



D Air Quality

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Appendix D

Air Quality Analysis Resources and Methodologies

The following information is provided for additional detail on air pollutants evaluated in the Proposed Action air quality impacts analysis and on the methodology used in the impact analysis.

Criteria Pollutants

National Ambient Air Quality Standards (NAAQS) are currently established for the criteria air pollutants ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulates equal to or less than 10 microns in diameter [PM₁₀] and particulates equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (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 criteria pollutant O₃ is not usually emitted directly into the air but is formed in the atmosphere by photochemical reactions involving sunlight and previously emitted pollutants, or “O₃ precursors.” These O₃ precursors consist primarily of nitrogen oxides (NO_x) and volatile organic compounds (VOCs) that are directly emitted from a wide range of emission sources. For this reason, regulatory agencies limit atmospheric O₃ concentrations by controlling VOC pollutants (also identified as reactive organic gases) and NO_x.

The USEPA has recognized that particulate matter emissions can have different health effects depending on particle size and, therefore, developed separate NAAQS for coarse particulate matter (PM₁₀) 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. As such, 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.

Analytical Methodology

Construction

Construction emissions were quantified based on construction footprints. Equipment selection and duration were based on the South Coast Air Quality Management District construction survey to estimate default phase lengths based on total project acreage. These data are found in Appendix A of the CALEEMOD Users Guide (Trinity Consultants 2021). Additional information used for estimating worker and vendor trips were generated using the same resource.

Truck sizes were selected based on average standards – concrete truck capacity = 9 CY of material

Dump truck sizes vary based on material weight and range from 10-16 CY. 12 CY was used as average capacity for the construction.

CALEEMOD was used to model construction activities at Fresno ANGB. Similar construction estimates were made for Barnes ANGB and NAS JRB New Orleans, but were modeled using ACAM.

F-15C, F-15EX, and F-35A Aircraft

Departures, landings and closed patterns for these aircraft were evaluated in ACAM. EnviroSolutio provided time in modes (TIMs) for closed patterns and landings. Departure TIMs were calculated separately because of the requirement to use two distinct departures types: Military departure and Afterburner departure. These were further allocated based on frequency of use per each installation, as identified in Table 2.2-3 in the EIS.

Jet engine test cell data were provided by Fresno ANGB. Increases in jet engine test cell use were based on the proportion of increase in aircraft populations and engine use. The data provided by Fresno ANGB were used as surrogates for the jet engine test cell activity at the other two installations.

AGE data were provided by Fresno ANGB. Because the same aircraft were evaluated at each installation, the data were used for each. Where AGE equipment was located in ACAM, those emission factors were used to calculate the AGE emissions. As none of the installations being evaluated have F-35A aircraft located onsite, no AGE data for this aircraft model is available. As a result, the AGE used for the F-15 models was used for the F-35A as surrogates.

Engine maintenance data for the aircraft was obtained from the noise studies for each installation. The data for F-35A were identical for each installation.

Greenhouse Gases (GHGs)

GHG emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and contribute to global climate change. Primary GHGs include water vapor, methane, NO_x, hydrofluorocarbons, and chlorofluorocarbons. While water vapor is considered a GHG, note that atmospheric temperature controls the amount of water vapor in the air and the other GHGs control the atmospheric

temperature. As a result, the amount of water vapor in the air is determined by the amount of other GHGs present in the atmosphere. This is how the greenhouse effect has rapidly increased over the last 100 years –when emissions of CO₂ and other GHGs significantly increased due to man’s activities.

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 CO₂ equivalent (CO₂e) or the amount of CO₂e to the emissions of that gas. CO₂ has a GWP of 1 and is, therefore, the standard by which all other GHGs are measured.

GHG Emissions

Because GHG emission impacts are independent of altitude, the entire flight horizon for all aircraft sorties was estimated. In addition to land, departure and closed pattern operations, estimates of emissions for sorties was based on the settings for approach and intermediate (Climb out) operations. These were split 50/50 for the sortie duration. Average sortie durations are unique to each installation: 1.6 hours for Fresno ANGB, 1.65 hours for Barnes ANGB, and 1.37 hours for NAS JRB New Orleans.

A 50-year lifetime horizon was estimated based on the lifespan of the F-15C, though both the F-35A and F-15EX have estimated lifetimes in excess of 50 years. Building emissions for the 50-year period were not calculated as too little information is available on what sources could exist and the DAF’s plan to become net zero by 2046 cannot be calculated, though emissions would be anticipated to steadily decline over the period.

The social cost of carbon dioxide emissions was calculated through 2050. The actual 50-year timespan would extend to 2076 and 2077, but the Federal Office of Management and Budget has not published the cost of GHG emission tons past 2050. These data may or may not be available by the time the EIS is published in its final form. The SC-CO₂ is a measure, in dollars, of the long-term damage done by a ton of CO₂ emissions in a given year. The dollar figure can also represent the value of damages avoided for an emission reduction. The cost analysis evaluated two different discount rates. A 3% discount provides a statistical average of damages. A more conservative discount uses the 95th percentile of estimates based on the 3 percent discount rate, with a higher cost to society per ton of CO₂ emitted. The 95th percentile rate is close to the revised cost values that EPA is considering for a new estimate for the social cost of carbon emissions using a 2% discount rate

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**104th Fighter Wing at Westfield-Barnes Regional Airport
(BAF)**

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104 FW

Conformity Evaluation Report for Westfield Barnes Regional Airport, Westfield, MA

Final

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ACRONYMS AND ABBREVIATIONS

<i>Acronym</i>	<i>Definition</i>
104 FW	104th Fighter Wing
ACAM	Air Conformity Applicability Model
AFI	Air Force Instruction
AGE	aerospace ground equipment
ANG	Air National Guard
AR	Attrition Reserve
BAA	Backup Aerospace Vehicle Authorized
BAF	Westfield-Barnes Regional Airport
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DAF	Department of the Air Force
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
MA	Massachusetts
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
O ₃	ozone
PM _{2.5}	particulate matter less than or equal to 2.5 microns in diameter
PM ₁₀	particulate matter less than or equal to 10 microns in diameter
PSD	Prevention of Significant Deterioration
ROCA	Record of Conformity Analysis
ROI	Region of Influence
SF	square foot/feet
SIP	State Implementation Plan
SO ₂	sulfur dioxide
U.S.	United States
USC	United States Code
VOC	Volatile Organic Compound

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1.0 INTRODUCTION

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) fighter wings currently flying the F-15C/D aircraft. These aircraft have reached the end of their lifespan and will be retired due to safety and maintenance concerns. These fighter wings (that are not already undergoing similar evaluation) include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing at Fresno Yosemite International Airport in Fresno, California; and the 159th Fighter Wing at Naval Air Station Joint Reserve Base New Orleans, in Belle Chasse, Louisiana. The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II aircraft at two of these fighter wings and one squadron of F-35A Lightning II aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings. It is also conceivable that one or more of these fighter wings would retain the legacy F-15C/D aircraft for the foreseeable future and construction associated with that alternative would be implemented to support the current legacy aircraft.

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force Instruction (AFI) 32-7061 as promulgated at 32 CFR Part 989 et seq., Environmental Impact Analysis Process (EIAP), the DAF and NGB have prepared an Environmental Impact Statement (EIS), which considers the potential consequences to the human and natural environment that may result from implementation of this action. This Conformity Evaluation Report has been prepared in accordance with Section 176(c)(1) of the Clean Air Act (CAA) and as specified in requirements found in 40 CFR 93 Subpart B, and is included in Appendix D of the EIS.

This document addresses the U.S. Environmental Protection Agency's (EPA's) General Conformity Rule requirements and how they relate to the actions associated with the implementation of the Proposed Action. The CAA requires any federal agency, such as the NGB, to assess whether their proposed action would contribute to further degradation of air quality or prevent the attainment of air quality standards. The NGB proposes to implement a federal action that would contribute to regional air emissions at BAF in Westfield, MA and associated environs in Hampden County, MA. Therefore, the Region of Influence (ROI) includes BAF as well as all of Hampden County. This is an area that previously did not meet air quality standards for ozone (O₃) and is currently under a maintenance plan under the CAA (refer to Section 3.3, *Existing Air Quality Attainment Status*).

2.0 AIR QUALITY STANDARDS

Individual states are delegated the responsibility to regulate air quality in order to achieve or maintain air quality in attainment with these standards. The MA Department of Environmental Protection enforces air pollution regulations and sets guidelines to attain and maintain the National Ambient Air Quality Standards (NAAQS). These guidelines are found in the MA State Implementation Plan (SIP). Table 1 summarizes the NAAQS.

Table 1 National Ambient Air Quality Standards

<i>Pollutant</i>		<i>Primary/Secondary^{1, 2}</i>	<i>Averaging Time</i>	<i>Level</i>
Carbon Monoxide (CO)		Primary	8 hours	9 ppm
Carbon Monoxide (CO)		Primary	1 hour	35 ppm
Nitrogen Dioxide (NO ₂)		Primary	1 hour	100 ppb
Nitrogen Dioxide (NO ₂)		Primary and Secondary	Annual	53 ppb
Ozone (O ₃)		Primary and Secondary	8 hours	0.070 ppm
Particulate Matter	PM _{2.5}	Primary	Annual	12 µg/m ³
Particulate Matter	PM _{2.5}	Secondary	Annual	15 µg/m ³
Particulate Matter	PM _{2.5}	Primary and Secondary	24 hours	35 µg/m ³
Particulate Matter	PM ₁₀	Primary and Secondary	24 hours	150 µg/m ³
Sulfur Dioxide (SO ₂)		Primary	1 hour	75 ppb
Sulfur Dioxide (SO ₂)		Secondary	3 hours	0.5 ppm
Lead (Pb)		Primary and Secondary	Rolling 3-month average	0.15 µg/m ³

Notes: ¹Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than 3 years after that state’s implementation plan is approved by the EPA.

²Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Legend: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; ppm = parts per million; ppb = parts per billion.

Source: EPA 2022a.

The CAA also established a national goal of preventing degradation or impairment in federally designated Class I areas. Class I areas are defined as those areas where any appreciable degradation in air quality or associated visibility impairment is considered significant. As part of the Prevention of Significant Deterioration (PSD) Program, Congress assigned mandatory Class I status to all national parks, national wilderness areas (excluding wilderness study areas or wild and scenic rivers), and memorial parks greater than 5,000 acres. In Class I areas, visibility impairment is defined as atmospheric discoloration (such as from an industrial smokestack), and a reduction in regional visual range. Visibility impairment or haze results from smoke, dust, moisture, and vapor suspended in the air. Very small particles are either formed from gases (sulfates, nitrates) or are emitted directly into the atmosphere from sources like electric utilities, industrial processes, and vehicle emissions. Stationary sources are regulated under the PSD Program, and the PSD permitting process requires a review of impacts to all Class I areas within 62 miles of any proposed major stationary source. Mobile sources, including aircraft and associated operations such as those occurring at ANG installations, are not subject to the requirements of PSD.

2.1 AIR QUALITY DESIGNATIONS

As part of the CAA, the EPA has established criteria for major pollutants of concern, called “criteria pollutants.” These criteria pollutants include carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), O₃, particulate matter less than or equal to 10 microns in diameter (PM₁₀), particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}), and lead. Volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) are precursors to O₃. Emissions of lead are not addressed because the affected areas contain no significant sources of this criteria pollutant, and 104 FW operations would not result in substantial emissions of lead. The criteria set for these pollutants, the NAAQS, represent maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect the public health and welfare. Based on measured ambient criteria pollutant data, the EPA designates areas in the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. Areas that lack monitoring data to demonstrate attainment or nonattainment status are designated as unclassified and are treated as attainment areas for regulatory purposes. Varying levels of attainment have been established for O₃, CO, and PM₁₀ to indicate the severity of the air quality problem (i.e., the classification runs from moderate to serious for CO and PM₁₀ and from marginal to extreme for O₃).

2.2 FEDERAL REQUIREMENTS

The CAA (42 USC §§ 7401-7671q, as amended) provided the authority for the EPA to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the NAAQS, were developed for the criteria pollutants: O₃, NO₂, CO, SO₂, both coarse and fine inhalable particulate matter PM₁₀ and PM_{2.5}, and lead (refer to Table 1). The Act also requires that each state prepare a SIP for maintaining and improving air quality and eliminating violations of the NAAQS. The CAA requires federal agencies to determine whether their proposed actions in nonattainment and maintenance areas conform with the applicable SIP, and demonstrate that their actions will not (1) cause or contribute to a new violation of the NAAQS; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, emission reduction, or milestone contained in the SIP.

