MOB6

KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Final

Environmental Impact Statement (EIS)

KC-46A Main Operating Base #6 (MOB 6) Beddown

Volume II – Appendices

November 2023

HEADQUARTERS AIR MOBILITY COMMAND

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Public Involvement and Agency Coordination

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Appendix A: Public Involvement and Agency Coordination

A.1 General Stakeholder Involvement

A.1.1 General Stakeholder Contact List

The following is a list by installation of officials, agencies, and interest groups who received notification from the United States Department of the Air Force (DAF) regarding the KC-46A Pegasus (KC-46A) Main Operation Base #6 (MOB 6) Beddown Environmental Impact Statement (EIS; **Table A-1**). U.S. Congressional members were sent notification to both their Washington, D.C. offices and a preferred local office. Some private citizens received notification, but their names are not published in this list.

Table A-1. KC-46A MOB 6 EIS General Stakeholder Contact List

Title	Organization/Division	Sub-organization	City	State
MacDill AFB				
Congresswoman	U.S. House of Representatives	14th District	Washington	DC
Senator	U.S. Senate	Florida	Washington	DC
Senator	U.S. Senate	Florida	Washington	DC
Senator	Florida Senate	District 18	Tallahassee	FL
Representative	Florida House of Representatives	District 60	Tallahassee	FL
Governor	State of Florida Governor's Office	--	Tallahassee	FL
Mayor	City of Tampa	--	Tampa	FL
Council Chairman	City of Tampa	City Council	Tampa	FL
Councilmember	City of Tampa	City Council District 4	Tampa	FL
County Administrator	Hillsborough County	--	Tampa	FL
Director	City of Tampa Department of Planning and Development	--	Tampa	FL
Regional Administrator	Federal Aviation Administration	Southern Region	Atlanta	GA
Chief of the NEPA Program Office	U.S. Environmental Protection Agency	Region 4	Atlanta	GA
Field Supervisor	U.S Fish and Wildlife Service	North Florida Ecological Services Office	Jacksonville	FL
SERO NEPA Coordinator	NOAA Fisheries		St. Petersburg	FL
Florida State Clearinghouse	Florida Department of Environmental Protection	Office of Intergovernmental Programs	Tallahassee	FL
Supervisor of Federal and State Compliance and Review	Florida Division of Historical Resources	Compliance Review Section	Tallahassee	FL
SHPO	Florida Division of Historical Resources	--	Tallahassee	FL

Title	Organization/Division	Sub-organization	City	State
MacDill AFB (continued)				
Secretary of Transportation	Florida Department of Transportation	--	Tallahassee	FL
Fairchild AFB				
Congressman	U.S. House of Representatives	Idaho District 1	Coeur d'Alene	ID
Congresswoman	U.S. House of Representatives	Washington District 5	Washington	DC
Senator	U.S. Senate	Washington	Washington	DC
Senator	U.S. Senate	Washington	Washington	DC
Senator	U.S. Senate	Idaho	Washington	DC
Senator	U.S. Senate	Idaho	Washington	DC
Governor	Washington Governor's Office	--	Olympia	WA
Governor	Idaho Governor's Office	--	Boise	ID
Representative	Washington House of Representatives	District 4	Olympia	WA
Representative	Washington House of Representatives	District 6	Olympia	WA
Representative	Washington House of Representatives	District 3	Olympia	WA
Senator	Washington Senate	District 6	Olympia	WA
Senator	Washington Senate	District 3	Olympia	WA
Senator	Washington Senate	District 4	Olympia	WA
Mayor	City of Spokane Mayor's Office	--	Spokane	WA
--	U.S. Forest Service	Region 6, Pacific Northwest	Portland	OR
NEPA Program Coordinator	U.S. Fish and Wildlife Service	Upper Columbia Fish and Wildlife Office	Spokane Valley	WA
Regional Administrator	Federal Aviation Administration	Northwest Mountain Region	Renton	WA
Representative	Washington Pilots Association	Government Affairs	Spokane	WA
Regional Director	Washington Department of Fish and Wildlife	--	Spokane Valley	WA
Regional Director	Washington State Department of Ecology	Eastern Region	Spokane	WA
Secretary of Transportation	Washington Department of Transportation	--	Olympia	WA
Executive Director	Idaho Department of Transportation	--	Austin	TX
SHPO	Department of Archaeology & Historic Preservation	--	Olympia	WA
Air Quality Engineer	Spokane Regional Clean Air Agency	--	Spokane	WA
--	City of Airway Heights Planning Department	--	Airway Heights	WA
Planning Director	City of Spokane Planning and Development	--	Spokane	WA

