Final
Environmental Assessment
Contracted Close Air Support
Nellis Air Force Base, Nevada

April 2022

United States Air Force
57th Wing
6th Combat Training Squadron

Nellis Air Force Base, Nevada

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Privacy Advisory

This Environmental Assessment (EA) is provided for public comment in accordance with the National Environmental Policy Act of 1969 (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] Parts 1500 to 1508), and 32 CFR Part 989, *Environmental Impact Analysis Process (EIAP)*. For this EA, the updated September 2020 CEQ NEPA rules (85 Federal Register 43304 through 43376) are being followed. The EIAP provides an opportunity for public input on United States Air Force (Air Force) decision-making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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This document has been verified that it does not exceed the 75 pages, not including appendices, as defined in 40 CFR § 1501.5(f). As defined in 40 CFR § 1508.1(v) a "page" means 500 words and does not include maps, diagrams, graphs, tables, and other means of graphically displaying quantitation or geospatial information.

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COVER SHEET
FINAL ENVIRONMENTAL ASSESSMENT (EA) FOR CONTRACTED CLOSE AIR SUPPORT
NELLIS AIR FORCE BASE, NEVADA

a. *Responsible Agency*: United States Air Force (Air Force)

b. *Cooperating Agency*: None

c. *Proposals and Actions:* The environmental assessment (EA) analyzes a Proposed Action to provide contracted close air support (CCAS) training for the Joint Terminal Attack Controller (JTAC) Qualification Course (JTACQC) for Nellis Air Force Base (AFB), Nevada. CCAS would support Nellis AFB training operations out of North Las Vegas Airport (VGT), North Las Vegas, Nevada. The contractor would use Jean Airport (ØL7), Clark County, Nevada, for munitions loading and unloading. The Proposed Action would include the addition of 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel, operating an estimated six aircraft and approximately 1,350 annual contracted sorties. The 1,350 training sorties would be added to perform training activities at the Fort Irwin National Training Center/R-2502 Range special use airspace (SUA), or a backup range, Nevada Test and Training Range/R-4806. Training activities would continue to use the Leach Lake Training Range within Fort Irwin.

d. *For Additional Information:* Mr. Tod Oppenborn, Nellis AFB Environmental Impact Analysis Process Program Manager, 6020 Beale Avenue, Nellis AFB, Nevada 89191-6520 or at tod.oppenborn@us.af.mil.

e. *Designation:* Final EA

f. *Abstract:* This EA has been prepared pursuant to provisions of the National Environmental Policy Act, Title 42 United States Code §§ 4321 to 4347, implemented by Council on Environmental Quality Regulations, Title 40, Code of Federal Regulations Parts 1500 to 1508, and 32 Code of Federal Regulations Part 989, *Environmental Impact Analysis Process (EIAP)*.

The purpose of the Proposed Action is to provide dedicated CCAS sorties from an off-base location to provide sustained JTACQC for 6th Combat Training Squadron students. Dedicated CCAS would improve and expand JTACQC training to meet production requirements and support unit readiness; JTAC students would gain more realistic Close Air Support (CAS) training while performing their syllabus tasks. The need for CCAS is to provide better and more realistic training for JTAC at Nellis AFB.

CCAS training scenarios would include the use of inert training munitions and ammunition on existing and approved targets. The Proposed Action includes elements affecting civil airports proposed for use and military training SUA. The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. Elements affecting the SUA include CAS training in SUA and use of inert training munitions and ammunition.

Because it is not known at this time what type of aircraft would be used for CCAS, two aircraft noise scenarios were evaluated (High and Low) to represent the range of aircraft types that could be selected to meet the needs of the Air Force in support of Nellis AFB. The potential aircraft types include Aero L-39 Albatros, Douglas A-4, BAC-167, and Aero Vodochody L-59 (High Noise Scenario) and Pilatus PC-9, Cessna 337, Embraer A-27, Brasov IAR-823, Valmet L/A-90 (A-90 Raider), Rockwell OV-10, and Embraer A-19 (Low Noise Scenario).

The analysis of the affected environment and environmental consequences of implementing the Proposed Action under Alternative 1 for both the High and Low Noise Scenarios concluded there would be no major impacts from the Proposed Action on airspace management and use; safety; air quality; biological resources; cultural resources; and hazardous materials and wastes.

Under the Alternative 1 High Noise Scenario, there would be no major impacts at ØL7 or the SUA for all the resources analyzed. Under the Alternative 1 High Noise Scenario at VGT, there is the potential for long-term, major noise increases in the areas surrounding VGT. Increased noise under the Alternative 1 High Noise Scenario would potentially impact residential land use, residential and commercial property values, and disproportionately impact minorities. For the Alternative 1 High Noise Scenario, there would be moderate adverse impacts on noise at ØL7. For the Alternative 1 Low Noise Scenario, there would be the potential for moderate adverse impacts on noise and land use at VGT. There would be minor impacts on air quality under Alternative 1; however, the expected increases in nitrogen oxide emissions were incorporated into the emissions budget for Clark County's Second Maintenance Plan which constitutes conformity with the National Ambient Air Quality Standards.

The analysis of the affected environment and environmental consequences of implementing the Proposed Action under Alternative 1, when considered with reasonably foreseeable future actions, concluded that by implementing standing environmental protection measures and Best Management Practices, there would be no major impacts from CCAS operations at VGT, ØL7, or in the SUA under the Alternative 1 Low Noise Scenario for all resources analyzed.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

CONTRACTED CLOSE AIR SUPPORT
NELLIS AIR FORCE BASE

Pursuant to provisions of the National Environmental Policy Act, 42 United States Code §§ 4321 to 4370h; Council on Environmental Quality Regulations, 40 Code of Federal Regulations (CFR) Parts 1500 to 1508; and 32 CFR Part 989, *Environmental Impact Analysis Process (EIAP),* the United States Air Force (Air Force) prepared the attached Environmental Assessment (EA) to address the potential environmental consequences associated with providing contracted close air support (CCAS) training for the Joint Terminal Attack Controller (JTAC) Qualification Course (JTACQC) for Nellis Air Force Base (AFB).

Purpose and Need

The purpose of the Proposed Action is to provide dedicated CCAS sorties from an off-base location to provide sustained JTACQC for 6th Combat Training Squadron students. Dedicated CCAS would improve and expand JTACQC training to meet production requirements and support unit readiness; JTAC students would gain more realistic Close Air Support training while performing their syllabus tasks. The need for CCAS is to provide better and more realistic training for JTAC at Nellis AFB.

Description of Proposed Action and Alternatives

The Proposed Action would include an estimated six contractor aircraft. Because it is not known at this time what type of aircraft would be used by CCAS, two aircraft noise scenarios were evaluated (High and Low) to represent the range of aircraft types that could be selected. The potential aircraft types identified which would meet the needs of the Air Force for CCAS include Aero L-39 Albatros, Douglas A-4, BAC-167, and Aero Vodochody L-59, which fall under the High Noise Scenario, and Pilatus PC-9, Cessna 337, Embraer A-27, Brasov IAR-823, Valmet L/A-90 (A-90 Raider), Rockwell OV-10, and Embraer A-19, which fall under the Low Noise Scenario.

The Proposed Action would include the addition of 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel. It would also require the use of office space and briefing areas, aircraft maintenance personnel and hangar space, tool and equipment storage, vehicle parking, and aircraft parking ramp space at a civilian airport.

The Proposed Action would include approximately 1,350 annual contracted sorties. The 1,350 training sorties would be added to perform training activities at the Fort Irwin National Training Center/ R-2502 Range, or at a backup range, Nevada Test and Training Range (NTTR)/R-4806. Training activities would continue to use the Leach Lake Training Range within Fort Irwin. CCAS training scenarios would include the use of inert training munitions and ammunition on existing and approved targets.

One alternative met the purpose of and need for the action, satisfied the criteria set forth in the selection standards, and was carried forward for further detailed analysis. This alternative is Alternative 1, CCAS operating out of both North Las Vegas Airport (VGT) and Jean Airport (ØL7). Alternative 1 would support Nellis AFB training operations out of VGT. Additionally, munitions and ammunition would be stored and maintained at VGT, while arm/dearm operations would occur at ØL7.

In addition to Alternative 1, the No Action Alternative was evaluated in the EA. No action means that an action would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward. No action for this EA reflects the status quo, where no CCAS support for Nellis AFB would occur.

Summary of Findings

Potentially affected environmental resources were identified through communications with state and federal agencies and review of past environmental documentation. Specific environmental resources with the potential for environmental consequences include airspace management and use; noise; safety; air quality; biological resources; land use; socioeconomics – income and employment; environmental justice and protection of children; cultural resources; and hazardous materials, Environmental Restoration Program sites, and toxic substances.

Under Alternative 1, the addition of 1,350 annual sorties (1-percent increase) in the VGT airspace is not expected to impact the operational capacity of or necessitate changes to airspace locations or dimensions of any of the airspaces around VGT. Potential impacts on the airspace are expected to be negligible and long-term. Of the 1,350 additional annual sorties, half (675) would first divert to ØL7 for munitions upload before flying to SUA for training operations and would then return to ØL7 to dearm. These additional sorties in the ØL7 airspace represents a 17-percent increase over the baseline sorties, and similar to VGT, potential impacts on the ØL7 airspace are expected to be negligible and long-term. The special use airspace (SUA) proposed for CCAS training operations have the capacity, are in locations, and have the dimensions necessary to support the additional sorties under Alternative 1.

The Alternative 1 High Noise Scenario would result in long-term, highly noticeable noise increases (8- to 23-dBA DNL) for all points of interest (POIs) and other areas surrounding VGT. There would be the potential for long-term, significant impacts on all POIs as well as an increase in noise in areas surrounding VGT. The Alternative 1 High Noise Scenario would result in long-term, highly noticeable noise increases at the POI (5-dBA DNL) and other areas surrounding ØL7. There would be the potential for long-term, moderate impacts at the POI as well as an increase in noise in areas surrounding ØL7.

The Alternative 1 Low Noise Scenario would result in long-term, noticeable noise increases (4 to 5 dBA) at two POIs. There would be the potential for long-term moderate impacts on two POIs as well as an increase in noise levels in areas surrounding VGT. The Alternative 1 Low Noise Scenario would result in long-term, unnoticeable increases at the POI and other areas surrounding ØL7. There would be negligible impacts on the POI and areas surrounding ØL7.

There would be a negligible increase in noise from additional CCAS flight operations in the proposed SUA under Alternative 1.

Under Alternative 1, CCAS would comply with Air Force safety guidance as identified in Defense Contract Management Agency Instruction (DCMA INST) 2819.01 including ground safety (emergency response and safety zones), explosives safety, and flight safety, including bird/wildlife-aircraft strike hazard (BASH) procedures. No significant impacts on airspace/flight safety procedures with CCAS and no significant impacts on airspace/flight safety are anticipated provided that contractor flight safety rules are followed, and the applicable airport, Federal Aviation Administration (FAA), DCMA INST 2819.01 guidelines are implemented at VGT or ØL7.

Implementation of Alternative 1 would increase air pollutant emissions. The VGT and ØL7 airports are located in Clark County, Nevada; VGT is within an area of the county that has been designated marginal nonattainment for ozone, a criteria pollutant under the Clean Air Act (CAA). ØL7 is located in a part of the county that has been designated maintenance for ozone. The annual emissions for other criteria pollutants would not be considered significant as they are below the relevant *de minimis* or insignificant indicator values. Under Alternative 1, nitrogen oxide emissions for the Rockwell OV-10 would exceed the *de minimis* value of 100 tons per year (tpy) under the 1997 Clark County Maintenance Plan; for all other aircraft, those emissions would be well below the *de minimis* value of 100 tpy. Therefore, the implementation of Alternative 1 would interfere with the region’s ability to maintain compliance with the National Ambient Air Quality Standards (NAAQS) for ozone (for which nitrogen oxide is a precursor) under the 1997 Clark County Maintenance Plan. However, the Air Force coordinated with Clark County to incorporate these nitrogen oxide emissions into an emissions budget for the County’s Second Maintenance Plan. Under General Conformity Determination (GCD) regulations, the inclusion of these project-specific emissions into the State Implementation Plan constitutes conformity with the NAAQS, and therefore would not interfere with the region’s ability to maintain compliance with the NAAQS for ozone. As such, the Proposed Action would not create a significant impact on air quality or the ability of Clark County to comply with the NAAQS. Neither VGT nor ØL7 are located within 10 kilometers (6.2 mi) of any Class I areas. Air quality impacts from emissions during training operations in R-2502 and R-4806 would not be significant. While Wilderness

Areas and Wilderness Study Areas underlie or are near R-2502 and R-4806, impacts on visibility within Class I areas proximate to R-2502 and R-4806 would be insignificant.

Under Alternative 1, there would be no ground disturbing activities; therefore, no impact on vegetation would be expected. There would be short- and long-term adverse impacts on wildlife from increased aircraft operations and the associated increase in noise. Potential impacts on birds and other wildlife would be minor with implementation of the FAA Wildlife Hazard Mitigation Program. There is no suitable habitat on VGT for federally listed avian or mammal species; therefore, there would be no effect on the southwestern willow flycatcher, Yuma Ridgway's rail, Mojave desert tortoise, or Pahrump poolfish. Likewise, there is no suitable habitat for southwestern willow flycatcher and Yuma Ridgway's rail at or within the extended noise contours at ØL7. There would be no effect on Mojave desert tortoise if they were to occur within the extended noise contours of ØL7. Therefore, there would be no effect on any federally listed species from CCAS operations at VGT and ØL7.

While CCAS aircraft would be using ground-impacting training munitions and ammunition for an estimated half of their sorties, these would be used on managed ranges. The use of munitions and ammunition for CCAS training in the SUA over Fort Irwin and the potential effects of these training activities on federally listed species, including the Mojave desert tortoise, are described by the Fort Irwin 2014 Biological Opinion (FWS-SB-14BO363-14F0495) and 2018 Programmatic Biological Opinion for Activities and Expansion of the Nevada Test and Training Range (08ENVS00-2018-F-0028). Further, Fort Irwin is developing an endangered species management plan to address potential conflicts and recommendations for management of the Mojave desert tortoise and other sensitive wildlife and botanical resources. Therefore, the proposed CCAS operations in the SUA may affect but are not likely to adversely affect the California condor, southwestern willow flycatcher, and Yuma Ridgway's rail under Alternative 1. All potential effects on Mojave desert tortoise from proposed CCAS training activities, including the use of training munitions and ammunition, and the accompanied increased risk of wildland fires from the use of training munitions and ammunition are covered under the installations' Biological Opinions and no further consultation with USFWS on effects of CCAS activities on federally listed species would be required.

Under the Alternative 1, increased noise at VGT may result in long-term impacts on land use compatibility. At VGT, under the High and Low Noise Scenarios, an overall increase in newly exposed areas affected by noise levels between the 65- and 80-A-weighted decibels (dBA) day-night average sound level (DNL) would occur within areas zoned for residential use. Under the High Noise scenario, the change in noise in some areas surrounding VGT would potentially result in significant and long-term adverse impacts and may be incompatible with the existing residential land use. The change in noise under Alternative 1 Low Noise Scenario would potentially result in moderate and long-term incompatibility with existing residential land use in the areas surrounding VGT. Under the CCAS Alternative 1 High Noise Scenario at ØL7, there would be an increase of newly exposed area affected by noise levels at ØL7, however, there is no land zoned as residential. Therefore, there would be no impacts on land use under the CCAS High Noise Scenario at ØL7. The Alternative 1 Low Noise Scenario at ØL7 would not result in an increase of newly exposed area affected by noise levels.

Under Alternative 1, the 35 CCAS maintenance personnel and pilots would represent an insignificant increase in the total employment in Clark County, Nevada. There would be no impact on income and employment from the addition of CCAS personnel at VGT and ØL7. Expenditures would occur with the purchase of fuel, equipment, and materials; this increase in expenditures would provide long-term, potentially minor, beneficial impacts. Under the High Noise Scenario, residential and commercial properties proximate to VGT would experience a major increase in noise and potentially could result in major adverse impacts on residential and commercial property values. There would be no impact on residential and commercial property values proximate to ØL7 under the High Noise Scenario or to VGT or ØL7 under the Low Noise Scenario.

Under Alternative 1, the percentage of the population that identifies as minority as well as the percentage of low-income populations in Clark County census tracts proximate to VGT and under the 65-dBA DNL noise contours are higher than the percentage of minority and low-income populations in Clark County and in Nevada. Therefore, there would be disproportionate impacts from noise on minority and low-income populations under the Alternative 1 High Noise Scenario; however, under the Low Noise Scenario at VGT, disproportionate impacts on minority or low-income communities are not expected. No disproportionate impacts on minority or low-income communities are anticipated at ØL7 under the High or Low Noise Scenarios. No disproportionate impacts on youth or elderly populations at VGT or at ØL7 are expected.

Under Alternative 1, no ground disturbance would take place; therefore, no archaeological resources would be disturbed. No traditional cultural resources or sacred sites have been identified at VGT or ØL7. VGT and ØL7 are modern airports. There are two National Register of Historic Places–listed architectural resources recorded under the SUA. Noise analysis under both noise scenarios indicates there would be a negligible increase to the noise environment under the SUA. Therefore, Alternative 1 would have no effect on, and consequently no impact to, cultural resources.

Hazardous wastes generated as a result of CCAS operations would be stored and disposed of in accordance with existing plans and procedures. While there would be a minor impact from increased hazardous materials, no impacts from managing hazardous wastes are expected from Alternative 1. Since no new construction is being proposed, no impacts are expected from asbestos-containing materials, lead-based paint, or polychlorinated biphenyl-containing materials. There is a low potential for radon to pose a health hazard at VGT and ØL7; however, no new construction is required; therefore, no impacts from radon are anticipated.

Reasonably Foreseeable Future Actions

Routine construction and planned infrastructure improvements would continue to occur at and near VGT and ØL7 simultaneously with Alternative 1. These routine projects and reasonably foreseeable future projects were considered for analysis in this EA. While some of the construction and infrastructure improvement projects may overlap with implementation of Alternative 1, there is the potential for an incremental impact on noise and air quality; however, these incremental impacts would be negligible. The analysis of the affected environment and environmental consequences of implementing the Proposed Action under Alternative 1, when considered with reasonably foreseeable future actions, concluded that by implementing standing environmental protection measures and Best Management Practices, there would be no major impacts from CCAS operations at VGT, ØL7, or in the SUA under the Alternative 1 Low Noise Scenario for all resources analyzed.

Mitigation

Best Management Practices and environmental commitments are described and in the EA where applicable. No mitigation measures are proposed.

Conclusion

Finding of No Significant Impact. After review of the EA prepared in accordance with the requirements of National Environmental Policy Act; Council on Environmental Quality regulations; and 32 CFR Part 989, *Environmental Impact Analysis Process (EIAP),* and which is hereby incorporated by reference, I have determined that the proposed activities to provide dedicated CCAS operations support for the 6th Combat Training Squadron, Nellis AFB with the implementation of the Alternative 1 Low Noise Scenario as outlined in **EA Section 3.3.4**, would not have a significant impact on the quality of the human or natural environment. Accordingly, an Environmental Impact Statement will not be prepared. The Air Force would not implement the Alternative 1 High Noise Scenario due to the potential for significant impacts from increased noise on sensitive receptors (i.e., POIs) proximate to VGT, and potential significant impacts on land use, socioeconomics, and environmental justice from increased noise. This decision has been made after considering all submitted information, including a review of public and agency comments submitted during the 30-day public comment period, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the United States Air Force.

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22 April 2022

DEE JAY KATZER, Colonel, USAF
Chief, Civil Engineer Division (HQ ACC/A4C)

DATE

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	degree(s) Fahrenheit
57 WG	57th Wing
6 CTS	6th Combat Training Squadron
ac	acre(s)
ACAM	Air Conformity Applicability Model
ACC	Air Combat Command
ACM	asbestos-containing material(s)
AEP	Airport Emergency Plan
AFB	Air Force Base
AFH	Air Force Handbook
AGE	aerospace ground equipment
AGL	above ground level
Air Force	United States Air Force
APE	Area of Potential Effects
AQCR	Air Quality Control Region
Army	United States Army
ARTCC	Air Route Traffic Control Center
BASH	bird/wildlife-aircraft strike hazard
CAA	Clean Air Act
CAF	Combat Air Forces
CAS	close air support
CCAS	contracted close air support
CDDAR	Crash Damaged or Disabled Aircraft Recovery
CEQ	Council on Environmental Quality
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CSAF	Air Force Chief of Staff
dBA	A-weighted decibel(s)
DCMA INST	Defense Contract Management Agency Instruction
DNL	day-night average sound level
DOA	Department of Aviation
DOD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FBO	Fixed-Base Operator
ft	foot(feet)
ft^2	square foot(feet)
GA	general aviation
gal	gallon(s)
GCD	General Conformity Determination
GHG	greenhouse gas(es)
HAZMAT	hazardous materials
HND	Henderson Executive Airport
JTAC	Joint Terminal Attack Controller
JTACQC	Joint Terminal Attack Controller Qualification Course
km	kilometer(s)
LBP	lead-based paint

L_{dnmr}	onset-rate adjusted monthly day-night average sound level
LTO	landing and takeoff
mi	mile(s)
mm	millimeter(s)
MSL	mean sea level
NEPA	National Environmental Policy Act
NH_3	ammonia
NHPA	National Historic Preservation Act
NIMS	National Incident Management System
NM	nautical mile(s)
NO_x	nitrogen oxides
NRHP	National Register of Historic Places
NTC	National Training Center
NTTR	Nevada Test and Training Range
NTSB	National Transportation Safety Board
ØL7	Jean Airport
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
POI	point of interest
PSD	Prevention of Significant Deterioration
PWS	Performance Work Statement
R-	Restricted Airspace
ROAA	Record of Air Analysis
ROCA	Record of Conformity Applicability
ROI	region of influence
RPZ	Runway Protection Zone
SO_2	sulfur dioxide
SO_x	sulfur oxide
SUA	special use airspace
TGO	touch and go
tpy	ton(s) per year
US	United States
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VGT	North Las Vegas Airport
VOC	volatile organic compound
WHMP	Wildlife Hazard Management Plan
yd^2	square yard(s)

CHAPTER 1 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force) proposes to provide dedicated contracted close air support (CCAS) sorties in the special use airspace (SUA) proximate to Nellis Air Force Base (AFB). The Proposed Action is for dedicated contract support to Nellis AFB from an off-base location. Nellis AFB, located in Clark County in the southeastern corner of the state of Nevada, is 5 miles (mi) northeast of the city of Las Vegas and adjacent to the city of North Las Vegas. Nellis AFB is the center for Air Combat Command (ACC) training and testing activities at the Nevada Test and Training Range (NTTR), with the base providing logistical and organizational support for NTTR, aircraft training, and personnel.

1.1.1 Background

The 6th Combat Training Squadron (6 CTS), located on Nellis AFB, is ACC's only Joint Terminal Attack Controller (JTAC) schoolhouse. It is responsible for training students in classroom academics, simulators, and live aircraft missions. A JTAC is a military member who directs the action of combat aircraft engaged in close air support (CAS) and other offensive air operations from a forward position, such as directing airstrikes and strafing from the ground. Standardized training is needed to ensure all JTACs are qualified to provide effective air control for all operations. Currently, the Air Force cannot self-generate the required amount of aircraft support needed to meet JTAC Qualification Course (JTACQC) production requirements, reduce current backlogs, or meet staffing requirements in operational units.

The Air Force Chief of Staff (CSAF) hosted a CAS Focus Conference at the Pentagon on 2 through 5 March 2015 that included representatives from all the services, US Special Operations Command, and other stakeholders. The conference brought together each service's CAS experts and generated several new joint initiatives to improve the CAS mission. The conference outbrief was attended by CSAF, the US Army (Army) Chief of Staff, the Marine Corps Commandant, the Vice Chief of Naval Operations, the National Guard Bureau Chief, and others. At the conference, service representatives agreed to improve and expand training for both aviators and in-demand JTAC parties by using live virtual constructive training and CAS aircraft for JTAC training. Service exercises would be aligned to better coordinate CAS training, such as combining Blue Flag exercises with the Army Warfighter Assessment (Air Force, 2017).

Existing Air Force squadrons are not able to provide sufficient range hours to train an adequate number of 6 CTS JTAC students. Aircraft support for JTACQC has been provided by ACC aircraft participating in Green Flag exercises. This approach provided limited targets, experienced airspace scheduling difficulties, and limited aircrew training while JTACQC sorties were performed. In addition, JTACQC training was moved to various ACC bases around the United States. Subsequently, this required multiple temporary duty assignments for each JTAC class. These issues have resulted in JTAC students being increasingly unable to fulfill training and operational requirements.

At present, Nellis AFB does not have the mission or physical capacity to host contracted CAS (CCAS) on base. Uninterrupted training of JTACs is essential to prevent a break in the pipeline that may cause further deployment stresses and challenges. Using dedicated off base CCAS to support the JTACQC, instead of ACC flying squadrons, would return an estimated 1,350 range sorties to Combat Air Forces (CAF) flying hour programs for other pilot training purposes. Moreover, the proximity of the 6 CTS to the Army Garrison Fort Irwin (Fort Irwin) and National Training Center (NTC) range facilitates on-time course completion by reducing the need for time-consuming and costly logistics to send students to other installations. JTACQC has been temporarily supported by CCAS from the Henderson Executive Airport (HND), in Las Vegas, Nevada. Under this temporary support, the 6 CTS has produced up to 270 JTACs per year to meet combatant commander deployment and Army/Air Force Liaison Memorandum of Agreement requirements.

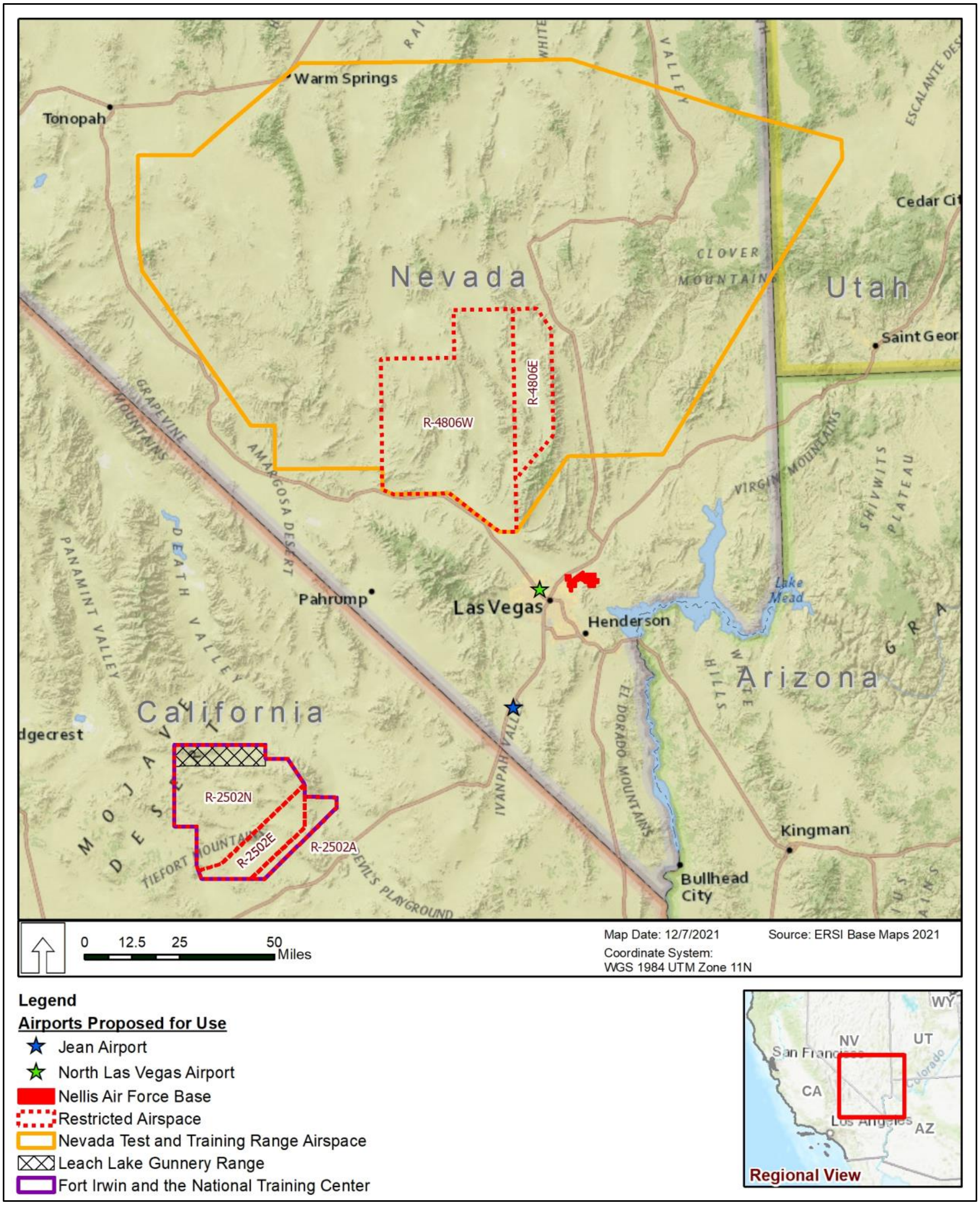

Figure 1-1 Regional Map of Nellis Air Force Base, Nevada, Locations of Airports Proposed for Use, and Special Use Airspace Proposed for Use for Contracted Close Air Support.

1.1.2 Location

CCAS would primarily use the Fort Irwin ranges and Restricted Area R-2502N (see **Figure 1-1**). These areas are operated by the Fort Irwin Commander and are located in northern San Bernardino County, California. The Fort Irwin ranges include the Leach Lake Training Range, which is an approved bombing range. In the event of scheduling conflicts or weather, CCAS may also use the R-4806 ranges within the NTTR (see **Figure 1-1**). The R-4806 ranges are operated by the Tactical Fighter Weapons Center (R-4806E) and the Air Force Warfare Center (R-4806W) and used for conventional bombing and gunnery testing and training. CCAS training would not extend beyond R-4806E and R-4806W into other NTTR airspace. Except for the extreme northern portion, all of R-4806 overlies the Desert National Wildlife Refuge.

1.2 PURPOSE OF AND NEED FOR THE ACTION

The purpose of the Proposed Action is to provide dedicated CCAS sorties from an off-base location to provide sustained JTACQC for 6 CTS students. Dedicated CCAS would improve and expand JTAQC training to meet production requirements and support unit readiness; JTAC students would gain more realistic CAS while performing their syllabus tasks. Finally, dedicated CCAS would allow the Air Force to reduce the need for time-consuming and costly logistics to send students to other installations to satisfy JTACQC requirements. The proximity to Fort Irwin ranges greatly facilitates on-time course completion and reduces cost and the time needed to graduate students.

The need for CCAS is to provide better and more realistic training for JTAC at Nellis AFB. Dedicated CCAS at the JTAC schoolhouse also increases the quantity of CAS training available for operational units (fighter squadrons and air support operations squadrons) by removing this training burden from operational flying squadrons. Further, CCAS would allow the 6 CTS to increase the number of graduates to meet combatant commander deployment and Army/Air Force Liaison Memorandum of Agreement requirements for JTAC support to the Army.

1.3 DECISION TO BE MADE

This environmental assessment (EA) analyzes the potential environmental consequences associated with establishing dedicated CCAS for the 6 CTS. Based on the analysis in this EA, the CAF will make one of three decisions regarding the Proposed Action: 1) determine the potential environmental impacts associated with the Proposed Action and alternatives are not significant and sign a Finding of No Significant Impact (FONSI); 2) initiate preparation of an Environmental Impact Statement (EIS) if it is determined that significant impacts would occur through implementation of the Proposed Action or alternatives; or 3) select the No Action Alternative, whereby the Proposed Action would not be implemented. As required by the National Environmental Policy Act (NEPA) and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project and be available to inform decision-makers of the potential environmental impacts.

1.4 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATIONS

The environmental analysis process, in compliance with NEPA guidance, includes public and agency review of information pertinent to the Proposed Action and alternatives. Further, compliance with Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA) requires consultation with the US Fish and Wildlife Service (USFWS) and State Historic Preservation Offices, respectively. Tribal consultation is also required under the NHPA. Information about Interagency and Intergovernmental Coordination for Environmental Planning, as well as the letters and responses, are included in **Appendix A**.

Three letters were received during the Draft EA 30-day comment period. Comments were received from the Clark County Department of Aviation, the City of North Las Vegas, and the Mojave Desert Air Quality Management District (refer to **Appendix A**). All substantive comments received during the 30-day comment period were considered and, where appropriate, minor clarifications were made to this Final EA.

1.5 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS

Implementation of the Proposed Action would involve coordination with several organizations and agencies. Adherence to the requirements of specific laws, regulations, best management practices, and necessary permits are described in detail in each resource section in **Chapter 3**.

1.5.1 National Environmental Policy Act

NEPA requires that federal agencies consider potential environmental consequences of proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 Code of Federal Regulations [CFR] Parts 1500 through 1508 [CEQ 1978]. On 14 September 2020, CEQ updated NEPA rules, subject to congressional review (85 Federal Register 43304 through 43376), which are being followed for this EA. CEQ regulations specify that an EA be prepared to

- briefly provide sufficient analysis and evidence for determining whether to prepare an EIS or a FONSI;
- aid in an agency's compliance with NEPA when no EIS is necessary; and
- facilitate preparation of an EIS when one is necessary.

The Air Force's implementing regulation is 32 CFR §989, which provides a framework for how the Air Force implements CEQ regulations and achieves the goals set forth by NEPA. Known as the Environmental Impact Analysis Process (EIAP), this allows the Air Force to thoroughly examine the Proposed Action and alternatives to determine potential issues affecting the environment during their decision-making process.

1.6 SCOPE OF THE ENVIRONMENTAL ANALYSIS

This EA analyzes the potential environmental consequences associated with contracted close air support training for JTACQC for Nellis AFB. This EA has been prepared in accordance with the NEPA (42 US Code §§ 4321 through 4347), the CEQ Regulations (40 CFR Parts 1500 through 1508), and 32 CFR Part 989 et seq., *Environmental Impact Analysis Process (EIAP)*. NEPA ensures that environmental information, including the anticipated environmental consequences of a proposed action, is available to the public, federal and state agencies, and the decision-maker before decisions are made and before actions are taken.

CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training munitions and ammunition on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training SUA. The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training munitions and ammunition.

2.2 Elements of the Proposed Action

2.2.1 Aircraft

CCAS would have multiple aircraft available with acceptable capabilities to support training requirements. Proposed aircraft specifications are described in **Table 2-1**; all aircraft listed can provide CCAS to JTAC students assigned to the 6 CTS. One or a combination of these aircraft types may be operated by a contractor at the airport proposed for use in support of CCAS training. The Proposed Action would include the establishment of an estimated 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel who would operate an estimated six aircraft from North Las Vegas Airport (VGT), Nevada. All munitions loading and unloading associated with this proposed action will be conducted at Jean Airport (ØL7).

Table 2-1
Specifications of Potential Aircraft for Contracted Close Air Support

Aircraft	Wingspan (feet)	Length (feet)	Height (feet)	Number of Engines
Aero L-39 Albatros	31	39	15.7	1
Pilatus PC-9	33.1	33.25	10.7	1
Cessna 337	38.75	29.75	9.3	2
Embraer A-27	36.5	32.3	11.2	1
Brasov IAR-823	32.8	27.3	9.4	1
Valmet L/A-90 (A-90 Raider)	34.75	28	10.5	1
Rockwell OV-10	40	41.6	15.2	2
Embraer A-29	36.6	37.1	13.0	1
Douglas A-4	26.5	40.25	15.0	1
BAC-167	23.8	36.7	10.9	1
Aero Vodochody L-59	31.3	40.0	15.6	1

2.2.2 Facilities

CCAS would require the use of facilities at the prospective airports for office space and briefing areas for pilots and aircraft maintenance personnel, aircraft maintenance hangar space, tool and equipment storage, AGE storage, vehicle parking, and aircraft parking ramp space. A summary of estimated facilities needs to satisfy the Proposed Action is provided in **Table 2-2**. The selected contractor would coordinate specific requirements with the selected airport.

Table 2-2
Contracted Close Air Support Estimated Airport Facilities Needs[1]

Location	Ramp Required (yd^2)	Aircraft Maintenance Unit space (ft^2)	Stand-Alone Operations Space (ft^2)	Integrated Operations Space (ft^2)	Munitions Storage (ft^2)[2]	Munitions Maintenance (ft^2)[2]
Civil Airport	1,111	12,800	900	N/A	200	200

Notes:
[1] If adequate facilities are not available at the selected airport, the contractor may be required to fund the renovation or construction of storage and maintenance facilities. Alternatively, munitions could be supported using mobile munitions support services. If construction is required, separate environmental analysis would be completed as required, including appropriate consideration of potential impacts that have a reasonable, close, causal relationship to the selected alternative, if a FONSI is signed.
[2] This space does not include the separation distances required around munitions facilities from other airport facilities, runways, taxiways, or roads.
ft^2 = square feet; N/A = not applicable; yd^2 = square yards

CCAS pilots at a civil airport would land and park their aircraft at the airport on civilian authority Fixed-Base Operator (FBO) assigned rows. CCAS pilots would then participate in debriefs with 6 CTS instructors and students as required. CCAS pilots may conduct debriefs at 6 CTS facilities on Nellis AFB if the airport is located close enough for pilots to commute, or by video conferencing from the CCAS operations facility.

CCAS aircraft located at a civil airport would require aircraft fuel delivered in fuel trucks owned and operated by the fuel provider at the airports proposed for use. CCAS personnel would be responsible for all aircraft fuel and defuel operations. It would be anticipated that no additional personnel at the airports proposed for use would be needed to support the additional deliveries. All required aerospace ground equipment (AGE) would be owned and maintained by the CCAS personnel but may also be provided by the civil FBO per contractual arrangement with the service provider.

2.2.3 Maintenance

CCAS aircraft maintenance would include routine inspections and minor unscheduled repairs on the flightline. Aircraft requiring major scheduled (depot level maintenance) or unscheduled maintenance would typically be flown back to the contractor's home base for repairs. For the rare occasions when an aircraft is not flyable, the contractor would dispatch a temporary field repair team to the airport to repair the aircraft.

The civil airports proposed for use would either provide available hangar space for use or have available space for the contractor to construct additional facilities as negotiated with CCAS contractors. Hangar use associated with the Proposed Action could be needed to perform limited maintenance operations on CCAS aircraft.

Contractor maintenance personnel would also be responsible for the inspection and maintenance of all external stores (e.g., bomb release units, external fuel tanks). All required AGE would be owned and maintained by the CCAS contractor but may also be provided by the civil FBO per contractual arrangement with the service provider. Gas and diesel fuel for AGE would be obtained by CCAS contract personnel from the civil airport fuel provider.

2.2.4 Personnel

Contractors that would be located at a prospective airport in support for Nellis AFB would be staffed by an estimated 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel to support CCAS. The estimated contractor arrival at the airports proposed for use is February 2022.

2.2.5 Sorties

The Proposed Action includes contracting for the support of an estimated six contractor aircraft to fly an estimated 1,350 annual sorties in support of the 6 CTS. The projected flight turn patterns would be a 4 x 4 from a civil airport. This number of sorties also includes sorties expected for contractor training activities (refer to **Section 2.2.6**) and aircraft leaving for or returning from either maintenance or other deployments. A typical training day would provide up to 10 hours of day and 5 hours of night range hours (up to 15 total CCAS range hours per day) during each 10-day flying training event.

The vendor would depart VGT and fly to Fort Irwin NTC/R-2502 or NTTR/R-4806 under visual and instrument flight rules clearances. For 50 percent of the sorties, before flying to SUA, aircraft would divert to ØL7 for munitions upload. Refer to **Section 2.2.1.7** for munitions operations. CCAS pilots may fly very few additional traffic patterns at the airports proposed for use to maintain their currency and proficiency as required. Additional traffic patterns would be anticipated on no more than 3 percent of the annual sortie total, about 41 sorties. Implementation of the Proposed Action at VGT would result in an estimated increase of 2 percent in the number of operations at VGT and 19 percent at ØL7. Refer to **Section 2.2.1.6** for more information on training operations.

CCAS would fly up to a projected 19 percent of the estimated 1,350 sorties during environmental night hours. This would increase flights at night by approximately 257 sorties per year at VGT. Since an estimated 50 percent of sorties out of VGT would divert to ØL7 for munitions upload and would return after training to download unexpended muntions, an estimated 257 additional night sorties may also occur at ØL7. Contractor night sorties would be flown during 6 CTS's approved flying window.

2.2.6 Airspace Use

The contractor would execute CCAS while flying training missions with propeller driven and/or turbofan driven aircraft to Fort Irwin NTC/R-2502 Range (primary range) or NTTR/R-4806 Range (backup range) to emulate military aircraft performing CAS mission profiles. An estimated 1,350 sorties would be flown to provide JTACQC support and are summarized in **Table 2-3**. The Fort Irwin NTC/R-2502 Range is an air-to-ground bombing range controlled by Fort Irwin. The 6 CTS would continue to use the Leach Lake Training Range within Fort Irwin (see **Figure 1-1**). Weather or other conflicts at the Fort Irwin NTC/R-2502 Range may drive the infrequent use of the NTTR/R-4806 Range. During mission execution, aircraft would execute established procedures for military air-to-ground operations. In general, aircraft would loiter away from targets to coordinate with the JTAC trainee for approximately 90 percent of the total time on the range flying at an average altitude of 6,000 feet (ft) above ground level (AGL). CCAS aircraft would fly to 1,000 ft AGL for training weapons deliveries, approximately 10 percent of total range time.

Table 2-3
Projected Annual Training Activities by 6th Combat Training Squadron, Nellis Air Force Base

Special Use Airspace	Projected CCAS Training Sorties
R-2502A (Surface to 16,000 ft MSL) and R-2502E (Surface to Unlimited)	960
R-2502N (Surface to Unlimited)	195
R-4806E (100 ft AGL to Unlimited) and R-4806W (Surface to Unlimited)	195
Total Special Airspace Sorties for CCAS	**1,350**

AGL=above ground level; CCAS = contracted close air support; ft = feet; MSL= mean sea level

2.2.7 Training Munitions

CCAS would employ training munitions, primarily BDU-33s (Bomb, Dummy Unit) and either 7.62-millimeter or .50-caliber ball and tracer ammunition. The estimated training munitions and ammunition use is presented in **Table 2-4**. The type and amount of munitions would be dictated by the specific training event. Descriptions of the munitions are provided in **Appendix F**.

For CCAS support at VGT, munitions storage and maintenance would be authorized at VGT and the contractor would be responsible to store, account for, inspect, maintain, assemble and disassemble, and properly dispose of expended and unserviceable, suspended, or restricted munitions. All required state conditional use permits would be maintained for the storage of munitions at VGT. Compliance with federal and state statutory guidelines regarding the security and the storage and handling of explosive components would be followed. For the purposes of this assessment, it is assumed that approximately 50 percent of sorties would divert to ØL7 to upload training munitions and ammunition. A mobile munitions support team would transport (via ground) training munitions and ammunition from VGT to ØL7 with the needed type and quantity of training munitions and ammunition for that day's mission needs to meet and upload munitions onto the CCAS aircraft. Once the CCAS aircraft depart ØL7 and it is clear aircraft would not need to make an immediate return, the mobile munitions team would return to VGT. At the end of training, the mobile munitions team would return to ØL7 to download any unexpended munitions. Afterwards, the CCAS aircraft and the mobile munitions team would return to VGT. Transportation of munitions by the mobile munitions support on public roads would comply with all federal, state, and local Department of Transportation and Occupational Safety and Health Administration (OSHA) regulations governing the transportation of explosives on public roads and highways.

Table 2-4
Proposed Defensive Training Munitions and Ammunition Use in the Proposed Special Use Airspace to Support Contracted Close Air Support

Special Use Airspace	Munitions and Ammunition Type	Proposed Contracted Close Air Support Munitions and Ammunition Use
Fort Irwin/R-2502A and R-2502E	BDU-33	478
Fort Irwin/R-2502A and R-2502E	7.62-mm ammunition[1]	14,347
Fort Irwin/R-2502A and R-2502E	.50-caliber ammunition[1]	14,347
NTTR/R-4806W[2]	BDU-33	61
NTTR/R-4806W[2]	7.62-mm ammunition[1]	1,827
NTTR/R-4806W[2]	.50-caliber ammunition[1]	1,827
Fort Irwin/R-2502N	BDU-33	61
Fort Irwin/R-2502N	7.62-mm ammunition[1]	1,827
Fort Irwin/R-2502N	.50-caliber ammunition[1]	1,827

Notes:
[1] The mix of 7.62-mm or .50-caliber ammunition consists of one round of tracer ammunition for every four rounds of ball ammunition.
[2] No munitions or ammunition would be used at NTTR/R-4806E.
mm = millimeter(s)

2.3 SELECTION STANDARDS

In order to assess viable alternatives for the CCAS implementation in support of Nellis AFB, the following selection standards were applied:

1. Mission: Proposed CCAS must not displace, interfere with, detract from, or reduce Air Force missions or ongoing activities at the selected airport.
2. Proximity to SUA: Airports proposed for use must be within 100 NM from the SUA proposed for use.
3. Facilities: The airports proposed for use should have facilities or the space available for additional facilities that meet the CCAS contractor's negotiated needs. The anticipated requirements to operate from the airports proposed for use are listed below:

- Length of Runway: Airports proposed for CCAS use should have a useable runway length that is approximately 4,000 ft long.
- Available Ramp Space for Projected Number of Aircraft: Available ramp space should meet or exceed the space needed to park the number of aircraft to support the Proposed Action.
- Runway Lighting and Instrumentation: Airports proposed for use should have sufficient runway lighting and instrumentation to service aviation operations during Instrument Meteorological Conditions and/or nighttime operations.
- Available Arm/Dearm and Hot Brake Servicing Areas: Airports proposed for use should have locations suitable for arm/dearm operations of aircraft without live weapons and to resolve hot brake incidents.
- Infrastructure: Airports proposed for use should have adequate hanger space for routine inspections and minor unscheduled maintenance of aircraft or enough space on or near the airport for facilities to be constructed by the vendor. This does not indicate permanent hangar space is required, only that hangar space is available when unscheduled field maintenance is required. It is assumed the contractor would conduct depot level maintenance at their selected Centralized Repair Facility (not at the airports proposed for use). There should be enough facilities for pilot and maintenance personnel office space, tool and equipment storage, AGE and vehicle parking, as well as munitions storage and maintenance space.
- Airfield Services: The airports proposed for use should have the ability to provide Jet A fuel.

4. Cost and Time: Meeting 6 CTS training requirements is currently an urgent need; viable CCAS alternatives must be able to support CCAS activities in the near term. Solutions that cannot be implemented within the next 2 years, at the latest, would not meet the purpose of and need for the initiative. The Air Force has a strong preference for solutions that could be implemented as soon as possible.

2.4 SCREENING OF ALTERNATIVES

The following potential alternatives were considered:

- Alternative 1 – Establish CCAS capabilities (an estimated six aircraft) providing 1,350 annual training sorties for Nellis AFB operating from VGT, with munitions arm/dearm support occurring at ØL7. Training operations would occur in the Fort Irwin/R-2502 and NTTR/R-4806 ranges. Operations for CCAS aircraft at the civil airport would be in facilities contracted by the service provider with civil airport authorities. Aircraft maintenance space would be in those contracted by the service provider and aircraft parking would be assigned by the local FBO.
- Alternative 2 – Establish CCAS capabilities (an estimated six aircraft) providing 1,350 annual training sorties for Nellis AFB operating from ØL7. Training operations would be provided in the Fort Irwin/R-2502 and NTTR/R-4806 ranges. Operations for CCAS aircraft at the civil airport would be in facilities contracted by the service provider with civil airport authorities. Aircraft maintenance space would be in those that would have to be put in place by the service provider and aircraft parking would be assigned by the local FBO.
- Alternative 3 – Continue temporary CCAS operations from HND, with munitions storage occurring at VGT and arm/dearm support occurring at ØL7. The number of annual sorties would increase from 917 to an estimated 1,350. Training operations would be provided in the Fort Irwin/R-2502 and NTTR/R-4806 ranges. Operations for CCAS aircraft at HND would be in facilities contracted by the service provider with civil airport authorities. Aircraft maintenance space would be in those contracted by the service provider and aircraft parking would be assigned by the local FBO.

2.4.1 Comparison of Alternatives

The selection standards described in **Section 2.3** were applied to the alternatives to determine which could support CCAS requirements and fulfill the purpose of and need for the Proposed Action. The alternatives considered above are compared in **Table 2-5**.

Table 2-5
Comparison of Alternatives by Selection Standard

Alternatives	1. Mission Compatibility	2. Proximity to SUA	3. Available Facilities	4. Cost and Time	Meets Purpose and Need
Alternative 1 – North Las Vegas Airport	Yes	Yes	Yes	Yes	**YES**
Alternative 2 – Jean Airport	Yes	Yes	No	No	**NO**
Alternative 3 – Henderson Executive Airport	No	Yes	Yes	Yes	**NO**

CCAS = contracted close air support; SUA = special use airspace

2.5 Alternative Actions Eliminated from Further Consideration

Two alternatives were considered and eliminated from further consideration because they would not meet the purpose of and need for the action or the selection standards (refer to **Section 2.3**).

- Alternative 2 – Establish CCAS capabilities from ØL7. This alternative fails to meet Selection Standards 3 and 4 as ØL7 does not have the needed infrastructure available to support CCAS operations. The time needed for the planning and construction of the minimal needed facilities and infrastructure would not meet the schedule necessary to support CAS training. Alternative 2 does not support the purpose of and need for the Proposed Action.
- Alternative 3 – Continue temporary CCAS operations from HND, with munitions storage occurring at VGT and arm/dearm support occurring at ØL7. This alternative fails to meet Selection Standard 1 as potential mission conflicts related to future airport planning are anticipated. HND does not meet the purpose of and need for the Proposed Action.

2.6 Detailed Description of the Alternatives Considered for Detailed Analysis

NEPA and the CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that meet the purpose of and need for the Proposed Action. One alternative meets the purpose of and need for the action, satisfies the criteria set forth in the selection standards, and was carried forward for further detailed analysis in this EA. The No Action Alternative provides a benchmark used to compare potential impacts of the Proposed Action. Alternatives carried forward for evaluation are described in **Sections 2.6.1** and **2.6.2**.

2.6.1 Alternative 1: Contracted Close Air Support Operating Out of North Las Vegas and Jean Airports

Under Alternative 1, ACC would establish CCAS (an estimated six aircraft) providing 1,350 annual training sorties for Nellis AFB operating out of VGT. An estimated 50 percent of the sorties would include a mix of BDU-33 and either 7.62-millimeter or .50-caliber ammunition. Munitions and ammunition would be stored and maintained at VGT, while aircraft arm/dearm would occur at ØL7. The CCAS aircraft, maintenance, personnel, sorties, SUA use, and training munitions and ammunition would be as described under the Proposed Action.

VGT is currently owned and controlled by the Clark County Department of Aviation (DOA). In 2019, the airport serviced approximately 483 aircraft operations daily. The airport has three runways, runway 7/25 is 5,005 ft long and 75 ft wide, runway 12R/30L is 5,001 ft long and 75 ft wide, and runway 12L/30R is 4,203 ft long and 75 ft wide. The airfield is equipped with runway end identifier lights, land and hold short operations, as well as medium-intensity approach lighting system with runway alignment indicator lights visual aids on both runways. The airport has sufficient aircraft parking and surfaces to support contractor operations. If existing facilities do not meet CCAS needs, the contractor may be required to fund the renovations and separate environmental analysis would be completed and appropriate agencies would be included as required.

ØL7 is a public-use airport owned and operated by the Clark County DOA. ØL7 supports both aircraft operations and recreational aviation, including aerobatic aircraft, gliders, ultralights, and skydiving. In 2019, ØL7 serviced approximately 40 aircraft operations daily. ØL7 has two runways, runway 02L/20R is 4,600 ft long and 75 ft wide and runway 02R/20L is 3,700 ft long and 60 ft wide. The airfield is equipped with runway end identifier lights, land and hold short operations, as well as a medium-intensity approach lighting system. The airport has sufficient aircraft parking and surfaces to support contractor munitions loading and unloading operations.

2.6.2 No Action Alternative

Analysis of the No Action Alternative provides a benchmark, enabling decision-makers to compare the magnitude of the potential environmental effects of the Proposed Action. NEPA requires an EA to analyze the No Action Alternative. No action means that an action would not take place at this time, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward.

No action for this EA reflects the status quo, where additional CCAS would not be established off base for the 6 CTS. Temporary support from HND would continue until mission conflicts required the departure of CCAS from HND. Without off-base CCAS, the 6 CTS would not meet the number of graduates required for combatant commander deployment and Army/Air Force Liaison Memorandum of Agreement requirements for JTAC support to the Army.

2.7 Mitigation and Best Management Practices

Agencies are required to identify and include all relevant and reasonable mitigation measures that could reduce potential significant impacts. The CEQ regulations (40 CFR § 1508.1[s]) define mitigation as avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments.

As summarized in **Section 2.8**, there are no significant impacts anticipated as a result of the Proposed Action under the Alternative 1 Low Noise Scenario. Mitigation measures are not included in this EA; however, environmental commitments and best management practices are described, when applicable, in the Environmental Consequences section of each resource in **Chapter 3**.

2.8 Summary of Potential Environmental Consequences

The potential impacts associated with the Proposed Action are summarized in **Table 2-6**. The summary is based on information discussed in detail in **Chapter 3** (**Environmental Consequences**) of the EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative action.

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Table 2-6
Comparison of Potential Environmental Consequences of the Alternatives by Resource

Alternative	Airspace Management and Use	Noise	Safety	Air Quality	Biological Resources	Land Use	Socioeconomics – Income and Employment	Environmental Justice and Protection of Children	Cultural Resources	Hazardous Materials and Wastes and Toxic Substances
Alternative 1: CCAS Operations Supporting Nellis AFB out of VGT and ØL7	**VGT** Negligible and long-term adverse impacts **ØL7** Negligible and long-term adverse impacts **Special Use Airspace** Negligible and long-term adverse impacts	**VGT** If the High Noise Scenario aircraft are selected, long-term, major adverse impacts If the Low Noise Scenario aircraft are selected, long-term, moderate adverse impacts **ØL7** If the High Noise Scenario aircraft are selected, long-term, moderate adverse impacts If the Low Noise Scenario aircraft are selected, long-term, negligible adverse impacts **Special Use Airspace** No impacts	**VGT** No impacts on ground, explosive, or flight safety **ØL7** No impacts on ground, explosive, or flight safety **Special Use Airspace** Long-term, minor adverse impacts on flight safety due to increase in flights	**VGT and ØL7** Potential for long-term, major adverse impacts from one of the proposed CCAS airframes (Rockwell OV-10). Impacts would be minimized through a General Conformity Determination, therefore, minor adverse long-term impacts **Special Use Airspace** No impact on the region's ability to meet NAAQS for all regulated pollutants	**VGT and ØL7** No short or long-term impacts on vegetation or habitat Minor adverse, short and long-term impacts on wildlife from increased noise Minor adverse long-term impacts on birds from potential aircraft/ bird collisions No short or long-term impacts on federally listed species Minor adverse long-term impacts on Nevada sensitive species **Special Use Airspace** No short or long-term impacts on vegetation or habitat Minor adverse long-term impacts on avian and mammal species from increased noise and aircraft movement Effects of training operations on the Mojave desert tortoise have been previously covered under Biological Opinions; training operations in the SUA may affect but are not likely to adversely affect the southwestern willow flycatcher, yellow-billed cuckoo, and Yuma Ridgway's rail.	**VGT** Under the High Noise Scenario, potential major, long-term adverse impacts on the existing residential noise environment Under the Low Noise Scenario, potential moderate long-term adverse impacts on the existing residential noise environment **ØL7** Under the Low and High Noise Scenarios, no adverse impacts on the existing residential noise environment **Special Use Airspace** No impacts	**VGT** Potential minor, beneficial impact from possible annual expenditures Under the High Noise Scenario, potential major adverse impacts on residential and commercial property values Under the Low Noise Scenario, no impacts on residential and commercial property values **ØL7** Potential minor, beneficial impact from possible annual expenditures Under the Low and High Noise Scenarios, no impacts on residential and commercial property values **Special Use Airspace** No impacts	**VGT** Potential major disproportionate impact on minority or low-income populations from noise under the High Noise Scenario No disproportionate impact on minority or low-income populations under the Low Noise Scenario No disproportionate impacts on youth or elderly populations under both the High and Low Noise Scenarios **ØL7** No disproportionate impact on minority or low-income populations under both the High and Low Noise Scenarios No disproportionate impacts on youth or elderly populations under both the High and Low Noise Scenarios **Special Use Airspace** No impacts	**VGT** No effects to cultural resources **ØL7** No effects to cultural resources **Special Use Airspace** No effects to cultural resources	**VGT** Minor impact from increased use or management of hazardous materials No impacts from radon, asbestos-containing materials, lead-based paint, or polychlorinated biphenyls **ØL7** No impacts from increased use or management of hazardous materials No impacts from radon, asbestos-containing materials, lead-based paint, or polychlorinated biphenyls **Special Use Airspace** No impacts
No Action Alternative	No change to airspace management and use at VGT, ØL7, or in the special use airspace	No change to noise environment at VGT, ØL7, or in the special use airspace	No change to ground, flight, or explosive safety at VGT, ØL7, or in the special use airspace	No change to air quality at VGT, ØL7, or in the special use airspace	No change to biological resources at VGT, ØL7, or in or beneath the special use airspace	No change to land use at VGT, ØL7, or beneath the special use airspace	No change to income and employment at VGT, ØL7, or beneath the airspace.	No disproportionate impacts on minority populations, low-income communities, children or the elderly in the community at VGT, ØL7, or beneath the special use airspace.	No change to cultural resources at VGT or ØL7	No change to hazardous materials and wastes and toxic substances at VGT or ØL7

Notes: AFB = Air Force Base; NAAQS = National Ambient Air Quality Standards; VGT = North Las Vegas Airport; ØL7 = Jean Airport

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CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This EA analyzes potential impacts on existing environmental conditions associated with dedicated CCAS sorties being supported from off-base locations for Nellis AFB. The analysis considers the current (baseline) conditions of the affected environment and compares those to conditions that might occur should the Air Force implement either Alternative 1 or the No Action Alternative.

3.1 DEFINITIONS OF ANALYZED RESOURCES AND EVALUATION CRITERIA

In this section, each resource is defined, and the geographic scope is identified. The expected geographic scope of potential consequences is referred to as the region of influence (ROI). The ROI boundaries will vary depending on the nature of each resource. For example, the ROI for some resources, such as air quality, extends over a larger jurisdiction unique to the resource. The specific criteria for evaluating impacts and assumptions for the analyses are presented under each resource area. Evaluation criteria for most potential impacts were obtained from standard criteria; federal, state, or local agency guidelines and requirements; and/or legislative criteria.

Impacts are defined in general terms and are qualified as adverse or beneficial, and as short- or long-term. For the purposes of this EA, short-term impacts are generally considered those impacts that would have temporary effects. Long-term impacts are generally considered those impacts that would result in permanent effects. Impacts are defined as:

- negligible, the impact is localized and not measurable or at the lowest level of detection;
- minor, the impact is localized and slight but detectable;
- moderate, the impact is readily apparent and appreciable; or
- major, the impact is severely adverse or highly noticeable and considered to be significant.

Major impacts are considered significant and receive the greatest attention in the decision-making process. The significance of an impact is assessed based on the relationship between context and intensity. Major impacts require application of a mitigation measure to achieve a less than significant impact. Moderate impacts may not meet the criteria to be classified as significant, but the degree of change is noticeable and has the potential to become significant if not effectively mitigated. Minor impacts have little to no effect on the environment and are not easily detected; impacts defined as negligible are the lowest level of detection and generally not measurable. Beneficial impacts would provide desirable situations or outcomes.

Impacts and their significance, as well as the means (e.g., Best Management Practices [BMPs]) for reducing potential adverse environmental impacts are discussed below for each resource. **Appendix C** includes a detailed definition of each resource area. **Table 3-1** shows the ROI for each resource analyzed. A description of the resource categories eliminated from detailed analysis can be found in **Appendix C.11**. Reasonably foreseeable future actions that could result in an increased affect to environmental resources in conjunction with Alternative 1 are discussed in **Appendix B.**

3.2 AIRSPACE MANAGEMENT AND USE

3.2.1 Environmental Consequences Evaluation Criteria

Adverse impacts on the airspace surrounding the airfield or the SUA might include modifications to the airspace or significantly increasing flight operations within the airspace because of the Proposed Action. For the purposes of this EA, an impact is considered significant if it modifies airport airspace or SUA location, dimensions, or aircraft operational capacity.

Table 3-1
Region of Influence by Resource for Alternative 1

Resource	ROI for Airports	ROI for SUA
Airspace Management and Use	VGT and ØL7 and their environs	SUA (see **Figure 1-1**)
Noise	Updated noise contours for VGT and ØL7	Land under the SUA (see **Figure 1-1**)
Safety	Airfield and areas immediately adjacent to the airport property as well as the airfield and airspaces	SUA (see **Figure 1-1**)
Air Quality	VGT and ØL7 and their environs under the Las Vegas Intrastate AQCR	SUA below 3,000 ft AGL (see **Figure 1-1**)
Biological Resources	VGT and ØL7 and the land within the noise contours for this airport.	Land under the SUA (see **Figure 1-1**)
Land Use	Land surrounding VGT and ØL7, and the land within the airport noise contours	Land under the SUA (see **Figure 1-1**)
Socioeconomics – Income and Employment	Clark County, Nevada	Not analyzed
Environmental Justice	Clark County, Nevada	Not analyzed
Cultural Resources	Areas of VGT proposed for use (specifically facilities)	SUA (see **Figure 1-1**)
Hazardous Material, Waste, Environmental Restoration Program, and Toxic Substances	General anticipated use of VGT and ØL7 such as office space, aircraft maintenance hangar space, storage area(s), vehicle parking, and ramp space	Not analyzed

ØL7=Jean Airport; AGL=above ground level; AQCR=Air Quality Control Region; SUA=Special Use Airspace; VGT=North Las Vegas Airport

3.2.2 Existing Conditions

3.2.2.1 North Las Vegas Airport

VGT operates in Class D airspace, with tower service operations occurring from 0600 to 2000 hours from October through March and from 0600 to 2100 hours from April through September, and Class G airspace at other times. VGT has two parallel runways, 12L/30R and 12R/30L which have lengths of 4,202 ft and 5,000 ft, respectively; and one cross runway, 7/25, which has a length of 5,004 ft. General aviation (GA) and flight school aircraft, both local and itinerant, are the primary users of the airport (VGT, 2021); VGT also supports a variety of air taxi, air carrier, and military users.

GA local and itinerant operations, mostly by single-engine and twin-engine turboprop or piston aircraft, including rotorcraft, make up the majority of VGT airfield use (**Table 3-2**).

Table 3-2
Annual Operations at North Las Vegas Airport

Use	Annual Operations	Percentage of Use
Military	1,402	0.8
Air Carrier	18	< 0.1
Air Taxi and GA Jet	5,900	3.3
General Aviation (1- and 2-Engine Fixed- and Rotary-Wing; Local and Itinerant)	169,150	95.8
Total	**176,470**	**99.1**

3.2.2.2 Jean Airport

ØL7 is a public use airport located 20 mi south of Las Vegas in Clark County, Nevada. ØL7 primarily serves recreational aviation including GA aircraft, aerobatic aircraft, gliders, ultralights, and skydiving. The airport has two parallel runways, 2L/20R and 2R/20L, with lengths of 4,600 and 3,700 ft, respectively (McCarran International Airport, 2021). ØL7 is a non-towered airport.

Operations at ØL7 consist of arrivals and departures of itinerant and local operations (including patterns) primarily by GA aircraft, with a smaller amount of air taxi operations. GA itinerant and local operations, mostly by single-engine and twin-engine turboprop or piston aircraft, make up the great majority of airfield use (**Table 3-3**).

Table 3-3
Annual Operations at Jean Airport

Use	Annual Operations	Percentage of Use
Air Taxi and General Aviation Jet	120	0.8
General Aviation (1- and 2-Engine Fixed Wing; Local)	14,400	99.2
Total	**14,520**	**100**

3.2.2.3 Special Use Airspace

The affected environment for airspace management includes SUA as described in **Section 2.2.1.6** where aircraft based at Nellis AFB perform training operations. For Alternative 1, this includes Fort Irwin NTC/R-2502 Range (primary range including R-2502A/E/N) or NTTR/R-4806 Range (backup range including R-4806E/W).

3.2.3 Environmental Consequences – Alternative 1

3.2.3.1 North Las Vegas and Jean Airports

The addition of an estimated 1,350 annual sorties (1 percent increase) in the VGT airspace is not expected to impact the operational capacity or necessitate changes to airspace locations or dimensions of any of the airspaces around VGT. Potential impacts on the airspace are expected to be negligible and long-term. Of the 1,350 additional annual sorties at VGT, half of these sorties (675) would first divert to ØL7 for munitions upload before flying to SUA; following the completion of training operations, these sorties would then fly from SUA to ØL7 to download any unexpended munitions before returning to VGT. The 1,350 additional sorties in the ØL7 airspace represents a 17 percent increase over the baseline sorties and, similar to VGT, potential impacts on the ØL7 airspace are expected to be negligible and long-term.

3.2.3.2 Special Use Airspace

With the implementation of CCAS, there would be an increase of 1,350 annual training sorties in the Fort Irwin/R-2502 or NTTR/R-4806. CCAS would fly up to a projected 19 percent of the estimated 1,350 sorties during environmental night hours when the effects of aircraft noise are accentuated (10:00 pm to 7:00 am local time). A typical training day would provide up to 10 hours of day and 5 hours of night range hours (up to 15 total CCAS range hours per day) during each 10-day flying training event. Weather or other conflicts may drive the infrequent use of the NTTR/R-4806 Range.

No airspace modifications are included as part of the Alternative 1. The SUA proposed for use have the capacity, are in locations, and have the dimensions necessary to support the additional sorties proposed under Alternative 1. Negligible impacts on airspace are expected from the implementation of Alternative 1.

3.2.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to airspace management or use at VGT or ØL7 or the SUA.

3.2.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

The runway rehabilitation at ØL7 that are currently in the planning phase may occur concurrently with the Proposed Action. This could result in limited to no CCAS support during the estimated 6-to-8-month timeframe or that CCAS operations temporarily be relocated to another airfield. If operations are temporarily relocated, the appropriate environmental analysis would be completed.

There would be no modifications to the existing airspace under Alternative 1; however, with the additional demand for the same SUA from the alternative, the potential for impacts on airspace management and use can be expected. As airspace demand in the region increases, the Air Force, in conjunction with other managing agencies, would continue coordination to reduce potential impacts. Potential effects on airspace management and use, when added to reasonably foreseeable future actions are expected to be negligible.

3.3 NOISE

3.3.1 Environmental Consequences Evaluation Criteria

Noise analysis typically evaluates potential changes to existing noise environments that would result from implementation of Alternative 1. In accordance with Air Force Handbook (AFH) 32-7084, *AICUZ Program Manager's Guide*, 65-A-weighted decibels (dBA) day-night sound level (DNL) is the noise level below which generally all land uses are compatible with noise from aircraft operations. Areas below 65-dBA DNL can also experience levels of appreciable noise depending upon training intensity or weather conditions. In addition, DNL noise contours may vary from year to year due to fluctuations in operational tempo because of unit deployments, funding levels, and other factors.

Potential changes in the noise environment can be beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels), negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged), or adverse (i.e., if they result in increased noise exposure to unacceptable noise levels).

A discussion of the impacts from noise on land use can be found in **Section 3.7**.

3.3.2 Existing Conditions

3.3.2.1 North Las Vegas Airport

As is normal for active civil airports, the primary driver of noise at VGT is aircraft operations. Standard aircraft operations include take-offs, landings, closed patterns, and static run-ups.

In addition to aviation noise, some additional noise results from the day-to-day activities associated with operations, maintenance, and the industrial functions associated with the operations of the airport. These noise sources include the operations of ground-support equipment and other transportation noise from vehicular traffic. Noise resulting from aircraft operations remains the dominant noise source.

Aircraft operations at VGT consist of a variety of military aircraft and civilian twin engine and single engine aircraft. Existing annual aircraft operations at VGT total 176,470, as listed in **Table 3-4**. The table pattern numbers are operation counts, not pattern circuit counts. VGT Runway 12R is used for the majority of aircraft operations. A more detailed existing annual aircraft operations table can be found in **Appendix D.1.1.3**.

