

Air Quality Analysis Supporting Documentation

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus Air Force Base (AFB) with T-7A Red Hawk aircraft. For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

The Air Conformity Applicability Model (ACAM) version 5.0.17b was used to perform an analysis to assess the potential air quality impacts associated with the Proposed Action and alternatives in accordance with Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process* (EIAP, 32 Code of Federal Regulations [CFR] Part 989) and the General Conformity Rule (40 Code of Federal Regulations Part 93, Subpart B). This appendix provides the ACAM results.

This appendix is presented in four sections corresponding to the four separate air quality Regions of Influence (ROI) based on regulatory requirements and the physical spatial distribution of the emissions sources associated with the Proposed Action and alternatives. The four ROIs are as follows:

- **ROI 1: Columbus AFB** – includes all Columbus AFB airfield operations and construction actions

Counties included:

Lowndes, MS

Clay, MS

Monroe, MS

- **ROI 2: Birmingham and Birmingham 2 MOAs** – includes aircraft operations within Birmingham and Birmingham 2 MOAs

Counties included:

Bibb, AL

Dallas, AL

Greene, AL

Hale, AL

Marengo, AL Perry, AL Sumter, AL

- **ROI 3: Range R-4404** – includes aircraft operations within Range R-4404

Counties included:

Noxubee County, MS

- **ROI 4: MTRs** – includes aircraft operations within IR-066, IR-068, IR-091, VR-1014, and VR-1031

Counties included:

Autauga, AL	Marengo, AL	Carroll, MS	Quitman, MS
Bibb, AL	Marion, AL	Chickasaw, MS	Sunflower, MS
Blount, AL	Perry, AL	Clay, MS	Tallahatchie, MS
Chilton, AL	Pickens, AL	Coahoma, MS	Tate, MS
Choctaw, AL	Shelby, AL	Grenada, MS	Tippah, MS
Clarke, AL	St. Clair, AL	Itawamba, MS	Tishomingo, MS
Clay, AL	Talladega, AL	Kemper, MS	Tunica, MS
Colbert, AL	Tallapoosa, AL	Lafayette, MS	Union, MS
Coosa, AL	Tuscaloosa, AL	Lee, MS	Webster, MS
Cullman, AL	Walker, AL	Leflore, MS	Yalobusha, MS
Dallas, AL	Wilcox, AL	Lowndes, MS	Chester, TN
Elmore, AL	Winston, AL	Marshall, MS	Decatur, TN
Franklin, AL	Lee, AR	Monroe, MS	Hardeman, TN
Greene, AL	Phillips, AR	Montgomery, MS	Hardin, TN
Hale, AL	Alcorn, MS	Noxubee, MS	Lawrence, TN
Jefferson, AL	Benton, MS	Panola, MS	McNairy, TN
Lauderdale, AL	Bolivar, MS	Pontotoc, MS	Wayne, TN
Lawrence, AL	Calhoun, MS	Prentiss, MS	

Columbus AFB is in Lowndes County, Mississippi. In addition to Lowndes County, Columbus AFB airfield operations below 3,000 feet occur in Monroe and Clay Counties. Lowndes, Monroe, and Clay Counties have been designated as in attainment for all criteria pollutants. The table below outlines the attainment status and the *de minimis* threshold under the General Conformity Rule for the counties within ROIs 2, 3 and 4 (i.e., counties underlying the MTRs, MOAs, and Range R-4404).

Table 1. Air Attainment Status for All Counties Underlying the MTRs, MOAs, and R-4404

County	Airspace	Attainment Status	<i>de minimis</i> Threshold
Autauga County, AL	VR-1031	Unclassifiable/Attainment	None
Bibb County, AL	VR-1031, Birmingham 2 MOA	Unclassifiable/Attainment	None
Blount County, AL	IR-066, VR-1014	Unclassifiable/Attainment	None
Chilton County, AL	VR-1031	Unclassifiable/Attainment	None
Choctaw County, AL	VR-1031	Unclassifiable/Attainment	None
Clarke County, AL	VR-1031	Unclassifiable/Attainment	None
Clay County, AL	VR-1031	Unclassifiable/Attainment	None
Colbert County, AL	IR-066	Unclassifiable/Attainment	None
Coosa County, AL	VR-1031	Unclassifiable/Attainment	None
Cullman County, AL	IR-066, VR-1014	Unclassifiable/Attainment	None
Dallas County, AL	VR-1031, Birmingham 2 MOA	Unclassifiable/Attainment	None
Elmore County, AL	VR-1031	Unclassifiable/Attainment	None
Franklin County, AL	IR-066, VR-1014	Unclassifiable/Attainment	None
Greene County, AL	VR-1031, Birmingham MOA, Birmingham 2 MOA	Unclassifiable/Attainment	None
Hale County, AL	VR-1031, Birmingham MOA, Birmingham 2 MOA	Unclassifiable/Attainment	None
Jefferson County, AL	VR-1014	Maintenance for the PM _{2.5} NAAQS	100 tpy for PM _{2.5} 100 tpy for NO _x 100 tpy for VOCs 100 tpy for SO _x 100 tpy for NH ₃
Lauderdale County, AL	IR-066	Unclassifiable/Attainment	None
Lawrence County, AL	VR-1014	Unclassifiable/Attainment	None
Marengo County, AL	VR-1031, Birmingham MOA, Birmingham 2 MOA	Unclassifiable/Attainment	None
Marion County, AL	IR-066, VR-1014	Unclassifiable/Attainment	None
Perry County, AL	VR-1031, Birmingham 2 MOA	Unclassifiable/Attainment	None
Pickens County, AL	VR-1014, VR-1031	Unclassifiable/Attainment	None