2.3 STATE REQUIREMENTS

The CAA requires each state to develop, adopt, and implement a SIP to achieve, maintain, and enforce federal air quality standards throughout the state. States develop SIPs on a pollutant-by-pollutant basis whenever there is a violation of one or more air quality standards. MA has adopted the federal ambient air quality standards and does not maintain any additional standards.

2.4 GENERAL CONFORMITY REGULATIONS

The General Conformity Rule was promulgated by the EPA on November 30, 1993 at 40 CFR Part 93 Subpart B *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* for all federal activities except those covered under transportation conformity (EPA 1993). The General Conformity Regulations were revised by the EPA on April 5, 2010 (75 Federal Register 17253-17279) and changed the existing regulations found in 40 CFR Part 93, Subpart B (EPA 2010). The EPA also modified 40 CFR Part 51, Subpart W, to change state or Tribal adoption and submittal of general conformity SIPs from a requirement to a voluntary measure in 40 CFR § 51.851(a). In addition, the EPA provided in 40 CFR § 51.851(b) that until such time as EPA approves a state's or Tribe's revision to the conformity implementation plan permitted under this section, that federal agencies must meet the requirements of 40 CFR Part 93, Subpart B.

The General Conformity Rule requires any federal agency responsible for an action in a nonattainment or maintenance area to determine that the action conforms to the applicable SIP. Emissions of attainment pollutants are exempt from conformity analysis. Actions would conform to a SIP if their annual direct and indirect emissions would remain less than the applicable *de minimis* thresholds. Formal conformity determinations are required for any actions that would equal or exceed these thresholds.

Analyses required by the General Conformity Regulations focus on the net increase in air emissions from a Proposed Action compared to ongoing historical conditions. Existing SIPs are presumed to have accounted for routine, ongoing federal agency activities. Conformity analyses are further limited to those direct and indirect emissions over which the federal agency has continuing program responsibility and control over. General conformity analyses are not required to analyze emission sources beyond the responsibility and control of the federal agency. Conformity determinations are also not required to address emissions that are not reasonably foreseeable or reasonably quantifiable.

2.5 GENERAL CONFORMITY ANALYSIS PROCEDURES

The EPA General Conformity Regulations incorporate a stepwise process, beginning with an applicability analysis (EPA 1993, 2010). According to EPA guidance, before any approval is given for a federal action to go forward, the regulating federal agency must apply the applicability requirements found at 40 CFR § 93.153(b) to the federal action to evaluate whether, on a pollutant-by-pollutant basis, a determination of general conformity is required. If the regulating federal agency determines that the General Conformity Regulations do not apply to the federal action, no further analysis or documentation is required. However, if the General Conformity Regulations do apply to a federal action, the action proponent must make its own conformity determination in

accordance with the criteria and procedures outlined in the implementing regulations, publish a draft determination of general conformity for public review, consider comments from interested parties, and then publish the final determination of general conformity.

3.0 ELEMENTS OF THE PROPOSED ACTION

The Proposed Action involves both construction of new facilities to accommodate the conversion of F-15Cs to F-15EXs or F-35As, or construction of facilities required to continue the legacy mission of the F-15Cs, and operational emissions associated with either aircraft.

3.1 CONSTRUCTION EMISSIONS

The Proposed Action would include construction activities at the 104 FW to provide for additional infrastructure and facilities needed to support the proposed F-15EX or F-35A operations, or facilities required for the continued mission of the F-15C if neither aircraft were to be selected. Air quality impacts from construction would occur from (1) combustion emissions due to the use of fossil fuel-powered equipment and vehicles; and (2) fugitive dust emissions (PM_{2.5} and PM₁₀) during demolition activities, earth-moving activities, and the operation of equipment on bare soil.

All proposed construction would occur within the footprint of the developed installation. To ensure the maximum annual emissions from construction are captured, the calculations have been performed to account for each construction project being completed within 12 months of the year it is programmed (e.g., if a project is planned for implementation in fiscal year 2024, the construction is assumed to occur between January and December 2025), even though some projects would last longer than 12 months.

3.2 OPERATIONAL EMISSIONS

Operational emissions associated with the Proposed Action include emissions from aircraft operations and associated equipment, along with commuter emissions from additional personnel required to operate either the F-15EX or F-35A. Mobile source emissions include emissions from aircraft operations (takeoffs and landings), aerospace ground equipment (AGE), personal vehicle operations, and maintenance aircraft operations performed with the engines still mounted on the aircraft (engine run-ups and trim checks). The Proposed Action would include either an increase of 101 personnel under the F-15EX beddown or 80 personnel under the F-35A beddown.

Under the Proposed Action, the 104 FW would convert from 18 F-15C aircraft to a total of 24 F-15EX including 2 Backup Aerospace Vehicle Authorized [BAA] and 1 Attrition Reserve [AR]) or 23 F-35A including 2 BAAs. If the 104 FW is selected to receive the F-15EX, the aircraft would be based at the installation by 2027, and if selected to receive the F-35A, the aircraft would be based by 2026. Existing operations for the F-15C aircraft at BAF total 4,100 operations

annually. The number of annual operations would increase by 2,766 annual operations under the Proposed Action for either the F-15EX or the F-35A.

3.3 EXISTING AIR QUALITY ATTAINMENT STATUS

Hampden County is part of the Hartford-New Haven-Springfield Interstate Air Quality Control Region (40 CFR 81.26) and the entire state of MA falls within the Ozone Transport Region boundary (40 CFR 81.457). Hampden County is currently designated as a maintenance area for the 8-Hour O₃ NAAQS (due to the Springfield, Western Massachusetts “orphan nonattainment area” that includes Berkshire, Franklin, Hampden, and Hampshire counties) (EPA 2022a). The area was determined to be in attainment in 2012 (EPA 2012), so the maintenance area designation would remain in place until 2032. Hampden County is designated as unclassifiable, attainment, or better than national standards for all other NAAQS. The applicable *de minimis* thresholds for the area are listed in Table 2.

Table 2 Applicable General Conformity *de minimis* Thresholds (tons per year)

VOCs ¹	NO _x ¹	CO	SO ₂	PM ₁₀	PM _{2.5}
50	100	N/A ²	N/A ²	N/A ²	N/A ²

Notes: ¹Hampden County is a maintenance area for 8-Hour Ozone (1997) NAAQS and is within the ozone transport region. VOCs and NO_x are precursors to ozone.

²*De minimis* thresholds are not applicable because Hampden County is in attainment of the NAAQS. For attainment area criteria pollutants, this analysis uses the EPA’s PSD permitting threshold of 250 tons per year as an initial indicator of the local significance of potential impacts on air quality.

Legend: CO = Carbon Monoxide; N/A = not applicable; NO_x = Nitrogen Oxides; PM_{2.5} = Particulate Matter Less Than or Equal to 2.5 Microns in Diameter; PM₁₀ = Particulate Matter Less Than or Equal to 10 Microns in Diameter; SO₂ = Sulfur Dioxide; TPY = tons per year; VOC = Volatile Organic Compound.

Source: 40 CFR 93.153.

4.0 GENERAL CONFORMITY EVALUATION

4.1 APPLICABILITY ANALYSIS

The first step in a general conformity evaluation is an analysis of whether the requirements apply to the federal action that is proposed in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a federal action requires a general conformity determination for each pollutant where the total of direct and indirect emissions caused by the federal action would equal or exceed an annual *de minimis* emission rate for any given maintenance or nonattainment pollutant (or precursor). If a proposed action would result in emission increases less than the identified applicable *de minimis* thresholds, then no conformity determination is required.

4.2 EXEMPTIONS FROM GENERAL CONFORMITY REQUIREMENTS

The general conformity requirements apply to a federal action if the net project emissions equal or exceed certain *de minimis* emission rates established in the General Conformity Regulations. The

de minimis thresholds differ based on the severity of the nonattainment status. The only exceptions to this applicability criterion include certain federal actions that are presumed to conform because of the thorough air quality analysis required to comply with other statutory requirements. Examples of these actions include those subject to the New Source Review program and remedial activities under the Comprehensive Environmental Response, Compensation, and Liability Act.

Other federal actions exempt from the conformity process include those actions that would result in no increase in emissions, or an increase in emissions that is clearly *de minimis*. Examples include continuing or recurring activities, routine maintenance and repair, and administrative and planning actions; however, the emissions that would result from this federal action do not meet any of these exempt categories. For this reason, a Level II Quantitative Assessment, as described in the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2* (DAF 2019) was performed. This analysis is used to prepare an estimate of the worst-case annual net change (the total direct and indirect emissions associated with the Proposed Action), and these emissions were compared against *de minimis* thresholds for the pollutants of concern – VOCs and NO_x. Emissions were estimated using flight operations data and flight profiles for the installation, and aircraft model-specific emission factors, along with emission estimates generated in the DAF’s Air Conformity Applicability Model (ACAM) for construction, AGE, and personal vehicle operations. The results were used to quantify the Proposed Action emissions.

4.3 EMISSION ESTIMATES

Existing emissions quantified include emissions from the F-15C aircraft, which would be replaced under the Proposed Action by either the F-15EX or F-35A aircraft. Annual operations under the Proposed Action for either the F-15EX or F-35A are anticipated to increase to 6,866 operations per year at the airfield compared to the existing 4,100 annual operations currently flown with the F-15C. If the 104 FW is not selected to receive the F-15EX or the F-35A aircraft, then ANG operations at the airfield would not change from current operations for the foreseeable future.

To evaluate emissions from ongoing historical conditions for evaluating the net emissions increases/decreases associated with the Proposed Action, aircraft operation emission estimates were derived from ACAM version 5.0.18b, using installation-specific data including landings and takeoffs, closed patterns, and annual engine testing. Additionally, AGE operations emissions estimates were also derived from ACAM using default values where installation-specific information was not available. Chapter 3.0 and Appendix D of the EIS provide a discussion of the methodology for quantifying emissions. Table 3 presents the emissions associated with operations of the F-15C aircraft.

**Table 3 104 FW F-15C Emissions at the Westfield-Barnes Regional Airport (BAF)
 (tons per year)**

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>
F-15C Aircraft Operations	24.10	31.28
AGE	0.57	4.94
Total F-15C Operations Emissions²	24.67	36.22

Notes: ¹Includes maintenance testing (engine testing).

¹Numbers may not add up due to rounding.

Legend: AGE = aerospace ground equipment; NO_x = Nitrogen Oxides; VOCs = Volatile Organic Compounds.

Construction activities at the 104 FW include demolition or renovation of existing structures, construction of new structures, and infrastructure upgrades, and would depend on the aircraft selected. Table 4 provides information on the construction projects anticipated to support the arrival of the F-15EX, F-35A or the continuation of the legacy F-15C mission. Table 5 presents the total area of building construction, demolition, and ground disturbance in square feet (SF) assumed to occur by calendar year for the F-15EX, F-35A, or the continuation of the F-15C mission at BAF, respectively. Additional details on the individual construction projects are available in Appendix C of the EIS.