Title	Organization/Division	Sub-organization	City	State
Fairchild AFB (continued)				
Planning Director	City of Coeur d'Alene Planning Commission	--	Coeur d'Alene	ID
City Planner	City of Airway Heights Planning Department	--	Airway Heights	WA
Planning Director	Spokane County Planning Department	Public Works Building and Planning	Spokane	WA
Chief Executive Officer	Spokane Transit Authority	--	Spokane	WA
Executive Officer	Spokane Association of Realtors	--	Spokane	WA
Director	Spokane International Airport	--	Spokane	WA
--	Washington Air National Guard	--	Fairchild AFB	WA
President	Spokane Community College	--	Spokane	WA
Principal	Michael Anderson Elementary School	--	Fairchild AFB	WA
Enrollment Officer	Gonzaga University	--	Spokane	WA
Superintendent	Medical Lake School District	--	Medical Lake	WA
--	Park University of Fairchild AFB	--	Fairchild AFB	WA
Both Installations				
Administrator	U.S. Environmental Protection Agency	--	Washington	DC
Director	U.S. Environmental Protection Agency	Office of Federal Activities	Washington	DC
Administrator	Federal Aviation Administration	--	Washington	DC
Manager	Federal Aviation Administration	Airport Planning and Environmental Division	Washington	DC
Vice President	Federal Aviation Administration	Mission Support Services	Washington	DC
Manager	Federal Aviation Administration	Airspace Policy Group	Washington	DC

Key: FL = Florida; DC = District of Columbia; GA = Georgia; AFB = Air Force Base; SERO = Southeast Regional Office; NEPA = National Environmental Policy Act; NOAA = National Oceanic and Atmospheric Administration; SHPO = State Historic Preservation Officer; ID = Idaho; WA = Washington; TX = Texas; OR = Oregon

A.1.2 Sample General Stakeholder Draft EIS Notification Letter

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

18 January 2023

Mr. David R. Steele
Chief, Programs Division
Directorate of Strategy, Plans, Requirements and Programs
Headquarters Air Mobility Command
Scott Air Force Base, IL 62225

Federal, State, and Local Public Agencies
Interested Parties
Members of the Public

The Department of the Air Force (DAF) has prepared the Draft Environmental Impact Statement (EIS) for the KC-46A Main Operating Base #6 (MOB 6), in accordance with the National Environmental Policy Act (NEPA). The following libraries are requested to have this document remain available throughout the 45-day public comment period: Port Tampa City Public Library (4902 W Commerce St, Tampa, FL 33616), John F. Germany Public Library (900 N. Ashley Dr, Tampa, FL 33602), Jan Kaminis Platt Regional Library (3910 S. Manhattan Ave, Tampa, FL 33611), MacDill AFB Library (8102 Condor St, Bldg 252, Tampa, FL 33621), Spokane Central Public Library (906 W Main Ave, Spokane, WA 99201), Airway Heights Library (1213 S. Lundstrom St, Airway Heights, WA 99001), Medical Lake Library (321 E Herb St, Medical Lake, WA 99022), and Fairchild AFB Library (2 W Castle St, Fairchild AFB, WA 99011). This document is also available online at www.kc46amob6eis.com.