Table 3-4
Existing Annual Aircraft Operations Summary at North Las Vegas Airport

Operation	Military	Air Carrier	Air Taxi and General Aviation Jet	General Aviation (1- and 2-Engine Turboprop or Piston)	Grand Total
Day Departures	265	9	16,722	26,291	43,287
Night Departures	17	0	1,027	1,619	2,663
Day Arrivals	265	9	16,722	26,291	43,287
Night Arrivals	17	0	1,027	1,619	2,663
Day Closed Patterns	792	0	0	81,392	82,184
Night Closed Patterns	46	0	0	2,340	2,386
Day Total	1,322	18	33,444	133,974	168,758
Night Total	80	0	2,054	5,578	7,712
Day and Night Total	1,402	18	35,498	139,552	176,470

The resultant 65- to 85-dBA DNL contours in 5-dBA increments for the existing daily flight events at VGT are depicted on **Figure 3-1**. Areas beyond the 65-dBA DNL can also experience levels of appreciable noise depending upon flight activity or weather conditions. In addition, DNL noise contours may vary from year to year due to fluctuations in operations, funding levels, and other factors. Static run-up operations, such as maintenance and pre/postflight run-ups, were also modeled.

The area within the DNL noise contours for the existing conditions as depicted on **Figure 3-1** are listed in **Table 3-5**.

Table 3-5
Existing Day-Night Average Sound Level Area Affected at North Las Vegas Airport

Noise Level (dBA DNL)	Area Within Noise Contour (acres)
>65	219
>70	95
>75	27
>80	10
>85	3

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

A number of points of interest (POIs) have been identified in the vicinity of VGT (**Table 3-4**; **Figure 3-2**). **Table 3-6** shows the DNL as a result of aircraft operations at VGT at the 16 POIs for the existing conditions.

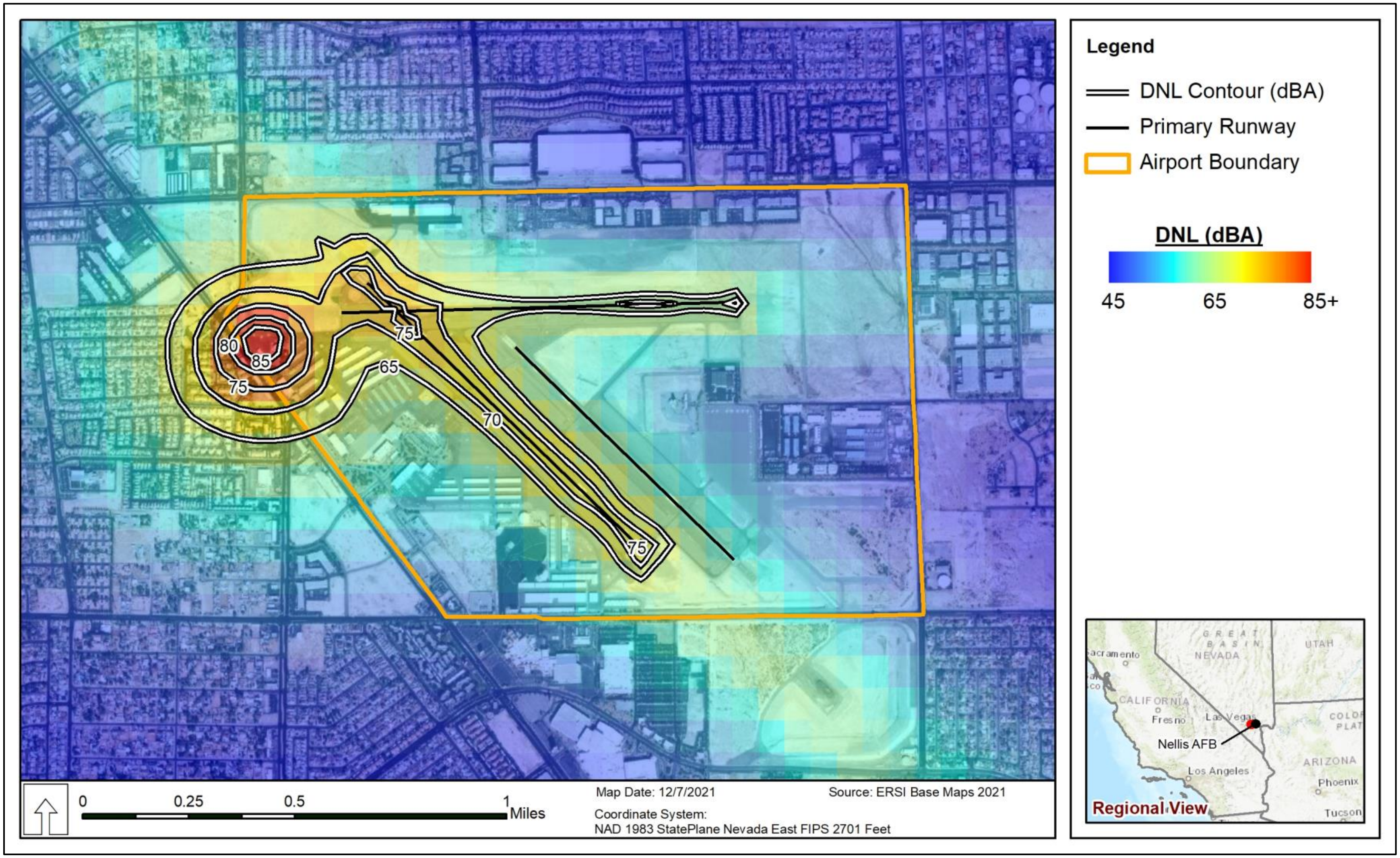

Figure 3-1 Existing Day-Night Average Sound Level Contours at North Las Vegas Airport.

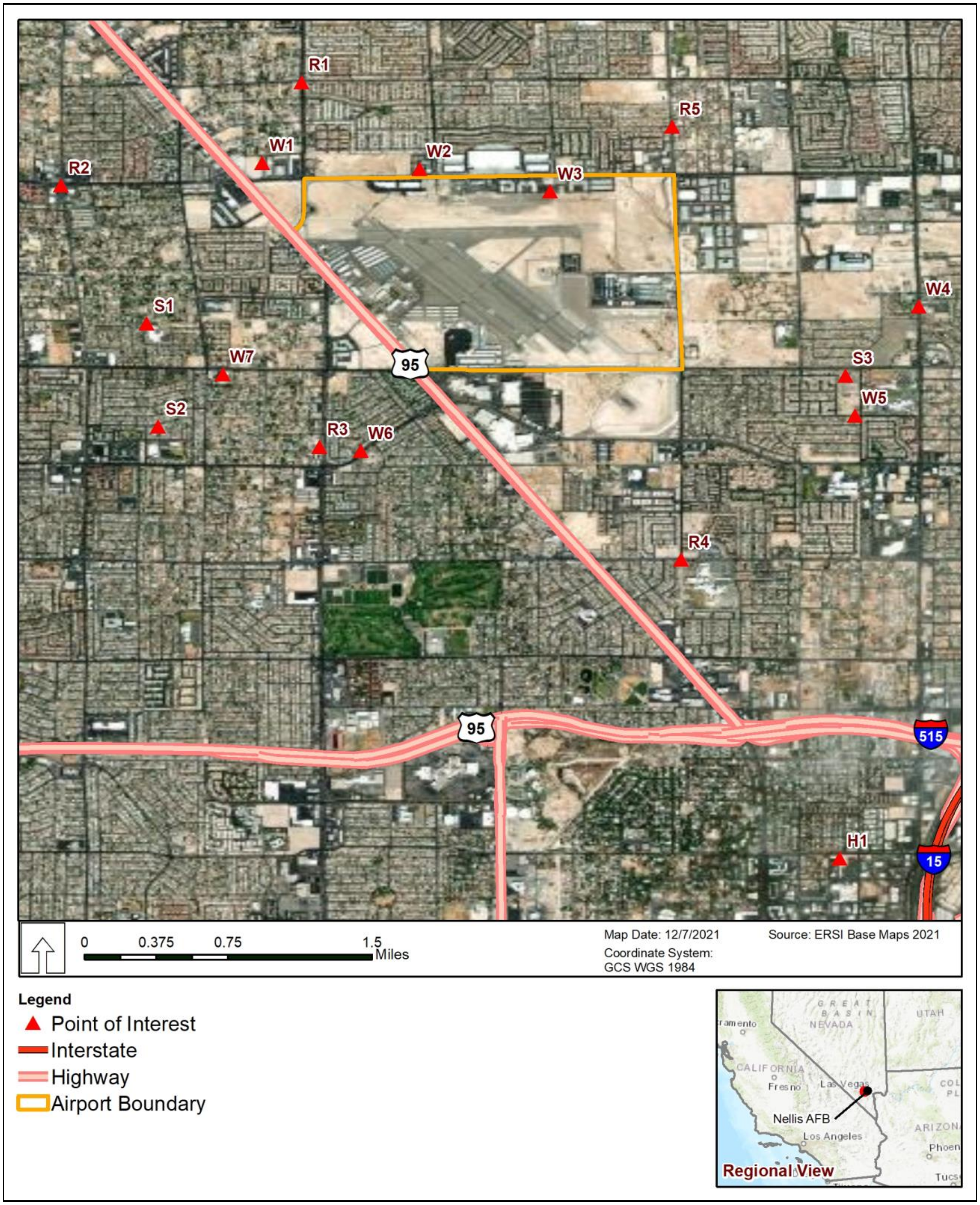

Figure 3-2 Representative Points of Interest at North Las Vegas Airport.

Table 3-6
Existing Day-Night Average Sound Level at Points of Interest at North Las Vegas Airport

ID	Description	DNL (dBA)
H1	Valley Hospital Medical Center	<45
R1	W Gowen Road and N Decatur Boulevard	50
R2	N Sones Boulevard and 574	46
R3	W Lake Mead Boulevard and N Decatur Boulevard	45
R4	Vegas Drive and N Simmons Street	51
R5	W Colton Avenue and N Simmons Street	<45
S1	Doris M Reed Elementary School	48
S2	Ronzone Elementary School	45
S3	Imagine Schools 100 Academy of Excellence	<45
W1	Kingdom Hall Jehovah's Witness	56
W2	Calvary Chapel Meadow Mesa	52
W3	Great Commission Interdenominational Church	50
W4	Church of Christ	<45
W5	Portals to Glory Cogic	45
W6	Westminster Presbyterian Church	45
W7	St Thomas Catholic Church	48

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

3.3.2.2 Jean Airport

As is normal for active civil airports, the primary driver of noise at ØL7 is aircraft operations. Standard aircraft operations include take-offs, landings, closed patterns, and static run-ups.

In addition to aviation noise, some additional noise results from the day-to-day activities associated with operations, maintenance, and the industrial functions associated with the operations of the airport. These noise sources include the operations of ground-support equipment and other transportation noise from vehicular traffic. Noise resulting from aircraft operations remains the dominant noise source.

Aircraft operations at ØL7 consist of a variety of military aircraft and civilian twin engine and single engine aircraft. Existing annual aircraft operations at ØL7 total 14,520, as listed in **Table 3-7**. The table pattern numbers are operation counts, not pattern circuit counts. A more detailed existing annual aircraft operations table can be found in **Appendix D.1.1.3**.

Table 3-7
Existing Annual Aircraft Operations Summary at Jean Airport

Operation	Air Taxi and General Aviation Jet	General Aviation (1- and 2-Engine Turboprop or Piston)	Grand Total
Day Departures	45	7,200	7,245
Night Departures	15	0	15
Day Arrivals	45	7,200	7,245
Night Arrivals	15	0	15
Day Closed Patterns	0	0	0
Night Closed Patterns	0	0	0
Day Total Operations	90	14,400	14,490
Night Total Operations	30	0	30
Day and Night Total	120	14,400	14,520

The resultant 65- to 85-dBA DNL contours in 5-dBA increments for the existing daily flight events at ØL7 are depicted on **Figure 3-3**. Areas beyond the 65-dBA DNL can also experience levels of appreciable noise depending upon flight activity or weather conditions. In addition, DNL noise contours may vary from year to year due to fluctuations in operations, funding levels, and other factors. Static run-up operations, such as maintenance and pre/postflight run-ups, were also modeled.

The area within the DNL noise contours for the existing conditions as depicted on **Figure 3-3** are listed in **Table 3-8**.

Table 3-8
Existing Day-Night Average Sound Level Area Affected at Jean Airport

Noise Level (dBA DNL)	Area Within Noise Contour (acres)
>65	1
>70	0
>75	0
>80	0
>85	0

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

One POI has been identified in the vicinity of ØL7 (**Table 3-9**; **Figure 3-4**) and the operational DNL at the one POI for the existing conditions is shown in **Table 3-9**.

Table 3-9
Existing Day-Night Average Sound Level at Points of Interest at Jean Airport

ID	Description	DNL (dBA)
P1	Southern Nevada Correctional	<45

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

3.3.2.3 Special Use Airspace

SUA used by Nellis AFB-based aircraft for close air support training are Fort Irwin/R-2502A/E/N and NTTR/R-4806E/W. Less than 1,600 annual operations are flown by Nellis AFB-based F-15C, F-16C, and F-22A aircraft within the SUA, resulting in subsonic noise levels of <45-dBA L_{dnmr}.

There are no supersonic aircraft sorties flown by Nellis AFB-based aircraft in these SUA.

3.3.3 Summary of Environmental Consequences

Impacts from each alternative are summarized in **Table 3-10**, with details regarding impacts specific to Alternative 1.

3.3.4 Environmental Consequences – Alternative 1

Implementation of Alternative 1 would establish CCAS capabilities (an estimated six aircraft) at VGT, providing 1,350 annual training sorties in the SUA used by Nellis AFB. CCAS would also fly a small number of additional sorties in order to maintain proficiency.

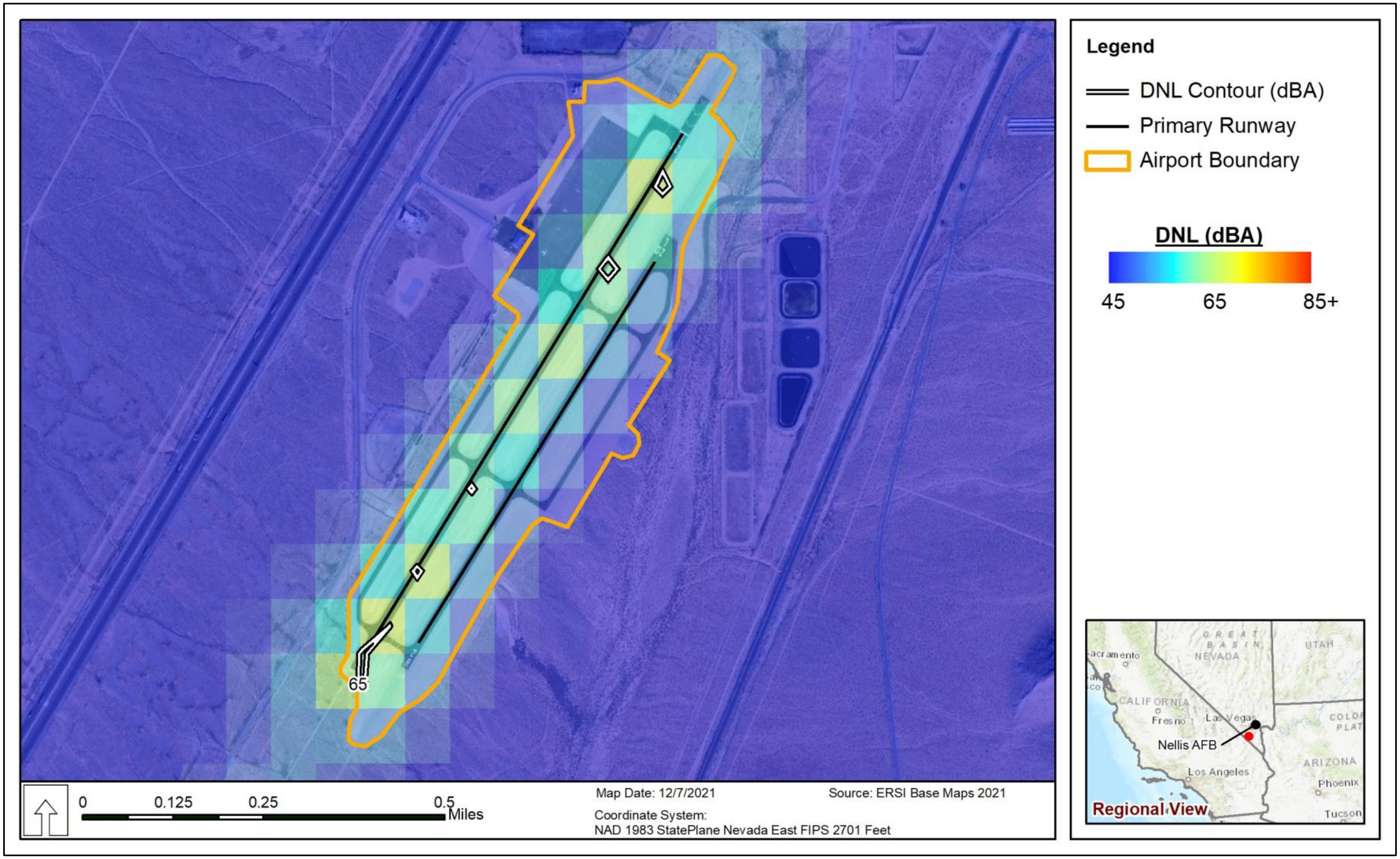

Figure 3-3 Existing Day-Night Average Sound Level Contours at Jean Airport.

Figure 3-4 Representative Points of Interest at Jean Airport.

Because it is not known at this time what type of aircraft would be used by CCAS, two aircraft noise scenarios were evaluated (High and Low) to represent the range of aircraft types that could be selected. The aircraft proposed for use by CCAS and the surrogate aircraft modeled for the High and Low Noise Scenarios are listed in **Table 3-11**. The aircraft modeled for each scenario are representative of the potential aircraft available to meet training requirements.

Table 3-10
Summary of Contracted Close Air Support Noise Impacts

Alternative	Change in Noise
Alternative 1 – North Las Vegas Airport and Jean Airport, High Noise Scenario	VGT – Long-term, highly noticeable noise increases (8- to 23-dBA DNL) for all POIs and other areas surrounding the airport. Potential for long-term, major impacts on all POIs as well as an increase in noise in areas surrounding the airport. ØL7 – Long-term, highly noticeable noise increases at the POI (5-dBA DNL) and other areas surrounding the airport. Potential for long-term, moderate impacts at the POI as well as an increase in noise in areas surrounding the airport. SUA – Negligible increases in noise from additional CCAS subsonic flight operations at Fort Irwin/R-2502A/E/N and NTTR/R-4806E/W.
Alternative 1 – North Las Vegas Airport and Jean Airport, Low Noise Scenario	VGT – Long-term, noticeable noise increases at two POIs (4 to 5 dBA). Potential for long-term moderate impacts on two POIs as well as an increase in the amount of noise in areas surrounding the airport. ØL7 – Long-term, unnoticeable increases surrounding the airport. No impacts on the POI and negligible impacts on the areas surrounding the airfield. SUA – Same results for subsonic operations as noted for the Alternative 1 High Noise Scenario.
No Action Alternative	None

CCAS = contracted close air support; dBA = A-weighted decibel(s); DNL = day-night average sound level; POI = point of interest; SUA = special use airspace

Table 3-11
Contracted Close Air Support Scenarios

Scenario	Available Contracted Close Air Support Aircraft	Representative Contracted Close Air Support Aircraft	Surrogate Aircraft
High Noise	Aero L-39 Albatros, Douglas A-4, BAC-167, Aero Vodochody L-59	Douglas A-4	A-4C
Low Noise	Pilatus PC-9, Cessna 337, Embraer A-27, Brasov IAR-823, Valmet L/A-90 (A-90 Raider), Rockwell OV-10, Embraer A-29,	Embraer A-29	T-6

To model changes in noise relative to the baseline conditions, all modeled flight and engine run-up operations were set to the CCAS aircraft listed in **Table 3-11** for the appropriate scenario. For example, when looking at the Low Noise Scenario, all CCAS operations are modeled as Embraer A-29 operations; however, the NOISEMAP database does not contain noise data for the Embraer A-29, so an appropriate noise modeling surrogate was selected, the T-6 in this case. All CCAS departure were modeled using the maximum possible power on all takeoffs. The modeling represents the loudest noise levels for this class of surrogate aircraft and engine types that would be experienced as a result of Alternative 1.

3.3.4.1 North Las Vegas and Jean Airports

High Noise Scenario

Implementation of the Alternative 1 High Noise Scenario would result in a 1.5 percent increase in the number of operations at VGT and a 16 percent increase in the number of operations at ØL7. CCAS would fly 19 percent of the estimated 1,350 sorties during environmental night hours when the effects of aircraft noise are accentuated (10:00 pm to 7:00 am local time). Contractor night sorties would be flown during the Nellis AFB approved flying window. Runway utilization, flight tracks, and flight track utilization for CCAS aircraft would be similar to the existing aircraft operations at VGT and ØL7. Proposed annual departure, arrival, and closed pattern aircraft operations at VGT and ØL7 with the addition of CCAS are listed in **Tables 3-12** and **3-13**. CCAS would also perform static run-up operations, such as pre- and postflight run-ups.

Table 3-12
Proposed High Noise Scenario Annual Aircraft Operations Summary at North Last Vegas Airport

Operations	Military	Air Carrier	Air Taxi and General Aviation Jet	General Aviation (1- and 2-Engine Turboprop or Piston)	Contracted Close Air Support	Grand Total
Day Departures	265	9	16,722	26,291	1,093	44,380
Night Departures	17	0	1,027	1,619	257	2,920
Day Arrivals	265	9	16,722	26,291	1,093	44,380
Night Arrivals	17	0	1,027	1,619	257	2,920
Day Closed Patterns	792	0	0	81,392	82	82,266
Night Closed Patterns	46	0	0	2,340	0	2,386
Day Total Operations	1,322	18	33,444	133,974	2,268	171,026
Night Total Operations	80	0	2,054	5,578	514	8,226
Day and Night Total	1,402	18	35,498	139,552	2,782	179,252

Table 3-13
Proposed High Noise Scenario Annual Aircraft Operations Summary at Jean Airport

Operations	Air Taxi and General Aviation Jet	General Aviation (1- and 2-Engine Turboprop or Piston)	Contracted Close Air Support	Grand Total
Day Departures	45	7,200	1,093	8,338
Night Departures	15	0	257	272
Day Arrivals	45	7,200	1,093	8,338
Night Arrival	15	0	257	272
Day Closed Patterns	0	0	82	82
Night Closed Pattern	0	0	0	0
Day Total Operations	90	14,400	2,268	16,758
Night Total Operations	30	0	514	544
Day and Night Total	120	14,400	2,782	17,302

The resultant 65- to 85-dBA DNL contours in 5-dBA increments for the daily flight events at VGT and ØL7 under the proposed High Noise Scenario are depicted on **Figures 3-5** and **3-6**. The 65-dBA DNL is the noise level below which generally all land uses are compatible with noise from aircraft operations. The noise levels generated by High Noise Scenario CCAS aircraft would increase the overall noise environment in the vicinity of VGT and ØL7. Comparisons of the DNL noise contours of the High Noise Scenario and the existing conditions are depicted on **Figures 3-7** and **3-8**, and the changes in area within noise contours as a result of the High Noise Scenario are listed in **Tables 3-14** and **3-15**.

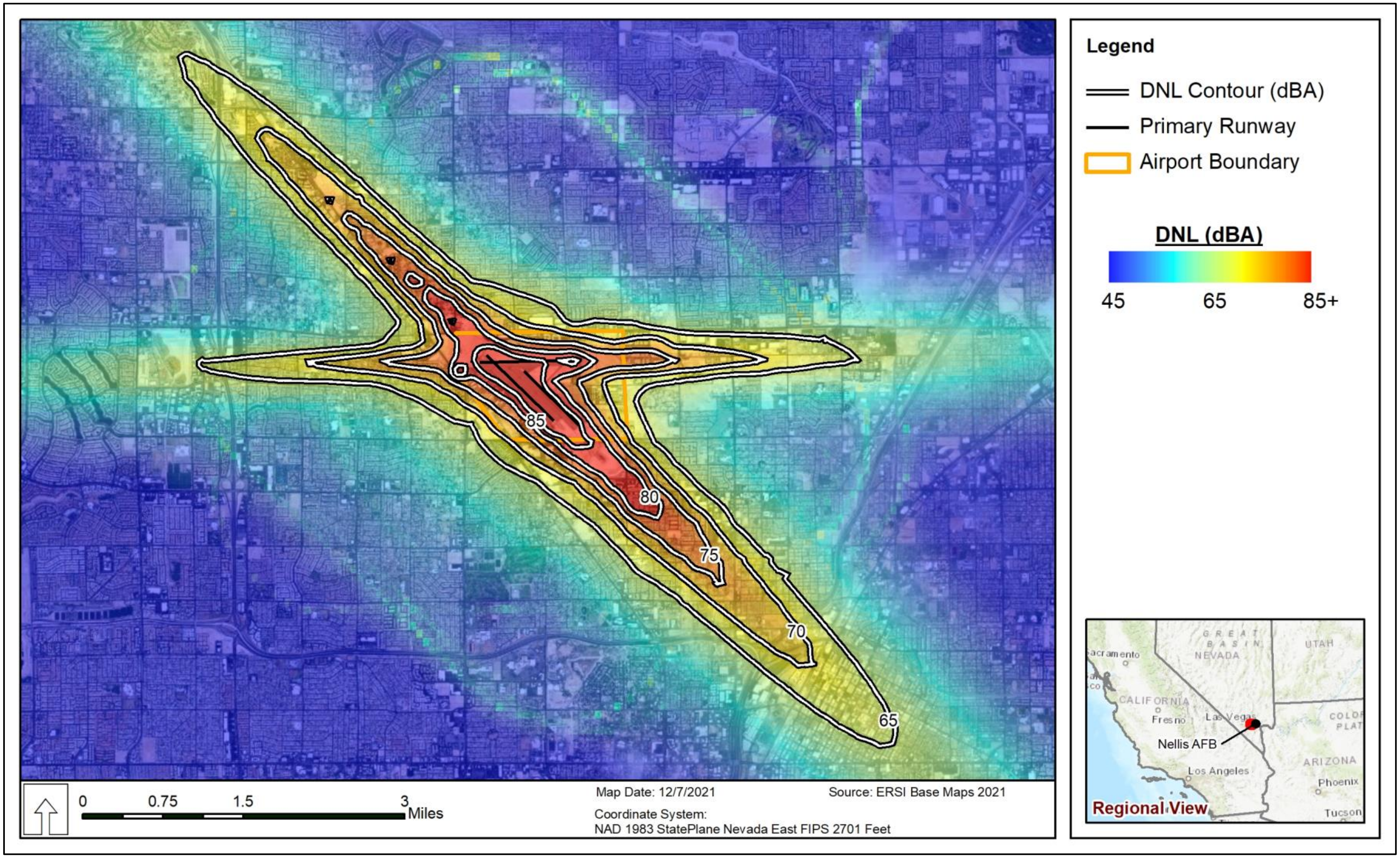

Figure 3-5 High Noise Scenario Day-Night Average Sound Level Contours at North Las Vegas Airport.

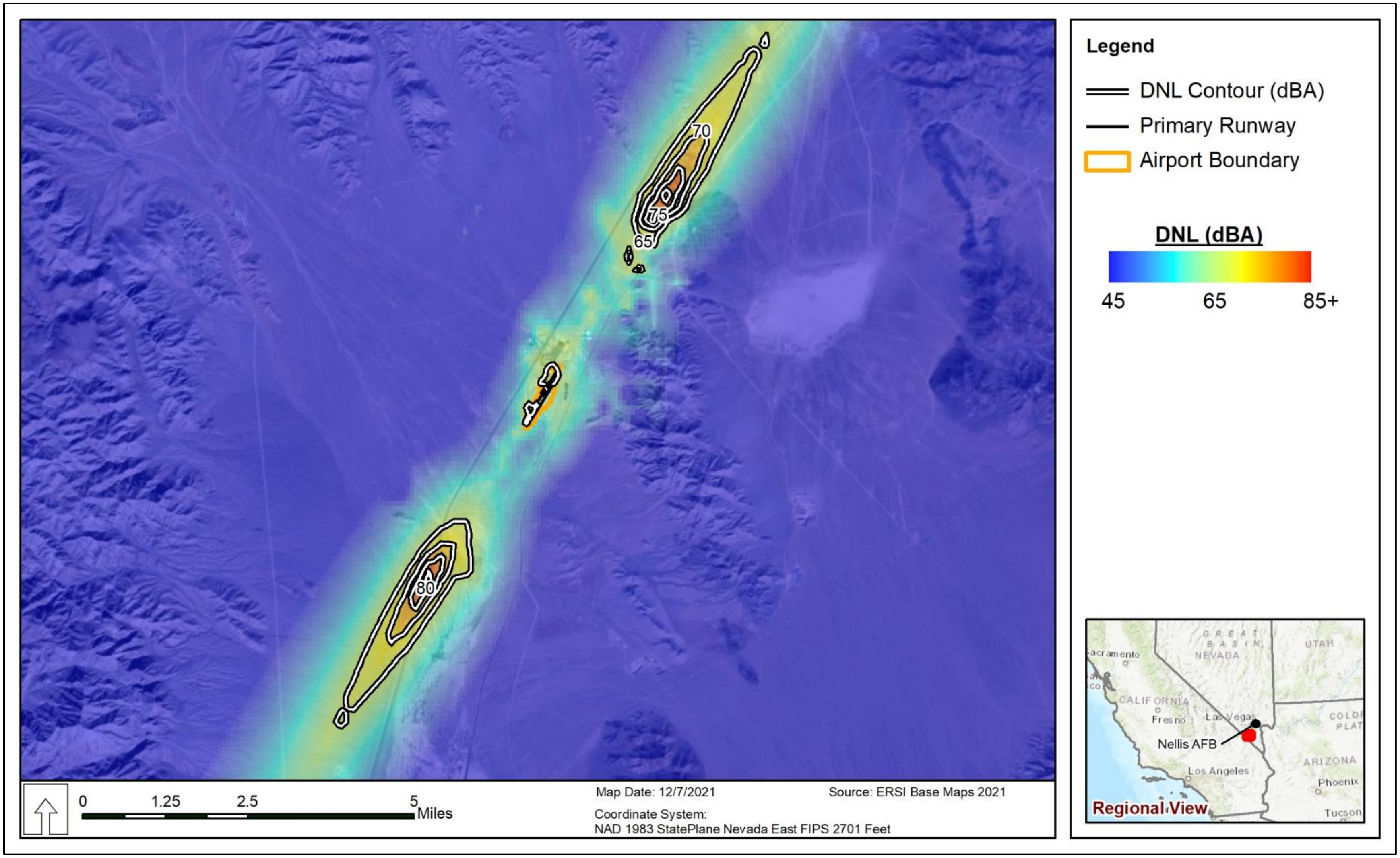

Figure 3-6 High Noise Scenario Day-Night Average Sound Level Contours at Jean Airport.

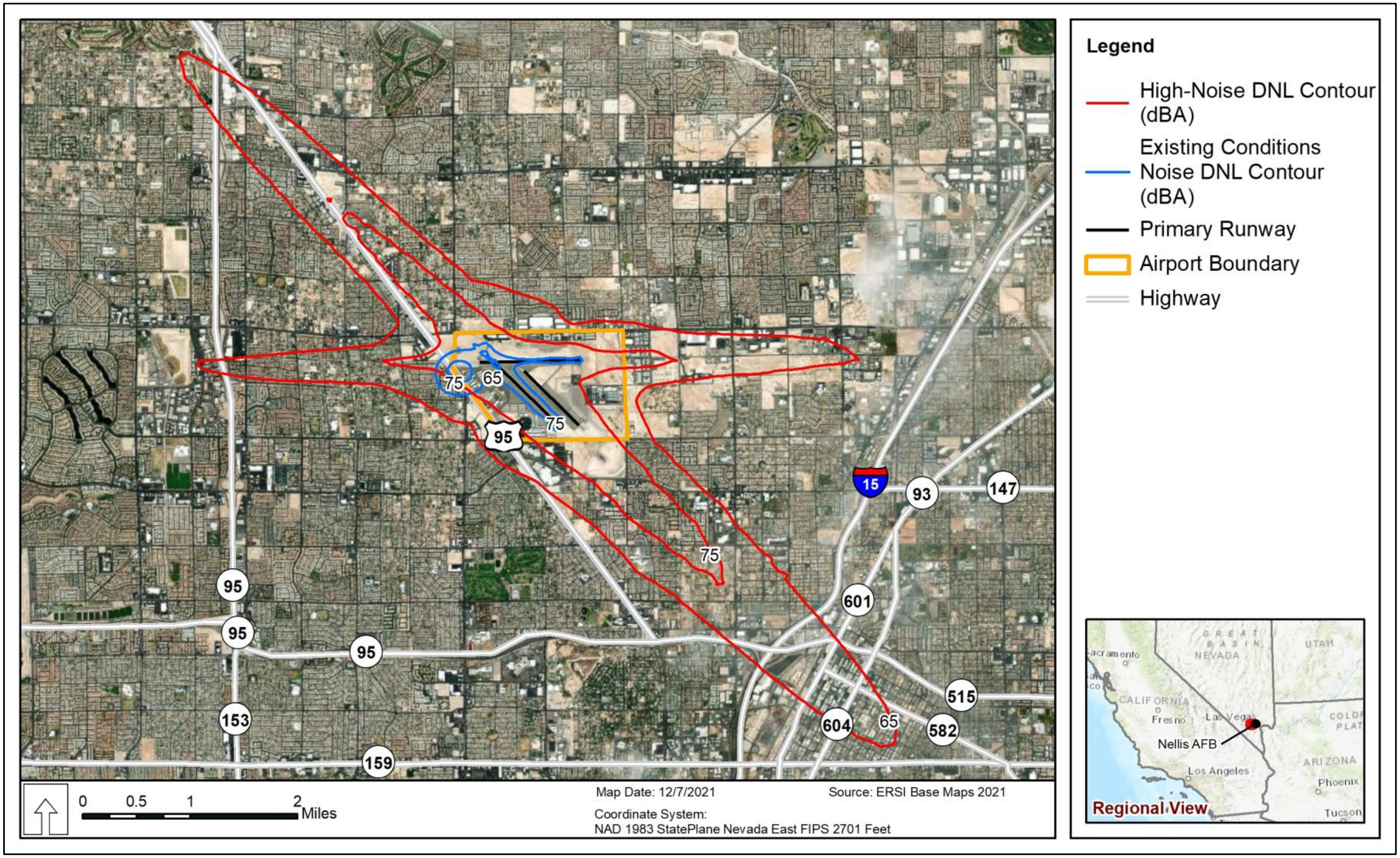

Figure 3-7 Comparison of High Noise Scenario and Existing Day-Night Average Sound Level Contours at North Las Vegas Airport.

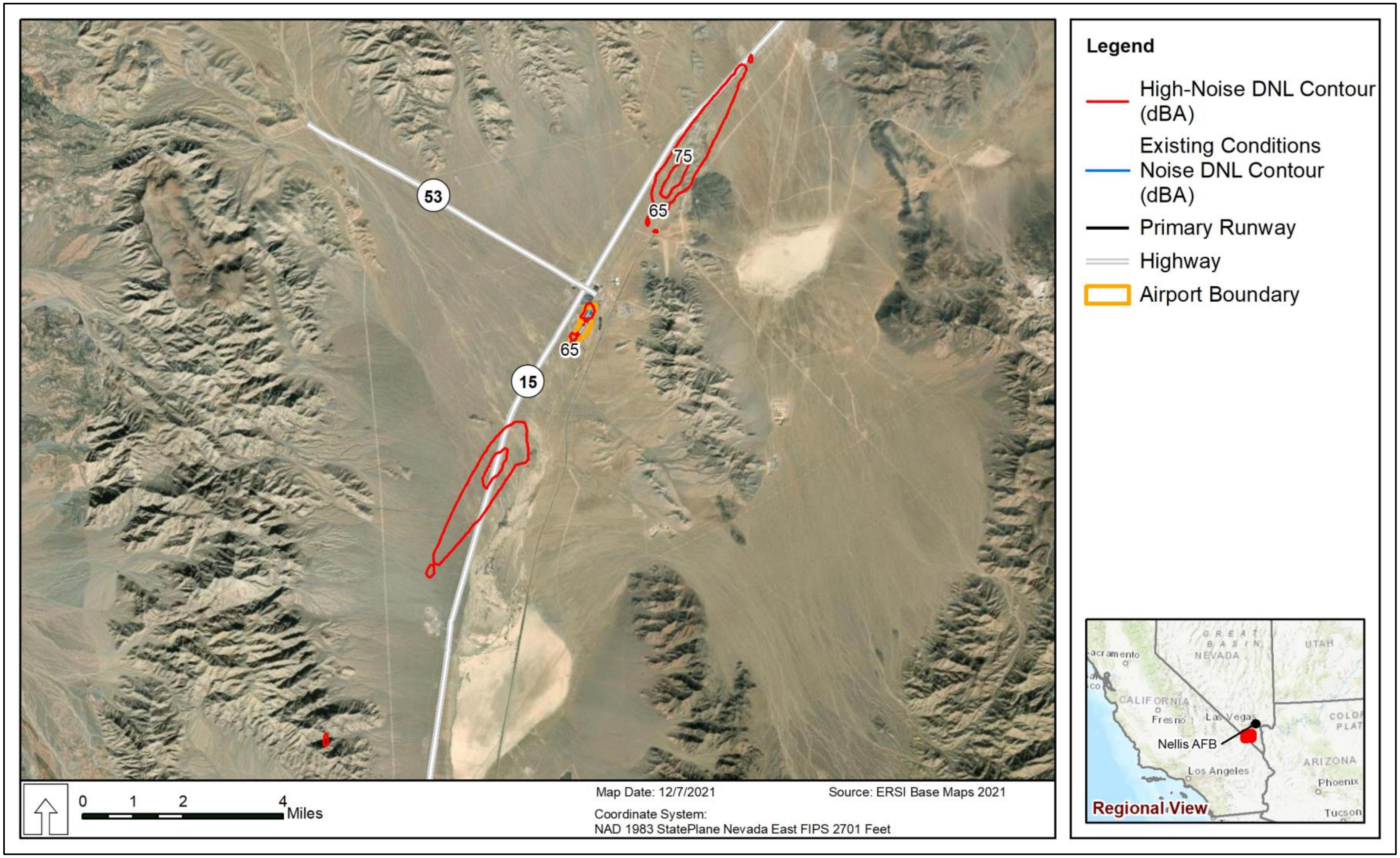

Figure 3-8 Comparison of High Noise Scenario and Existing Day-Night Average Sound Level Contours at Jean Airport.

Table 3-14
Proposed High Noise Scenario Day-Night Average Sound Level Area Affected on and Surrounding North Las Vegas Airport

Noise Level (dBA DNL)	Existing Area Within Noise Contour (acres)	High Noise Scenario Area Within Noise Contour (acres)	Increase (acres)
>65	219	5,678	5,459
>70	95	3,002	2,907
>75	27	1,489	1,462
>80	10	594	584
>85	3	234	231

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-15
Proposed High Noise Scenario Day-Night Average Sound Level Area Affected on and Surrounding Jean Airport

Noise Level (dBA DNL)	Existing Area Within Noise Contour (acres)	High Noise Scenario Area Within Noise Contour (acres)	Increase (acres)
>65	1	2,179	2,178
>70	0	719	719
>75	0	232	232
>80	0	20	20
>85	0	0	0

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

As a result of the implementation of the High Noise Scenario, noise levels at representative POIs described in **Sections 3.3.2.1** and **3.3.2.2** would increase (**Tables 3-16** and **3-17**). At the representative noise sensitive locations modeled, the DNL at POIs at VGT would increase from 8- to 23-dBA with five POIs exceeding 65 dBA DNL; therefore, the potential increased noise would result in long-term significant impacts and be highly noticeable. The potential increase of DNL at ØL7 would be up to 5 dBA under the High Noise Scenario, but the DNL would remain well below 65 dBA resulting in moderate impacts.

Table 3-16
Proposed High Noise Scenario Day-Night Average Sound Level at Representative Points of Interest on and near North Las Vegas Airport

ID	POI Description	Existing DNL (dBA)	High Noise Scenario DNL (dBA)	Increase in DNL (dBA)
H1	Valley Hospital Medical Center	<45	53	8
R1	W Gowen Road and N Decatur Boulevard	50	69	19
R2	N Sones Boulevard and 574	46	60	14
R3	W Lake Mead Boulevard and N Decatur Boulevard	45	58	13
R4	Vegas Drive and N Simmons Street	51	67	16
R5	W Colton Avenue and N Simmons Street	<45	61	16
S1	Doris M Reed Elementary School	48	59	11
S2	Ronzone Elementary School	45	54	9
S3	Imagine Schools 100 Academy of Excellence	<45	59	14
W1	Kingdom Hall Jehovah's Witness	56	74	18
W2	Calvary Chapel Meadow Mesa	52	73	21
W3	Great Commission Interdenominational Church	50	73	23
W4	Church of Christ	<45	57	12
W5	Portals to Glory Cogic	45	61	16
W6	Westminster Presbyterian Church	45	60	15
W7	St. Thomas Catholic Church	48	59	11

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-17
Proposed High Noise Scenario Day-Night Average Sound Level at Representative Points of Interest on and near Jean Airport

ID	POI Description	Existing DNL (dBA)	High Noise Scenario DNL (dBA)	Increase in DNL (dBA)
P1	Southern Nevada Correctional	<45	50	5

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

Low Noise Scenario

The operation numbers, day/night distribution, and runway utilization for the Low Noise Scenario would be identical to those of the High Noise Scenario.

The resultant 65- to 85-dBA DNL contours in 5-dBA increments for the daily flight events at VGT and ØL7 under the proposed Low Noise Scenario are depicted on **Figures 3-9** and **3-10**. The 65-dBA DNL is the noise level below which generally all land uses are compatible with noise from aircraft operations.

The noise levels generated by Low Noise Scenario CCAS aircraft would increase the overall noise environment in the vicinity of VGT and ØL7. Comparisons of the DNL noise contours of the Low Noise Scenario and the existing conditions are depicted on **Figures 3-11** and **3-12**, and the changes in area within noise contours as a result of the Low Noise Scenario are listed in **Tables 3-18** and **3-19**.

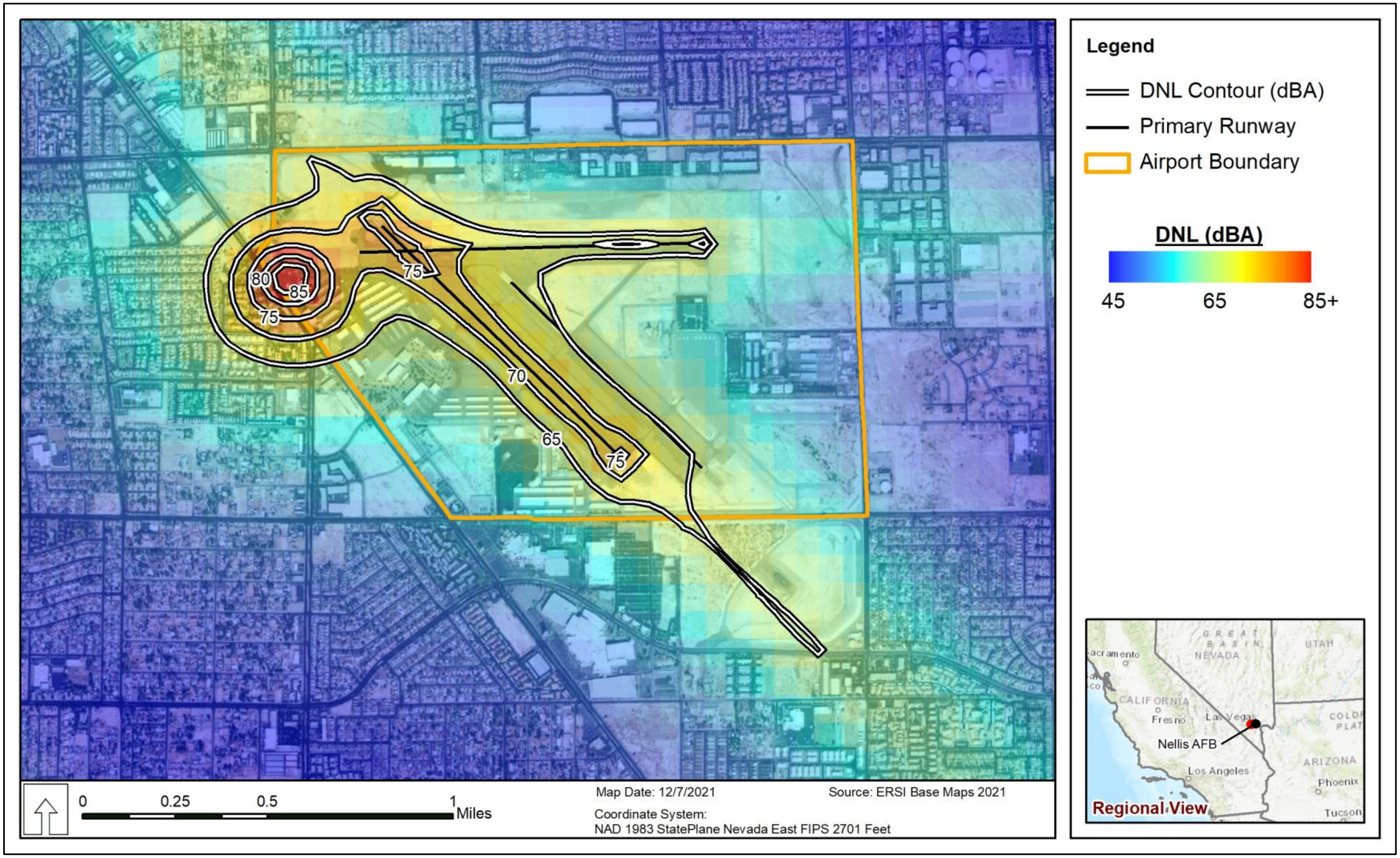

Figure 3-9 Low Noise Scenario Day-Night Average Sound Level Contours at North Las Vegas Airport.

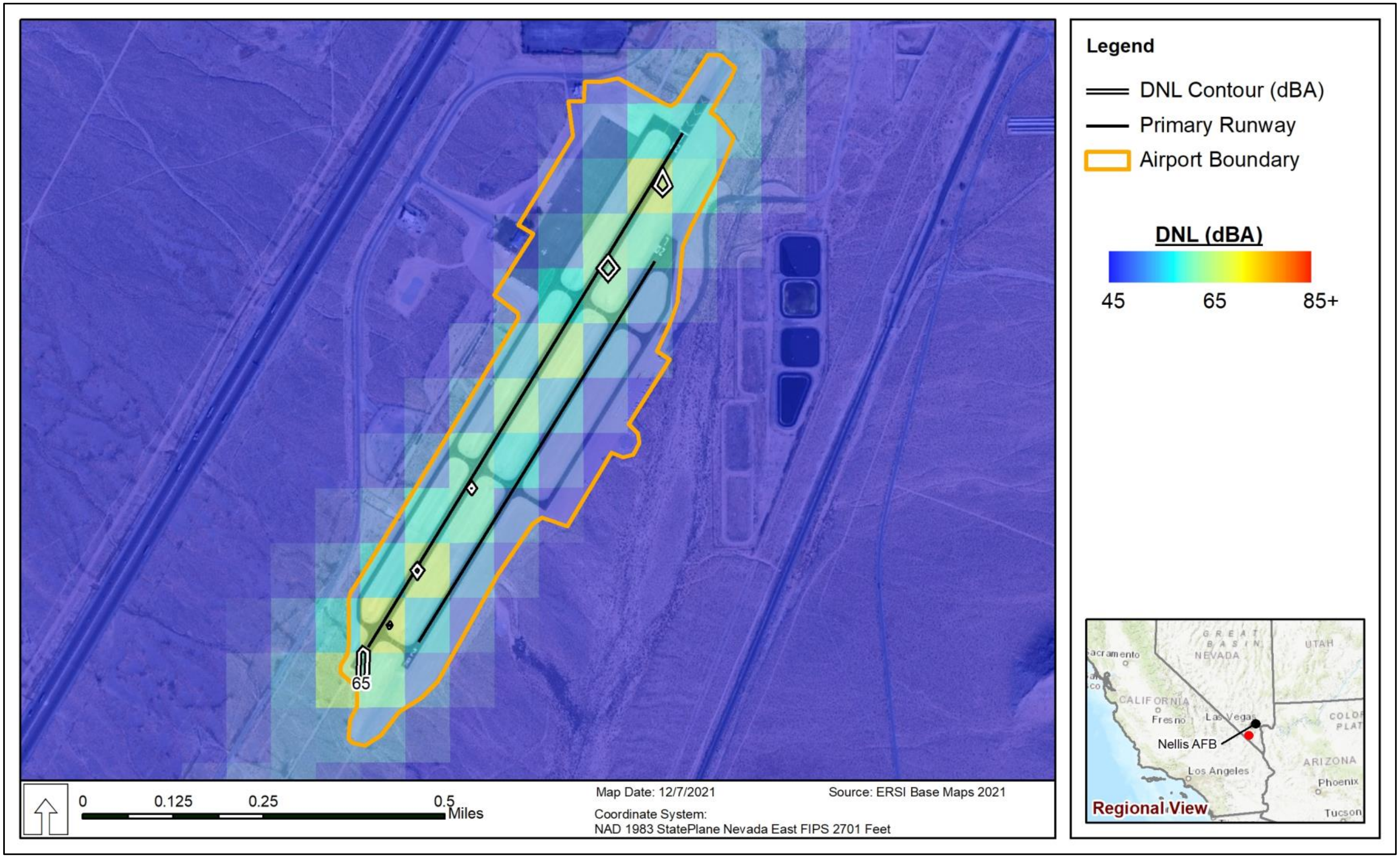

Figure 3-10 Low Noise Scenario Day-Night Average Sound Level Contours at Jean Airport.

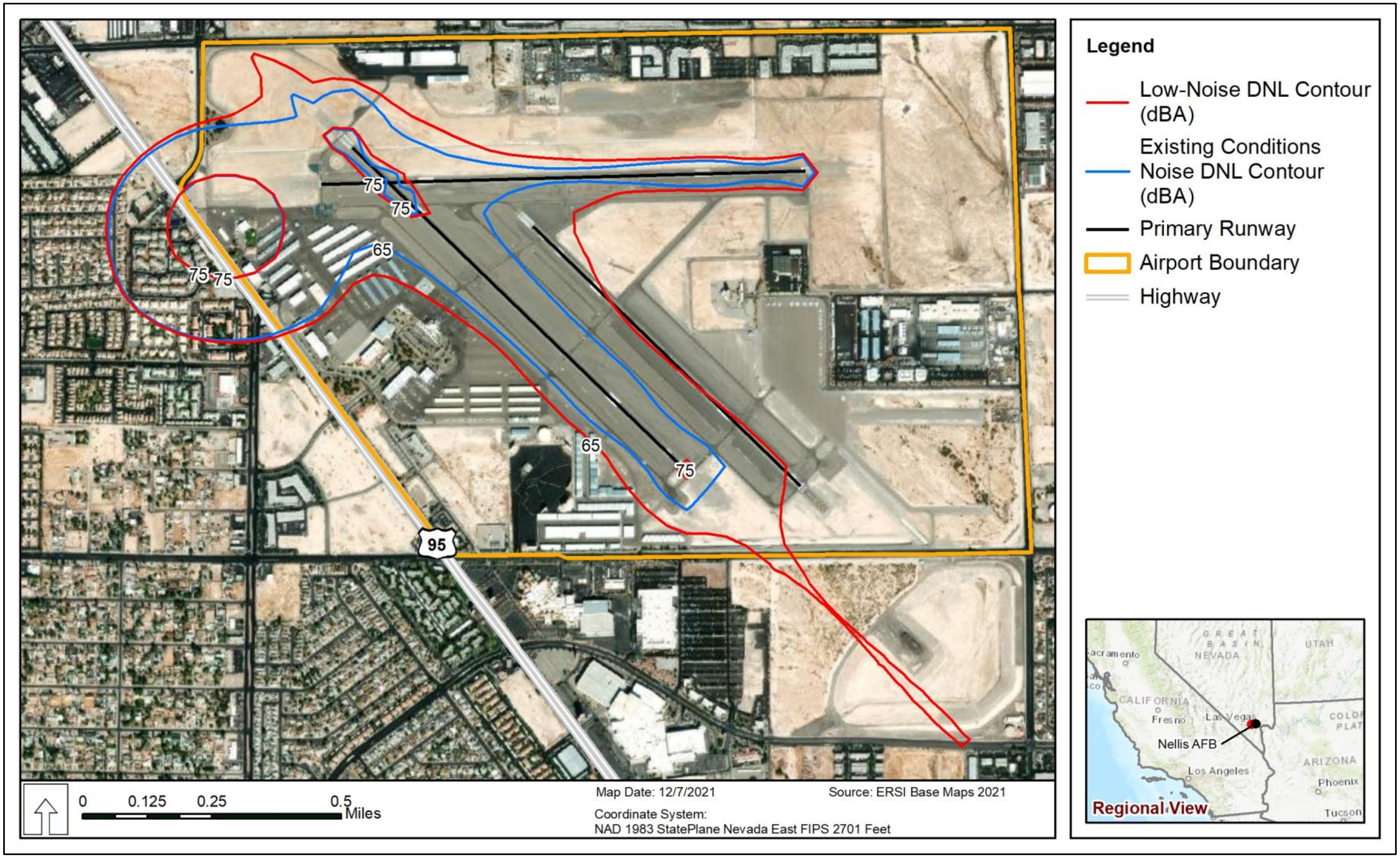

Figure 3-11 Comparison of Low Noise Scenario and Existing Day-Night Average Sound Level Contours at North Las Vegas Airport.

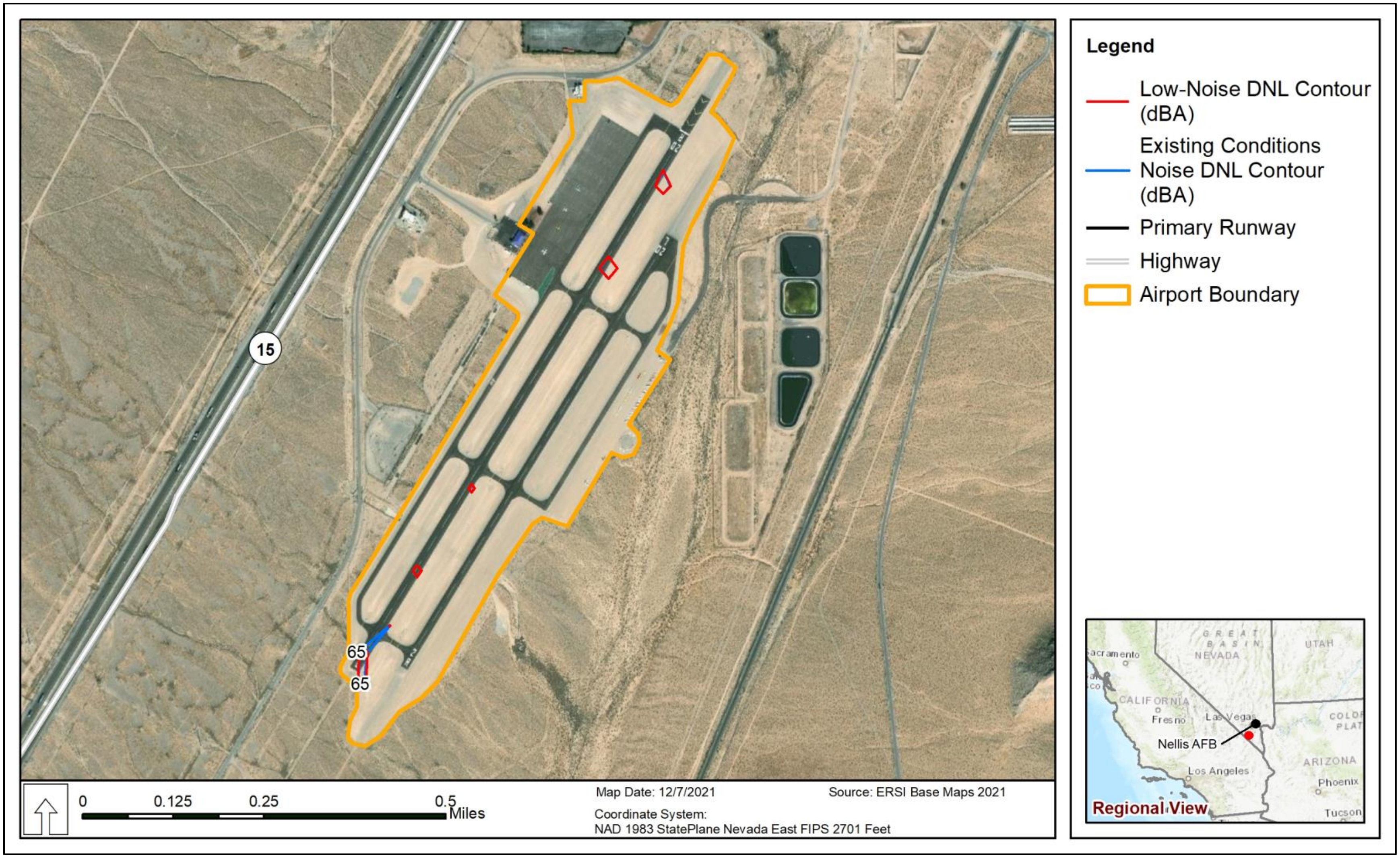

Figure 3-12 Comparison of Low Noise Scenario and Existing Day-Night Average Sound Level Contours at Jean Airport.

Table 3-18
Proposed Low Noise Scenario Day-Night Average Sound Level Area Affected on and Surrounding North Las Vegas Airport

Noise Level (dBA DNL)	Existing Area Within Noise Contour (acres)	High Noise Scenario Area Within Noise Contour (acres)	Increase (acres)
>65	219	332	113
>70	95	118	23
>75	27	30	3
>80	10	10	0
>85	3	4	1

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-19
Proposed Low Noise Scenario Day-Night Average Sound Level Area Affected on and Surrounding Jean Airport

Noise Level (dBA DNL)	Existing Area Within Noise Contour (acres)	High Noise Scenario Area Within Noise Contour (acres)	Increase (acres)
>65	1	1	0
>70	0	0	0
>75	0	0	0
>80	0	0	0
>85	0	0	0

Notes: Area (on- and off-airport property) was based off the combined AEDT- and NOISEMAP-modeled noise contours and used to calculate the amount of land within each noise contour. The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

As a result of the implementation of the Low Noise Scenario, noise levels at representative POIs described in **Sections 3.3.2.1** and **3.3.2.2** would increase (**Tables 3-20** and **3-21**). At the representative noise sensitive locations modeled, the DNL would increase by an amount ranging from 0- to 5-dBA at VGT and the DNL would increase by 0-dBA at ØL7 under the Low Noise Scenario. Two of the POIs examined would experience moderate DNL increases of at least 4 dBA but would remain less than 65-dBA DNL. The remaining POIs at VGT would experience DNL increase from 0 to 3 dBA and would remain less than 65-dBA DNL. The impacts on the two POIs with a DNL increase of at least 4-dBA DNL and the areas surrounding those POIs would be long term, likely noticeable, and moderate under the Low Noise Scenario for VGT. The impacts would be long term and minor for the remaining POIs and areas surrounding those POIs under the Low Noise Scenario for VGT. Impacts would be long term, likely unnoticeable, and negligible under the Low Noise Scenario for ØL7.

Table 3-20
Proposed Low Noise Scenario Day-Night Average Sound Level at Representative Points of Interest on and near North Las Vegas Airport

ID	POI Description	Existing DNL (dBA)	Low Noise Scenario DNL (dBA)	Increase in DNL (dBA)
H1	Valley Hospital Medical Center	<45	<45	0
R1	W Gowen Road and N Decatur Boulevard	50	53	3
R2	N Sones Boulevard and 574	46	48	2
R3	W Lake Mead Boulevard and N Decatur Boulevard	45	47	2
R4	Vegas Drive and N Simmons Street	51	52	1
R5	W Colton Avenue and N Simmons Street	<45	46	1
S1	Doris M Reed Elementary School	48	49	1
S2	Ronzone Elementary School	45	46	1
S3	Imagine Schools 100 Academy of Excellence	<45	46	1
W1	Kingdom Hall Jehovah's Witness	56	58	2
W2	Calvary Chapel Meadow Mesa	52	56	4
W3	Great Commission Interdenominational Church	50	55	5
W4	Church of Christ	<45	<45	0
W5	Portals to Glory Cogic	45	47	2
W6	Westminster Presbyterian Church	45	47	2
W7	St Thomas Catholic Church	48	50	2

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-21
Proposed Low Noise Scenario Day-Night Average Sound Level at Representative Points of Interest on and near Jean Airport

ID	POI Description	Existing DNL (dBA)	Low Noise Scenario DNL (dBA)	Increase in DNL (dBA)
P1	Southern Nevada Correctional	<45	<45	0

Note: POI levels based on the combined AEDT- and NOISEMAP-modeled noise exposures.
dBA = A-weighted decibel; DNL = day-night average sound level

3.3.4.2 Special Use Airspace

Under the High or Low Noise Scenarios of Alternative 1, CCAS would perform an estimated 1,350 annual operations in the SUA proposed for use. CCAS would only operate in the same SUA already used by based Nellis AFB-based aircraft. A summary of annual airspace operations for CCAS aircraft is presented in **Table 3-22**. Noise analysis of the High and Low Noise Scenarios was conducted to analyze changes to the noise levels in the proposed SUA listed in **Table 2-3**. Under the High or Low Noise Scenarios, the noise environment for these SUA would be negligibly louder than the existing SUA noise environment; therefore, there would be no significant impacts under the High or Low Noise Scenarios under Alternative 1.

Table 3-22
Proposed Annual Airspace Operations Summary by Contract Close Air Support Aircraft (All Scenarios)

Airspace	Daytime (0700-2200)	Nighttime (2200-0700)	Total Annual Operations
R-2502A/E	745	215	960
R-2502N	166	29	195
R-4806E/W	166	29	195
Grand Total	**1,077**	**273**	**1,350**

3.3.5 Environmental Consequences –No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to noise environment at the airports or under the SUA.

3.3.6 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1 would result in potential long-term, moderate to major increases to the noise environment (POIs and increases in noise in the areas surrounding the airport) in the vicinity of VGT and ØL7 and negligible changes in the noise environment in the SUA. No other reasonably foreseeable future actions at these airports or in the SUA would further change the long-term noise environment if implemented.

3.4 SAFETY

3.4.1 Environmental Consequences Evaluation Criteria

Impacts from implementation of Alternative 1 are assessed according to the potential to increase or decrease safety risks to personnel, the public, property, or the environment. Adverse impacts on safety might include implementing contractor flight procedures that result in greater safety risk or constructing new buildings within established Quantity-Distance explosive safety arcs. For the purposes of this EA, an impact is considered significant if the proposed safety measures are not consistent with (FAA), National Transportation Safety Board [NTSB], OSHA, or other applicable standards for civil airports resulting in unacceptable safety risks as described below and in **Appendix C.3**.

3.4.2 Existing Conditions

3.4.2.1 North Las Vegas Airport

Ground Safety

Emergency Response

VGT has in place an Airport Emergency Plan (AEP), the purpose of which is to facilitate the appropriate response to and recovery from an airport emergency event. An airport emergency is defined as any occasion or instance which warrants prompt action(s) to save lives, protect property, and public health. The Plan is designed to assist in minimizing the possibility and extent of personal injury while limiting property damage on the airport. The VGT AEP provides emergency responders guidance that is written in concert with the National Incident Management System (NIMS) framework in response to the many types of emergency situations that might occur on the airport or adjacent property that is within the authority and responsibility of the VGT Airport. The AEP sets forth lines of authority and organizational relationships in accordance with the NIMS. Additionally, this AEP identifies personnel, equipment, facilities, supplies, and other resources that are available at the airport or in the surrounding greater Clark County for use during response and recovery operations. The AEP also contains emergency responder checklists, written in accordance with the NIMS framework, for Incident Command System to manage airport incidents and accidents. In addition to the Mutual Aid Agreement with local Fire Departments, the airport also maintains a 2007 Crash Rescue Renegade TM-5150 Dual Agent Support Truck containing 500 pounds of PKW Dry Chemical and 5 gallons (gal) of aqueous film-forming foam and 150 gal of water (equaling 2,000 gal of finished foam).

Safety Zones

VGT complies with FAA criteria for land areas underneath aircraft approach paths, including designated Runway Protection Zones (RPZs), as outlined in FAA Advisory Circular 150/5300-13, A*irport Design*. The FAA RPZs preclude any obstructions and development in these areas must adhere to Unified Facilities Criteria 3-260-01, *Airfield and Heliport Planning and Design*. **Figure 3-13** shows the RPZs around VGT.

Arresting Gear Capability

VGT's runways are not equipped with aircraft arresting systems.

Explosive Safety

Munitions storage occurs on VGT for which applicable state conditional use permits have been obtained. Personnel handling munitions are trained and certified.

Flight Safety

VGT's Air Traffic Control Tower is tasked with the safe and efficient movement of aircraft operating within Class D airspace. The tower is located east of the parallel runways and south of the singular runway. Summer hours are 0600 to 2100 seven (7) days a week and winter hours 0600 to 2000 seven (7) days a week. VGT has been delegated the airspace within 4.3 NM of VGT, up to but not including 4,500 ft MSL. The tower provides services for student, private, and professional pilots. GA and flight school aircraft, both local and itinerant, are the primary users of the airport. Fixed wing and helicopter traffic are typical at VGT. The potential for aircraft accidents is a primary public concern regarding flight safety. Such accidents may occur because of midair collisions, collisions with manmade structures or terrain, mechanical failure, weather-related accidents, pilot error, or bird/wildlife-aircraft strike hazard (BASH).

Midair Collision

Midair collision accidents involve two or more aircraft coming in contact with each other during flight. Navigation errors, miscommunications, deviations from flight plans, and lack of collision avoidance systems all increase the potential for midair collisions. Aircraft mishaps and their prevention represent a paramount concern for the FAA and airports. **Appendix C.3.2** defines civil aircraft accidents (49 CFR § 830.2) and serious incidents (49 CFR § 830.5) that require reporting to the NTSB.

In-Flight Emergency

Each aircraft type has different emergency procedures, based on the aircraft design, which are produced by the original equipment manufacturer of the aircraft. As specified in 14 CFR § 25.1585, operating procedures must be furnished for

- normal procedures peculiar to the particular type or model encountered for routine operations;
- nonnormal procedures for malfunction cases and failure conditions involving the use of special systems or the alternative use of regular systems; and
- emergency procedures for foreseeable but unusual situations in which immediate and precise action by the crew may be expected to substantially reduce the risk of catastrophe.

Bird/Wildlife-Aircraft Strike Hazards

In accordance with their Airport Certification, VGT has a Wildlife Hazard Management Plan (WHMP) in place per 14 CFR § 139.337 to ensure the airport meets or exceeds all FAA wildlife-related safety regulations while insuring the safest possible environment for aircraft, crew, and passengers arriving to and departing from VGT. Any bird strikes are reported through the FAA Wildlife Strike Database.

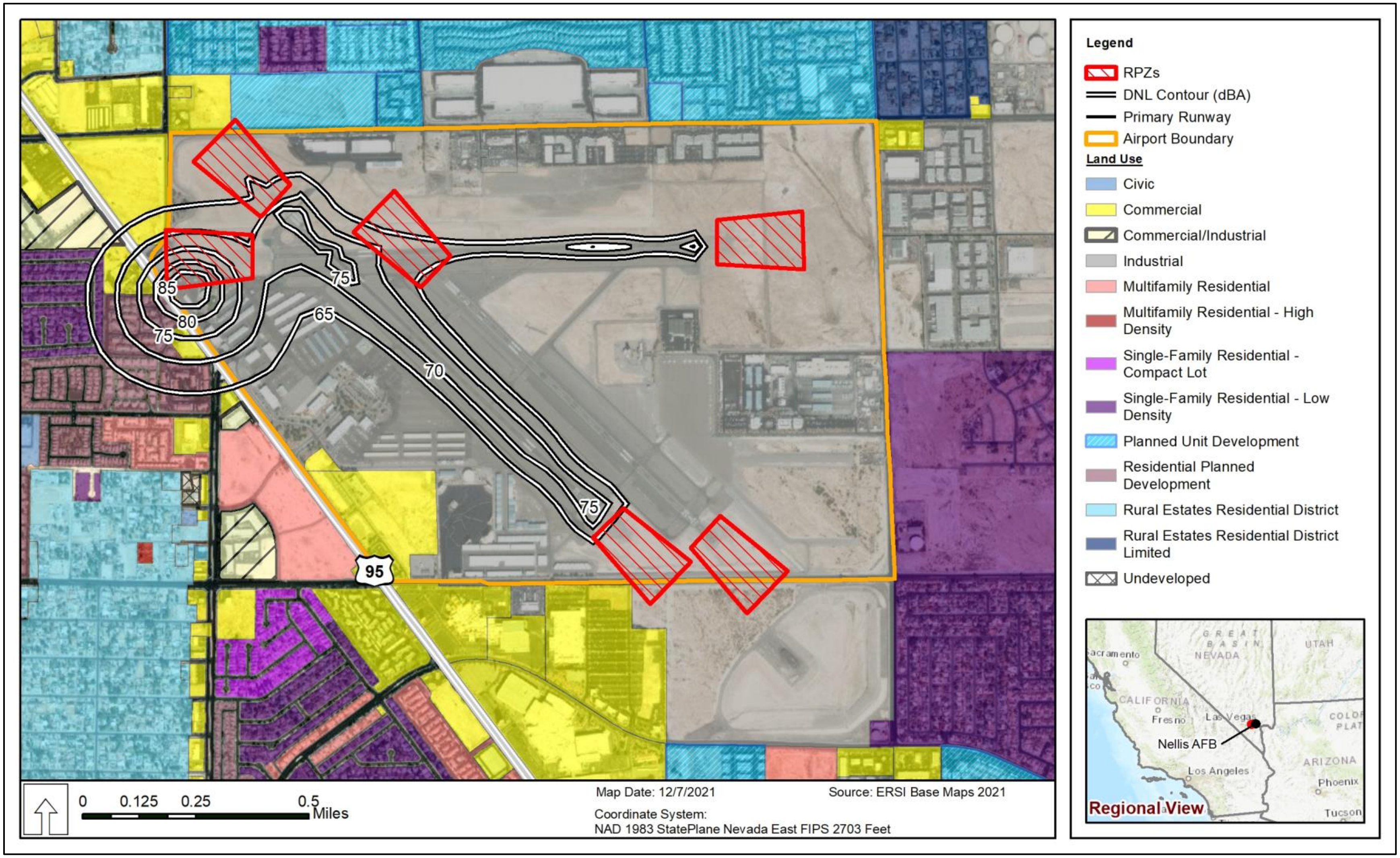

Figure 3-13 Runway Protection Zones Around North Las Vegas Airport.