Table 4 Summary of Construction and Modification Projects

<i>Project ID</i>	<i>Project Name</i>	<i>F-15EX</i>	<i>F-35A</i>	<i>Legacy F-15C</i>
1.1 (Option 1)	Renovate Wing HQ (Building 1)/Construct Wing HQ	X	X	X
1.2 (Option 2)				
1.3 (Option 3)				
2	Alter Supply Warehouse (Building 54)	X	X	X
3	Construct Taxiway Juliet	X	X	X
4	Renovate POL Shop (Building 33)	X	X	X
5	Renovate Avionics Shop (Building 26)	X	X	X
6	Repair MNS	X	X	X
7	Construct Vehicle Operations Parking Sheds	X	X	X
8	Construct Redundant Utilities	X	X	X
9	Renovate JISCC Storage	X	X	X
10.1 (Option 1)	Construct Running Track	X	X	X
10.2 (Option 2)				
11	Alter AAS Signage	X	X	X
12	Repair Base Roads and Parking Lots	X	X	X
13	Construct Base Engineer Storage Yard	X	X	X
14	Alter Civil Engineer Building (Building 40)	X	X	X
15.1 (Option 1)	ADAL Dining Facility (Building 3)	X	X	X
15.2 (Option 2)				

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Project ID	Project Name	F-15EX	F-35A	Legacy F-15C
16.1 (Option 1) 16.2 (Option 2)	Construct Flight Simulator Facility	X	X	
17	Repair HAZMAT HVAC (Building 52)	X	X	
18	ADAL WLT Door (Building 23)	X	X	
19	Demo Liquid Oxygen Facility (Building 38 & 39)	X	X	
20	Repair Munitions Administration Facility (Building 65)	X	X	
21	Construct PL3 Fence Line	X	X	
22.1 (Option 1) 22.2 (Option 2)	Construct Temporary Facility (Squadron Operations) (Building 25)	X	X	
23	Investigative Study for Squadron Operations (second floor and Simulator location) (Building 25)	X	X	
24	Add HVAC (Building 37)	X	X	
25	Repair MAC Pad	X	X	
26	Repair Maintenance Shops (Building 15)	X		
27	ADAL Fuel Cell (Building 27)	X		
28	ADAL Alert Crew Readiness (Building 48)	X		
29	ADAL Squadron Operations Facility (Building 25)	X		
30	Repair Avionics Facility (Building 26)	X		
31	Construct Aircraft Shelters and Shades		X	
32	Install Power Converters (Buildings 13, 27, 45, 46, 47)		X	
33	Repair Maintenance Shops (Building 15) (specific for F-35A)		X	
34	Convert Shelter to Wash Rack (Building 19)		X	
35	Repair LRS (Levelator, Building 54)		X	
36	Repair Squadron Operations (Building 25)		X	
37	Repair Avionics Facility (Building 26) (specific for F-35A)		X	
38	Repair Drop Tank Storage for AGE (Building 116)		X	

Legend: AAS = Airfield Arresting System; ADAL = Addition and Alteration; AGE = Aerospace Ground Equipment; HAZMAT = Hazardous Materials; HQ = Headquarters; HVAC = Heating, Ventilation, and Air Conditioning; JISCC = Joint Incident Site Communications Capability; LRS = Logistics Readiness Squadron; MAC = Munitions Assembly Conveyor; MNS = Mass Notification System; PL3 = Protection Level 3; POL = Petroleum, Oil, and Lubricants; WLT = Weapons Load Crew Training.

Sources: 104 FW n.d.; ACC and NGB 2021; NGB 2021a, 2021b.

Table 5 Summary of Construction Footprints

<i>Aircraft Type</i>	<i>Total SF Disturbance</i>	<i>Total SF Net New Impervious</i>	<i>Years of Construction</i>
Based F-15C	173,900	128,400	FY 2026–2033
F-15EX	218,100	148,000	FY 2024 ¹ –2033
F-35A	203,800	136,600	FY 2024–2033

Note: ¹2024 but no sooner than ROD signature.

Legend: FY = Fiscal Year; SF = square foot/feet.

Table 6 summarizes the annual construction emissions associated with the continuation of the legacy F-15C mission associated with the Proposed Action.

Table 6 Annual Construction Emissions Estimates for the 104 FW Installation with Construction for Legacy F-15C (tons per year)

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>	<i>CO</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>CO_{2e}</i>
2026 Construction Emissions	0.60	0.93	1.69	0.00	0.05	0.03	356
2027 Construction Emissions	0.42	0.95	1.57	0.00	0.45	0.03	350
2028 Construction Emissions	0.75	1.24	1.82	0.00	1.47	0.04	403
2029 Construction Emissions	0.18	0.90	1.46	0.00	0.03	0.03	321
2030 Construction Emissions	0.26	1.12	1.53	0.00	0.17	0.04	324
2031 Construction Emissions	0.21	0.60	0.90	0.00	0.12	0.02	212
2032 Construction Emissions ¹	-	-	-	-	-	-	-
2033 Construction Emissions	0.23	1.27	1.71	0.00	21.29	0.05	425
2034 Construction Emissions	0.21	1.14	1.58	0.00	1.83	0.04	376
<i>de minimis</i> or Comparative Threshold	50	100	250	250	250	250	N/A
Exceeds Threshold	No	No	No	No	No	No	N/A

Note: ¹No construction projects are proposed to occur in calendar year 2032.

Legend: CO = carbon monoxide; CO_{2e} = carbon dioxide equivalent; N/A = Not Applicable; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

If neither the F-15EX or the F-35A is selected for the 104 FW, the legacy F-15C operations would continue and there would be no net change in ongoing operational emissions. Tables 7 and 8 present the ongoing net change in operational emissions that would occur from the F-15EX or F-35A being selected, respectively. The construction emissions for all years presented in Table 8 would be well below the *de minimis* threshold of 50 tons per year of both VOCs and NO_x. The operational emissions in the tables below represent the ongoing annual airfield operational emissions that would occur and continue with the complete basing of the F-15EX or the F-35A aircraft.

**Table 7 Annual Airfield Emissions Estimates for the 104 FW
Beginning in 2027 (tons per year)**

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>
F-15C Current Airfield Operations Removed	-24.67	-36.22
F-15EX Aircraft Operations Added	33.49	34.66
Net Change in Airfield Emissions – F-15EX	8.82	-1.55
F-15EX Additional Commuter Emissions	0.14	0.09
Total	8.96	-1.46

Legend: NO_x = nitrogen oxides; VOCs = volatile organic compounds.

**Table 8 Annual Airfield Emissions for the 104 FW
Beginning in 2026 (tons per year)**

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>
F-15C Current Airfield Operations removed	-24.67	-36.22
F-35A Aircraft Operations	1.14	52.96
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
F-35A Additional Commuter Emissions	0.11	0.07
Total	-23.42	16.82

Legend: NO_x = nitrogen oxides; VOCs = volatile organic compounds.

The total annual emissions for both construction and operations occurring in a calendar year are presented in Table 9 for the F-15EX conversion and Table 10 for the F-35A conversion. No construction projects are proposed to begin after 2034.

**Table 9 Total Annual Emissions Estimates for Construction and Operations
with the F-15EX Conversion at the 104 FW (tons per year)**

<i>Year</i>	<i>VOCs</i>	<i>NO_x</i>
2025 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.37	0.91
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
2026 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.91	0.95
Net Change – F-15EX Operations Emissions (50% transition)	4.41	-0.78
Commuter Emissions (50% transition)	0.07	0.05
2026 Total Net Change Emissions¹	5.39	0.22
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
2027 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.42	0.95
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2027 Total Net Change Emissions¹	9.38	-0.52

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<i>Year</i>	<i>VOCs</i>	<i>NO_x</i>
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2028 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.75	1.24
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2028 Total Net Change Emissions¹	9.71	-0.22
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2029 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.33	0.91
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2029 Total Net Change Emissions¹	9.29	-0.55
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2030 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.57	1.14
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2030 Total Net Change Emissions¹	9.53	-0.32
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2031 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.17	0.60
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2031 Total Net Change Emissions¹	9.13	-0.86
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2032 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions ²	-	-
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2032 Total Net Change Emissions¹	8.96	-1.46
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No

<i>Year</i>	<i>VOCs</i>	<i>NO_x</i>
2033 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.23	1.27
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2033 Total Net Change Emissions¹	9.19	-0.20
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
2034 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.21	1.14
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2034 Total Net Change Emissions¹	9.17	-0.32
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
2035 Estimated Annual Net Change Air Emissions (Steady State)		
Net Change – F-15EX Operations Emissions	8.82	-1.55
Commuter Emissions	0.14	0.09
2035 (Steady State) Total Net Change Emissions¹	8.96	-1.46
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No

Note: ¹Numbers may not add up due to rounding.

²No construction projects are proposed to occur in calendar year 2032.

Legend: CO = carbon monoxide; CO_{2e} = carbon dioxide equivalent; N/A = Not Applicable; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

Table 10 Total Annual Emissions Estimates for Construction and Operations with the F-35A Conversion at the 104 FW (tons per year)

<i>Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>
2025 Estimated Annual Net Change Air Emissions		
Construction Emissions	0.47	0.90
Net Change in Aircraft Emissions – F-35A (50% transition)	-11.77	8.37
Commuter Emissions (50% transition)	0.06	0.04
2025 Total Net Change Emissions¹	-11.24	9.30
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No

<i>Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>
<i>2026 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.91	0.95
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2026 Total Net Change Emissions¹	-22.51	17.77
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2027 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.42	0.95
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2027 Total Net Change Emissions¹	-23.00	17.76
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2028 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	1.18	1.34
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2028 Total Net Change Emissions¹	-22.24	18.15
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2029 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.26	0.90
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2029 Total Net Change Emissions¹	-23.17	17.72
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2030 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.51	1.14
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2030 Total Net Change Emissions¹	-22.91	17.95
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2031 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.17	0.60

<i>Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2031 Total Net Change Emissions¹	-23.25	17.42
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2032 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions ²	-	-
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2032 Total Net Change Emissions¹	-23.42	16.82
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2033 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.23	1.27
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2033 Total Net Change Emissions¹	-23.19	18.08
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2034 Estimated Annual Net Change Air Emissions</i>		
Construction Emissions	0.21	1.14
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2034 Total Net Change Emissions¹	-23.21	17.96
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No
<i>2035 Estimated Annual Net Change Air Emissions (Steady State)</i>		
Net Change in Aircraft Emissions – F-35A	-23.54	16.74
Commuter Emissions	0.11	0.07
2035 (Steady State) Total Net Change Emissions¹	-23.42	16.82

<i>Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>
<i>de minimis</i> or Comparative Threshold	50	100
Exceeds Threshold	No	No

Note: ¹Numbers may not add up due to rounding.

²No construction projects are proposed to occur in calendar year 2032.

Legend: CO = carbon monoxide; CO₂e = carbon dioxide equivalent; N/A = Not Applicable; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

As shown in Table 9 (Conversion to F-15EX), Table 10 (Conversion to F-35A), and Table 6 (Maintain Legacy F-15C), emissions associated with the Proposed Action at BAF would be below the General Conformity Rule *de minimis* thresholds for all pollutants.

4.4 APPLICABILITY OF GENERAL CONFORMITY TO THIS FEDERAL ACTION

The applicability of the General Conformity requirements to the Proposed Action was determined by comparing the federal action emissions to the conformity *de minimis* thresholds for all nonattainment and maintenance pollutants in the ROI. As shown in Tables 6, 9, and 10, the emissions of all pollutants are lower than their applicable *de minimis* thresholds.

5.0 FINDING OF CONFORMITY

In accordance with 40 CFR Part 93, Subpart B and the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2* (DAF 2019), the emissions due to the Proposed Action were evaluated, including reasonable foreseeable direct and indirect emissions. The applicability analysis has found that:

- General Conformity is not applicable to this proposed federal action,
- a Conformity Determination is not required, and
- the General Conformity Evaluation is complete with a completed Record of Conformity Analysis (ROCA) to document the conclusion (included in Attachment 1 to this document).

6.0 REFERENCES

Department of the Air Force (DAF). 2019. Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2. May.

United States Environmental Protection Agency (EPA). 1993. Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule. 40 CFR Parts 6, 51, and 93. 30 November.

_____. 2010. Revisions to the General Conformity Rule Regulations; Final Rule. 40 CFR Parts 51 and 93. 5 April.

_____. 2012. Approval and Promulgation of Air Quality Implementation Plans; Massachusetts; Determination of Attainment of the 1997 Ozone Standard for the Western Massachusetts Nonattainment Area. 77 Fed, Reg, 36404-36405 (June 19, 2012). Accessed at: <https://www.govinfo.gov/content/pkg/FR-2012-06-19/pdf/2012-14719.pdf#page=1>.

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AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

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: BARNES ANGB
State: Massachusetts
County(s): Hampden
Regulatory Area(s): Springfield (Western MA), MA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: Barnes F-15EX

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2026

e. Action Description:

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

Name: Caitlin Jafolla
Title: Air Quality SME
Organization: Cardno now Stantec
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:

<i>Emissions Source</i>						
Construction Emissions	0.37	0.91	1.54	0.00	0.03	0.03

**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)**

<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.91	0.95	1.81	0.00	0.21	0.03
Net Change – F-15EX Operations Emissions (50% transition)	4.41	-0.78	6.77	-0.15	3.39	3.07
Commuter Emissions (50% transition)	0.07	0.05	0.92	0.00	0.00	0.00
Total 2026 Estimated Emissions¹	5.39	0.22	9.50	-0.14	3.61	3.10
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.42	0.95	1.57	0.00	0.45	0.03
Net Change – F-15EX Operations Emissions (100% conversion - steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
Total 2027 Estimated Emissions¹	9.38	-0.52	16.95	-0.29	7.24	6.16
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.75	1.24	1.82	0.00	1.47	0.04
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2028 Total Net Change Emissions¹	9.71	-0.22	17.20	-0.29	8.26	6.18
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.33	0.91	1.51	0.00	0.13	0.03
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2029 Total Net Change Emissions¹	9.29	-0.55	16.89	-0.29	6.92	6.16
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.57	1.14	1.67	0.00	0.63	0.04
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00

**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)**

2030 Total Net Change Emissions¹	9.53	-0.32	17.06	-0.29	7.42	6.17
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.17	0.60	0.89	0.00	0.17	0.02
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2031 Total Net Change Emissions¹	9.13	-0.86	16.27	-0.29	6.96	6.16
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	-	-	-	-	-	-
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2032 Total Net Change Emissions¹	8.96	-1.46	15.38	-0.29	6.79	6.13
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.23	1.27	1.71	0.00	21.29	0.05
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2033 Total Net Change Emissions¹	9.19	-0.20	17.09	-0.29	28.08	6.18
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.21	1.14	1.58	0.00	1.83	0.04
Net Change – F-15EX Operations Emissions (steady state)	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2034 Total Net Change Emissions¹	9.17	-0.32	16.96	-0.29	8.62	6.18
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Net Change – F-15EX Operations Emissions	8.82	-1.55	13.53	-0.29	6.79	6.13
Commuter Emissions	0.14	0.09	1.85	0.00	0.00	0.00
2035 Total Net Change Emissions¹	8.96	-1.46	15.38	-0.29	6.79	6.13
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

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.