Notification of the availability of the Draft EIS will appear in the Federal Register to initiate the public review period. The EIS analyzes alternative installations (MacDill AFB [Alternative 1 – Preferred Alternative] and Fairchild AFB [Alternative 2]) for the MOB 6 beddown, which includes the basing of 24 KC-46A tanker aircraft and the infrastructure, facilities, airfield operations, training activities, personnel, and airspace to support the mission transition between fiscal years 2026 and 2028. Aircraft operations with the KC-46A would be similar to the type and level of intensity of existing KC-135 operations, although the number of annual operations would change depending on the alternative installation selected. The purpose of the Proposed Action is to recapitalize aging tanker aircraft (KC-135 Stratotanker) currently used by the DAF with the KC-46A model to better address future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 Stratotankers. The Proposed Action is needed because the KC-46A would provide mission essential capabilities currently lacking in the existing tanker fleet, resulting in a fully capable, combat-operational, tanker force to accomplish aerial refueling and related worldwide missions.

The DAF understands that there is the potential for the MOB 6 beddown to affect environmental resources and the human environment. The Draft EIS analyzes and presents the potential environmental consequences associated with the Proposed Action and Alternatives, including the No Action Alternative. The DAF is consulting with the appropriate resource agencies to determine the potential for significant impacts on cultural and natural resources and

corresponding mitigation measures, if needed. Consultation will continue to be incorporated into the EIS process and includes, but is not limited to, consultation with Federally-Recognized Tribes, consultation under Section 7 of the Endangered Species Act and consultation under Section 106 of the National Historic Preservation Act. It is anticipated that the potentially long-term, major, adverse effects on architectural resources under National Historic Preservation Act Section 106 that would result from Alternative 1 at MacDill AFB could be successfully mitigated in consultation with the Florida State Historic Preservation Office through the development and implementation of a Memorandum of Understanding, and the resulting long-term effects would be reduced to moderate. Therefore, no significant impacts would be expected on any resource area analyzed in the Draft EIS under either alternative. The Final EIS and a Record of Decision on the Proposed Action are expected in Fall 2023. Additional information is also available on the project website at www.kc46amob6eis.com.

The DAF will hold two virtual public hearings on the Draft EIS via internet/phone on March 7, 2023 from 5:30 pm to 8 pm EST to accommodate the public located near the MacDill AFB Alternative and March 9, 2023 from 5:30 pm to 8 pm PST to accommodate the public located near the Fairchild AFB Alternative. The purpose of the hearings is to receive input on the proposed action and alternatives and the Draft EIS analysis. The hearings will also be announced through local media and the project website. Instructions for participating in the virtual public hearing and more information are provided on the project website, www.kc46mob6eis.com. Links to the on-line virtual public hearings will be provided on the project website allowing interested parties to electronically participate in the public hearings, and a phone number will be provided for those without internet access.

All public, agency, and stakeholder substantive comments provided at the hearings and through written comments received via postal mail, email, and the project website will be considered in the preparation of the Final EIS. To ensure we have sufficient time to consider your input in the Final EIS, please submit comments within 45 days of receipt of this letter.

Additional information can be found on the project website listed above. Comments or questions regarding this project may be directed to the MacDill AFB Public Affairs Office (PAO) via email at 6.arw.pa@us.af.mil or the Fairchild AFB PAO via email at 92arw.pa@us.af.mil, including KC-46A MOB 6 EIS in the subject line, or by postal mail via USPS to: AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853 or via FedEx or UPS to AFCEC/CZN, Attn: KC-46A MOB 6 EIS, Building 1 Bay 8 Room 6009, 3515 South General McMullen, San Antonio, TX 78226-1710. In addition to the availability of the Draft EIS on the public website, digital or hard copy versions of the Draft EIS are available upon request via any of the communication methods above.

Sincerely,

DAVID R. STEELE
GS-15, DAF

A.1.3 Materials Distribution to Local Libraries

Hard copies of public hearing materials (project flyer, presentation, public hearing process sheet), and hard and CD copies of the Draft EIS were available during the DEIS public review period for public access and review at the following local libraries within each installation community (**Table A-2**).

Table A-2. Distribution List of Local Libraries

Library	Address
MacDill AFB	
MacDill AFB Library	8102 Condor St, Bldg 252, Tampa, FL 33621
Jan Kaminis Platt Regional Library	3910 S. Manhattan Ave, Tampa, FL 33611
John F. Germany Public Library	900 N. Ashley Dr, Tampa, FL 33602
Port Tampa City Library	4902 W Commerce St, Tampa, FL 33616
Fairchild AFB	
Fairchild AFB Library	2 W Castle St, Fairchild AFB, WA 99011
Airway Heights Library	1213 S. Lundstrom St, Airway Heights, WA 99001
Medical Lake Library	321 E Herb St, Medical Lake, WA 9902
Spokane Central Public Library	906 W Main Ave, Spokane, WA 99201

A.1.4 Federal Register Notice of Availability

requirements. No party objected to holding the proceedings in abeyance.