County	Airspace	Attainment Status	<i>de minimis</i> Threshold
Shelby County, AL	VR-1031	Maintenance for the PM _{2.5} NAAQS	100 tpy for PM _{2.5} 100 tpy for NO _x 100 tpy for VOCs 100 tpy for SO _x 100 tpy for NH ₃
St. Clair County, AL	VR-1031	Unclassifiable/Attainment	None
Sumter County, AL	Birmingham MOA, Birmingham 2 MOA	Unclassifiable/Attainment	None
Talladega County, AL	VR-1031	Unclassifiable/Attainment	None
Tallapoosa County, AL	VR-1031	Unclassifiable/Attainment	None
Tuscaloosa County, AL	VR-1014, VR-1031	Unclassifiable/Attainment	None
Walker County, AL	IR-066, VR-1014	Maintenance for the PM _{2.5} NAAQS	100 tpy for PM _{2.5} 100 tpy for NO _x 100 tpy for VOCs 100 tpy for SO _x 100 tpy for NH ₃
Wilcox County, AL	VR-1031	Unclassifiable/Attainment	None
Winston County, AL	IR-066, VR-1031	Unclassifiable/Attainment	None
Lee County, AR	IR-068	Unclassifiable/Attainment	None
Phillips County, AR	IR-068	Unclassifiable/Attainment	None
Alcorn County, MS	IR-066	Unclassifiable/Attainment	None
Benton County, MS	IR-066, IR-091	Unclassifiable/Attainment	None
Bolivar County, MS	IR-068	Unclassifiable/Attainment	None
Calhoun County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Carroll County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Chickasaw County, MS	IR-091	Unclassifiable/Attainment	None
Clay County, MS	IR-091	Unclassifiable/Attainment	None
Coahoma County, MS	IR-068	Unclassifiable/Attainment	None
Grenada County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Itawamba County, MS	IR-066, VR-1014	Unclassifiable/Attainment	None
Kemper County, MS	VR-1031	Unclassifiable/Attainment	None
Lafayette County, MS	IR-091	Unclassifiable/Attainment	None
Lee County, MS	IR-066	Unclassifiable/Attainment	None
Leflore County, MS	IR-068	Unclassifiable/Attainment	None
Lowndes County, MS	VR-1031	Unclassifiable/Attainment	None
Marshall County, MS	IR-091	Unclassifiable/Attainment	None
Monroe County, MS	IR-066, VR-1014	Unclassifiable/Attainment	None
Montgomery County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Noxubee County, MS	VR-1031, R-4404	Unclassifiable/Attainment	None
Panola County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Pontotoc County, MS	IR-091	Unclassifiable/Attainment	None
Prentiss County, MS	IR-066	Unclassifiable/Attainment	None

County	Airspace	Attainment Status	de minimis Threshold
Quitman County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Sunflower County, MS	IR-068	Unclassifiable/Attainment	None
Tallahatchie County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Tate County, MS	IR-091	Unclassifiable/Attainment	None
Tippah County, MS	IR-066	Unclassifiable/Attainment	None
Tishomingo County, MS	IR-066	Unclassifiable/Attainment	None
Tunica County, MS	IR-068	Unclassifiable/Attainment	None
Union County, MS	IR-066, IR-091	Unclassifiable/Attainment	None
Webster County, MS	IR-068, IR-091	Unclassifiable/Attainment	None
Yalobusha County, MS	IR-068	Unclassifiable/Attainment	None
Chester County, TN	IR-066	Unclassifiable/Attainment	None
Decatur County, TN	IR-066	Unclassifiable/Attainment	None
Hardeman County, TN	IR-066	Unclassifiable/Attainment	None
Hardin County, TN	IR-066	Unclassifiable/Attainment	None
Lawrence County, TN	IR-066	Unclassifiable/Attainment	None
McNairy County, TN	IR-066	Unclassifiable/Attainment	None
Wayne County, TN	IR-066	Unclassifiable/Attainment	None

Sources: (1) 40 CFR § 93.153 (2) USEPA. 2022. *Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants: Alabama, Arkansas, Mississippi, and Tennessee*. As of June 30, 2022.

Key: NAAQS = National Ambient Air Quality Standard; NH₃ = ammonia; NO_x = nitrogen oxides; PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter; SO_x = sulfur oxides; tpy = tons per year; VOCs = volatile organic compounds

The emission factors presented in this Appendix are imbedded within ACAM and come from the following DAF documents: (1) *Air Emissions Guide for Air Force Stationary Sources, Methods for Estimating Emissions of Air Pollutants for Stationary Sources at U.S. Air Force Installations*, Air Force Civil Engineer Center (June 2020), and (2) *Air Emissions Guide for Air Force Mobile Sources, Methods for Estimating Emissions of Air Pollutants for Mobile Sources at U.S. Air Force Installations*, Air Force Civil Engineering Center (June 2020). Additional data used to prepare the ACAM reports are below.