Caitlin Jafolla, Air Quality SME

22 February 2023

DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

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: BARNES ANGB
State: Massachusetts
County(s): Hampden
Regulatory Area(s): Springfield (Western MA), MA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: Barnes F-35A

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2025

e. Action Description:

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

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Title: Air Quality SME
Organization: Cardno now Stantec
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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
 not applicable

Conformity Analysis Summary:

<i>Emissions Source</i>						

**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)**

Construction Emissions	0.47	0.90	1.56	0.00	0.03	0.03
Net Change – F-35A Operations Emissions (50% transition)	-11.77	8.37	-33.12	1.07	4.34	3.91
Commuter Emissions (50% transition)	0.06	0.04	0.73	0.00	0.00	0.00
2025 Total Net Change Emissions¹	-11.24	9.30	-30.83	1.08	4.37	3.94
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.91	0.95	1.81	0.00	0.21	0.03
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2026 Total Net Change Emissions¹	-22.51	17.77	-62.96	2.15	8.89	7.86
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.42	0.95	1.57	0.00	0.45	0.03
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2027 Total Net Change Emissions¹	-23.00	17.76	-63.20	2.15	9.13	7.86
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	1.18	1.34	2.07	0.00	1.47	0.04
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2028 Total Net Change Emissions¹	-22.24	18.15	-62.70	2.15	10.15	7.88
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.26	0.90	1.48	0.00	0.12	0.03
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2029 Total Net Change Emissions¹	-23.17	17.72	-63.30	2.15	8.80	7.86

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

<i>2034 Estimated Annual Net Change Air Emissions (Steady State)</i>						
Construction Emissions	0.21	1.14	1.58	0.00	1.83	0.04
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2034 Total Net Change Emissions¹	-23.21	17.96	-63.20	2.15	10.50	7.88
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
<i>2035 Estimated Annual Net Change Air Emissions (Steady State)</i>						
Net Change – F-35A Operations Emissions	-23.54	16.74	-66.24	2.15	8.67	7.83
Commuter Emissions	0.11	0.07	1.46	0.00	0.00	0.00
2035 Total Net Change Emissions¹	-23.42	16.82	-64.77	2.15	8.68	7.83
<i>de minimis</i> or Comparative Threshold	50	50	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

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.



Caitlin Jafolla, Air Quality SME

22 February 2023

DATE

**144th Fighter Wing at Fresno Yosemite International
Airport (FAT)**

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144 FW

Conformity Evaluation Report for Fresno Yosemite International Airport, Fresno, CA

Final

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ATTACHMENT 1 RECORD OF CONFORMITY ANALYSIS (ROCA)

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ACRONYMS AND ABBREVIATIONS

<i>Acronym</i>	<i>Definition</i>
144 FW	144th Fighter Wing
ACAM	Air Conformity Applicability Model
AFI	Air Force Instruction
AGE	aerospace ground equipment
ANG	Air National Guard
APCD	Air Pollution Control District
BAF	Westfield-Barnes Regional Airport
CA	California
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CFR	Code of Federal Regulations
CO	carbon monoxide
DAF	Department of the Air Force
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
FAT	Fresno Yosemite International Airport
FY	fiscal year
NAAQS	National Ambient Air Quality Standards
NAS	Naval Air Station
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
O ₃	ozone
PM _{2.5}	particulate matter less than or equal to 2.5 microns in diameter
PM ₁₀	particulate matter less than or equal to 10 microns in diameter
PSD	Prevention of Significant Deterioration
ROCA	Record of Conformity Analysis
SF	square foot/feet
SIP	State Implementation Plan
SO ₂	sulfur dioxide
U.S.	United States
USC	United States Code
VOC	Volatile Organic Compound

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1.0 INTRODUCTION

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) fighter wings currently flying the F-15C/D aircraft. These aircraft have reached the end of their lifespan and will be retired due to safety and maintenance concerns. These fighter wings (that are not already undergoing similar evaluation) include the 104th Fighter Wing at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts; the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing at Naval Air Station (NAS) Joint Reserve Base New Orleans, in Belle Chasse, Louisiana. The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II aircraft at two of these fighter wings and one squadron of F-35A Lightning II aircraft at either the 104th Fighter Wing or the 159th Fighter Wing. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings. It is also conceivable that one or more of these fighter wings would retain the legacy F-15C/D aircraft for the foreseeable future and construction associated with that alternative would be implemented to support the current legacy aircraft.

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force Instruction (AFI) 32-7061 as promulgated at 32 CFR Part 989 et seq., Environmental Impact Analysis Process, the DAF and NGB have prepared an Environmental Impact Statement (EIS), which considers the potential consequences to the human and natural environment that may result from implementation of this action. This Conformity Evaluation Report has been prepared in accordance with Section 176(c)(1) of the Clean Air Act (CAA) and as specified in requirements found in 40 CFR 93 Subpart B, and is included in Appendix D of the EIS.

This document addresses the U.S. Environmental Protection Agency's (EPA's) General Conformity Rule requirements and how they relate to the actions associated with the implementation of the Proposed Action. The CAA requires any federal agency, such as the NGB, to assess whether their proposed action would contribute to further degradation of air quality or prevent the attainment of air quality standards. The NGB proposes to implement a federal action that would contribute to regional air emissions at FAT in Fresno, California and associated environs in Fresno County, CA. Fresno County does not meet air quality standards for several air pollutants (refer to Section 3.3, *Existing Air Quality Attainment Status*). Fresno County falls within the San Joaquin Valley Intrastate Air Quality Control Region that also includes Madera County, Merced County, San Joaquin County, Stanislaus County, Tulare County, and the San Joaquin Valley Air Basin portion of Kern County (that portion of the county that straddles the Sierra

Nevada and Tehachapi mountains) (40 CFR 81.165). This eight-county area is also known as the San Joaquin Valley Air Pollution Control District (APCD).

2.0 AIR QUALITY STANDARDS

Individual states are delegated the responsibility to regulate air quality in order to achieve or maintain air quality in attainment with these standards. The California Air Resources Board enforces air pollution regulations and sets guidelines to attain and maintain the National Ambient Air Quality Standards (NAAQS). These guidelines are found in the California State Implementation Plan (SIP). Table 1 summarizes the NAAQS.

Table 1 National Ambient Air Quality Standards

<i>Pollutant</i>		<i>Primary/Secondary^{1, 2}</i>	<i>Averaging Time</i>	<i>Level</i>
Carbon Monoxide (CO)		Primary	8 hours	9 ppm
Carbon Monoxide (CO)		Primary	1 hour	35 ppm
Nitrogen Dioxide (NO ₂)		Primary	1 hour	100 ppb
Nitrogen Dioxide (NO ₂)		Primary and Secondary	Annual	53 ppb
Ozone (O ₃)		Primary and Secondary	8 hours	0.070 ppm
Particulate Matter	PM _{2.5}	Primary	Annual	12 µg/m ³
Particulate Matter	PM _{2.5}	Secondary	Annual	15 µg/m ³
Particulate Matter	PM _{2.5}	Primary and Secondary	24 hours	35 µg/m ³
Particulate Matter	PM ₁₀	Primary and Secondary	24 hours	150 µg/m ³
Sulfur Dioxide (SO ₂)		Primary	1 hour	75 ppb
Sulfur Dioxide (SO ₂)		Secondary	3 hours	0.5 ppm
Lead		Primary and Secondary	Rolling 3-month average	0.15 µg/m ³

Notes: ¹Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than 3 years after that state’s implementation plan is approved by the EPA.

²Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Legend: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; ppm = parts per million; ppb = parts per billion.

Source: EPA 2022a.

The CAA also established a national goal of preventing degradation or impairment in federally designated Class I areas. Class I areas are defined as those areas where any appreciable degradation in air quality or associated visibility impairment is considered significant. As part of the Prevention of Significant Deterioration (PSD) Program, Congress assigned mandatory Class I status to all national parks, national wilderness areas (excluding wilderness study areas or wild and scenic rivers), and memorial parks greater than 5,000 acres. In Class I areas, visibility impairment is defined as atmospheric discoloration (such as from an industrial smokestack), and a reduction in regional visual range. Visibility impairment or haze results from smoke, dust, moisture, and vapor suspended in the air. Very small particles are either formed from gases (sulfates, nitrates) or are emitted directly into the atmosphere from sources like electric utilities, industrial processes, and vehicle emissions. Stationary sources are regulated under the PSD Program, and the PSD

permitting process requires a review of impacts to all Class I areas within 62 miles of any proposed major stationary source. Mobile sources, including aircraft and associated operations such as those occurring at ANG installations, are not subject to the requirements of PSD.

2.1 AIR QUALITY DESIGNATIONS

As part of the CAA, the EPA has established criteria for major pollutants of concern, called “criteria pollutants.” These criteria pollutants include carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than or equal to 10 microns in diameter (PM₁₀), particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}), and lead. Emissions of lead are not addressed because the affected areas contain no significant sources of this criteria pollutant, and 144 FW operations would not result in substantial emissions of lead. The criteria set for these pollutants, the NAAQS, represent maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect the public health and welfare. Based on measured ambient criteria pollutant data, the EPA designates areas in the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. Areas that lack monitoring data to demonstrate attainment or nonattainment status are designated as unclassified and are treated as attainment areas for regulatory purposes. Varying levels of attainment have been established for O₃, CO, and PM₁₀ to indicate the severity of the air quality problem (i.e., the classification runs from moderate to serious for CO and PM₁₀ and from marginal to extreme for O₃).

2.2 FEDERAL REQUIREMENTS

The CAA (42 USC §§ 7401-7671q, as amended) provided the authority for the EPA to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the NAAQS, were developed for the criteria pollutants: O₃, NO₂, CO, SO₂, both coarse and fine inhalable particulate matter PM₁₀ and PM_{2.5}, and lead (refer to Table 1). The Act also requires that each state prepare a SIP for maintaining and improving air quality and eliminating violations of the NAAQS. The CAA requires federal agencies to determine whether their proposed actions in nonattainment and maintenance areas conform with the applicable SIP, and demonstrate that their actions will not (1) cause or contribute to a new violation of the NAAQS; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, emission reduction, or milestone contained in the SIP.

2.3 STATE REQUIREMENTS

The CAA requires each state to develop, adopt, and implement a SIP to achieve, maintain, and enforce federal air quality standards throughout the state. States develop SIPs on a pollutant-by-pollutant basis whenever there is a violation of one or more air quality standards.

2.4 GENERAL CONFORMITY REGULATIONS

The General Conformity Rule was promulgated by the EPA on November 30, 1993 at 40 CFR Part 93 Subpart B *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* for all federal activities except those covered under transportation conformity (EPA 1993). The General Conformity Regulations were revised by the EPA on April 5, 2010 (75 Federal Register 17253-17279) and changed the existing regulations found in 40 CFR Part 93, Subpart B (EPA 2010). The EPA also modified 40 CFR Part 51, Subpart W by changing state or Tribal adoption and submittal of general conformity SIPs from a requirement to a voluntary measure in 40 CFR § 51.851(a). In addition, the EPA provided in 40 CFR § 51.851(b) that until such time as EPA approves a state’s or Tribe’s revision to the conformity implementation plan permitted under this section, that federal agencies must meet the requirements of 40 CFR Part 93, Subpart B.

The General Conformity Rule requires any federal agency responsible for an action in a nonattainment or maintenance area to determine that the action conforms to the applicable SIP. Emissions of attainment pollutants are exempt from conformity analysis. Actions would conform to a SIP if their annual direct and indirect emissions would remain less than the applicable *de minimis* thresholds. Formal conformity determinations are required for any actions that would equal or exceed these thresholds.