By this notice, the Commission requests comment regarding: (1) whether issues remain outstanding in this proceeding; (2) what those issues are; and (3) whether, if issues remain outstanding, the Commission should continue to hold the complaint in abeyance in light of any ongoing PJM stakeholder proceedings or for other reasons. If there are no further outstanding issues in this proceeding, please explain how each of the issues that were raised in this proceeding have been addressed (*e.g.,* through other filings the Commission has accepted in the interim, etc.). Comments must be submitted on or before 30 days from the date of this notice.

Comments may be filed electronically via the internet.[2] Instructions are available on the Commission's website *http://www.ferc.gov/docs-filing/efiling.asp.* For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at 1–866–208–3676, or for TTY, (202) 502–8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, submissions sent via the U.S. Postal Service must be addressed to: Federal Energy Regulatory Commission, Office of the Secretary, 888 First Street NE, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Federal Energy Regulatory Commission, Office of the Secretary, 12225 Wilkins Avenue, Rockville, Maryland 20852.

Dated: February 6, 2023.

Debbie-Anne A. Reese,

Deputy Secretary.

[FR Doc. 2023–02891 Filed 2–9–23; 8:45 am]

BILLING CODE 6717–01–P

[2] *See* 18 CFR 385.2001(a)(1)(iii) (2021).

ENVIRONMENTAL PROTECTION AGENCY

[FRL OP–OFA–056]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information 202–564–5632 or *https://www.epa.gov/nepa.*

Weekly receipt of Environmental Impact Statements (EIS)

Filed January 30, 2023 10 a.m. EST Through February 6, 2023 10 a.m. EST

Pursuant to 40 CFR 1506.9.

Notice: Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/search.*

EIS No. 20230017, Final Supplement, NRC, WI, NUREG–2183 Supplement 1, Environmental Impact Statement Related to the Operating License for the SHINE Medical Isotope Production Facility—Final Report, Review Period Ends: 03/13/2023, Contact: Lance J Rakovan 301–415–2589.

EIS No. 20230018, Final, EPA, LA, Adoption—Proposed Mid-Barataria Sediment Diversion Project in Plaquemines Parish, Louisiana, Contact: Michael Jansky 214–665–7451.

The Environmental Protection Agency (EPA) has adopted the U.S. Army Corps of Engineers' Final EIS No. 20220137, filed 9/19/2022 with the Environmental Protection Agency. The EPA was a cooperating agency on this project. Therefore, republication of the document is not necessary under Section 1506.3(b)(2) of the CEQ regulations.

EIS No. 20230019, Final, DOI, LA, Adoption—Proposed Mid-Barataria Sediment Diversion Project in Plaquemines Parish, Louisiana, Contact: Mary Josie Blanchard 202–208–3406.

The Department of the Interior (DOI) has adopted the U.S. Army Corps of Engineers' Final EIS No. 20220137, filed 9/19/2022 with the Environmental Protection Agency. The DOI was a cooperating agency on this project. Therefore, republication of the document is not necessary under Section 1506.3(b)(2) of the CEQ regulations.

EIS No. 20230020, Final, USDA, LA, Adoption—Proposed Mid-Barataria Sediment Diversion Project in Plaquemines Parish, Louisiana, Contact: Ronald Howard 601–812–9449.

The United States Department of Agriculture (USDA) has adopted the U.S. Army Corps of Engineers' Final EIS No. 20220137, filed 9/19/2022 with the Environmental Protection Agency. The USDA was a cooperating agency on this project. Therefore, republication of the document is not necessary under Section 1506.3(b)(2) of the CEQ regulations.

EIS No. 20230021, Final, NOAA, LA, Adoption—Proposed Mid-Barataria Sediment Diversion Project in Plaquemines Parish, Louisiana, Contact: Mel Landry 301–427–8711.