Time in Mode (TIM) Summary for T-7A and T-38C aircraft within the ROIs

Table 2. TIMs Summary for ROI 1: Columbus AFB

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
Columbus AFB T-7A TIMs Summary					
LTO Flight	0.00	0.01	0.73	0.42	4.03
LTO Taxi	16.95	0.00	0.00	0.00	0.00
Total LTO	16.95	0.01	0.73	0.42	4.03
Closed Patterns	0.00	0.00	0.00	3.56	0.00

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
Columbus AFB T-38C TIMs Summary					
LTO Flight	0.00	0.52	0.22	0.46	3.91
LTO Taxi	18.35	0.00	0.00	0.00	0.00
Total LTO	18.35	0.52	0.22	0.46	3.91
Closed Patterns	0.00	0.00	0.00	3.56	0.00

Key: AB = afterburn; LTO = landing and takeoff cycle mil = military; min = minutes

Table 3. TIMs Summary for ROI 2: Birmingham and Birmingham 2 MOAs

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
Birmingham and Birmingham 2 MOAs T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	19.55	0.00	0.00
Birmingham and Birmingham 2 MOAs T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	19.55	0.00	0.00

Key: AB = afterburn; LTO = landing and takeoff cycle mil = military; min = minutes

Table 4. TIMs Summary for ROI 3: Range R-4404

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
R-4404 T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	19.50	0.00	0.00
R-4404 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	19.50	0.00	0.00

Key: AB = afterburn; LTO = landing and takeoff cycle mil = military; min = minutes

Table 3. TIMs Summary for ROI 4: MTRs

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
IR-066 T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	3.74	0.00
IR-066 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	3.74	0.00
IR-068 T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	27.48	0.00
IR-068 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	27.48	0.00
IR-091 T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	27.48	0.00
IR-091 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	27.48	0.00
VR-1014 T-7A TIMs Summary					

	Idle In/Out (min)	Takeoff AB (min)	Takeoff Mil (min)	Climbout (min)	Approach (min)
Low Flight Pattern	0.00	0.00	0.00	38.09	0.00
VR-1014 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	38.09	0.00
VR-1031 T-7A TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	32.15	0.00
VR-1031 T-38C TIMs Summary					
Low Flight Pattern	0.00	0.00	0.00	32.15	0.00

Key: AB = afterburn; LTO = landing and takeoff cycle mil = military; min = minutes

ROI 1: Columbus AFB

This section includes the following:

- Alternative 1 ACAM Report
- Alternative 1 ACAM Detail Report
- Alternative 2 ACAM Report
- Alternative 2 ACAM Detail Report
- Alternative 3 ACAM Report
- Alternative 3 ACAM Detail Report

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: COLUMBUS AFB
State: Mississippi
County(s): Clay, MS; Lowndes, MS; Monroe, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 1

c. Project Number/s (if applicable):

d. Projected Action Start Date: 8 / 2024

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
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

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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.

“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:

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.205	250	No
NOx	1.005	250	No
CO	1.689	250	No
SOx	0.004	250	No
PM 10	0.284	250	No
PM 2.5	0.035	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	397.5		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.069	250	No
NOx	4.712	250	No
CO	7.091	250	No
SOx	0.017	250	No
PM 10	8.445	250	No
PM 2.5	0.182	250	No
Pb	0.000	25	No
NH3	0.004	250	No
CO2e	1603.9		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.804	250	No

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NOx	7.095	250	No
CO	10.840	250	No
SOx	0.024	250	No
PM 10	0.620	250	No
PM 2.5	0.240	250	No
Pb	0.000	25	No
NH3	0.010	250	No
CO2e	2363.7		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.009	250	No
NOx	2.459	250	No
CO	4.117	250	No
SOx	0.009	250	No
PM 10	0.086	250	No
PM 2.5	0.086	250	No
Pb	0.000	25	No
NH3	0.003	250	No
CO2e	886.1		

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	17.466	250	No
NOx	53.652	250	No
CO	-200.780	250	No
SOx	1.675	250	No
PM 10	-6.253	250	No
PM 2.5	-4.297	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	6325.7		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	30.134	250	No
NOx	129.447	250	No
CO	-637.064	250	No
SOx	2.783	250	No
PM 10	-18.912	250	No
PM 2.5	-13.078	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	11635.4		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	29.647	250	No
NOx	150.497	250	No
CO	-815.025	250	No
SOx	2.619	250	No
PM 10	-23.807	250	No
PM 2.5	-16.495	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	11586.6		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	29.647	250	No
NOx	150.497	250	No
CO	-815.025	250	No
SOx	2.619	250	No
PM 10	-23.807	250	No
PM 2.5	-16.495	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	11586.6		

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.