Analyses required by the General Conformity Regulations focus on the net increase in air emissions from a Proposed Action compared to ongoing historical conditions. Existing SIPs are presumed to have accounted for routine, ongoing federal agency activities. Conformity analyses are further limited to those direct and indirect emissions over which the federal agency has continuing program responsibility and control over. General conformity analyses are not required to analyze emission sources beyond the responsibility and control of the federal agency. Conformity determinations are also not required to address emissions that are not reasonably foreseeable or reasonably quantifiable.

2.5 GENERAL CONFORMITY ANALYSIS PROCEDURES

The EPA General Conformity Regulations incorporate a stepwise process, beginning with an applicability analysis (EPA 1993, 2010). According to EPA guidance, before any approval is given for a federal action to go forward, the regulating federal agency must apply the applicability requirements found at 40 CFR § 93.153(b) to the federal action to evaluate whether, on a pollutant-by-pollutant basis, a determination of general conformity is required. If the regulating federal agency determines that the General Conformity Regulations do not apply to the federal action, no further analysis or documentation is required. However, if the General Conformity Regulations do apply to a federal action, the action proponent must make its own conformity determination in

accordance with the criteria and procedures outlined in the implementing regulations, publish a draft determination of general conformity for public review, consider comments from interested parties, and then publish the final determination of general conformity.

3.0 ELEMENTS OF THE PROPOSED ACTION

The Proposed Action involves both construction of new facilities to accommodate the conversion of F-15Cs to F-15EXs, or the construction of facilities required to continue the legacy mission of the F-15Cs at FAT, and operational emissions associated with the F-15EX, if selected.

3.1 CONSTRUCTION EMISSIONS

Proposed construction varies based on the location for the F-15EX aircraft beddown alternative at FAT. Construction would also be required to support the legacy aircraft at FAT if not selected for the F-15EX. All proposed construction would occur within the footprint of the installation. To ensure the maximum annual emissions from construction are captured, the calculations have been performed to account for each construction project being completed within 12 months of the year that it is programmed (e.g., if a project is planned for implementation in fiscal year [FY] 2024, the construction is assumed to occur between January and December 2025).

3.2 OPERATIONAL EMISSIONS

Operational emissions associated with the Proposed Action include emissions associated with aircraft operations and associated equipment. Mobile source emissions include emissions from aircraft operations (takeoffs and landings), aerospace ground equipment (AGE), personal vehicle operations, and maintenance aircraft operations performed with the engines still mounted on the aircraft (engine run-ups and trim checks). The Proposed Action would include either an increase of 101 personnel under the F-15EX beddown.

Under the Proposed Action, the 144 FW would convert from 21 F-15C aircraft (includes Primary Aerospace Vehicles Authorized and Backup Aerospace Vehicles Authorized) to 24 F-15EX. If the 144 FW is selected to receive is selected to receive the F-15EX, the aircraft would be on-site and operational in 2027. Baseline operations for the F-15C aircraft at FAT total 3,802 operations annually. The number of annual operations would increase by 3,086 annual operations under the Proposed Action for the F-15EX.

3.3 EXISTING AIR QUALITY ATTAINMENT STATUS

The San Joaquin Valley APCD is currently designated as nonattainment for the following NAAQS: 8-hour O₃ (extreme), 24-hour PM_{2.5} (serious), and annual PM_{2.5} (serious) (40 CFR 81.305 and EPA 2022b). Volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) are

precursors to the formation of O₃, and SO₂ is a precursor to the formation of PM_{2.5}. In June 2021, the EPA announced it will reconsider the 2020 decision to retain the particulate matter NAAQS, which were last strengthened in 2012, because available scientific evidence and technical information indicate that the current standards may not be adequate to protect public health and welfare, as required by the CAA (EPA 2022c).

The San Joaquin Valley APCD reached levels of attainment status for PM₁₀ in December 2008 and was reclassified from “non-attainment” to “maintenance,” and is designated as unclassifiable, attainment, or better than national standards for the federal SO₂, CO, NO₂, and Pb NAAQS. The applicable *de minimis* thresholds for the area are listed in Table 2.

Table 2 Applicable General Conformity *De Minimis* Thresholds (tons per year)

<i>Affected Areas</i>	<i>VOCs</i> ¹	<i>NO_x</i> ¹	<i>SO₂</i> ¹	<i>PM₁₀</i>	<i>PM_{2.5}</i>
San Joaquin Valley APCD	10	10	70	100	70

Notes: ¹VOCs and NO_x are precursors to the formation of O₃; SO₂ is a precursor to the formation of PM_{2.5}.

Legend: NO_x = Nitrogen Oxides; PM_{2.5} = Particulate Matter Less Than or Equal to 2.5 Microns in Diameter; PM₁₀ = Particulate Matter Less Than or Equal to 10 Microns in Diameter; SO₂ = Sulfur Dioxide; VOC = Volatile Organic Compound.

Source: 40 CFR 93.153(b)(2).

4.0 GENERAL CONFORMITY EVALUATION

4.1 APPLICABILITY ANALYSIS

The first step in a general conformity evaluation is an analysis of whether the requirements apply to the federal action that is proposed in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a federal action requires a general conformity determination for each pollutant where the total of direct and indirect emissions caused by the federal action would equal or exceed an annual *de minimis* emission rate for any given maintenance or nonattainment pollutant (or precursor). If a proposed action would result in emission increases less than the identified applicable *de minimis thresholds*, then no conformity determination is required.

4.2 EXEMPTIONS FROM GENERAL CONFORMITY REQUIREMENTS

The general conformity requirements apply to a federal action if the net project emissions equal or exceed certain *de minimis* emission rates established in the General Conformity Regulations. The *de minimis* thresholds differ based on the severity of the nonattainment status. The only exceptions to this applicability criterion include certain federal actions that are presumed to conform because of the thorough air quality analysis required to comply with other statutory requirements. Examples of these actions include those subject to the New Source Review program and remedial activities under the Comprehensive Environmental Response, Compensation, and Liability Act.

Other federal actions exempt from the conformity process include those actions that would result in no increase in emissions, or an increase in emissions that is clearly *de minimis*. Examples include continuing or recurring activities, routine maintenance and repair, and administrative and planning actions; however, the emissions that would result from this federal action do not meet any of these exempt categories. For this reason, a Level II Quantitative Assessment, as described in the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2* (DAF 2019) was performed. This analysis is used to prepare an estimate of the worst-case annual net change (the total direct and indirect emissions associated with the Proposed Action) and these emissions were compared against *de minimis* thresholds for the pollutants of concern – VOCs, NO_x, SO₂, PM₁₀, and PM_{2.5}. Emissions were estimated using flight operations data and flight profiles for the installation, and aircraft model-specific emission factors, along with emission estimates generated in the Air Conformity Applicability Model (ACAM), along with AGE, and personal vehicle operations. Construction emission estimates were prepared using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 (California Air Pollution Control Officers Association 2023). Default values in CalEEMod were used for the length of construction phases within each calendar year and construction equipment used during each phase, which correspond to the total acres proposed for construction. Assumptions for on-road vehicle trips related to construction worker commutes and material deliveries were developed based on the total square footage of construction planned for each year as well as the number of pieces of construction equipment per phase. For the purpose of estimating emissions, no construction-phase mitigation measures for NO_x were assumed. The results were used to quantify the Proposed Action emissions.

4.3 EMISSION ESTIMATES

Existing emissions quantified include emissions from the F-15C aircraft, which would be replaced under the Proposed Action by the F-15 EX aircraft. Annual operations under the Proposed Action for the F-15EX are anticipated to increase to 6,866 operations per year at the airfield compared to the existing 3,802 annual operations currently flown with the F-15C. If the 144 FW is not selected to receive the F-15EX aircraft, then ANG operations at the airfield would not change from current operations for the foreseeable future.

To evaluate emissions from ongoing historical conditions for evaluating the net emissions increases/decreases associated with the Proposed Action, aircraft operation emission estimates were derived from the DAF's ACAM version 5.0.18b, using installation-specific data including landings and takeoffs, closed patterns, and annual engine testing. Emission estimates were developed for the F-15C aircraft, using the Pratt and Whitney F100-PW-220 engine. Aircraft operation emission estimates were derived from the DAF's ACAM version 5.0.18b, using installation-specific data including landings and take-offs, closed patterns, and on-ground

maintenance activities. AGE operations emissions were estimated using data provided by the installation, ACAM, and EPA’s NONROAD. Chapter 3.0 and Appendix D of the EIS provide a discussion of the methodology for quantifying emissions. Table 3 presents the total mobile source emissions associated with operations of the F-15C aircraft.

Table 3 144 FW F-15C Emissions at FAT (tons per year)

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
F-15C Aircraft Operations	25.85	26.37	3.90	2.48	2.22
AGE	0.25	2.18	0.25	0.24	0.23
Total	26.10	30.44	4.15	2.72	2.45

Notes: ¹Includes maintenance tests.

¹Numbers may not add up due to rounding.

Legend: AGE = aerospace ground equipment; NO_x = Nitrogen Oxides; VOCs = Volatile Organic Compounds.

Construction activities at the 144 FW include demolition or renovation of existing structures, construction of new structures, and infrastructure upgrades, and would depend on the aircraft selected and location selected:

As described in the EIS Section CA2.1.3, there are two locational scenarios for construction projects considered for the F-15EX conversion:

- Locational Scenario 1: construction would occur at the current 144 FW cantonment area south of the runway, or
- Locational Scenario 2: the majority of the construction would occur at the current 144 FW cantonment area, with some projects related to the Aerospace Control Alert mission occurring north of the runway.

Table 4 provides information on the construction projects anticipated to support the arrival of the F-15EX or the continuation of the legacy F-15C mission.

Table 4 Construction Projects for 144 FW at FAT

<i>Project ID</i>	<i>Project Name</i>	<i>Year</i>	<i>F-15EX Location</i>		<i>Legacy F-15C</i>
			<i>1</i>	<i>2</i>	
1	Construct Munitions Administration	2025	X	X	X
2	Construct Three Phase ECP – Munitions Dakota Gate	2026	X	X	X
3	Construct Three Phase ECP – Main Gate	2026	X	X	X
4	Construct Vehicle Maintenance Complex	2025	X	X	X
5	Construct Med Training and SFS EMEDS Facility	2025	X	X	X
6	Repair Airfield Pavements (south side)	2026	X	X	X
7	Repair Munitions M&I (Building 2600)	2029	X	X	

Project ID	Project Name	Year	F-15EX Location		Legacy F-15C
			1	2	
8	ADAL Building 2606 for ATG Munitions & MAC Pad	2028	X	X	
9.1 (Option 1)	Construct Fire Station (Option 1) (South side)	2025	X	X	
9.2 (Option 2)	Construct Fire Station (Option 2) (North side - northwest of the Marine Corps ramp)	2025		X	
10	ADAL Squadron Operations (Building 194)	2026	X	X	
11	Repair Small Maintenance Hangar (Building 159)	2026	X	X	
12	Repair Fuel Cell HVAC (Building 157)	2029	X	X	
13	ADAL Alert Crew Readiness (South side)	2027	X		
14	Construct F-15EX Four Bay FMS Facility (South side)	2028	X	X	
15	Construct WLT (F-15EX South side)	2028	X	X	
16	Construct CFT Maintenance (South side)	2028	X	X	
17	Construct Alert Spots 5 & 6 (North side)	2029		X	
18	Construct Alert Complex (North side)	2025		X	
19	Construct North Utilities Infrastructure (North side)	2025		X	
20	Construct ECP – E. Airway Boulevard	2025		X	
21	Building 130 Renovation	2025			X
22	Building 135 Dining Facility Remodel	2025			X

Legend: ADAL = Addition and Alteration; ASE = Aircraft Support Equipment; ATG = air-to-ground; CFT = Conforming Fuel Tank; ECP = Entry Control Point; EMEDS = Expeditionary Medical Support; FMS = Full Mission Simulator; HVAC = Heating, Ventilation, and Air Conditioning; M&I = Maintenance and Inspection; MAC = Munitions Assembly Conveyor; MCCA = Military Construction Cooperative Agreement; SFS = Security Forces Squadron; WLT = Weapons Load Crew Training.

Table 5 presents a summary of anticipated construction footprints. Additional details on the individual construction projects are available in Appendix C of the EIS.

Table 5 Summary of Construction Footprints

Year	Locational Scenario 1		Locational Scenario 2	
	SF of New Construction or Renovation ¹	SF of Demolition ¹	SF of New Construction or Renovation ¹	SF of Demolition ¹
2025	50,600	42,502	157,110	42,502
2026	83,690	36,823	83,690	36,823
2027	3,400	3,400	N/A	N/A
2028	33,100	800	33,100	800
2029	6,250	6,250	6,250	6,250

Tables 6 and 7 summarize the annual construction emissions associated with the conversion to the F-15EX at the two location options.