The National Oceanic and Atmospheric Administration (NOAA) has adopted the U.S. Army Corps of Engineers' Final EIS No. 20220137, filed 9/19/2022 with the Environmental Protection Agency. The NOAA was a cooperating agency on this project. Therefore, republication of the document is not necessary under Section 1506.3(b)(2) of the CEQ regulations.

EIS No. 20230022, Draft, FERC, TN, Cumberland Project, Comment Period Ends: 03/27/2023, Contact: Office of External Affairs 866–208–3372.

EIS No. 20230023, Final, DOD, AK, Heat and Electrical Upgrades at Fort Wainwright, Alaska, Review Period Ends: 03/13/2023, Contact: Grant Sattler 907–353–6701.

EIS No. 20230024, Draft, USAF, FL, KC–46A—Main Operating Base No. 6 Beddown, Comment Period Ends: 03/27/2023, Contact: Helen Kellogg 210–925–7843.

EIS No. 20230025, Draft, BIA, ID, Nez Perce Tribe Integrated Resource Managment Plan, Comment Period Ends: 04/11/2023, Contact: Tobiah Mogavero 435–210–0509.

EIS No. 20230026, Draft Supplement, TVA, AL, Browns Ferry Nuclear Plant Subsequent License Renewal, Comment Period Ends: 03/27/2023, Contact: J Taylor Johnson 423–751–2732.

Amended Notice

EIS No. 20220185, Draft, NNSA, SC, Surplus Plutonium Disposition Program, Comment Period Ends: 03/16/2023, Contact: Maxcine Maxted 803–952–7434. Revision to FR Notice Published 12/16/2022; Extending the Comment Period from 02/14/2023 to 03/16/2023.

EIS No. 20220191, Draft Supplement, USFS, VA, Mountain Valley Pipeline and Equitrans Expansion Project, Comment Period Ends: 02/21/2023, Contact: Joby Timm, Forest Supervisor 888–603–0261. Revision to FR Notice Published 12/23/2022; Extending the Comment Period from 02/06/2023 to 02/21/2023.

Dated: February 6, 2023.

Cindy S. Barger,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2023–02897 Filed 2–9–23; 8:45 am]

BILLING CODE 6560–50–P

A.1.5 Newspaper Notices of Availability

A.1.5.1 Tampa Bay Times – Hillsborough and Pinellas Sections

LEGAL NOTICE

NOTICE OF AVAILABILITY: DRAFT ENVIRONMENTAL IMPACT STATEMENT
NOTICE OF PUBLIC HEARINGS
UNITED STATES AIR FORCE

The U.S. Department of the Air Force invites you to review the Draft Environmental Impact Statement and attend Public Hearings for the Proposed Beddown of KC-46A Tanker Aircraft for Main Operating Base #6

PROPOSED ACTION AND ALTERNATIVES CONSIDERED. Pursuant to the National Environmental Policy Act, the U.S. Department of the Air Force (DAF), has prepared a Draft Environmental Impact Statement (EIS) for public review that analyzes the potential environmental consequences associated with the proposal to beddown and replace 1950s-era aerial refueling tankers with the KC-46A Main Operating Base #6 (MOB 6) aircraft and mission at either MacDill Air Force Base (AFB), Florida or at Fairchild AFB, Washington, to include the proposal's effect on historic properties. The MOB 6 beddown requires an active duty installation in the continental United States with the aerial refueling tankers and mission to be replaced, as well as the capacity to support KC-46A infrastructure, facilities, airfield operations, training activities, and personnel.

The DAF's Preferred Alternative is to beddown the MOB 6 mission with 24 KC-46A aircraft at MacDill AFB. The EIS also evaluates Fairchild AFB as a reasonable alternative for the MOB 6 beddown, and the No Action Alternative. Depending on the selected installation, the KC-46A would either fully or partially replace the current active duty tanker mission.