3.4.2.2 Jean Airport

Ground Safety

Emergency Response

ØL7 is mainly used for recreational aviation including GA aircraft, aerobatic aircraft, gliders, ultralights, and skydiving. In addition to Clark County DOA, emergency response is handled by the Clark County Fire Department and Las Vegas Metropolitan Police Department.

Safety Zones

ØL7 complies with FAA criteria for land areas underneath aircraft approach paths, designated RPZs, as outlined in FAA Advisory Circular 150/5300-13, A*irport Design*. The FAA RPZs preclude any obstructions and development in these areas must adhere to Unified Facilities Criteria 3-260-01, *Airfield and Heliport Planning and Design*. **Figure 3-14** shows the RPZs around ØL7.

Arresting Gear Capability

ØL7's runways are not equipped with aircraft arresting systems.

Explosive Safety

ØL7 does not use or store munitions.

Flight Safety

ØL7 is a non-towered, public-use airport designated as a GA airport mainly used for recreational aviation including GA, aerobatic, glider, ultralight, and skydiving operations. Flight operations oversight is handled by the Los Angeles Center Air Route Traffic Control Center.

The potential for aircraft accidents is a primary public concern regarding flight safety. Such accidents may occur because of midair collisions, collisions with manmade structures or terrain, mechanical failure, weather-related accidents, pilot error, or BASH.

Midair Collision

Midair Collision accident concerns are the same as were previously defined for VGT in **Section 3.4.2.1**. **Appendix C.3.2** defines civil aircraft accidents (49 CFR § 830.2) and serious incidents (49 CFR § 830.5) that require reporting to the NTSB.

In-Flight Emergency

In-flight emergency procedures are the same as were previously defined for VGT in **Section 3.4.2.1**.

Bird/Wildlife-Aircraft Strike Hazards

Any bird strikes associated with ØL7 operations are reported through the FAA Wildlife Strike Database.

3.4.2.3 Special Use Airspace

The SUA used by Nellis AFB-based units are the Fort Irwin NTC/R-2502 Range and the NTTR/R-4806 Range (see **Figure 1-1**), the affected environment. Safety concerns with SUA flight activities are primarily due to the hazards associated with aircraft mishaps, bird/wildlife-aircraft strikes, munitions, and obstructions to flight. Such mishaps may occur because of mid-air collisions, collisions with terrain or manmade structures, BASH, weather-related accidents, mechanical failure, or pilot error.

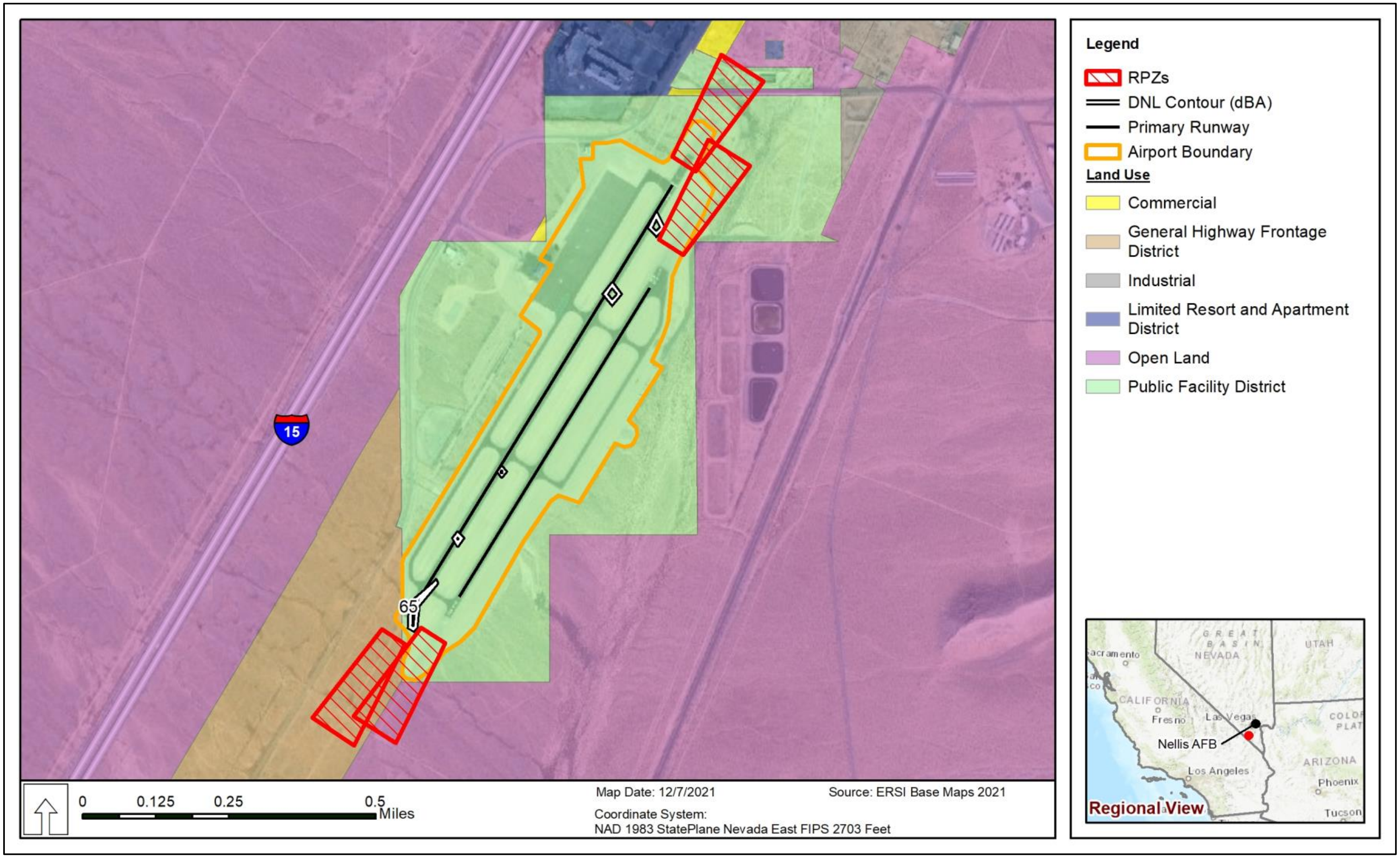

Figure 3-14 Runway Protection Zones around Jean Airport.

3.4.3 Environmental Consequences – Alternative 1

3.4.3.1 North Las Vegas and Jean Airports

CCAS would follow the Air Force safety guidance identified in Defense Contract Management Agency Instruction (DCMA INST) 8210.1C (AFI 10-220.

Ground Safety

Under Alternative 1, limited contractor aircraft maintenance and testing would occur on the aircraft parking ramp or in the hangar and would be consistent with current aircraft maintenance activities at the airport. No unique maintenance activities would be associated with the CCAS aircraft. Some scheduled depot-level or other heavy maintenance requirements would occur at off-airport contractor facilities.

Emergency Response

For initial emergency response involving a CCAS aircraft, the airport would provide emergency responders (Airport Firefighter) trained on the applicable mission design series they are providing. For crash response, the airport would provide on-field aircraft Crash Damaged or Disabled Aircraft Recovery (CDDAR). For events occurring off-airport, civilian authorities (city, county, or state) would be first on scene. After the initial response, the contractor would be required to facilitate crash site security and clean-up. The contractor would be responsible to cooperate with the Air Force or the NTSB investigation, depending upon circumstances of the incident.

The contractor emergency response would include the following:

- Establish a CDDAR program that is fully integrated into the host operating location's CDDAR program. The contractor would provide technical expertise and facilitate the host operating location's response and recovery capability of contractor-owned aircraft, consistent with the following considerations: (1) urgency to open the runway for operational use; (2) prevention of secondary damage to the aircraft; and (3) preservation of evidence for mishap or accident investigations in accordance with DCMA INST 8210.1C (Chapter 6.12) which specifies that the contractor must notify the Government Flight Representative of any aircraft mishap meeting the mishap classification criteria defined in Department of Defense (DOD) Instruction 6055.07; NTSB guidelines; and any local operating location guidance, as applicable. The contractor would ensure the host operating location's CDDAR personnel receive familiarization training on contractor aircraft and procedures prior to commencing local flying operations, at permanent and temporary duty operating locations.
- The contractor would develop an egress/cockpit familiarization training program to ensure all host operating location's nonegress personnel (e.g., emergency response personnel, fire department, CDDAR) who may access contractor aircraft cockpits, equipped with egress systems, receive initial and annual refresher training.

No significant impacts on emergency response are anticipated to occur under Alternative 1 provided the contractor establishes a CDDAR program and all applicable FAA, NTSB, and OSHA requirements are implemented.

Safety Zones

Under Alternative 1, RPZs around the airport would not change.

Explosives Safety

Under Alternative 1, CCAS would be responsible for the storage, maintenance, and delivery of training munitions used in daily training operations. This would be provided by trained and certified CCAS personnel following DOD Manual 4145.26 and technical orders, and any additional guidance specified by the FAA. Trained and certified CCAS personnel would be responsible for transporting munitions from VGT to ØL7, and the loading and unloading of training munitions on CCAS aircraft following approved safety measures outlined in the Performance Work Statement (PWS) (Air Force, 2021b). CCAS personnel would also be responsible for the maintenance of any egress munitions as contractor-provided equipment. Transportation of munitions by the mobile munitions support on public roads would comply with all federal, state, and local Department of Transportation and OSHA regulations governing the transportation of explosives on public roads and highways. All required state conditional permits would be maintained for the storage of munitions at VGT.

The loading and unloading of training munitions would occur on the aircraft parking ramp. The proposed ramp area for CCAS aircraft would need to be authorized for BDU-33 and training ammunition operations (Hazard Class 1.4) in accordance with DOD Manual 4145.26. No significant impacts on explosive safety are anticipated to occur under Alternative 1 provided CCAS personnel are trained and all applicable safety guidelines are implemented. Quantity-distance arcs would need to be established around new explosives storage and maintenance facilities, as well as the ramp areas used for loading and unloading operations at the select airport to identify the change in safety procedures and establish safety zones around these facilities. Construction of additional storage facilities, if required, would be considered under separate environmental analysis.

Flight Safety

The potential for aircraft accidents is a primary public concern regarding flight safety. Such accidents may occur because of midair collisions, collisions with manmade structures or terrain, mechanical failure, weather-related accidents, pilot error, BASH, or strikes from training munitions used during training. Under Alternative 1, CCAS would be required to strictly conform to the flight safety rules implemented at the airport. In addition, the PWS stipulates the following requirements for CCAS:

- Contractor Flight Operations would respond to and follow Air Traffic Control vectors from approved facilities per FAA and the DOD guidelines specified in DCMA INST 8210-1C, Chapter 6.
- CCAS would be conducted under positive tactical control. Pilots would be responsible to respond to tactical vectors and instructions by the applicable controlling authority (Ground Controller Intercept, Baron Controllers, Range Control Officer, JTAC, etc.). If positive control is unavailable, mission flights would remain autonomous and adhere to the briefed presentations and Special Instructions.
- CCAS aircraft would
    - be equipped with applicable communication and navigation capability to operate in the National Airspace Structure under FAA Instrument Flight Rules and aircraft operating limitations (if applicable) and International Civil Aviation Organization equipment prerequisites;
    - have at least one type of FAA-approved Navigation System such as a Tactical Air Navigation, Automatic Direction Finder Receiver System, with Automatic Direction Finder indicator; Very High Frequency Omni Directional Range; Global Positioning System/Long-Range Navigation;
    - have sufficient precision approach instrumentation (compatible with standard Air Force instrument landing systems) to permit operations down to 300-ft ceilings and 1-statute-mi visibility; and
    - have at least two functional voice radios operating in either the very high frequency/ultrahigh frequency bands, and one must be ultrahigh frequency.

Bird/Wildlife-Aircraft Strike Hazards

Contractor operations would not follow the airport BASH procedures; they follow the PWS-directed Flight Operations Procedures and Quality Management System per the references above. In this case, the contractor's BASH plan would be part of the Quality Management System and be integrated with the select airport's plan. It is expected the CCAS BASH plan would very closely mirror and, in fact, may be an exact copy of the airport's FAA-approved WHMP.

No significant impacts on airspace/flight safety are anticipated to occur under Alternative 1 provided that contractor flight safety rules are followed, and all applicable airport, FAA, and DCMA INST 8210-1C guidelines are implemented.

3.4.3.2 Special Use Airspace

Analysis of SUA flight risks correlates mishap rates and BASH with airspace utilization; munitions and route obstruction risks are also assessed as flight hazards. Under Alternative 1, there would be an increase of 1,350 annual training sorties in the airspaces flown by Nellis AFB-based aircraft, including 1,155 sorties in the Fort Irwin NTC/R-2502 Range (primary range) and 195 sorties in the NTTR/R-4806 Range (backup range). Under Alternative 1, there would be no modifications to the existing airspace; however, with additional demand for training operations in the SUA from the proposed CCAS operations, the potential for minor impacts on safety can be expected. As airspace demand in the region increases, the Air Force, in conjunction with other managing agencies, would continue coordination to reduce potential impacts.

3.4.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to operations or impacts on safety at VGT or ØL7 or in the SUA.

3.4.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1, in addition to reasonably foreseeable future actions at Nellis AFB, VGT and ØL7 would follow existing safety procedures and policies for ground and flight operations. Safety zones would not change under CCAS. Contract personnel would be trained and required to follow safety procedures in accordance with established aircraft flight manuals as implemented by the contract. Contractor operations would and could pose an increased risk to flight, ground, and explosive safety; however, through compliance with the FAA and DOD guidelines specified in DCMA INST 8210-1C, Chapter 6, OSHA standards, and the CCAS BASH Plan/FAA WHMP, the potential impact would be minimized. As airspace demand in the region increases, the Air Force, in conjunction with other managing agencies, would continue coordination to reduce potential impacts. As such, no effects on flight, ground and explosive safety are expected with implementation of Alternative 1.

3.5 AIR QUALITY

Air quality in various areas of the country is affected by pollutants emitted by numerous sources, including natural and man-made sources. To manage pollutant emission levels in ambient air, the US Environmental Protection Agency (USEPA) was mandated under the Clean Air Act (CAA) to set air quality standards for select pollutants that are known to affect human health and the environment. The USEPA has divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the National Ambient Air Quality Standards (NAAQS) (40 CFR §50). NAAQS are currently established for six criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (including particulates equal to or less than 10 microns in diameter (PM_{10}) and particulates equal to or less than 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). Each AQCR has regulatory areas that are designated as an attainment area or nonattainment area for each of the criteria pollutants depending on whether it meets or exceeds the NAAQS. Attainment areas that were reclassified from a previous nonattainment status to attainment are called maintenance areas and are required to prepare a maintenance plan for air quality. The airports proposed for use (ØL7 and VGT) are located in Clark County, Nevada, and lie within the Las Vegas Intrastate AQCR (§ 81.80).

Federal actions in NAAQS nonattainment and maintenance areas are also required to comply with USEPA's General Conformity Rule (40 CFR 93). These regulations are designed to ensure that federal actions do not impede local efforts to achieve or maintain attainment with the NAAQS. Federal actions are evaluated to determine if the total indirect and direct net emissions from the project are below *de minimis* levels for each of the pollutants as specified in 40 CFR § 93.153. If *de minimis* levels are not exceeded for any of the pollutants, no further evaluation is required. However, if net emissions from the project exceed the *de minimis* thresholds for one or more of the specified pollutants, a demonstration of conformity, as prescribed in the General Conformity Rule, is required.

Greenhouse gases (GHGs) are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and are believed to contribute to global climate change. USEPA regulates GHG emissions via permitting and reporting requirements that are applicable mainly to large stationary sources of emissions.

For purposes of this EA, there are multiple ROIs for air quality. One includes the AQCRs within which the airports proposed for use for CCAS (including areas within their vicinities) are located. In addition, multiple AQCRs were considered which coincide with the SUAs proposed for use for CCAS. For consideration of potential air quality impacts, it is the volume of air extending up to the mixing height (3,000 ft AGL) and coinciding with the spatial distribution of the ROIs that is considered. In the vicinity of the airfield itself, it is the portions of the landing and takeoff (LTO) and touch and go (TGO) cycles that occur at or below 3,000 ft that are analyzed. Also considered in the air quality analysis are the ground support and fueling activities that take place on or adjacent to the airfield.

For the SUA, after applying the 3,000-ft criteria, there are several areas that are identified for air quality impact analysis. These areas, their underlying counties, and AQCRs are listed in **Table C-5** in **Appendix C.4**.

See **Appendix C.4** for a detailed discussion on air quality regulations, ROIs, general conformity, climate and GHGs.

3.5.1 Environmental Consequences Evaluation Criteria

The overland project areas associated with the two airports and SUA have areas that are designated as either attainment (or unclassified) or nonattainment (or maintenance) for criteria pollutants. Because some of the activities would occur within areas designated nonattainment/maintenance, the air quality analysis would include a review of criteria pollutant emissions for applicability to General Conformity. For all other areas designated attainment/unclassified, an air analysis would be performed without considering General Conformity.

Based on guidance in Chapter 4 of the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide*, *Volume II – Advanced Assessments*, for air quality impact analysis, project criteria pollutant emissions were compared against the insignificance indicator of 250 tons per year (tpy) for Prevention of Significant Deterioration (PSD) major source permitting threshold for actions occurring in areas that are in attainment for all criteria pollutants (25 tpy for lead). These "Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the NAAQS. These insignificance indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action would not cause or contribute to an exceedance on one or more NAAQSs. Although PSD and Title V are not applicable to mobile sources, the PSD major source thresholds provide a benchmark to compare air emissions against and to determine project impacts.

For Alternative 1 locations that would occur in nonattainment/maintenance areas, the net-change emissions estimated for the relevant criteria pollutant(s) are compared against General Conformity *de minimis* values to perform a General Conformity evaluation. If the estimated annual net emissions for each relevant pollutant are below the corresponding *de minimis* threshold values, General Conformity Rule requirements would not be applicable.

ACAM, Version 5.0.17b, was used to estimate criteria and precursor pollutant emissions for CCAS airfield operations, maintenance activities, worker commutes, and flight operations in SUA. In addition, emissions associated with the use of munitions in the SUA were estimated, using draft emission factors found in AP-42. There are no stationary sources associated with this action, other than for fueling and storage. By default, ACAM only accounts for emissions occurring at or below 3,000 ft (within the mixing layer) and emissions are evaluated using this default and aircraft emissions released above 3,000 ft were not included in analysis for the ROIs. Assumptions of the model are discussed in **Appendix D.2**. The air quality analysis focused on emissions associated with the airfield operations at the prospective airports and with sorties in the SUA. As such, emissions from ACAM were determined separately for the airport and SUA ROIs. The emissions associated with the use of munitions in the SUA were estimated using draft emission factors found in AP-42 Section 15.8 (US Environmental Protection Agency [USEPA], 2009).

ACAM documentation in the form of a Record of Conformity Applicability (ROCA), if the action would occur in a nonattainment/maintenance area, or a Record of Air Analysis (ROAA), if the action would occur in attainment area, is provided in **Appendix D.2**.

The emissions analysis for CCAS was performed for 11 aircraft:

- Aero L-39 Albatros
- Aero Vodochody L-59
- BAC-167
- Brasov IAR-823
- Cessna 337
- Douglas A-4 Skyhawk
- Embraer A-27
- Embraer A-29
- Pilatus PC-9
- Rockwell OV-10
- Valmet L/A-90s

The basis for the air emissions calculations performed are identical for all 11 CCAS aircraft; they are listed in **Table 3-23**.

Table 3-23
Basis of Air Emission Calculations

Location	Type of Operation	Number of Sorties per Year	Ground Operation Emission Sources
VGT	LTO Cycles	1,350[a,d]	Auxiliary power unit equipment, AGE, personal vehicle use, aircraft maintenance (solvent use), fuel handling and storage, aircraft trim tests (12 per aircraft)
VGT	TGO Cycles	203[b,d]	Auxiliary power unit equipment, AGE, personal vehicle use, aircraft maintenance (solvent use), fuel handling and storage, aircraft trim tests (12 per aircraft)
ØL7	LTO Cycles	1,350[a,d]	Auxiliary power unit equipment, AGE, aircraft trim tests (12 per aircraft)
R-2502A/E	Sorties at ≤3,000 ft AGL	960[c,e]	Not Applicable
R-2502N	Sorties at ≤3,000 ft AGL	195[c,e]	Not Applicable
R-4806E/W	Sorties at ≤3,000 ft AGL	195[c,e]	Not Applicable

Notes:
[a] Air quality impacts are assessed for the airport airfield and SUA based on the total annual sorties from the selected airfield.
[b] 5 percent of total sorties flying to SUA are for contractor proficiency training. Each of those 5 percent sorties is assumed to include three TGO/low approaches.
[c] Impacts include munitions use at and below 3,000 ft.
[d] All sorties are low-altitude operations (≤3,000 ft AGL) and would spend the estimated time per sortie in the mixing layer.
[e] Estimated time per sortie spent at or below 3,000 ft altitude for all CCAS airspace is 27 minutes each.
AGE = aerospace ground equipment; AGL= above ground level; CCAS = contracted close air support; ft = foot(feet); LTO = Landing and Takeoff; NTTR = Nevada Test and Training Range; ØL7 = Jean Airport; SUA = special use airspace; TGO = Touch and Go; VGT = North Las Vegas Airport

3.5.2 Existing Conditions

3.5.2.1 North Las Vegas Airport

The regional climate of the Las Vegas area, where VGT is located, is classified as Tropical and Subtropical Desert Climate, which is characterized by cool winters with very warm, dry summers. The average temperature for the year in North Las Vegas is 64.5°F. The warmest month, on average, is July with an average temperature of 85.3°F. The coolest month on average is January, with an average temperature of 44.6°F. The average amount of precipitation for the year in North Las Vegas is 4.5 in. The month with the most precipitation on average is January with 0.6 in. of precipitation. The month with the least precipitation on average is May with an average of 0.2 in. (Weatherbase, 2021a).

VGT, located in Clark County, is part of the Las Vegas Intrastate AQCR. Parts of this County (particularly the area where VGT is located) have been designated marginal nonattainment for the 2015 ozone NAAQS, maintenance for the 1997 ozone NAAQS, and maintenance for PM10 and CO NAAQS (per designations included in ACAM). As a result, General Conformity would be applicable in the vicinity of VGT.

3.5.2.2 Jean Airport

The regional climate of the southern Nevada area, where ØL7 is located, is classified as Tropical and Subtropical Desert Climate, which is characterized by cool winters with very warm, dry summers. The average annual temperature in Goodsprings (the nearest town to ØL7) is 62.9°F. The warmest month, on average, is July with an average temperature of 85.8°F. The coolest month on average is December, with an average temperature of 42.1°F. The average amount of precipitation for the year in Goodsprings is 6.9 in. The month with the most precipitation on average is February with 1.1 in. of precipitation. The month with the least precipitation on average is June with an average of 0.1 in. (Weatherbase, 2021b).

ØL7 is part of the Las Vegas Intrastate AQCR. ØL7 is located in a part of the county designated maintenance for PM_{10} and CO NAAQS (per designations included in ACAM). As a result, General Conformity would be applicable in the vicinity of ØL7.

3.5.2.3 Special Use Airspace

R-2502A/E/N airspace overlies parts of the Mojave Desert and is located entirely in San Bernardino County, California. The approximate elevation is 2,487 feet above mean sea level. The geology and landscape of the Fort Irwin area, typical of many parts of the Mojave Desert, consist of rugged mountains separated by broad alluvial valleys that form the main coarse-resolution features of the geologic map (USGS, 2014). The Fort Irwin area is characterized as Tropical and Subtropical Desert Climate. The average temperature for the year in Fort Irwin is 53.8°F. The warmest month, on average, is July with an average temperature of 69.2°F. The coolest month on average is December, with an average temperature of 41.5°F. The average amount of precipitation for the year in Fort Irwin is 5.8 in. The month with the most precipitation on average is February with 1.2 in. of precipitation. The month with the least precipitation on average is June with an average of 0.0 in. (Weatherbase, 2021c).

The R-4806 SUA proposed for training overlies the north-eastern Mojave Desert region located in southern Nevada and spans across three counties in Nevada – Lincoln, Nye, and Clark. The regional climate of Indian Springs, Nevada, located in northwestern Clark County is characterized as Tropical and Subtropical Desert Climate. The average temperature for the year in Indian Springs is 61.0°F. The warmest month, on average, is July with an average temperature of 83.0°F. The coolest month on average is January, with an average temperature of 39.0°F. The average amount of precipitation for the year in Indian Springs is 3.4 in. The month with the most precipitation on average is July with 0.5 in. of precipitation. The month with the least precipitation on average is May with an average of 0.1 in. (Weatherbase, 2021d).

The entire R-2502 airspace that overlies San Bernardino County, California, is in nonattainment for PM_{10} and $PM_{2.5}$ and is designated in attainment or unclassified for all remaining criteria pollutant NAAQSs (per designations included in ACAM). The affected environment for R-4806 airspace located over Nye and

Lincoln counties, Nevada, fall within an area that is unclassified or in attainment of state and federal air quality standards (per designations included in ACAM). The southernmost part of R-4806 falls within the Las Vegas Intrastate area in Clark County. Parts of this county have been designated marginal nonattainment for the 2015 ozone NAAQS, maintenance for the 1997 ozone NAAQS, and maintenance for particulate matter less than PM_{10} and CO NAAQS (per designations included in ACAM).

3.5.3 Environmental Consequences – Alternative 1

3.5.3.1 North Las Vegas and Jean Airports

Emissions were estimated for each year of Alternative 1 beginning in January 2023 and ending in December 2032. **Table 3-24** presents total increases in annual operational emissions for the proposed airport ROI and emission scenarios. No construction emissions are anticipated and only those emissions associated with the addition of CCAS operations were evaluated as no substantive changes to current operations of the 6 CTS are expected from the implementation of Alternative 1. The methodologies, emission factors, and assumptions used for the emission estimates for each of the scenarios and related activities are outlined in **Appendix D.2**. The project alternative's estimated emissions are compared against the 250 tpy indicator of insignificance for criteria pollutants in attainment areas.

Table 3-24
Contracted Close Air Support Emissions – North Las Vegas and Jean Airport Operations

Scenario	VOC (tpy)[1,2,3]	NO_x (tpy)[1,2,3]	CO (tpy)[1,2,3]	SO_x (tpy)[1,2,3]	PM_{10} (tpy)[1,2,3]	$PM_{2.5}$ (tpy)[1,2,3]	CO_2e (tpy)[1,2,3]	Pb (tpy)[1,2,3]	NH_3 (tpy)[1,2,3]
Aero L-39 Albatros	8.5	4.7	27.0	0.6	3.4	3.4	1,665	0	0.00
Aero Vodochody L-59	8.5	4.7	27.0	0.6	3.4	3.4	1,665	0	0.00
BAC-167	9.0	2.4	51.7	0.6	0.5	0.4	1,886	0	0.00
Brasov IAR-823	4.8	3.4	4.8	0.2	0.4	0.4	651	0	0.00
Cessna 337[a]	9.3	14.0	39.2	1.0	3.0	2.8	941.6	0.0	0.0
Douglas A-4 Skyhawk	16.6	9.9	32.3	1.3	0.8	0.8	2,784	0	0.00
Embraer A-27	3.3	11.4	14.9	0.5	1.2	0.9	1,039	0	0.00
Embraer A-29	3.3	11.4	14.9	0.5	1.2	0.9	1,039	0	0.00
Pilatus PC-9	3.3	11.4	14.9	0.5	1.2	0.9	1,039	0	0.00
Rockwell OV-10	20.2	**126.1**	38.9	3.3	3.4	3.2	6,360	0	0.00
Valmet L/A-90s	3.3	11.4	14.9	0.5	1.2	0.9	1,039	0	0.00
Ground Transport	0.0	0.0	0.1	0.0	0.0	0.0	14	0	0.00

Source: Air Conformity Applicability Model output

Notes:

[1] The emissions were estimated for each year of the Proposed Action under Alternative 1 beginning in January 2023 and ending in December 2032. For air quality modeling purposes, these are representative years; the modeling generates air emissions estimates for the life of a representative 10-year contract.

[2] Represents total per year emissions for: 1) flight operations (includes trim tests and auxiliary power unit use), 2) aerospace ground equipment, 3) aircraft maintenance (parts cleaning), and 5) AVGAS storage (fuel for CCAS operations only - includes CCAS fuel for LTOs, TGOs, trim tests, airspace use, and travel to the airspace).

[3] Based on 1,350 LTOs and 203 TGOs per year.

[a] ACAM incorrectly uses a single engine for the Cessna 337 (which has a twin-engine) and emissions need to be doubled

NO_x = nitrogen oxides; CO = carbon monoxide; CO_2e = carbon dioxide equivalent; LTO = landing and takeoff; NH_3 = ammonia; Pb = lead; $PM_{2.5}$ = particulate matter less than 2.5 microns; PM_{10} = particulate matter less than 10 microns; SO_x = sulfur oxides; TGO = touch and go; tpy = tons per year; VOC = volatile organic compound

VGT is located in a part of Clark County that has been designated marginal nonattainment for the 2015 ozone NAAQS, maintenance for the 1997 ozone NAAQS, and maintenance for PM_{10} and CO NAAQS. ØL7 is in a part of Clark County that has been designated maintenance for the 1997 ozone NAAQS. NO_x emissions for the Rockwell OV-10 would exceed the *de minimis* value of 100 tpy; for all other aircraft those emissions would be well below the *de minimis* value of 100 tpy (**Table 3-24**). For the remaining criteria pollutants (VOC, CO, SO_x, $PM_{2.5}$, and PM_{10}), the annual emission increases would not be considered significant, as they are below the relevant *de minimis* or insignificant indicator values. The analysis results demonstrate that for the airfield operations in Clark County, the project, if implemented, would interfere with the region's ability to maintain compliance with the NAAQS for ozone (for which NO_x is a precursor). However, see **Section 3.5.3.3** below for measures to minimize these impacts**.** The other pollutants (CO, VOC, PM, SO_x) would not affect the region's ability to maintain compliance with the other NAAQS. Additionally, neither North Las Vegas Airport nor Jean Airport is located within 10 km (6.2 mi) of any Class I area.

These emission findings are documented in the Detail ACAM Report and ROAA or ROCA (**Appendix D.2**).

3.5.3.2 Special Use Airspace

The SUA for CCAS (Fort Irwin/R-2502A/E/N, NTTR/R-4806E/W) would include sorties at or below 3,000 ft AGL, and thus, these regions are included in the air quality analysis. Consistent with the USEPA recommendation regarding mixing height, only those emissions that would occur within the mixing layer (at or below 3,000 ft) were analyzed. Out of the proposed 1,350 CCAS sorties, almost all sorties include low-altitude (less than 3,000 ft AGL) operations. Thus, it is assumed for the air quality analysis that all sorties would occur at or below the mixing height for an estimated period of time spent training in the SUA, as previously listed in **Table 3-25.** Estimated net emissions from the SUA would be entirely additive, as implementation of Alternative 1 in the SUA would not alter existing operations in the SUA.

The emissions associated with CCAS sorties proposed for the SUA were evaluated using ACAM for the proposed CCAS aircraft. Munitions emissions in the SUA were based upon the methodologies in AP-42 (USEPA, 2009). For CCAS the flight time in the mixing layer in each SUA was estimated to be 27 minutes. In addition, it was assumed the time it would take to fly from the prospective airport to and from the SUA would occur at an altitude above 3,000 ft AGL, and thus, this portion of the sortie is not included in the analysis. The methodologies, emission factors, and assumptions used for the emission estimates for each of the scenarios are outlined in **Appendix D.2**.

The SUA estimated emissions are compared against the 250 tpy indicator of insignificance for criteria pollutants in attainment areas. For SUA that underlie areas of nonattainment (or maintenance), the estimated emissions are compared against the relevant General Conformity *de minimis* thresholds. The emissions that would result from CCAS sorties are listed in **Table 3-25** for R-2502A/E/N and **Table 3-26** for R-4806E/W. Emissions for each year of the proposed 10-year contract period are the same.

The highest emission rate in R-4806E/W would be for CO for BAC-167 operations (10.26 tpy), which would be lower than 100 tpy. Emissions in R-4806E/W would primarily occur in areas that are in attainment of all criteria pollutants; however, to be conservative, the R-4806E/W emissions were compared against the General Conformity *de minimis* levels of 100 tpy for VOC and NO_x (ozone precursors) and CO and 70 tpy for PM_{10}. Estimated emissions for VOC, NO_x, CO, and PM_{10} in R-4806E/W would be well below the respective *de minimis* thresholds, and emissions for all other attainment level criteria pollutants would be safely below the 250 tpy PSD indicator levels.

For R-2502A/E/N, the highest emission rate for any criteria pollutant for any aircraft is 60.95 tpy of CO from BAC-167 operations. R-2502A/E/N overlies San Bernardino County in California, which is designated moderate nonattainment for PM_{10} and $PM_{2.5}$; however, even the highest emissions from proposed operations in this SUA (4.89 tpy for PM_{10} and $PM_{2.5}$ from Aero L-39 and Aero L-59 operations) would be lower than the lowest relevant *de minimis* threshold (100 tpy). Therefore, the air quality impacts from proposed aircraft emissions in R-2502A/E/N would not cause impacts that would be considered significant. Additionally, there are several Wilderness Areas and some Wilderness Study Areas that underlie or are near R-2502. There may be some haze that would develop as the aircraft moves across its flight path, but the haze would likely occur for a very short duration and would dissipate easily over the large areas. Therefore, impacts on visibility from the alternative within Class 1 areas in proximity to R-2502 would be insignificant.

Based on the analysis, the additional emissions due to CCAS in the SUA would not be considered significant with respect to air quality impacts. These emission findings are documented in the ROAA (**Appendix D.2**).

3.5.3.3 General Conformity Definition

Because the use of the Rockwell OV-10 could exceed the *de minimis* threshold for NO_x emissions, a General Conformity Determination (GCD) under 40 CFR Part 93 was conducted. The Air Force coordinated with Clark County to incorporate these NO_x emissions into an emissions budget for the County's Second Maintenance Plan. Under GCD regulations, the inclusion of these project-specific emissions into the State Implementation Plan constitutes conformity with the NAAQS. As such, the proposed action would not create a significant impact on air quality or the ability of the County to comply with the NAAQS.

Table 3-25
Contracted Close Air Support Air Emissions – R-2502A/E/N Airspace Operations

Aircraft	VOC (tpy)[1,2,3]	NO_x (tpy)[1,2,3]	CO (tpy)[1,2,3]	SO_x (tpy)[1,2,3]	PM_{10} (tpy)[1,2,3]	$PM_{2.5}$ (tpy)[1,2,3]	CO_2e (tpy)[1,2,3]	Pb (tpy)[1,2,3]
Aero L-39 Albatros	0.23	8.30	3.89	1.06	4.90	4.95	3,216	0
Aero Vodochody L-59	0.23	8.30	3.89	1.06	4.90	4.95	3,216	0
BAC-167	1.85	3.36	60.95	1.32	0.03	0.08	4,002	0
Brasov IAR-823	0.00	0.75	0.32	0.11	0.03	0.09	336	0
Cessna 337	0.7	0.2	35.4	0.0	1.5	1.3	117.6	0
Douglas A-4 Skyhawk	0.27	6.18	13.87	0.91	0.16	0.20	2,740	0
Embraer A-27	0.08	0.57	1.47	0.13	0.39	0.14	377	0
Embraer A-29	0.08	0.57	1.47	0.13	0.39	0.14	377	0
Pilatus PC-9	0.08	0.57	1.47	0.13	0.39	0.14	377	0
Rockwell OV-10	0.05	4.11	2.63	0.44	0.26	0.30	1,335	0
Valmet L/A-90s	0.08	0.57	1.47	0.13	0.39	0.14	377	0

Table 3-26
Contracted Close Air Support Air Emissions – R-4806E/W Airspace Operations

Aircraft	VOC (tpy)[1,2,3]	NO_x (tpy)[1,2,3]	CO (tpy)[1,2,3]	SO_x (tpy)[1,2,3]	PM_{10} (tpy)[1,2,3]	$PM_{2.5}$ (tpy)[1,2,3]	CO_2e (tpy)[1,2,3]	Pb (tpy)[1,2,3]
Aero L-39 Albatros	0.04	1.41	0.72	0.18	0.83	0.86	543	0
Aero Vodochody L-59	0.04	1.41	0.72	0.18	0.83	0.86	543	0
BAC-167	0.31	0.57	10.36	0.22	0.01	0.04	676	0
Brasov IAR-823	0.00	0.13	0.12	0.02	0.01	0.04	57	0
Cessna 337	0.1	0.0	6.0	0.0	0.2	0.2	19.8	0
Douglas A-4 Skyhawk	0.05	1.05	2.41	0.15	0.03	0.05	463	0
Embraer A-27	0.01	0.10	0.31	0.02	0.07	0.05	64	0
Embraer A-29	0.01	0.10	0.31	0.02	0.07	0.05	64	0
Pilatus PC-9	0.01	0.10	0.31	0.02	0.07	0.05	64	0
Rockwell OV-10	0.01	0.70	0.51	0.08	0.05	0.07	225	0
Valmet L/A-90s	0.01	0.10	0.31	0.02	0.07	0.05	64	0

Source: Air Conformity Applicability Model output

Notes:
[1] While CCAS targeted performance is estimated to operate over a 10-year contract period, the emissions were estimated for each year of the Proposed Action under Alternative 1. For air quality modelling purposes, these are representative years; the modelling generates air emissions estimates for the life of a representative 10-year contract.
[2] Represents total per year emissions.
[3] Emission based on 1,350 sorties and includes emissions from munitions.
NO_x = nitrogen oxides; CO = carbon monoxide; CO_2e = carbon dioxide equivalent; $PM_{2.5}$ = particulate matter less than 2.5 microns; PM_{10} = particulate matter less than 10 microns; SO_x = sulfur oxides; VOC = volatile organic compound; tpy = tons per year.

3.5.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to current baseline emission levels at VGT or ØL7 or in the SUA.

3.5.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Implementation of Alternative 1, in addition to reasonably foreseeable future actions at VGT and ØL7, and in the SUA, may result in additional impacts on air quality; however, these impacts would not be significant (refer to **Section 3.5.3.3**). With any addition of ongoing construction projects in the area, PM_{10} emissions could increase; however, these increases would be short in duration and the incremental impact on air quality would be negligible.

CCAS training activities for all sorties are assumed to occur at times below the mixing height (3,000 ft AGL) (see **Section 3.5.3.2**) in the SUA proposed for training; however, the duration would be short (approximately 27 minutes) and therefore impacts on air quality would not be significant. Overall, there would be some increases in air emissions from Alternative 1, but no significant incremental change to air quality would be expected when adding Alternative 1 to reasonably foreseeable future actions.

3.6 BIOLOGICAL RESOURCES

3.6.1 Environmental Consequences Evaluation Criteria

The level of impact on biological resources is based on the

- importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource;
- proportion of the resource that would be affected relative to its occurrence in the region;
- sensitivity of the resource to the proposed activities; and
- duration of potential ecological ramifications.

The impacts on biological resources would be adverse if species or habitats of high concern (i.e., federally and state listed threatened and endangered species, designated critical habitat) are negatively affected over relatively large areas. Impacts would also be considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that agency actions do not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid unauthorized “take” of federally threatened or endangered species or adverse modification of designated critical habitat. The ESA Section 7 consultation process would result in either a concurrence on the Air Force’s determination of “effect, but no adverse effect” on listed species, or a biological opinion with either an Incidental Take Statement that authorizes a specified amount of “take” (or adverse modification of designated critical habitat) or a jeopardy determination. No ESA Section 7 formal consultation is required if the Air Force determines there would be no effect on a threatened or endangered species.

There are no activities associated with any of the alternatives that have the potential to affect invasive species. There would be no ground-disturbing activities that have the potential to spread or remove invasive plants. Similarly, aircraft operations at an airfield would have no impact on invasive plants or wildlife. Therefore, invasive species are not discussed further.

3.6.2 Existing Conditions

3.6.2.1 North Las Vegas and Jean Airports

Vegetation and Wildlife

Vegetation communities present at VGT and ØL7 are similar to those described for Nellis AFB and provided in the Nellis AFB Integrated Natural Resources Management Plan (Nellis AFB, 2019). The Mojave Desert valley floors primarily support creosote bush/white bursage vegetation communities. Creosote bush/white bursage communities are characteristic of much of the Mojave Desert at elevations ranging from below sea level to approximately 3,940 ft and are likely present in less developed areas at and proximate to VGT and ØL7. Tamarisk is a common invasive shrub and tree species and the most common tamarisk in the region is *Tamarix ramosissima*, an arborescent shrub that is an aggressive colonizer of areas where groundwater is shallow or where seasonal moisture is available (Nellis AFB, 2019).

Birds present in the Mojave Desert creosote scrub plant communities include the horned lark (*Eremophila alpestris*), Costa’s hummingbird (*Calypte costae*), loggerhead shrike (*Lanius ludovicianus*), mourning dove (*Zenaida macroura*), blackthroated sparrow (*Amphispiza bilineata*), burrowing owl, greater roadrunner, lesser nighthawk (*Chordeiles acutipennis*), and Gambel’s quail (*Callipepla gambelii*). Le Conte’s thrasher (*Toxostoma lecontei*), an uncommon and secretive resident of the arid southwest, prefers sparsely vegetated creosote scrub. Most of the common mammals in the Mojave Desert represent five families within the Rodentia. Other common mammal species that would occur at VGT and ØL7 include pygmy rabbit (*Brachylagus idahoensis*), black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*). Common reptiles and amphibians include Great Basin whiptail lizard (*Aspidocelis tigris*), side-blotched lizard (*Uta stansburiana*), Great Basin gopher snake (*Pituophis catenifer*), and Woodhouse’s toad (*Anaxyrus woodhousii*).

Threatened and Endangered Species

Federally listed species that could potentially occur at or proximate to VGT based on the USFWS Information for Planning and Consultation database are the southwestern willow flycatcher (*Empidonax traillii*), Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), Mojave desert tortoise (*Gopherus agassizii*), and Pahrump poolfish (*Empetrichthys latos*; Endangered). There is no designated critical habitat at or proximate to VGT (USFWS, 2021). Nevada state sensitive species that could potentially occur at VGT are the Brewer's sparrow (*Spizella breweri*), northern goshawk (*Accipiter gentilis*), and sage thrasher (*Oreoscoptes montanus*).

Federally listed species that could potentially occur at or proximate to ØL7 based on the USFWS Information for Planning and Consultation database are the southwestern willow flycatcher, Yuma Ridgway's rail, and Mojave desert tortoise. There is no designated critical habitat at or proximate to the ØL7 (USFWS, 2021). Nevada state sensitive and protected species that could occur on or in the vicinity of ØL7 are the Brewer's sparrow, northern goshawk, sage thrasher, Mexican free-tailed bat (*Tadarida brasiliensis*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), western red bat (*Lasiurus blossevillii*), California leaf-nosed bat (*Macrotus californicus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

3.6.2.2 Special Use Airspace

Ecoregion Description

Ecoregions are used to generally describe the vegetation and wildlife present under the SUA. Because of the physical scale of the SUA, which overlie thousands of square miles, much of which has not been specifically surveyed for biological resources, Ecoregions provide a planning level description of biological resources. Ecoregions are used to describe areas of similar type, quality, and quantity of ecological resources (USEPA, 2018). Ecoregions are assigned hierarchical levels to delineate ecosystems spatially based on different levels of planning and reporting needs. Level I is the broadest ecoregion level, dividing North America into 15 ecological regions. Level II includes 50 ecoregions, and Level III divides the continental United States into 105 ecoregions. Level IV further subdivides the Level III ecoregions (USEPA, 2018).

The SUA overlie a portion of the Mojave Desert in southern California and southern Nevada. Level IV Ecoregions are used to summarize the various ecological communities that occur beneath the vast landscapes of the SUA in California. There are nine Level IV Ecoregions beneath the R-2502A, R-2502E, R-2502N, R-4806E, and R-4806W (see **Figure 3-15** and **Appendix C.5**, **Table C-9**).

Threatened and Endangered Species

Federally listed species that could occur beneath the SUA that could be affected by aircraft movement and the use of training munitions and ammunition during training activities include Mojave desert tortoise, California condor (*Gymnogyps californianus*), southwestern willow flycatcher, and Yuma Ridgway's rail.

The SUA does not overlap with designated critical habitat for any avian or mammal species but does overlap designated critical habitat for the Mojave desert tortoise. Aircraft movement, noise, and use of training munitions and ammunition in defined ranges where ongoing munitions training occurs would have no effect on federally listed amphibians, fish, mollusks, crustaceans, or plants. These are not discussed further.

Species listed by California as Endangered or Threatened under the California Endangered Species Act (CESA) which could occur in the SUA and potentially be impacted by aircraft movement, noise, and the use of munitions and ammunition include Arizona bell's vireo (*Vireo bellii arizonae*), bald eagle (*Haliaeetus leucocephalus*), California black rail (*Laterallus jamaicensis coturniculus*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and Swainson's hawk (*Buteo swainsoni*). Threatened and Endangered listings under CESA are categories for which there are no legal protection under the federal ESA.

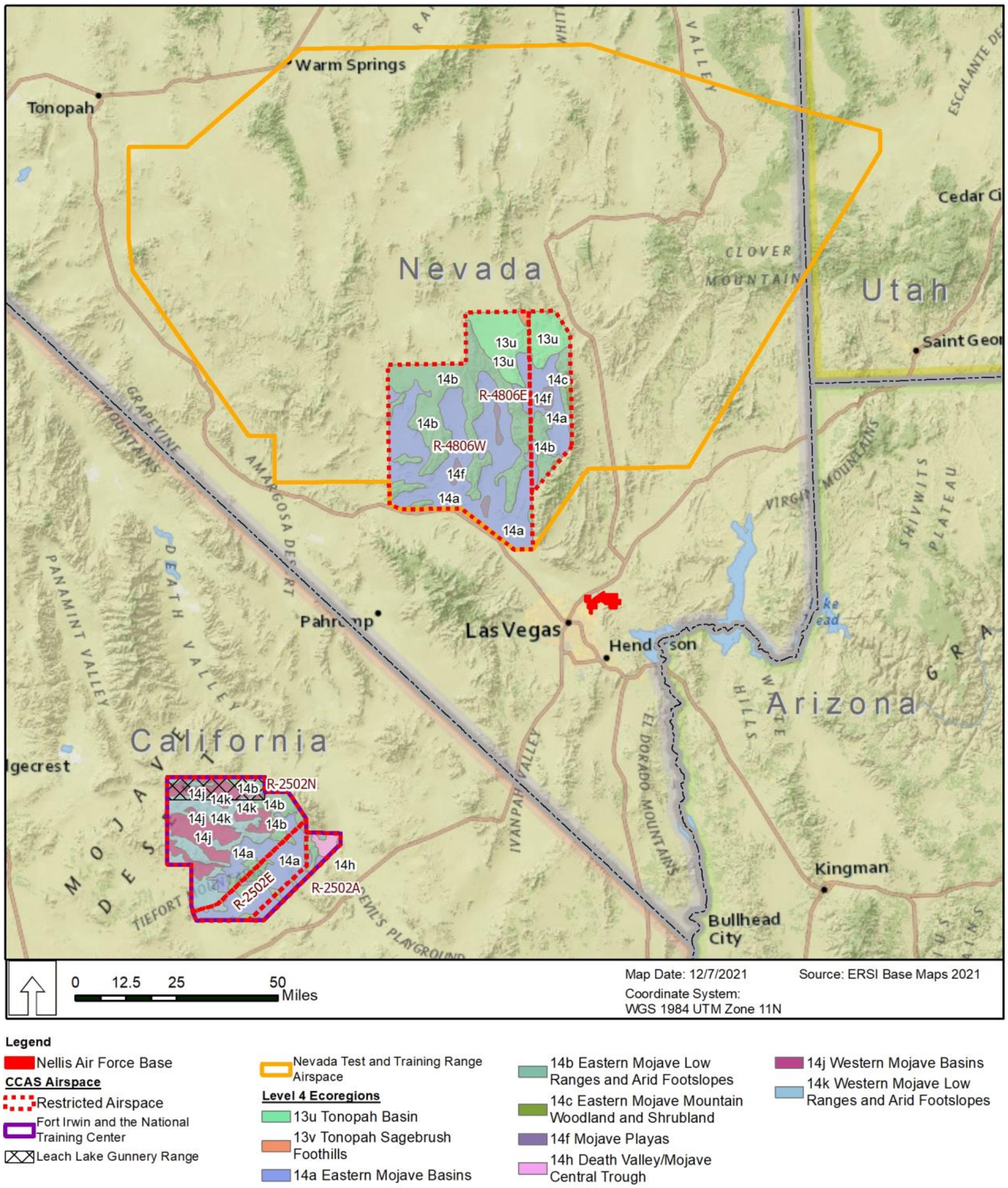

Figure 3-15 Level IV Ecoregions Beneath the Special Use Airspace.

The Nevada Department of Wildlife maintains a list of sensitive species, a category for which there is no legal protection under the federal ESA. The Nevada Revised Statutes and Nevada Administrative Code establish classifications for plants and wildlife regulated in the state. Nevada Administrative Code 527.010 includes the list of plants declared by the state forester as endangered with extinction. Nevada state sensitive species that could occur in the SUA and have been recorded as being present on the NTTR, Nellis AFB, and/or Creech AFB are the Brewer's sparrow, northern goshawk, sage thrasher, western mastiff bat, western red bat, California leaf-nosed bat, and Townsend's big-eared bat. Nevada state protected species that could occur in the SUA and have been recorded as present include the pallid bat, Allen's big-eared bat (*Idionycteris phyllotis*), fringed myotis (*Myotis thysanodes*), dark kangaroo mouse (*Microdipodops megacephalus*), Mexican free-tailed bat, and pale kangaroo mouse (*Microdipodops pallidus*). Spotted bat (*Euderma maculatum*) is a Nevada state-listed Threatened species that could occur in the SUA (Nellis AFB, 2019).

3.6.3 Environmental Consequences – Alternative 1

3.6.3.1 North Las Vegas and Jean Airports

Vegetation

Under Alternative 1, there would be no ground disturbing activities and as such no potential to disturb vegetation or habitats on VGT or ØL7; therefore, there would be no impacts on vegetation under Alternative 1.

Wildlife

There would be short- and long-term, minor adverse impacts on wildlife from increased aircraft operations and the associated increase in noise under both the High and Low Noise Scenarios. With an increase in air operations associated with CCAS aircraft at VGT and ØL7, there is an increased risk of BASH; however, this risk is minimal due to low populations of resident and migratory bird species and the distribution patterns of those species near the airports, as well as the airports' management of wildlife attractants program developed specifically to reduce attracting wildlife to the airfields. With the management of wildlife attractants program and the CCAS contractor's compliance with the FAA Wildlife Hazard Mitigation Program, potential impacts on birds and other wildlife from proposed CCAS aircraft strikes during air operations at VGT and ØL7 would be minor.

Threatened and Endangered Species

There is no suitable habitat on VGT for federally listed avian or mammal species. The airport is located in metropolitan Las Vegas and is surrounded by developed lands. Therefore, under both the High and Low Noise Scenarios there would be no effect on the southwestern willow flycatcher, Yuma Ridgway's rail, Mojave desert tortoise, or Pahrump poolfish from CCAS aircraft operations at VGT as these species would not be present in the area.

The CCAS aircraft operations at ØL7 would have no effect on Mojave desert tortoise if they were to occur beneath the extended noise contours as noise and aircraft movement under both the High and Low Noise Scenarios would not alter their behavior or their use of available habitat. There is no suitable habitat on ØL7 for federally listed avian species. There is no riparian or wetland habitats beneath the extended noise contours that could provide suitable foraging or nesting habitat for the southwestern willow flycatcher or Yuma Ridgway's rail. There is no potential for their occurrence proximate to ØL7. Therefore, CCAS aircraft operations at ØL7 under Alternative 1 would have no effect on the Mojave desert tortoise, the southwestern willow flycatcher, or the Yuma Ridgway's rail.

There would be minor impacts on Nevada sensitive species that could occur proximate to VGT and ØL7. Aircraft movement, increased noise from aircraft takeoffs and landings under both the High and Low Noise Scenarios, and the potential for bird/wildlife aircraft strikes would have a minor adverse long-term impact on breeding and foraging avian and mammal sensitive species under Alternative 1.

3.6.3.2 Special Use Airspace

Vegetation and Wildlife

Implementation of Alternative 1 in the SUA would not have impacts on vegetation communities or habitat under Alternative 1.

CCAS aircraft training operations would occur at low altitudes in the SUA and could adversely impact avian and mammal species. Low-flying aircraft could startle breeding and foraging birds and mammals; however, aircraft training has occurred in these SUA for decades, and most wildlife have likely become habituated to aircraft movement and noise. Most of the available literature on aircraft movement and noise on avian species focuses on raptors. A literature review of the effects of aircraft noise on raptors found that most raptors did not display adverse reactions to overflights and most negative responses were primarily associated with rotor-winged aircraft or jet aircraft that repeatedly passed within 0.5 mi of a nest (Manci et al., 1988). Ellis et al. (1991) found that reoccupancy and productivity of nesting raptors (i.e., common black hawk [*Buteogallus anthracinus*], Harris's hawk [*Parabuteo unicinctus*], zone-tailed hawk [*Buteo albonotatus*], red-tailed hawk [*Buteo jamaicensis*], golden eagle [*Aquila chrysaetos*], prairie falcon [*Falco mexicanus*], and bald eagle) were not adversely affected when exposed to low-level military jet aircraft. Unconfined wildlife responds to aircraft overflight differently and is dependent on type, duration, and the source of noise and, under most circumstances, has minimal biological significance (Manci et al., 1988; Radle, 2007; NPS, 2011). Further, golden eagles show little effects due to aircraft overflights; low-altitude aircraft are typically used for golden eagle nest surveys, and the USFWS has issued guidance on surveying golden eagle nests from aircraft (Pagel et al., 2010), and Air Force utilizes helicopters for annual golden eagle nest surveys on the NTTR following the USFWS survey guidance. Under both the High and Low Noise Scenarios, aircraft movement and noise may have a moderate adverse impact on foraging and breeding birds and mammals and would have a minor risk of BASH under Alternative 1.

Noise modeling for the CCAS aircraft training operations under both the High and Low Noise Scenarios (see **Section 3.3**) indicates that there would be no substantial increase in noise impacts in the SUA and that subsonic noise levels in the SUA would not change substantially from the baseline conditions; therefore, the minor change in noise levels as a result of CCAS training may have a minor, adverse impact on breeding, foraging, or nesting birds or mammals in the SUA.

Threatened and Endangered Species

Under Alternative 1, there would be no ground-disturbing activities under the SUA and potential impacts on threatened and endangered species would be associated with aircraft operations and the use of training munitions and ammunition only. Therefore, there would be no effect on listed amphibians, fish, mollusks, crustaceans, or plants. Aircraft movement, aircraft noise, and the use of munitions would not interact with these listed species, especially considering there is no substantial change in the noise emissions from CCAS training in the SUA.

Federal and state avian and mammal listed species are known to occur beneath and within the SUA proposed for use. The potential exists for species discussed in **Section 3.5.3** to be affected by aircraft operation, noise, and the use of training munitions and ammunition.

CCAS aircraft movement at low altitudes in the SUA "may affect but is not likely to adversely affect" federally listed bird and mammal species under Alternative 1 because the chance of effects is discountable. The California condor, southwestern willow flycatcher, yellow-billed cuckoo, and Yuma Ridgway's rail could be startled or, in the case of listed avian species (with the exception of the Yuma Ridgway's rail, which is a secretive wading bird that rarely flies at altitude), at risk from aircraft strikes from aircraft flying at very low altitudes. Aircraft noise in the SUA would have no effect on listed bird species as the subsonic noise levels would not change appreciably as a result of CCAS training.

Designated critical habitat for the Mojave desert tortoise occurs under the SUA (**Figure 3-16**). There would be no modification to Mojave desert tortoise designated critical habitat under Alternative 1. Further aircraft movement and noise under both the High and Low Noise Scenarios would not change the constituent elements supporting critical habitat. There would be no effect on designated critical habitat under the SUA.

While CCAS aircraft would be using ground-impacting training munitions for an estimated half of their sorties, these would be used on managed ranges. The use of munitions and ammunition for CCAS training in the SUA over Fort Irwin and the NTTR, and the potential effects of these training activities, such as increased risk of wildland fires, on federally listed species including the Mojave desert tortoise are described by the Fort Irwin 2014 Biological Opinion (FWS-SB-14BO363-14F0495) (Fort Irwin, 2020) and Programmatic Biological Opinion for Activities and Expansion of the Nevada Test and Training Range (08ENVS00-2018-F-0028) (Nellis AFB, 2018). Further, Fort Irwin is developing an endangered species management plan to address potential conflicts and recommendations for management of the desert tortoise and other sensitive wildlife and botanical resources (Fort Irwin, 2020). Therefore, the proposed CCAS operations in the SUA may affect but are not likely to adversely affect the southwestern willow flycatcher, yellow-billed cuckoo, and Yuma Ridgway's rail under Alternative 1. All potential effects on Mojave desert tortoise from CCAS training activities, including the use of training munitions and ammunition, and the accompanied increased risk of wildland fires from the use of training munitions and ammunition are covered under the installations' Biological Opinions and no further consultation with USFWS concerning the effects of CCAS activities on federally listed species would be required.

3.6.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to biological resources at the airport or under the SUA.

3.6.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Reasonably foreseeable actions on and off the civil airports would have negligible short-term adverse impacts on biological resources. Reasonably foreseeable future actions at the civil airports and nearby residential and commercial development are primarily infrastructure construction projects that would occur in mostly disturbed or developed areas. Noise and equipment movement during construction activities would disturb wildlife; however, the wildlife proximate to the civil airports are all common species typically found in developed areas of the Mojave and Great Basin Deserts and would return to available habitats following construction activities.

Reasonably foreseeable actions in the SUA, such as increased training operations that would increase noise and aircraft movement, especially additional aircraft operations at low altitudes, would have negligible short- and long-term, adverse impacts on wildlife.

3.7 LAND USE

3.7.1 Environmental Consequences Evaluation Criteria

Potential impacts on land use are based on the level of land use sensitivity in areas potentially affected by the alternatives as well as compatibility of those actions with existing conditions. In general, a land use impact would be adverse if it met one of the following criteria:

- inconsistency or noncompliance with existing land use plans or policies;
- precluded the viability of existing land use;
- precluded continued use or occupation of an area;
- incompatibility with adjacent land use to the extent that public health or safety is threatened; and
- conflict with planning criteria established to ensure the safety and protection of human life and property.

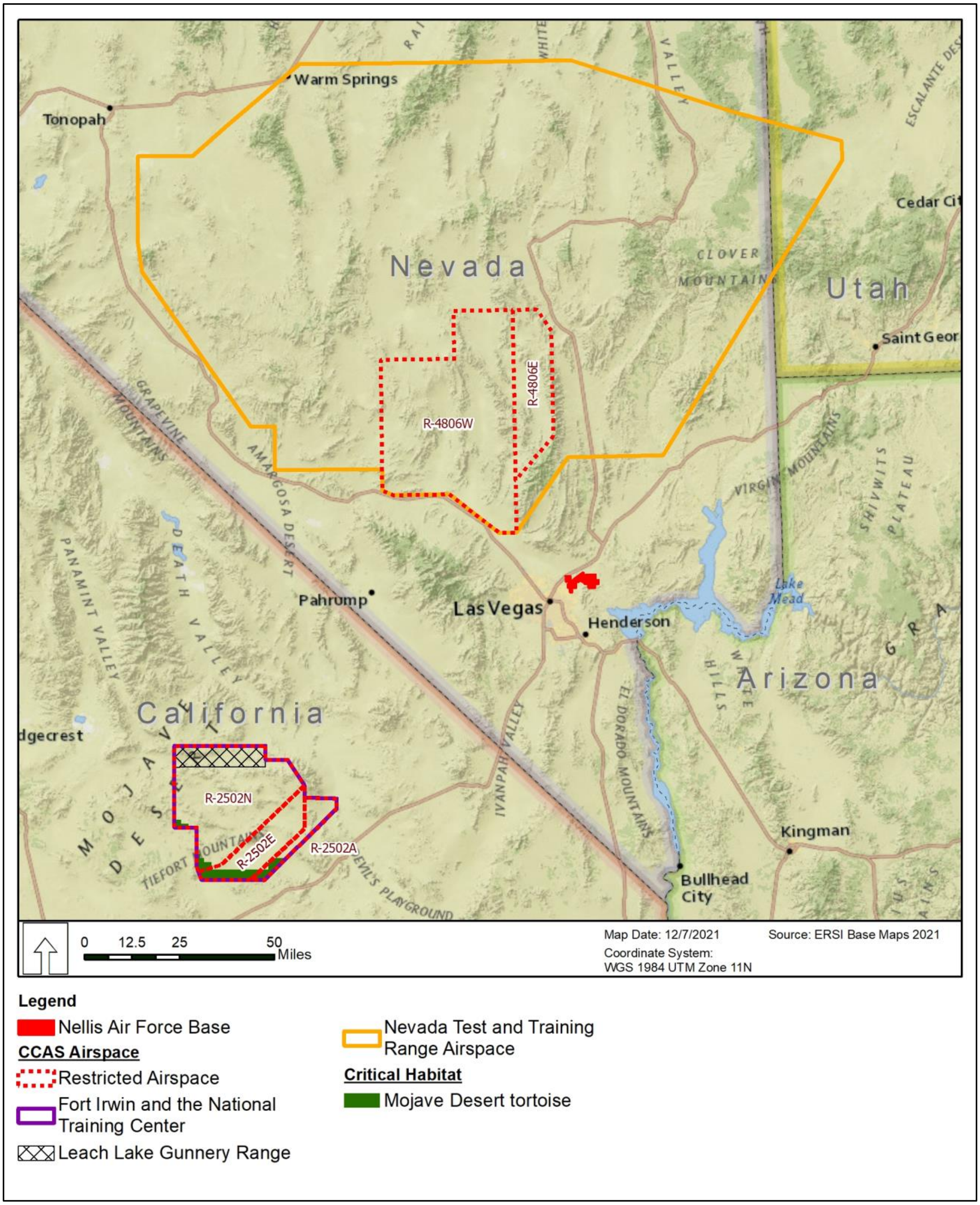

Figure 3-16 Designated Critical Habitat for Federally Listed Species in the Special Use Airspace.

3.7.2 Existing Conditions

3.7.2.1 North Las Vegas Airport

VGT is owned and controlled by the Clark County DOA and services approximately 483 aircraft operations daily. Off-airport land use (see **Figure 3-13**) within the VGT noise contours accounts for approximately 44 ac (**Table 3-27**) and most of the off-airport land use beneath the noise contours is categorized as Planned Residential Development (approximately 57 percent). Approximately 28 percent of the off-airport land use within the noise contours is categorized as Commercial. Commercial/Industrial and Industrial comprise 1 percent and 5 percent, respectively. The remaining off-airport land use, approximately 4 ac (9.3 percent), is categorized as Rural Residential and Single Family Residential.

Table 3-27
Off-Airport Land use within North Las Vegas Airport Existing Noise Contours

Land Use Description	65-dBA DNL Acreage	70-dBA DNL Acreage	75-dBA DNL Acreage	80-dBA DNL Acreage	85-dBA DNL Acreage	Total Acreage	Percent of Total
Commercial/ Industrial	0.2	0.0	0.0	0.0	0.0	0.2	1.0%
Commercial	6.3	4.1	1.3	0.4	0.0	12.1	27.5%
Industrial	1.7	0.5	0.1	0.0	0.0	2.3	5.0%
Rural Residential	1.0	0.0	0.0	0.0	0.0	1.0	2.3%
Single Family Residential	3.1	0.0	0.0	0.0	0.0	3.1	7.0%
Planned Residential Development	12.4	6.1	6.0	0.5	0.0	25.0	57.2%
Total	**24.7**	**10.7**	**7.4**	**0.9**	**0.0**	**43.7**	**100%**

dBA = A-weighted decibel; DNL = day-night average sound level

Most of the land use within the VGT RPZ is located within the airport boundary; however, a small portion of land, 4.9 ac, is located outside of the airport boundary. The Industrial land use category comprises 4.5 ac (92 percent) of the RPZ. The remaining land use within the RPZ includes less than 1 ac each of Commercial and Planned Unit Development. There is no incompatible land use within the VGT RPZ boundaries.

3.7.2.2 Jean Airport

The Jean Airport is a public use airport owned and operated by the Clark County DOA. ØL7 supports both aircraft operations and recreation aviation with approximately 40 aircraft operations daily. The existing noise contours are within ØL7 airport boundaries; therefore, there is no off-base land use within the noise contours. A total of 22.6 ac of land are within the boundaries of the ØL7 RPZ (see **Figure 3-14**). The General Highway Frontage District land use category comprises 9.6 ac (42 percent) of the RPZ. The remaining land use within the RPZ includes 9.3 ac (41 percent) of land categorized as Public Facility District, 3.6 ac of Open Land (16 percent); and less than 1 ac of land zoned Commercial (1 percent). There is no incompatible land use within the ØL7 RPZ boundaries.

3.7.3 Environmental Consequences – Alternative 1

3.7.3.1 North Las Vegas Airport

There would be no change to land use patterns, land ownership, land management plans, or special use areas in the ROI as a result of Alternative 1. The safety zones (e.g., RPZs) around the airfield would not change as a result of Alternative 1.

The area potentially affected by increased noise levels under Alternative 1 would expand (**Table 3-28**). Land zoned as residential use within the expanded noise contours under the High Noise Scenario would increase by an estimated 1,013 ac within the 65- to 70-dBA DNL noise contour, 1,184 ac within the 70- to 75-dBA DNL contour, 267 ac within the 75- to 80-dBA DNL contour, and 67 ac within the 80- to 85-dBA DNL contour (**Table 3-29**). The number of people that would be affected by the change in noise would also increase under the High Noise Scenario (**Table 3-30**). The change in noise in some areas surrounding VGT under the Alternative 1 High Noise Scenario may be significant, resulting in long-term incompatibility with existing residential land use.

Table 3-28
Increase in Day-Night Average Sound Level Area Potentially Affected on and Surrounding North Las Vegas Airport

Noise Level (dBA DNL)	Existing Area (acres)	High Noise Scenario Increase (acres)	Low Noise Scenario Increase (acres)
>65	219	5,459	113
>70	95	2,907	23
>75	27	1,462	3
>80	10	584	0
>85	3	231	1

Note: The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).

dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-29
Increase in Estimated Residential Land Use Within the Noise Contours at North Las Vegas Airport, High Noise Scenario

dBA DNL Noise Contour	Existing Residential (acres)	Change (acres)	Total (acres)
>65	16.4	1,013.3	1,029.7
>70	6.0	1,184.4	1,190.4
>75	2.6	265.6	268.2
>80	0.5	66.6	67.1
>85	0.0	0.0	0.0

dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-30
Increase in Estimated Population Potentially Affected on and Surrounding North Las Vegas Airport, High Noise Scenario

dBA DNL Noise Contour	Existing Population	Change	% Increase
>65	513	21,173	4,127
>70	262	9,663	3,688
>75	88	4,326	4,916
>80	26	1,734	6,669
>85	7	452	6,457

dBA = A-weighted decibel; DNL = day-night average sound level

Under the Alternative 1 Low Noise Scenario there would be an overall increase of newly exposed area affected by noise levels between 65- and 85-dBA DNL (see **Table 3-28**). Land zoned as residential use within the expanded noise contours under the Alternative 1 Low Noise Scenario would increase by an estimated 18 ac within the 65- to 70-dBA DNL noise contour, 6 ac within the

70- to 75-dBA DNL contour, 3 ac within the 75- to 80-dBA DNL contour, and 1 ac within the 80- to 85-dBA DNL contour (see **Table 3-31**). The number of people that would be affected by the change in noise would also increase under the Low Noise Scenario (**Table 3-32**). The change in noise in some areas surrounding VGT under the Alternative 1 Low Noise Scenario may result in moderate and long-term incompatibility with existing residential land use.