Table 6 Annual Emissions Estimates for Construction with the F-15EX Conversion at Locational Scenario 1 at the 144 FW Installation (tons per year)

Year	VOCs	NO _x	SO ₂	PM ₁₀	PM _{2.5}
2025	0.86	3.85	0.01	0.30	0.19
2026	1.87	7.25	0.02	7.55	1.28
2027	0.05	0.31	0.00	0.02	0.01
2028	0.58	2.37	0.01	0.13	0.10
2029	0.10	0.58	0.00	0.03	0.02

Legend: NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

Table 7 Annual Emissions Estimates for Construction with the F-15EX Conversion at Locational Scenario 2 at the 144 FW Installation (tons per year)

Year	VOCs	NO _x	SO ₂	PM ₁₀	PM _{2.5}
2025	2.10	8.23	0.02	0.77	0.44
2026	1.87	7.25	0.02	7.55	1.28
2027	N/A	N/A	N/A	N/A	N/A
2028	0.58	2.37	0.01	0.13	0.10
2029	0.34	2.35	0.01	0.14	0.10

Legend: NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

Should the 144 FW retain the F-15C legacy aircraft at FAT, impacts would be less intensive in magnitude than the stationing of the F-15EX, as fewer construction projects with less square footage would be implemented. No additional personnel would be added to the 144 FW installation and the F-15C airfield operations would remain the same as baseline conditions. Table 8 shows the emissions for construction activities under the F-15C legacy aircraft scenario which are compared to the *de minimis* thresholds.

Table 8 Annual Emissions Estimates for Construction with the Legacy F-15C at the 144 FW Installation (tons per year)

<i>Year</i>	<i>VOCs</i>	<i>NO_x</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
2025	0.73	3.09	0.01	0.18	0.13
2026	1.40	3.57	0.01	7.47	1.23
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No

Legend: NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

If the 144 FW is selected to receive the F-15EX, the aircraft would be based at the installation by FY 2027–2028. Drawdown of the 144 FW’s F-15C aircraft would be complete approximately 6 months prior to the initial arrival of the new aircraft. The emissions account for the difference in the engine operations between the F-15C and the F-15EX, the increase in annual operations, and an increase in commuting personnel who would be assigned to the 144 FW installation as a result of beddown of the F-15EX. Despite an 81 percent increase in 144 FW operations with the F-15EX at the airfield, operational emissions would be slightly reduced for VOCs and slightly increased for NO_x, CO, SO₂, PM₁₀, PM_{2.5}, and CO_{2e}. This can generally be attributed to the differences in the emissions factors for the F-15C using two Pratt and Whitney F100-PW-220 engines and the F-15EX aircraft using two General Electric F110-GE-129 engines. Operational emissions associated with the Proposed Action are summarized in Table 9.

Table 9 144 FW Projected F-15 EX Operational Emissions, 2027 (Steady State) (tons per year)

<i>Emission Source</i>	<i>VOCs</i>	<i>NO_x</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
F-15C Current Airfield Operations removed	-26.10	-30.44	-4.15	-2.72	-2.45
F-15EX Airfield Operations added	15.68	34.56	4.39	7.89	7.13
Net Change in Airfield Emissions – F-15EX	-10.42	4.13	0.24	5.17	4.68
F-15EX – Additional Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2027 (Steady State) Total Net Change Emissions	-10.28	4.19	0.24	5.18	4.68

Legend: NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

The total annual emissions for both construction and operations occurring in a calendar year are presented in Tables 10 and 11.

Table 10 Total Annual Emissions Estimates for Construction and Operations with the F-15EX Conversion, Locational Scenario 1 at the 144 FW Installation (tons per year)

<i>Year/Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
2025 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.86	3.85	0.01	0.30	0.19
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2026 Estimated Annual Net Change Air Emissions					
Construction Emissions	1.87	7.25	0.02	7.55	1.28
Net Change – F-15EX Operations Emissions (50% Transition)	-5.21	2.06	0.12	2.59	2.34
Commuter Emissions (50% Transition)	0.07	0.03	0.00	0.01	0.00
Total 2026 Estimated Emissions¹	-3.27	9.35	0.14	10.14	3.62
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2027 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.05	0.31	0.00	0.02	0.01
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
Total 2027 Estimated Emissions¹	-10.22	4.49	0.24	5.20	4.69
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2028 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.58	2.37	0.01	0.13	0.10
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2028 Total Net Change Emissions¹	-9.69	6.55	0.25	5.32	4.77
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2029 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.10	0.58	0.00	0.03	0.02
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2029 Total Net Change Emissions¹	-10.17	4.77	0.24	5.21	4.70
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2030 Estimated Annual Net Change Air Emissions (Steady State)					
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2030 Total Net Change Emissions¹	-10.28	4.19	0.24	5.18	4.68
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No

Note: ¹Numbers may not add up due to rounding.

Legend: N/A = not applicable; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

Table 11 Total Annual Emissions Estimates for Construction and Operations with the F-15EX Conversion, Locational Scenario 2 at the 144 FW Installation (tons per year)

<i>Year/Emissions Source</i>	<i>VOCs</i>	<i>NO_x</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
2025 Estimated Annual Net Change Air Emissions					
Construction Emissions	2.10	8.23	0.02	0.77	0.44
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2026 Estimated Annual Net Change Air Emissions					
Construction Emissions	1.87	7.25	0.02	7.55	1.28
Net Change – F-15EX Operations Emissions (50% Transition)	-5.21	2.06	0.12	2.59	2.34
Commuter Emissions (50 % Transition)	0.07	0.03	0.00	0.01	0.00
2026 Total Net Change Emissions¹	-3.27	9.35	0.14	10.14	3.62
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2027 Estimated Annual Net Change Air Emissions					
Construction Emissions	--	--	--	--	--
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2027 Total Net Change Emissions¹	-10.28	4.19	0.24	5.18	4.68
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2028 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.58	2.37	0.01	0.13	0.10
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2028 Total Net Change Emissions¹	-9.69	6.55	0.25	5.32	4.77
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2029 Estimated Annual Net Change Air Emissions					
Construction Emissions	0.34	2.35	0.01	0.14	0.10
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2029 Total Net Change Emissions¹	-9.94	6.54	0.25	5.32	4.78
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No
2030 Estimated Annual Net Change Air Emissions (Steady State)					
Net Change – F-15EX Operations Emissions	-10.42	4.13	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.00	0.01	0.00
2030 Total Net Change Emissions¹	-10.28	4.19	0.24	5.18	4.68
<i>de minimis</i> Threshold	10	10	70	100	70
Exceeds Threshold	No	No	No	No	No

Note: ¹Numbers may not add up due to rounding.

Legend: N/A = not applicable; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; PM₁₀ = particulate matter less than or equal to 10 microns in diameter; SO₂ = sulfur dioxide; VOCs = volatile organic compounds.

4.4 APPLICABILITY OF GENERAL CONFORMITY TO THIS FEDERAL ACTION

The applicability of the General Conformity requirements to the Proposed Action was determined by comparing the federal action emissions to the conformity *de minimis* thresholds for all nonattainment and maintenance pollutants in the region of influence. As shown in Tables 10 and 11 (F-15EX conversion at FAT), the emissions of all pollutants are lower than their applicable *de minimis* thresholds.

5.0 FINDING OF CONFORMITY

In accordance with 40 CFR Part 93, Subpart B and the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2* (DAF 2019), the emissions due to the Proposed Action were evaluated, including reasonable foreseeable direct and indirect emissions. The applicability analysis has found that:

- General Conformity is not applicable to this proposed federal action,
- a Conformity Determination is not required, and
- the General Conformity Evaluation is complete with a completed Record of Conformity Analysis (ROCA) to document the conclusion (included in Attachment 1 to this document).

6.0 REFERENCES

California Air Pollution Control Officers Association. 2023. California Emissions Estimator Model®. Accessed at: <http://www.aqmd.gov/caleemod/>.

Department of the Air Force (DAF). 2019. Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide – Fundamentals, Volume 1 of 2. May.

United States Environmental Protection Agency (EPA). 1993. Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule. 40 CFR Parts 6, 51, and 93. 30 November.

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_____. 2022a. NAAQS Table. Accessed at: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

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AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

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: FRESNO ANGB
State: California
County(s): Fresno
Regulatory Area(s): San Joaquin Valley, CA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: Fresno F-15EX

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2026

e. Action Description:

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

Name: Caitlin Jafolla
Title: Air Quality SME
Organization: Cardno now Stantec
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
 not applicable

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Location 1 – South

<i>Emissions Source</i>						
Construction Emissions	0.86	3.85	4.83	0.01	0.30	0.19
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	1.87	7.25	8.64	0.02	7.55	1.28
Net Change – F-15EX Operations Emissions (50% transition)	-5.21	2.06	3.19	0.12	2.59	2.34
Commuter Emissions (50% transition)	0.07	0.03	0.42	0.00	0.01	0.00
Total 2026 Estimated Emissions¹	-3.27	9.35	12.24	0.14	10.14	3.62
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.05	0.31	0.40	0.00	0.02	0.01
Net Change – F-15EX Operations Emissions (100% conversion - steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
Total 2027 Estimated Emissions¹	-10.22	4.49	7.60	0.24	5.20	4.69
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.58	2.37	2.82	0.01	0.13	0.10
Net Change – F-15EX Operations Emissions (steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2028 Total Net Change Emissions¹	-9.69	6.55	10.02	0.25	5.32	4.77
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.10	0.58	0.75	0.00	0.03	0.02
Net Change – F-15EX Operations Emissions (steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2029 Total Net Change Emissions¹	-10.17	4.77	7.95	0.24	5.21	4.70
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Exceeds Threshold	No	No	No	No	No	No
Net Change – F-15EX Operations Emissions	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2030 Total Net Change Emissions¹	-10.28	4.19	7.20	0.24	5.18	4.68
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No

Location 2 – North

<i>Emissions Source</i>						
Construction Emissions	2.10	8.23	10.21	0.02	0.77	0.44
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	1.87	7.25	8.64	0.02	7.55	1.28
Net Change – F-15EX Operations Emissions (50% transition)	-5.21	2.06	3.19	0.12	2.59	2.34
Commuter Emissions (50% transition)	0.07	0.03	0.42	0.00	0.01	0.00
Total 2026 Estimated Emissions¹	-3.27	9.35	12.24	0.14	10.14	3.62
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	--	--	--	--	--	--
Net Change – F-15EX Operations Emissions (100% conversion - steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
Total 2027 Estimated Emissions¹	-10.28	4.19	7.20	0.24	5.18	4.68
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.58	2.37	2.82	0.01	0.13	0.10
Net Change – F-15EX Operations Emissions (steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2028 Total Net Change Emissions¹	-9.69	6.55	10.02	0.25	5.32	4.77

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.34	2.35	2.77	0.01	0.14	0.10
Net Change – F-15EX Operations Emissions (steady state)	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2029 Total Net Change Emissions¹	-9.94	6.54	9.98	0.25	5.32	4.78
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	Yes	No	No	No	No
Net Change – F-15EX Operations Emissions	-10.42	4.13	6.37	0.24	5.17	4.68
Commuter Emissions	0.14	0.06	0.83	0	0.01	0
2030 Total Net Change Emissions¹	-10.28	4.19	7.20	0.24	5.18	4.68
<i>de minimis</i> or Comparative Threshold	10	10	250	70	100	70
Exceeds Threshold	No	Yes	No	No	No	No

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.