OBTAIN AND REVIEW THE DRAFT EIS. The DAF has initiated a 45-day comment period and invites the public to review and provide comments on the Draft EIS, which is available for download at www.kc46amob6eis.com and may also be viewed at the following local libraries:

MacDill AFB Area: Jan Kaminis Platt Regional Library (3910 S. Manhattan Ave, Tampa, FL 33611), John F. Germany Public Library (900 N. Ashley Dr, Tampa, FL 33602), Port Tampa City Public Library (4902 W Commerce St, Tampa, FL 33616), and MacDill AFB Library (8102 Condor St, Bldg 252, Tampa, FL 33621)

Fairchild AFB Area: Airway Heights Library (1213 S. Lundstrom St, Airway Heights, WA 99001), Medical Lake Library (321 E Herb St, Medical lake, WA 99022), Spokane Central Public Library (906 W Main Ave, Spokane, WA 99201), and Fairchild AFB Library (2 W Castle St, Fairchild AFB, WA 99011)

VIRTUAL PUBLIC HEARINGS - *PLEASE ATTEND.* The DAF requests comments from interested local, state, and federal agencies; federally recognized tribes; and interested members of the public. The DAF is holding two virtual public hearings to provide the public with the opportunity to learn more about the proposal, it's effect on historic properties, and to provide input in March 2023 (see table below for specific dates and times). Information regarding the impact assessment is accessible via the project website (www.kc46amob6eis.com), and a pre-recorded public hearing presentation will be available to access and listen to on the day of the virtual public hearing. A weblink and phone number to access the online virtual public hearings will be provided via flyers at the specified local libraries and on the project website allowing interested parties to participate in the public hearings either by phone or online. Those without internet access are invited to participate by phone.

One virtual public hearing will be held in the local time of each installation alternative. Each virtual public hearing will begin at 5:30 local time with the DAF giving a brief presentation about the proposal. Formal public testimony will begin at approximately 6 p.m. The hearing venue will close at 8:00 p.m., but may adjourn before 8:00 p.m. upon or after verification that all participants who desire to speak have been heard and there are no more registered speakers. All members of the public are invited and encouraged to attend. **Verbal comments will be accepted at the hearings, but you can also submit your comments in writing via email, postal mail, the project website (see details below). Verbal comments will be limited to 3 minutes or less; therefore, the DAF suggests submitting statements of considerable length in writing. Your input is valuable and assists the DAF in making more informed decisions.**

To request a CD of the hearing presentation, or if you need to request accommodation to access the printed or audio portion of the presentation or need additional accommodation to make a telephone comment (per the Americans with Disabilities Act), please submit your request at the project website (www.kc46amob6eis.com) or contact the MacDill AFB 6 Aerial Refueling Wing (ARW) Public Affairs Office (PAO) by phone (813-828-2215) or email (6.arw.pa@us.af.mil) or Fairchild AFB PAO by phone (509-247-5705) or email (92arw.pa@us.af.mil) no later than one week prior to the virtual hearing date. Dates for each virtual hearing are provided below:

Date	Time	Installation
March 7, 2023	5:30 to 8:00 p.m. Eastern Standard Time	MacDill AFB
March 9, 2023	5:30 to 8:00 p.m. Pacific Standard Time	Fairchild AFB

PUBLIC COMMENT. Comments on the Draft EIS can be submitted online at www.kc46amob6eis.com; verbally at the public hearings; via email to MacDill AFB 6 ARW PA at 6.arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or to Fairchild AFB PAO at 92arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or by postal mail via USPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, Texas 78236-9853 or via FedEx or UPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, Building 1 Bay 8 Room 8009, 3515 South General McMullen, San Antonio, TX 78226-1710. In order to fully address public concerns or comments, the DAF suggests attendees submit their intention to participate in the public hearing with an indication of which environmental impact(s) they wish to address prior to the hearing via email or phone, though it is not required.

For additional information, or to request hard or CD copies of the Draft EIS, please contact MacDill AFB 6 ARW PAO via the phone, email, or postal mail contact information provided in this notice. Please consider the environment when requesting print materials.

We will accept comments at any time during the environmental process. Written and oral comments will be given equal weight; however, to ensure the DAF has sufficient time to consider public input in preparation of the Final EIS, please submit comments by March 27, 2023.