Table 3-31
Increase in Estimated Residential Land Use Within the Noise Contours at North Las Vegas Airport, Low Noise Scenario

dBA DNL Noise Contour	Existing Residential (acres)	Change (acres)	Total (acres)
>65	16.4	18.1	34.5
>70	6.0	6.2	12.2
>75	2.6	2.6	5.2
>80	0.5	0.5	1.0
>85	0.0	0.0	0.0

dBA = A-weighted decibel; DNL = day-night average sound level

Table 3-32
Increase in Estimated Population Potentially Affected on and Surrounding North Las Vegas Airport, Low Noise Scenario

dBA DNL Noise Contour	Existing Population	Change	% Increase
>65	513	193	38
>70	262	41	16
>75	88	7	8
>80	26	0	0
>85	7	0	0

dBA = A-weighted decibel; DNL = day-night average sound level

3.7.3.2 Jean Airport

There would be no change to land use patterns, land ownership, land management plans, or special use areas in the ROI as a result of the Alternative 1 at ØL7. The safety zones around the airfield would not change as a result of Alternative 1.

The area potentially affected by increased noise levels of the Alternative 1 High Noise Scenario would expand (**Table 3-33**). Under the Alternative 1 High Noise Scenario at ØL7 there would be an overall increase of newly exposed area affected by noise levels between the 65- and 85-dBA DNL (**Table 3-33**); however, there is no land zoned as residential that would be affected by the increased noise contours. The number of people that would be affected by the change in noise would slightly increase under the High Noise Scenario (**Table 3-34**). There would be no impacts on land use at ØL7 under the Alternative 1 High Noise Scenario.

Table 3-33
Increase in Day-Night Average Sound Level Area Potentially Affected on and Surrounding Jean Airport

Noise Level (dBA DNL)	Existing Area (acres)	High Noise Scenario Increase (acres)	Low Noise Scenario Increase (acres)
>65	1	2,178	0
>70	0	719	0
>75	0	232	0
>80	0	20	0
>85	0	0	0

Note: The amounts shown are cumulative (i.e., the acreage within the >85-dBA contour is also within all the lower noise level contours).
dBA = A-weighted decibel; DNL = day-night average sound level

The Alternative 1 Low Noise Scenario at ØL7 would not result in an increase of newly exposed area affected by noise levels (see **Table 3-30**). There is no land zoned as residential that would be affected by the increased noise contours and no populations would be affected by the change in noise increase under the Low Noise Scenario. There would be no impacts on land use under the Alternative 1 Low Noise Scenario at ØL7.

Table 3-34
Increase in Estimated Population Potentially Affected on and Surrounding Jean Airport for the High Noise Scenario

dBA DNL Noise Contour	Existing Population	Change	% Increase
>65	0.0	19	1,900
>70	0.0	3	300
>75	0.0	1	100
>80	0.0	0	0
>85	0.0	0	0

dBA = A-weighted decibel; DNL = day-night average sound level

3.7.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to land use at the airport or under the SUA.

3.7.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1, in addition to reasonably foreseeable future actions on and off VGT and ØL7, would not change land use; however, Alternative 1 could be incompatible with existing residential land uses proximate to VGT. Other reasonably foreseeable future actions would not further increase the area of residential land exposed to increased aircraft noise.

3.8 SOCIOECONOMICS – INCOME AND EMPLOYMENT

3.8.1 Environmental Consequences Evaluation Criteria

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from proposed CCAS. The level of impacts associated with the proposed CCAS expenditure is assessed in terms of direct impacts on the local economy and related impacts on other socioeconomic resources (e.g., employment). The magnitude of potential impacts can vary greatly, depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area but might have significant impacts in a rural region. In addition, if potential socioeconomic changes resulting from other factors were to result in substantial shifts in population trends or in adverse impacts on regional spending and earning patterns, they may be considered adverse.

All potential impacts on socioeconomics – income and employment would be limited to the communities surrounding the airport. There would be no socioeconomic impacts in the SUA as CCAS training in the airspace would not substantially change the noise environment, would primarily occur over undeveloped and sparsely populated lands, and would not alter the income and employment in these areas.

3.8.2 Existing Conditions

3.8.2.1 North Las Vegas Airport and Jean Airports

The unemployment rate for Clark County was 4.1 percent in 2019 (US Bureau of Labor Statistics, 2021a). This was slightly higher than the 2019 unemployment rate for Nevada (3.9 percent) and the unemployment rate for the United States (3.7 percent) (US Bureau of Labor Statistics, 2021b). The median household income in 2019 was $59,340 for Clark County, which was nearly the same as that for Nevada ($60,365) but slightly less than the median household income for the United States ($62,843). The rate of persons in poverty in 2019 was 13.3 percent for Clark County, which was slightly higher than the rate of persons in poverty in Nevada (12.5 percent) and substantially higher than the rate of persons in poverty in the United States (10.5 percent) (US Census Bureau, 2021).

VGT supports 919 jobs and contributes $133 million of economic output to Clark County (Oxford Economics, 2019). ØL7 supports recreational aviation including GA aircraft, aerobatic aircraft, gliders, ultralights, and skydiving (Oxford Economics, 2019).

3.8.3 Environmental Consequences – Alternative 1

3.8.3.1 North Las Vegas and Jean Airports

The 35 contracted CCAS maintenance personnel and pilots would represent an insignificant increase in the total employment in Clark County, Nevada, which supports a workforce of approximately 1.4 million people and with a population of approximately 2.3 million (US Census Bureau, 2021). Therefore, there would be no impact on income and employment from the addition of CCAS personnel at VGT and ØL7 under Alternative 1. Expenditures in the region would occur by purchasing fuel, equipment, and materials to support the CCAS sorties. These increased expenditures would provide a long-term, potentially minor, beneficial impact on the ROI through increased payroll tax revenue and the purchase of additional equipment, materials, and fuel needed for aircraft operations and maintenance under Alternative 1.

As described in **Section 3.3**, under Alternative 1 High Noise Scenario, residential and commercial properties proximate to VGT would experience a major increase in noise that would be well above the threshold of annoyance. These substantial increases in noise to thousands of residences and businesses would reduce the value of existing residential homes and commercial properties near VGT and adversely impact the desirability to live and work proximate to VGT. Income on leases from residential and commercial properties would likely decline in areas within the expanded noise contours. Resale values of these properties would also decline. Alternative 1 under the High Noise Scenario would have a potentially significant adverse impact on residential and commercial property values as well as income generated from leases and property sales in areas proximate to VGT in Clark County, Nevada. Under the High and Low Noise Scenarios at ØL7 and the Low Noise Scenario at VGT, noise levels under Alternative 1 would not exceed 65-dBA DNL, even though there would be increase noise levels at some POIs greater than 3-dBA DNL. Therefore, noise levels at nearby residential and commercial properties would not rise above the threshold of annoyance and would not have an adverse impact on property values or income from payment on leased properties.

3.8.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to income or employment at the airport or in the Clark County area.

3.8.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1 and reasonably foreseeable future actions at the civil airports, would not result in an adverse impact on the Clark County, Nevada region's income or employment. Other construction projects at the airports or in the vicinity of the airports would result in short term beneficial impacts as local sales and payroll taxes would increase. Alternative 1 would increase annual expenditures in the local economy of the selected airport in the long term. This, along with other proposed projects at the airports, regionally, and by local governments, would create an economic boost to the region where CCAS would occur and would represent a long-term, minor, beneficial impact on the local economy of the airfield chosen.

3.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

3.9.1 Environmental Consequences Evaluation Criteria

Environmental justice analysis applies to potential disproportionate effects on minority, low-income, youth, and elderly populations. Environmental justice issues could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon minority, low-income, youth, or elderly populations. Ethnicity and poverty status were examined and compared to state and national data to determine if these populations could be disproportionately affected by the alternatives. The potential for disproportionate impacts on minority, low-income, youth, and elderly populations would be limited to the civil airports and the noise contours associated with CCAS sorties at the airfields.

3.9.2 Existing Conditions

3.9.2.1 North Las Vegas and Jean Airports

An evaluation of minority and low-income populations in Clark County forms a baseline for the evaluation of the potential for disproportionate impacts on these populations from Alternative 1 at VGT and ØL7. In 2019, Clark County had a higher percentage of minorities (58.3 percent) in the population compared to Nevada (51.8 percent), and the United States (39.9 percent) (US Census Bureau, 2021). A total of 31.6 percent of the Clark County population identified as Hispanic or Latino, which is higher than the population of that minority group in Nevada (29.2 percent), and the United States (18.5 percent).

The rate of persons in poverty in 2019 was 13.3 percent for Clark County, which was slightly higher than the rate of persons in poverty in Nevada (12.5 percent) but substantially higher than the rate of persons in poverty in the United States (10.5 percent) (US Census Bureau, 2021).

In 2019, there was no substantial difference between the percent of the population that were children in Clark County (23.0 percent), the state of Nevada (22.5 percent), and the United States (22.3 percent) (US Census Bureau, 2021). In 2019, the percent of the population that were elderly in Clark County (15.1 percent) was slightly less than percent of the population that were elderly in the state of Nevada (16.1 percent) and the United States (16.5 percent).

3.9.3 Environmental Consequences – Alternative 1

3.9.3.1 North Las Vegas and Jean Airports

Under Alternative 1, the increase in the number of personnel at VGT and ØL7 supporting the CCAS sorties would not result in a disproportionate impact on minorities, low-income populations, protection of children, or elderly populations because there is adequate housing, community resources, and community services in the Clark County – Las Vegas Metropolitan Area to support the increase in personnel. The 35 additional personnel and their families supporting the CCAS requirement moving into the Clark County area where the population is 2.3 million, would not disproportionately affect the availability of these resources to minorities, low-income populations, or children under Alternative 1.

Under the High Noise Scenario at VGT there would be major noise increases proximate to the airport. A total of 28 Clark County Census Tracts overlap with the Alternative 1 High Noise Scenario 65-dBA DNL noise contour for VGT. Of those 28, 12 Census Tracts had a higher percentage of the population that identifies as minority than in Clark County and 17 Census Tracts had a higher percentage of the population that identifies as minority than in the state of Nevada. Further, of those 28, 18 Census Tracts had a higher percentage of the population in poverty than in Clark County, and 19 Census Tracts had a higher percentage of the population in poverty than in the state of Nevada. Therefore, there would be disproportionate impacts from noise on minority and low-income populations under Alternative 1 High Noise Scenario. Noise levels under the Low Noise Scenario at VGT and both noise scenarios at ØL7 would not exceed 65-dBA DNL at any POIs; therefore, there would not be any disproportionate impacts on minority or low-income communities under these noise scenarios at these airports.

The percentage of the population that is under the age of 18 and over the age of 65 in Clark County are similar to that of Nevada and the United States. Further, the noise environment would remain below the 65-dBA DNL threshold at all schools, childcare facilities, and elderly care facilities proximate to VGT and ØL7 under both noise scenarios. Therefore, there would be no disproportionate impacts on youth or elderly populations from aircraft noise.

3.9.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to minority, low-income, and youth populations at the airport.

3.9.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

There are no reasonably foreseeable projects, on and off the civil airports, that in combination with the Alternative 1 would have a disproportionate impact on minority and low-income populations, children and the elderly.

3.10 CULTURAL RESOURCES

3.10.1 Environmental Consequences Evaluation Criteria

Adverse impacts on cultural resources might include physically altering, damaging, or destroying all or part of a resource or altering characteristics of the resource that make it eligible for listing in the National Register of Historic Places (NRHP). Those effects can include introducing visual or audible elements that are out of character with the property or its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property’s historic significance. For the purposes of this EA, an effect is considered adverse if it alters the integrity of a NRHP-listed or eligible resource or if it has the potential to adversely affect Traditional Cultural Properties and the practices associated with the property.

3.10.2 Existing Conditions

3.10.2.1 North Las Vegas and Jean Airports

VGT was opened as Sky Haven Airport, a small, private airfield on 7 December 1941. During World War II, the airport was used by GA flyers and pilots from the Las Vegas Army Air Base for off duty flying. The airfield exchanged private ownership several times after the war. In the 1960s, it was expanded to include an administration building, restaurant, and motel. In the 1970s, VGT formally became a reliever airport for McCarran International Airport. Clark County purchased VGT in 1987 before making a considerable investment to upgrade the airport, including construction of a new 15,600-square-foot terminal building completed in 1992 (VGT, n.d.).

ØL7 consists of a multiuse structure, a storage shed, a tenant office trailer, and the associated ramps and runways. The entire facility as currently configured was rebuilt in the late 1990s.

VGT and ØL7 are effectively modern airports. No archaeological sites are known to be recorded within the boundaries of either airport. No traditional cultural properties or sacred sites were identified as a result of tribal consultation.

3.10.2.2 Special Use Airspace

There are two historic properties under the Fort Irwin NTC/R-2502 Area of Potential Effects (APE) listed in the NRHP (**Table 3-35**) (NPS, n.d.). There are no historic properties under the NTTR/R-4806 APE.

Table 3-35
National Register of Historic Places Listed Resources Under the Special Use Airspace Proposed for Use[1]

Airspace Name	Resource	Reference No.
Fort Irwin National Training Center/R-2502N	Harmony Borax Works	74000339
Fort Irwin National Training Center/R-2502N	Pioneer Deep Space Station	85002813

Note:

[1] The condition is defined as "likely but not guaranteed to be extant" (or not guaranteed to be standing). National Park Service Cultural Resources GIS Program, National Register of Historic Places data confirms both Harmony Borax Works and Pioneer Deep Space Station are located beneath Airspace R-2502-N.

In addition to the historic resources formally listed on the NRHP, additional archaeological sites (quarry and resource extraction sites, remains of pueblos, pithouse villages, burned rock middens, rock cairns, ranch headquarters, line camps, early homesteads, railroad stations and work camps, rock art sites, etc.), architectural resources (standing homes, stores, farmsteads, mining-related structures, etc.) may lie under the SUA. Because the undertaking does not include modifications to the existing airspace, these resources are not addressed in this EA.

Seventeen tribes were contacted regarding their knowledge of traditional cultural resources and sacred sites under the SUA including the Benton Paiute Indian Tribe, Big Pine Paiute Tribe, Bishop Paiute Tribe, Chemehuevi Indian Tribe, Colorado River Indian Tribes, Duckwater Shoshone Tribe, Ely Shoshone Tribe, Fort Independence Indian Tribe, Ft. Mojave Tribe, Kaibab Band of Southern Paiutes, Las Vegas Paiute Tribe, Lone Pine Paiute-Shoshone Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah, Timbisha Shoshone Tribe, and Yomba Shoshone Tribe.

There are no tribal lands in California or Nevada under the SUA.

3.10.3 Environmental Consequences – Alternative 1

3.10.3.1 North Las Vegas and Jean Airports

No ground disturbance would take place as part of the Proposed Action; therefore, no archaeological resources would be disturbed or otherwise affected. No traditional cultural resources or sacred sites have been identified at VGT or ØL7. VGT and ØL7 are modern airports; no significant buildings greater than 50 years old are included in the APE for use as part of the Proposed Action. Therefore, the Proposed Action under Alternative 1 would have no effect on, and consequently no impact to, cultural resources.

3.10.3.2 Special Use Airspace

There are two NRHP-listed architectural resources recorded under the SUA. Noise analysis of the High and Low Noise Scenarios for implementing CCAS in the SUA indicates that the noise environment would only be slightly louder than the existing airspace noise environment. Therefore, the Proposed Action under Alternative 1 would have no effect on, and consequently no impact to, cultural resources.

3.10.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to cultural resources at the airport or under the SUA.

3.10.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1 and reasonably foreseeable future actions for CCAS on and/or adjacent to VGT and ØL7 are not anticipated to result in incremental impacts on cultural resources, including archaeological resources, architectural resources, and Native American Traditional Cultural Properties.

3.11 HAZARDOUS MATERIALS AND WASTES, ENVIRONMENTAL RESTORATION PROGRAM, AND TOXIC SUBSTANCES

3.11.1 Environmental Consequences Evaluation Criteria

Impacts on HAZMAT management would be considered adverse if the federal action resulted in noncompliance with applicable federal, state, and local regulations or increased the amounts generated or procured beyond a selected airport's waste management procedures and capacities.

3.11.2 Existing Conditions

3.11.2.1 North Las Vegas Airport

The North Las Vegas FBO is the FBO at VGT. North Las Vegas FBO provides full-service 100LL and Jet A fuel services as well as 100LL self-service fueling. The North Las Vegas FBO also provides oxygen service, nitrogen tire service, ground power units, and aircraft oil. VGT is operated by the Clark County DOA. Aircraft fueling activities only occur on paved surfaces and are performed via the self-service island or by mobile refueler. All spills are reported to the Customer Service Desk and promptly cleaned up by the responsible party. All mobile refueling vehicles are required to be equipped with spill response materials that are adequate for a minimum of a 100-gal spill. The DOA maintains a spill response cart placed near the tank farm and also at the self-service fueling island (Clark County DOA, 2009b).

The majority of the storage and application of aircraft de-icing and anti-icing fluids is conducted by DOA Line Service staff. All spent de-icing and anti-icing fluids that reach the ground surface are collected and properly disposed of (Clark County DOA, 2009b).

VGT is not on the National Priorities List of Superfund Sites, nor are any sites within the surrounding area.

The USEPA radon zone for Clark County, including VGT, is Zone 3 (low indoor radon screening levels, predicted indoor average level less than 2.0 pCi/L) (USEPA, 2021a).

3.11.2.2 Jean Airport

There is no FBO at ØL7; 100LL and Jet A fuel are provided via self-service pumps. Aircraft fueling only occurs on paved surfaces and is performed at the self-service island, which is owned and maintained by the DOA. The DOA maintains a spill response cart, which is located near the self-service island, to aid in fuel clean-up activities. All spills, including those from routine aircraft maintenance work, are reported to the HND Customer Service Desk and are promptly cleaned up by the responsible party (Clark County DOA, 2009a).

ØL7 is not on the National Priorities List of Superfund Sites, nor are any sites within the surrounding area.

The USEPA radon zone for Clark County, including ØL7, is Zone 3 (USEPA, 2021a).

3.11.3 Environmental Consequences – Alternative 1

3.11.3.1 North Las Vegas and Jean Airports

Under Alternative 1, maintenance and operations of six CCAS aircraft could contribute to the volume of HAZMAT stored and used at VGT and the volume of hazardous wastes generated. An emergency fuel dump could occur in the SUA; however, due to the infrequent nature of emergency fuel dumps as well as in-place safety precautions, these emergency procedures are not likely to have adverse effects.

Hazardous Materials and Wastes

The quantity of HAZMAT such as oil, 100LL fuel, hydrazine, hydraulic fluid, solvents, sealants, and antifreeze would increase with the operations and maintenance of CCAS aircraft at VGT Airport. HAZMAT required for the CCAS aircraft and used by contract personnel would be procured, controlled, and tracked by the VGT FBO and the selected private contractor. Only HAZMAT needed for operations and maintenance at the smallest quantities would be used and HAZMAT used for CCAS aircraft at VGT would be properly tracked and remain compliant with federal, state, and local regulations. Therefore, there would be a minor impact from the increased HAZMAT use to support the CCAS sorties at VGT. It is not anticipated that fueling and maintenance of CCAS aircraft would occur at ØL7; therefore, there would be no impact from increased HAZMAT use to support CCAS at ØL7.

Asbestos-Containing Materials and Lead-Based Paint

Existing facilities at VGT and ØL7 would be used to support CCAS operations. It is not anticipated that any construction or renovation would be required that could disturb ACM and LBP and there would be no impacts from ACM and LBP. Should construction or renovation be required, the potential to disturb ACM and LBP would be analyzed in separate environmental analysis as required.

Radon

There is a low potential for radon to pose a health hazard at VGT and ØL7 and no new construction is proposed. Therefore, no impact from radon would be anticipated. Should construction or renovation be required, radon risk would be analyzed in separate environmental analysis as required.

Polychlorinated Biphenyls

Existing facilities at VGT and ØL7 would be used to support CCAS operations. It is not anticipated that any construction or renovation would be required that could disturb PCB-containing materials (e.g., fluorescent lighting fixtures). Therefore, there would be no impacts from PCB. Should construction or renovation be required, the potential to disturb PCBs would be analyzed in separate environmental analysis as required.

3.11.4 Environmental Consequences – No Action Alternative

Under the No Action Alternative, there would be no addition of CCAS personnel or aircraft located at the proposed airports. CCAS operations would not occur in the SUA. No changes would occur to hazardous waste, hazardous materials, or toxic substances at the airport.

3.11.5 Reasonably Foreseeable Future Actions and Other Environmental Considerations

Alternative 1, along with the reasonably foreseeable future actions on and off the civil airports, are not anticipated to result in significant impacts on the management of hazardous materials and wastes and toxic substances. Storage and quantity of jet fuels, solvents, oil, and other HAZMAT supporting CCAS operations would increase in addition to reasonably foreseeable future projects; however, this increase would result in a minor adverse effect. The proposed CCAS, in addition to other reasonably foreseeable projects, would require compliance to hazardous waste management procedures in accordance with federal, state, and local regulations; therefore, no impacts on the storage and disposal of hazardous waste would be expected. The addition of the proposed CCAS would not require any modifications to existing structures at this time nor pose any risks from ACM, LBP, or PCB disturbance. No reasonably foreseeable significant adverse impacts on hazardous materials and wastes and toxic substances are expected.

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APPENDIX A
INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATIONS

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A.1 INTRODUCTION

Scoping is an early and open process for developing the breadth of issues to be addressed in an Environmental Assessment (EA) and for identifying significant concerns related to an action. Per the requirements of Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, as amended by EO 12416, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action or alternatives were notified during the development of this EA.

The Intergovernmental Coordination Act and EO 12372 require federal agencies to cooperate with and consider state and local views in implementing a federal proposal. Through the coordination process, the 57th Fighter Wing sent letters to potentially interested and affected government agencies, government representatives, elected officials, and interested parties potentially affected by the Proposed Action. The recipient mailing list and agency and intergovernmental coordination letters and responses are included in this Appendix.

A.1.1 Agency Consultations

Implementation of the Proposed Action involves coordination with several organizations and agencies. Since the Proposed Action would occur at civilian airports, the Air Force coordinated early with the Federal Aviation Administration. The Federal Aviation Administration has agreed to participate in the development of this EA, provide contact information for the civilian airports to be analyzed in the EA, and share baseline information to support the environmental analysis but will not act as a Cooperating Agency. Compliance with Section 7 of the Endangered Species Act, and implementing regulations (50 Code of Federal Regulations [CFR] Part 402), requires communication with the United States Fish and Wildlife Service in cases where a federal action could affect listed threatened or endangered species, species proposed for listing, or candidates for listing. The primary focus of this consultation is to request a determination of whether any of these species occur in the proposal area. If any of these species is present, a determination would be made of any potential adverse effects on the species. Should no species protected by the Endangered Species Act be affected by the Proposed Action or alternatives, no additional consultation is required. Letters have been sent to the appropriate United States Fish and Wildlife Service offices as well as relevant state agencies informing them of the proposal and requesting data regarding applicable protected species. Coordination occurred with the appropriate state government agencies and planning districts for review and comment. Compliance with Section 106 of the National Historic Preservation Act (NHPA) and implementing regulations (36 CFR Part 800) will be accomplished through the State Historic Preservation Offices. Letters have been sent to the appropriate State Historic Preservation Offices.

A.1.2 Government-to-Government Consultation

The NHPA and its regulations in 36 CFR Part 800 direct federal agencies to consult with federally recognized Indian tribes when a proposed or alternative action has the potential to affect tribal lands or properties of religious and cultural significance to a tribe. Consistent with the NHPA, Department of Defense Instruction 4710.02, *DoD Interactions with Federally-Recognized Tribes*, and Department of Air Force Instruction 90-2002, *Interactions with Federally Recognized Tribes*, federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action or alternatives have been invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from the National Environmental Policy Act consultation or the interagency coordination process, and it requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The Nellis Air Force Base (AFB) point of contact for Native American tribes is the Base Commander. The Nellis AFB point of contact for consultation with the Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation is the Cultural Resources Manager. Government-to-government consultation is included this Appendix.

A.2 PUBLIC AND AGENCY REVIEW OF ENVIRONMENTAL ASSESSMENT

A Notice of Availability of the Draft EA and Proposed Finding of No Significant Impact (FONSI) was published in the *Las Vegas Review-Journal*, *Ridgecrest Daily Independent*, and *Victorville Daily Press* inviting the public to review and comment on the Draft EA during the 30-day review period.

Copies of the Draft EA and Proposed FONSI were made available for review on the Nellis AFB Environmental website at https://www.nellis.af.mil/About/Partnerships/Environment/ and at the following locations:

- Alamo Branch Library, 100 South First West, Alamo, Nevada 89001
- Alexander Library, 1755 West Alexander Road, North Las Vegas, Nevada 89032
- Beatty Library District, 400 North Fourth Street, Beatty, Nevada 89003
- Barstow Branch Library, 304 East Buena Vista Street, Barstow, California 92311
- Pahrump Community Library, 701 East Street, Pahrump, Nevada 89048
- Ridgecrest Branch Library, 131 East Las Flores Avenue, Ridgecrest, California 93555
- Sunrise Library, 5400 Harris Avenue, Las Vegas, Nevada 89110
- Tonopah Library, 167 South Central Street, Tonopah, Nevada 89049

Those who were unable to access these documents online were asked to call Public Affairs at (702) 652-2750 or email 99ABW.PAOutreach@us.af.mil to arrange alternate access.

The Air Force is aware of the potential impact of the ongoing coronavirus (COVID-19) pandemic on the usual methods of access to information and ability to communicate, such as the mass closure of local public libraries and challenges with the sufficiency of an increasingly overburdened internet. The Air Force seeks to implement appropriate additional measures to ensure that the public and all interested stakeholders have the opportunity to participate fully in this EA process. Accordingly, please do not hesitate to contact the Nellis AFB Environmental Impact Analysis Process Program Manager directly at (702) 652-9366 to assist in resolving issues involving access to the documents.

A.3 INTERGOVERNMENTAL AND STAKEHOLDER COORDINATION

A.3.1 Scoping Letters to United States Fish and Wildlife Service

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

13 October 2021

Mr. Charles W. Rowland, Jr
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Mr. Scott Sobiech, Field Supervisor
US Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad CA 92008

Dear Mr. Sobiech

In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) National Environmental Policy Act regulations, the Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. Taking into account various environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Therefore, pursuant to 50 Code of Federal Regulations § 402.12(c), we request additional information on what listed, proposed, and candidate species or designated or proposed critical habitat may be in the Proposed Action area. A location map (Figure 1) is attached for your review. This information and comments on the Proposed Action will help us develop the scope of our environmental review.

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS includes contracting for the support of an estimated six contractor aircraft to fly an estimated 1,350 annual sorties in support of the 6 CTS. CCAS would support 6 CTS training operations from a combination of two potential regional civilian airports in Nevada: CCAS operations would be based at North Las Vegas Airport but would land at/take off from Jean Airport to load/download and arm/dearm ordnance to provide CCAS services (Figure 1). Training activities would use Fort Irwin NTC/R-2502 Range (primary range) or NTTR/R-4806 Range (backup range) to emulate military aircraft performing close air support mission profiles (Figure 1).

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The EA will assess the potential environmental consequences associated with the Proposed Action and the No Action Alternative. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the environmental analysis.

We intend to provide you with access to the Draft EA when the document is completed. Please inform us if bound copies are needed or if someone else with your agency other than you should be notified of the availability of the Draft EA. Please forward written issues or concerns within 30 days of receipt of this letter to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB Nevada 89191, or by email at tod.oppenborn@us.af.mil or by phone at (702) 652-9366. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely

ROWLAND.CHARLES.W.JR.1073438124 Digitally signed by ROWLAND.CHARLES.W.JR.1073438124 Date: 2021.10.25 12:27:00 -07'00'

CHARLES W. ROWLAND, JR.
Chief, Portfolio Optimization

Attachment:

1. Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

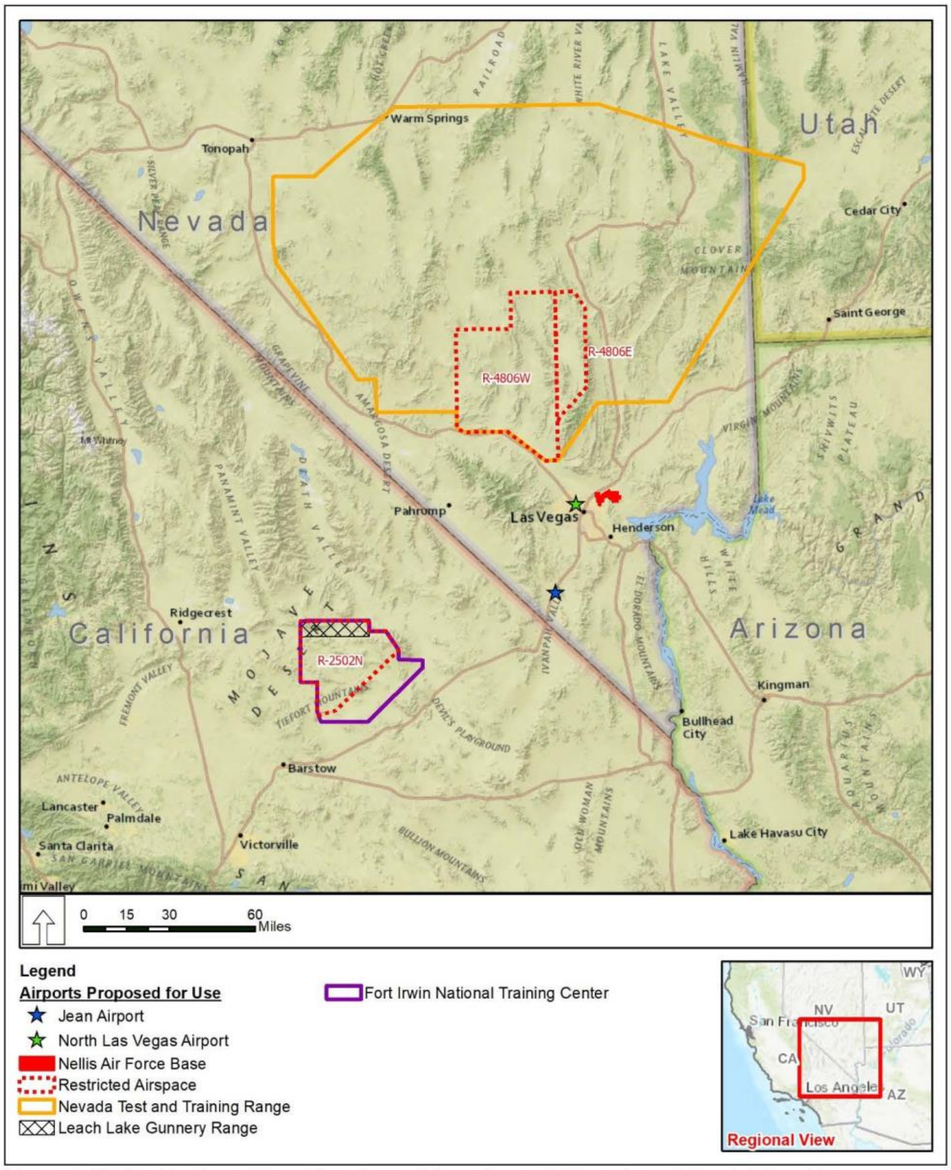

Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

13 October 2021

Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Mr. Glen Knowles, Field Supervisor
US Fish and Wildlife Service
Southern Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas NV 89130

Dear Mr. Knowles

In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) National Environmental Policy Act regulations, the Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. Taking into account various environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Therefore, pursuant to 50 Code of Federal Regulations § 402.12(c), we request additional information on what listed, proposed, and candidate species or designated or proposed critical habitat may be in the Proposed Action area. A location map (Figure 1) is attached for your review. This information and comments on the Proposed Action will help us develop the scope of our environmental review.

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Sincerely

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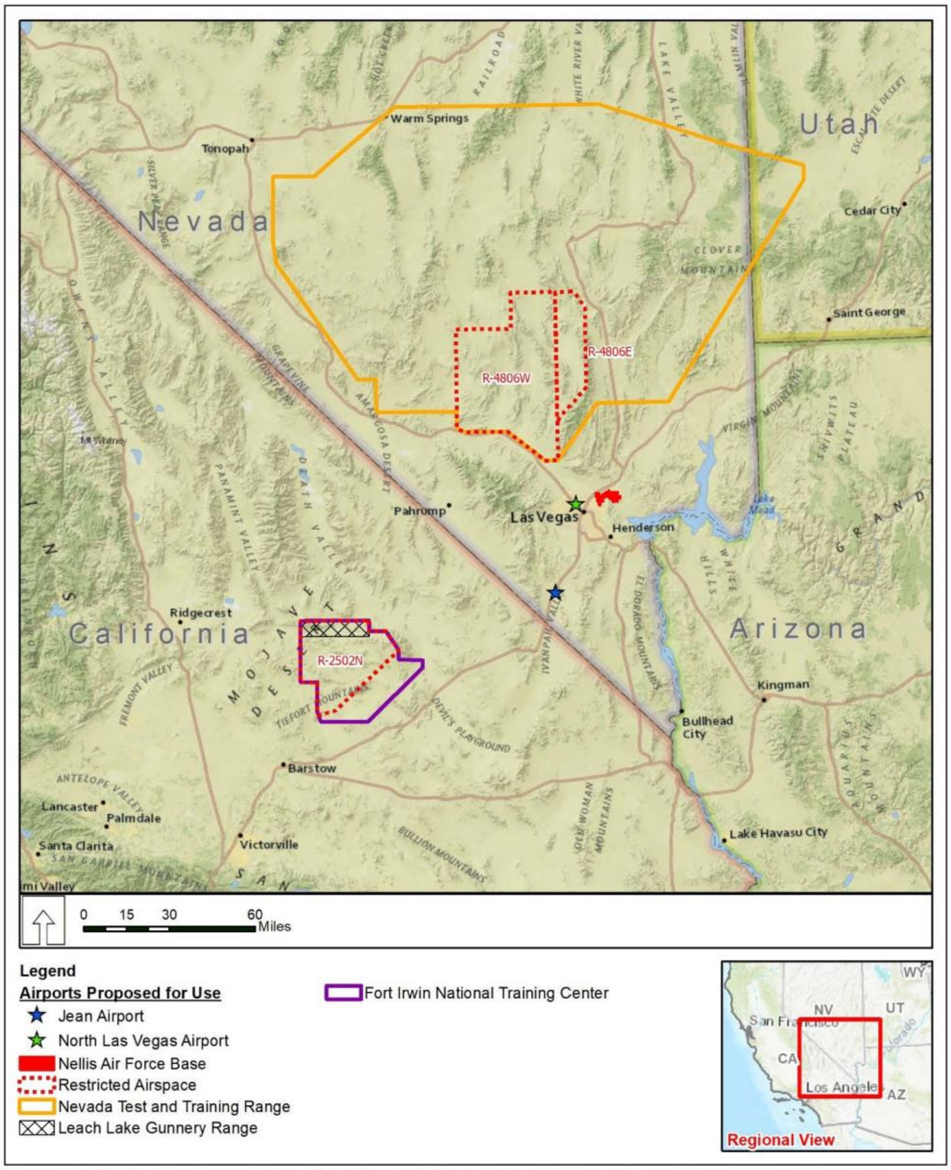

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DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

13 October 2021

Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Ms. Yvette Converse
Field Office Supervisor
Utah Ecological Services Field Office, USFWS
2369 Orton Circle, Suite 50
West Valley City UT 84119

Dear Ms. Converse

In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) National Environmental Policy Act regulations, the Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. Taking into account various environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Therefore, pursuant to 50 Code of Federal Regulations § 402.12(c), we request additional information on what listed, proposed, and candidate species or designated or proposed critical habitat may be in the Proposed Action area. A location map (Figure 1) is attached for your review. This information and comments on the Proposed Action will help us develop the scope of our environmental review.

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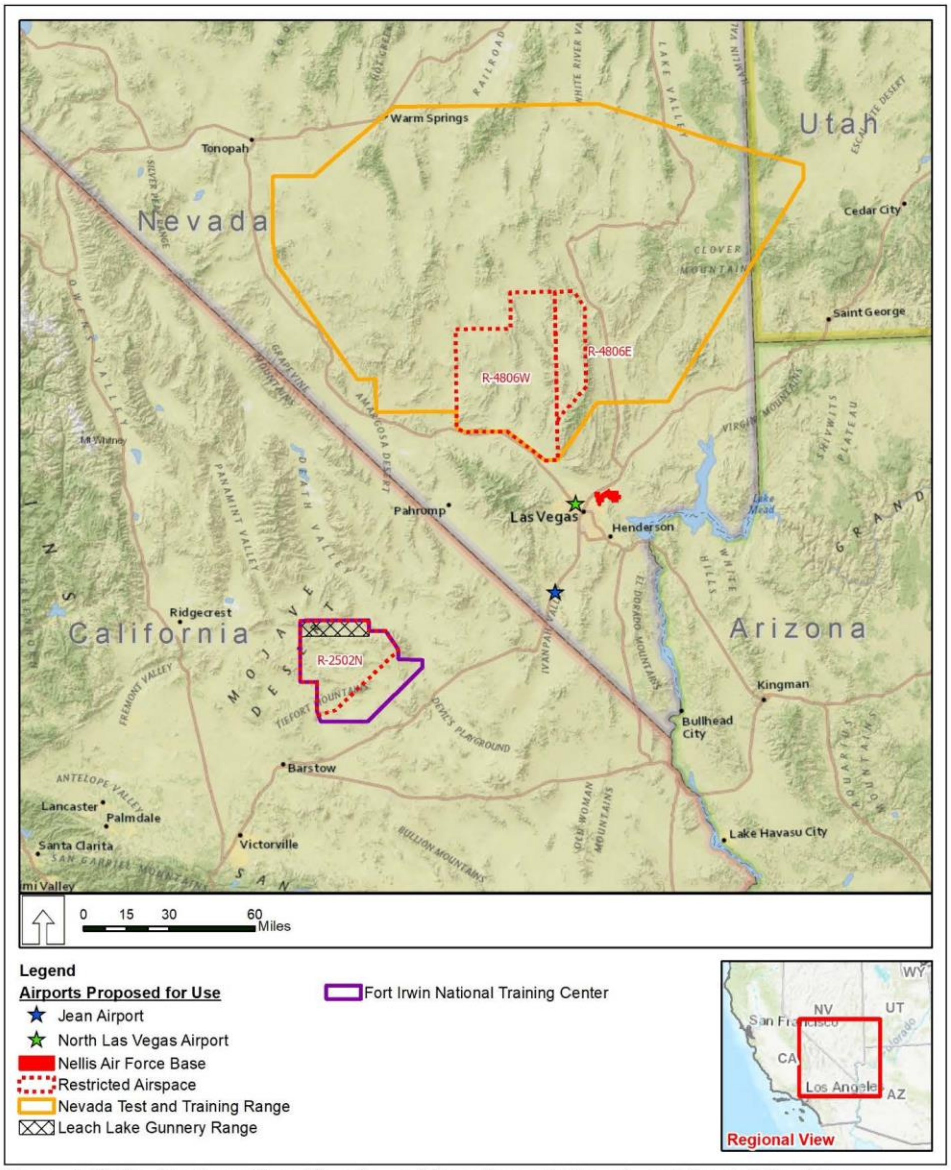

Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

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A.3.2 Scoping Letters to State Historic Preservation Offices

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

Mr. Scott R. Tarbox
Environmental Element Chief
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento CA 95816

Dear Ms. Polanco

In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) National Environmental Policy Act regulations, the Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. Taking into account various potential environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Accordingly, the Air Force seeks consultation with your office.

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The Area of Potential Effects (APE) for the Proposed Action is Jean Airport and North Las Vegas Airport in Nevada, and the existing special use airspace where military training

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operations would occur as listed above and shown in Figure 1. Pursuant to 36 CFR Sections 800.4, we request your assistance in identifying concerns you may have regarding the definition of the APE and any information regarding the potential presence of historic properties in the affected area.

The EA will assess the potential environmental consequences associated with the Proposed Action and the No Action Alternative. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the environmental analysis as well as concurrence with our APE for the Proposed Action.

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SCOTT R. TARBOX, GS-14, DAF
Environmental Element Chief

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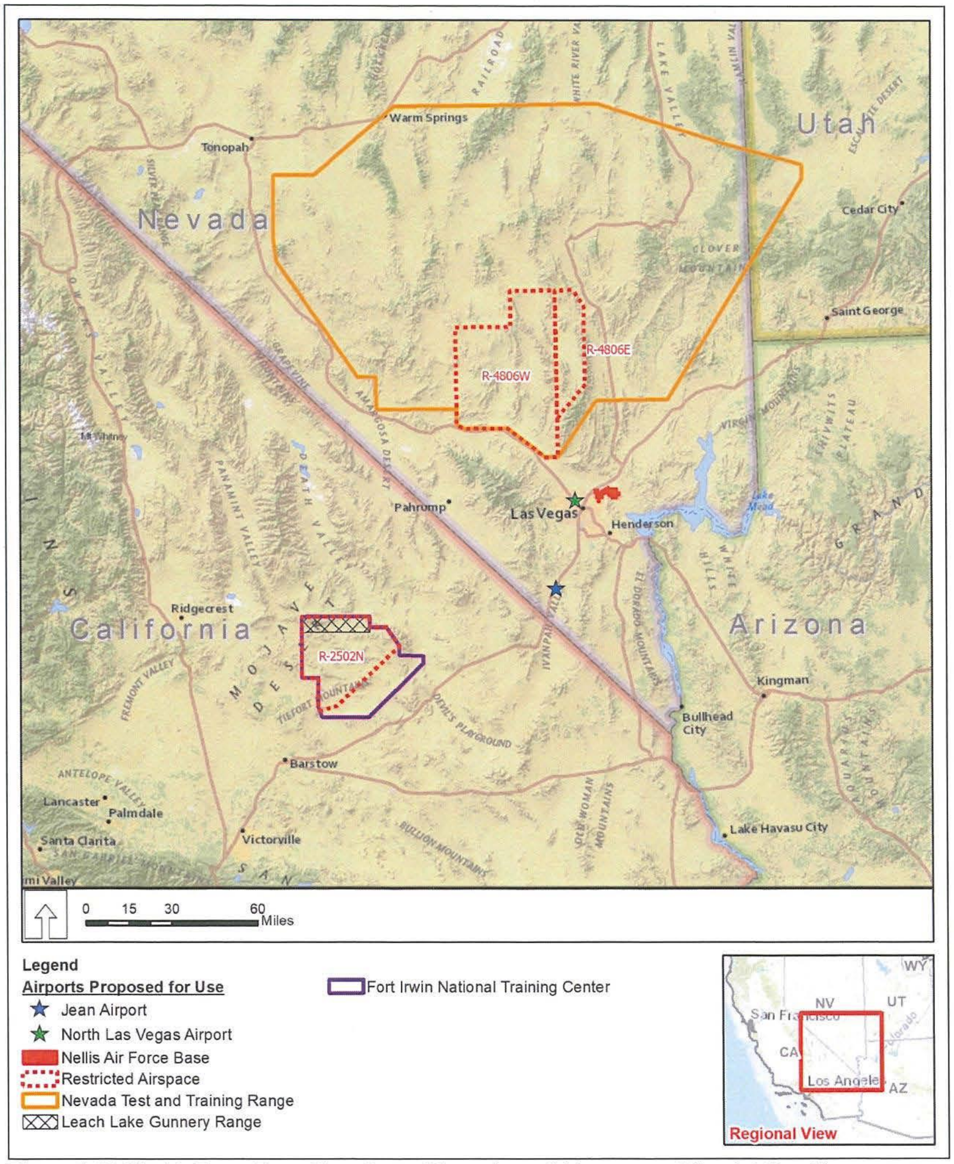

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DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

Mr. Scott R. Tarbox
Environmental Element Chief
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Ms. Rebecca Palmer
State Historic Preservation Officer
Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City NV 89701

Dear Ms. Palmer

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Sincerely

SCOTT R. TARBOX, GS-14, DAF
Environmental Element Chief

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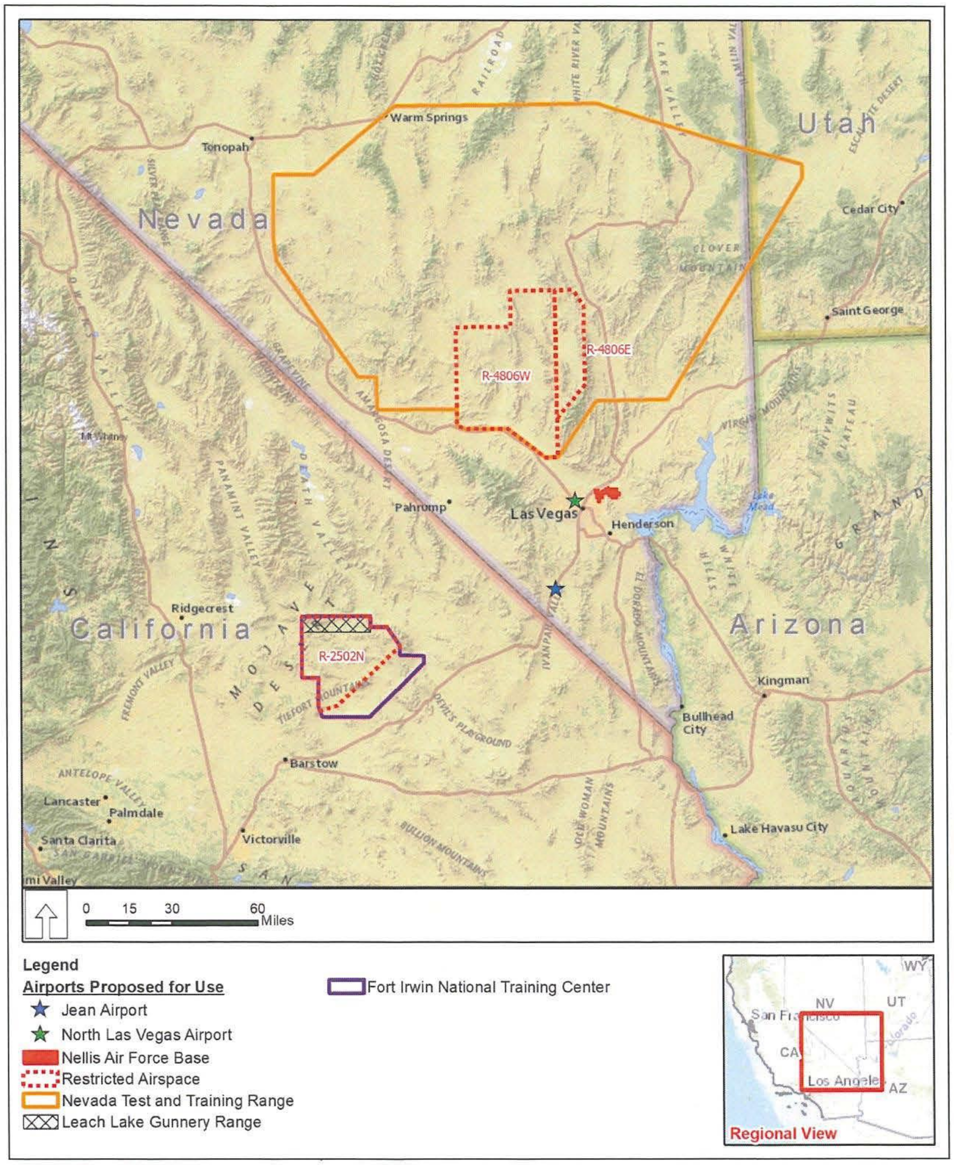

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DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

Mr. Scott R. Tarbox
Environmental Element Chief
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Mr. Robin Reed
Deputy State Historic Preservation Officer
Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City NV 89701

Dear Mr. Reed

In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) National Environmental Policy Act regulations, the Air Force is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. Taking into account various potential environmental concerns, the Air Force is engaging early with the appropriate resource and regulatory agencies as it formulates the undertaking. Accordingly, the Air Force seeks consultation with your office.

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS includes contracting for the support of an estimated six contractor aircraft to fly an estimated 1,350 annual sorties in support of the 6 CTS. CCAS would support 6 CTS training operations from a combination of two potential regional civilian airports in Nevada: CCAS operations would be based at North Las Vegas Airport but would land at/take off from Jean Airport to load/download and arm/dearm ordnance to provide CCAS services (Figure 1). Training activities would use Fort Irwin National Training Center (NTC)/R-2502N Range (primary range) or Nevada Test and Training Range (NTTR)/R-4806W and R-4806E Ranges (backup ranges) to emulate military aircraft performing close air support mission profiles (Figure 1).

The Area of Potential Effects (APE) for the Proposed Action is Jean Airport and North Las Vegas Airport in Nevada, and the existing special use airspace where military training operations would occur as listed above and shown in Figure 1. Pursuant to 36 CFR Sections 800.4, we request

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your assistance in identifying concerns you may have regarding the definition of the APE and any information regarding the potential presence of historic properties in the affected area.

The EA will assess the potential environmental consequences associated with the Proposed Action and the No Action Alternative. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the environmental analysis as well as concurrence with our APE for the Proposed Action.

We intend to provide you with access to the Draft EA when the document is completed. Please inform us if someone else with your agency other than you should be notified of the availability of the Draft EA. Please forward written issues or concerns within 30 days of receipt of this letter to Mr. Michael Chodoronek, 6020 Beale Avenue, Nellis AFB Nevada 89191, or by email at michael.chodoronek@us.af.mil or by phone at (702) 652-5813. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely

SCOTT R. TARBOX, GS-14, DAF
Environmental Element Chief

Attachment:
Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support

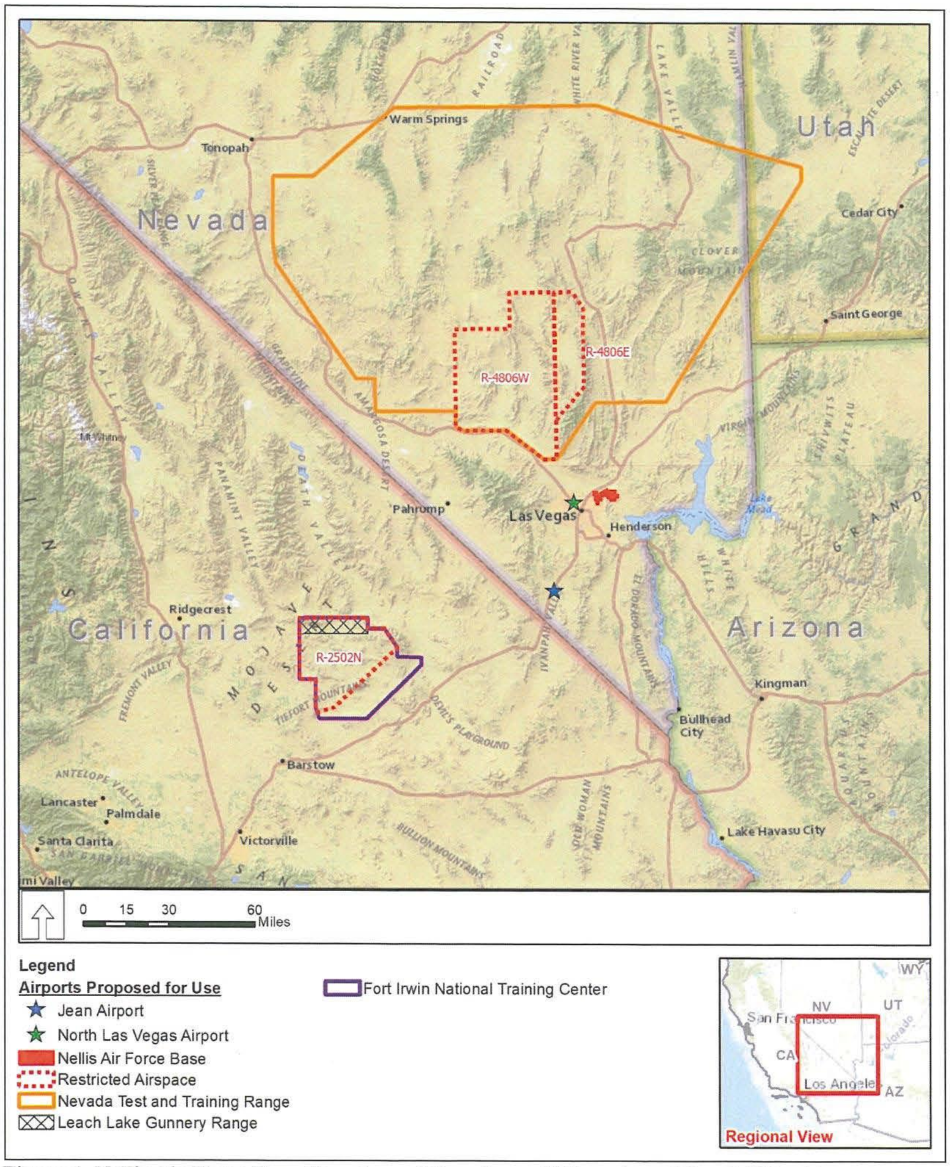

Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

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A.3.3 Sample Scoping Letter to State and Federal Agencies

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

13 October 2021

Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

Field Manager
BLM - Pahrump Field Office
4701 North Torrey Pines Drive
Las Vegas NV 89130

Dear Sir or Madam

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. The EA is being prepared in accordance with the National Environmental Policy Act, (42 United States Code §§ 4321 through 4347), the Council on Environmental Quality regulations (40 Code of Federal Regulations), and the Air Force's Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989).

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS includes contracting for the support of an estimated six contractor aircraft to fly an estimated 1,350 annual sorties in support of the 6 CTS. CCAS would support 6 CTS training operations from a combination of two potential regional civilian airports in Nevada: CCAS operations would be based at North Las Vegas Airport but would land at/take off from Jean Airport to load/download and arm/dearm ordnance to provide CCAS services (Figure 1). Training activities would use Fort Irwin NTC/R-2502 Range (primary range) or NTTR/R-4806 Range (backup range) to emulate military aircraft performing close air support mission profiles (Figure 1).

The EA will assess the potential environmental consequences associated with the Proposed Action and the No Action Alternative. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the environmental analysis.

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We intend to provide you with access to the Draft EA when the document is completed. Please inform us if bound copies are needed or if someone else with your agency other than you should be notified of the availability of the Draft EA. Please forward written issues or concerns within 30 days of receipt of this letter to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB Nevada 89191, or by email at tod.oppenborn@us.af.mil or by phone at (702) 652-9366. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely

ROWLAND.CHARLES.W.JR.1073438124
Digitally signed by ROWLAND.CHARLES.W.JR.1073438124
Date: 2021.10.25 12:29:33 -07'00'

CHARLES W. ROWLAND, JR.
Chief, Portfolio Optimization

Attachment:

1. Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

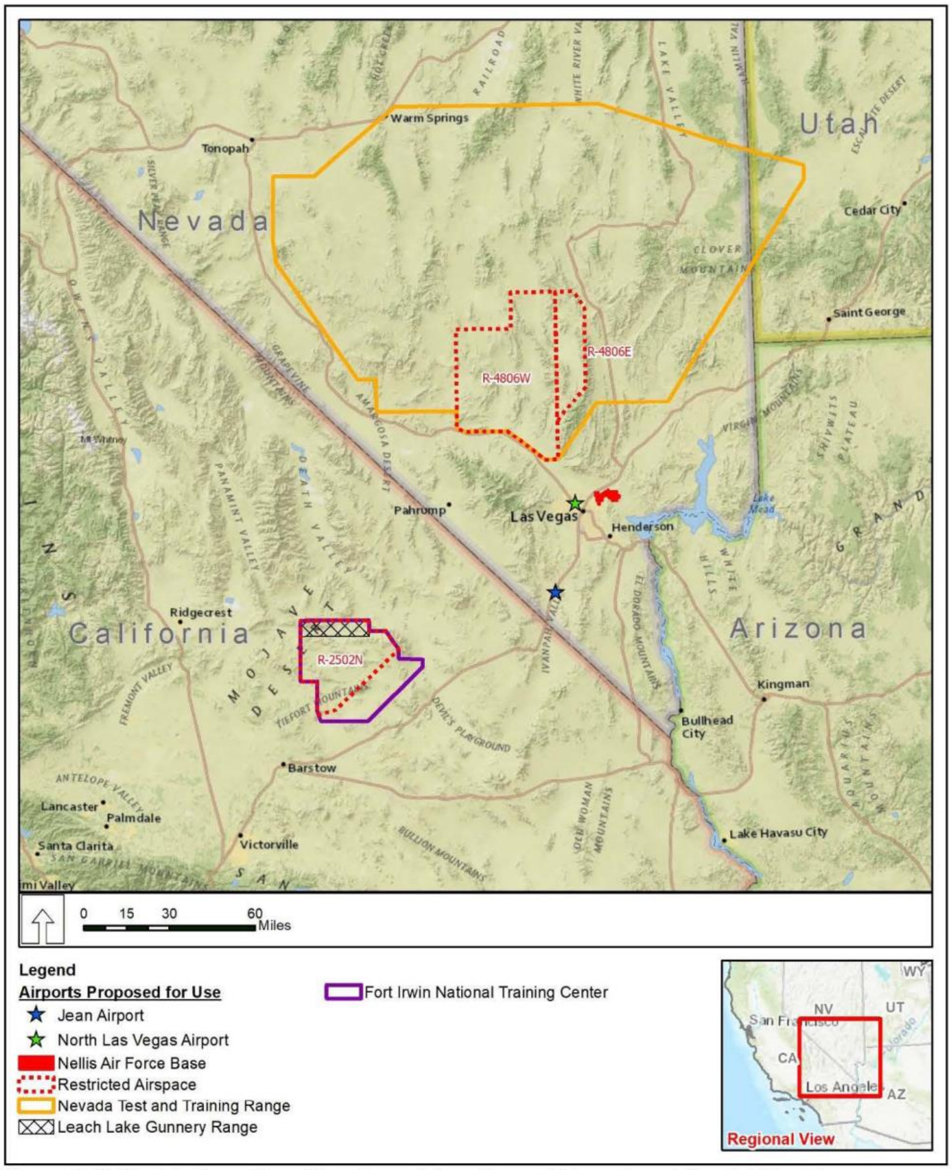

Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

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A.4 STAKEHOLDER/PUBLIC DISTRIBUTION LIST

Field Manager
BLM - Pahrump Field Office
4701 North Torrey Pines Drive
Las Vegas NV 89130

Ray Dotson
State Conservationist
USDA Natural Resource Conservation Service
Nevada State Office
1365 Corporate Boulevard
Reno NV 89502

Field Station Manager
US Geological Survey
Las Vegas Field Station
160 N. Stephanie Street
Henderson NV 89074

US Army Corps of Engineers
Arizona-Nevada Area Office
3636 N. Central Avenue, Suite 900
Phoenix AZ 85012-1939

Douglas Furtado
District Manager
BLM - Battle Mountain District Office
50 Bastian Road
Battle Mountain NV 89820

City of North Las Vegas
Community Development, Planning & Zoning Division
2250 Las Vegas Boulevard, Suite 114
North Las Vegas NV 89030

Martyn James
Director of Planning Services
Regional Transportation Commission of Southern Nevada
600 S. Grand Central Parkway, Suite 350
Las Vegas NV 89106

M.J. Maynard
Chief Executive Officer
Regional Transportation Commission of Southern Nevada
600 S. Grand Central Parkway, Suite 350
Las Vegas NV 89106

Marc Jordan
Director
City of North Las Vegas
Community Development, Planning & Zoning Division
2250 Las Vegas Boulevard North, Suite. 114
Las Vegas NV 89030

Yolanda King
County Manager
Clark County Commission
500 South Grand Central Parkway, Sixth Floor
Las Vegas NV 89109

Marilyn Kirkpatrick
Chairman
Clark County Board of Commissioners
500 S. Grand Central Parkway, Sixth Floor
Las Vegas NV 89155

Nelson Stone
Clark County Planning Commission
500 S. Grand Central Parkway
PO Box 551741
Las Vegas NV 89155-1741

Edward Frasier III
Commissioner
Clark County Department of Comprehensive Planning
500 S. Grand Central Parkway
PO Box 551741
Las Vegas NV 89155

Randy Tarr
Assistant County Manager
Clark County Department of Air Quality & Environmental Management
500 S. Grand Central Parkway
Las Vegas NV 89155

Danielle Ford
Trustee, District F
Clark County School District
5100 W. Sahara Avenue
Las Vegas NV 89146

Office Manager
Nevada Department of Wildlife
Southern Region - Henderson Office
744 South Racetrack Road
Henderson NV 89015

Cayenne Engel
Resource Management Officer
Nevada Division of Forestry - Las Vegas Office
4747 Vegas Drive
Las Vegas NV 89108

Nevada Division of State Lands
901 S. Steward Street, Suite 5003
Carson City NV 89701

Administrator Kristin Szabo
Nevada Natural Heritage Program
901 S. Stewart Street, Suite 5002
Carson City NV 89701

Jack Robb
Deputy Director of Resource Management
Nevada Department of Wildlife – Headquarters
6980 Sierra Center Parkway #120
Reno NV 89511

Chief Christine Andres
Nevada Department of Environmental Protection
375 E. Warm Springs Road, Suite 200
Las Vegas NV 89119

D. Bradford Hardenbrook
Supervisory Habitat Biologist
Nevada Department of Wildlife – Southern Region
4747 Vegas Drive
Las Vegas NV 89108

Scott Carey
Nevada State Clearinghouse - Division of State Lands
901 S. Stewart Street, Suite 5003
Carson City NV 89701-5246

Bureau of Land Management - Barstow Area Office
2601 Barstow Road
Barstow CA 92311

Bureau of Land Management - Ridgecrest Area Office
300 S. Richmond Road
Ridgecrest CA 93555

John O'Gara
Naval Air Weapons Station
Environmental Office Code 8G0000D
#1 Administration Circle
China Lake CA 93555

USDA Forest Service
Pacific Southwest Region
Sequoia National Forest
900 West Grand Avenue
Porterville CA 93257

US Department of the Interior
National Park Service
Death Valley National Park
PO Box 579
Death Valley CA 92328

US Environmental Protection Agency
Region IX - EIS Review Section
75 Hawthorne Street
San Francisco CA 94105

Bret Banks
Executive Director
Antelope Valley Air Quality Management District
43301 Division Street, Suite 206
Lancaster CA 93535

City of Lancaster - Planning Department
44933 N. Fern Avenue
Lancaster CA 93534

Glen Stephens
Eastern Kern County APCD
2700 M Street, Suite 302
Bakersfield CA 93301-2370

Kern County Department of Planning and Development Services
2700 M Street, Suite 100
Bakersfield CA 93301-2370

Executive Director Brad Poiriez
Mojave Desert AQMD
14306 Park Avenue
Victorville CA 92392

Muhammad Bari
Director of Public Works
HQ NTC Ft. Irwin - Attn: AFZJ-PW-EV
PO Box 105097, Building 285
Fort Irwin CA 92310-5097

California State Clearinghouse
Office of Planning and Research
PO Box 3044
Sacramento CA 95812-3044

San Bernardino County
Land Use Services Department Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino CA 92415

Sierra Club - Antelope Valley Group
PO Box 901875
Palmdale CA 93590

California Department of Fish and Wildlife
1416 Ninth Street, 12th Floor
Sacramento CA 95814

California Department of Parks and Recreation
PO Box 942896
Sacramento CA 94296

Governor Steve Sisolak
State of Nevada
555 East Washington Avenue, Suite 5100
Las Vegas NV 89101

Lt. Governor Kate Marshall
State of Nevada
555 East Washington Avenue, Suite 5500
Las Vegas NV 89101

Clark County Sheriff's Office
301 East Clark Avenue, Suite 100
Las Vegas NV 89101

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento CA 95691

The Honorable Susie Lee
365 Cannon HOB
Washington DC 20510

The Honorable Catherine Cortez Masto
United States Senate
313 Hart Senate Office Building
Washington DC 20510

The Honorable Alex Padilla
United States Senate
Russell Senate Office Building
Suite B03
Washington DC 20510

The Honorable Dianne Feinstein
United States Senate
331 Hart Senate Office Building
Washington DC 20510

The Honorable Tom McClintock
Roseville Office
2200A Douglas Boulevard, Suite 240
Roseville CA 95661

The Honorable Jay Obernolte
1029 Longworth House Office Building
Washington DC 20515

The Honorable Devin Nunes
Visalia Office
113 North Church Street, Suite 208
Visalia CA 93291

The Honorable Kevin McCarthy
Bakersfield Office
4100 Empire Drive, Suite 150
Bakersfield CA 93309

The Honorable David Valadao
1728 Longworth HOB
Washington DC 20515

The Honorable Steve Horsford
Las Vegas Office
2250 N. Las Vegas Boulevard, Suite 500
North Las Vegas, NV 89030

The Honorable Mike Garcia
1535 Longworth HOB
Washington DC 20515

Kevin DesRoberts
Acting Project Leader
US Fish and Wildlife Service
Desert National Wildlife Refuge Complex
16001 Corn Creek Road
Las Vegas NV 89124

The Honorable Chris Stewart
US House of Representatives
166 Cannon House Office Building
Washington DC 20515

Scott Baird
Executive Director
Utah Department of Environmental Quality
PO Box 144810
Salt Lake City UT 84114-4810

Mark Fuller
Project Leader
Utah Fish and Wildlife Conservation Office
1380 South 2350 West
Vernal UT 84078-2042

The Honorable Mitt Romney
United States Senate
354 Russell Senate Office Building
Washington DC 20510

The Honorable Michael Lee
United States Senate
361A Russell Senate Office Building
Washington DC 20510

Glen Knowles
Field Supervisor
US Fish and Wildlife Service
Southern Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas NV 89130

Scott Sobiech
Field Supervisor
US Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad CA 92008

Yvette Converse
Field Office Supervisor
US Fish and Wildlife Service
Utah Ecological Services Field Office
2369 Orton Circle, Suite 50
West Valley City UT 84119

Robin Reed
Deputy State Historic Preservation Officer
Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City NV 89701

Rebecca Palmer
State Historic Preservation Officer
Nevada State Historic Preservation Office
901 S. Stewart Street, Suite 5004
Carson City NV 89701

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento CA 95816

Chris Merritt
State Historic Preservation Officer
Utah Division of State History
300 S. Rio Grande Street
Salt Lake City UT 84101

Libraries

Las Vegas-Clark County Library District
833 Las Vegas Boulevard North
Las Vegas NV 89101

Tonopah Library
167 South Central Street
Tonopah NV 89049

Pahrump Community Library
701 East Street
Pahrump NV 89048

Beatty Library District
400 North Fourth Street
Beatty NV 89003

Alamo Branch Library
100 South First West
Alamo NV 89001

Ridgecrest Branch Library
131 East Las Flores Avenue
Ridgecrest CA 93555

Kern River Valley Branch Library
7054 Lake Isabella Boulevard
Lake Isabella CA 93240

California City Branch Library
9507 California City Boulevard
California City CA 93505

Lone Pine Branch Library
127 Bush Street
Lone Pine CA 93545

Barstow Branch Library
304 East Buena Vista Street
Barstow CA 92311-2806

Tribes

Chairperson Shane Saulque
Benton Paiute Indian Tribe
25669 Highway 6, PMB I
Benton CA 93512

Chairperson James Rambeau, Sr.
Big Pine Paiute Tribe
PO Box 700
Big Pine CA 93513

Elder Ross Stone
Big Pine Paiute Tribe
PO Box 700
Big Pine CA 93513

Chairperson Tilford Denver
Bishop Paiute Tribe
50 Tusu Lane
Bishop CA 93514

Chairperson Charles Wood
Chemehuevi Indian Tribe
PO Box 1976
Havasu Lake CA 92363

Chairperson Amelia Flores
Colorado River Indian Tribes
26600 Mohave Road
Parker AZ 85344

Chairperson Rodney Mike
Duckwater Shoshone Tribe
PO Box 140068
Duckwater NV 89314

Chairwoman Diana Buckner
Ely Shoshone Tribe
250 Heritage Drive #B
Ely NV 89301

Chairperson Carl Dahlberg
Fort Independence Indian Tribe
PO Box 67
Independence CA 93526

Chairperson Timothy Williams
Ft. Mojave Tribe
500 Merriman Avenue
Needles CA 92363

Chairwoman Ona Segundo
Kaibab Band of Southern Paiutes
HC 65 Box 2
Fredonia AZ 86022

Chairperson Curtis Anderson
Las Vegas Paiute Tribe
#1 Paiute Drive
Las Vegas NV 89106

Chairperson Richard Button
Lone Pine Paiute-Shoshone Tribe
PO Box 747
Lone Pine CA 93545

Chairperson Laura Watters
Moapa Band of Paiutes
PO Box 340
Moapa NV 89025

Richard Arnold
Native American Coordinator
Pahrump Paiute Tribe
PO Box 3411
Pahrump NV 89041

Chairperson George Gholson
Timbisha Shoshone Tribe
621 West Line Street, Suite 109
Bishop CA 93514

Vice-Chairperson Daryl Brady
Yomba Shoshone Tribe
HC 61, Box 6275
Austin NV 89310

Chairperson Ronnie Snooks
Yomba Shoshone Tribe
HC 61, Box 6275
Austin NV 89310

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A.5 TRIBAL AND STAKEHOLDER CORRESPONDENCE

From: Shanan Anderson [redacted]
Sent: Thursday, December 2, 2021 1:39 PM
To: OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP [redacted]
Subject: [Non-DoD Source] Environmental Assessment

Hi Mr. Oppenborn

I am writing about the consultation letter received in our office November 5th, 2021. Concerning an Environmental Assessment to evaluate the potential environmental impact associated with providing contracted close Air Support (CCAS) training for 6th Combat Training Squadron (6CTS) Joint Terminal Attack Controller (JTAC) students at Nellis AFB, Nevada.