Caitlin Jafolla, Air Quality SME

22 February 2023

DATE

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AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

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: NEW ORLEANS JRB
State: Louisiana
County(s): Plaquemines
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: NOLA F-15EX

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2026

e. Action Description:

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

Name: Caitlin Jafolla
Title: Air Quality SME
Organization: Cardno now Stantec
Email:
Phone Number:

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

applicable
 not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

“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 National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are “Clearly Attainment” (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are “Near Nonattainment” (i.e., within 5% of any NAAQS). These 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. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action’s net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

<i>Emissions Source</i>						
Construction Emissions	1.26	0.97	2.12	0.00	0.04	0.03
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.54	0.94	1.67	0.00	0.18	0.03
Net Change – F-15EX Operations Emissions (50% transition)	5.88	5.74	35.68	0.45	4.52	4.09
Commuter Emissions (50% transition)	0.076	0.045	1.14	0.00	0.00	0.00
Total 2026 Estimated Emissions¹	6.50	6.72	38.49	0.46	4.70	4.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.23	0.90	1.59	0.00	0.12	0.03
Net Change – F-15EX Operations Emissions (100% conversion - steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
Total 2027 Estimated Emissions¹	12.15	12.47	75.23	0.91	9.17	8.21
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	2.01	1.41	2.75	0.00	7.68	0.05
Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18

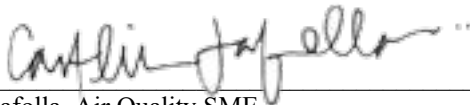
AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2028 Total Net Change Emissions¹	13.93	12.98	76.39	0.92	16.73	8.23
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.45	0.93	1.62	0.00	0.21	0.03
Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2029 Total Net Change Emissions¹	12.37	12.50	75.26	0.91	9.26	8.21
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.18	0.90	1.46	0.00	0.06	0.03
Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2030 Total Net Change Emissions¹	12.10	12.47	75.10	0.91	9.11	8.21
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.21	1.11	1.56	0.00	2.83	0.04
Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2031 Total Net Change Emissions¹	12.12	12.68	75.20	0.91	11.88	8.23
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.58	1.27	1.94	0.00	0.56	0.04
Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2032 Total Net Change Emissions¹	12.50	12.84	75.58	0.92	9.61	8.23
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.84	1.29	2.12	0.00	0.11	0.04

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

Net Change – F-15EX Operations Emissions (steady state)	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2033 Total Net Change Emissions¹	12.76	12.86	75.76	0.92	9.16	8.23
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Net Change – F-15EX Operations Emissions	11.76	11.48	71.36	0.91	9.05	8.18
Commuter Emissions	0.15	0.09	2.28	0.00	0.00	0.00
2034 Total Net Change Emissions¹	11.92	11.57	73.64	0.91	9.05	8.18
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.



Caitlin Jafolla, Air Quality SME

07/07/2023

DATE

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

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: NEW ORLEANS JRB
State: Louisiana
County(s): Plaquemines
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: NOLO F-35A

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2025

e. Action Description:

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

Name: Caitlin Jafolla
Title: Air Quality SME
Organization: Cardno now Stantec
Email: caitlin.jafolla@cardno-gs.com
Phone Number:

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

applicable
 not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

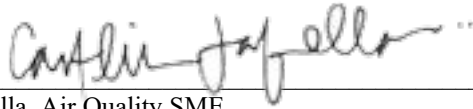
AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

Construction Emissions	0.59	1.16	1.76	0.00	0.17	0.04
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2028 Total Net Change Emissions¹	-29.19	10.91	-46.99	0.75	6.90	6.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.45	0.93	1.62	0.00	0.21	0.03
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2029 Total Net Change Emissions¹	-29.32	10.68	-47.13	0.75	6.95	6.11
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.22	1.16	1.64	0.00	0.07	0.04
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2030 Total Net Change Emissions¹	-29.56	10.91	-47.11	0.75	6.80	6.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.21	1.11	1.56	0.00	2.83	0.04
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2031 Total Net Change Emissions¹	-29.56	10.86	-47.19	0.75	9.56	6.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Construction Emissions	0.58	1.27	1.94	0.00	0.56	0.04
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2032 Total Net Change Emissions¹	-29.19	11.02	-46.81	0.75	7.29	6.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

<i>2033 Estimated Annual Net Change Air Emissions</i>						
Construction Emissions	0.84	1.29	2.12	0.00	0.11	0.04
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2033 Total Net Change Emissions¹	-28.93	11.03	-46.64	0.75	6.85	6.12
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No
Net Change – F-35A Operations Emissions	-29.89	9.68	-50.56	0.74	6.73	6.08
Commuter Emissions	0.12	0.07	1.80	0.00	0.00	0.00
2034 Total Net Change Emissions¹	-29.77	9.75	-48.75	0.74	6.73	6.08
<i>de minimis</i> or Comparative Threshold	250	250	250	250	250	250
Exceeds Threshold	No	No	No	No	No	No

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.



Caitlin Jafolla, Air Quality SME

07/07/23

DATE

Baseline

Group	Aircraft	LTOs			
		Day	Eve	Night	Total
144th FW	F-15C	1,668	141	2	1811
144th FW	C-26	150	8	2	160
Army Guard	UH-60	423	30	12	465
Army Guard	CH-47	142	10	3	155
	Total	2,383	189	19	2591

Ratio

70% of all mil LTOs at FAT are F-15C

F-15EX Alternative

Group	Aircraft	LTOs			
		Day	Eve	Night	Total
144 FW	F-15EX	3,022	255	4	3281
Other Military	C-26, UH60, CH47	715	48	17	780

Ratio

81% of all mil LTOs at FAT would be F-15EX

4061

Additional AGE NOTE: These are equipment that are not in ACAM. Emission factors derived from MOVES 3, Airport Support Equipment, using 2010 as the year to account for older equipment

Equipment	Type	Model	HP	Avg Run Time per Year (hr)	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
HYD PURIFIER	AC	100033-100	10	87.22	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05
Generator	GENERATOR SET, DIESEL	AM32A-112	160	340.94	0.640	2.334	5.843	0.054	0.475	0.461	529	0.02
Bomblift	TRUCK, BOMBLIFT, AERIAL	MJ-1C	29.1	1,419.26	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
Bomb Lift	TRUCK, BOMBLIFT, AERIAL	MHU-83D/E	26.1	1,450.97	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
N2 Servicing Cart		NGC-15-TM	49	253.72	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
N2 Servicing Cart		130009-100	165	261.65	0.376	1.650	4.325	0.054	0.336	0.326	536	0.02
MC-20	rotary air compressor	MC-20-WHTZ-T4	10.2	444.01	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05
HDU-43	duct type heater	HDU-43	6	134.79	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05

Emissions in lb/year

	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2	CH4	CO2e
THOR 200	1.38	10.12	8.46	0.12	1.19	1.16	1,142.35	0.10	1,145
AM32A-112	76.96	280.71	702.65	6.44	57.18	55.47	63,640.70	2.03	63,691
MJ-1C	37.65	205.39	395.20	5.48	38.29	37.14	54,174.17	2.94	54,248
MHU-83D/E	34.53	188.33	362.38	5.02	35.11	34.06	49,674.99	2.69	49,742
NGC-15-TM	11.33	61.83	118.96	1.65	11.53	11.18	16,307.66	0.88	16,330
130009-100	35.74	157.05	411.64	5.16	31.95	30.99	50,993.18	1.88	51,040
MC-20-WHTZ-T4F-E0	7.19	52.56	43.93	0.60	6.19	6.01	5,931.93	0.50	5,945
HDU-43	1.28	9.39	7.84	0.11	1.11	1.07	1,059.27	0.09	1,062
Total in Tons	0.10	0.48	1.03	0.01	0.09	0.09	121.46	0.01	122

AGE in ACAM

Equipment	Type	Model	HP	Avg Run Time per Year (hr)	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
Generator	GENERATOR, GAS TURBINE	A/M32A-60/A	180	2,783.02	0.270	5.480	1.820	0.306	0.211	0.205	221.10
Floodlights	FLOODLIGHT SET	FL-1D	10.5	1,030.75	0.025	0.13	0.17	0.043	0.16	0.155	30.7
Floodlights	FLOODLIGHT SET	NF-2D	10	1,712.63	0.01	0.08	0.11	0.043	0.01	0.01	22.1
MC-7	rotary air compressor	11M125RPDQ	48	459.87	0.057	0.642	1.285	0.023	0.109	0.105	75
Mule	TEST STAND, HYDRAULIC	TTU-228E/228	130	364.73	0.19	2.46	3.85	0.238	0.083	0.076	172

Efs from ACAM

NF-2 used for NF-2D

Emissions in lb/yr

	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
A/M32A-60/A	751.41	15250.93	5065.09	851.60	587.22	570.52	615325.10
FL-1D	25.77	134.00	175.23	44.32	164.92	159.77	31643.94
NF-2D	17.13	137.01	188.39	73.64	17.13	17.13	37849.03
11M125RPDQ	26.21	295.24	590.94	10.58	50.13	48.29	34490.38
TTU-228E/228	69.30	897.23	1404.19	86.80	30.27	27.72	62732.85
Total in tons	0.44	8.36	3.71	0.53	0.42	0.41	391.02

	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
AGE Emission Totals for Baseline	0.55	8.84	4.74	0.55	0.52	0.50	513

F-15EX

Additional AGE NOTE: These are equipment that are not in ACAM. Emission factors derived from MOVES 3, Airport Support Equipment, using 2010 as the year to account for older equipment

Equipment	Type	Model	HP	Avg Run Time per Year (hr)	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2	CH4
HYD PURIFIER	AC	100033-100	10	180.64	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05
Generator	GENERATOR SET, DIESEL	AM32A-112	160	706.15	0.640	2.334	5.843	0.054	0.475	0.461	529	0.02
Bomblift	TRUCK, BOMBLIFT, AERIAL	MJ-1C	29.1	2,939.53	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
Bomb Lift	TRUCK, BOMBLIFT, AERIAL	MHU-83D/E	26.1	3,005.22	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
N2 Servicing Cart		NGC-15-TM	49	525.50	0.414	2.256	4.340	0.060	0.421	0.408	595	0.03
N2 Servicing Cart		130009-100	165	541.93	0.376	1.650	4.325	0.054	0.336	0.326	536	0.02
MC-20	rotary air compressor	MC-20-WHTZ-T4	10.2	919.63	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05
HDU-43	duct type heater	HDU-43	6	279.17	0.720	5.264	4.399	0.060	0.620	0.602	594	0.05

Emissions in lb/year

	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2	CH4	CO2e
THOR 200	2.87	20.96	17.52	0.24	2.47	2.40	2,366.02	0.20	2,371
AM32A-112	159.40	581.39	1455.31	13.33	118.43	114.88	131,810.98	4.20	131,916
MJ-1C	77.98	425.39	818.53	11.35	79.31	76.93	112,204.15	6.08	112,356
MHU-83D/E	71.51	390.07	750.55	10.40	72.72	70.54	102,885.57	5.57	103,025
NGC-15-TM	23.48	128.05	246.40	3.42	23.87	23.16	33,776.01	1.83	33,822
130009-100	74.03	325.28	852.58	10.68	66.17	64.18	105,615.76	3.89	105,713
MC-20-WHTZ-T4F-E0	14.88	108.86	90.98	1.24	12.83	12.44	12,286.07	1.05	12,312
HDU-43	2.66	19.44	16.25	0.22	2.29	2.22	2,193.94	0.19	2,199
Total in Tons	0.21	1.00	2.12	0.03	0.19	0.18	251.57	0.012	252

AGE in ACAM

Equipment	Type	Model	HP	Avg Run Time per Year (hr)	EFs in lb/hr						
					VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
Generator	GENERATOR, GAS TURBINE	A/M32A-60/A	180	5,764.11	0.270	5.480	1.820	0.306	0.211	0.205	221.10
Floodlights	FLOODLIGHT SET	FL-1D	10.5	2,134.86	0.025	0.13	0.17	0.043	0.16	0.155	30.7
Floodlights	FLOODLIGHT SET	NF-2D	10	3,547.15	0.01	0.08	0.11	0.043	0.01	0.01	22.1
MC-7	rotary air compressor	11M125RPDQ	48	952.47	0.057	0.642	1.285	0.023	0.109	0.105	75
Mule	TEST STAND, HYDRAULIC	TTU-228E/228	130	755.41	0.19	2.46	3.85	0.238	0.083	0.076	172

EFs from ACAM
NF-2 used for NF-2D

Emissions in lb/yr							
	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
A/M32A-60/A	1556.31	31587.34	10490.69	1763.82	1216.23	1181.64	1274445.57
FL-1D	53.37	277.53	362.93	91.80	341.58	330.90	65540.11
NF-2D	35.47	283.77	390.19	152.53	35.47	35.47	78391.95
11M125RPDQ	54.29	611.49	1223.93	21.91	103.82	100.01	71435.60
TTU-228E/228	143.53	1858.31	2908.33	179.79	62.70	57.41	129930.68
Total in tons	0.92	17.31	7.69	1.10	0.88	0.85	810

	VOCs	CO	NOx	SO2	PM10	PM2.5	CO2e
AGE Emission Totals for F-15EX/F-35	1.13	18.31	9.81	1.13	1.07	1.04	1062
Change in Emissions	0.59	9.47	5.07	0.58	0.55	0.54	549

