5, and Site 7) were evaluated for location of the ASR-11. Site 2 is located in the northwest portion of the base, approximately 2,100 feet south of the existing AN/GPN-12 and 450 feet north of a demolition area. Site 5 is located in the southeast portion of the base in a parking lot adjacent to a recreational area near the South Gatehouse. Site 7 is located in the southwest portion of the base and east of the runways on a narrow strip of land between Super Sabre Street and the base boundary fence. All three sites feature characteristics that would generally make any of these locations an acceptable location for the radar facility from operational and environmental perspectives; however, Site 5 is somewhat less preferable due to the proximity to the recreational area. Site 2 does pose some engineering challenges, due to recent subsidence and the potential to encounter elevated levels of metals in the soils, and Site 7 would require additional design work, due to the siting constraints between the existing roadway and perimeter fence. Of these three sites, Site 7 is the preferred alternative site of the Air Force.

If Site 2 were selected as the preferred alternative, no significant adverse impacts associated with land use, socioeconomics, transportation, noise, air quality, surface water, groundwater, biological resources, or

aesthetic and cultural resources would be anticipated. However, there is the potential to encounter lead and chromium in surface and subsurface soil during construction, and the fact that the site has subsided approximately 20 feet in the last 50 years may require additional structural support for a radar tower at this location. Approximately $\frac{3}{4}$ of an acre of sparse desert scrub vegetation would be cleared for the site and access road; additional clearing may be required along utility installation routes. Connections to both telephone and electricity would require trenches between 500 and 540 feet long; however, the fiber optic connection would be approximately 7,925 feet long. Base personnel have indicated that a somewhat greater potential for encountering cultural artifacts would be associated with installation of the fiber optic conduit for Site 2, as opposed to the alternative ASR-11 locations.

If Site 5 were selected as the preferred alternative, no significant adverse impacts associated with socioeconomics, transportation, noise, air quality, surface water, geology/soils, groundwater, biological resources, cultural resources, or hazardous waste would be anticipated. However, the ASR-11 would be located in proximity to a playground and recreational fields, which may affect the aesthetics (as well as short-term noise and dust) of these neighboring land uses. No vegetation would need to be cleared for the site and access road, however clearing may be required along utility installation routes. Connections to both telephone and electricity would require trenches off approximately 100 feet; however, the fiber optic connection would be approximately 6,250 feet long.

With Site 7 as the preferred alternative, no significant adverse impacts associated with socioeconomics, transportation, noise, air quality, surface water, geology/soils, groundwater, biological resources, or aesthetic and cultural resources would be anticipated. However, there is the potential to encounter petroleum hydrocarbons, SVOCs, and VOCs above background levels in soils during construction. Additionally, the standard DASR facility design would need to be modified to fit between Super Sabre Street and the base perimeter fence. Approximately $\frac{1}{2}$ acre of sparse desert scrub would be cleared for the site and access road; additional clearing may be required along utility installation routes. Connections to both telephone and electricity would require trenches of 50 and 400 feet, respectively; however, the fiber optic connection would be approximately 1,900 feet long. Since the site is within the 100-year floodplain as identified by FEMA (although Luke AFB is investigating this boundary), approval from Air Education Training Command Headquarters (HQ AETC) would be required.

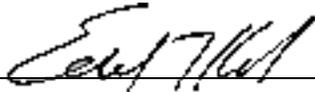
Operation of the DASR system is anticipated to have minimal long-term impacts to the natural and human environments. The radar would generate radio frequency radiation (RFR) while operating. However, the RFR generated would be safe to humans at ground level and is not anticipated to pose a harm to the general population. During the DASR system operation, fuel and other hazardous materials may be used at the site, such as engine oil and grease. However, use and disposal of any hazardous materials would occur in compliance with Luke AFB protocols and guidelines as well as applicable state and federal regulations. Consequently, it is anticipated that operational use of hazardous materials would not adversely affect the natural or human environments.

It is anticipated that few mitigation measures would be required during construction and operation of the facility. Prior to construction, a Wildlife Services Technician should be consulted, to minimize the potential impact to burrowing owls. During the construction period, sheeting or supports of some kind may be used

in the areas excavated for the tower footings and utility trenches in order to prevent collapse of these excavated areas. To minimize noise impacts during construction, mufflers would be used on construction equipment and vehicles. In addition, all equipment and vehicles used during construction would be maintained in good operating condition so that emissions are minimized, thus reducing the potential for air quality impacts. Dust would be controlled onsite by using water to wet down disturbed areas. All areas disturbed for the DASR system construction would be seeded with a grass mixture or covered with a geotextile fabric and crushed stone to stabilize the disturbed soils, in order to minimize the potential for erosion and sedimentation. Trench construction for fiber optic cable would be monitored by Luke AFB personnel to minimize the potential for displacing cultural artifacts. All hazardous materials used during construction would be handled and disposed of in accordance with Luke AFB policies and protocols and all applicable state and federal regulations. Traffic management measures would be developed to facilitate traffic flow and pedestrian access.

During operation of the DASR system, fuel would be stored at an above-ground storage tank (AST) and some hazardous materials, such as equipment oil or grease, may be used at the site. Similar to the construction period, all hazardous materials used during operation would be used and disposed of in accordance with Luke AFB policies and protocols and all applicable state and federal regulations in order to minimize the potential for media contamination.

Based on this summary of effects, along with the detailed description of the effects provided in the Environmental Assessment, I have determined that Site 7, which I have selected, will not have a significant impact on the human environment. For this reason, no environmental impact statement needs to be prepared.



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Vice Commander

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Date