At this time, we do not have any questions, however, should there be any inadvertent discovery of cultural significance at any time, please keep us informed. We do have cultural, historical and religious significance in the area that may be effected by your proposed undertaking, so keep us informed.

Thank you.

Shanandoah Anderson
Cultural Manager
Moapa Band of Paiutes
[redacted]

From:	Sabine, Collin
To:	OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP
Subject:	[Non-DoD Source] Proposed EA at Fort Irwin NTC Airspace
Date:	Friday, November 5, 2021 9:55:53 AM
Attachments:	USAF Proposed EA at Fort Irwin NTC.pdf

Hi Tod,

My name is Collin, and I am the Military Legislative Aide for Congressman Obernolte. I recently received the attached letter your office sent us pertaining to an upcoming Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support training for 6th Combat Training Squadron Joint Terminal Attack Controller students at Nellis AFB.

I was wondering if you would have any availability next week for a phone call to provide some additional background on this proposed EA just so that I am fully informed on the issue.

Thank you for your assistance with this issue!

V/R,

Collin

Collin Sabine
Legislative Aide
Office of Congressman Jay Obernolte (CA-08)
1029 Longworth HOB, Washington, DC 20515
[redacted]

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

13 October 2021

Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

The Honorable Jay Obernolte
1029 Longworth House Office Building
Washington DC 20515

Dear Congressman Obernolte

The United States Air Force (Air Force) is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with providing contracted Close Air Support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada. The EA is being prepared in accordance with the National Environmental Policy Act, (42 United States Code §§ 4321 through 4347), the Council on Environmental Quality regulations (40 Code of Federal Regulations), and the Air Force's Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989).

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS includes contracting for the support of an estimated six contractor aircraft to fly an estimated 1,350 annual sorties in support of the 6 CTS. CCAS would support 6 CTS training operations from a combination of two potential regional civilian airports in Nevada: CCAS operations would be based at North Las Vegas Airport but would land at/take off from Jean Airport to load/download and arm/dearm ordnance to provide CCAS services (Figure 1). Training activities would use Fort Irwin NTC/R-2502 Range (primary range) or NTTR/R-4806 Range (backup range) to emulate military aircraft performing close air support mission profiles (Figure 1).

The EA will assess the potential environmental consequences associated with the Proposed Action and the No Action Alternative. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the environmental analysis.

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We intend to provide you with access to the Draft EA when the document is completed. Please inform us if bound copies are needed or if someone else with your agency other than you should be notified of the availability of the Draft EA. Please forward written issues or concerns within 30 days of receipt of this letter to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB Nevada 89191, or by email at tod.oppenborn@us.af.mil or by phone at (702) 652-9366. I look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely

ROWLAND.CHARLES.W.JR.1073438124 Digitally signed by ROWLAND.CHARLES.W.JR.1073438124 Date: 2021.10.25 12:29:33 -07'00'

CHARLES W. ROWLAND, JR.
Chief, Portfolio Optimization

Attachment:

1. Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

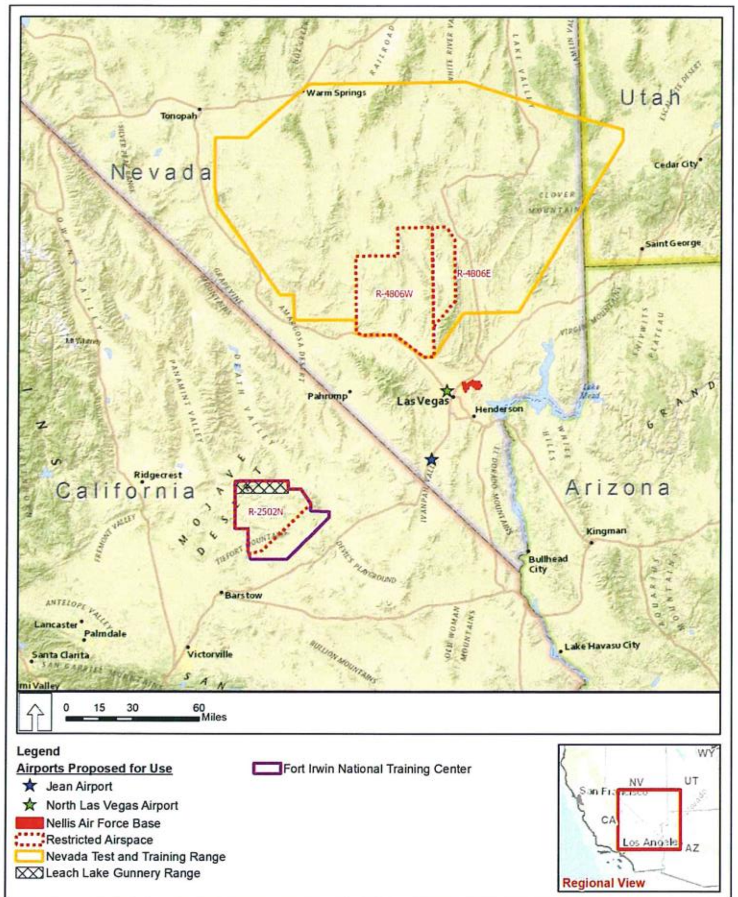

Figure 1. Nellis Air Force Base, Nevada, and Locations of Airports and Special Use Airspace Proposed for Use for Contracted Close Air Support.

From: Housman, David C CIV USARMY IMCOM (USA) [redacted]
Sent: Wednesday, December 1, 2021 7:43 AM
To: OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP [redacted]
Subject: RE: USAF EA for CCAS at Nellis AFB / Fort Irwin Leach Lake

Tod,

We have reviewed the EA for CCAS at Nellis AFB / Fort Irwin Leach Lake and have only one question/comment. Table 3-32 of the EA lists two National Register of Historic Places under Fort Irwin National Training Center Airspace R-2502-N; Harmony Borax Works and Pioneer Deep Space Station. The Harmony Borax Works is located in Death Valley National Park, some 50 miles north of the Leach Lake Impact Area. To my knowledge, the R-2502-N airspace does not reach north into Death Valley and cover that historic site. Perhaps the Harmony Borax Works is within a zone of potential noise impacts from proposed activities at Leach Lake(?), but as presented in the table it implies that site lies under the airspace designated R-2502-N.
Any clarification is appreciated.

VR

Dave

Dave C. Housman
NEPA Planner
USAG Fort Irwin, California
[redacted]
View our community calendar

New to NTC/Fort Irwin?

From: OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP [redacted]
Sent: Wednesday, November 17, 2021 2:40 PM
To: Housman, David C CIV USARMY IMCOM (USA) [redacted]
Cc: Gardner, Ronald A CIV USARMY NTC (USA) [redacted]
Subject: RE: USAF EA for CCAS at Nellis AFB / Fort Irwin Leach Lake

Dave,

I'll be sending you a draft copy of what we have so far. I'll be sending it via DoDSafe due to file size.

Vr
Tod

From: Housman, David C CIV USARMY IMCOM (USA) [redacted]
Sent: Thursday, November 4, 2021 9:25 AM
To: OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP [redacted]
Cc: Gardner, Ronald A CIV USARMY NTC (USA) <[redacted]
Subject: USAF EA for CCAS at Nellis AFB / Fort Irwin Leach Lake

Hello Mr. Oppenborn,

I am the NEPA Planner at Fort Irwin and received a notification letter from Mr. Charles Rowland regarding an Environmental Assessment that Nellis AFB is completing for CCAS training. My understanding from correspondence I had last year with Ms. Wanda Gooden and Mr. Bruce Munger (attached) was this training would involve continued use of the Leach Lake Impact Area on Fort Irwin, with no expected increase in noise. I would like to request access to an electronic copy of the draft EA when it becomes available for review. I have cc'd our G3 Force Integration Chief as well for situational awareness.
Thank you.

VR

Dave

Dave C. Housman
NEPA Planner
USAG Irwin, California
[redacted]

[View our community calendar]

New to NTC/Fort Irwin?

A.6 DRAFT EA NOTIFICATION LETTERS

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

MEMORANDUM FOR ALL TRIBAL GOVERNMENTS AND STATE HISTORIC PRESERVATION OFFICER

FROM: Mr. Scott Tarbox
Environmental Element Chief
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

SUBJECT: Draft Environmental Assessment for Contracted Close Air Support for Nellis Air Force Base, Nevada

1. The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed contracted close air support (CCAS) training for Nellis Air Force Base (AFB), Nevada. The Draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations.

2. The Air Force is proposing to provide dedicated CCAS training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS would include the addition of 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel, operating an estimated six aircraft and approximately 1,350 annual contracted sorties. CCAS would support Nellis AFB training operations out of North Las Vegas Airport (VGT), North Las Vegas, Nevada. The contractor would use Jean Airport (ØL7), Clark County, Nevada, for munitions loading and unloading. The estimated 1,350 training sorties would be added to perform training activities using Fort Irwin National Training Center/R-2502 Range special use airspace, or a backup range, Nevada Test and Training Range/R-4806 Range. Training activities would continue to use the Leach Lake Training Range within Fort Irwin.

3. We are requesting your participation in the NEPA review and comment process. The Draft EA and the Proposed FONSI are available electronically at https://www.nellis.af.mil/About/Environment.aspx. The Draft EA and Proposed FONSI are also available for review at the following locations:

- Alamo Branch Library, 100 South First West, Alamo, Nevada 89001
- Alexander Library, 1755 West Alexander Road, North Las Vegas, Nevada 89032
- Beatty Library District, 400 North Fourth Street, Beatty, Nevada 89003

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- Barstow Branch Library, 304 East Buena Vista Street, Barstow, California 92311
- Pahrump Community Library, 701 East Street, Pahrump, Nevada 89048
- Ridgecrest Branch Library, 131 East Las Flores Avenue, Ridgecrest, California 93555
- Sunrise Library, 5400 Harris Avenue, Las Vegas, Nevada 89110
- Tonopah Library, 167 South Central Street, Tonopah, Nevada 89049

Please provide comments on the Draft EA and Proposed FONSI within 30 days of receipt of this memorandum to Mr. Michael Chodoronek, 6020 Beale Avenue, Nellis AFB Nevada 89191, or by email to michael.chodoronek@us.af.mil.

Sincerely

TARBOX.SCOTT.ROLAND.1144246302 Digitally signed by TARBOX.SCOTT.ROLAND.1144246302 Date: 2022.01.10 16:53:45 -08'00'

SCOTT R. TARBOX, GS-14, DAF
Environmental Element Chief

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

19 January 2022

MEMORANDUM FOR LOCAL PUBLIC LIBRARIES

FROM: Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

SUBJECT: Draft Environmental Assessment for Contracted Close Air Support for Nellis Air Force Base, Nevada

1. Please find attached a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed contracted close air support (CCAS) training for Nellis Air Force Base (AFB), Nevada.

2. In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations, Nellis AFB requests that libraries file this document for public access and reference. Copies of the Draft EA and Proposed FONSI are also available at https://www.nellis.af.mil/About/Partnerships/Environment/.

3. Please maintain this document for public access from 23 January 2022 through 22 February 2022. Written responses on the Draft EA and Proposed FONSI may be sent to to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB, Nevada 89191, or by email to tod.oppenborn@us.af.mil. Thank you for your assistance.

Sincerely

ROWLAND.CHARLES.W.JR.1073438124
Digitally signed by ROWLAND.CHARLES.W.JR.1073438124
Date: 2021.12.27 10:48:27 -08'00'

CHARLES W. ROWLAND, JR.
Chief, Portfolio Optimization

Attachment
1. Draft Environmental Assessment

Enable Mission Success by Delivering Innovative Support

DEPARTMENT OF THE AIR FORCE
99TH CIVIL ENGINEER SQUADRON (ACC)
NELLIS AIR FORCE BASE, NEVADA

19 January 2022

MEMORANDUM FOR ALL INTERESTED GOVERNMENT AGENCIES, INDIVIDUALS, AND ORGANIZATIONS

FROM: Mr. Charles W. Rowland, Jr.
Chief, Portfolio Optimization
99th Civil Engineer Squadron
6020 Beale Avenue
Nellis Air Force Base NV 89191

SUBJECT: Draft Environmental Assessment for Contracted Close Air Support for Nellis Air Force Base, Nevada

1. The United States Air Force (Air Force) has prepared a Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) evaluating the potential environmental impacts associated with the proposed contracted close air support (CCAS) training for Nellis Air Force Base (AFB), Nevada. The Draft EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations.

2. The Air Force is proposing to provide dedicated CCAS training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS would include the addition of 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel, operating an estimated six aircraft and approximately 1,350 annual contracted sorties. CCAS would support Nellis AFB training operations out of North Las Vegas Airport (VGT), North Las Vegas, Nevada. The contractor would use Jean Airport (ØL7), Clark County, Nevada, for munitions loading and unloading. The estimatd 1,350 training sorties would be added to perform training activities using Fort Irwin National Training Center/R-2502 Range special use airspace, or a backup range, Nevada Test and Training Range/R-4806 Range. Training activities would continue to use the Leach Lake Training Range within Fort Irwin.

3. Executive Order 12372, *Intergovernmental Review of Federal Programs*, requires federal agencies to solicit federal agency as well as state and local government participation in the NEPA process. We are requesting your participation in the review and comment process. The Draft EA and the Proposed FONSI are available electronically at https://www.nellis.af.mil/About/Partnerships/Environment/.

Enable Mission Success by Delivering Innovative Support

4. The Draft EA and Proposed FONSI are also available for review at the following locations:

- Alamo Branch Library, 100 South First West, Alamo, Nevada 89001
- Alexander Library, 1755 West Alexander Road, North Las Vegas, Nevada 89032
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- Ridgecrest Branch Library, 131 East Las Flores Avenue, Ridgecrest, California 93555
- Sunrise Library, 5400 Harris Avenue, Las Vegas, Nevada 89110
- Tonopah Library, 167 South Central Street, Tonopah, Nevada 89049

Please provide comments on the Draft EA and Proposed FONSI within 30 days of receipt of this memorandum to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB, Nevada 89191, or by email to tod.oppenborn@us.af.mil.

Sincerely

ROWLAND.CHARLES.W.JR.1073438124 Digitally signed by ROWLAND.CHARLES.W.JR.1073438124 Date: 2021.12.27 10:50:23 -08'00'

CHARLES W. ROWLAND, JR.
Chief, Portfolio Optimization

A.7 DRAFT EA CORRESPONDENCE

Department of Aviation

ROSEMARY A. VASSILIADIS
DIRECTOR

POSTAL BOX 11005
LAS VEGAS, NEVADA 89111-1005
(702) 261-5211
FAX (702) 597-9553

February 22, 2022

Electronic Transmittal

Mr. Tod Oppenborn
Nellis AFB Environmental Impact Analysis Process Program Manager
6020 Beale Avenue
Nellis AFB, NV 89191

RE: Draft Environmental Assessment Contracted Close Air Support
Nellis Air Force Base, Nevada

Dear Mr. Oppenborn:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) and proposed Finding of No Significant Impact (FONSI) for the Air Force Contracted Close Air Support (CCAS), Nellis Air Force Base.

The proposed action includes the contracting of six aircraft by the Air Force to fly an estimated 1,350 annual sorties from a combination of two public use airports within the Clark County Department of Aviation (CCDOA) Airport System: North Las Vegas Airport (VGT) and Jean Airport (ØL7). The operations would be based at VGT but would land at/take off from ØL7 to load/download and arm/dearm ordnance. The proposed action would also require the use of office space and briefing areas, aircraft maintenance personnel and hangar space, tool and equipment storage, vehicle parking, and aircraft parking ramp space at VGT.

The purpose of the proposed action is to provide dedicated CCAS training for the Joint Terminal Attack Controller (JTAC) Qualification course to students in the 6th Combat Training Squadron at Nellis AFB in order to meet production requirements and support unit readiness. JTAC has been temporarily supported by CCAS from another CCDOA Airport - the Henderson Executive Airport. Under this temporary support, the 6 CTS has produced up to 270 JTACs per year to meet combatant commander deployment and Army/Air Force Liaison Memorandum of Agreement requirements.

The Clark County Department of Aviation notes the following:

1. General Comment – Please note that further discussions with the CCDOA would be needed regarding the use of our facilities and the way in which those facilities would be used as the project progresses.

2. General Comment - The correct FAA identifier for Henderson Executive Airport is HND. In the list of Acronyms and Abbreviations on Page vii, and elsewhere throughout the report, Henderson Executive Airport is abbreviated as HSH. Please correctly identify this airport using the FAA identifier HND throughout the report.

3. Because it is not known at this time what type of aircraft would be used by CCAS, two aircraft noise scenarios were evaluated (High and Low) to represent the range of aircraft types that could be selected. The CCDOA concurs with the proposed FONSI which states the Air Force would not implement the Alternative 1 High Noise Scenario due to the potential for significant impacts from increased noise on sensitive receptors (i.e., POIs) proximate to VGT, and potential significant impacts on land use, socioeconomics, and environmental justice from increased noise.

4. Under the Low Noise Scenario (the preferred scenario), moderate adverse impacts at VGT are anticipated with an estimated 513 additional people exposed to the change in noise. However, there are no Best Management Practices (BMP) identified to address this. Please identify these BMPs.

5. Section 2.6.1 of the EA notes that if existing facilities at VGT do not meet CCAS needs, the contractor may be required to fund the renovations or construction and that separate environmental analyses would be completed as required. CCDOA requests to be included in the scoping effort should additional environmental studies be required.

6. Emissions were estimated for each year in the proposed action beginning in January 2023 and ending in December 2032 (correlating to a 10-year timeframe). Is a 10-year timeframe for the proposed action correct? What happens to the training at the end of 2032?

7. Section 3.7.2.2, Sentence 1 of the EA states "The Jean Airport is a public use airport owned by the Clark County DOA and co-operated by HSH." The sentence should read "The Jean Airport is a public use airport owned and operated by the Clark County DOA." Please correct.

8. Table B-1, Reasonably Foreseeable Future Actions includes the Ivanpah Valley Airport, renamed the Southern Nevada Supplemental Airport, as being relevant to the proposed action in that once constructed there could be potential implications to airspace management and use at Jean Airport. An additional reasonably foreseeable future action is the rehabilitation of the runways at ØL7. It is likely that the runways would be closed for approximately 6-8 months during construction. Was this considered a "routine construction and planned infrastructure improvement" in the analysis?

Sincerely,

Roben Armstrong
Clark County Department of Aviation
Airport Strategic Manager

cc: J. Chrisley, CCDOA
B. Czyzewski, CCDOA
K. Tarnowska, CCDOA
B. Daugherty, CCDOA
K. Slon, CCDOA
C. Schueler, CCDOA

[redacted]

Subject: FOUO\\Contracted Close Air Support for Nellis EA Comment Response
Date: Wednesday, February 23, 2022 9:55:52 AM
Attachments: Mojave Desert Air Quality.pdf

This e-mail contains FOR OFFICIAL USE ONLY (FOUO)

Mr. Poiriez,

Thank you for submitting comments concerning the Contracted Close Air Support for Nellis EA (attached). We have reviewed your comments and have added them to the EA record.

The answer to the question regarding CEQA's applicability to Federal Actions is as follows: Per the joint Whitehouse/California handbook: "CEQA applies to projects of all California state, regional or local agencies, but not to Federal agencies" and "NEPA applies specifically to Federal proposed actions and CEQA applies to state and local government proposed actions" (NEPA and CEQA; Integrating State and Federal Environmental Reviews, February 2014: https://ceq.doe.gov/publications/NEPA-CEQA_Handbook.html).

Thank you! Please let me know if you have any questions or would like to discuss.

Thank you
Tod Oppenborn

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
[redacted]
www.MDAQMD.ca.gov • @MDAQMD

Clean air is everybody's business.

January 29, 2022

Mr. Tod Oppenborn
6020 Beale Avenue
Nellis AFB, NV 89191

Subject: Draft EA Nellis AFB Contracted Close Air Support

Dear Mr. Oppenborn:

The Mojave Desert Air Quality Management District (District) has received the Request for Comments for the Draft EA for the Contracted Close Air Support for Nellis Airforce Base, a proposal for dedicated CCAS training for 6th Combat Training Squadron Joint Terminal Attack Controller students at Nellis Airforce Base. An estimated 1,350 training sorties would be added to perform training activities at Fort Irwin National Training center.

We have reviewed the project as proposed and based on the information available to us at this time, the District concurs with the Draft EA's finding that the program emissions are below the corresponding de minimis threshold values for the Federal General Conformity Rule requirements. However, the district does not concur with the finding of no significant impact. Based on the results of the emissions modeling shown in the Draft EA, the program's NOx and VOC emissions will exceed the District's CEQA significance threshold of 25 TPY, and must therefore include mitigation measures sufficient to reduce the project impacts to less than significant.

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me [redacted] or Bertrand Gaschot [redacted]

Sincerely,

Alan J. De Salvio
Deputy APCO

AJD/bg EA Nellis AFB Contracted Close Air Support

From: Johanna Murphy [redacted]
Sent: Thursday, February 17, 2022 3:17 PM
To: OPPENBORN, TOD [redacted]
Subject: [Non-DoD Source] Comments for Draft Environmental Assessment (EA) for Contracted Close Air Support for Nellis Air Force Base, Nevada.

Hello Mr. Oppenborn,

Thank you for sharing the Draft Environmental Assessment (EA) for Contracted Close Air Support for Nellis Air Force Base, Nevada with the City of North Las Vegas. I have reviewed the Draft EA and have the following two questions.

1. Paragraph 2 of the memorandum for all interested Government Agencies, Individuals and Organizations states ""The contractor would use Jean Airport for munitions loading and unloading"" and paragraph 6 on page 1 of the draft EA states " munitions and ammunition would be stored and maintained at VGT, while arm/dearm operations would occur at 0L7." If the munitions are stored at VGT and loaded/unloaded at 0L7, how will the munitions be transported from one airport to the other?

2. Page 3-27 3.4.2.1, of the draft EA, Existing conditions for North Las Vegas Airport - states "VGT does not use or store munitions" and paragraph 6 on page 1 of the draft EA states" munitions and ammunition would be stored and maintained at VGT". Will adding storage of munitions at VGT require a Use Permit under Nevada Revised Statute 278.147 "*Facilities for use, manufacture, processing, transfer or storage of explosives or certain other substances: Conditional use permit required; application for and issuance of conditional use permit*"?

Thank you,
Johanna Murphy

--
Johanna Murphy
Principal Planner
City of North Las Vegas
2250 Las Vegas Boulevard North
Suite 114
North Las Vegas, NV 89030
[redacted]

A.8 NOTICE OF AVAILABILITY

A4 - Wednesday, January 26, 2022 - The Daily Independent

Trinity Safety provides hundreds of free COVID tests

News release

Hundreds of residents and visitors were able to get free COVID testing from Trinity Safety, hired by Ridgecrest Regional Hospital to help with increased demand for testing. Trinity had originally projected that they would be able to offer 180 tests over the three days they were in Ridgecrest. During that period they tested 336 people, 81 of which were positive, for a positivity rate of 24 percent.

"We are pleased to have been able to extend local testing capacity in this way," said Brenda Diel, administrator of quality and systems at RRH. "Trinity was able to offer a critical service to our community, but having them on hand also helped us focus RRH resources on other urgent medical needs."

Diel said that RRH will extend the service to four days a week, starting this week. Trinity will be on hand for testing Tuesdays, Wednesdays, Fridays and Saturdays from 9 a.m. to 3 p.m. at 301 W. Drummond Avenue.

Testing is free, and results are available in real time.

A total of 81 positive tests were detected out of 336 COVID tests done.
COURTESY PHOTO

IWVWD

Continued from A1

Annual reporting for Indian Wells Valley Groundwater Sustainability Plan: 10

The IWVGA prioritized the projects as:

Imported water interconnection project: 21

Wastewater treatment plant and recycled water project: 21

Pumping optimization investigation: 15

Data gap evaluation, data collection, monitoring, and model update: 10

Annual reporting for Indian Wells Valley Groundwater Sustainability Plan: 9

Discussion at the workshop primarily revolved around the differences towards the top of each priority list.

The document with IWVGA's project priority list has comments on the imported water project, stating that it is critical because even if there is significantly reduced local pumping, sustainability cannot be achieved without imported water.

Meanwhile, the Water District ranked the imported water project lower largely based on the feasibility of the plan and the timeline of the grant. Tim Parker, a consulting hydrogeologist for the Water District, stated that there are still many uncertainties with the imported water project but the recycled water project is more straightforward.

"The Department of Water Resources made a comment on the GSP about the implementability and uncertainty related to imported water. If a lot of money is going to be applied in the grant application for imported water, it may not get that funding," Parker said.

The document showing the Water District's priority list had comments which stated that they ranked the imported water project lower because the current plan has uncertainty with "the acquisition, feasibility in obtaining annual deliveries in the amount contracted for, implementation timeline, and other aspects."

The document states that the Water District ranked the recycled water project higher because "it is new water that exists in the basin and can be optimally put to use relatively easily with existing tools and technologies, making it highly feasible and implementable, with a shorter term schedule than imported water."

At the workshop, this topic required no vote from the board of directors, but board president David Saint-Amand stated that he agreed with Water District staff that recycled water should be the highest priority, followed in second place by improving data on the IWV groundwater basin.

NOTICE OF AVAILABILITY

Draft Environmental Assessment for Contracted Close Air Support Nellis Air Force Base, Nevada

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) have been prepared by the United States Air Force (Air Force) to analyze the impacts of providing dedicated contracted close air support (CCAS) training for 6th Combat Training Squadron (6 CTS) Joint Terminal Attack Controller (JTAC) students at Nellis Air Force Base (AFB), Nevada.

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. The Proposed Action for CCAS would include the addition of 21 contracted maintainers, 10 contracted pilots, and 4 administrative and management personnel, operating an estimated six aircraft and approximately 1,350 annual contracted sorties. CCAS would support Nellis AFB training operations out of North Las Vegas Airport (VGT), North Las Vegas, Nevada. The contractor would use Jean Airport (ØL7), Clark County, Nevada, for munitions loading and unloading. The estimated 1,350 training sorties would be added to perform training activities using Fort Irwin National Training Center/R-2502 Range special use airspace, or a backup range, Nevada Test and Training Range/R-4806 Range. Training activities would continue to use the Leach Lake Training Range within Fort Irwin.

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The Draft EA and Proposed FONSI are also available at the Nellis AFB website: https://www.nellis.af.mil/About/Partnerships/Environment/.

The Air Force is soliciting comments from interested local, state, and federal elected officials and agencies, as well as interested members of the public. Although comments can be submitted to the Air Force at any time during the EA process, comments are requested within 30 days from the publication date of this notice to ensure full consideration in the process. Comments can be submitted to Mr. Tod Oppenborn, 6020 Beale Avenue, Nellis AFB, Nevada 89191, or by email to tod.oppenborn@us.af.mil.

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This Draft EA and Proposed FONSI are provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 DFR § 989, Environmental Impact Analysis Process (EIAP). The EIAP provides an opportunity for the public to provide comments on the proposed action and alternatives and solicits comments on the analysis of potential environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will only be used to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published.

COMPOST

Continued from A1

public suggested such large price increases might not be necessary. The detractors included a former employee of the Public Works Department and the former director of Bakersfield's Solid Waste Department.

Public Works insisted throughout the process it had come up with was the most cost-effective strategy toward meeting the state mandates.

"This is not the direction we would have gone personally, but it is mandated. It is the law," Public Works Director Craig Pope told supervisors on Tuesday. "We are bringing before you what we believe is the most cost-effective, balanced proposal to meet the recommendations and requirements of the state."

Bin fees and gate fees, which are charged to commercial haulers, were also increased by a lesser amount than originally proposed. Gate fees will increase from $45 to $58, while bin fees will increase from $2.35 to $3. Supervisors will also likely need to scale up the fees over the next few years to keep up with the loan interest.

"This is the state of California from my perspective wanting to fight climate change and putting it on the ratepayers," Scrivner said during the meeting.

Obituary: Ida Jane Bird

Sept. 16, 1940 - Jan. 22, 2022

Ida Jane Bird passed away peacefully on January 22, 2022, at the age of 81, with her family by her side.

Jane was born on September 16, 1940 in Hollis, Oklahoma and moved with her parents to Selma, California where she attended and graduated from Selma High School in 1958. She married her husband Larry Bird Jr. in February 1961, and they moved to Apple Valley, California in 1963 to work and raise their four children. She attended Pasadena College and graduated from Cal State Los Angeles in 1963 with her Bachelor's Degree in Education. She began a 41-year teaching career in Apple Valley at Desert Knolls Elementary School and in Victorville at Del Ray Elementary School before moving to teach for two years in Adrian, Michigan. In 1973, Jane moved with her family to Ridgecrest, California where she taught first grade and special education in the Sierra Sands Unified School District for 32 years, at Groves, Richmond, and Las Flores Elementary Schools.

Jane was an active member of the Ridgecrest First Church of the Nazarene where she absolutely loved teaching Sunday School and singing in the church choir. She actively supported her husband with his leadership in the Burroughs High School Fellowship of Christian Athletes' huddle and his coaching of the boys' basketball team. Her support when she served as the unofficial team mom for the Cerro Coso Community College Men's Basketball team-making meals, getting their apartments ready, and cheering on the athletes. Jane supported her children by driving them to practices and attending all of their games and activities. She loved to draw, work in her garden and yard, and take care of the family animals that were brought home by her children.

Jane loved her family and leaves behind her husband and four children, Larry III (Julie) Bird, Kim McBride, Richard Bird, Mitchell Bird, five grandchildren, and two great-grandchildren.

Services will be held at the Ridgecrest First Church of the Nazarene on Thursday, January 27, 2022. Viewing will be at 10 a.m. and the service at 11 a.m. The reception will be held in the Fellowship Hall. Private burial service will be held on January 31, 2022 at El Camino Memorial Cemetery in San Diego, California.

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF KERN

Vernadero Group Incorporated
Nellis

Case Number____________________________________

DECLARATION OF PUBLICATION (2015.5 C.C.P.)

State of California, County of Kern, ss:

Declarant says:

That at all times, herein mentioned, declarant is and was a citizen of the United States, over the age of twenty-one years, and not a party to nor interested in the within matter; that declarant is the principal clerk of the printer and the publisher of THE DAILY INDEPENDENT, a newspaper of general circulation printed and published daily in the City of Ridgecrest, Indian Wells Judicial District, County of Kern, State of California, which newspaper has been adjudicated a newspaper of general circulation by the said Superior Court by order made and renewed July 8, 1952, in Civil Proceeding No. 58584 of said Court: that the instrument of which the annexed in a printed copy has been published in each regular and like issue of said newspaper (and not any supplement thereof) on the following dates, to-wit:

January 26 2022

I declare under penalty of perjury that the foregoing is true and correct.

EXECUTED ON __January 26 2022 ____, at Ridgecrest California.

Declarant ____Paula J McKay_____

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PROOF OF PUBLICATION

STATE OF NEVADA)
COUNTY OF CLARK) SS:

VERNADERO GROUP INCORPORATED
#850752
3400 S CARROLLTON AVE
NEW ORLEANS LA 70185

Account # **191249**
Ad Number **0001177718**

Leslie McCormick, being 1st duly sworn, deposes and says: That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for, was continuously published in said Las Vegas Review-Journal and / or Las Vegas Sun in 1 edition(s) of said newspaper issued from 01/23/2022 to 01/23/2022, on the following days:

01 / 23 / 22

/S/ ____________________
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 24th day of January, 2022

Notary ____________________

MARY A. LEE
Notary Public, State of Nevada
Appointment No. 21-7624-01
My Appt. Expires Dec 15, 2024

NOTICE OF AVAILABILITY

Draft Environmental Assessment for Contracted Close Air Support
Nellis Air Force Base, Nevada

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PRIVACY ADVISORY NOTICE

This Draft EA and Proposed FONSI are provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 DFR § 989, Environmental Impact Analysis Process (EIAP). The EIAP provides an opportunity for the public to provide comments on the proposed action and alternatives and solicits comments on the analysis of potential environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will only be used to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published.

PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA,
County of San Bernardino

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January 23

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All in the year 2022.

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated this: 24th **day of** January **,** **20**22.

Janet Bald

Signature

Janet Baldwin

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APPENDIX B
REASONABLY FORESEEABLE FUTURE ACTIONS

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Table B-1
Reasonably Foreseeable Future Actions

Scheduled Project	Project Summary	Implementation Date	Relevance to Proposed Action
NDOT US 95 Northwest Corridor Improvement Project	Five-phase improvement project from Washington Avenue to Kyle Canyon Road; improvements include widening of US 95, HOV access ramps, and interchange at US 95 and Kyle Canyon Road	Ongoing	Action could occur within the same timeframe as the Proposed Action.
NDOT Road Improvement Project	Road Improvement Project on Cheyenne Avenue to Martin Luther King Boulevard	Funded: 2021 Construction Completion: 2022	Action could occur within the same timeframe as the Proposed Action.
FHWA/NDOT I-11 Las Vegas	Construction of I-11 between the Arizona border on US 93 to the vicinity of Kyle Canyon Road on US 95 crossing the Las Vegas metropolitan area; the proposed project initiated a PEL study in early 2021 to identify reasonable alternative corridors and will be followed by a tiered NEPA process	As funding and design become available	Action could occur within the same timeframe as the Proposed Action.
NDOT I-15 South/ Via Noblia (formerly Bermuda) New Interchange	Construction of a new interchange at I-15 south and Via Noblia; currently undergoing a re-evaluation of the 2008 EA scheduled for completion in the second quarter of 2021	TBD	Action could occur within the same timeframe as the Proposed Action.
Brightline West High-Speed Rail	179-mi high-speed rail line from Las Vegas to Los Angeles roughly following the I-15 corridor. In Nevada, a rail station would be constructed on the southern end of the Las Vegas strip; the rail line would extend 34 mi to the California border before continuing on through southern California to Los Angeles	Construction is expected to begin second quarter of 2021	Action could occur within the same timeframe as the Proposed Action.
Southern Nevada Supplemental Airport (formerly Ivanpah Valley Airport)	Clark County is in the early planning phase of the construction of a new international airport, 30 mi south of Las Vegas between Jean and Primm. It is expected to take from 10 to 20 years before it may open for use.	TBD	Once constructed, potential implications to airspace management and use at Jean Airport.
Jean Airport Runway Rehabilitation	The Clark County Department of Aviation is in the planning phase for the rehabilitation of the Jean Airport Runways. This will likely close Jean Airport for about 6 to 8 months.	TBD	Action could occur at the same time as the Proposed Action with potential implications to airspace management.

EA = Environmental Assessment; FHWA = Federal Highway Administration; HOV = high-occupancy vehicle; I-11 = Interstate 11; I-15 = Interstate 15; mi = mile(s); NDOT = Nevada Department of Transportation; NEPA = National Environmental Policy Act; PEL = Planning and Environmental Linkage; TBD = to be determined; US 93 = United States Highway 93; US 95 = United States Highway 95

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APPENDIX C
DEFINITION OF RESOURCES AREAS ANALYZED

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C.1 AIRSPACE MANAGEMENT AND USE

C.1.1 Definition of the Resource

Airspace management involves the direction, control, and handling of flight operations in the airspace that overlies the borders of the United States (US) and its territories. Under Title 49, United States Code (U.S.C.) § 40103, *Sovereignty and Use of Airspace*, and Public Law No. 103-272, the US government has exclusive sovereignty over the nation's airspace. The Federal Aviation Administration (FAA) has the responsibility to plan, manage, and control the structure and use of all airspace over the United States. FAA rules govern the national airspace system, and FAA regulations establish how and where aircraft may fly. Collectively, the FAA uses these rules and regulations to make airspace use as safe, effective, and compatible as possible for all types of aircraft, from private propeller-driven planes to large, high-speed commercial and military jets.

Aircraft use different kinds of airspace according to the specific rules and procedures defined by the FAA for each type of airspace. The region of influence (ROI) for airspace management and use for contracted close air support (CCAS) includes North Las Vegas Airport (VGT), Jean Airport (ØL7), and their respective environs as well as the Fort Irwin NTC/R-2502 Range (primary range) or NTTR/R-4806 Range (backup range). Terminal airspace around civil airports is defined by the terminal airspace area designations for each airport (FAA Order Job Order 7400.11D, *Air Traffic Organization Policy, Airspace Designations and Reporting Points*). Controlled airspace of defined dimensions within which Air Traffic Control service is provided and all operations must occur under Instrument Flight Rules (IFR). These airspace designations include Classes A through G, which specify the airspace within which all aircraft operators are subject to operating rules and equipment requirements of Part 91 of the Federal Aviation Regulations (see 14 Code of Federal Regulations [CFR] § 91.130). General descriptions of the airspace classifications common to civil airports, including Class A, C, D, and E airspace, are described. More specific rules may apply to VGT or ØL7.

Class A. Generally, this is the airspace from 18,000 feet (ft) mean sea level mean sea level (MSL) up to and including 60,000 ft MSL and includes airspace overlying waters within 12 nautical miles (NM) of the coast of the 48 contiguous United States and Alaska.

Class C. Generally, this is the airspace from the surface to 4,000 ft above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach control, and have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a 5-NM radius, an outer circle with a 10-NM radius that extends from 1,200 to 4,000 ft above the airport elevation, and an outer area. Each aircraft must establish two-way radio communications with the Air Traffic Control (ATC) facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace.

Class D. Generally, this is the airspace from the surface to 2,500 ft above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or E airspace. Unless otherwise authorized, each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace.

Class E. Generally, if the airspace is not Class A, B, C, or D and is controlled airspace, then it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also, in this class are federal airways, airspace beginning at either 700 or 1,200 ft above ground level (AGL) used to transition to and from the terminal or en route environment and en route domestic and offshore airspace areas designated below 18,000 ft MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 ft MSL over the United States, including that airspace overlying the waters within 12 NM of the coast of the 48 contiguous states and Alaska, up to but not including 18,000 ft MSL, and the airspace above flight level 600.

SUA. A Military Operations Area (MOA) is designated airspace outside of Class A airspace used to separate or segregate certain nonhazardous military activities from IFR traffic and to identify for Visual Flight Rules (VFR) traffic where these activities are conducted (14 CFR § 1.1). Activities in MOAs include, but are not limited to, air combat maneuvers, air intercepts, and low-altitude tactics. The defined vertical and lateral limits vary for each MOA. While MOAs generally extend from 1,200 ft AGL to 18,000 ft above MSL, the floor may extend below 1,200 ft AGL if there is a mission requirement and minimal adverse aeronautical effect. MOAs allow military aircraft to practice maneuvers and tactical flight training at airspeeds in excess of 250 knots indicated airspeed (approximately 285 miles [mi] per hour). The FAA requires publication of the hours of operation for any MOA so that all pilots, both military and civilian, are aware of when other aircraft could be in the airspace. Each military organization responsible for a MOA develops a daily use schedule. Although the FAA designates MOAs for military use, other pilots may transit the airspace under VFR. MOAs exist to notify civil pilots under VFR where heavy volumes of military training exist which increases the chance of conflict and are generally avoided by VFR traffic. MOAs in the vicinity of busy airports may have specific avoidance procedures that also apply to small private and municipal airports. Such avoidance procedures are maintained for each MOA, and both civil and military aircrews build them into daily flight plans. A Restricted Area (R-) is a designated airspace that supports ground or flight activities that could be hazardous to nonparticipating aircraft and typically used by the military due to safety or security concerns. Hazards include existence of unusual and often invisible threats from artillery use, aerial gunnery, or guided missiles. An Air Traffic Control Assigned Airspace (ATCAA) is an airspace of defined vertical/lateral limits assigned by FAA ATC for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic. Typically, these blocks of airspace start at flight level 180 or 18,000 ft MSL and, in some cases, are contoured to the dimensions of the MOAs beneath them. This airspace is not depicted on any chart but is often an extension of a MOA to higher altitudes and usually referred to by the same name. This airspace remains in control of the FAA when not in use to support general aviation activities.

Each military organization responsible for the SUA develops a daily use schedule. Although the FAA designates the SUA for military use, other pilots may transit the airspace. Avoidance procedures are maintained for each SUA, and military aircrews build them into daily flight plans.

The primary airspace that would be used by CCAS aircraft are described in detail in **Chapter 2**.

The ROIs for airspace management and use for VGT and ØL7 include each airport and its respective environs as well as the airspace previously described and depicted on **Figure 1-1** (see **Section 1.1.2**).

C.2 NOISE

C.2.1 Introduction

This appendix discusses sound and noise and their potential effects on the human and natural environment. **Section C.2.2.1** provides an overview of the basics of sound and noise. **Section C.2.2.2** defines and describes the different metrics used to describe noise. The largest section, **Section C.2.2.3**, reviews the potential effects of noise, focusing on effects on humans but also addressing effects on property values, terrain, structures, and animals. **Section C.2.3** contains the list of references cited. See **Appendix D.1** for the data used in the noise modeling process. A number of noise metrics are defined and described in this appendix. Some metrics are included for the sake of completeness when discussing each metric and to provide a comparison of cumulative noise metrics.

The ROI for noise includes VGT and ØL7 and each respective environs as well as the airspace previously described and depicted on **Figure 1-1** (see **Section 1.1.2**). Noise analysis at the regional airports was conducted to update the airfield noise contours and the SUA noise levels in order to reflect the most recent and accurate aircraft operations and flying conditions.

C.2.2 Sound, Noise, and Potential Effects

C.2.2.1 Basics of Sound

C.2.2.1.1 Sound Waves and Decibels

Sound consists of minute vibrations in the air that travel through the air and are sensed by the human ear. **Figure C-1** is a sketch of sound waves from a tuning fork. The waves move outward as a series of crests where the air is compressed and troughs where the air is expanded. The height of the crests and the depth of the troughs are the amplitude or sound pressure of the wave. The pressure determines its energy or intensity. The number of crests or troughs that pass a given point each second is called the frequency of the sound wave.

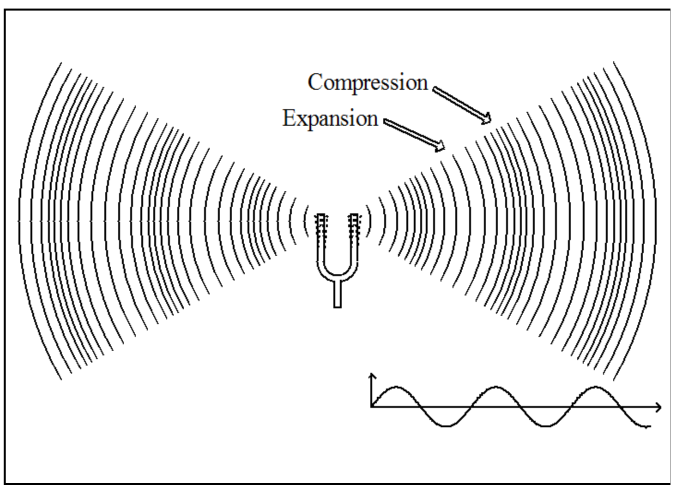


Figure C-1. Sound Waves from a Vibrating Tuning Fork.

The measurement and human perception of sound involves three basic physical characteristics: intensity, frequency, and duration.

- Intensity is a measure of the acoustic energy of the sound and related to sound pressure. The greater the sound pressure, the more energy carried by the sound and the louder the perception of that sound.

- Frequency determines how the pitch of the sound is perceived. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are typified by sirens or screeches.
- Duration or the length of time the sound can be detected.

The loudest sounds that can be comfortably heard by the human ear have intensities a trillion times higher than those of sounds barely heard. Because of this vast range, it is unwieldy to use a linear scale to represent the intensity of sound. As a result, a logarithmic unit known as the decibel (abbreviated dB) is used to represent the intensity of a sound. Such a representation is called a sound level. A sound level of 0 dB is approximately the threshold of human hearing and barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above 120 dB begin to be felt inside the human ear as discomfort. Sound levels between 130 and 140 dB are felt as pain (Berglund and Lindvall, 1995).

As shown on **Figure C-1**, the sound from a tuning fork spreads out uniformly as it travels from the source. The spreading causes the sound's intensity to decrease with increasing distance from the source. For a source such as an aircraft in flight, the sound level will decrease by about 6 dB for every doubling of the distance. For a busy highway, the sound level will decrease by 3 to 4.5 dB for every doubling of distance.

As sound travels from the source, it also is absorbed by the air. The amount of absorption depends on the frequency composition of the sound, temperature, and humidity conditions. Sound with high frequency content gets absorbed by the air more than sound with low frequency content. More sound is absorbed in colder and drier conditions than in hot and wet conditions. Sound is also affected by wind and temperature gradients, terrain (elevation and ground cover), and structures.

Because of the logarithmic nature of the decibel unit, sound levels cannot simply be added or subtracted and are somewhat cumbersome to handle mathematically; however, some simple rules are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. For example:

60 dB + 60 dB = 63 dB, and
80 dB + 80 dB = 83 dB

Second, the total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB

Because the addition of sound levels is different than that of ordinary numbers, this process is often referred to as "decibel addition."

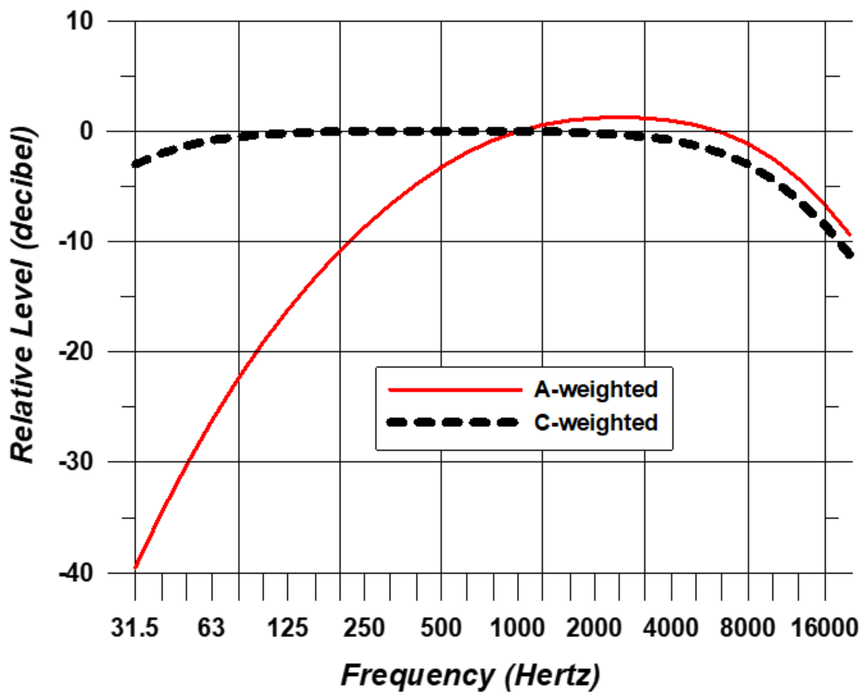
The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB. On average, a person perceives a change in sound level of about 10 dB as a doubling (or halving) of the sound's loudness. This relation holds true for loud and quiet sounds. A decrease in sound level of 10 dB actually represents a 90 percent decrease in sound intensity but only a 50 percent decrease in perceived loudness because the human ear does not respond linearly.

Sound frequency is measured in terms of cycles per second or hertz (Hz). The normal ear of a young person can detect sounds that range in frequency from about 20 to 20,000 Hz. As we get older, we lose the ability to hear high frequency sounds. Not all sounds in this wide range of frequencies are heard equally. Human hearing is most sensitive to frequencies in the 1,000- to 4,000-Hz range. The notes on a piano range from just over 27 to 4,186 Hz, with middle C equal to 261.6 Hz. Most sounds (including a single note on a piano) are not simple pure tones like the tuning fork on **Figure C-1** but contain a mix, or spectrum, of many frequencies.

Sounds with different spectra are perceived differently even if the sound levels are the same. Weighting curves have been developed to correspond to the sensitivity and perception of different types of sound.

A-weighting and C-weighting are the two most common weightings. These two curves, shown on **Figure C-2**, are adequate to quantify most environmental noises. A-weighting puts emphasis on the 1,000- to 4,000-Hz range where human hearing is most sensitive.

Very loud or impulsive sounds, such as explosions or sonic booms, can sometimes be felt and cause secondary effects, such as shaking of a structure or rattling of windows. These types of sounds can add to annoyance and are best measured by C-weighted sound levels, denoted dBC. C-weighting is nearly flat throughout the audible frequency range and includes low frequencies that may not be heard but cause shaking or rattling. C-weighting approximates the human ear's sensitivity to higher intensity sounds.



Source: ANSI S1.4A -1985 "Specification of Sound Level Meters"

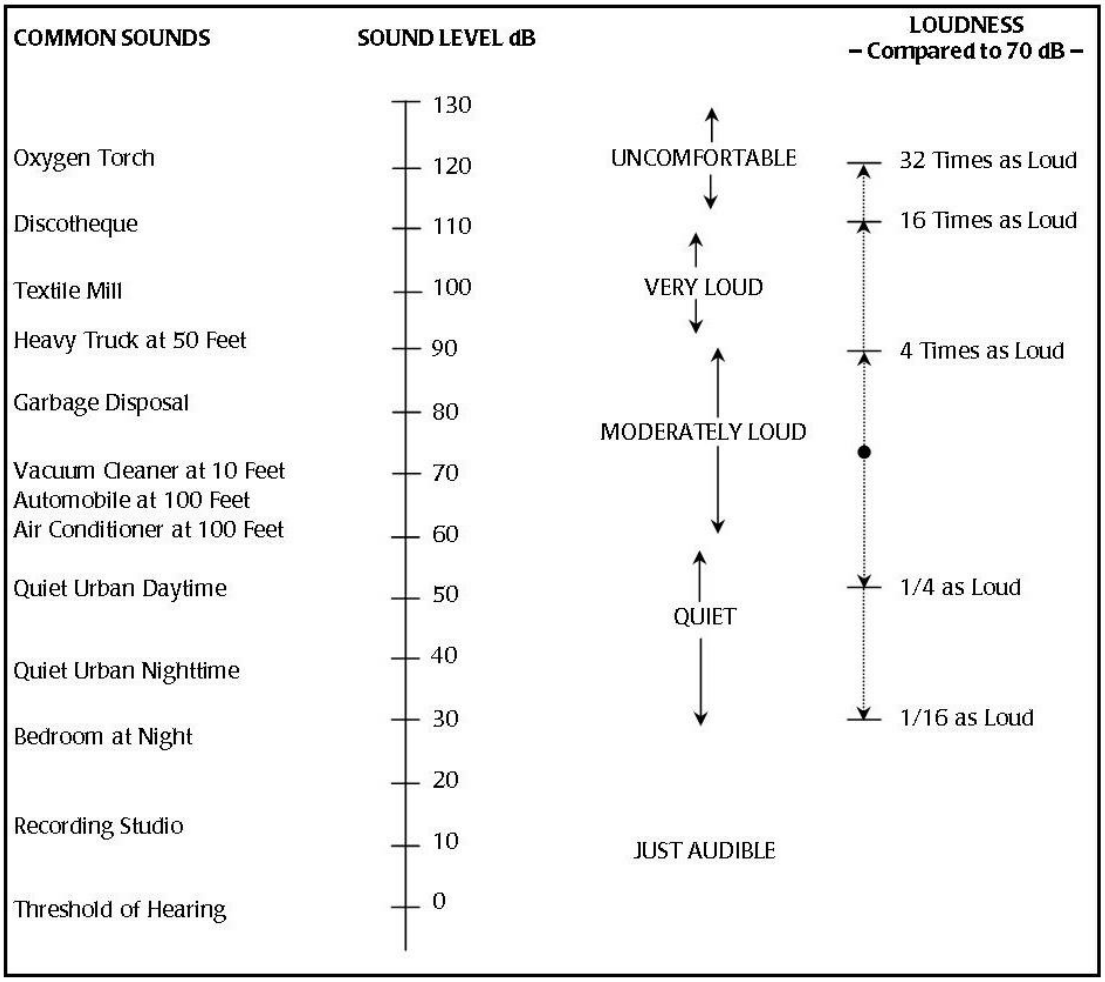
Figure C-2. Frequency Characteristics of A- and C-Weighting.

C.2.2.1.2 Sound Levels and Types of Sounds

Most environmental sounds are measured using A-weighting. They are called A-weighted sound levels and sometimes use the unit dBA or dB(A) rather than dB. When the use of A-weighting is understood, the term "A-weighted" is often omitted and the unit dB is used. Unless otherwise stated, dB units refer to A-weighted sound levels.

Sound becomes noise when it is unwelcome and interferes with normal activities, such as sleep or conversation. Noise is unwanted sound. Noise can become an issue when its level exceeds the ambient or background sound level. Ambient noise in urban areas typically varies from 60 to 70 dB but can be as high as 80 dB in the center of a large city. Quiet suburban neighborhoods experience ambient noise levels around 45 to 50 dB (US Environmental Protection Agency [USEPA], 1978).

Figure C-3 shows A-weighted sound levels from common sources. Some sources, like the air conditioner and vacuum cleaner, are continuous sounds whose levels are constant for some time. Some sources, like the automobile and heavy truck, are the maximum sound during an intermittent event like a vehicle pass-by. Some sources like "urban daytime" and "urban nighttime" are averages over extended periods. A variety of noise metrics have been developed to describe noise over different time periods. These are discussed in detail in **Section C.2.2.2**.



Source: Harris, 1979

Figure C-3. Typical A-weighted Sound Levels of Common Sounds.

Aircraft noise consists of two major types of sound events: flight (including takeoffs, landings, and flyovers) and stationary, such as engine maintenance run-ups. The former is intermittent and the latter primarily continuous. Noise from aircraft overflights typically occurs beneath main approach and departure paths, in local air traffic patterns around the airfield, and in areas near aircraft parking ramps and staging areas. As aircraft climb, the noise received on the ground drops to lower levels, eventually fading into the background or ambient levels.

Impulsive noises are generally short, loud events. Their single-event duration is usually less than 1 second. Examples of impulsive noises are small-arms gunfire, hammering, pile driving, metal impacts during rail-yard shunting operations, and riveting. Examples of high-energy impulsive sounds are quarry/mining explosions, sonic booms, demolition, and industrial processes that use high explosives, military ordnance (e.g., armor, artillery and mortar fire, and bombs), explosive ignition of rockets and missiles, and any other explosive source where the equivalent mass of dynamite exceeds 25 grams (American National Standards Institute [ANSI], 1996).

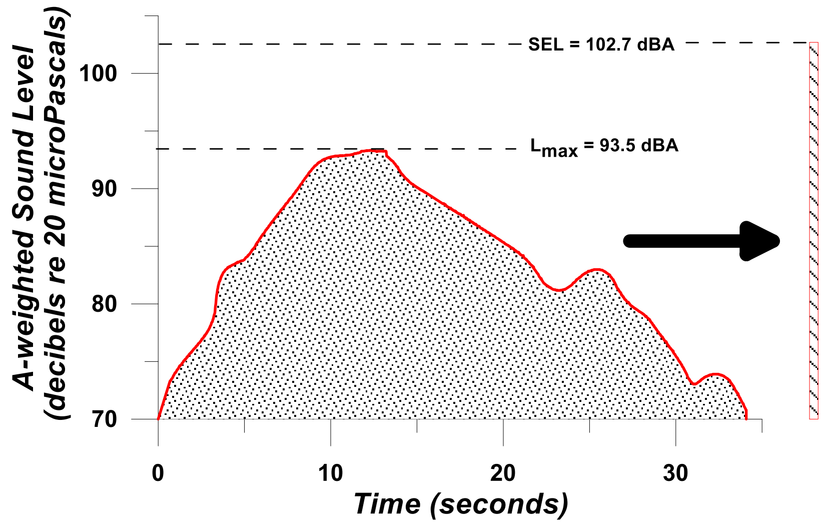
C.2.2.2 Noise Metrics

Noise metrics quantify sounds so they can be compared with each other and with their effects, in a standard way. There are a number of metrics that can be used to describe a range of situations, from a particular individual event to the cumulative effect of all noise events over a long time. This section describes the metrics relevant to environmental noise analysis.

C.2.2.2.1 Single Events

Maximum Sound Level

The highest A-weighted sound level measured during a single event in which the sound changes with time is called the maximum A-weighted sound level or Maximum Sound Level and is abbreviated L_{max}. The L_{max} is depicted for a sample event in **Figure C-4**.



Source: Wyle Laboratories

Figure C-4. Example Time History of Aircraft Noise Flyover.

L_{max} is the maximum level that occurs over a fraction of a second. For aircraft noise, the “fraction of a second” is one-eighth of a second, denoted as “fast” response on a sound level measuring meter (ANSI, 1988) (**Figure C-4**). Slowly varying or steady sounds are generally measured over 1 second, denoted as “slow” response. L_{max} is important in judging if a noise event will interfere with conversation, television or radio listening, or other common activities. Although it provides some measure of the event, it does not fully describe the noise because it does not account for how long the sound is heard.

Peak Sound Pressure Level

The Peak Sound Pressure Level (L_{pk}) is the highest instantaneous level measured by a sound level measurement meter. L_{pk} is typically measured every 20 microseconds and usually based on unweighted or linear response of the meter. It is used to describe individual impulsive events such as blast noise. Because blast noise varies from shot to shot and varies with meteorological (weather) conditions, the US Department of Defense (DOD) usually characterizes L_{pk} by the metric PK 15(met), which is the L_{pk} exceeded 15 percent of the time. The “met” notation refers to the metric accounting for varied meteorological or weather conditions.

Sound Exposure Level

Sound Exposure Level (SEL) combines both the intensity of a sound and its duration. For an aircraft flyover, SEL includes the maximum and all lower noise levels produced as part of the overflight, together with how long each part lasts. It represents the total sound energy in the event. **Figure C-4** indicates the SEL for an example event, representing it as if all the sound energy were contained within 1 second.

Aircraft noise varies with time. During an aircraft overflight, noise starts at the background level, rises to a maximum level as the aircraft flies close to the observer, then returns to the background as the aircraft recedes into the distance. This is sketched on **Figure C-4**, which also indicates two metrics (L_{max} and SEL) that are described above. Over time there can be a number of events, not all the same. Because aircraft noise events last more than a few seconds, the SEL value is larger than L_{max}. It does not directly represent the sound level heard at any given time but rather the entire event. SEL provides a much better measure of aircraft flyover noise exposure than L_{max} alone.

Overpressure

The single event metrics commonly used to assess supersonic noise are overpressure in pounds per square foot and CSEL. Overpressure is the peak pressure at any location within the sonic boom footprint.

C-Weighted Sound Exposure Level

CSEL is SEL computed with C frequency weighting, which is similar to A-Weighting (discussed in **Section C.2.2.1**) except that C weighting places more emphasis on low frequencies below 1,000 Hz.

C.2.2.2.2 Cumulative Events

Equivalent Sound Level

Equivalent Sound Level (L_{eq}) is a “cumulative” metric that combines a series of noise events over a period of time. L_{eq} is the sound level that represents the decibel average SEL of all sounds in the time period. Just as SEL has proven to be a good measure of a single event, L_{eq} has proven to be a good measure of series of events during a given time period.

The time period of an L_{eq} measurement is usually related to some activity and is given along with the value. The time period is often shown in parenthesis (e.g., L_{eq}[24] for 24 hours). The L_{eq} from 7:00 a.m. to 3:00 p.m. may give exposure of noise for a school day.

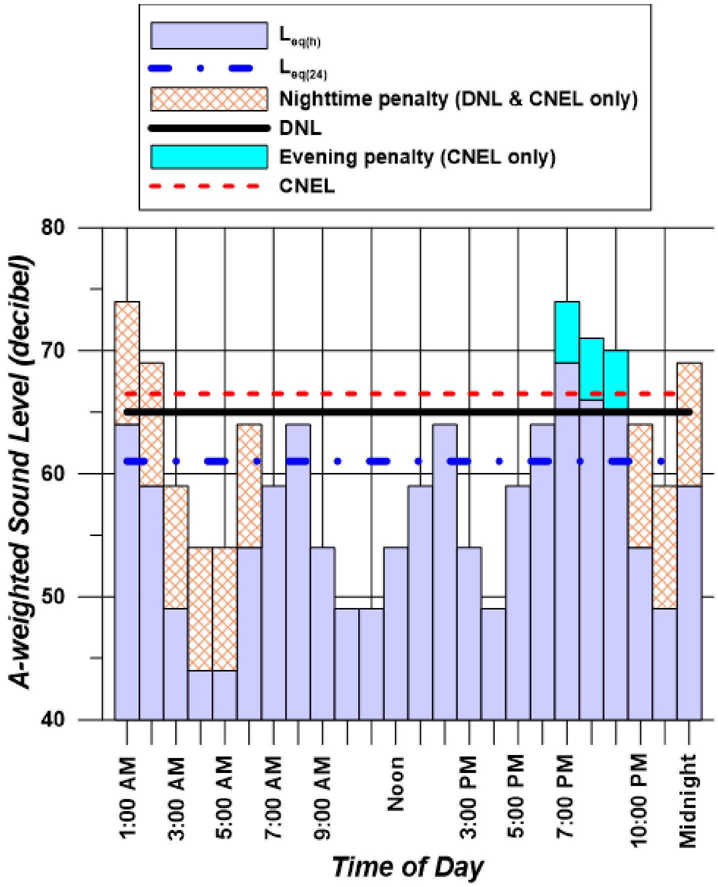
Figure C-5 gives an example of L_{eq}(24) using notional hourly average noise levels (L_{eq}[h]) for each hour of the day as an example. The L_{eq}(24) for this example is 61 dB.

Day-Night Average Sound Level and Community Noise Equivalent Level

DNL or L_{dn} is a cumulative metric that accounts for all noise events in a 24-hour period; however, unlike L_{eq}(24), DNL contains a nighttime noise penalty. To account for our increased sensitivity to noise at night, DNL applies a 10-dB penalty to events during the nighttime period, defined as 10:00 p.m. to 7:00 a.m. The notations DNL and L_{dn} are both used for Day-Night Average Sound Level and are equivalent.

Community Noise Equivalent Level (CNEL) is a variation of DNL specified by law in California (California Code of Regulations Title 21, Public Works) (Wyle Laboratories, 1970). CNEL has the 10-dB nighttime penalty for events between 10:00 p.m. and 7:00 a.m. but also includes a 4.8-dB penalty for events during the evening period of 7:00 p.m. to 10:00 p.m. The evening penalty in CNEL accounts for the added intrusiveness of sounds during that period. For airports and military airfields, DNL and CNEL represent the average sound level for annual average daily aircraft events.

Figure C-5 gives an example of DNL and CNEL using notional hourly average noise levels (L_{eq}[h]) for each hour of the day as an example. Note the L_{eq}(h) for the hours between 10:00 p.m. and 7:00 a.m. have a 10-dB penalty assigned. For CNEL, the hours between 7:00 p.m. and 10:00 p.m. have a 4.8-dB penalty assigned. The DNL for this example is 65 dB. The CNEL for this example is 66 dB.

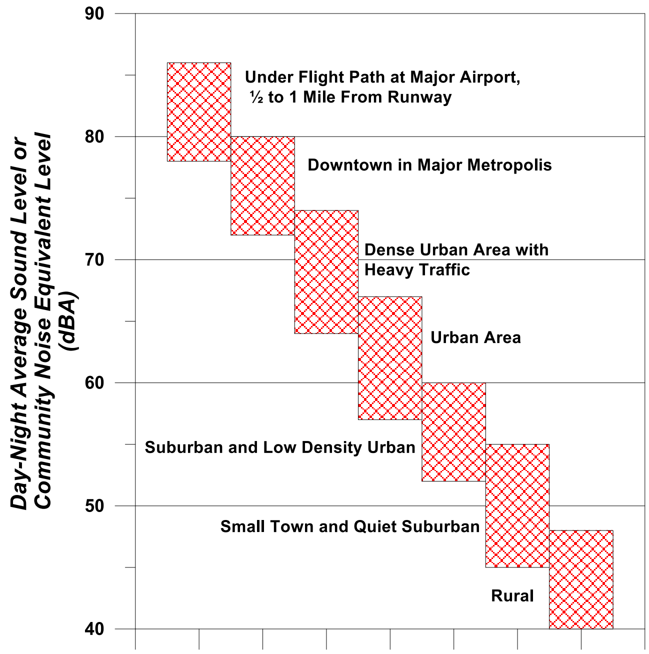


Source: Wyle Laboratories

Figure C-5. Example of Cumulative Noise Exposure From All Events Over a Full 24 Hours, Day-Night Average Sound Level and C-Weighted Sound Exposure Level Computed from Hourly Equivalent Sound Levels.

Figure C-6 shows the ranges of DNL or CNEL that occur in various types of communities. Under a flight path at a major airport the DNL may exceed 80 dB while rural areas may experience DNL less than 45 dB. The decibel summation nature of these metrics causes the noise levels of the loudest events to control the 24-hour average. As a simple example, consider a case in which only one aircraft overflight occurs during the daytime over a 24-hour period, creating a sound level of 100 dB for 30 seconds. During the remaining 23 hours, 59 minutes, and 30 seconds of the day, the ambient sound level is 50 dB. The DNL for this 24-hour period is 65.9 dB. Assume, as a second example that 10 such 30-second overflights occur during daytime hours during the next 24-hour period, with the same ambient sound level of 50 dB during the remaining 23 hours and 55 minutes of the day. The DNL for this 24-hour period is 75.5 dB. Clearly, the averaging of noise over a 24-hour period does not ignore the louder single events and tends to emphasize both the sound levels and number of those events.

A feature of the DNL metric is that a given DNL value could result from a very few noisy events or a large number of quieter events. For example, one overflight at 90 dB creates the same DNL as 10 overflights at 80 dB.



Source: DOD 1978.

Figure C-6. Typical Day-Night Average Sound Level or Community Noise Equivalent Level Ranges in Various Types of Communities.

DNL or CNEL does not represent a level heard at any given time but represent long-term exposure. Scientific studies have found good correlation between the percentages of groups of people highly annoyed and the level of average noise exposure measured in DNL (Schultz, 1978; USEPA, 1978).

Onset-Rate Adjusted Monthly Day-Night Average Sound Level and Onset-Rate Adjusted Monthly Community Noise Equivalent Level

Military aircraft utilizing airspace such as Military Training Routes, MOAs, and restricted areas generate a noise environment that is somewhat different from that around airfields. Rather than regularly occurring operations like at airfields, activity in SUA is highly sporadic. It is often seasonal, ranging from 10 per hour to less than 1 per week. Individual military overflight events also differ from typical community noise events in that noise from a low-altitude, high-airspeed flyover can have a rather sudden onset, with rates of up to 150 dB per second.

The cumulative daily noise metric devised to account for the "surprise" effect of the sudden onset of aircraft noise events on humans and the sporadic nature of SUA activity is the L_{dnmr}. Onset rates between 15 and 150 dB per second require an adjustment of 0 to 11 dB to the event's SEL while onset rates below 15 dB per second require no adjustment to the event's SEL (Stusnick et al., 1992). The term 'monthly' in L_{dnmr} refers to the noise assessment being conducted for the month with the most operations or sorties -- the so-called busiest month.

In California, a variant of the L_{dnmr} includes a penalty for evening operations (7:00 p.m. to 10:00 p.m.) and is denoted Onset-Rate Adjusted Monthly Community Noise Equivalent Level ($CNEL_{mr}$).

C.2.2.2.3 Supplemental Metrics

Number-of-Events Above a Threshold Level

The Number-of-Events Above (NA) metric gives the total number of events that exceed a noise level threshold (L) during a specified period of time. Combined with the selected threshold, the metric is denoted NAL. The threshold can be either SEL or L_{max}, and it is important that this selection is shown in the nomenclature. When labeling a contour line or point of interest, NAL is followed by the number of events in parentheses. For example, where 10 events exceed an SEL of 90 dB over a given period of time, the nomenclature would be NA90SEL(10). Similarly, for L_{max} it would be NA90L_{max}(10). The period of time can be an average 24-hour day, daytime, nighttime, school day, or any other time period appropriate to the nature and application of the analysis.