Carolyn Hein, Contractor

2/17/2023

DATE

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

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a. Action Location:

Base: COLUMBUS AFB
State: Mississippi
County(s): Clay, MS; Lowndes, MS; Monroe, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 2

c. Project Number/s (if applicable):

d. Projected Action Start Date: 8 / 2024

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

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f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
Email:
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2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
 X 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

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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.

“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:

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.205	250	No
NOx	1.005	250	No
CO	1.689	250	No
SOx	0.004	250	No
PM 10	0.284	250	No
PM 2.5	0.035	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	397.5		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.069	250	No
NOx	4.712	250	No
CO	7.091	250	No
SOx	0.017	250	No
PM 10	8.445	250	No
PM 2.5	0.182	250	No
Pb	0.000	25	No
NH3	0.004	250	No
CO2e	1603.9		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.804	250	No

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

NOx	7.095	250	No
CO	10.840	250	No
SOx	0.024	250	No
PM 10	0.620	250	No
PM 2.5	0.240	250	No
Pb	0.000	25	No
NH3	0.010	250	No
CO2e	2363.7		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.009	250	No
NOx	2.459	250	No
CO	4.117	250	No
SOx	0.009	250	No
PM 10	0.086	250	No
PM 2.5	0.086	250	No
Pb	0.000	25	No
NH3	0.003	250	No
CO2e	886.1		

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	27.562	250	No
NOx	67.791	250	No
CO	-181.515	250	No
SOx	2.782	250	No
PM 10	-6.070	250	No
PM 2.5	-4.137	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	9688.1		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	55.137	250	No
NOx	164.465	250	No
CO	-589.356	250	No
SOx	5.525	250	No
PM 10	-18.458	250	No
PM 2.5	-12.683	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	19962.7		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	58.978	250	No
NOx	191.576	250	No
CO	-759.059	250	No
SOx	5.836	250	No
PM 10	-23.274	250	No
PM 2.5	-16.031	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	21355.0		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	58.978	250	No
NOx	191.576	250	No
CO	-759.059	250	No
SOx	5.836	250	No
PM 10	-23.274	250	No
PM 2.5	-16.031	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	21355.0		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB
State: Mississippi
County(s): Clay, MS; Lowndes, MS; Monroe, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 3

c. Project Number/s (if applicable):

d. Projected Action Start Date: 8 / 2024

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.205	250	No
NOx	1.005	250	No
CO	1.689	250	No
SOx	0.004	250	No
PM 10	0.284	250	No
PM 2.5	0.035	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	397.5		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.069	250	No
NOx	4.712	250	No
CO	7.091	250	No
SOx	0.017	250	No
PM 10	8.445	250	No
PM 2.5	0.182	250	No
Pb	0.000	25	No
NH3	0.004	250	No
CO2e	1603.9		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.819	250	No

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

NOx	7.205	250	No
CO	10.925	250	No
SOx	0.025	250	No
PM 10	0.623	250	No
PM 2.5	0.244	250	No
Pb	0.000	25	No
NH3	0.010	250	No
CO2e	2403.3		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.009	250	No
NOx	2.459	250	No
CO	4.117	250	No
SOx	0.009	250	No
PM 10	0.086	250	No
PM 2.5	0.086	250	No
Pb	0.000	25	No
NH3	0.003	250	No
CO2e	886.1		

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	27.732	250	No
NOx	68.731	250	No
CO	-178.614	250	No
SOx	2.837	250	No
PM 10	-6.004	250	No
PM 2.5	-4.078	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	9854.5		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	55.307	250	No
NOx	165.405	250	No
CO	-586.455	250	No
SOx	5.580	250	No
PM 10	-18.392	250	No
PM 2.5	-12.624	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	20129.2		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	59.147	250	No
NOx	192.516	250	No
CO	-756.158	250	No
SOx	5.891	250	No
PM 10	-23.208	250	No
PM 2.5	-15.972	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	21521.5		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	59.147	250	No
NOx	192.516	250	No
CO	-756.158	250	No
SOx	5.891	250	No
PM 10	-23.208	250	No
PM 2.5	-15.972	250	No
Pb	0.000	25	No
NH3	-0.010	250	No
CO2e	21521.5		

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.



Carolyn Hein, Contractor

2/17/2023

DATE

ROI 2: Birmingham and Birmingham 2 MOAs

This section includes the following:

- Alternative 1 ACAM Report
- Alternative 1 ACAM Detail Report
- Alternative 2 ACAM Report
- Alternative 2 ACAM Detail Report
- Alternative 3 ACAM Report
- Alternative 3 ACAM Detail Report

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: COLUMBUS AFB

State: Alabama

County(s): Bibb, AL; Dallas, AL; Greene, AL; Hale, AL; Marengo, AL; Perry, AL; Sumter, AL