Baseline AGE Data

EQUIP ID	TYPE	NOMENCLATURE	MODEL NUMBER	AVG HOURS / Day	NOLA NAA	NOLA PA
A05	-60	GENERATOR	A/M32A-60/A	1.20		
A18	-60	GENERATOR	A/M32A-60/A	0.36		
A11	-60	GENERATOR	A/M32A-60/A	0.38		
A62	-60	GENERATOR	A/M32A-60/A	0.37		
A20	-60	GENERATOR	A/M32A-60/A	0.37		
A80	-60	GENERATOR	A/M32A-60/A	0.11		
A26	-60	GENERATOR	A/M32A-60/A	0.40		
TG01	-60	GENERATOR	A/M32A-60/A	0.30		
GT10	-60	GENERATOR	A/M32A-60/A	0.02		
			NAA Total Hrs per Day	3.51		
			NAA Total Hrs per Year	1281.15		
			NAA Total Hrs per Sortie	0.71	2,783	5,764
			PA Total Hrs Per Year	2321.07		
DG01	B809	GENERATOR	AM32A-112	0.11		
DG02	B809	GENERATOR	AM32A-112	0.11		
DG86	B809	GENERATOR	AM32A-112	0.16		
DG87	B809	GENERATOR	AM32A-112	0.05		
			NAA Total Hrs per Day	0.43		
			NAA Total Hrs per Year	156.95		
			NAA Total Hrs per Sortie	0.09	341	706
			PA Total Hrs Per Year	284.35		
BL49	MJ-1C	BOMBLIFT	MJ-1C	0.09		
B43	MJ-1C	BOMBLIFT	MJ-1C	0.05		
B69	MJ-1C	BOMBLIFT	MJ-1C	0.14		
B70	MJ-1C	BOMBLIFT	MJ-1C	0.42		
B44	MJ-1C	BOMBLIFT	MJ-1C	0.04		
B45	MJ-1C	BOMBLIFT	MJ-1C	0.25		
B46	MJ-1C	BOMBLIFT	MJ-1C	0.30		
B47	MJ-1C	BOMBLIFT	MJ-1C	0.39		
B48	MJ-1C	BOMBLIFT	MJ-1C	0.05		
B57	MJ-1C	BOMBLIFT	MJ-1C	0.06		
			NAA Total Hrs per Day	1.79		
			NAA Total Hrs per Year	653.35		
			NAA Total Hrs per Sortie	0.36	1,419	2,940
			PA Total Hrs Per Year	1183.68		
B32	MHU-83	BOMBLIFT	MHU-83D/E	0.03		
B24	MHU-83	BOMBLIFT	MHU-83D/E	0.34		
B37	MHU-83	BOMBLIFT	MHU-83D/E	0.03		
B41	MHU-83	BOMBLIFT	MHU-83D/E	0.04		
B50	MHU-83	BOMBLIFT	MHU-83D/E	1.31		
BL39	MHU-83	BOMBLIFT	MHU-83D/E	0.06		
D77	MHU-83	BOMBLIFT	MHU-83D/E	0.02		
			NAA Total Hrs per Day	1.83		
			NAA Total Hrs per Year	667.95		
			NAA Total Hrs per Sortie	0.37	1,451	3,005
			PA Total Hrs Per Year	1210.13		
C40	FL-1D	LIGHTS	FL-1D	0.36		
C53	FL-1D	LIGHTS	FL-1D	0.48		
C15	FL-1D	LIGHTS	FL-1D	0.28		
C16	FL-1D	LIGHTS	FL-1D	0.18		
			NAA Total Hrs per Day	1.30		
			NAA Total Hrs per Year	474.50		
			NAA Total Hrs per Sortie	0.26	1,031	2,135

			PA Total Hrs Per Year	859.65		
C20	NF-2D	LIGHTS	NF-2D	0.17	NF-2	
C37	NF-2D	LIGHTS	NF-2D	0.20		
C77	NF-2D	LIGHTS	NF-2D	0.39		
C36	NF-2D	LIGHTS	NF-2D	0.33		
C38	NF-2D	LIGHTS	NF-2D	0.34		
C81	NF-2D	LIGHTS	NF-2D	0.24		
C74	NF-2D	LIGHTS	NF-2D	0.12		
FL2	NF-2D	FLOOD LIGHTS	NF-2D	0.10		
FL3	NF-2D	FLOOD LIGHTS	NF-2D	0.08		
FL8	NF-2D	FLOOD LIGHTS	NF-2D	0.11		
FL09	NF-2D	FLOOD LIGHTS	NF-2D	0.04		
FL10	NF-2D	FLOOD LIGHTS	NF-2D	0.04		
			NAA Total Hrs per Day	2.16		
			NAA Total Hrs per Year	788.40		
			NAA Total Hrs per Sortie	0.44	1,713	3,547
			PA Total Hrs Per Year	1428.35		
NC66	SGNC	NITRO CART	NGC-15-TM	0.04		
NC56	SGNC	NITRO CART	NGC-15-TM	0.11		
NC83	SGNC	NITRO CART	NGC-15-TM	0.13		
NC47	SGNC	NITRO CART	NGC-15-TM	0.04		
			NAA Total Hrs per Day	0.32		
			NAA Total Hrs per Year	116.80		
			NAA Total Hrs per Sortie	0.06	254	526
			PA Total Hrs Per Year	211.61		
NC30	SGNC HP	NITRO CART	130009-100	0.33		
			NAA Total Hrs per Day	0.33		
			NAA Total Hrs per Year	120.45		
			NAA Total Hrs per Sortie	0.07	262	542
			PA Total Hrs Per Year	218.22		
J97	CPT	PRE TESTER	AFM32T-1	0.11		
			NAA Total Hrs per Day	0.11		
			NAA Total Hrs per Year	40.15		
			NAA Total Hrs per Sortie	0.02	87	181
			PA Total Hrs Per Year	72.74		
E70	HTS	HYD TEST STAND	TTU-228E/22	0.16		
E94	HTS	HYD TEST STAND	TTU-228E/22	0.10		
E55	HTS	HYD TEST STAND	TTU-228E/22	0.20		
			NAA Total Hrs per Day	0.46		
			NAA Total Hrs per Year	167.90		
			NAA Total Hrs per Sortie	0.09	365	755
			PA Total Hrs Per Year	304.19		
E76	SHTS	HYD TEST STAND	MK-1	N/A		
G40	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.06		
G80	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.04		
G60	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.08		
G59	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.33		
G61	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.02		
G81	MC-20	AIR COMPRESSOR	MC-20-WHTZ-T4F-E01	0.03		
			NAA Total Hrs per Day	0.56		
			NAA Total Hrs per Year	204.40		
			NAA Total Hrs per Sortie	0.11	444	920
			PA Total Hrs Per Year	370.31		

G24	MC-7	AIR COMPRESSOR	11M125RPDQ	0.26		
G30	MC-7	AIR COMPRESSOR	11M125RPDQ	0.12		
G79	MC-7	AIR COMPRESSOR	11M125RPDQ	0.04		
G32	MC-7	AIR COMPRESSOR	11M125RPDQ	0.16		
			NAA Total Hrs per Day	0.58		
			NAA Total Hrs per Year	211.70		
			NAA Total Hrs per Sortie	0.12	460	952
			PA Total Hrs Per Year	383.54		
AC2	THOR	AIR CONDITIONER	HDT-THOR200	0.20		
TH01	THOR	AIR CONDITIONER	HDT-THOR200	0.20		
			NAA Total Hrs per Day	0.40		
			NAA Total Hrs per Year	146.00		
			NAA Total Hrs per Sortie	0.08	317	657
			PA Total Hrs Per Year	264.51		
F28	NGH	HEATER	HDU-43	0.02		
F66	NGH	HEATER	HDU-43	0.05		
F53	NGH	HEATER	HDU-43	0.03		
F67	NGH	HEATER	HDU-43	0.02		
F72	NGH	HEATER	HDU-43	0.02		
F90	NGH	HEATER	HDU-43	0.02		
F35	NGH	HEATER	HDU-43	0.01		
			NAA Total Hrs per Day	0.17		
			NAA Total Hrs per Year	62.05		
			NAA Total Hrs per Sortie	0.03	135	279
			PA Total Hrs Per Year	112.42		
P21	HYD PURI	PURIFIER	100033-100	0.04		
P22	HYD PURI	PURIFIER	100033-100	0.02		
P23	HYD PURI	PURIFIER	100033-100	0.05		
			NAA Total Hrs per Day	0.11		
			NAA Total Hrs per Year	40.15		
			NAA Total Hrs per Sortie	0.02	87	181
			PA Total Hrs Per Year	72.74		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

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: NEW ORLEANS JRB
State: Louisiana
County(s): Plaquemines
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Air National Guard F-15EX Eagle II & F-35A Lightning II Operational Beddowns EIS: New Orleans Legacy F-15C Construction Only

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2025

e. Action Description: F-15C Legacy Alternative Construction

The United States (U.S.) Department of the Air Force (DAF) and National Guard Bureau (NGB) propose to maintain the combat capability of the Air National Guard (ANG) by recapitalizing the remaining F-15C/D aircraft, which are being retired due to age and associated maintenance costs. There are three remaining ANG units that are still flying the F-15C/D aircraft (that are not already undergoing similar evaluation) at this time; these include the 104th Fighter Wing (104 FW) at Westfield-Barnes Regional Airport (BAF) in Westfield, Massachusetts (MA); the 144th Fighter Wing (144 FW) at Fresno Yosemite International Airport (FAT) in Fresno, California (CA); and the 159th Fighter Wing (159 FW) at Naval Air Station (NAS) Joint Reserve Base (JRB) New Orleans, in Belle Chasse, Louisiana (LA). The proposal is the beddown, operation, and associated infrastructure construction of one squadron of F-15EX Eagle II (F-15EX) aircraft at two of these fighter wings and one squadron of F-35A Lightning II (F-35A) aircraft at one of the fighter wings. These aircraft would replace the aging F-15C/D fighter aircraft at the selected wings.

f. Point of Contact:

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Title: Air Quality SME
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Phone Number:

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

applicable
 not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

“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 National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are “Clearly Attainment” (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are “Near Nonattainment” (i.e., within 5% of any NAAQS). These 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. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action’s net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.517	250	
NOx	0.919	250	
CO	1.676	250	
SOx	0.004	250	
PM 10	0.066	250	
PM 2.5	0.027	250	
Pb	0.000	25	No
NH3	0.002	250	
CO2e	350.8		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	
NOx	0.000	250	
CO	0.000	250	
SOx	0.000	250	
PM 10	0.000	250	
PM 2.5	0.000	250	
Pb	0.000	25	No
NH3	0.000	250	
CO2e	0.0		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	
NOx	0.000	250	
CO	0.000	250	
SOx	0.000	250	

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PM 10	0.000	250	
PM 2.5	0.000	250	
Pb	0.000	25	No
NH3	0.000	250	
CO2e	0.0		

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	
NOx	0.000	250	
CO	0.000	250	
SOx	0.000	250	
PM 10	0.000	250	
PM 2.5	0.000	250	
Pb	0.000	25	No
NH3	0.000	250	
CO2e	0.0		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391	250	
NOx	0.918	250	
CO	1.582	250	
SOx	0.003	250	
PM 10	0.114	250	
PM 2.5	0.028	250	
Pb	0.000	25	No
NH3	0.001	250	
CO2e	341.2		

2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.201	250	
NOx	1.110	250	
CO	1.504	250	
SOx	0.003	250	
PM 10	0.069	250	
PM 2.5	0.039	250	
Pb	0.000	25	No
NH3	0.000	250	
CO2e	317.5		

2031

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.208	250	

**AIR CONFORMITY APPLICABILITY MODEL REPORT
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NOx	1.112	250	
CO	1.558	250	
SOx	0.004	250	
PM 10	2.829	250	
PM 2.5	0.043	250	
Pb	0.000	25	No
NH3	0.001	250	
CO2e	364.9		

2032

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.582	250	
NOx	1.269	250	
CO	1.943	250	
SOx	0.004	250	
PM 10	0.559	250	
PM 2.5	0.044	250	
Pb	0.000	25	No
NH3	0.002	250	
CO2e	411.7		

2033

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.843	250	
NOx	1.286	250	
CO	2.115	250	
SOx	0.004	250	
PM 10	0.113	250	
PM 2.5	0.044	250	
Pb	0.000	25	No
NH3	0.003	250	
CO2e	434.8		

2034 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	
NOx	0.000	250	
CO	0.000	250	
SOx	0.000	250	
PM 10	0.000	250	
PM 2.5	0.000	250	
Pb	0.000	25	No
NH3	0.000	250	
CO2e	0.0		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.



Caitlin Jafolla, Air Quality SME

07/07/2023

DATE