NA is a supplemental metric. It is not supported by the amount of science behind DNL/CNEL, but it is valuable in helping to describe noise to the community. A threshold level and metric are selected that best meet the need for each situation. An L_{max} threshold is normally selected to analyze speech interference, while an SEL threshold is normally selected for analysis of sleep disturbance.

The NA metric is the only supplemental metric that combines single-event noise levels with the number of aircraft operations. In essence, it answers the question of how many aircraft (or range of aircraft) fly over a given location or area at or above a selected threshold noise level.

Time Above a Specified Level

The Time Above (TA) metric is the total time, in minutes, that the A-weighted noise level is at or above a threshold. Combined with the threshold level (L), it is denoted TAL. TA can be calculated over a full 24-hour annual average day, the 15-hour daytime and 9-hour nighttime periods, a school day, or any other time period of interest, provided there is operational data for that time.

TA is a supplemental metric, used to help understand noise exposure. It is useful for describing the noise environment in schools, particularly when assessing classroom or other noise sensitive areas for various scenarios. TA can be shown as contours on a map similar to the way DNL contours are drawn.

TA helps describe the noise exposure of an individual event or many events occurring over a given time period. When computed for a full day, the TA can be compared alongside the DNL in order to determine the sound levels and total duration of events that contribute to the DNL. TA analysis is usually conducted along with NA analysis, so the results show not only how many events occur, but also the total duration of those events above the threshold.

C.2.2.3 Noise Effects

Noise is of concern because of potential adverse effects. The following subsections describe how noise can affect communities and the environment and how those effects are quantified. The specific topics discussed are

- annoyance;
- speech interference;
- sleep disturbance;
- noise effects on children; and
- noise effects on domestic animals and wildlife.

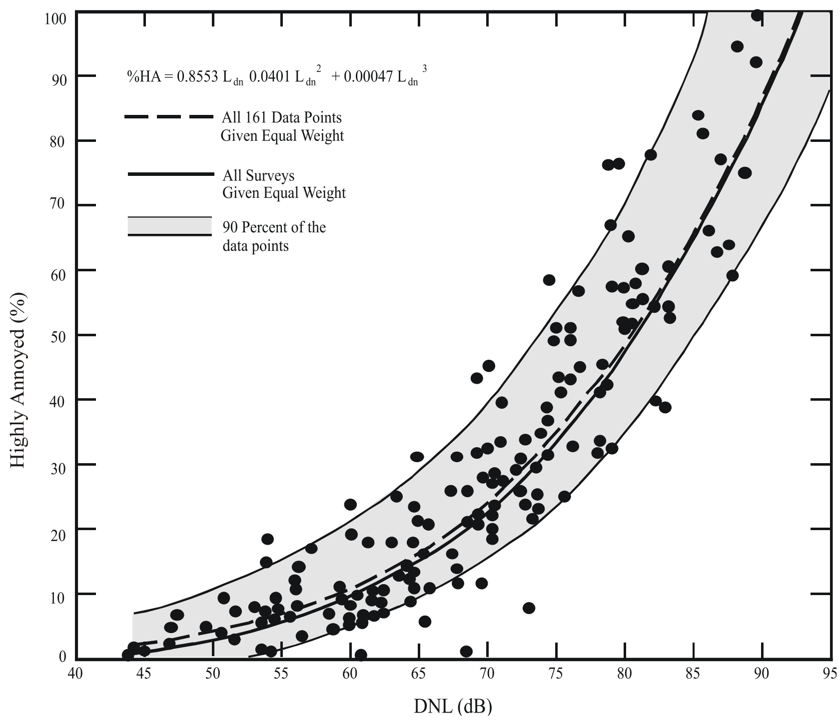
C.2.2.3.1 Annoyance

With the introduction of jet aircraft in the 1950s, it became clear that aircraft noise annoyed people and was a significant problem around airports. Early studies, such as those of Rosenblith et al. (1953) and Stevens et al. (1953) showed that effects depended on the quality of the sound, its level, and the number of flights. Over the next 20 years considerable research was performed refining this understanding and setting guidelines for noise exposure. In the early 1970s, the USEPA published its “Levels Document” (USEPA,

1974) that reviewed the factors that affected communities. DNL (still known as L_{dn} at the time) was identified as an appropriate noise metric, and threshold criteria were recommended.

Threshold criteria for annoyance were identified from social surveys, where people exposed to noise were asked how noise affects them. Surveys provide direct real-world data on how noise affects actual residents.

Surveys in the early years had a range of designs and formats and needed some interpretation to find common ground. In 1978, Schultz showed that the common ground was the number of people "highly annoyed," defined as the upper 28 percent range of whatever response scale a survey used (Schultz, 1978). With that definition, he was able to show a remarkable consistency among the majority of the surveys for which data were available. **Figure C-7** shows the result of his study relating DNL to individual annoyance measured by percent highly annoyed (%HA).



Source: Schultz, 1978

Figure C-7. Schultz Curve Relating Noise Annoyance to Day-Night Average Sound Level

Schultz's original synthesis included 161 data points. **Figure C-8** shows a comparison of the predicted response of the Schultz data set with an expanded set of 400 data points collected through 1989 (Finegold et al., 1994). The new form is the preferred form in the United States, endorsed by the Federal Interagency Committee on Aviation Noise (FICAN, 1997). Other forms have been proposed, such as that of Fidell and Silvati (2004) but have not gained widespread acceptance.

When the goodness of fit of the Schultz curve is examined, the correlation between groups of people is high, in the range of 85 to 90 percent; however, the correlation between individuals is much lower, at 50 percent or less. This is not surprising, given the personal differences between individuals. The surveys underlying the Schultz curve include results that show that annoyance to noise is also affected by nonacoustical factors. Newman and Beattie (1985) divided the nonacoustic factors into the emotional and physical variables shown in **Table C-1**.

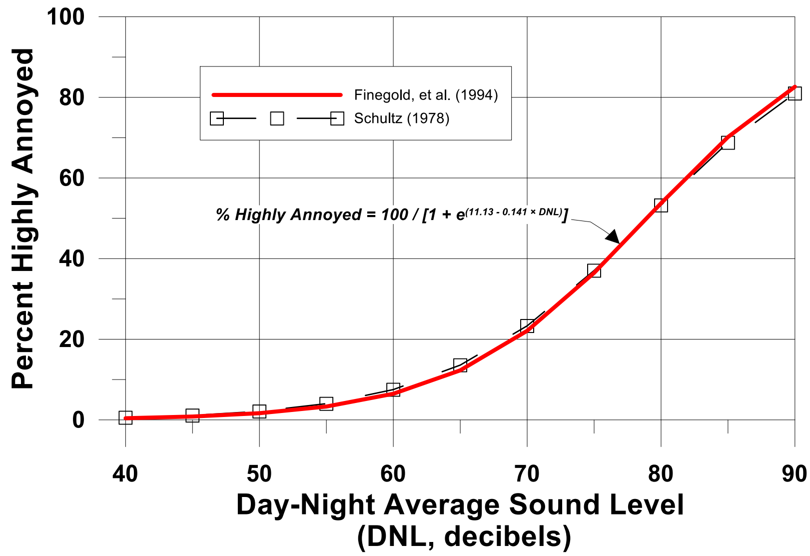


Figure C-8. Response of Communities to Noise; Comparison of Original Schultz (1978) with Finegold et al. (1994).

Table C-1
Nonacoustic Variables Influencing Aircraft Noise Annoyance

Emotional Variables
Feeling about the necessity or preventability of the noise
Judgement of the importance and value of the activity that is producing the noise
Activity at the time an individual hears the noise
Attitude about the environment
General sensitivity to noise
Belief about the effect of noise on health
Feeling of fear associated with the noise
Physical Variables
Type of neighborhood
Time of day
Season
Predictability of the noise
Control over the noise source
Length of time individual is exposed to a noise.

Schreckenberg and Schuemer (2010) examined the importance of some of these factors on short term annoyance. Attitudinal factors were identified as having an effect on annoyance. In formal regression analysis, however, sound level (L_{eq}) was found to be more important than attitude. A series of studies at three European airports showed that less than 20 percent of the variance in annoyance can be explained by noise alone (Márki, 2013).

A study by Plotkin et al. (2011) examined updating DNL to account for these factors. It was concluded that the data requirements for a general analysis were much greater than are available from most existing studies. It was noted that the most significant issue with DNL is that it is not readily understood by the public and that supplemental metrics such as TA and NA were valuable in addressing attitude when communicating noise analysis to communities (DOD, 2009a).

A factor that is partially nonacoustical is the source of the noise. Miedema and Vos (1998) presented synthesis curves for the relationship between DNL and percentage “Annoyed” and percentage “Highly

Annoyed" for three transportation noise sources. Different curves were found for aircraft, road traffic, and railway noise. **Table C-2** summarizes their results. Comparing the updated Schultz curve suggests that the percentage of people highly annoyed by aircraft noise may be higher than previously thought. Miedema and Oudshoorn (2001) authors supplemented that investigation with further derivation of percent of population highly annoyed as a function of either DNL or DENL along with the corresponding 95 percent confidence intervals with similar results.

Table C-2
Percent Highly Annoyed for Different Transportation Noise Sources

Day-Night Average Sound Level (decibels)	Percent Highly Annoyed (%HA)			
	Miedema and Vos			Schultz Combined
	Air	Road	Rail	
55	12	7	4	3
60	19	12	7	6
65	28	18	11	12
70	37	29	16	22
75	48	40	22	36

Source: Miedema and Vos, 1998

As noted by the World Health Organization (WHO), however, even though aircraft noise seems to produce a stronger annoyance response than road traffic, caution should be exercised when interpreting synthesized data from different studies (WHO, 1999).

Consistent with WHO's recommendations, the Federal Interagency Committee on Noise (FICON, 1992) considered the Schultz curve to be the best source of dose information to predict community response to noise but recommended further research to investigate the differences in perception of noise from different sources.

The International Standard Organization (ISO 1996:1-2016) update introduced the concept of Community Tolerance Level (L_{ct}) as the day-night sound level at which 50 percent of the people in a particular community are predicted to be highly annoyed by noise exposure. L_{ct} accounts for differences between sources and/or communities when predicting the percentage highly annoyed by noise exposure. ISO also recommended a change to the adjustment range used when comparing aircraft noise to road noise. The previous edition suggested +3 to +6 dB for aircraft noise relative to road noise while the latest editions recommends an adjustment range of +5 to +8 dB. This adjustment range allows DNL to be correlated to consistent annoyance rates when originating from different noise sources (i.e., road traffic, aircraft, or railroad). This change to the adjustment range would increase the calculated percent highly annoyed at the 65-dBA DNL by approximately 2 to 5 percent greater than the previous ISO definition. **Figure C-9** depicts the estimated percentage of people highly annoyed for a given DNL using both the ISO 1996-1 estimation and the older FICON 1992 method. The results suggest that the percentage of people highly annoyed may be greater than previous thought and reliance solely on DNL for impact analysis may be insufficient if utilizing the FICON 1992 method.

The FAA is currently conducting a major airport community noise survey at approximately 20 US airports in order to update the relationship between aircraft noise and annoyance. Results from this study have not yet been released.

C.2.2.3.2 Speech Interference

Speech interference from noise is a primary cause of annoyance for communities. Disruption of routine activities such as radio or television listening, telephone use, or conversation leads to frustration and annoyance. The quality of speech communication is important in classrooms and offices. In the workplace, speech interference from noise can cause fatigue and vocal strain in those who attempt to talk over the noise. In schools it can impair learning.

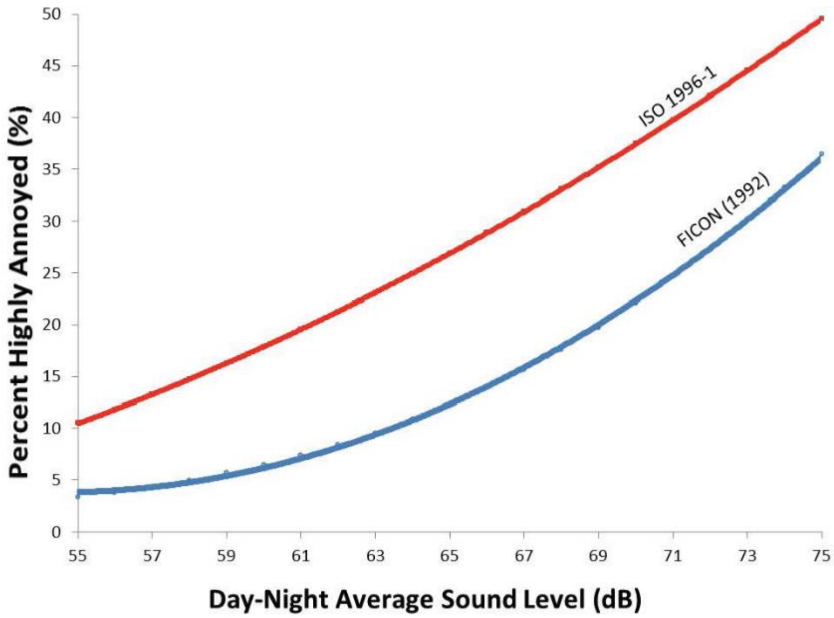


Figure C-9. Percent Highly Annoyed Comparison of International Standard Organization 1996-1 to Federal Interagency Committee on Noise (1992).

There are two measures of speech comprehension:

1. Word Intelligibility – the percent of words spoken and understood. This might be important for students in the lower grades who are learning the English language and particularly for students who have English as a Second Language.
2. Sentence Intelligibility – the percent of sentences spoken and understood. This might be important for high-school students and adults who are familiar with the language and who do not necessarily have to understand each word in order to understand sentences.

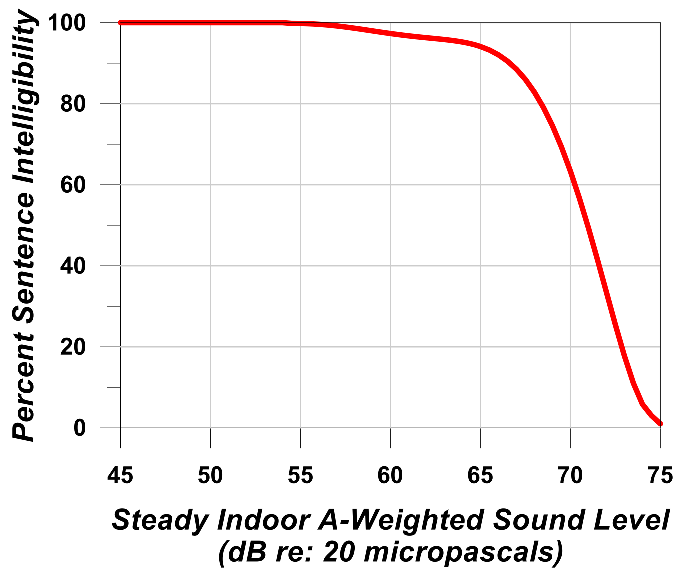
United States Federal Criteria for Interior Noise

In 1974, the USEPA identified a goal of an indoor L_{eq}(24) of 45 dB to minimize speech interference based on sentence intelligibility and the presence of steady noise (USEPA, 1974). **Figure C-10** shows the effect of steady indoor background sound levels on sentence intelligibility. For an average adult with normal hearing and fluency in the language, steady background indoor sound levels of less than the 45-dB L_{eq} are expected to allow 100 percent sentence intelligibility.

The curve on **Figure C-10** shows 99 percent intelligibility at L_{eq} below 54 dB and less than 10 percent above 73 dB. Recalling that L_{eq} is dominated by louder noise events, the USEPA L_{eq}(24) goal of 45 dB generally ensures that sentence intelligibility will be high most of the time.

Classroom Criteria

For teachers to be understood, their regular voice must be clear and uninterrupted. Background noise has to be below the teacher's voice level. Intermittent noise events that momentarily drown out the teacher's voice need to be kept to a minimum. It is therefore important to evaluate the steady background level, level of voice communication, and single-event level due to aircraft overflights that might interfere with speech.



Source: Digitized from United States Environmental Protection Agency, 1974

Figure C-10. Speech Intelligibility Curve.

Lazarus (1990) found that for listeners with normal hearing and fluency in the language, complete sentence intelligibility can be achieved when the signal-to-noise ratio (i.e., a comparison of the level of the sound to the level of background noise) is in the range of 15 to 18 dB. The initial ANSI (2002) classroom noise standard and American Speech-Language-Hearing Association (2005) guidelines concur, recommending at least a 15-dB signal-to-noise ratio in classrooms. If the teacher's voice level is at least 50 dB, the background noise level must not exceed an average of 35 dB. The National Research Council of Canada (Bradley, 1993) and WHO (1999) agree with this criterion for background noise.

For eligibility for noise insulation funding, the FAA guidelines state that the design objective for a classroom environment is the 45-dB L_{eq} during normal school hours (FAA, 1985).

Most aircraft noise is not continuous. It consists of individual events like the one sketched on **Figure C-4**. Since speech interference in the presence of aircraft noise is caused by individual aircraft flyover events, a time-averaged metric alone, such as L_{eq}, is not necessarily appropriate. In addition to the background level criteria described above, single-event criteria that account for those noisy events are also needed.

A 1984 study by Wyle for the Port Authority of New York and New Jersey recommended using Speech Interference Level (SIL) for classroom noise criteria (Sharp and Plotkin, 1984). SIL is based on the maximum sound levels in the frequency range that most affects speech communication (500 to 2,000 Hz). The study identified an SIL of 45 dB as the goal. This would provide 90 percent word intelligibility for the short time periods during aircraft overflights. While SIL is technically the best metric for speech interference, it can be approximated by an L_{max} value. An SIL of 45 dB is equivalent to an A-weighted L_{max} of 50 dB for aircraft noise (Wesler, 1986).

Lind et al. (1998) also concluded that an L_{max} criterion of 50 dB would result in 90 percent word intelligibility. Bradley (1985) recommends SEL as a better indicator. His work indicates that 95 percent word intelligibility would be achieved when indoor SEL did not exceed 60 dB. For typical flyover noise, this corresponds to an L_{max} of 50 dB. While WHO (1999) only specifies a background L_{max} criterion, they also note the SIL frequencies and that interference can begin at around 50 dB.

The United Kingdom Department for Education and Skills (UKDfES) established in its classroom acoustics guide a 30-minute time-averaged metric of L_{eq}(30min) for background levels and the metric of LA1,30min for intermittent noises, at thresholds of 30 to 35 dB and 55 dB, respectively. LA1,30min represents the A-weighted sound level that is exceeded 1 percent of the time (in this case, during a 30-minute teaching session) and is generally equivalent to the L_{max} metric (UKDfES, 2003).

Table C-3 summarizes the criteria discussed. Other than the FAA (1985) 45 dB L_{max} criterion, they are consistent with a limit on indoor background noise of 35 to 40 dB L_{eq} and a single event limit of 50 dB L_{max}. It should be noted that these limits were set based on students with normal hearing and no special needs. At-risk students may be adversely affected at lower sound levels.

Table C-3
Indoor Noise Level Criteria Based on Speech Intelligibility

Source	Metric/Level (dB)	Effects and Notes
Federal Aviation Administration (1985)	$L_{eq(during\ school\ hours)}$ = 45 dB	Federal assistance criteria for school sound insulation; supplemental single-event criteria may be used.
Lind et al. (1998), Sharp and Plotkin (1984), Wesler (1986)	L_{max} = 50 dB / Speech Interference Level 45	Single event level permissible in the classroom.
World Health Organization (1999)	L_{eq} = 35 dB L_{max} = 50 dB	Assumes average speech level of 50 dB and recommends signal to noise ratio of 15 dB.
American National Standards Institute (2010)	L_{eq} = 35 dB, based on Room Volume (e.g., cubic feet)	Acceptable background level for continuous and intermittent noise.
United Kingdom Department for Education and Skills (2003)	$L_{eq(30min)}$ = 30-35 dB L_{max} = 55 dB	Minimum acceptable in classroom and most other learning environs.

dB = decibel(s); L_{eq} = Equivalent Sound Level; L_{max} = Maximum Sound Level

C.2.2.3.3 Sleep Disturbance

Sleep disturbance is a major concern for communities exposed to aircraft noise at night. A number of studies have attempted to quantify the effects of noise on sleep. This section provides an overview of the major noise-induced sleep disturbance studies. Emphasis is on studies that have influenced US federal noise policy. The studies have been separated into two groups:

1. Initial studies performed in the 1960s and 1970s, where the research was focused on sleep observations performed under laboratory conditions.
2. Later studies performed in the 1990s up to the present, where the research was focused on field observations.

Initial Studies

The relation between noise and sleep disturbance is complex and not fully understood. The disturbance depends not only on the depth of sleep and the noise level but also on the nonacoustic factors cited for annoyance. The easiest effect on measure is the number of arousals or awakenings from noise events. Much of the literature has therefore focused on predicting the percentage of the population that will be awakened at various noise levels.

FICON's 1992 review of airport noise issues (FICON, 1992) included an overview of relevant research conducted through the 1970s. Literature reviews and analyses were conducted from 1978 through 1989 using existing data (Griefahn, 1978; Lukas, 1978; Pearsons et. al., 1989). Because of large variability in the data, FICON did not endorse the reliability of those results.

FICON did, however, recommend an interim dose-response curve, awaiting future research. That curve predicted the percent of the population expected to be awakened as a function of the exposure to SEL.

This curve was based on research conducted for the US Air Force (Air Force; Finegold, 1994). The data included most of the research performed up to that point and predicted a 10 percent probability of awakening when exposed to an interior SEL of 58 dB. The data used to derive this curve were primarily from controlled laboratory studies.

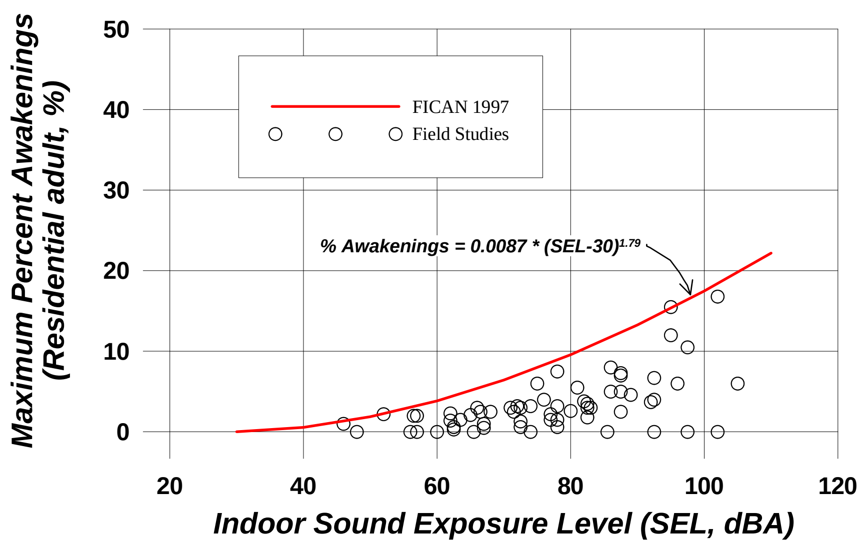
Recent Sleep Disturbance Research – Field and Laboratory Studies

It was noted that early sleep laboratory studies did not account for some important factors. These included habituation to the laboratory, previous exposure to noise, and awakenings from noise other than aircraft. In the early 1990s, field studies in people's homes were conducted to validate the earlier laboratory work conducted in the 1960s and 1970s. The field studies of the 1990s (e.g., Horne, 1994) found that 80 to 90 percent of sleep disturbances were not related to outdoor noise events but rather to indoor noises and nonnoise factors. The results showed that, in real life conditions, there was less of an effect of noise on sleep than had been previously reported from laboratory studies. Laboratory sleep studies tend to show more sleep disturbance than field studies because people who sleep in their own homes are used to their environment and, therefore, do not wake up as easily (FICAN, 1997).

Federal Interagency Committee on Aviation Noise (FICAN)

Based on this new information, in 1997 FICAN recommended a dose-response curve to use instead of the earlier 1992 FICON curve (FICAN, 1997). **Figure C-11** shows FICAN's curve, the red line, which is based on the results of three field studies shown in the figure (Ollerhead et al., 1992; Fidell et al., 1994, 1995a, 1995b), along with the data from six previous field studies.

The 1997 FICAN curve represents the upper envelope of the latest field data. It predicts the maximum percent awakened for a given residential population. According to this curve, a maximum of 3 percent of people would be awakened at an indoor SEL of 58 dB. An indoor SEL of 58 dB is equivalent to an outdoor SEL of about 83 dB, with the windows closed (73 dB with windows open).



Source: FICAN 1997

Figure C-11. Federal Interagency Committee on Aviation Noise (1997) Recommended Sleep Disturbance Dose-Response Relationship.

Number of Events and Awakenings

It is reasonable to expect that sleep disturbance is affected by the number of events. The German Aerospace Center (DLR Laboratory) conducted an extensive study focused on the effects of nighttime aircraft noise on sleep and related factors (Basner et al., 2004). The DLR Laboratory study was one of the largest studies to examine the link between aircraft noise and sleep disturbance. It involved both laboratory and in-home field research phases. The DLR Laboratory investigators developed a dose-response curve that predicts the number of aircraft events at various values of L_{max} expected to produce one additional awakening over the course of a night. The dose-effect curve was based on the relationships found in the field studies.

Later studies by DLR Laboratory conducted in the laboratory comparing the probability of awakenings from different modes of transportation showed that aircraft noise lead to significantly lower awakening probabilities than either road or rail noise (Basner et al., 2011). Furthermore, it was noted that the probability of awakening, per noise event, decreased as the number of noise events increased. The authors concluded that by far the majority of awakenings from noise events merely replaced awakenings that would have occurred spontaneously anyway.

A different approach was taken by an ANSI standards committee (ANSI, 2008). The committee used the average of the data shown on **Figure C-10** rather than the upper envelope, to predict average awakening from one event. Probability theory is then used to project the awakening from multiple noise events.

Currently, there are no established criteria for evaluating sleep disturbance from aircraft noise although recent studies have suggested a benchmark of an outdoor SEL of 90 dB as an appropriate tentative criterion when comparing the effects of different operational alternatives. The corresponding indoor SEL would be approximately 25 dB lower (at 65 dB) with doors and windows closed, and approximately 15 dB lower (at 75 dB) with doors or windows open. According to the ANSI (2008) standard, the probability of awakening from a single aircraft event at this level is between 1 and 2 percent for people habituated to the noise sleeping in bedrooms with windows closed, and between 2 to 3 percent with windows open. The probability of the exposed population awakening at least once from multiple aircraft events at the 90-dB SEL is shown in **Table C-4**.

Table C-4
Probability of Awakening from Aircraft Events Exceeding a Sound Exposure Level of 90 Decibels over a 9-Hour Period

Number of Aircraft Events at the 90-Decibel Sound Exposure Level for Average 9-Hour Night	Minimum Probability of Awakening at Least Once	
	Windows Closed	Windows Open
1	1%	2%
3	4%	6%
5	7%	10%
9 (1 per hour)	12%	18%
18 (2 per hour)	22%	33%
27 (3 per hour)	32%	45%

Source: DOD, 2009b

In December 2008, FICAN recommended the use of this new standard. FICAN also recognized that more research is underway by various organizations, and that work may result in changes to FICAN's position. Until that time, FICAN recommends the use of the ANSI (2008) standard (FICAN, 2008).

Summary

Sleep disturbance research still lacks the details to accurately estimate the population awakened for a given noise exposure. The procedure described in the ANSI (2008) Standard and endorsed by FICAN is based on probability calculations that have not yet been scientifically validated. While this procedure certainly provides a much better method for evaluating sleep awakenings from multiple aircraft noise events, the estimated probability of awakenings can only be considered approximate.

C.2.2.3.4 Noise Effects on Children

Recent studies on school children indicate a potential link between aircraft noise and both reading comprehension and learning motivation. The effects may be small but may be of particular concern for children who are already scholastically challenged.

Effects on Learning and Cognitive Abilities

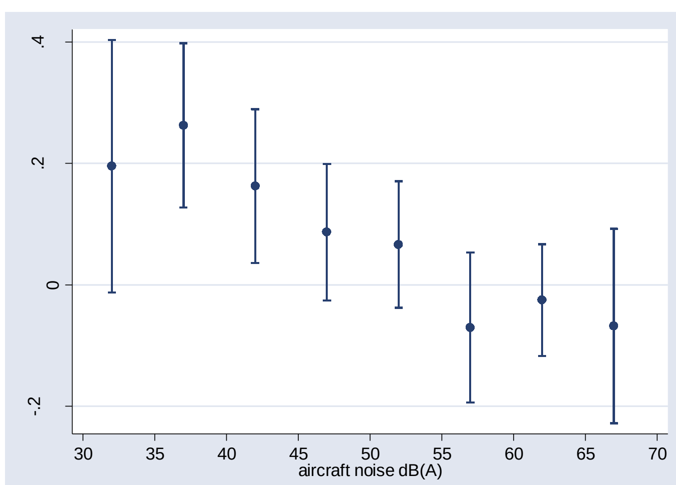
Early studies in several countries (Cohen et al., 1973, 1980, 1981; Bronzaft and McCarthy, 1975; Green et al., 1982; Evans et al., 1998; Haines et al., 2002; Lercher et al., 2003) showed lower reading scores for children living or attending school in noisy areas than for children away from those areas. In some studies noise exposed children were less likely to solve difficult puzzles or more likely to give up.

A longitudinal study reported by Evans et al. (1998), conducted prior to relocation of the old Munich airport in 1992, reported that high noise exposure was associated with deficits in long-term memory and reading comprehension in children with a mean age of 10.8 years. Two years after the closure of the airport, these deficits disappeared, indicating that noise effects on cognition may be reversible if exposure to the noise ceases. Most convincing was the finding that deficits in memory and reading comprehension developed over the 2-year follow-up for children who became newly noise exposed near the new airport; deficits were also observed in speech perception for the newly noise-exposed children.

More recently, the Road Traffic and Aircraft Noise Exposure and Children's Cognition and Health (RANCH) study (Stansfeld et al., 2005; Clark et al., 2005) compared the effect of aircraft and road traffic noise on over 2,000 children in three countries. This was the first study to derive exposure-effect associations for a range of cognitive and health effects and was the first to compare effects across countries.

The study found a linear relation between chronic aircraft noise exposure and impaired reading comprehension and recognition memory. No associations were found between chronic road traffic noise exposure and cognition. Conceptual recall and information recall surprisingly showed better performance in high road traffic noise areas. Neither aircraft noise nor road traffic noise affected attention or working memory (Stansfeld et al., 2005; Clark et al., 2006).

Figure C-12 shows RANCH's result relating noise to reading comprehension. It shows that reading falls below average (a z-score of 0) at Leq greater than 55 dB. Because the relationship is linear, reducing exposure at any level should lead to improvements in reading comprehension.



Sources: Stansfeld et al. 2005; Clark et al. 2006

Figure C-12. Road Traffic and Aircraft Noise Exposure and Children's Cognition and Health Study Reading Scores Varying with Equivalent Sound Level.

An observation of the RANCH study was that children may be exposed to aircraft noise for many of their childhood years and the consequences of long-term noise exposure were unknown. A follow-up study of the children in the RANCH project is being analyzed to examine the long-term effects on children's reading comprehension (Clark et al., 2009). Preliminary analysis indicated a trend for reading comprehension to be poorer at 15 to 16 years of age for children who attended noise-exposed primary schools. An additional study utilizing the same data set (Clark et al., 2012) investigated the effects of traffic-related air pollution and found little evidence that air pollution moderated the association of noise exposure on children's cognition.

There was also a trend for reading comprehension to be poorer in aircraft noise exposed secondary schools. Significant differences in reading scores were found between primary school children in the two different classrooms at the same school (Bronzaft and McCarthy, 1975). One classroom was exposed to high levels of railway noise while the other classroom was quiet. The mean reading age of the noise-exposed children was 3 to 4 months behind that of the control children. Studies suggest that the evidence of the effects of noise on children's cognition has grown stronger over recent years (Stansfeld and Clark, 2015), but further analysis adjusting for confounding factors is ongoing and needed to confirm these initial conclusions.

Studies identified a range of linguistic and cognitive factors to be responsible for children´s unique difficulties with speech perception in noise. Children have lower stored phonological knowledge to reconstruct degraded speech reducing the probability of successfully matching incomplete speech input when compared with adults. Additionally, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Klatte et al., 2013).

FICAN funded a pilot study to assess the relationship between aircraft noise reduction and standardized test scores (Eagan et al., 2004; FICAN, 2007). The study evaluated whether abrupt aircraft noise reduction within classrooms, from either airport closure or sound insulation, was associated with improvements in test scores. Data were collected in 35 public schools near three airports in Illinois and Texas. The study used several noise metrics. These were, however, all computed indoor levels, which makes it hard to compare with the outdoor levels used in most other studies.

The FICAN study found a significant association between noise reduction and a decrease in failure rates for high school students but not middle or elementary school students. There were some weaker associations between noise reduction and an increase in failure rates for middle and elementary schools. Overall, the study found that the associations observed were similar for children with or without learning difficulties, and between verbal and math/science tests. As a pilot study, it was not expected to obtain final answers but provided useful indications (FICAN, 2007).

A study of the effect of aircraft noise on student learning (Sharp et al., 2013) examined student test scores at a total of 6,198 US elementary schools, 917 of which were exposed to aircraft noise at 46 airports with noise exposures exceeding the 55-dBA DNL. The study found small but statistically significant associations between airport noise and student mathematics and reading test scores, after taking demographic and school factors into account. Associations were also observed for ambient noise and total noise on student mathematics and reading test scores, suggesting that noise levels per se, as well as from aircraft, might play a role in student achievement.

As part of the Noise-Related Annoyance, Cognition and Health study conducted at Frankfurt airport, reading tests were conducted on 1,209 school children at 29 primary schools. It was found that there was a small decrease in reading performance that corresponded to a 1-month reading delay; however, a recent study observing children at 11 schools surrounding Los Angeles International Airport found that the majority of distractions to elementary age students were other students followed by themselves, which includes playing with various items and daydreaming. Less than 1 percent of distractions were caused by traffic noise.

While there are many factors that can contribute to learning deficits in school-aged children, there is increasing awareness that chronic exposure to high aircraft noise levels may impair learning. This awareness has led WHO and a North Atlantic Treaty Organization (NATO) working group to conclude that daycare centers and schools should not be located near major sources of noise, such as highways, airports, and industrial sites (NATO, 2000; WHO, 1999). The awareness has also led to the classroom noise standard discussed earlier (ANSI, 2002).

C.2.2.3.5 Noise Effects on Animals and Wildlife

Hearing is critical to an animal's ability to react, compete, reproduce, hunt, forage, and survive in its environment. While the existing literature does include studies on possible effects of jet aircraft noise and sonic booms on wildlife, there appears to have been little concerted effort in developing quantitative comparisons of aircraft noise effects on normal auditory characteristics. Behavioral effects have been relatively well described, but the larger ecological context issues, and the potential for drawing conclusions regarding effects on populations, have not been well developed.

The relationships between potential auditory/physiological effects and species interactions with their environments are not well understood. Manci et al. (1988) assert that the consequences that physiological effects may have on behavioral patterns are vital to understanding the long-term effects of noise on wildlife. Questions regarding the effects (if any) on predator-prey interactions, reproductive success, and intraspecific behavior patterns remain.

The following discussion provides an overview of the existing literature on noise effects (particularly jet aircraft noise) on animal species. The literature reviewed here involves those studies that have focused on the observations of the behavioral effects that jet aircraft and sonic booms have on animals.

A great deal of research was conducted in the 1960s and 1970s on the effects of aircraft noise on the public and the potential for adverse ecological impacts. These studies were largely completed in response to the increase in air travel and as a result of the introduction of supersonic jet aircraft. According to Manci et al. (1988), the foundation of information created from that focus does not necessarily correlate or provide information specific to the impacts on wildlife in areas overflown by aircraft at supersonic speed or at low altitudes.

The abilities to hear sounds and noise and to communicate assist wildlife in maintaining group cohesiveness and survivorship. Social species communicate by transmitting calls of warning, introduction, and other types that are subsequently related to an individual's or group's responsiveness.

Animal species differ greatly in their responses to noise. Noise effects on domestic animals and wildlife are classified as primary, secondary, and tertiary. Primary effects are direct, physiological changes to the auditory system and most likely include the masking of auditory signals. Masking is defined as the inability of an individual to hear important environmental signals that may arise from mates, predators, or prey. There is some potential that noise could disrupt a species' ability to communicate or could interfere with behavioral patterns (Manci et al., 1988). Although the effects are likely temporal, aircraft noise may cause masking of auditory signals within exposed faunal communities. Animals rely on hearing to avoid predators, obtain food, and communicate with, and attract, other members of their species. Aircraft noise may mask or interfere with these functions. Other primary effects, such as ear drum rupture or temporary and permanent hearing threshold shifts, are not as likely given the subsonic noise levels produced by aircraft overflights.

Secondary effects may include nonauditory effects such as stress and hypertension; behavioral modifications; interference with mating or reproduction; and impaired ability to obtain adequate food, cover, or water. Tertiary effects are the direct result of primary and secondary effects and include population decline and habitat loss. Most of the effects of noise are mild enough that they may never be detectable as variables of change in population size or population growth against the background of normal variation (Bowles, 1995). Other environmental variables (e.g., predators, weather, changing prey base, ground-based disturbance) also influence secondary and tertiary effects and confound the ability to identify the ultimate factor in limiting productivity of a certain nest, area, or region (Smith et al., 1988). Overall, the literature suggests that species differ in their response to various types, durations, and sources of noise (Manci et al., 1988).

Many scientific studies have investigated the effects of aircraft noise on wildlife, and some have focused on wildlife "flight" due to noise. Animal responses to aircraft are influenced by many variables, including size, speed, proximity (both height above the ground and lateral distance), engine noise, color, flight profile, and radiated noise. The type of aircraft (e.g., fixed wing versus rotor-wing [helicopter]) and type of flight mission may also produce different levels of disturbance, with varying animal responses (Smith et al., 1988). Consequently, it is difficult to generalize animal responses to noise disturbances across species.

One result of the Manci et al. (1988) literature review was the conclusion that, while behavioral observation studies were relatively limited, a general behavioral reaction in animals from exposure to aircraft noise is the startle response. The intensity and duration of the startle response appears to be dependent on which species is exposed, whether there is a group or an individual, and whether there have been some previous exposures. Responses range from flight, trampling, stampeding, jumping, or running, to movement of the head in the apparent direction of the noise source. Manci et al. (1988) reported that the literature indicated that avian species may be more sensitive to aircraft noise than mammals.

Domestic Animals

Although some studies report that the effects of aircraft noise on domestic animals is inconclusive, a majority of the literature reviewed indicates that domestic animals exhibit some behavioral responses to military overflights but generally seem to habituate to the disturbances over a period of time. Mammals in particular appear to react to noise at sound levels higher than 90 dB, with responses including the startle response, freezing (i.e., becoming temporarily stationary), and fleeing from the sound source. Many studies on domestic animals suggest that some species appear to acclimate to some forms of sound disturbance (Manci et al., 1988). Some studies have reported such primary and secondary effects as reduced milk production and rate of milk release, increased glucose concentrations, decreased levels of hemoglobin, increased heart rate, and a reduction in thyroid activity. These latter effects appear to represent a small percentage of the findings occurring in the existing literature.

Some reviewers have indicated that earlier studies, and claims by farmers linking adverse effects of aircraft noise on livestock, did not necessarily provide clear-cut evidence of cause and effect (Cottereau, 1978). In contrast, many studies conclude that there is no evidence that aircraft overflights affect feed intake, growth, or production rates in domestic animals.

Wildlife

Studies on the effects of overflights and sonic booms on wildlife have been focused mostly on avian species and ungulates such as caribou and bighorn sheep. Few studies have been conducted on marine mammals, small terrestrial mammals, reptiles, amphibians, and carnivorous mammals. Generally, species that live entirely below the surface of the water have also been ignored due to the fact they do not experience the same level of sound as terrestrial species (National Park Service, 1994). Wild ungulates appear to be much more sensitive to noise disturbance than domestic livestock. This may be due to previous exposure to disturbances. One common factor appears to be that low-altitude flyovers seem to be more disruptive in terrain where there is little cover (Manci et al., 1988).

Some physiological/behavioral responses such as increased hormonal production, increased heart rate, and reduction in milk production have been described in a small percentage of studies. A majority of the studies focusing on these types of effects have reported short-term or no effects.

The relationships between physiological effects and how species interact with their environments have not been thoroughly studied; therefore, the larger ecological context issues regarding physiological effects of jet aircraft noise (if any) and resulting behavioral pattern changes are not well understood.

Animal species exhibit a wide variety of responses to noise. It is therefore difficult to generalize animal responses to noise disturbances or to draw inferences across species, as reactions to jet aircraft noise appear to be species-specific. Consequently, some animal species may be more sensitive than other species and/or may exhibit different forms or intensities of behavioral responses. For instance, wood ducks appear to be more sensitive and more resistant to acclimation to jet aircraft noise than Canada geese in one study. Similarly, wild ungulates seem to be more easily disturbed than domestic animals.

The literature does suggest that common responses include the “startle” or “fright” response and, ultimately, habituation. It has been reported that the intensities and durations of the startle response decrease with the numbers and frequencies of exposures, suggesting no long-term adverse effects. The majority of the literature suggests that domestic animal species (e.g., cows, horses, chickens) and wildlife species exhibit adaptation, acclimation, and habituation after repeated exposure to jet aircraft noise and sonic booms.

Animal responses to aircraft noise appear to be somewhat dependent on, or influenced by, the size, shape, speed, proximity (vertical and horizontal), engine noise, color, and flight profile of planes. Helicopters also appear to induce greater intensities and durations of disturbance behavior as compared to fixed-wing aircraft. Some studies showed that animals that had been previously exposed to jet aircraft noise exhibited greater degrees of alarm and disturbance to other objects creating noise, such as boats, people, and objects blowing across the landscape. Other factors influencing response to jet aircraft noise may include wind direction, speed, and local air turbulence; landscape structures (i.e., amount and type of vegetative cover); and, in the case of bird species, whether the animals are in the incubation/nesting phase.

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C.3 SAFETY

C.3.1 Definition of the Resource

Safety concerns associated with ground, explosive, and flight activities are considered in this section. Ground safety considers issues associated with ground operations and maintenance activities that support civil and military operations including jet blast/maintenance testing and safety danger. Aircraft maintenance testing occurs in designated safety zones. Ground safety also considers the safety of personnel and facilities on the ground that may be placed at risk from flight operations in the vicinity of the airport and in the airspace. Safety zones, which include Runway Protection Zones (RPZs) and Quantity-Distance arcs, around the airport restrict the public's exposure to areas where there is a higher accident potential. Although ground and flight safety are addressed separately, in the immediate vicinity of the runway, risks associated with safety-of-flight issues are interrelated with ground safety concerns.

Explosives safety relates to the management and safe use of ordnance and munitions. Flight safety considers aircraft flight risks such as midair collision, bird/wildlife-aircraft strike hazard, and in-flight emergency. If the Proposed Action is implemented, CCAS planes would follow Air Force safety procedures and aircraft specific emergency procedures based on the aircraft design which are produced by the original equipment manufacturer of the aircraft. Basic airmanship procedures also exist for handling any deviations to ATC procedures due to an in-flight emergency; these procedures are defined in Air Force Instruction (AFI) 11-202 (Volume 3), *General Flight Rules*, and established aircraft flight manuals. As is specified in Defense Contract Management Agency Instruction (DCMA INST) 8210.1C, *Contractor's Flight and Ground Operations*, contractors would also maintain a Flight Crew Information File, a safety resource for aircrew day-to-day operations which is composed of air and ground operation rules and procedures.

The ROIs for VGT and ØL7 include the airfield and areas immediately adjacent to the airport property where ground and explosive safety concerns are described, as well as the airfield and airspace where flight safety is discussed.

C.3.2 Aircraft Accident and Incident Notification

Per 49 CFR § 830.5, *Notification of Aircraft Accidents, Incidents, and Overdue Aircraft*, the operator of any civil aircraft, or any public aircraft not operated by the Armed Forces or an intelligence agency of the United States, or any foreign aircraft shall immediately, and by the most expeditious means available, notify the nearest National Transportation Safety Board office when an aircraft accident or serious incidents occur or an aircraft is overdue and is believed to have been involved in an accident.

An aircraft *accident*, per 49 CFR § 830.2, is an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. Key terms used above are defined as follows:

- *Civil aircraft* means any aircraft other than a public aircraft.
- *Operator* means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.
- *Serious injury* means any injury which (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface. *Fatal injury* means any injury which results in death within 30 days of the accident.
- *Substantial damage* means damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing

gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered “substantial damage”.

An aircraft *incident*, per 49 CFR § 830.5, is an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations. Serious incidents that require National Transportation Safety Board notification include

- flight control system malfunction or failure;
- inability of any required flight crewmember to perform normal flight duties as a result of injury or illness;
- failure of any internal turbine engine component that results in the escape of debris other than out the exhaust path;
- in-flight fire;
- aircraft collision in flight;
- damage to property, other than the aircraft, estimated to exceed $25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less;
- for large multiengine aircraft (more than 12,500 pounds maximum certificated takeoff weight),
  - in-flight failure of electrical systems which requires the sustained use of an emergency bus powered by a back-up source such as a battery, auxiliary power unit, or air-driven generator to retain flight control or essential instruments;
  - in-flight failure of hydraulic systems that results in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces;
  - sustained loss of the power or thrust produced by two or more engines; and
  - an evacuation of an aircraft in which an emergency egress system is utilized.
- release of all or a portion of a propeller blade from an aircraft, excluding release caused solely by ground contact;
- a complete loss of information, excluding flickering, from more than 50 percent of an aircraft's cockpit displays known as
  - Electronic Flight Instrument System displays;
  - Engine Indication and Crew Alerting System displays;
  - Electronic Centralized Aircraft Monitor displays; or
  - other displays of this type, which generally include a primary flight display, primary navigation display, and other integrated displays.
- Airborne Collision and Avoidance System resolution advisories issued when an aircraft is being operated on an IFR flight plan and compliance with the advisory is necessary to avert a substantial risk of collision between two or more aircraft.
- damage to helicopter tail or main rotor blades, including ground damage, that requires major repair or replacement of the blade(s); or
- any event in which an operator, when operating an airplane as an air carrier at a public-use airport on land,
  - lands or departs on a taxiway, incorrect runway, or other area not designed as a runway; or
  - experiences a runway incursion that requires the operator or the crew of another aircraft or vehicle to take immediate corrective action to avoid a collision.

C.3.3 Evaluation Criteria and Safety Procedures

Although ground and flight safety are addressed separately, in the immediate vicinity of the runway, risks associated with safety-of-flight issues are interrelated with ground safety concerns. Explosives safety relates to the management and safe use of ordnance and munitions. Flight safety considers aircraft flight risks such as midair collision, bird/wildlife aircraft strike hazard, and in-flight emergency requirements. Contractor planes would follow Air Force safety procedures and aircraft specific emergency procedures based on the aircraft design. The RPZs around each airport restrict the public’s exposure to areas where there is a higher accident potential. For all other flight and ground safety procedures, CCAS would be required to follow the Air Force guidance, specifically DCMA INST 8210.1C, *Contractor’s Flight and Ground Operations*, and AFI 10-220_IP (AFMC Supplement), (Manned/UAS) AFI 11-202, Volumes 1–3 and applicable AFMC supplements; AFI 11-2FT, Volumes 1–3; AFI 11-401, AFI 11-301, AFI 16-1301, and applicable AFMC supplements; (SUAS) AFI-11-502 Volumes 1–3 and applicable AFMC supplements; AFI 11-5FT Volumes 1--3, and established aircraft flight manuals. DCMA INST 8210.1C, Contractor’s Flight and Ground Operations, 21 August 2013, and include AFI 10-220_IP (AFMC Supplement), *Contractor's Flight and Ground Operations*, 6 September 2017, (Manned/UAS) AFI 11-202, *Flying Operations, General Flight Rules*, Volumes 1–3 and applicable AFMC supplements; AFI 11-2FTV1, *Flying Operations, Flight Test Aircrew Training*, 26 February 2019; AFI 11-2FTV2, *Flying Operations, Flight Test Aircrew Evaluation Criteria*, 21 March 2019; AFI 11-2FTV3, *Flying Operations, Flight Test Operation Procedures*, 1 March 2017; AFI 11-301, *Flying Operations, Aircrew Flight Equipment (AFE) Program*, 10 October 2017; AFI 11-401 (ANG Supplement), *Flying Operations, Aviation Management*, 10 December 2010; AFI 16-1301, *Operations Support*, *US Air Force Priority System for Resources Management*, 11 April 1994 and applicable AFMC supplements; (SUAS) AFI-11-502 Volumes 1–3, *Flight Operations, Small Unmanned Aircraft Systems*, 29 July 2019, and applicable AFMC supplements; AFI 11-5FT Volumes 1-3, *Flying Operations, Small Unmanned Aircraft System (SUAS) Flight Test Operations Procedures*, 27 August 2015, and established aircraft flight manuals. The Flight Crew Information File is a safety resource for aircrew day-to-day operations which is composed of air and ground operation rules and procedures.

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C.4 AIR QUALITY AND AIR CONFORMITY APPLICABILITY ANALYSIS

C.4.1 Air Quality

Appendix C.4 presents an overview of the Clean Air Act (CAA) and Nevada, and California air quality regulations/standards. Air quality modeling and calculations, including the assumptions used for the air quality analyses presented in **Section 3.5** are included in **Appendix D.2**.

C.4.1.1 Definition of the Resource

The USEPA has divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the National Ambient Air Quality Standards (NAAQS). NAAQS are currently established for six criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (including particulates equal to or less than 10 microns in diameter (PM_{10}) and particulates equal to or less than 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). The Nevada Division of Environmental Protection (NDEP), Bureau of Air Quality has adopted the federal NAAQS while incorporating some changes, such as the addition of a 1-hour hydrogen sulfide concentration standard. Each AQCR has regulatory areas that are designated as an attainment area or nonattainment area for each of the criteria pollutants depending on whether it meets or exceeds the NAAQS. For CCAS, the airports proposed for use located in Clark County, Nevada (ØL7 and VGT), lie within the Las Vegas Intrastate AQCR (§ 81.80). In addition to considering the two AQCRs for the regional airports, multiple AQCRs were considered which coincide with the SUA (see **Section 1.1.2**, **Figure 1-1**) proposed for use for CCAS.

Federal actions in NAAQS nonattainment areas also required to comply with USEPA's General Conformity Rule. These regulations are designed to ensure that federal actions do not impede local efforts to achieve or maintain attainment with the NAAQS. Greenhouse gases (GHGs) are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and are believed to contribute to global climate change. USEPA regulates GHG emissions via permitting and reporting requirements that are applicable mainly to large stationary sources of emissions.

For consideration of potential air quality impacts, it is the volume of air extending up to the mixing height (3,000 ft AGL[1]) and coinciding with the spatial distribution of the ROIs that is considered. At the proposed airports, in the vicinity of the airfields itself, it is the portions of the landing and takeoff (LTO) and touch and go (TGO) cycles that occur at or below 3,000 ft that are analyzed. Also considered in the air quality analysis are the ground support and fueling activities that take place on or adjacent to the airports.

For the SUA, after applying the 3,000-ft criteria, there are several areas that are identified for air quality impact analysis. These areas, their underlying counties, and AQCRs are listed in **Table C-5**. The AQCRs in California are further organized by air pollution control districts or air quality management districts, as indicated in **Table C-5**.

[1] Even though, under local regulations, the mixing height in Clark County is 10,000 ft AGL, for the purposes of estimating emissions for this analysis, a default value of 3,000 ft AGL is assumed.

Table C-5
Airspace Region of Influence Subject to Air Quality Impact Analysis

Airspace with Operations ≤3,000 feet AGL	County	AQCRs (AQMDs or APCDs)
Fort Irwin NTC/R-2502 Range (primary)	San Bernardino (Calfiornia)	Southeast Desert Intrastate (§ 81.167)
NTTR/R-4806 (backup)	Clark, Lincoln, and Nye (all in Nevada)	Las Vegas Intrastate (§81.80) and Nevada Intrastate (§ 81.276)

Source: 40 CFR Part 81 Subpart B

Notes:
Airspace listed is applicable to training staged from the two regional airports (VGT and ØL7).
In California, the AQCRs are further organized by air pollution control or management districts for the purposes of planning.
AQCR = Air Quality Control Region; AQMD = air quality management district; APCD = air pollution control district; NTC = National Training Center; NTTR = Nevada Test and Training Range

C.4.1.2 Criteria Pollutants

In accordance with CAA requirements, the air quality in each region or area is measured by the concentration of various pollutants in the atmosphere. Measurements of these "criteria pollutants" in ambient air are expressed in units of parts per million or in units of micrograms per cubic meter. Regional air quality is a result of the types and quantities of atmospheric pollutants and pollutant sources in an area as well as surface topography, the size of the "air basin," and prevailing meteorological conditions.

The CAA directed the USEPA to develop, implement, and enforce strong environmental regulations that would ensure clean and healthy ambient air quality. To protect public health and welfare, the USEPA developed numerical concentration-based standards, NAAQS, for pollutants that have been determined to impact human health and the environment and established both primary and secondary NAAQS under the provisions of the CAA. NAAQS are currently established for six criteria air pollutants: O_3, CO, NO_2, SO_2, respirable particulate matter (including PM_{10} and $PM_{2.5}$), and Pb. The primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration necessary to protect vegetation, crops, and other public resources in addition to maintaining visibility standards. The primary and secondary NAAQS are presented in **Table C-6**.

The criteria pollutant O_3 is not usually emitted directly into the air but is formed in the atmosphere by photochemical reactions involving sunlight and previously emitted pollutants, or "O_3 precursors." These O_3 precursors consist primarily of nitrogen oxides and volatile organic compounds that are directly emitted from a wide range of emissions sources. For this reason, regulatory agencies limit atmospheric O_3 concentrations by controlling volatile organic compound pollutants (also identified as reactive organic gases) and nitrogen oxides.

The USEPA has recognized that particulate matter emissions can have different health affects depending on particle size and, therefore, developed separate NAAQS for coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$). The pollutant $PM_{2.5}$ can be emitted from emission sources directly as very fine dust and/or liquid mist or formed secondarily in the atmosphere as condensable particulate matter, typically forming nitrate and sulfate compounds. Secondary (indirect) emissions vary by region depending upon the predominant emission sources located there and thus which precursors are considered significant for $PM_{2.5}$ formation and identified for ultimate control.

The CAA and USEPA delegated responsibility for ensuring compliance with NAAQS to the states and local agencies.

The NDEP has adopted the NAAQS to regulate air pollutant levels within the state of Nevada and has set its own, and in some cases, more stringent standards for ambient air in Nevada that are not to be exceeded.

For example, Nevada's annual SO_2 standard is more stringent than the national standard and the 8-hour CO standard for the state are specific to elevations greater than 5,000 ft above MSL. In addition, Nevada has added new standards for visibility impairment and 1-hour hydrogen sulfide concentrations; however, Nevada standards are only to be used "in considering whether to issue a permit for a stationary source and shall ensure that the stationary source will not cause the Nevada standards to be exceeded in areas where the general public has access" and further states that the NAAQS (as shown in **Table C-6**) are to be used in determinations of attainment or nonattainment (NDEP, 2021). The NTTR airspace lies predominantly in areas of attainment and proposed operations within the NTTR airspace are classified as mobile source of emissions. As such, permitting programs that are applicable only to stationary sources will not apply for the proposed NTTR airspace operations.

Table C-6
National Ambient Air Quality Standards

Pollutant	Standard Value[6]		Standard Type
Carbon Monoxide (CO)			
8-hour average	9 ppm	(10 mg/m^3)	Primary
1-hour average	35 ppm	(40 mg/m^3)	Primary
Nitrogen Dioxide (NO_2)			
Annual arithmetic mean	0.053 ppm	(100 µg/m^3)	Primary and Secondary
1-hour average[1]	0.100 ppm	(188 µg/m^3)	Primary
Ozone (O_3)			
8-hour average[2]	0.070 ppm	(137 µg/m^3)	Primary and Secondary
Lead (Pb)			
3-month average[3]		0.15 µg/m^3	Primary and Secondary
Particulate <10 Micrometers (PM_{10})			
24-hour average[4]		150 µg/m^3	Primary and Secondary
Particulate <2.5 Micrometers ($PM_{2.5}$)			
Annual arithmetic mean[4]		12 µg/m^3	Primary
Annual arithmetic mean[4]		15 µg/m^3	Secondary
24-hour average[4]		35 µg/m^3	Primary and Secondary
Sulfur Dioxide (SO_2)			
1-hour average[5]	0.075 ppm	(196 µg/m^3)	Primary
3-hour average[5]	0.5 ppm	(1,300 µg/m^3)	Secondary

Notes:
[1] In February 2010, the USEPA established a new 1-hour standard for NO_2 at a level of 0.100 ppm, based on the 3-year average of the 98th percentile of the yearly distribution concentration, to supplement the then-existing annual standard.
[2] In October 2015, the USEPA revised the level of the 8-hour standard to 0.070 ppm, based on the annual 4th highest daily maximum concentration, averaged over 3 years; the regulation became effective on 28 December 2015. The previous (2008) standard of 0.075 ppm remains in effect for some areas. A 1-hour standard no longer exists.
[3] In November 2008, USEPA revised the primary Pb standard to 0.15 µg/m^3. USEPA revised the averaging time to a rolling 3-month average.
[4] In October 2006, USEPA revised the level of the 24-hour $PM_{2.5}$ standard to 35 µg/m^3 and retained the level of the annual $PM_{2.5}$ standard at 15 µg/m^3. In 2012, USEPA split standards for primary & secondary annual $PM_{2.5}$. All are averaged over 3 years, with the 24-hour average determined at the 98th percentile for the 24-hour standard. USEPA retained the 24-hour primary standard and revoked the annual primary standard for PM_{10}.
[5] In 2012, the USEPA retained a secondary 3-hour standard, which is not to be exceeded more than once per year. In June 2010, USEPA established a new 1-hour SO_2 standard at a level of 75 parts per billion, based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations.
[6] Parenthetical value is an approximately equivalent concentration for NO_2, O_3, and SO_2.
µg/m^3 = microgram(s) per cubic meter; mg/m^3 = milligram(s) per cubic meter; ppm = part(s) per million; USEPA = United States Environmental Protection Agency

California also has ambient air quality standards (CAAQS) that were initially set by the Department of Public Health and were subsequently adopted by the California Air Resources Board (CARB). California law continues to mandate CAAQS, although attainment of the NAAQS as presented in **Table C-6** has precedence over attainment of the CAAQS. California law does not require that CAAQS be met by specified dates as is the case with NAAQS. Rather, it requires incremental progress toward attainment (CARB, 2021). The R-2502 airspace lies entirely in California and proposed operations emissions within this airspace are classified as mobile source of emissions. As such, permitting programs that are applicable only to stationary sources do not apply to R-2502 airspace operations.

Each state must develop air pollutant control programs and promulgate regulations and rules that focus on meeting NAAQS and maintaining healthy ambient air quality levels. When a region or area fails to meet a NAAQS for a pollutant, that region is classified as “non-attainment” for that pollutant. In such cases the affected State must develop a State Implementation Plan (SIP) that is subject to USEPA review and approval. A SIP is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS. Any changes to the compliance schedule or plan (e.g., new regulations, emissions budgets, controls) must be incorporated into the SIP and approved by USEPA.

The Air Quality Monitoring Program within each state monitors ambient air throughout the state. The purpose is to monitor, assess, and provide information on statewide ambient air quality conditions and trends as specified by the state and federal CAA. The Air Quality Monitoring Program works in conjunction with local air pollution agencies and some industries, measuring air quality throughout the states. The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards. Also included are areas where the ambient standards are being met, but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth. The USEPA has specific requirements for a minimum number of monitoring sites, known as National Air Monitoring Sites. Most states augment these with additional sites to provide additional air quality data. Locations of these monitoring sites are determined by factors such as emissions sources, population density, permitting needs, modeling results, and site accessibility. The result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

Under Title I of the CAA Amendments of 1990, the federal government develops the technical guidance that states need to control stationary sources of pollutants. Title I also allow the USEPA to define boundaries of nonattainment areas. Title V of the CAA Amendments of 1990 requires state and local agencies to implement permitting programs for major stationary sources. A major stationary source is a facility (plant, base, activity, etc.) that has the potential to emit more than 100 tons annually of any one criteria air pollutant in an attainment area.

Although Titles I and V of the CAA Amendments of 1990 apply to Nellis Air Force Base (AFB), compliance requirements under the relevant regulations would not apply to the Proposed Action alternatives. This is because virtually all of the emissions increase from the Proposed Action would occur from mobile sources which are not governed by Titles I and V; therefore, the requirements originating from Titles I and V are not considered.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant adverse deterioration of the clean air in the area. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds; that is, 100 or 250 tons/year based on the source’s industrial category. These thresholds are applicable to stationary sources. The goals of the PSD program are to (1) ensure economic growth while preserving existing air quality; (2) protect public health and welfare from adverse effects that might occur even at pollutant levels better than the NAAQS; and (3) preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. Sources subject to PSD review are required by the CAA to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mi radius and all Class I areas within a 62-mi radius of the facility. Emissions from any new or modified source must be controlled using Best Available Control Technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase as specified in the regulations. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development.

Neither VGT nor ØL7 is located within 6.25 mi (10 kilometers) of any Class I area.

There are Wilderness Areas and Wilderness Study Areas that underlie the NTTR Complex or are near R-2502. The Death Valley National Park is part of a designated Wilderness Area totaling 3.19 million acres is within 50 mi of the NTTR airspace. Emissions associated with the proposed action alternatives would be mostly associated with mobile sources and are thus not subject to NSR/PSD permitting requirements for stationary sources; however, there is still a potential for impairment of visibility within a federal Class I area due to aircraft operations. Standard methods to quantitatively determine visibility impacts are not available and only a qualitative assessment to determine impact on visibility can be performed. Emissions from flight operations typically are spread over large areas and they quickly disperse.

C.4.1.3 Greenhouse Gases

GHGs are gases that trap heat in the atmosphere. These emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and are believed to contribute to global climate change. GHGs include water vapor, carbon dioxide (CO_2), methane, nitrous oxide, O_3, and several hydrocarbons and chlorofluorocarbons. Each GHG has an estimated global warming potential (GWP), which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The GWP of a particular gas provides a relative basis for calculating its carbon dioxide equivalent (CO_2e) or the amount of CO_2e to the emissions of that gas. CO_2 has a GWP of 1 and is, therefore, the standard by which all other GHGs are measured. Potential impacts associated with GHG emissions are discussed in **Section C.4.1.4**.

In Nevada and California, the USEPA regulates GHG primarily through a permitting program known as the GHG Tailoring Rule. This rule applies to GHG emissions from stationary sources. As virtually all of the emissions increase from the Proposed Action would occur from mobile sources, this rule would not apply here. As such, this rule is not considered further.

In addition to the GHG Tailoring Rule in 2009, the USEPA promulgated a rule requiring sources to report their GHG emissions if they emit 25,000 metric tons or more of CO_2e per year (40 CFR § 98.2[a][2]). Again, this only applies to stationary sources of emissions.

C.4.1.4 Climate Change Considerations

A vast amount of scientific research supports the theory that climate change is affecting weather patterns, average sea levels, ocean acidification, and precipitation rates. Likelihood of occurrence of these patterns are predicted to intensify in the future. Like many locations in the United States, climate trends within the western United States could be adversely affected by global climate change, including mass migration and loss or extinction of plant and animal species. There are scientific studies to indicate that the potential effects of climate change could lead to adverse human health. These include an increase in extreme heat events, increased levels of pollutants in the atmosphere and an increase in intensity and number of natural disasters, such as flooding, hurricanes, and drought.

GHG emissions in Nevada are steadily showing a decreasing trend between 2005 and 2013. GHG emissions in Nevada peaked in 2005, and ever since significant reductions in Nevada's GHG emissions have occurred due to various factors, including changes in the energy sector. Transportation has now exceeded electricity generation and has become the State's largest sector of GHGs. This shift was mainly driven by Nevada's increasing reliance on renewable energy and lower-GHG emitting natural gas, rather than any significant change in the transportation sector. For 2017, Nevada's net GHG emissions totaled 38.066 million metric tons of CO2e, with transportation accounting for 35.9 percent of gross emissions.

To serve as a reference point, projected GHG emissions were compared against State of Nevada's net GHG emissions from various sectors, and to the Title V and PSD major source thresholds for CO2e applicable to stationary sources (**Table C-7**). Based on the relative magnitude of the project's GHG emissions, a general inference can be drawn regarding whether the Proposed Action is meaningful with respect to the discussion regarding climate change.

C.4.1.5 Greenhouse Gas Emissions Modeling Results

As **Table C-7** demonstrates, GHG emissions for the high scenario for CCAS would be well below regulatory thresholds for stationary source permitting and would account for about 0.019 percent of the Nevada's GHG emissions. The state's GHG emissions are the result of mainly transportation and fossil fuel combustion. Based on this analysis, the incremental GHG emissions from the Proposed Action are not considered significant.

Table C-7
Metrics for Greenhouse Gas Emission Impacts

Emission Scenario	Title V Permit CO_2e Regulatory Threshold (tpy)	PSD New Source CO_2e Regulatory Threshold (tpy)	PSD Modified Source CO_2e Regulatory Threshold (tpy)	Nevada 2017 Net GHG Emissions (tpy)[3,4]	CCAS % of Nevada Emissions[5]
Highest	100,000	100,000	75,000	41,960,152	0.019

Notes:
[1] CO_2e = carbon dioxide equivalent from Air Conformity Applicability Model
[2] Sum of highest emissions from airfield operations and SUA sorties
[3] Represents MMT CO2e from transportation, electricity generation, industry, residential and commercial. Also, includes projected emissions from waste, agriculture, and Land Use, Land Use Change and Forestry
[4] Source: NDEP, 2020; Converted 38.066 MMT CO2e to tpy by multiplying MMT CO2e by a factor of 1.1023x106
[5] Percentage based on worst case (high) emission scenario
CCAS = contracted Close Air Support; GHG = greenhouse gas; MMT = million metric ton(s); PSD = Prevention of Significant Deterioration; tpy = ton(s) per year

C.4.2 References

CARB. 2021. *California Ambient Air Quality Standards (CAAQS).* <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>. Accessed July 2021.

NDEP. 2020. *Nevada Statewide Greenhouse Gas Emissions Inventory and Projections, 1990 – 2030.*

NDEP. 2021. *Ambient Air Quality Standards. Monitoring Program-Pollutants of Concern*. <https://ndep.nv.gov/air/air-quality-monitoring/ambient-air-quality-standards>. Accessed July 2021.

C.5 BIOLOGICAL RESOURCES

C.5.1 Definition of the Resource

Biological resources include native, nonnative, and invasive plants and animals; sensitive and protected floral and faunal species; and the habitats, such as wetlands, forests, and grasslands, in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. As defined in Executive Order (EO) 13112, *Invasive Species*, are "an alien species whose introduction does or is likely to cause economic or environmental harm to human health." Invasive species are highly adaptable and oftentimes displace native species. The characteristics that enable them to do so include high reproduction rates, resistance to disturbances, lack of natural predators, efficient dispersal mechanisms, and the ability to outcompete native species. The following is a description of the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

The ROI for this resource includes VGT and ØL7 and the environs within the noise contours of these airports and within the SUA proposed for CCAS training (see **Section 1.1.2**, **Figure 1-1**).

C.5.1.1 Endangered Species Act

The Endangered Species Act (ESA) of 1973 (16 U.S.C. § 1531 et seq.) established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service. Under the ESA (16 U.S.C. § 1536), an "endangered species" is defined as any species in danger of extinction throughout all, or a large portion, of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of species considered to be candidates for possible listing under the ESA. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the ESA.

Section 9 of the ESA prohibits the take of federally listed species. "Take" as defined under the ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Section 7 of the ESA prohibits any federal agency from engaging in any action that is likely to "jeopardize" the continued existence of listed endangered or threatened species or that destroys or adversely affects the critical habitat of such species. Any federal agency proposing an action which may adversely impact an endangered or threatened species must "consult" with USFWS or National Marine Fisheries Service (on an informal or formal basis, as appropriate) before carrying out that action would place a listed species and/or its critical habitat in jeopardy.

C.5.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, "take" is defined as to "pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 CFR § 10.12). Migratory birds include nearly all species in the United States, with the exception of some upland game birds and nonnative species.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement the MBTA.

The National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314, 116 Stat. 2458) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the US armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use.

In December 2017, the US Department of the Interior issued M-Opinion 37050 (US Department of Interior, 2017) which concluded that the take of migratory birds from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not the take of a migratory bird. The USFWS interprets the M-Opinion to mean that the MBTA's prohibition on take does not apply when the take of birds, eggs, or nests occurs as a result of an activity, the purpose of which is not to take birds, eggs, or nests.