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 1

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

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

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

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.517	250	No
NOx	25.205	250	No
CO	-9.093	250	No
SOx	0.483	250	No
PM 10	-0.262	250	No
PM 2.5	0.096	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1461.6		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.517	250	No
NOx	25.205	250	No
CO	-9.093	250	No
SOx	0.483	250	No
PM 10	-0.262	250	No
PM 2.5	0.096	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1461.6		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.034	250	No
NOx	50.410	250	No
CO	-18.187	250	No
SOx	0.965	250	No
PM 10	-0.525	250	No
PM 2.5	0.191	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2923.3		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.034	250	No
NOx	50.410	250	No
CO	-18.187	250	No
SOx	0.965	250	No
PM 10	-0.525	250	No
PM 2.5	0.191	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2923.3		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB

State: Alabama

County(s): Bibb, AL; Dallas, AL; Greene, AL; Hale, AL; Marengo, AL; Perry, AL; Sumter, AL

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 2

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.031	250	No
NOx	31.919	250	No
CO	-6.015	250	No
SOx	0.791	250	No
PM 10	-0.133	250	No
PM 2.5	0.127	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2393.1		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.031	250	No
NOx	31.919	250	No
CO	-6.015	250	No
SOx	0.791	250	No
PM 10	-0.133	250	No
PM 2.5	0.127	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2393.1		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.932	250	No
NOx	63.505	250	No
CO	-17.411	250	No
SOx	1.396	250	No
PM 10	-0.462	250	No
PM 2.5	0.247	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	4224.8		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.932	250	No
NOx	63.505	250	No
CO	-17.411	250	No
SOx	1.396	250	No
PM 10	-0.462	250	No
PM 2.5	0.247	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	4224.8		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB

State: Alabama

County(s): Bibb, AL; Dallas, AL; Greene, AL; Hale, AL; Marengo, AL; Perry, AL; Sumter, AL

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 3

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.031	250	No
NOx	31.919	250	No
CO	-6.015	250	No
SOx	0.791	250	No
PM 10	-0.133	250	No
PM 2.5	0.127	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2393.1		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.031	250	No
NOx	31.919	250	No
CO	-6.015	250	No
SOx	0.791	250	No
PM 10	-0.133	250	No
PM 2.5	0.127	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2393.1		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.932	250	No
NOx	63.505	250	No
CO	-17.411	250	No
SOx	1.396	250	No
PM 10	-0.462	250	No
PM 2.5	0.247	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	4224.8		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.932	250	No
NOx	63.505	250	No
CO	-17.411	250	No
SOx	1.396	250	No
PM 10	-0.462	250	No
PM 2.5	0.247	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	4224.8		

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.



Carolyn Hein, Contractor

2/17/2023

DATE

ROI 3: Range R-4404

This section includes the following:

- Alternative 1 ACAM Report
- Alternative 1 ACAM Detail Report
- Alternative 2 ACAM Report
- Alternative 2 ACAM Detail Report
- Alternative 3 ACAM Report
- Alternative 3 ACAM Detail Report

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: COLUMBUS AFB
State: Mississippi
County(s): Noxubee, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 1

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
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
 X 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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.929	250	No
NOx	15.435	250	No
CO	-5.568	250	No
SOx	0.296	250	No
PM 10	-0.161	250	No
PM 2.5	0.059	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	895.1		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.929	250	No
NOx	15.435	250	No
CO	-5.568	250	No
SOx	0.296	250	No
PM 10	-0.161	250	No
PM 2.5	0.059	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	895.1		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.858	250	No
NOx	30.869	250	No
CO	-11.136	250	No
SOx	0.591	250	No
PM 10	-0.321	250	No
PM 2.5	0.117	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1790.2		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.858	250	No
NOx	30.869	250	No
CO	-11.136	250	No
SOx	0.591	250	No
PM 10	-0.321	250	No
PM 2.5	0.117	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1790.2		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB
State: Mississippi
County(s): Noxubee, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 2

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
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
__X__ 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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.237	250	No
NOx	19.453	250	No
CO	-3.726	250	No
SOx	0.480	250	No
PM 10	-0.083	250	No
PM 2.5	0.077	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1452.6		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.237	250	No
NOx	19.453	250	No
CO	-3.726	250	No
SOx	0.480	250	No
PM 10	-0.083	250	No
PM 2.5	0.077	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1452.6		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.395	250	No
NOx	38.706	250	No
CO	-10.672	250	No
SOx	0.849	250	No
PM 10	-0.284	250	No
PM 2.5	0.150	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2569.1		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.395	250	No
NOx	38.706	250	No
CO	-10.672	250	No
SOx	0.849	250	No
PM 10	-0.284	250	No
PM 2.5	0.150	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2569.1		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB
State: Mississippi
County(s): Noxubee, MS
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 3

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein
Title: Contractor
Organization: HDR
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
 X 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

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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.

“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:

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.237	250	No
NOx	19.453	250	No
CO	-3.726	250	No
SOx	0.480	250	No
PM 10	-0.083	250	No
PM 2.5	0.077	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1452.6		

2029

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.237	250	No
NOx	19.453	250	No
CO	-3.726	250	No
SOx	0.480	250	No
PM 10	-0.083	250	No
PM 2.5	0.077	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	1452.6		

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


2030

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.395	250	No
NOx	38.706	250	No
CO	-10.672	250	No
SOx	0.849	250	No
PM 10	-0.284	250	No
PM 2.5	0.150	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2569.1		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.395	250	No
NOx	38.706	250	No
CO	-10.672	250	No
SOx	0.849	250	No
PM 10	-0.284	250	No
PM 2.5	0.150	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	2569.1		

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.



Carolyn Hein, Contractor

2/21/2023

DATE

ROI 4: MTRs (IR-066, IR-068, IR-091, VR-1014, and VR-1031)

This section includes the following:

- Alternative 1 ACAM Report
- Alternative 1 ACAM Detail Report
- Alternative 2 ACAM Report
- Alternative 2 ACAM Detail Report
- Alternative 3 ACAM Report
- Alternative 3 ACAM Detail Report

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: COLUMBUS AFB

State (s): Alabama, Arkansas, Mississippi, Tennessee

County(s): Autauga, AL; Bibb, AL; Blount, AL; Chilton, AL; Choctaw, AL; Clarke, AL; Clay, AL; Colbert, AL; Coosa, AL; Cullman, AL; Dallas, AL; Elmore, AL; Franklin, AL; Greene, AL; Hale, AL; Jefferson, AL; Lauderdale, AL; Lawrence, AL; Marengo, AL; Marion, AL; Perry, AL; Pickens, AL; Shelby, AL; St. Clair, AL; Sumter, AL; Talladega, AL; Tallapoosa, AL; Tuscaloosa, AL; Walker, AL; Wilcox, AL; Winston, AL; Lee, AR; Phillips, AR; Alcorn, MS; Benton, MS; Bolivar, MS; Calhoun, MS; Carroll, MS; Chickasaw, MS; Clay, MS; Coahoma, MS; Grenada, MS; Itawamba, MS; Kemper, MS; Lafayette, MS; Lee, MS; Leflore, MS; Lowndes, MS; Marshall, MS; Monroe, MS; Montgomery, MS; Noxubee, MS; Panola, MS; Pontotoc, MS; Prentiss, MS; Quitman, MS; Sunflower, MS; Tallahatchie, MS; Tate, MS; Tippah, MS; Tishomingo, MS; Tunica, MS; Union, MS; Webster, MS; Yalobusha, MS; Chester, TN; Decatur, TN; Hardeman, TN; Hardin, TN; Lawrence, TN; McNairy, TN, Wayne, TN

Regulatory Area(s): NOT IN A REGULATORY AREA; Birmingham, AL

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 1

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

Email:

Phone Number:

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

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:

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-4.540		
NOx	31.743		
CO	-94.308		
SOx	-0.526		
PM 10	-2.249		
PM 2.5	-0.916		
Pb	0.000		
NH3	0.000		
CO2e	-1585.8		
Birmingham, AL			
VOC	1.069	100	No
NOx	17.774	100	No
CO	-6.406		
SOx	0.341	100	No
PM 10	-0.185		
PM 2.5	0.067	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1033.6		
Birmingham, AL			
VOC	1.251	100	No
NOx	20.756	100	No
CO	-7.524		
SOx	0.393	100	No
PM 10	-0.216		
PM 2.5	0.079	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1188.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-4.540		
NOx	31.743		
CO	-94.308		
SOx	-0.526		
PM 10	-2.249		

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

PM 2.5	-0.916		
Pb	0.000		
NH3	0.000		
CO2e	-1585.8		
Birmingham, AL			
VOC	1.069	100	No
NOx	17.774	100	No
CO	-6.406		
SOx	0.341	100	No
PM 10	-0.185		
PM 2.5	0.067	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1033.6		
Birmingham, AL			
VOC	1.251	100	No
NOx	20.756	100	No
CO	-7.524		
SOx	0.393	100	No
PM 10	-0.216		
PM 2.5	0.079	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1188.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-2.453		
NOx	66.406		
CO	-106.827		
SOx	0.136		
PM 10	-2.610		
PM 2.5	-0.784		
Pb	0.000		
NH3	0.000		
CO2e	418.8		
Birmingham, AL			
VOC	2.139	100	No
NOx	35.549	100	No
CO	-12.811		
SOx	0.683	100	No
PM 10	-0.370		
PM 2.5	0.135	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2067.2		
Birmingham, AL			
VOC	2.502	100	No
NOx	41.512	100	No
CO	-15.047		
SOx	0.786	100	No


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

PM 10	-0.433		
PM 2.5	0.158	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2377.4		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-2.453		
NOx	66.406		
CO	-106.827		
SOx	0.136		
PM 10	-2.610		
PM 2.5	-0.784		
Pb	0.000		
NH3	0.000		
CO2e	418.8		
Birmingham, AL			
VOC	2.139	100	No
NOx	35.549	100	No
CO	-12.811		
SOx	0.683	100	No
PM 10	-0.370		
PM 2.5	0.135	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2067.2		
Birmingham, AL			
VOC	2.502	100	No
NOx	41.512	100	No
CO	-15.047		
SOx	0.786	100	No
PM 10	-0.433		
PM 2.5	0.158	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2377.4		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB

State: Alabama, Arkansas, Mississippi, Tennessee

County(s): Autauga, AL; Bibb, AL; Blount, AL; Chilton, AL; Choctaw, AL; Clarke, AL; Clay, AL; Colbert, AL; Coosa, AL; Cullman, AL; Dallas, AL; Elmore, AL; Franklin, AL; Greene, AL; Hale, AL; Jefferson, AL; Lauderdale, AL; Lawrence, AL; Marengo, AL; Marion, AL; Perry, AL; Pickens, AL; Shelby, AL; St. Clair, AL; Sumter, AL; Talladega, AL; Tallapoosa, AL; Tuscaloosa, AL; Walker, AL; Wilcox, AL; Winston, AL; Lee, AR; Phillips, AR; Alcorn, MS; Benton, MS; Bolivar, MS; Calhoun, MS; Carroll, MS; Chickasaw, MS; Clay, MS; Coahoma, MS; Grenada, MS; Itawamba, MS; Kemper, MS; Lafayette, MS; Lee, MS; Leflore, MS; Lowndes, MS; Marshall, MS; Monroe, MS; Montgomery, MS; Noxubee, MS; Panola, MS; Pontotoc, MS; Prentiss, MS; Quitman, MS; Sunflower, MS; Tallahatchie, MS; Tate, MS; Tippah, MS; Tishomingo, MS; Tunica, MS; Union, MS; Webster, MS; Yalobusha, MS; Chester, TN; Decatur, TN; Hardeman, TN; Hardin, TN; Lawrence, TN; McNairy, TN; Wayne, TN

Regulatory Area(s): NOT IN A REGULATORY AREA; Birmingham, AL

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 2

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

Email:

Phone Number:

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

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:

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-3.833		
NOx	40.966		
CO	-90.081		
SOx	-0.103		
PM 10	-2.071		
PM 2.5	-0.873		
Pb	0.000		
NH3	0.000		
CO2e	-307.6		
Birmingham, AL			
VOC	1.414	100	No
NOx	22.279	100	No
CO	-4.340		
SOx	0.548	100	No
PM 10	-0.098		
PM 2.5	0.088	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1659.1		
Birmingham, AL			
VOC	1.678	100	No
NOx	26.329	100	No
CO	-4.972		
SOx	0.648	100	No
PM 10	-0.109		
PM 2.5	0.105	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1958.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-3.833		
NOx	40.966		
CO	-90.081		
SOx	-0.103		
PM 10	-2.071		

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

PM 2.5	-0.873		
Pb	0.000		
NH3	0.000		
CO2e	-307.6		
Birmingham, AL			
VOC	1.414	100	No
NOx	22.279	100	No
CO	-4.340		
SOx	0.548	100	No
PM 10	-0.098		
PM 2.5	0.088	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1659.1		
Birmingham, AL			
VOC	1.678	100	No
NOx	26.329	100	No
CO	-4.972		
SOx	0.648	100	No
PM 10	-0.109		
PM 2.5	0.105	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1958.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-1.219		
NOx	84.394		
CO	-105.766		
SOx	0.726		
PM 10	-2.523		
PM 2.5	-0.708		
Pb	0.000		
NH3	0.000		
CO2e	2203.8		
Birmingham, AL			
VOC	2.741	100	No
NOx	44.333	100	No
CO	-12.289		
SOx	0.972	100	No
PM 10	-0.328		
PM 2.5	0.172	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2941.7		
Birmingham, AL			
VOC	3.248	100	No
NOx	52.381	100	No
CO	-14.415		
SOx	1.141	100	No

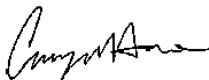
AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

PM 10	-0.380		
PM 2.5	0.204	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	3450.7		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	-1.219		
NOx	84.394		
CO	-105.766		
SOx	0.726		
PM 10	-2.523		
PM 2.5	-0.708		
Pb	0.000		
NH3	0.000		
CO2e	2203.8		
Birmingham, AL			
VOC	2.741	100	No
NOx	44.333	100	No
CO	-12.289		
SOx	0.972	100	No
PM 10	-0.328		
PM 2.5	0.172	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2941.7		
Birmingham, AL			
VOC	3.248	100	No
NOx	52.381	100	No
CO	-14.415		
SOx	1.141	100	No
PM 10	-0.380		
PM 2.5	0.204	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	3450.7		

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.



Carolyn Hein, Contractor

2/17/2023

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: COLUMBUS AFB

State: Alabama, Arkansas, Mississippi, Tennessee

County(s): Autauga, AL; Bibb, AL; Blount, AL; Chilton, AL; Choctaw, AL; Clarke, AL; Clay, AL; Colbert, AL; Coosa, AL; Cullman, AL; Dallas, AL; Elmore, AL; Franklin, AL; Greene, AL; Hale, AL; Jefferson, AL; Lauderdale, AL; Lawrence, AL; Marengo, AL; Marion, AL; Perry, AL; Pickens, AL; Shelby, AL; St. Clair, AL; Sumter, AL; Talladega, AL; Tallapoosa, AL; Tuscaloosa, AL; Walker, AL; Wilcox, AL; Winston, AL; Lee, AR; Phillips, AR; Alcorn, MS; Benton, MS; Bolivar, MS; Calhoun, MS; Carroll, MS; Chickasaw, MS; Clay, MS; Coahoma, MS; Grenada, MS; Itawamba, MS; Kemper, MS; Lafayette, MS; Lee, MS; Leflore, MS; Lowndes, MS; Marshall, MS; Monroe, MS; Montgomery, MS; Noxubee, MS; Panola, MS; Pontotoc, MS; Prentiss, MS; Quitman, MS; Sunflower, MS; Tallahatchie, MS; Tate, MS; Tippah, MS; Tishomingo, MS; Tunica, MS; Union, MS; Webster, MS; Yalobusha, MS; Chester, TN; Decatur, TN; Hardeman, TN; Hardin, TN; Lawrence, TN; McNairy, TN; Wayne, TN