On 7 January 2021, the USFWS issued Final Rule (86 Federal Register 1134), effective 8 February 2021 determining that the MBTA's prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same, applies only to actions directed at migratory birds, their nests, or their eggs; however, the MBTA ruled 8 March 2021 in conformity with the Congressional Rule Act (86 Federal Register 8715). On 7 May 2021, the USFWS published a proposal to revoke the 7 January 2021 final regulation that limited the scope of the MBTA. In addition, the USFWS opened a public comment period and solicited public comments on issues of fact, law, and policy raised by the MBTA rule published on 7 January. The public comment period closed on 7 June 2021. On 20 July 2021, the USFWS published a public notice announcing the availability of two economic analyses documents for review and comment. These documents are associated with the proposed MBTA revocation rule and USFWS provided a 30-day public comment period on these documents. The public comment period closed on 19 August 2021. On 4 October 2021, the USFWS issued a final rule revoking the MBTA rule. This revocation will be effective on 3 December 2021.

C.5.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. § 668 to 668c) prohibits the "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), alive or dead, or any part, nest, or egg thereof." "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb," and "disturb" is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle's normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle's normal breeding, feeding or sheltering behavior." The Bald and Golden Eagle Protection Act also prohibits activities around an active or inactive nest site that could result in an adverse impact on the eagle.

C.5.2 Threatened and Endangered Species/Critical Habitat

Table C-8 provides a list of federally and state listed threatened and endangered species that could potentially be affected by aircraft movement; aircraft noise; and use of training munitions, and ammunition on select Fort Irwin ranges and the NTTR. This species list is derived from the Nellis AFB Integrated Natural Resources Management Plan (Nellis AFB, 2019); National Training Center and Fort Irwin Integrated Natural Resources Management Plan (Fort Irwin, 2020); California Natural Diversity Database (California Department of Fish and Wildlife [CDFW], 2021); Nevada Wildlife Action Plan (Nevada Department of Wildlife [NDOW], 2013); and USFWS Information for Planning and Consultation (USFWS, 2021c).

No ground-disturbing activities are proposed and impacts on threatened and endangered species and designated critical habitat could only occur from aircraft operations at civil airports and in the SUA. These aircraft operations, including noise and aircraft movement would not affect listed amphibian, fish, mollusk, crustacean, or plant species, and are not described further. The Mojave desert tortoise (*Gopherus agassizii*) occurs beneath the SUA and there is designated Critical Habitat for the Mojave desert tortoise within the boundaries of R-2502A/E/N. The use of training munitions and ammunition for CCAS training in the SUA over Fort Irwin and the NTTR and the potential effects of these training activities on the Mojave desert tortoise are described by the Fort Irwin 2014 Biological Opinion (FWS-SB-14BO363-14F0495) (Fort Irwin, 2020) and the Programmatic Biological Opinion for Activities and Expansion of the Nevada Test and Training Range (08ENVS00-2018-F-0028)(Nellis AFB, 2018). Further, Fort Irwin is developing an endangered species management plan to address potential conflicts and recommendations for management of the Mojave desert tortoise and other sensitive wildlife and botanical resources (Fort Irwin, 2020). Therefore, effects of CCAS training activities in the SUA on the Mojave desert tortoise are covered under the Biological Opinions and the Mojave desert tortoise and potential effects from CCAS training on the Mojave desert tortoise and its designated critical habitat are not described further.

There is no designated Critical Habitat for any other federally listed species within the boundaries of VGT, ØL7, or the SUA or the extended noise contours at VGT and ØL7.

Table C-8
Federal and State Listed Species with the Potential to Occur on or near Civil Airports and the Special Use Airspace

Species	Federal Status[1]	State Status	VGT	ØL7	SUA
Arizona Bell's Vireo (*Vireo bellii arizonae*)	-	E[2]			X
Bald Eagle (*Haliaeetus leucocephalus*)	-	E[2], SOCP[3]			X
Bank Swallow (*Riparia riparia)*	-	T[2], SOCP[3]			X
Bell's Vireo (*Vireo bellii*)	-	SOCP[3]			X
Brewer's Sparrow (Spizella breweri)	-	SOCP[3]	X		X
Burrowing Owl (*Athene cunicularia*)	-	SOCP[3]			X
California Condor (*Gymnogyps californianus*)	E	E[2]			X
California Condor (*Gymnogyps californianus*)	EXPN				X
Flammulated Owl (*Otus flammeolus*)	-	SOCP[3]			X
Gila Woodpecker (*Melanerpes uropygialis*)	-	E[2]			X
Greater Sage-Grouse (*Centrocercus urophasianus*)	-	SOCP[3]			X
Lewis's Woodpecker (*Melanerpes lewis*)	-	SOCP[3]			X
Northern Goshawk (*Accipiter gentilis*)	-	SOCP[3]		X	X
Olive-Sided Flycatcher (*Contopus cooperi*)	-	SOCP[3]			X
Peregrine Falcon (*Falco peregrinus*)	-	E[2], SOCP[3]			X
Sage Thrasher (*Oreoscoptes montanus*)	-	SOCP[3]		X	X
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E	E[2], SOCP[3]	X	X	X
Swainson's Hawk (*Buteo swainsoni*)	-	T[2]			X
Yellow-Billed Cuckoo (*Coccyzus americanus*)	T	E[2]			X
Yuma Ridgway's Rail (*Rallus obsoletus* [=*longirostris*] *yumanensis*)	E	E[2], SOCP[3]	X	X	X
Allen's Big-Eared Bat (*Idionycteris phyllotis*)	-	SOCP[3]			X
California Leaf-Nosed Bat (*Macrotis californicus*)	-	SOCP[3]		X	X

Species	Federal Status[1]	State Status	VGT	ØL7	SUA
Dark Kangaroo Mouse (*Microdipodops megacephalus*)	-	SOCP[3]			X
Fringed Myotis (*Myotis thysanodes*)	-	SOCP[3]			X
Mexican Free-Tailed Bat (*Tadarida brasiliensis*)	-	SOCP[3]			X
Mohave Ground Squirrel (*Xerospermophilus mohavensis*)	-	T[2]			X
Pale Kangaroo Mouse (*Microdipodops pallidus*)	-	SOCP[3]			X
Pallid Bat (*Antrozous pallidus*)	-	SOCP[3]		X	X
Pygmy Rabbit (*Brachylagus idahoensis*)	-	SOCP[3]			X
Spotted Bat (*Euderma maculatum*)	-	T[3]			X
Townsend's Big-Eared Bat (*Corynorhinus townsendii*)	-	SOCP[3]		X	X
Western Mastiff Bat (*Eumops perotis*)	-	SOCP[3]		X	X
Western Red Bat (*Lasiurus blossevillii*)	-	SOCP[3]		X	X

Source:
[1] USFWS, 2021c
[2] CDFW, 2021
[3] NDOW, 2013
VGT = North Las Vegas Airport; ØL7 = Jean Airport; SUA = Special Use Airspace; E = Endangered; T = Threatened; SGCN = Species of Greatest Conservation Need; SOCP = Species of Conservation Priority; X = Species has the potential to occur.

The following are summary descriptions of the federally listed species that could potentially be affected by CCAS operations and training activities.

California Condor. The California condor (*Gymnogyps californianus*) is federally listed Endangered where not listed as a nonessential experimental population. The California condor is the largest flying land bird in North America and weigh up to 26 pounds. They are scavengers that primarily feed on large, dead mammals such as deer and elk, and domesticated range animals. The California condor nest in cavities of cliffs and caves. The California condor could occur during soaring and foraging activities in the SUA.

Southwestern Willow Flycatcher. The southwestern willow flycatcher federally listed as Endangered and breeds in riparian habitats from southern California to Arizona, New Mexico, southern Utah, and Nevada; it may also be found in southwestern Colorado and west Texas. The southwestern willow flycatcher occurs in the United States only during the breeding season from May until September and migrates to Central and South America in the winter. It nests in riparian habitats primarily with mature native trees; however, they have also been observed nesting in riparian areas dominated by saltcedar (*Tamarix* spp.). Although its occurrence in the action area is rare, it potentially occurs in mature riparian corridors in the SUA during the breeding season.

Yellow-Billed Cuckoo The yellow-billed cuckoo is federally listed as threatened and is found in deciduous woodlands, low scrubby vegetation, abandoned farmland, and dense riparian thickets. In the western United States, it is listed as a federally threatened species. The greatest threat to the species has been reported to be loss of riparian habitat. It has been estimated that 90 percent of the cuckoo's stream-side habitat has been lost. Habitat loss in the western United States is attributed to agriculture, dams, river flow management, and overgrazing and competition from exotic plants such as tamarisk (New Mexico

Department of Game and Fish, 2019). There is the potential for the yellow-billed cuckoo to occur in riparian areas in the SUA.

Yuma Ridgway's Rail. The Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) is federally listed endangered and is one subspecies of the Ridgway's rail. It is a small rail found in freshwater marshes dominated by cattail (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) with vegetation heights greater than 6 ft and water depth of 3.5 inches. They primarily feed on crayfish, small fish, tadpoles, and aquatic invertebrates. Their distribution is limited to Arizona, California, Nevada, and Baja California and Sonora, Mexico (USFWS, 2017). The Yuma Ridgway's rail could be present in suitable wetland and aquatic habitats beneath the SUA.

C.5.3 Special Use Airspace Regional Biological Setting

The SUA overlie large portions of California and Nevada with highly variable topography, creating numerous microclimates that leads to extraordinary biological diversity. The SUA not only overlie large expanses of desert valleys and mountainous terrain, but also overlie portions of the Mojave and Great Basin Deserts. Level IV Ecoregions (**Table C-9**) are used to summarize the various ecological communities that occur beneath the vast landscapes of the SUA in California and Nevada.

Table C-9
Level IV Ecoregion Descriptions

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
Central Basin and Range	Tonopah Basin	The Tonopah Basin ecoregion lies in the transition between the Great Basin and the more southerly Mojave Desert. The Tonopah Basin shows varying degrees of Great Basin and Mojave Desert characteristics. The western side of the Tonopah Basin is a continuation of the Lahontan Basin, whereas the lower and hotter Pahranagat Valley on the eastern side is more like the Mojave Desert. Similar to basins farther north, shadscale and associated arid land shrubs cover broad rolling valleys, hills, and alluvial fans. However, unlike the Lahontan Salt Shrub Basin and Upper Lahontan Basin Ecoregions, the shrubs often co-dominate in highly diverse mosaics. The shrub understory includes warm season grasses, such as Indian rice grass and galleta grass. Valleys with perennial water contain endemic fish species, including the Railroad Valley tui chub, Pahranagut roundtail chub, Railroad Valley springfish, and White River springfish.	66,356 acres for R-4806-E and 110,485 acres for R-4806W
Central Basin and Range	Tonopah Sagebrush Foothills	The Tonopah Sagebrush Foothills ecoregion includes the low mountains and hills rising from the floor of the flatter Tonopah Basin Ecoregion. The substrate is rocky and lacks the fine sediments found at lower elevations in Tonopah Basin Ecoregion. Great Basin species are common in this ecoregion as they are farther north in the Lahontan Sagebrush Slopes Ecoregion. However, because the Tonopah Sagebrush Foothills Ecoregion is in the rain shadow of the Sierra Nevada and is adjacent to the Mojave Desert, it is more arid than Lahontan Sagebrush Slopes Ecoregion. As a result, black sagebrush is more prevalent in the shrub overstory of Tonopah Sagebrush Foothills Ecoregion, and the more mesic understory species that are farther north and east are largely absent. Mojave Desert species, such as blackbrush, Joshua tree, and cholla cactus, become more common in the east and south, where summer moisture is more prevalent. Streams are ephemeral and flow during and immediately after storms. Storm events can be of sufficient magnitude to move large quantities of sediment in streambeds. Because of the droughty conditions, Tonopah Sagebrush Foothills Ecoregion has a low carrying capacity for cattle.	883 acres for R-4806E and 3,972 acres for R-4806W

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
Mojave Basin and Range	Eastern Mojave Low Ranges and Arid Footslopes	The Eastern Mojave Low Ranges and Arid Footslopes ecoregion is composed of alluvial fans, basalt flows, hills, and low mountains that rise above the basin floors of the Mojave Desert to upper elevations of about 5,000–6,000 ft. Areas of sparsely vegetated soils, depending on slope, soil type, and grazing history, can be susceptible to erosion during storm events. In areas transitional to the Great Basin in the north, blackbrush dominates slopes just above the upper elevational limit for creosotebush. Elsewhere, a mixture of typical Mojave Desert forbs, shrubs, and succulent species occurs, including Joshua tree, other yucca species, and cacti on rocky, well-drained sites. The Eastern Mojave Low Ranges and Arid Footslopes has a diverse array of reptiles including iguanas, chuckwallas, and Mojave desert tortoises, as well as leopard, collared, horned, and spiny lizards. Desert bighorn sheep also may be present on some remote rocky outcrops.	18,158 acres for R-2502A, 29,940 acres for R-2502E, 71,367 acres for 2502N, 63,587 acres for R-4806E, and 35,871 acres for R-4806W
Mojave Basin and Range	Eastern Mojave Basins	The creosotebush-dominated Eastern Mojave Basins ecoregion includes the valleys lying between the scattered mountain ranges of the Mojave Desert at elevations ranging from 1,800 to 4,500 ft. Elevations are lower, soils are warmer, and evapotranspiration is higher than in the Central Basin and Range Ecoregion to the north. Limestone- and gypsum-influenced soils occur, but overall, precipitation amount has a greater ecological significance than geology. Toward the south and east, as summer rainfall increases, the Sonoran influence grows, and woody leguminous species, such as mesquite, acacia, and smoke tree, become more common. Creosotebush, white bursage, and galleta grass are typical in Eastern Mojave Basins Ecoregion. Pocket mice, kangaroo rats, and Mojave desert tortoise are faunal indicators of the desert environment. Desert willow, coyote willow, and mesquite grow in riparian areas, although the alien invasive tamarisk is rapidly replacing native desert riparian vegetation.	28,499 acres for R-2502A, 11,633 acres for R-2502E, 62,148 acres for R-2502N, 92,136 acres for R-4806E, and 505,879 acres for R-4806 W

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
Mojave Basin and Range	Eastern Mojave Mountain Woodland and Shrubland	The Eastern Mojave Mountain Woodland and Shrubland ecoregion occurs in California, Nevada, Utah, and Arizona, at elevations from about 5,000 to greater than 7,000 feet, where mean annual precipitation increases to between 10 and 16 inches per year. Vegetation includes pinyon, juniper, curl-leaf mountain-mahogany, and cliffrose. In many areas, a denser and more diverse mixture of large interior chaparral shrubs occurs, including oaks, ceanothus, silktassel, and Apache plume. A sagebrush zone is largely absent, but some Wyoming big sagebrush may be found in the understory of the woodland along with blackbrush. Higher riparian zones along the few perennial streams have willow, mountain brush, and cottonwood, whereas other canyons have canyon live oak, or singleleaf pinyon and desert scrub oak. In California, the Kingston Range and New York and Providence Mountains are areas of unique plant communities	9,188 acres for R-4806E
Mojave Basin and Range	Mojave Playas	Broad, nearly level alluvial flats, muddy lake plains, low terraces, sand sheets, and sand dunes. Intermittent saline lakes occur, episodically filling to support a large invertebrate fauna. Lands are mostly barren. Also, creosotebush communities. Vegetation is mostly absent but scattered, extremely salt tolerant plants do occur. Cold intolerant trees and woody legumes, such as velvet ash and mesquite sometimes are found where there is sufficient moisture, particularly toward the south. There is locally scattered creosotebush. Lands are mostly barren with limited wildlife habitat. There is very limited grazing potential in his unsuitable as cropland.	14,407 acres for R-4806E and 20,036 acres for R-4806W

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
Mojave Basin and Range	Death Valley/Mojave Central Trough	The Death Valley/Mojave Central Trough ecoregion includes the alluvial plain of parts of Death Valley, the Silurian Valley, and the great depressions that contain Soda, Bristol, and Cadiz dry lakes of Ecoregion 14f. The line of basins in this trough is lower in elevation and warmer than adjacent basins to the east or west, with soil temperatures mostly hyperthermic rather than thermic. The far northern part of the ecoregion, where elevations are greater than 4,000 ft near the Nevada border, is slightly cooler than the lower-elevation central and southern parts. Some areas in the central part are at or below sea level. Creosotebush, white bursage, and mixed saltbush communities occur. Drainage is internal. Although some consider this trough as a convenient divide between the eastern and western Mojave, summer rainfall and certain plant species characteristic of the east occur slightly farther to the west of Ecoregion 14h.	4,257 acres for R-2502A and 4,257 acres for R-2502N
Mojave Basin and Range	Western Mojave Basins	The Western Mojave Basins ecoregion includes the alluvial plains, fans, and bajadas of the major valleys lying between the scattered mountain ranges of Western Mojave Low Ranges and Arid Footslopes Ecoregion. There is some variation in climate and vegetation from north to south, but the basins typically are dominated by creosotebush and white bursage, with areas of shadscale, fourwing saltbush, and on some upper bajadas and fans, scattered Joshua trees. The Western Mojave Basins ecoregion has little summer rainfall compared to the Eastern Mojave Basins Ecoregion, and typically lacks species such as Mojave yucca and big galleta found more to the east. Some annual plant species associated more with Mediterranean climates occur here, but not in the Eastern Mojave Basins. Soil temperature regimes are thermic and soil moisture regimes are aridic. Drainage is internal to closed basins in the Mojave.	172,969 acres for R-2502N

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
Mojave Basin and Range	Western Mojave Low Ranges and Arid Footslopes	The Western Mojave Low Ranges and Arid Footslopes ecoregion consists of erosional highlands of exposed bedrock that rise above the alluvium of the basin floors. Granitic rocks are more typical in this western ecoregion compared to a mix of geology in the eastern Mojave ranges of Eastern Mojave Low Ranges and Arid Footslopes Ecoregion. Many of these western granitic outcrops have relatively low elevations and relief. Creosotebush shrubland occurs on hills along with areas of Joshua tree woodland on some footslopes. This ecoregion receives little summer rainfall compared to Eastern Mojave Low Ranges and	6,376 acres for R-2502E

Level III Ecoregion	Level IV Ecoregion	Ecoregion Description*	Area of SUA
		Arid Footslopes Ecoregion, and lacks some of the shrubs, yuccas, and grasses in the eastern Mojave. The ranges in the north have some Great Basin desert scrub influence. Blackbrush shrubland and sagebrush occur more in the north in the transition to Central Basin and Range Ecoregion. The large highland area of Western Mojave Low Ranges and Arid Footslopes Ecoregion east of Owens Lake has a few small valleys or flats in it that are more similar to Western Mojave Basins Ecoregion, particularly between the Coso Range and Cottonwood Mountains.	164,374

Sources: Bryce et al., 2003; Griffith et al., 2016

Note: * Descriptions as provided in Bryce et al., 2003 and Griffith et al., 2016
ft = feet; NTTR = Nevada Test and Training Range; R- = Restricted Area

C.5.4 References

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C.6 LAND USE

C.6.1 Definition of the Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws; however, no nationally recognized convention or uniform terminology has been adopted for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions.

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws; however, no nationally recognized convention or uniform terminology has been adopted for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions. Land use designations vary per municipality but often include government, agriculture, institutional/industrial, utilities, multifamily residential, single family residential, conservation, aviation, and open space. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include existing land use at the project site, the types of land use on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its “permanence.”

In addition to land use categories, sensitive lands are considered in the evaluation as well. Sensitive lands include those intended to preserve natural or cultural resources, contain recreational opportunities and public access, or provide for the management of public lands.

The ROI for CCAS includes the land within and surrounding VGT, ØL7, and the land within the airport noise contours. The ROI for land use also includes the SUA (see **Section 1.1.2, Figure 1-1**).

C.6.2 Federal Aviation Administration Runway Protection Zones

The FAA RPZs are trapezoidal areas at the end of the runway that serve to protect people and property in the event of an emergency. In RPZs, incompatible land use includes buildings and structures, recreational land uses, transportation facilities, fuel and hazardous material (HAZMAT) storage facilities, wastewater treatment facilities, and aboveground utility infrastructure. Compatible RPZ land use, such as open space and conservation lands, is necessary to maintain the protection of people and property and to ensure safety. Airport sponsors are required to mitigate or remove existing incompatible land uses and to consult the National Airport Planning and Environmental Division, APP-400 for new or modified land uses within the RPZ (FAA, 2012).

C.6.3 References

FAA. 2012. *Memorandum for Interim Guidance on Land Uses Within a Runway Protection Zone*. 27 September.

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C.7 SOCIOECONOMICS

C.7.1 Definition of the Resource

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. Economic data are typically presented at county, state, and US levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends.

The relevant factors related to the Proposed Action include income and employment. Socioeconomic data are typically presented at county, state, and US levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends.

The ROI includes Clark County, Nevada, for VGT and ØL7. Proposed CCAS operations in the SUA would not impact the income or employment of regions beneath the SUA. Therefore, income and employment for areas beneath the SUA are not discussed further.

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C.8 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

C.8.1 Definition of the Resource

Federal agencies, through EOs, are required to address disproportionate environmental and human health effects in minority and low-income communities and to identify and assess environmental health and safety risks to children. For the purposes of this analysis, minority populations are defined as Alaska Natives and American Indians, Asians, Blacks or African-Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race); low-income populations include persons living below the poverty threshold as determined by the US Census Bureau; youth populations are children under the age of 18 years; elderly populations are adults over the age of 65 years.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that federal agencies' actions substantially affecting human health, or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

The ROI includes Clark County, Nevada, for VGT and ØL7. Proposed CCAS training operations in the SUA would not impact minority, low-income, youth, or elderly populations as there would be negligible changes in the noise environment in the SUA and the SUA overlie mostly undeveloped and sparsely populated areas. Therefore, minority, low-income, youth, and elderly populations for areas beneath the SUA are not discussed further.

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C.9 CULTURAL RESOURCES

C.9.1 Definition of the Resource

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs. Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);
- Architectural (i.e., buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional Cultural Properties (resources of traditional, religious, or cultural significance to Native American tribes and other communities).

Historic properties are cultural resources that have been listed in or determined eligible for listing in the National Register of Historic Places (NRHP). To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance, and meet at least one of four criteria (National Park Service, 2002):

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
- Associated with the lives of persons significant in our past (Criterion B);
- Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or
- Have yielded or be likely to yield information important in prehistory or history (Criterion D)

Properties that are less than 50 years old can be considered eligible for the NRHP under Criterion Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP Criteria for Evaluation (Criterion A, B, C, or D). The term “Historic Property” refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources.

Federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 as amended, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the National Historic Preservation Act (NHPA), as amended through 2016, and associated regulations (36 CFR Part 800). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to making a decision or taking an action and to integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the Section 106 consultation process, as set forth in 36 CFR Part 800. Section 106 of the NHPA also requires agencies to consult with federally recognized Native Americans or Indian tribes with a vested interest in the undertaking.

Section 106 of the NHPA requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects on historic properties (36 CFR § 800.1[a]). For cultural resource analysis, the Area of Potential Effects (APE) is used as the ROI. APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist,” (36 CFR § 800.16[d]) and thereby diminish their historic integrity. The APE for CCAS includes VGT and ØL7 and the SUA (see **Section 1.1.2**, **Figure 1-1**).

C.9.2 References

National Park Service. 2002. *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin 15. Washington, DC, US Department of the Interior, National Park Service, Interagency Resources Division. <https://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_4.htm>. Accessed February 2018.

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C.10 HAZARDOUS MATERIALS AND WASTES, ENVIRONMENTAL RESTORATION PROGRAM, AND TOXIC SUBSTANCES

C.10.1 Definition of the Resource

The Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act and the Toxic Substances Control Act (TSCA), defines HAZMAT. HAZMAT is defined as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, and incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. HAZMAT is also defined under Section 1802 of the Hazardous Materials Transportation Act as "a substance or material in a quantity and form which may pose an unreasonable risk to health and safety or property when transported in commerce" (49 U.S.C. §§ 5101-5127). Occupational Safety and Health Administration (OSHA) is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR Part 1910. OSHA also includes the regulation of HAZMAT in the workplace and ensures appropriate training in their handling.

The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act, which was further amended by the Hazardous and Solid Waste Amendments, defines hazardous wastes. Hazardous waste is defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both HAZMAT and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

HAZMAT are often stored in bulk quantities in aboveground or underground storage tanks and fueling operations such as required for aircraft operations require the bulk storage of HAZMAT such as petroleum, oils, and lubricants. Therefore, the evaluation of HAZMAT and hazardous wastes focuses on underground storage tanks and aboveground storage tanks as well as the storage, transport, and use of pesticides, fuels, oils, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of HAZMAT and hazardous wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of HAZMAT or hazardous wastes, the extent of contamination varies based on type of soil, topography, weather conditions, and water resources.

Through the Environmental Restoration Program (ERP) (formerly the Installation Restoration Program) initiated in 1980, a subcomponent of the Defense ERP that became law under the Superfund Amendments and Reauthorization Act, each DOD installation is required to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendment of 1984 under the Resource Conservation and Recovery Act Corrective Action Program and Comprehensive Environmental Response, Compensation, and Liability Act. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

Description of ERP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., activities dependent on groundwater usage might be foreclosed where a groundwater contaminant plume remains to complete remediation).

Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials, lead-based paint (LBP), radon, and polychlorinated biphenyls (PCBs). The presence of special hazards or controls over them might affect, or be affected by, a proposed action. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of a proposed action.

The ROI for HAZMAT, hazardous wastes, and toxic materials includes facilities such as selected office space, aircraft maintenance hangar space, storage area(s), vehicle parking, and ramp space at VGT and ØL7.

Asbestos. Asbestos is regulated by the USEPA with the authority promulgated under OSHA, 29 U.S.C. § 669 et seq. Section 112 of the Clean Air Act regulates emissions of asbestos fibers to ambient air. USEPA policy is to leave asbestos in place if disturbance or removal could pose a health threat.

Lead-based Paint. Human exposure to lead has been determined an adverse health risk by agencies such as OSHA and the USEPA. Sources of exposure to lead are dust, soils, and paint. In 1973, the Consumer Product Safety Commission established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, under the Consumer Product Safety Act (Public Law 101-608, as implemented by 16 CFR Part 1303), the Consumer Product Safety Commission lowered the allowable lead level in paint to 0.06 percent (600 parts per million). The Act also restricted the use of LBP in nonindustrial facilities. The DOD implemented a ban of LBP use in 1978; therefore, it is possible that facilities constructed prior to or during 1978 may contain LBP.

Radon. The US Surgeon General defines radon as an invisible, odorless, and tasteless gas, with no immediate health symptoms, that comes from the breakdown of naturally occurring uranium inside the earth (US Surgeon General, 2005). Radon that is present in soil can enter a building through small spaces and openings, accumulating in enclosed areas such as basements. No federal or state standards are in place to regulate residential radon exposure at the present time, but guidelines were developed. Although 4.0 picocuries per liter is considered an “action” limit, any reading over 2 picocuries per liter qualifies as a “consider action” limit. The USEPA and the US Surgeon General have evaluated the radon potential around the country to organize and assist building code officials in deciding whether radon-resistant features are applicable in new construction. Radon zones can range from 1 (high) to 3 (low).

Polychlorinated Biphenyls. PCBs are a group of chemical mixtures used as insulators in electrical equipment, such as transformers and fluorescent light ballasts. Chemicals classified as PCBs were widely manufactured and used in the United States until they were banned in 1979. The disposal of PCBs is regulated under the federal TSCA (15 U.S.C. § 2601 et seq., as implemented by 40 CFR Part 761), which banned the manufacture and distribution of PCBs, with the exception of PCBs used in enclosed systems.

The TSCA regulates and the USEPA enforces the removal and disposal of all sources of PCBs containing 50 parts per million or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

C.10.2 References

US Surgeon General. 2005. S*urgeon General Releases National Health Advisory on Radon*. US Department of Health and Human Services. January.

C.11 RESOURCE CATEGORIES ELIMINATED FROM DETAILED ANALYSIS

The Proposed Action is not expected to affect the following resources; therefore, they are not carried forward for detailed analysis.

C.11.1 Socioeconomics – Housing, Population, and Schools

The estimated additional 35 contract personnel along with their family members for the proposed CCAS would be a negligible increase in Clark County, Nevada, with a population of nearly 2.3 million. There is adequate available housing and public schools to support the minor increase in population within these counties from the Proposed Action; therefore, there would be no impact on the region’s population, or the capacity of housing or schools from implementation of the Proposed Action, and these resources are not carried forward for further detailed analysis in this EA.

C.11.2 Visual Resources

There would be no potential impacts on visual resources from the proposed CCAS activities since no new construction is proposed. Aircraft would utilize the existing airfield; therefore, CCAS activities in the areas adjacent to the airport facilities and aircraft parking ramp would not change the existing visual setting. Likewise, the Proposed Action would not affect the visual setting of the natural areas and other lands beneath the SUA. CCAS operations would occur in existing airspace where training activities currently take place. While some low-altitude training would continue under the Proposed Action, this activity would be brief and not alter the existing landscape. As such, this resource is not carried forward for further detailed analysis in this EA.

C.11.3 Water Resources

Under the Proposed Action, there would be no ground-disturbing activities. The proposed additional CCAS aircraft, personnel, and associated operational and maintenance activities would not affect water quality or quantity. Due to the rare and infrequent nature of fuel dumps as well as in-place safety precautions, these emergency procedures are not likely to adversely affect water resources. Water resources are not carried forward for further detailed analysis in this EA.

C.11.4 Soil Resources

Protection of soils was considered when evaluating potential impacts of the Proposed Action in terms of alteration of soil composition, structure, or function and any accumulation of chaff material. Impacts on soils would be adverse if they alter the soil composition, structure, or function within the environment or accumulate in the soil. Under the Proposed Action, there would be no ground-disturbing activities to affect soil resources. Defensive countermeasures are not deployed in the SUA. Soil resources are not carried forward for further detailed analysis in this EA.

C.11.5 Utilities, Infrastructure, and Transportation

The Proposed Action would not require upgrades or additions to utilities and infrastructure to accommodate the CCAS action. No additional Air Force personnel would be stationed at Nellis AFB and all contractors supporting CCAS would reside off-base. CCAS would be completely supported in existing facilities at a civil airport. If sufficient facilities are not available at a civil airport, the contractor may be required to fund the renovation or construction of additional facilities, and impacts on utilities, infrastructure, and transportation from renovation or construction would be evaluated under a separate environmental analysis. At a civil airport, all aircraft support services would be provided by the airport's Fixed-Base Operator. There would be no construction or modification of any roads or transportation networks. Therefore, impacts on utilities and infrastructure are not expected.

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APPENDIX D
METHODOLOGIES AND MODELING

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D.1 NOISE

D.1.1 Model Operational Data Documentation

D.1.1.1 Introduction

The following sections describe the data collected and noise modeling performed for an Environmental Assessment (EA) analyzing the implementation of contract close air support (CCAS) supporting Nellis Air Force Base (AFB). Impacts associated with the Proposed Action were analyzed at two locations, North Las Vegas Airport (VGT) and Jean Airport (ØL7).

The following analysis tools were used to calculate the potential noise levels associated with the examined alternatives.

NOISEMAP

Analyses of aircraft noise exposure and compatible land uses around Department of Defense (DOD) airfield-like facilities are normally accomplished using a group of computer-based programs, collectively called NOISEMAP (Czech and Plotkin, 1998; Wasmer and Maunsell, 2006a, 2006b). The core computational program of the NOISEMAP suite is NMAP. In this report, NMAP Version 7.3 was used to analyze aircraft operations and to generate noise contours.

Aviation Environmental Design Tool

Civilian aircraft operations were modeled using the Aviation Environmental Design Tool (AEDT). AEDT is the Federal Aviation Administration's (FAA's) software system that is designed to model aviation related operations in space and time to compute noise, emissions, and fuel consumption. Airfield noise modeling for the Environmental Impact Analysis Process combines civil aircraft noise estimated with AEDT Version 3c (FAA, 2020) with military aircraft noise, estimated with NOISEMAP Version 7.3.

MR_NMAP

When the aircraft flight tracks are not well defined and are distributed over a wide area, such as in Military Training Routes with wide corridors or Warning Areas, the Air Force uses the DOD-approved MR_NMAP program (Lucas and Calamia, 1997). In this report, MR_NMAP Version 3.0 was used to model subsonic aircraft noise in the special use airspace (SUA). For SUA environments where noise levels are calculated to be less than 45 decibels, the noise levels are stated as "<45 decibels."

PCBoom

Environmental analysis of supersonic aircraft operations requires calculation of sonic boom amplitudes. For the purposes of this study, the Air Force and DOD-approved PCBoom program was used to assess sonic boom exposure due to military aircraft operations in the supersonic SUA. In this report, PCBoom Version 4 was used to calculate sonic boom ground signatures and overpressures from supersonic vehicles performing steady, level flight operations (Plotkin, 2002).

BooMap

For cumulative sonic boom exposure under supersonic air combat training arenas, the Air Force and DOD-approved BooMap program was used. In this report, BooMap96 was used to calculate cumulative C-weighted day-night average sound level exposure based on long-term measurements in a number of the SUA (Plotkin, 1993).

D.1.1.2 Flight Tracks

Figures D-1 and **D-2** display flight tracks proposed for use by CCAS aircraft at at VGT and ØL7. All flight tracks shown are included in the noise models.

Figure D-1. Contracted Close Air Support Flight Tracks at North Las Vegas Airport.

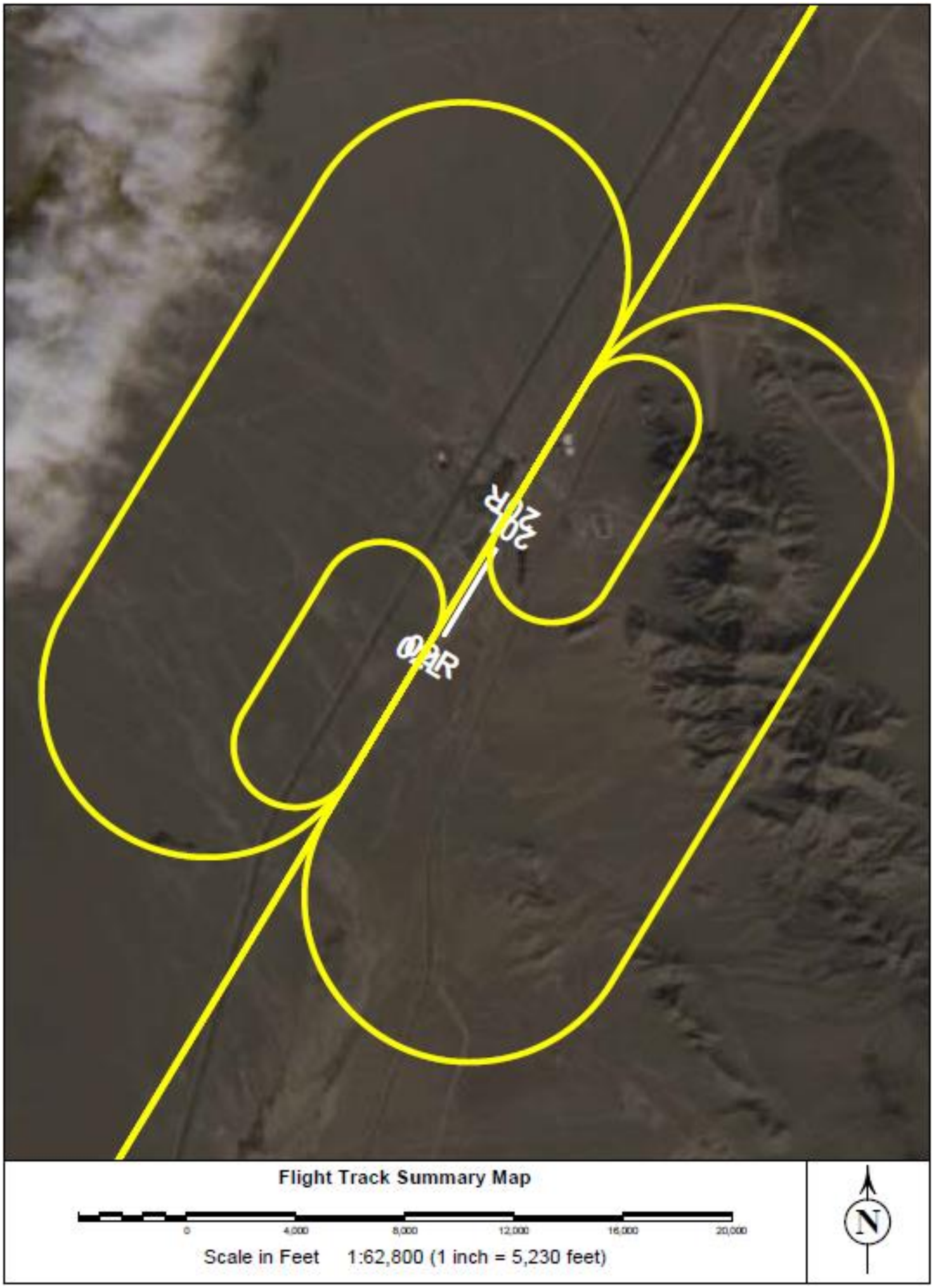


Figure D-2. Contracted Close Air Support Flight Tracks at Jean Airport.

D.1.1.3 Flight Operations

Table D-1 contains the operations modeled for the existing conditions for VGT. These operations were developed using interview with airport personnel and FAA OPSNET. Representative aircraft types are used to model civilian aircraft operations – similar aircraft operating out of the airport are grouped together in the noise model using a representative airframe.

Table D-2 contains the operations to be modeled for CCAS Alternative 1 at VGT. The only difference between the CCAS Alternative 1 and the existing conditions is the inclusion of CCAS.

Table D-3 contains the operations modeled for the existing conditions for ØL7. These operations were developed using interview with airport personnel and FAA OPSNET. Representative aircraft types are used to model civilian aircraft operations – similar aircraft operating out of the airport are grouped together in the noise model using a representative airframe.

Table D-4 contains the operations to be modeled for CCAS Alternative 1 at ØL7. The only difference between the CCAS Alternative 1 and the existing conditions is the inclusion of CCAS.

D.1.1.4 Runway Utilization

Table D-5 displays the runway utilization percentages for VGT aircraft.

Table D-6 displays the runway utilization percentages for ØL7 aircraft.

Table D-1
Existing Operations at North Las Vegas Airport

Category		Representing Aircraft Types	Departure			Arrival			Closed Pattern			Total		
			Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total
Military	Transient	UH-60 Blackhawk	1	-	1	1	-	1	-	-	-	2	-	2
		Cessna 206 Stationair	74	5	79	74	5	79	222	12	234	370	22	392
		Cessna Skylane	189	12	201	189	12	201	566	34	600	944	58	1,002
		ICA IAR-823	1	-	1	1	-	1	4	-	4	6	-	6
Civilian Itinerant	Air Carrier	737500, 737700, 737800	7	-	7	7	-	7	-	-	-	14	-	14
		A321-232	2	-	2	2	-	2	-	-	-	4	-	4
	Air Taxi and GA Jet	Helicopters	12,204	751	12,955	12,204	751	12,955	-	-	-	24,408	1,502	25,910
		Pilatus PC12	1,737	107	1,844	1,737	107	1,844	-	-	-	3,474	214	3,688
		Pilatus PC24	169	10	179	169	10	179	-	-	-	338	20	358
		Cessna Citation CJ1-CJ4, II & V	1,008	62	1,070	1,008	62	1,070	-	-	-	2,016	124	2,140
		Gulfstream GIV-SP/TAY 611-8	608	37	645	608	37	645	-	-	-	1,216	74	1,290
		Cessna Citation 560XL, others	460	28	488	460	28	488	-	-	-	920	56	976
		RJ	413	25	438	413	25	438	-	-	-	826	50	876
		LEAR 36/TFE731-2, Bae (Hawker Siddeley) 125-800	64	4	68	64	4	68	-	-	-	128	8	136
		Cessna 551 Citation 2SP	36	2	38	36	2	38	-	-	-	72	4	76
		Learjet 31	23	1	24	23	1	24	-	-	-	46	2	48
		Cessna 441, others	857	53	910	857	53	910	2,572	158	2,730	4,286	264	4,550
		Cessna 172, others	5,941	366	6,307	5,941	366	6,307	17,822	1,096	18,918	29,704	1,828	31,532
Civilian Local	Helicopters	R44, R22, others	5,869	361	6,230	5,869	361	6,230	17,606	1,086	18,692	29,344	1,808	31,152
	GA 2-engine turboprop or piston	Cessna 441, others	1,718	106	1,824	1,718	106	1,824	5,472	-	5,472	8,908	212	9,120
	GA 1-engine turboprop or piston	Cessna 172, others	11,906	733	12,639	11,906	733	12,639	37,920	-	37,920	61,732	1,466	63,198
Total			**43,287**	**2,663**	**45,950**	**43,287**	**2,663**	**45,950**	**82,184**	**2,386**	**84,570**	**168,758**	**7,712**	**176,470**

Table D-2
Contracted Close Air Support Alternative 1 Operations at North Las Vegas Airport

Category		Representing Aircraft Types	Departure			Arrival			Closed Pattern			Total		
			Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total
Military	Transient	UH-60 Blackhawk	1	-	1	1	-	1	-	-	-	2	-	2
		Cessna 206 Stationair	74	5	79	74	5	79	222	12	234	370	22	392
		Cessna Skylane	189	12	201	189	12	201	566	34	600	944	58	1,002
		ICA IAR-823	1	-	1	1	-	1	4	-	4	6	-	6
	Local	Contracted Close Air Support	1,093	257	1,350	1,093	257	1,350	82	0	82	2,268	514	2,782
Civilian Itinerant	Air Carrier	737500, 737700, 737800	7	-	7	7	-	7	-	-	-	14	-	14
		A321-232	2	-	2	2	-	2	-	-	-	4	-	4
	Air Taxi and GA Jet	Helicopters	12,204	751	12,955	12,204	751	12,955	-	-	-	24,408	1,502	25,910
		Pilatus PC12	1,737	107	1,844	1,737	107	1,844	-	-	-	3,474	214	3,688
		Pilatus PC24	169	10	179	169	10	179	-	-	-	338	20	358
		Cessna Citation CJ1-CJ4, II & V	1,008	62	1,070	1,008	62	1,070	-	-	-	2,016	124	2,140
		Gulfstream GIV-SP/TAY 611-8	608	37	645	608	37	645	-	-	-	1,216	74	1,290
		Cessna Citation 560XL, others	460	28	488	460	28	488	-	-	-	920	56	976
		RJ	413	25	438	413	25	438	-	-	-	826	50	876
		LEAR 36/TFE731-2, Bae (Hawker Siddeley) 125-800	64	4	68	64	4	68	-	-	-	128	8	136
		Cessna 551 Citation 2SP	36	2	38	36	2	38	-	-	-	72	4	76
		Learjet 31	23	1	24	23	1	24	-	-	-	46	2	48
		Cessna 441, others	857	53	910	857	53	910	2,572	158	2,730	4,286	264	4,550
		Cessna 172, others	5,941	366	6,307	5,941	366	6,307	17,822	1,096	18,918	29,704	1,828	31,532
Civilian Local	Helicopters	R44, R22, others	5,869	361	6,230	5,869	361	6,230	17,606	1,086	18,692	29,344	1,808	31,152
	GA 2-engine turboprop or piston	Cessna 441, others	1,718	106	1,824	1,718	106	1,824	5,472	-	5,472	8,908	212	9,120
	GA 1-engine turboprop or piston	Cessna 172, others	11,906	733	12,639	11,906	733	12,639	37,920	-	37,920	61,732	1,466	63,198
Total			**44,380**	**2,920**	**47,300**	**44,380**	**2,920**	**47,300**	**82,266**	**2,386**	**84,652**	**171,026**	**8,226**	**179,252**

Table D-3
Existing Operations at Jean Airport

Category		Representing Aircraft Types	Departure			Arrival			Closed Pattern			Total		
			Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total
Civilian Itinerant	Air Taxi	Cessna Citation CJ1-CJ4, II & V	30	-	30	30	-	30	-	-	-	60	-	60
		Cessna Citation 560XL, others	15	15	30	15	15	30	-	-	-	30	30	60
	GA 2-engine turboprop or piston	Cessna 441, others	407	8	415	407	8	415	-	-	-	814	16	830
	GA 1-engine turboprop or piston	Cessna 172, others	4,885	100	4,985	4,885	100	4,985	-	-	-	9,770	200	9,970
Civilian Local	GA 2-engine turboprop or piston	Cessna 441, others	91	2	93	90	2	92	90	2	92	271	6	277
	GA 1-engine turboprop or piston	Cessna 172, others	1,086	22	1,108	1,086	22	1,108	1,085	22	1,107	3,257	66	3,323
Total			**6,514**	**147**	**6,661**	**6,513**	**147**	**6,660**	**1,175**	**24**	**1,199**	**14,202**	**318**	**14,520**

Table D-4
Contracted Close Air Support Alternative 1 Operations at Jean Airport

Category		Representing Aircraft Types	Departure			Arrival			Closed Pattern			Total		
			Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total	Day (7am-10pm)	Night (10pm-7am)	Total
Military	Local	Contracted Close Air Support	1,093	257	1,350	1,093	257	1,350	82	0	82	2,268	514	2,782
Civilian Itinerant	Air Taxi	Cessna Citation CJ1-CJ4, II & V	30	-	30	30	-	30	-	-	-	60	-	60
		Cessna Citation 560XL, others	15	15	30	15	15	30	-	-	-	30	30	60
	GA 2-engine turboprop or piston	Cessna 441, others	407	8	415	407	8	415	-	-	-	814	16	830
	GA 1-engine turboprop or piston	Cessna 172, others	4,885	100	4,985	4,885	100	4,985	-	-	-	9,770	200	9,970
Civilian Local	GA 2-engine turboprop or piston	Cessna 441, others	91	2	93	90	2	92	90	2	92	271	6	277
	GA 1-engine turboprop or piston	Cessna 172, others	1,086	22	1,108	1,086	22	1,108	1,085	22	1,107	3,257	66	3,323
Total			**7,607**	**404**	**8,011**	**7,606**	**404**	**8,010**	**1,257**	**24**	**1,281**	**16,470**	**832**	**17,302**

Table D-5
Runway Usage at North Las Vegas Airport

Runway	Departures	Arrivals
07	10%	10%
12L	15%	15%
12R	44%	44%
25	5%	5%
30L	19%	19%
30R	7%	7%

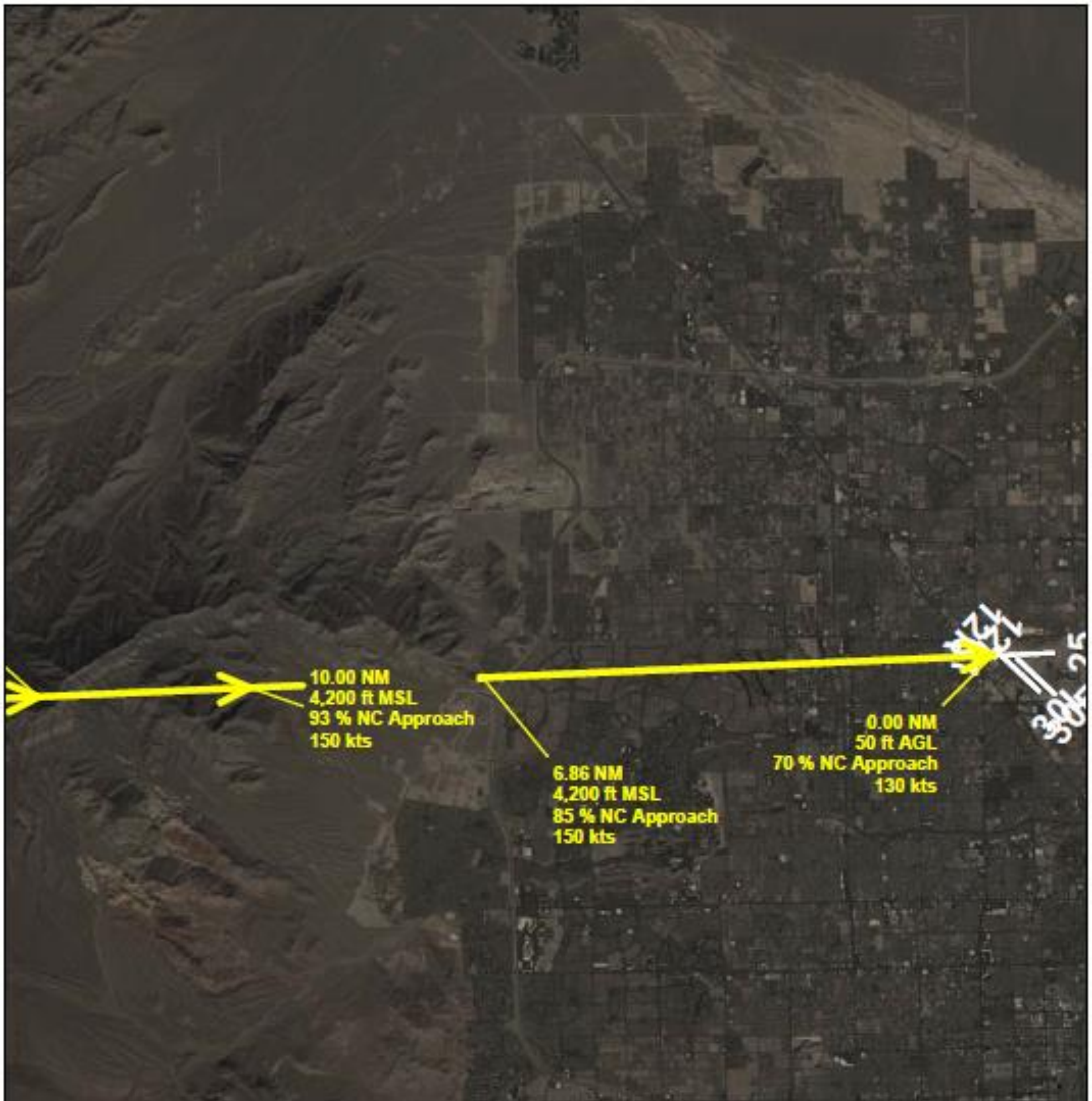
Table D-6
Runway Usage at Jean Airport

Runway	Departures	Arrivals
02	50%	50%
20	50%	50%

D.1.1.5 Flight Profiles

Representative profiles provide the speed and power setting of each type of aircraft as a function of distance along the flight track for the representative maneuvers. For modeling purposes, the appropriate profile was used for all flight tracks that conform to that maneuver type. For example, all overhead break arrival tracks utilize the representative profile for modeling that maneuver. The following images illustrate representative flight tracks for contract CCAS aircraft operations at VGT and ØL7.

Representative Flight Profiles for Contracted Close Air Support Operations Out of North Las Vegas Airport



Flight Profile CCASHA01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	24.69	10,000 MSL	83 Cruise	300	-4.0	-1600	189	
b	12.84	5,000 MSL	83 Cruise	150	-2.7	-700	68	
c	10.00	4,200 MSL	93 Approach	150	0.0	0	75	Drop Gear
d	6.86	4,200 MSL	85 Approach	150	-2.7	-700	176	
e	0.00	50 AGL	70 Approach	130				

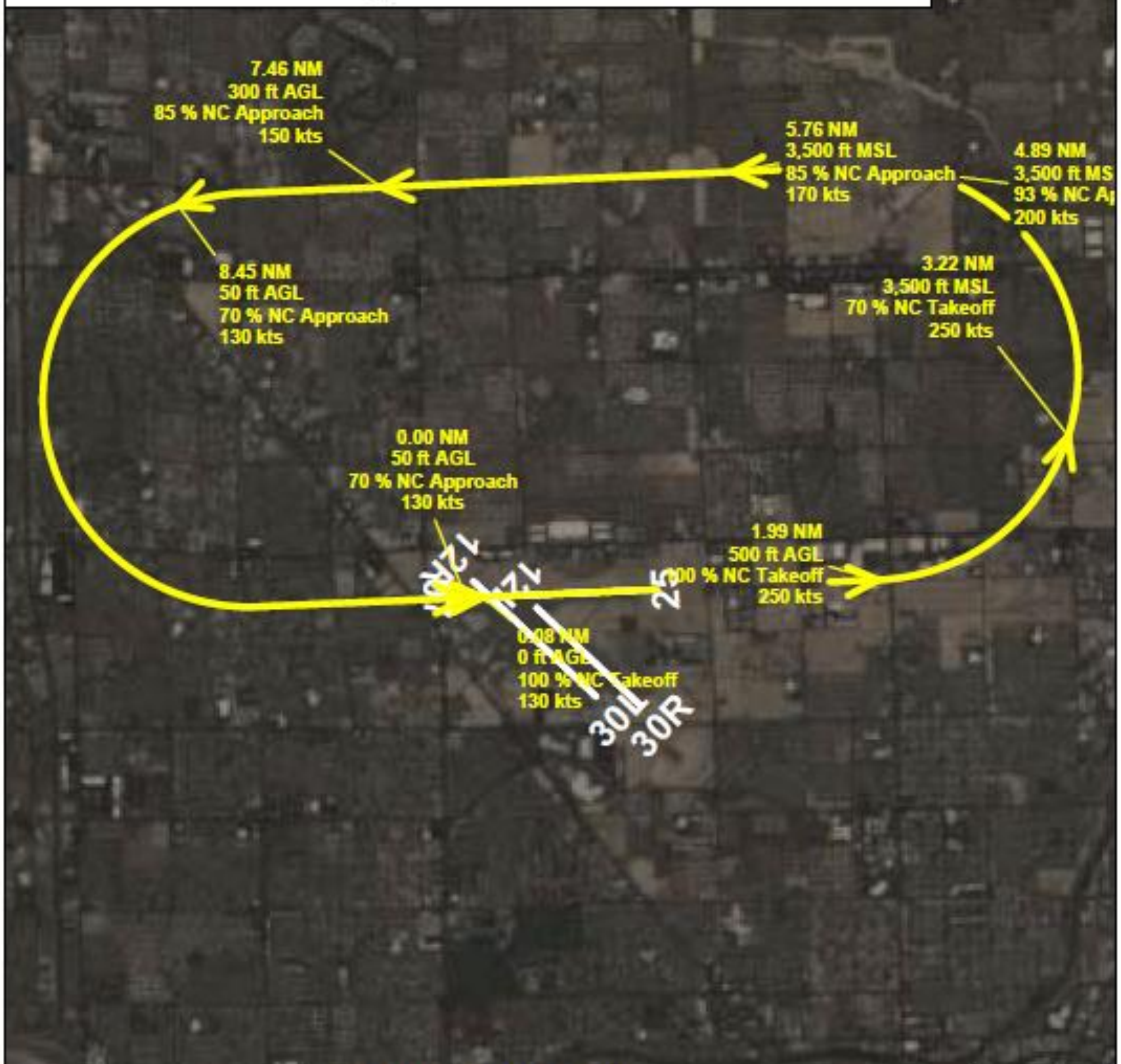
Flight Profile CCASHA01
CCAS High Noise Arrival

0 10,000 20,000 30,000 40,000 50,000
Scale in Feet 1:163,000 (1 inch = 13,600 feet)

N

Flight Profile CCASHC01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	50 AGL	70 Approach	130	-5.7	-1300	2	
b	0.08	0 AGL	100 Takeoff	130	2.5	800	36	
c	1.99	500 AGL	100 Takeoff	250	6.1	2700	18	
d	3.22	3,500 MSL	70 Takeoff	250	0.0	0	27	
e	4.89	3,500 MSL	93 Approach	200	0.0	0	17	DROP GEAR
f	5.76	3,500 MSL	85 Approach	170	-5.5	-1600	38	
g	7.46	300 AGL	85 Approach	150	-2.4	-600	25	
h	8.45	50 AGL	70 Approach	130				



Flight Profile CCASHC01
CCAS High Noise Pattern

0 2,000 4,000 6,000 8,000 10,000 12,000 14,000 16,000 18,000 20,000

Scale in Feet 1:60,100 (1 inch = 5,010 feet)

Flight Profile CCASHD01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	0 AGL	80 Mil	0	0.0	0	25	
b	0.49	0 AGL	100 Takeoff	145	2.0	700	25	ROTATE 3000 FT
c	1.89	300 AGL	100 Takeoff	250	3.3	1600	18	
d	3.29	3,000 MSL	100 Takeoff	300	7.4	4000	243	unrestricted climb at 4000 fpm
e	23.53	19,000 MSL	83 Takeoff	300				

Flight Profile CCASHD01

CCAS High Noise Departure

0 4,000 8,000 12,000 16,000 20,000 24,000

Scale in Feet 1:79,500 (1 inch = 6,630 feet)

N

Flight Profile CCASLA01

Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	33.32	15,000 AGL	60 Cruise	300	-4.3	-2000	246	
b	15.52	9,000 MSL	60 Cruise	220	-3.9	-1400	166	
c	5.86	5,000 MSL	60 Approach	200	-7.4	-2400	51	START TO CONFIGURE
d	3.34	3,000 MSL	60 Approach	160	-2.0	-600	53	GEAR DOWN
e	0.99	300 AGL	60 Approach	160	-2.4	-700	23	
f	0.00	50 AGL	30 Approach	150				

Flight Profile CCASLA01
CCAS Low Noise Arrival

0 4,000 8,000 12,000 16,000 20,000 24,000

Scale in Feet 1:79,900 (1 inch = 6,650 feet)

N

Flight Profile CCASLC01

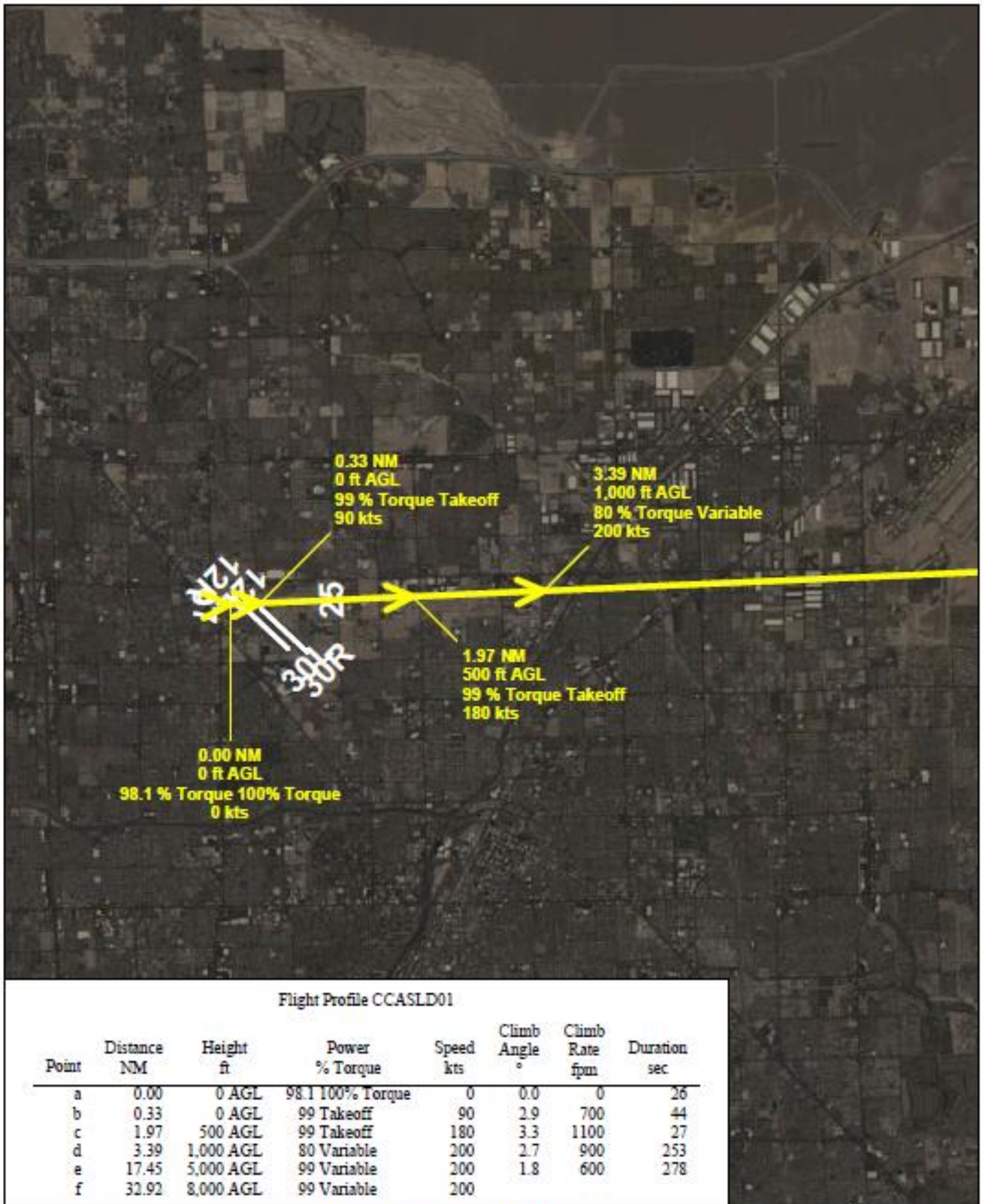
Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	50 AGL	70 Approach	130	-5.7	-1300	2	
b	0.08	0 AGL	100 Takeoff	130	2.5	800	36	
c	1.99	500 AGL	100 Takeoff	250	6.1	2700	18	
d	3.22	3,500 MSL	70 Takeoff	250	0.0	0	27	
e	4.89	3,500 MSL	93 Approach	200	0.0	0	17	DROP GEAR
f	5.76	3,500 MSL	85 Approach	170	-5.5	-1600	38	
g	7.46	300 AGL	85 Approach	150	-2.4	-600	25	
h	8.45	50 AGL	70 Approach	130				

Flight Profile CCASLC01
CCAS Low Noise Pattern

0 2,000 4,000 6,000 8,000 10,000 12,000 14,000 16,000 18,000 20,000

Scale in Feet 1:60,100 (1 inch = 5,010 feet)

N



Flight Profile CCASLD01

Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec
a	0.00	0 AGL	98.1 100% Torque	0	0.0	0	26
b	0.33	0 AGL	99 Takeoff	90	2.9	700	44
c	1.97	500 AGL	99 Takeoff	180	3.3	1100	27
d	3.39	1,000 AGL	80 Variable	200	2.7	900	253
e	17.45	5,000 AGL	99 Variable	200	1.8	600	278
f	32.92	8,000 AGL	99 Variable	200			

Flight Profile CCASLD01
CCAS Low Noise Departure

0 4,000 8,000 12,000 16,000 20,000 24,000 28,000 32,000 36,000 40,000

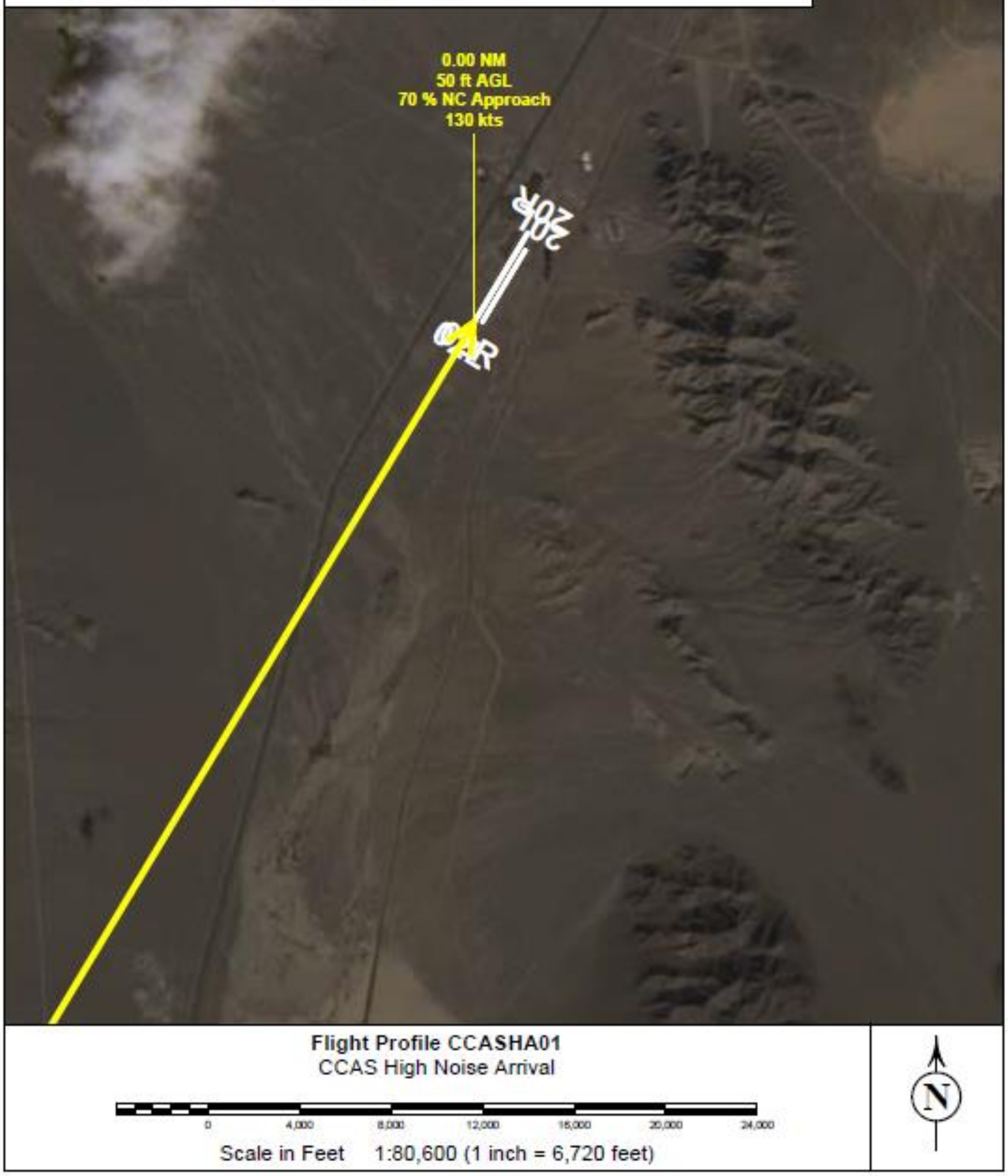
Scale in Feet 1:118,000 (1 inch = 9,830 feet)

N

Representative Flight Profiles for Contracted Close Air Support Operations Out of Jean Airport

Flight Profile CCASHA01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	24.69	10,000 MSL	83 Cruise	300	-4.0	-1600	189	
b	12.84	5,000 MSL	83 Cruise	150	-2.7	-700	68	
c	10.00	4,200 MSL	93 Approach	150	0.0	0	75	Drop Gear
d	6.86	4,200 MSL	85 Approach	150	-5.7	-1400	176	
e	0.00	50 AGL	70 Approach	130				



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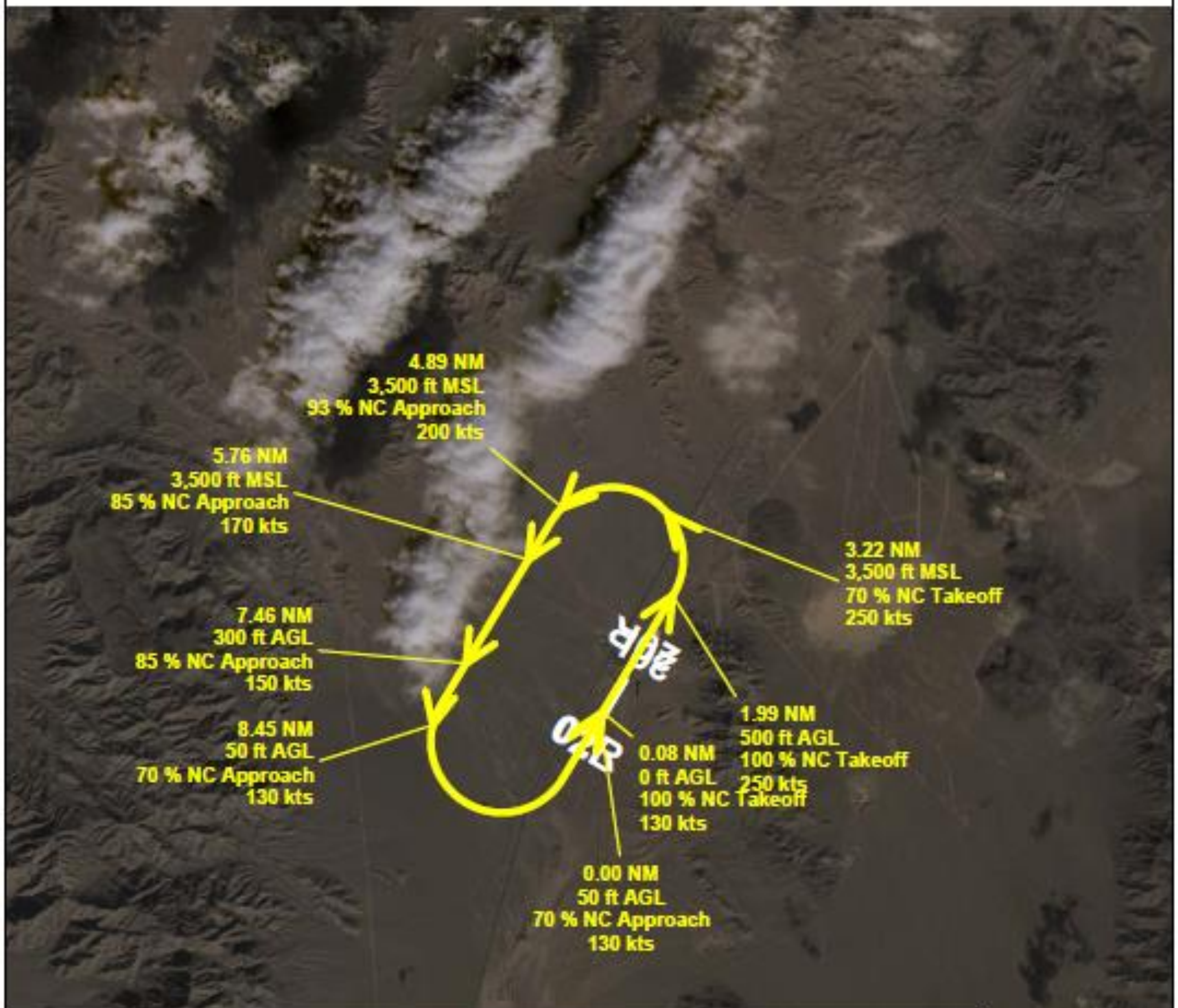


Flight Profile CCASHC01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	50 AGL	70 Approach	130	-5.7	-1300	2	
b	0.08	0 AGL	100 Takeoff	130	2.5	800	36	
c	1.99	500 AGL	100 Takeoff	250	21.9	10200	18	
d	3.22	3,500 MSL	70 Takeoff	250	0.0	0	27	
e	4.89	3,500 MSL	93 Approach	200	0.0	0	17	DROP GEAR
f	5.76	3,500 MSL	85 Approach	170	-17.2	-5000	38	
g	7.46	300 AGL	85 Approach	150	-2.4	-600	25	
h	8.45	50 AGL	70 Approach	130				

Flight Profile CCASHC01
CCAS High Noise Pattern

0 10,000 20,000 30,000 40,000 50,000 60,000

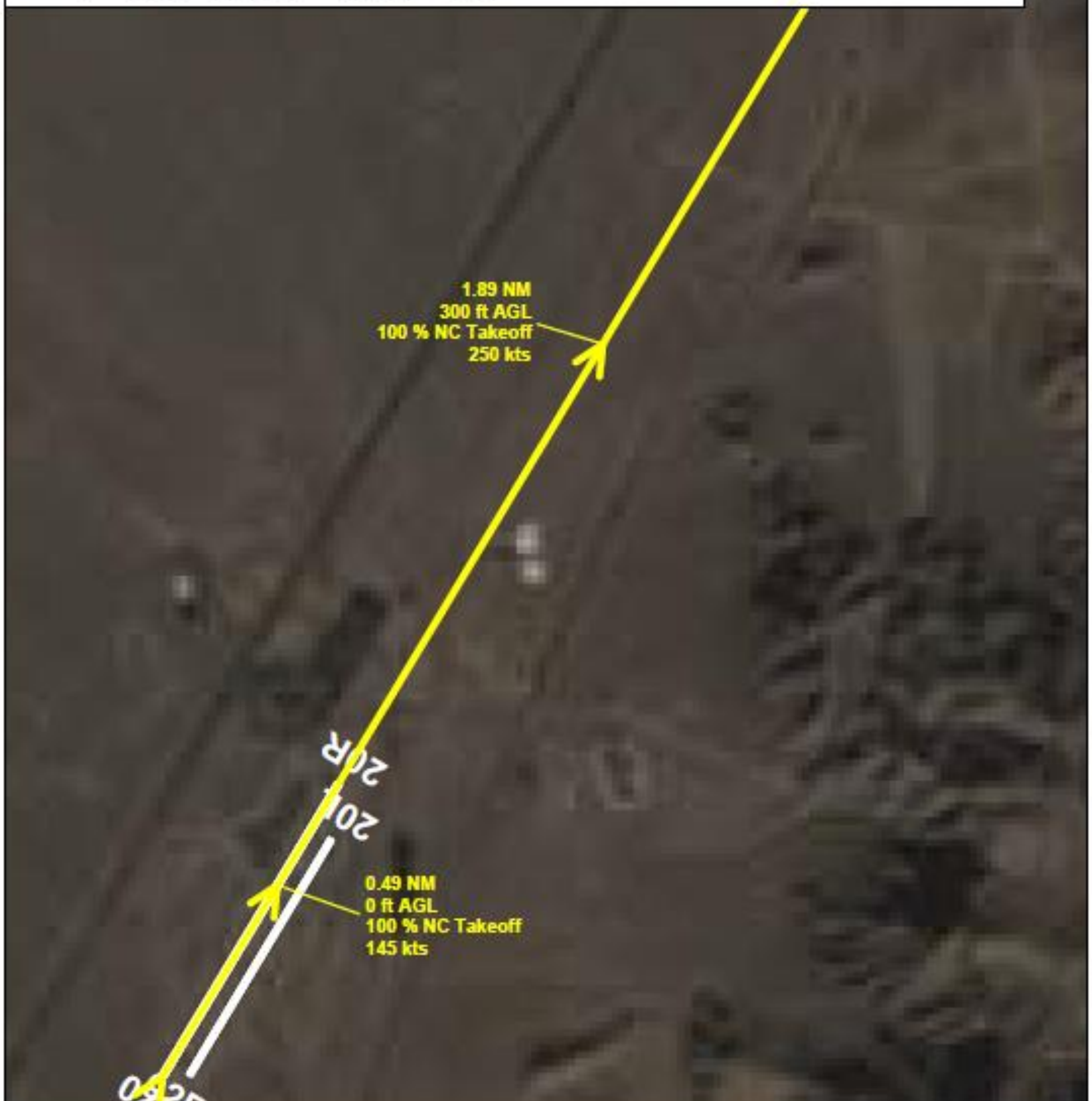
Scale in Feet 1:184,000 (1 inch = 15,300 feet)

N

•

Flight Profile CCASHD01

Point	Distance NM	Height ft	Power % NC	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	0 AGL	80 Mil	0	0.0	0	25	
b	0.49	0 AGL	100 Takeoff	145	2.0	700	25	ROTATE 3000 FT
c	1.89	300 AGL	100 Takeoff	250	17.6	8800	18	
d	3.29	3,000 MSL	100 Takeoff	300	7.4	4000	243	unrestricted climb at 4000 fpm
e	23.53	19,000 MSL	83 Takeoff	300				



Flight Profile CCASHD01
CCAS High Noise Departure

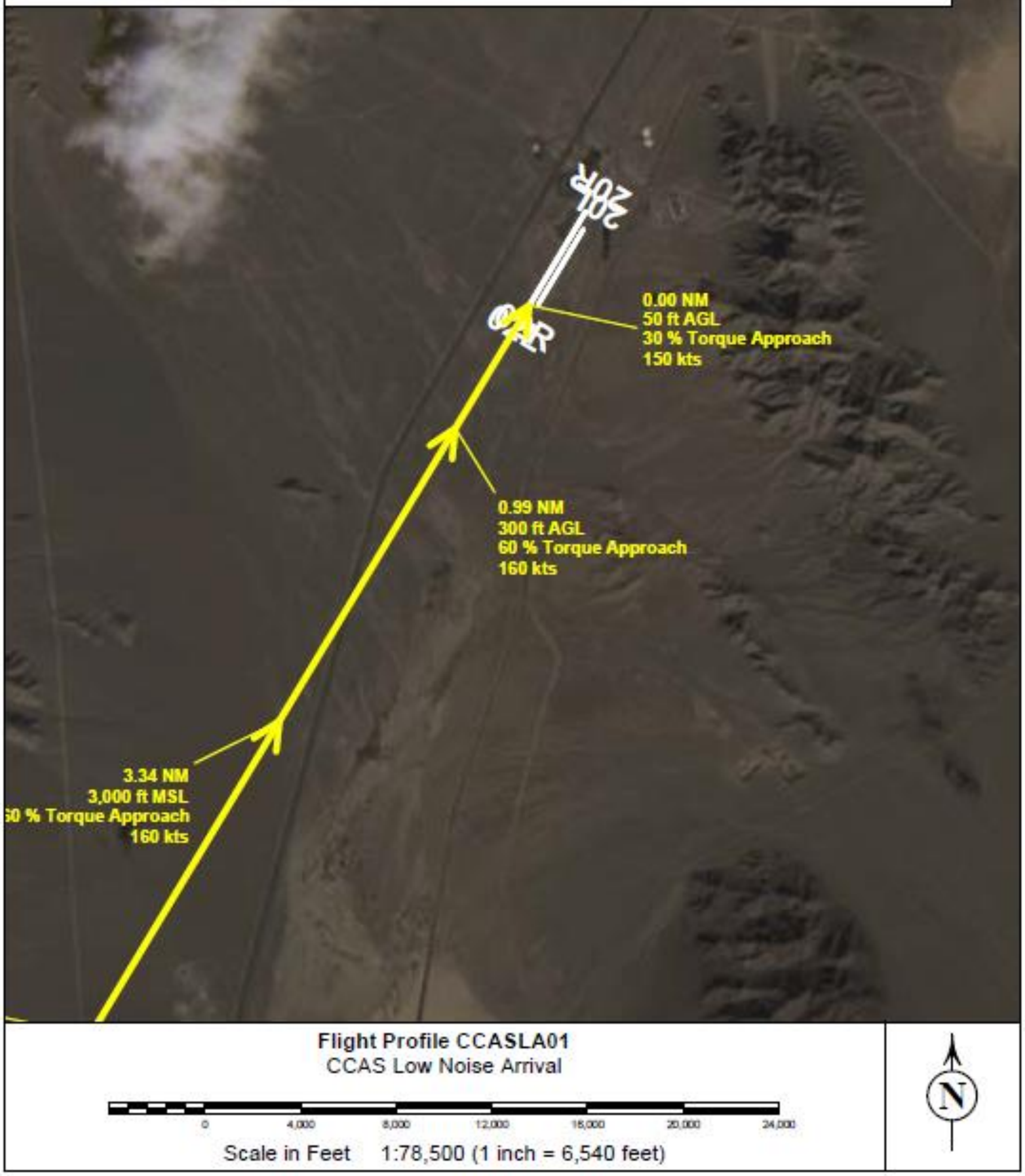
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000

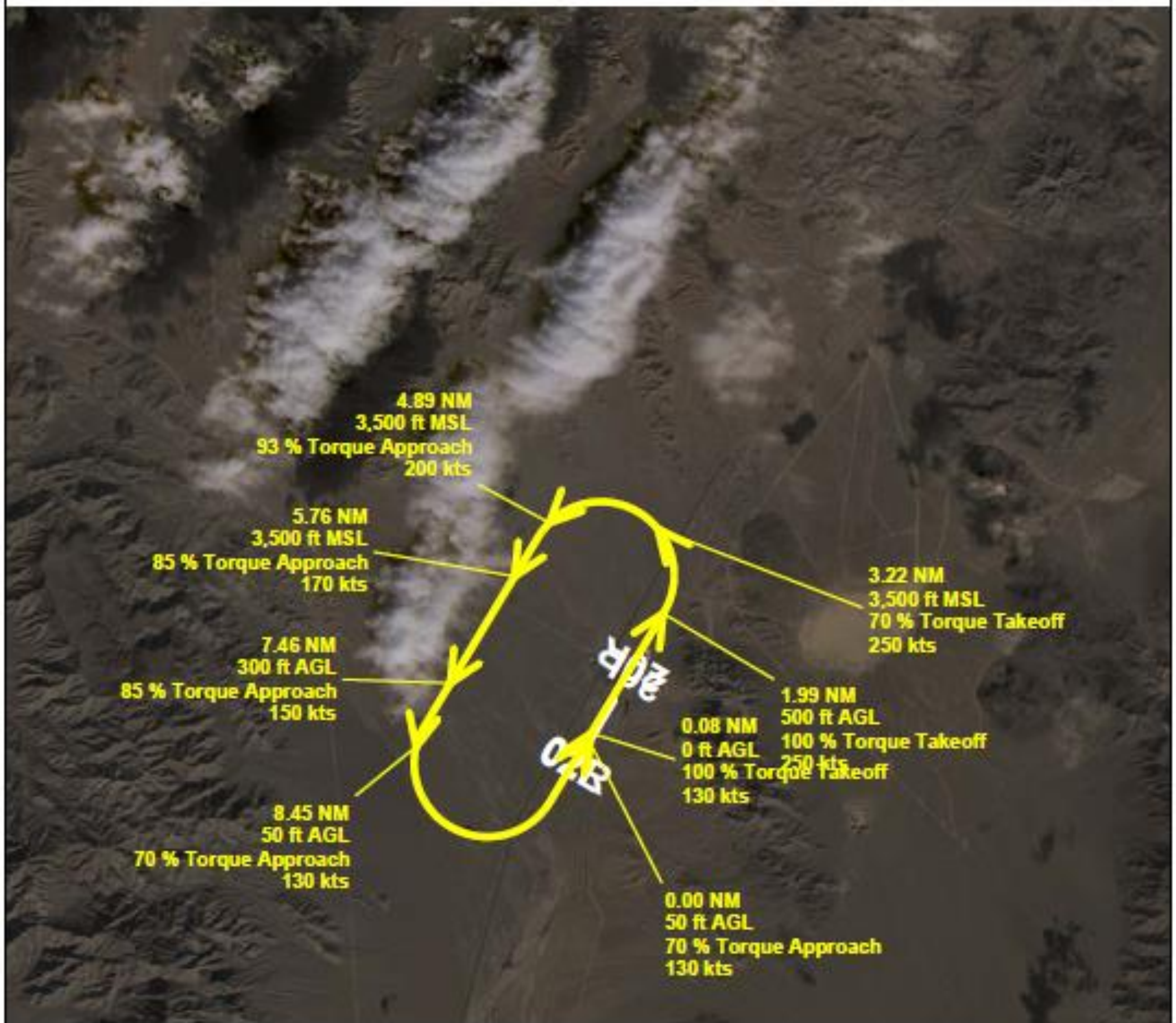
Scale in Feet 1:26,900 (1 inch = 2,240 feet)

N

Flight Profile CCASLA01

Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	33.32	15,000 AGL	60 Cruise	300	-3.2	-1500	246	
b	15.52	9,000 MSL	60 Cruise	220	-3.9	-1400	166	
c	5.86	5,000 MSL	60 Approach	200	-7.4	-2400	51	START TO CONFIGURE
d	3.34	3,000 MSL	60 Approach	160	-10.7	-3100	53	GEAR DOWN
e	0.99	300 AGL	60 Approach	160	-2.4	-700	23	
f	0.00	50 AGL	30 Approach	150				





Flight Profile CCASLC01

Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec	Notes
a	0.00	50 AGL	70 Approach	130	-5.7	-1300	2	
b	0.08	0 AGL	100 Takeoff	130	2.5	800	36	
c	1.99	500 AGL	100 Takeoff	250	21.9	10200	18	
d	3.22	3,500 MSL	70 Takeoff	250	0.0	0	27	
e	4.89	3,500 MSL	93 Approach	200	0.0	0	17	DROP GEAR
f	5.76	3,500 MSL	85 Approach	170	-17.2	-5000	38	
g	7.46	300 AGL	85 Approach	150	-2.4	-600	25	
h	8.45	50 AGL	70 Approach	130				

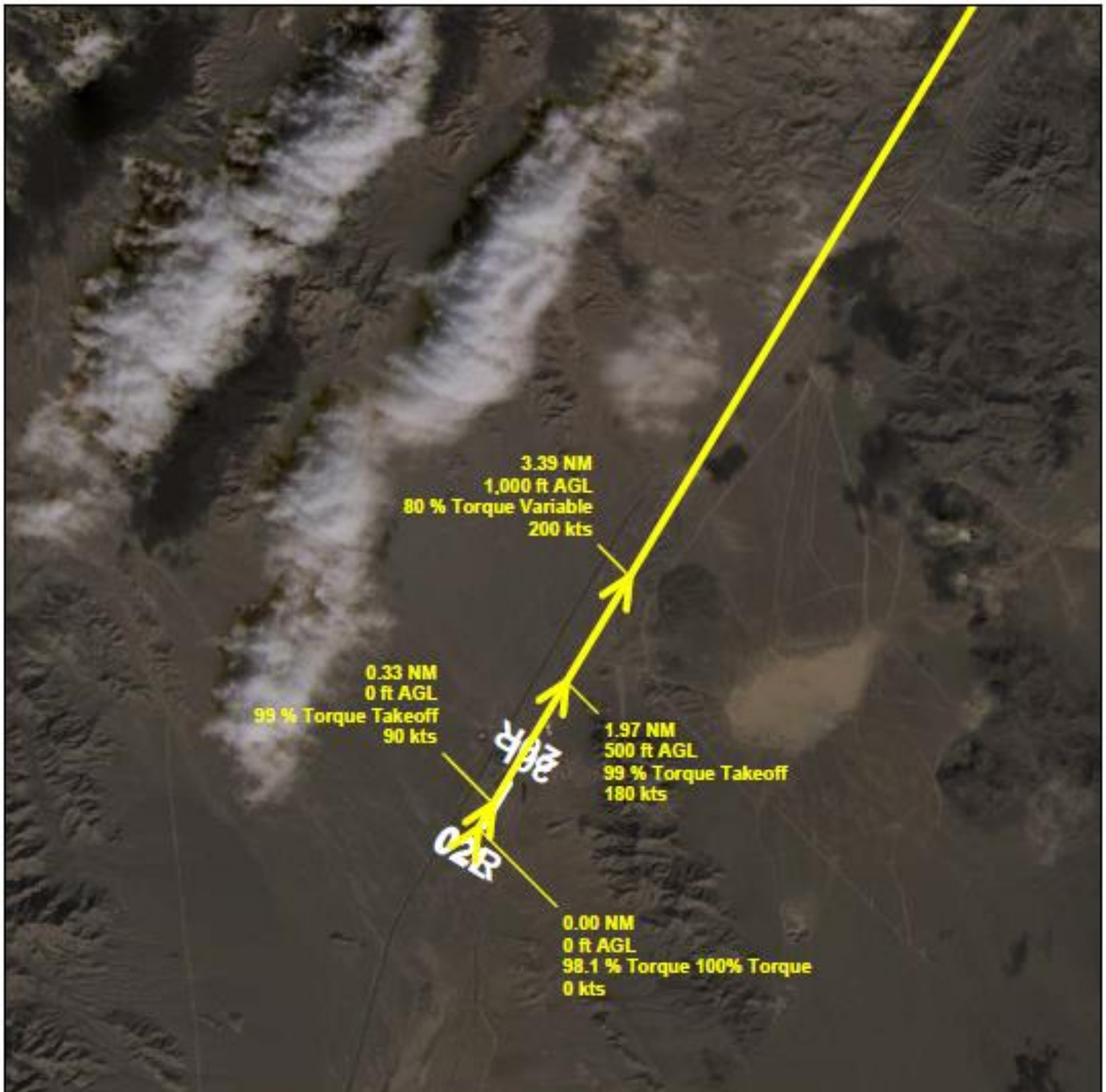
Flight Profile CCASLC01

CCAS Low Noise Pattern

0 10,000 20,000 30,000 40,000 50,000

Scale in Feet 1:178,000 (1 inch = 14,900 feet)

N



Flight Profile CCASLAD01

Point	Distance NM	Height ft	Power % Torque	Speed kts	Climb Angle °	Climb Rate fpm	Duration sec
a	0.00	0 AGL	98.1 100% Torque	0	0.0	0	26
b	0.33	0 AGL	99 Takeoff	90	2.9	700	44
c	1.97	500 AGL	99 Takeoff	180	3.3	1100	27
d	3.39	1,000 AGL	80 Variable	200	2.7	900	253
e	17.45	5,000 AGL	99 Variable	200	1.8	600	278
f	32.92	8,000 AGL	99 Variable	200			

Flight Profile CCASLAD01
CCAS Low Noise Departure

0 4,000 8,000 12,000 16,000 20,000 24,000 28,000 32,000 36,000 40,000 44,000 48,000

Scale in Feet 1:142,000 (1 inch = 11,800 feet)

N

D.1.2 References

Czech, J.J., and K.J. Plotkin. 1998. *NMAP 7.0 User's Manual*. Wyle Research Report WR 98-13. Wyle Laboratories, Inc. November.

FAA. 2020. *Aviation Environmental Design Tool (AEDT) Version 3c User Guide*. Washington, DC: Office of Environment and Energy. March.

Lucas, Michael J., and Paul T. Calamia. 1997. *Military Operating Area and Range Noise Model MR_NMAP User's Manual*. Wyle Research Report WR 94-12-R. Wyle Laboratories, Inc. March.

Plotkin, K.J. 1993. *Sonic Boom Focal Zones from Tactical Aircraft Maneuvers*. Journal of Aircraft 30(1). January-February.

Plotkin, K.J. 2002. *Computer Models for Sonic Boom Analysis: PCBoom4, CABoom, BooMap, CORBoom*.

Wasmer, F., and F. Maunsell. 2006a. BaseOps 7.3 User's Guide. Wasmer Consulting.

Wasmer, F., and F. Maunsell. 2

D.2 Air Quality

D.2.1 Methodology

D.2.1.1 Air Conformity Applicability Analysis

The Clean Air Act required the United States Environmental Protection Agency (USEPA) draft general conformity regulations that are applicable in nonattainment areas, or in designated maintenance areas (i.e., attainment areas that were reclassified from a previous nonattainment status, which are required to prepare a maintenance plan for air quality). These regulations are designed to ensure that federal actions do not impede local efforts to achieve or maintain attainment with the National Ambient Air Quality Standards (NAAQS). The General Conformity Rule and the promulgated regulations found in 40 Code of Federal Regulations (CFR) Part 93 exempt certain federal actions from conformity determinations (e.g., contaminated site cleanup and natural disaster response activities). Other federal actions are assumed to conform if total indirect and direct project emissions are below *de minimis* levels presented in **Table D-1**. Demonstration of conformity can be shown if Proposed Action emissions are within the State- or Tribe-approved budget of the facility as part of the State Implementation Plan or Tribal Implementation Plan (USEPA, 2010).

Direct emissions are those that occur as a direct result of the action. For example, emissions from new equipment that are a permanent component of the completed action (e.g., boilers, heaters, generators, paint booths) are considered direct emissions. Indirect emissions are those that occur at a later time or at a distance from the Proposed Action. For example, increased vehicular/commuter traffic because of the action is considered an indirect emission. As seen in **Table D-7**, the threshold levels (in tons of pollutant per year) depend upon the nonattainment status that USEPA has assigned to a region. Once the net change in nonattainment pollutants is calculated, the federal agency must compare them to the *de minimis* thresholds.

Table D-7
General Conformity Rule *De Minimis* Emission Thresholds

Pollutant	Attainment Classification	Tons per year
Ozone (VOC and NO_x)	Serious nonattainment	50
Ozone (VOC and NO_x)	Severe nonattainment	25
Ozone (VOC and NO_x)	Extreme nonattainment	10
Ozone (VOC and NO_x)	Other areas outside an ozone transport region	100
Ozone (NO_x)	Marginal and moderate nonattainment inside an ozone transport region	100
Ozone (NO_x)	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
Ozone (VOC)	Maintenance within an ozone transport region	50
Ozone (VOC)	Maintenance outside an ozone transport region	100
Carbon Monoxide, SO_2 and NO_2	All nonattainment and maintenance	100
PM_{10}	Serious nonattainment	70
PM_{10}	Moderate nonattainment and maintenance	100

Pollutant	Attainment Classification	Tons per year
$PM_{2.5}$ Direct emissions, SO_2, NO_x (unless determined not to be a significant precursor), VOC and ammonia (if determined to be significant precursors)	All nonattainment and maintenance	100
Lead	All nonattainment and maintenance	25

Source: USEPA, 2017
NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; $PM_{2.5}$ = particulates equal to or less than 2.5 microns in diameter; PM_{10} = particulates equal to or less than 10 microns in diameter; SO_2 = sulfur dioxide; VOC = volatile organic compound

D.2.1.2 Assumptions

The following assumptions were used in the air quality analysis for the Proposed Action:

1. No construction (or negligible construction) would be associated with any of the proposed alternatives. This includes no demolition, earth moving, hauling, or paving. Some minor interior building fabrication would be possible but affected square footage is too small to result in outdoor air quality impacts.
2. No installation of new boilers or generators. No generators would be used for the Proposed Action.
3. No new storage tanks would be installed – additional Jet-A fuel or Aviation Gas would be calculated based on additional engine type, number of sorties, and an average engine fuel consumption rate.
4. No new Hush House/Engine Test Cell facilities would be installed, and existing Hush House/Engine Test Cell facilities would not be used for CCAS contractor aircraft.
5. No new paint booth facilities would be installed, and existing paint booths would not be used for CCAS aircraft.
6. Contractor may bring their own parts cleaner (or share already installed unit unknown at this time) – for either case it is assumed contractor use would be minimal (no more than 0.5 gallon/month solvent used/lost).
7. Maintenance for contractor aircraft would be limited to minor repairs and minor routine maintenance/inspections (significant repairs, schedule/phased maintenance and inspections to be conducted off-site).
8. While CCAS targeted performance would be estimated to start in early 2022 with a 10-year contract, the emissions were estimated for each year of the Proposed Action beginning in January 2022 and ending in December 2031. For air quality modeling purposes, these are representative years; the modeling generates air emissions estimates for the life of a representative 10-year contract.
9. Contractor aircraft takeoff and landing cycles - use/assume Air Conformity Applicability Model (ACAM) default "times in mode" to be conservative.
10. Assume once an aircraft is out of the landing and takeoff (LTO) cycle the time spent traveling to/from the special use airspace (5 to 20 minutes) would be at an altitude above 3,000 feet (ft).
11. For consideration of potential air quality impacts, it is the volume of air extending up to the mixing height (3,000 ft above ground level [AGL]) and coinciding with the spatial distribution of the region of influence that is considered. Pollutants that are released above the mixing height typically would not disperse downward and thus would have little or no effect on ground level concentrations of pollutants. The mixing height is the altitude at which the lower atmosphere undergoes mechanical or turbulent mixing, producing a nearly uniform air mass. The height of the mixing level determines the volume of air within which pollutants can disperse. Mixing heights at any one location or region can vary by the season and time of day, but for air quality applications an average mixing height of 3,000 ft AGL is an acceptable default value (40 CFR § 93.153[c][2]). Even though the mixing height in Clark County is 10,000 ft AGL, for the purposes of estimating emissions for this analysis, 3,000 ft AGL default value is assumed.
12. Air Force training sorties would not increase or decrease as result of this action. Roles may change (i.e., the Air Force no longer need to play the adversary, but this would not change in any substantial way the number of Air Force sorties flown); thus, the change (increase) in emissions for air operations at the proposed regional airports would be strictly due to the addition of the CCAS aircraft and associated ground and maintenance activities.

13. Air Force use of engine test cells/hush house would not change as a result of the Proposed Action. No changes to Air Force trim tests also assumed.
14. For contractor aerospace ground equipment and auxiliary power units - until the contractor is selected, what they would bring/use in terms of aerospace ground equipment and auxiliary power units is unknown, thus ACAM defaults will be used based on the surrogate aircraft and engine type.
15. Assume contract aircraft would engage in LTO cycles, and touch and go or low-approach activities only in the vicinity of the airfield.
16. Assume an additional 5 percent of on-airfield sorties would include multiple patterns for contractor proficiency.
17. It is unknown what contractor requirements would be for trim tests; thus, ACAM defaults will be assumed based on surrogate aircraft and engine type.
18. Assume all new CCAS personnel (pilots and maintenance staff) would live off-base and commute to the base 5 days per week. ACAM defaults will be used for commute distances.
19. Chaff and flares would not be used in any of the areas of the SUAs considered. Only training munitions used would be considered.
20. For CCAS, one emission scenario was modeled with 11 aircraft/engine types.
21. CCAS training/mission time in the SUA is estimated as 180 minutes. Time spent at or below 3,000 ft is estimated to be approximately 27 minutes in the SUA (see Table D-2).
22. ACAM does not have separate inputs for time spent within SUAs. To represent the time spent at or below 3,000 ft, the estimated training time in minutes was assigned to Climb out/Intermediate power mode within the ACAM LTO input fields. No time was assigned to any other power modes, but default ACAM output also lists trim tests and touch and goes; however, all inputs for these fields were set to zero for time spent within the special use airspace (**Table D-2**).
23. Assume the time spent below 3,000 ft AGL would be the same for all sorties.
24. No changes to baseline aircraft air operations (sorties) at the proposed civilian airports due to CCAS and no changes to transient and civilian air operations due to CCAS.
25. For CCAS, it is assumed that a cargo vehicle, such as a van or large pickup truck, will transport training munitions between VGT and ØL7. Emissions from the operation of the cargo vehicle is included in the air quality analysis.

Table D-8 below shows the data and assumptions used as input to ACAM for flight operations.

Table D-8
Air Conformity Applicability Model Data Inputs and Assumptions for CCAS

Location	Type of Operation	Number of Sorties per Year	Ground Operation Emission Sources
VGT	LTO Cycles	1,350[a,d]	Auxiliary power unit equipment, AGE, personal vehicle use, aircraft maintenance (solvent use), fuel handling and storage, aircraft trim tests (12 per aircraft)
	TGO Cycles	203[b,d]	
ØL7	LTO Cycles	1,350[a,d]	Auxiliary power unit equipment, AGE, aircraft trim tests (12 per aircraft)
R-2502A/E	Sorties @ ≤3,000 ft AGL	960[c,e]	Not Applicable
R-2502N	Sorties @ ≤3,000 ft AGL	195[c,e]	Not Applicable
R-4806E/W	Sorties @ ≤3,000 ft AGL	195[c,e]	Not Applicable

Notes:
[a] Air quality impacts are assessed for the airport airfield and SUA based on the total annual sorties from the selected airfield.
[b] 5 percent of total sorties flying to SUA are for contractor proficiency training. Each of those 5 percent sorties is assumed to include three TGO/low approaches.
[c] Impacts include training munitions use at and below 3,000 ft.
[d] All sorties are low-altitude operations (≤3,000 ft AGL) and would spend the estimated time per sortie in the mixing layer.
[e.] Estimated time per sortie spent at or below 3,000 ft altitude for all CCAS airspace is 27 minutes each.
AGE = aerospace ground equipment; AGL= above ground level; ft = foot(feet); CCAS = contracted close air support; LTO = Landing and Takeoff; ØL7 = Jean Airport; R- = Restricted Area; TGO = Touch and Go; SUA = special use airspace; VGT = North Las Vegas Airport

D.2.1.3 Significance Indicators and Evaluation Criteria

The Clean Air Act Section 176(c), *General Conformity*, requires federal agencies to demonstrate that their proposed activities would conform to the applicable State Implementation Plan for attainment of the NAAQS. General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases. The Council on Environmental Quality defines significance in terms of context and intensity in 40 CFR § 1508.27. This requires that the significance of the action be analyzed with respect to the setting of the Proposed Action and based relative to the severity of the impact. The Council on Environmental Quality National Environmental Policy Act regulations (40 CFR § 1508.27[b]) provide 10 key factors to consider in determining an impact’s intensity.

Based on guidance in Chapter 4 of the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide*, *Volume II - Advanced Assessments*, for air quality impact analysis, project criteria pollutant emissions were compared against the insignificance indicator of 250 tons per year for Prevention of Significant Deterioration (PSD) major source permitting threshold for actions occurring in areas that are in attainment for all criteria pollutants (25 tons per year for lead). These “Insignificance Indicators” were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the NAAQSs. These insignificance indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. Although PSD and Title V are not applicable to mobile sources, the PSD major source thresholds provide a benchmark to compare air emissions against and to determine project impacts.

For proposed action alternatives that would occur in nonattainment/maintenance areas, the net-change emissions estimated for the relevant criteria pollutant(s) are compared against General Conformity *de minimis* values to perform a General Conformity evaluation. If the estimated annual net emissions for each relevant pollutant from the Proposed Action alternative are below the corresponding *de minimis* threshold values, General Conformity Rule requirements would not be applicable.

Emissions from the Proposed Action in the vicinity of the airports and the SUA were assessed in **Section 3.5** and compared to applicable significance indicators. An overview of ACAM inputs and the methodologies used to estimate emissions are summarized in **Sections D.2.1.1** and **D.2.1.2** of this appendix.

D.2.1.4 References

USEPA. 2010. *40 CFR Parts 51 and 93, Revisions to the General Conformity Regulations*. 75 Federal Register 14283, EPA-HQ-OAR-2006-0669; FRL-9131-7. 24 March.

USEPA. 2017. *General Conformity: De Minimis Tables*. <https://www.epa.gov/general-conformity/de-minimis-tables>. 04 August.

D.2.2 Contracted Close Air Support Modeling

Sample: Detailed Air Conformity Applicability Model (ACAM) Report VGT/ØL7 Airfields- CCAS: Rockwell OV-10

1. General Information

- Action Location
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

- Action Title: Nellis AFB Contracted Close Air Support (CCAS)

- Project Number/s (if applicable): N/A

- Projected Action Start Date: 1 / 2022

- Action Purpose and Need:
Currently, the Air Force cannot self-generate the required amount of aircraft support to meet JTAC Qualification Course (JTACQC) production requirements, reduce current backlogs, or meet staffing requirements in operational units. This proposed action will address this shortfall. The purpose of the CCAS Proposed Action is to provide dedicated CCAS sorties from a civil airport to provide sustained JTACQC for 6th Combat Training Squadron (6 CTS) students. Dedicated CCAS would allow JTACQC support to Nellis AFB and improve and expand training to meet production requirements and support unit readiness.

- Action Description:
The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

- Point of Contact
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

- Activity List:

Activity Type		Activity Title
2.	Aircraft	VGT Airfield - CCAS: Rockwell OV-10
3.	Aircraft	Jean Airfield - CCAS Rockwell OV-10
4.	Personnel	VGT Airfield - CCAS Rockwell OV-10
5.	Tanks	VGT Airfield - CCAS: Rockwell OV-10 Fuel Storage & Refueling

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Aircraft

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Clark
Regulatory Area(s): Clark Co, NV; Las Vegas, NV; Las Vegas, NV; Las Vegas, NV

- Activity Title: VGT Airfield - CCAS: Rockwell OV-10

- Activity Description:
Aircraft/Engine Configuration: Rockwell OV-10 (T76-G-12A engine)
Includes AGE and TGOs (203 approx)

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	66.802406
SO_x	16.765781
NO_x	630.970807
CO	192.627298
PM 10	16.838587

Pollutant	Total Emissions (TONs)
PM 2.5	16.113654
Pb	0.000000
NH_3	0.000000
CO_2e	31765.6

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Total Emissions (TONs)
VOC	20.998396
SO_x	4.196665
NO_x	31.981540
CO	72.899797
PM 10	1.802651

Pollutant	Total Emissions (TONs)
PM 2.5	1.622386
Pb	0.000000
NH_3	0.000000
CO_2e	12684.1

- Activity Emissions [Aerospace Ground Equipment (AGE) part]:

Pollutant	Total Emissions (TONs)
VOC	45.804010
SO_x	12.569115
NO_x	598.989267
CO	119.727501
PM 10	15.035936

Pollutant	Total Emissions (TONs)
PM 2.5	14.491268
Pb	0.000000
NH_3	0.000000
CO_2e	19081.5

2.2 Aircraft & Engines

2.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: OV-10A
Engine Model: T76-G-12A
Primary Function: General - Turboprop
Aircraft has After burn: No
Number of Engines: 2
- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

2.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	397.00	8.51	1.07	7.40	23.80	0.38	0.34	3234
Approach	476.00	0.92	1.07	8.50	17.20	0.50	0.45	3234
Intermediate	794.00	0.12	1.07	9.90	5.90	0.63	0.57	3234
Military	857.00	0.12	1.07	10.30	2.30	0.71	0.64	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

2.3 Flight Operations

2.3.1 Flight Operations Assumptions

- Flight Operations
Number of Aircraft: 6
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1350
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 203
Number of Annual Trim Test(s) per Aircraft: 12

- Default Settings Used: Yes

- Flight Operations TIMs (Time In Mode)
Taxi/Idle Out [Idle] (mins): 19 (default)
Takeoff [Military] (mins): 0.5 (default)
Takeoff [After Burn] (mins): 0 (default)
Climb Out [Intermediate] (mins): 2.5 (default)
Approach [Approach] (mins): 4.5 (default)
Taxi/Idle In [Idle] (mins): 7 (default)

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test
Idle (mins): 12 (default)
Approach (mins): 27 (default)
Intermediate (mins): 9 (default)
Military (mins): 12 (default)
AfterBurn (mins): 0 (default)

2.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

AE_{LTO} = AEM_{IDLE_IN} + AEM_{IDLE_OUT} + $AEM_{APPROACH}$ + $AEM_{CLIMBOUT}$ + $AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

AE_{TGO} = $AEM_{APPROACH}$ + $AEM_{CLIMBOUT}$ + $AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft

NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year
$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

2.4 Auxiliary Power Unit (APU)

2.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

2.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

2.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year
$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

2.5 Aerospace Ground Equipment (AGE)

2.5.1 Aerospace Ground Equipment (AGE) Assumptions

- Default Settings Used: Yes

- AGE Usage
Number of Annual LTO (Landing and Take-off) cycles for AGE: 1350

- Aerospace Ground Equipment (AGE) (default)

Total Number of AGE	Operation Hours for Each LTO	Exempt Source?	AGE Type	Designation
1	10	No	Air Compressor	MC-1A - 18.4hp
1	1	No	Air Conditioner	MA-3D - 120hp
1	11	No	Generator Set	A/M32A-86D
1	1	No	Heater	H1
1	3	No	Hydraulic Test Stand	MJ-2A
1	10	No	Light Cart	NF-2
1	0.25	No	Start Cart	A/M32A-60A

2.5.2 Aerospace Ground Equipment (AGE) Emission Factor(s)

- Aerospace Ground Equipment (AGE) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
MC-1A - 18.4hp	1.1	0.267	0.008	0.419	0.267	0.071	0.068	24.8
MA-3D - 120hp	7.1	0.053	0.050	4.167	0.317	0.109	0.105	161.7
A/M32A-86D	6.5	0.294	0.046	6.102	0.457	0.091	0.089	147.0
H1	0.4	0.100	0.011	0.160	0.180	0.006	0.006	8.9
MJ-2A	0.0	0.190	0.238	3.850	2.460	0.083	0.076	172.0
NF-2	0.0	0.010	0.043	0.110	0.080	0.010	0.010	22.1
A/M32A-60A	0.0	0.270	0.306	1.820	5.480	0.211	0.205	221.1

2.5.3 Aerospace Ground Equipment (AGE) Formula(s)

- Aerospace Ground Equipment (AGE) Emissions per Year

$AGE_{POL} = AGE * OH * LTO * EF_{POL} / 2000$

AGE_{POL}: Aerospace Ground Equipment (AGE) Emissions per Pollutant (TONs)
AGE: Total Number of Aerospace Ground Equipment
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

3. Aircraft

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Clark
Regulatory Area(s): Clark Co, NV; Las Vegas, NV; Las Vegas, NV; Las Vegas, NV

- Activity Title: Jean Airfield - CCAS Rockwell OV-10

- Activity Description:
Aircraft/Engine Configuration; Rockwell OV-10 (T76-G-12A engine)
Include AGE but not TGOs as it is a stopping point for weapons loading only.

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	66.726342	PM 2.5	16.033699
SO_x	16.600864	Pb	0.000000
NO_x	629.540603	NH_3	0.000000
CO	190.951214	CO_2e	31267.2
PM 10	16.749748		

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	20.922332	PM 2.5	1.542431
SO_x	4.031749	Pb	0.000000
NO_x	30.551336	NH_3	0.000000
CO	71.223713	CO_2e	12185.7
PM 10	1.713812		

- Activity Emissions [Aerospace Ground Equipment (AGE) part]:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	45.804010	PM 2.5	14.491268
SO_x	12.569115	Pb	0.000000
NO_x	598.989267	NH_3	0.000000
CO	119.727501	CO_2e	19081.5
PM 10	15.035936		

3.2 Aircraft & Engines

3.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: OV-10A
Engine Model: T76-G-12A
Primary Function: General - Turboprop
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

3.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	397.00	8.51	1.07	7.40	23.80	0.38	0.34	3234
Approach	476.00	0.92	1.07	8.50	17.20	0.50	0.45	3234
Intermediate	794.00	0.12	1.07	9.90	5.90	0.63	0.57	3234
Military	857.00	0.12	1.07	10.30	2.30	0.71	0.64	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

3.3 Flight Operations

3.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 6
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1350
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 12

- Default Settings Used: Yes

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 19 (default)
Takeoff [Military] (mins): 0.5 (default)
Takeoff [After Burn] (mins): 0 (default)
Climb Out [Intermediate] (mins): 2.5 (default)
Approach [Approach] (mins): 4.5 (default)
Taxi/Idle In [Idle] (mins): 7 (default)

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins): 12 (default)
Approach (mins): 27 (default)
Intermediate (mins): 9 (default)
Military (mins): 12 (default)
AfterBurn (mins): 0 (default)

3.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines

LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

3.4 Auxiliary Power Unit (APU)

3.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

3.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

3.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

3.5 Aerospace Ground Equipment (AGE)

3.5.1 Aerospace Ground Equipment (AGE) Assumptions

- Default Settings Used: Yes

- AGE Usage
Number of Annual LTO (Landing and Take-off) cycles for AGE: 1350

- Aerospace Ground Equipment (AGE) (default)

Total Number of AGE	Operation Hours for Each LTO	Exempt Source?	AGE Type	Designation
1	10	No	Air Compressor	MC-1A - 18.4hp
1	1	No	Air Conditioner	MA-3D - 120hp
1	11	No	Generator Set	A/M32A-86D
1	1	No	Heater	H1
1	3	No	Hydraulic Test Stand	MJ-2A
1	10	No	Light Cart	NF-2
1	0.25	No	Start Cart	A/M32A-60A

3.5.2 Aerospace Ground Equipment (AGE) Emission Factor(s)

- Aerospace Ground Equipment (AGE) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
MC-1A - 18.4hp	1.1	0.267	0.008	0.419	0.267	0.071	0.068	24.8
MA-3D - 120hp	7.1	0.053	0.050	4.167	0.317	0.109	0.105	161.7
A/M32A-86D	6.5	0.294	0.046	6.102	0.457	0.091	0.089	147.0
H1	0.4	0.100	0.011	0.160	0.180	0.006	0.006	8.9
MJ-2A	0.0	0.190	0.238	3.850	2.460	0.083	0.076	172.0
NF-2	0.0	0.010	0.043	0.110	0.080	0.010	0.010	22.1
A/M32A-60A	0.0	0.270	0.306	1.820	5.480	0.211	0.205	221.1

3.5.3 Aerospace Ground Equipment (AGE) Formula(s)

- Aerospace Ground Equipment (AGE) Emissions per Year
AGE_{POL} = AGE * OH * LTO * EF_{POL} / 2000

AGE_{POL}: Aerospace Ground Equipment (AGE) Emissions per Pollutant (TONs)
AGE: Total Number of Aerospace Ground Equipment
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

4. Personnel

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Clark
Regulatory Area(s): Clark Co, NV; Las Vegas, NV; Las Vegas, NV; Las Vegas, NV

- Activity Title: VGT Airfield - CCAS Rockwell OV-10

- Activity Description:
Personnel: Support Contractor (25 persons)

- Activity Start Date
Start Month: 1
Start Year: 2022
- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.539809
SO_x	0.003764
NO_x	0.475107
CO	5.872710
PM 10	0.012305

Pollutant	Total Emissions (TONs)
PM 2.5	0.010791
Pb	0.000000
NH_3	0.034597
CO_2e	562.4

4.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel: 0
Civilian Personnel: 0
Support Contractor Personnel: 25
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule

Active Duty Personnel: 5 Days Per Week (default)
Civilian Personnel: 5 Days Per Week (default)
Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

4.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

4.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.217	003.152	000.007	000.006		000.023	00333.001
LDGT	000.353	000.003	000.387	004.397	000.009	000.008		000.024	00429.124
HDGV	000.778	000.005	001.126	016.414	000.020	000.018		000.045	00792.406
LDDV	000.104	000.003	000.137	002.597	000.004	000.004		000.008	00323.890
LDDT	000.248	000.004	000.397	004.475	000.007	000.006		000.008	00459.539
HDDV	000.483	000.013	005.163	001.750	000.175	000.161		000.028	01528.139
MC	003.015	000.003	000.828	013.258	000.027	000.023		000.053	00395.795

4.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel

WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year
$VMT_{Total} = VMT_{AD} + VMT_{C} + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_{C}: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year
$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5. Tanks

5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Clark
Regulatory Area(s): Clark Co, NV; Las Vegas, NV; Las Vegas, NV; Las Vegas, NV

- Activity Title: VGT Airfield - CCAS: Rockwell OV-10 Fuel Storage & Refueling

- Activity Description:
AVGAS Storage & Refueling

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	67.526794	PM 2.5	0.000000
SO_x	0.000000	Pb	0.000000
NO_x	0.000000	NH_3	0.000000
CO	0.000000	CO_2e	0.0
PM 10	0.000000		

5.2 Tanks Assumptions

- Chemical

Chemical Name:	Gasoline (RVP 7)
Chemical Category:	Petroleum Distillates
Chemical Density:	5.6
Vapor Molecular Weight (lb/lb-mole):	68
Stock Vapor Density (lb/ft^3):	0.0394277661309437
Vapor Pressure:	3.2
Vapor Space Expansion Factor (dimensionless):	0.068

- Tank

Type of Tank:	Vertical Tank
Tank Height (ft):	24
Tank Diameter (ft):	12
Annual Net Throughput (gallon/year):	327797

5.3 Tank Formula(s)

- Vapor Space Volume

VSV = (PI / 4) * D^2 * H / 2

VSV: Vapor Space Volume (ft^3)
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)
2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

VVSF = 1 / (1 + (0.053 * VP * H / 2))

VVSF: Vented Vapor Saturation Factor (dimensionless)
0.053: Constant
VP: Vapor Pressure (psia)
H: Tank Height (ft)

- Standing Storage Loss per Year

SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000

SSL_{VOC}: Standing Storage Loss Emissions (TONs)
365: Number of Daily Events in a Year (Constant)
VSV: Vapor Space Volume (ft^3)
SVD: Stock Vapor Density (lb/ft^3)
VSEF: Vapor Space Expansion Factor (dimensionless)
VVSF: Vented Vapor Saturation Factor (dimensionless)
2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

NT = (7.48 * ANT) / ((PI / 4.0) * D * H)

NT: Number of Turnovers per Year
7.48: Constant
ANT: Annual Net Throughput
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)

- Working Loss Turnover (Saturation) Factor per Year

WLSF = (18 + NT) / (6 * NT)

WLSF: Working Loss Turnover (Saturation) Factor per Year
18: Constant
NT: Number of Turnovers per Year
6: Constant

- Working Loss per Year

WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000

0.0010: Constant
VMW: Vapor Molecular Weight (lb/lb-mole)
VP: Vapor Pressure (psia)
ANT: Annual Net Throughput
WLSF: Working Loss Turnover (Saturation) Factor
2000: Conversion Factor pounds to tons

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis – VGT/ØL7 Airfields - Aero L-39 Albatros

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Aero Vodochody L-59

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.457		
NOx	4.672		
CO	26.990	100	No
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Las Vegas, NV			
VOC	8.457	100	No
NOx	4.672	100	No
CO	26.990		
SOx	0.577		
PM 10	3.421		
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		
Clark Co, NV			
VOC	8.457		
NOx	4.672		
CO	26.990		
SOx	0.577		
PM 10	3.421	100	No
PM 2.5	3.409		
Pb	0.000		
NH3	0.003		
CO2e	1665.1		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields- BAC 167

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Radhika
Title: Environmental Scientist
Organization: Versar
Email:
Phone Number:

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	8.952		
NOx	2.389		
CO	51.696	100	No
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Las Vegas, NV			
VOC	8.952	100	No
NOx	2.389	100	No
CO	51.696		
SOx	0.628		
PM 10	0.452		
PM 2.5	0.419		
Pb	0.000		
NH3	0.003		
CO2e	1885.9		
Clark Co, NV			
VOC	16.091		
NOx	4.674		
CO	101.253		
SOx	1.230		
PM 10	0.895	100	No
PM 2.5	0.830		
Pb	0.000		
NH3	0.003		
CO2e	3638.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Radhika

____ ___07/14/2021____

Radhika Narayanan, Environmental Scientist DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Brasov IAR-823

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.834		
NOx	3.371		
CO	4.833	100	No
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Las Vegas, NV			
VOC	4.834	100	No
NOx	3.371	100	No
CO	4.833		
SOx	0.242		
PM 10	0.401		
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		
Clark Co, NV			
VOC	4.834		
NOx	3.371		
CO	4.833		
SOx	0.242		
PM 10	0.401	100	No
PM 2.5	0.386		
Pb	0.000		
NH3	0.003		
CO2e	651.1		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Cessna 337

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Radhika
Title: Environmental Scientist
Organization: Versar
Email:
Phone Number:

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	4.650		
NOx	6.989		
CO	19.606	100	No
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Las Vegas, NV			
VOC	4.650	100	No
NOx	6.989	100	No
CO	19.606		
SOx	0.499		
PM 10	1.488		
PM 2.5	1.389		
Pb	0.000		
NH3	0.003		
CO2e	470.8		
Clark Co, NV			
VOC	8.314		
NOx	13.925		
CO	37.541		
SOx	0.997		
PM 10	2.926	100	No
PM 2.5	2.732		
Pb	0.000		
NH3	0.003		
CO2e	881.6		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Radhika

____ ___07/14/2021____

Radhika Narayanan, Environmental Scientist DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Douglas A-4 Skyhawk

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Radhika
Title: Environmental Scientist
Organization: Versar
Email:
Phone Number:

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	16.556		
NOx	9.864		
CO	32.283	100	No
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Las Vegas, NV			
VOC	16.556	100	No
NOx	9.864	100	No
CO	32.283		
SOx	1.265		
PM 10	0.838		
PM 2.5	0.803		
Pb	0.000		
NH3	0.003		
CO2e	2784.3		
Clark Co, NV			
VOC	21.137		
NOx	19.548		
CO	63.571		
SOx	2.505		
PM 10	1.671	100	No
PM 2.5	1.601		
Pb	0.000		
NH3	0.003		
CO2e	5439.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Radhika

____ ___07/14/2021____

Radhika Narayanan, Environmental Scientist DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Embraer A-27

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri
____ ____07/14/2021___
Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Embraer A-29

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Pilatus PC-9

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

____ ____07/14/2021___
Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Rockwell OV

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: __X__ applicable
_____ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
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CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
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SOx	3.337		
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PM 2.5	3.216		
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NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
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Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
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Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	20.160		
NOx	126.099		
CO	38.945	100	No
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Las Vegas, NV			
VOC	20.160	100	No
NOx	126.099	100	Yes
CO	38.945		
SOx	3.337		
PM 10	3.360		
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		
Clark Co, NV			
VOC	20.160		
NOx	126.099		
CO	38.945		
SOx	3.337		
PM 10	3.360	100	No
PM 2.5	3.216		
Pb	0.000		
NH3	0.003		
CO2e	6359.5		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

Some estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are applicable.

Rahul Chettri, Contractor — 07/14/2021 DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Valmet

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Las Vegas, NV; Clark Co, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022			
Pollutant	**Action Emissions (ton/yr)**	**GENERAL CONFORMITY**	
		Threshold (ton/yr)	**Exceedance (Yes or No)**
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	3.321		
NOx	11.383		
CO	14.947	100	No
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Las Vegas, NV			
VOC	3.321	100	No
NOx	11.383	100	No
CO	14.947		
SOx	0.520		
PM 10	1.235		
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		
Clark Co, NV			
VOC	3.321		
NOx	11.383		
CO	14.947		
SOx	0.520		
PM 10	1.235	100	No
PM 2.5	0.877		
Pb	0.000		
NH3	0.003		
CO2e	1039.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - VGT/ØL7 Airfields - Ground Transport of Armaments

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB CCAS: Munitions Transport

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The CCAS aircraft will take off from North Las Vegas Airport and land at the nearby Jean Airport. A vehicle (truck or cargo van) will transport the armaments from North Las Vegas Airport to Jean Airport, where the aircraft will be armed. The aircraft will fly to the SUA for training, while the vehicle will return to North Las Vegas Airport. Once the aircraft complete their training, they will return to Jean Airport for de-arming. The vehicle will travel back from North Las Vegas Airport to Jean to load up unused ammunition and other gear and return to North Las Vegas Airport. The aircraft will depart Jean and return to North Las Vegas Airport.

This analysis ONLY addresses the activity involving transport of the armaments (primarily bullets and BDU-33s) between the two airports. The aircraft operations, ground support equipment, refueling, etc. are analyzed in a separate ACAM assessment. This is because AFCEC recommended modifying the Fleet Mix to account for Heavy-Duty Gasoline or Diesel Vehicles (HDGV/HDDV) that will be "commuting" between North Las Vegas Airport to Jean Airport and back. Modifying the fleet mix will apply across the board and will affect true commuter trip emissions. Moreover, the typical commuter roundtrip distance is much lower than the roundtrip distance these cargo vehicles will be traveling.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar, Inc.
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.013		
NOx	0.012		
CO	0.142		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013	100	No
NOx	0.012	100	No
CO	0.142		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		
Las Vegas, NV			
VOC	0.013		
NOx	0.012		
CO	0.142	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.001		
CO2e	13.6		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor ____07/14/2021___ DATE

Sample: Detailed Air Conformity Applicability Model (ACAM) Report
NTTR SUA - CCAS: Rockwell OV-10

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor — 07/14/2021 DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Aero L-39 Albatros

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:

Name:	Rahul Chettri
Title:	Contractor
Organization:	Versar
Email:	rchettri@versar.com
Phone Number:	(757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Aero Vodochody L-59

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.039		
NOx	1.398		
CO	0.624		
SOx	0.180		
PM 10	0.826	100	No
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039	100	No
NOx	1.398	100	No
CO	0.624		
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		
Las Vegas, NV			
VOC	0.039		
NOx	1.398		
CO	0.624	100	No
SOx	0.180		
PM 10	0.826		
PM 2.5	0.826		
Pb	0.000		
NH3	0.000		
CO2e	542.9		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri (signature) ____________________ 07/14/2021

Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - BAC 167

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.312		
NOx	0.564		
CO	10.259		
SOx	0.224		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312	100	No
NOx	0.564	100	No
CO	10.259		
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		
Las Vegas, NV			
VOC	0.312		
NOx	0.564		
CO	10.259	100	No
SOx	0.224		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	675.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Brasov IAR-823

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.123		
CO	0.021		
SOx	0.019		
PM 10	0.004	100	No
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.123	100	No
CO	0.021		
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		
Las Vegas, NV			
VOC	0.000		
NOx	0.123		
CO	0.021	100	No
SOx	0.019		
PM 10	0.004		
PM 2.5	0.004		
Pb	0.000		
NH3	0.000		
CO2e	56.8		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Cessna 337

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.061		
NOx	0.020		
CO	2.985		
SOx	0.003		
PM 10	0.123	100	No
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061	100	No
NOx	0.020	100	No
CO	2.985		
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		
Las Vegas, NV			
VOC	0.061		
NOx	0.020		
CO	2.985	100	No
SOx	0.003		
PM 10	0.123		
PM 2.5	0.111		
Pb	0.000		
NH3	0.000		
CO2e	9.9		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021

DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Douglas A-4 Skyhawk

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.046		
NOx	1.040		
CO	2.309		
SOx	0.153		
PM 10	0.026	100	No
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046	100	No
NOx	1.040	100	No
CO	2.309		
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		
Las Vegas, NV			
VOC	0.046		
NOx	1.040		
CO	2.309	100	No
SOx	0.153		
PM 10	0.026		
PM 2.5	0.023		
Pb	0.000		
NH3	0.000		
CO2e	462.6		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Embraer A-27

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Embraer A-29

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

____ ____07/14/2021___

Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA - Pilatus PC-9

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis – NTTR SUA - Rockwell OV

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.008		
NOx	0.690		
CO	0.411		
SOx	0.075		
PM 10	0.044	100	No
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008	100	No
NOx	0.690	100	No
CO	0.411		
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		
Las Vegas, NV			
VOC	0.008		
NOx	0.690		
CO	0.411	100	No
SOx	0.075		
PM 10	0.044		
PM 2.5	0.040		
Pb	0.000		
NH3	0.000		
CO2e	225.3		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor   07/14/2021
                                             DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - NTTR SUA – Valmet

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: Nevada
County(s): Clark; Lincoln; Nye
Regulatory Area(s): Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.014		
NOx	0.093		
CO	0.215		
SOx	0.021		
PM 10	0.066	100	No
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014	100	No
NOx	0.093	100	No
CO	0.215		
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		
Las Vegas, NV			
VOC	0.014		
NOx	0.093		
CO	0.215	100	No
SOx	0.021		
PM 10	0.066		
PM 2.5	0.014		
Pb	0.000		
NH3	0.000		
CO2e	63.7		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

____ ____07/14/2021___
Rahul Chettri, Contractor DATE

Sample: Detailed Air Conformity Applicability Model (ACAM) Report
Ft. Irwin SUA - CCAS - Rockwell OV-10

1. General Information

- Action Location
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

- Action Title: Nellis AFB Contracted Close Air Support (CCAS)

- Project Number/s (if applicable): N/A

- Projected Action Start Date: 1 / 2022

- Action Purpose and Need:
Currently, the Air Force cannot self-generate the required amount of aircraft support to meet JTAC Qualification Course (JTACQC) production requirements, reduce current backlogs, or meet staffing requirements in operational units. This proposed action will address this shortfall. The purpose of the CCAS Proposed Action is to provide dedicated CCAS sorties from a civil airport to provide sustained JTACQC for 6th Combat Training Squadron (6 CTS) students. Dedicated CCAS would allow JTACQC support to Nellis AFB and improve and expand training to meet production requirements and support unit readiness.

- Action Description:
The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

- Point of Contact
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

- Activity List:

Activity Type		Activity Title
2.	Aircraft	Jean Airspace - CCAS: Rockwell OV-10
3.	Aircraft	Jean Airspace - CCAS: Rockwell OV-10

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Aircraft

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: San Bernardino
Regulatory Area(s): San Bernardino Co, CA

- Activity Title: Jean Airspace - CCAS: Rockwell OV-10

- Activity Description:
Aircraft/Engine Configuration: Rockwell OV-10 (T76-G-12A engine)
R-2502A/E: 960 Annual Operations

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	0.394459	PM 2.5	1.944855
SO_x	3.670186	Pb	0.000000
NO_x	33.957792	NH_3	0.000000
CO	20.237472	CO_2e	11092.9
PM 10	2.160950		

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Total Emissions (TONs)	Pollutant	Total Emissions (TONs)
VOC	0.394459	PM 2.5	1.944855
SO_x	3.670186	Pb	0.000000
NO_x	33.957792	NH_3	0.000000
CO	20.237472	CO_2e	11092.9
PM 10	2.160950		

2.2 Aircraft & Engines

2.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: OV-10A
Engine Model: T76-G-12A
Primary Function: General - Turboprop
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

2.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	397.00	8.51	1.07	7.40	23.80	0.38	0.34	3234
Approach	476.00	0.92	1.07	8.50	17.20	0.50	0.45	3234
Intermediate	794.00	0.12	1.07	9.90	5.90	0.63	0.57	3234
Military	857.00	0.12	1.07	10.30	2.30	0.71	0.64	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

2.3 Flight Operations

2.3.1 Flight Operations Assumptions

- Flight Operations
Number of Aircraft: 6
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 960
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)
Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military] (mins): 0
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 27
Approach [Approach] (mins): 0
Taxi/Idle In [Idle] (mins): 0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test
Idle (mins): 0
Approach (mins): 0
Intermediate (mins): 0
Military (mins): 0
AfterBurn (mins): 0

2.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year
AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year
$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year
$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year
$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year
$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year
$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

2.4 Auxiliary Power Unit (APU)

2.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: No

- Auxiliary Power Unit (APU)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

2.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

2.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year
$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

3. Aircraft

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: San Bernardino
Regulatory Area(s): San Bernardino Co, CA

- Activity Title: Jean Airspace - CCAS: Rockwell OV-10

- Activity Description:
Aircraft/Engine Configuration; Rockwell OV-10 (T76-G-12A engine)
R-2502N: 195 Annual Operations

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2031

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.080125
SO_x	0.745506
NO_x	6.897677
CO	4.110737
PM 10	0.438943

Pollutant	Total Emissions (TONs)
PM 2.5	0.395049
Pb	0.000000
NH_3	0.000000
CO_2e	2253.2

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Total Emissions (TONs)
VOC	0.080125
SO_x	0.745506
NO_x	6.897677
CO	4.110737
PM 10	0.438943

Pollutant	Total Emissions (TONs)
PM 2.5	0.395049
Pb	0.000000
NH_3	0.000000
CO_2e	2253.2

3.2 Aircraft & Engines

3.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: OV-10A
Engine Model: T76-G-12A
Primary Function: General - Turboprop
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

3.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	397.00	8.51	1.07	7.40	23.80	0.38	0.34	3234
Approach	476.00	0.92	1.07	8.50	17.20	0.50	0.45	3234
Intermediate	794.00	0.12	1.07	9.90	5.90	0.63	0.57	3234
Military	857.00	0.12	1.07	10.30	2.30	0.71	0.64	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

3.3 Flight Operations

3.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft:	6
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft:	195
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft:	0
Number of Annual Trim Test(s) per Aircraft:	0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins):	0
Takeoff [Military] (mins):	0
Takeoff [After Burn] (mins):	0
Climb Out [Intermediate] (mins):	27
Approach [Approach] (mins):	0
Taxi/Idle In [Idle] (mins):	0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	0
Approach (mins):	0
Intermediate (mins):	0
Military (mins):	0
AfterBurn (mins):	0

3.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year
AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year
$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year
$AEPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year
$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

3.4 Auxiliary Power Unit (APU)

3.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: No

- Auxiliary Power Unit (APU)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

3.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

3.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year
$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Aero L-39 Albatros

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

____ ____07/14/2021___

Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Aero Vodochody L-59

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.229		
NOx	8.282		
CO	3.699		
SOx	1.064		
PM 10	4.892	100	No
PM 2.5	4.892		
Pb	0.000		
NH3	0.000		
CO2e	3215.5		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri ______________________________ ____07/14/2021___

Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - BAC 167

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	1.850		
NOx	3.341		
CO	60.762		
SOx	1.324		
PM 10	0.025	100	No
PM 2.5	0.022		
Pb	0.000		
NH3	0.000		
CO2e	4002.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri
Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Brasov IAR-823

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.728		
CO	0.125		
SOx	0.111		
PM 10	0.026	100	No
PM 2.5	0.024		
Pb	0.000		
NH3	0.000		
CO2e	336.2		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor — 07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Cessna 337

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.364		
NOx	0.120		
CO	17.682		
SOx	0.019		
PM 10	0.728	100	No
PM 2.5	0.655		
Pb	0.000		
NH3	0.000		
CO2e	58.8		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri (signature)

Rahul Chettri, Contractor — 07/14/2021 DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Douglas A-4 Skyhawk

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.271		
NOx	6.159		
CO	13.674		
SOx	0.906		
PM 10	0.152	100	No
PM 2.5	0.136		
Pb	0.000		
NH3	0.000		
CO2e	2739.8		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor — 07/14/2021 DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Embraer A-27

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri, Contractor — 07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Embraer A-29

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri

Rahul Chettri, Contractor

07/14/2021
DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Pilatus PC-9

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri (signature)

Rahul Chettri, Contractor — 07/14/2021 DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA - Rockwell OV

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.047		
NOx	4.086		
CO	2.435		
SOx	0.442		
PM 10	0.260	100	No
PM 2.5	0.234		
Pb	0.000		
NH3	0.000		
CO2e	1334.6		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

_______________________________________ ____07/14/2021___
Rahul Chettri, Contractor DATE

Air Conformity Applicability Model - Record of Conformity Analysis (ROCA) CCAS Nellis - Ft. Irwin SUA – Valmet

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: NELLIS AFB
State: California
County(s): San Bernardino
Regulatory Area(s): San Bernardino Co, CA

b. Action Title: Nellis AFB Contracted Close Air Support (CCAS)

c. Project Number/s (if applicable): N/A

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to provide dedicated CCAS training for 6 CTS JTAC students at Nellis AFB to enhance professional expertise and optimize training opportunities and efficiencies in order to meet combatant commander deployment requirements. CCAS training scenarios would include the use of inert training ordnance used on existing and approved targets following published delivery profiles and safety footprints. The Proposed Action includes elements affecting civil airports proposed for use and military training Special Use Airspace (SUA). The elements affecting the airports proposed for use include CCAS aircraft, facilities, maintenance, personnel, and sorties. The elements affecting the SUA include SUA use and use of inert training ordnance.

f. Point of Contact:
Name: Rahul Chettri
Title: Contractor
Organization: Versar
Email: rchettri@versar.com
Phone Number: (757) 557-0810

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2031

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.083		
NOx	0.552		
CO	1.273		
SOx	0.125		
PM 10	0.390	100	No
PM 2.5	0.082		
Pb	0.000		
NH3	0.000		
CO2e	377.4		

2032 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
San Bernardino Co, CA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

Rahul Chettri (signature)
Rahul Chettri, Contractor

07/14/2021
DATE

APPENDIX E
LIST OF PREPARERS AND CONTRIBUTORS

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LIST OF PREPARERS AND CONTRIBUTORS

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APPENDIX F
GLOSSARY OF TERMS

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7.62-Millimeter Ammunition: The ball cartridge rounds consist of a gilding metal jacket with a lead antimony slug. Tracer cartridges are similar to ball ammunition and also contain a small pyrotechnic charge in the base that is ignited when fired from the weapon. This allows the shooter to observe the trajectory of the round, correct their aim, and confirm projectile impacts. Tracer ammunition is typically loaded every fifth round with ball ammunition.

.50-Caliber Ammunition: The ball cartridge consists of a soft steel-core projectile used for training and against personnel and soft targets. Tracer cartridges are like ball ammunition but contain a small pyrotechnic charge that glows brightly when fired that makes the projectile visible to aid in aiming and has an incendiary effect on targets. Tracer ammunition is typically loaded every fifth round with ball ammunition.

Above Ground Level (AGL): Altitude expressed in feet (ft) measured above the surface of the ground. Altitudes are referred to as mean sea level (MSL) when flying above water; while flying over land, both MSL and AGL are used to delineate airspace structure.

Aerospace Ground Equipment (AGE): Support equipment required for aircraft maintenance and sortie generation and is composed of equipment such as generators, air compressors, portable light sources, tow bars, and mobile liquid oxygen and nitrogen sources.

Air-to-Ground Training: Air-to-ground training employs all the techniques and maneuvers associated with weapons use and includes low- and high-altitude tactics, navigation, formation flying, target acquisition, and defensive reaction. Training activities include surface attack tactics, different modes of weapons delivery, electronic combat training, and the use of defensive countermeasures.

Bomb, Dummy Unit-33 (BDU-33): A 25-pound, cast iron and steel, nonexplosive practice bomb used to simulate general purpose bombs in a low-drag configuration. These practice bombs contain either a “hot” or “cold” spotting charge that release a cloud of smoke on impact so that delivery accuracy can be scored. Cold spotting charges use a titanium tetrachloride chemical reaction that produces smoke on impact, which can only be scored during daylight use. Hot spotting charges use an incendiary compound composed of white phosphorus that produces both a narrow flame and white smoke that can be observed and scored day or night.

Environmental Night: From 2200 hours to 0700 hours and used in modeling noise impacts to account for our increased sensitivity to noise at night.

Flight Level (FL): Flight level is vertical altitude expressed in hundreds of feet.

Flightline: The area of an airfield, specifically the parking area and the maintenance hangars, where aircraft are onloaded, offloaded, and serviced.

Flight Turn Pattern: An aircraft maneuver designed to allow aircraft to fly, land, complete appropriate post flight inspections, refuel, and fly again. A turn pattern of 12 x 10 does not require 22 aircraft to execute but rather could be filled with only 12 aircraft (notwithstanding impacts of broken aircraft and airspace schedules). The turn pattern and total daily sorties are the same for environmental purposes, because they both indicate the number of takeoffs and landings for any given day. A 12 x 10 represents 22 total sorties for the day even though those sorties may have been flown with only 12 total aircraft.

Mean Sea Level (MSL): Altitude expressed in feet measured above average (mean) sea level. MSL is most commonly used when operating at or below 18,000 ft where clearance from terrain is less a concern for aircraft operation. Altitudes are referred to as MSL when flying above water; while flying over land, both MSL and AGL are used to delineate airspace structure.

Sortie: A single military aircraft flight from initial takeoff through final landing.

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