Regulatory Area(s): NOT IN A REGULATORY AREA; Birmingham, AL

b. Action Title: T-7A Recapitalization at Columbus AFB - Alternative 3

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2028

e. Action Description:

The Proposed Action is recapitalization of the T-38C Talon flight training program at Columbus AFB with T-7A Red Hawk aircraft. Recapitalization would entail introduction of T-7A aircraft and flight operations at Columbus AFB and associated special use airspace to replace all T-38C aircraft assigned to the installation; introduction of nighttime (between 10 a.m. and 7 a.m.) T-7A flight operations; changes to the number of personnel and dependents in the Columbus AFB region; and construction and upgrade of operations, support, and maintenance facilities.

For Alternative 1, Columbus AFB would receive 61 T-7A aircraft and perform sufficient operations for sustaining pilot training while simultaneously phasing out the T-38C aircraft. Alternative 2 would also result in 61 T-7A aircraft being delivered to Columbus AFB; however, T-7A operations would be performed at an intensity approximately 25 percent greater than Alternative 1 to cover a scenario in which DAF requires a surge or increase in pilot training operations above the current plan. For Alternative 3, Columbus AFB would receive 77 T-7A aircraft and perform T-7A operations at an intensity identical to Alternative 2. Alternative 3 also incorporates a MILCON project alternative to construct 12 additional shelters for the T-7A aircraft. Alternative 3 is intended to provide DAF with operational flexibility, and inclusion of this alternative in the EIS provides analysis to evaluate future capacity needs. The No Action Alternative would not implement T-7A recapitalization at Columbus AFB.

f. Point of Contact:

Name: Carolyn Hein

Title: Contractor

Organization: HDR

Email:

Phone Number:

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

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:

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.793		
NOx	43.887		
CO	-8.292		
SOx	1.085		
PM 10	-0.183		
PM 2.5	0.174		
Pb	0.000		
NH3	0.000		
CO2e	3282.9		
Birmingham, AL			
VOC	1.414	100	No
NOx	22.279	100	No
CO	-4.340		
SOx	0.548	100	No
PM 10	-0.098		
PM 2.5	0.088	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1659.1		
Birmingham, AL			
VOC	1.678	100	No
NOx	26.329	100	No
CO	-4.972		
SOx	0.648	100	No
PM 10	-0.109		
PM 2.5	0.105	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1958.7		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.793		
NOx	43.887		
CO	-8.292		
SOx	1.085		
PM 10	-0.183		

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

PM 2.5	0.174		
Pb	0.000		
NH3	0.000		
CO2e	3282.9		
Birmingham, AL			
VOC	1.414	100	No
NOx	22.279	100	No
CO	-4.340		
SOx	0.548	100	No
PM 10	-0.098		
PM 2.5	0.088	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1659.1		
Birmingham, AL			
VOC	1.678	100	No
NOx	26.329	100	No
CO	-4.972		
SOx	0.648	100	No
PM 10	-0.109		
PM 2.5	0.105	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	1958.7		

2030

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.408		
NOx	87.315		
CO	-23.977		
SOx	1.914		
PM 10	-0.635		
PM 2.5	0.339		
Pb	0.000		
NH3	0.000		
CO2e	5794.3		
Birmingham, AL			
VOC	2.741	100	No
NOx	44.333	100	No
CO	-12.289		
SOx	0.972	100	No
PM 10	-0.328		
PM 2.5	0.172	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2941.7		
Birmingham, AL			
VOC	3.248	100	No
NOx	52.381	100	No
CO	-14.415		
SOx	1.141	100	No


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

PM 10	-0.380		
PM 2.5	0.204	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	3450.7		

2031 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	5.408		
NOx	87.315		
CO	-23.977		
SOx	1.914		
PM 10	-0.635		
PM 2.5	0.339		
Pb	0.000		
NH3	0.000		
CO2e	5794.3		
Birmingham, AL			
VOC	2.741	100	No
NOx	44.333	100	No
CO	-12.289		
SOx	0.972	100	No
PM 10	-0.328		
PM 2.5	0.172	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	2941.7		
Birmingham, AL			
VOC	3.248	100	No
NOx	52.381	100	No
CO	-14.415		
SOx	1.141	100	No
PM 10	-0.380		
PM 2.5	0.204	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	3450.7		

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.



Carolyn Hein, Contractor

2/17/2023

DATE