2/12/2023

LEGAL NOTICE

FORWARD PINELLAS, THE METROPOLITAN PLANNING ORGANIZATION (MPO) FOR PINELLAS COUNTY

SUBCOMMITTEE MEETING, PUBLIC WORKSHOP AND REGULAR MEETING OF THE LOCAL COORDINATING BOARD (LCB) FOR THE PINELLAS COUNTY TRANSPORTATION DISADVANTAGED PROGRAM

Notice is hereby given that the Local Coordinating Board (LCB) will conduct a subcommittee meeting on February 10, 2023 from 1 to 3 p.m., a public hearing/workshop on February 21, 2023 at 9:15 a.m. and a general meeting on February 21, 2023 at 9:30 a.m. to address the regular business of the LCB and the Transportation Disadvantaged Program in Pinellas County.

The Local Coordinating Board (LCB) was established by the Pinellas County Metropolitan Planning Organization and charged with oversight and advisory responsibilities for the Transportation Disadvantaged Program. This program provides transportation services to persons who do not have the means or ability to transport themselves and generally includes persons who are elderly, disabled, or economically disadvantaged.

"If you are a person with a disability who needs any accommodation, or if you need language assistance in order to participate in this proceeding, you are entitled to the provision of certain assistance at no cost. Please call the Office of Human Rights, (727) 464-4062 (TDD)."

"Si usted necesita la ayuda de un traductor del idioma español, por favor comuníquese con la Oficina de Derechos Humanos situada en la siguiente dirección, 400 South Fort Harrison Avenue, Piso 5, en la Ciudad de Clearwater, Florida 33756; Teléfono: (727) 464-4062 (TDD)."

All meetings and will be held in the Pinellas County Planning Department Conference Room, 310 Court Street, Clearwater (two blocks southwest of PSTA's Park Street Terminal). Further information may be obtained by contacting Forward Pinellas, 310 Court Street, Clearwater, Florida 33756, at (727) 464-8250, forwardpinellas.org or by email at feigel@forwardpinellas.org.

In accordance with Title VI of the Civil Rights Act of 1964 and other nondiscrimination laws, public participation is solicited without regard to race, color, national origin, age, sex, religion, disability, or family status.

2/12/23

A.1.5.2 Spokesman Review – Print and Online

THE SPOKESMAN-REVIEW FEBRUARY 10, 2023 • FRIDAY • A11

BUSINESS

Unilever among giants scrapping product lines, sacrificing sales

By Dasha Afanasieva
BLOOMBERG

Consumer giants such as Unilever and Nestlé are walking away from less profitable product lines to make their supply chains more efficient overall, even if it means raking a hit to sales.

Companies in the sector typically stock thousands of variations of sizes and flavors of different products. Narrowing that range can simplify operations. The groups are trying to spend less as they struggle to pass on higher input costs to consumers.

Unilever warned Thursday that shoppers will buy fewer of its products in 2023 having suffered a 2.1% fall in volumes in 2022. Customers are cutting back spending amid an inflationary crisis in many parts of the world.

Unilever is no longer selling about 5,000 lines in its personal care unit and discontinued 50 or 60 local brands that make up less than 1% of the unit's sales, Chief Financial Officer Graeme Pitkethly said.

It also cut its offering in dressings in North America – including premium mayonnaise Sir Kensington's and a very large tub of Hellmann's that will no longer be supplied to a retailer in the U.S.

In Europe, it's cutting back on some ice cream tub options. In October, Danone said it would speed up "pruning" its product ranges over the coming quarters.

Companies can end up offering unwieldy combinations as they try to cater to every customer's preference, but the variety contributes little to growth. Nestlé has said it has more than 100,000 "stock keeping units" – versions of their products – and a third of them account for just 1% of sales.

Cutting products in an economic downturn can seem like a "no-brainer," Siobhan Gebin, a senior partner at consultancy Roland Berger. Still, she warned: "It may be difficult to regain associated lost space on the grocery shelf when economic conditions bounce back."

Earlier this month, Nestlé said it would wind down its frozen meals and pizza business in Canada over the next six months, ending the supply of brands Delissio, Saugger's, Lean Cuisine and Life Cuisine.

Instead, the company says it wants to give the 1% that account for four-fifths of sales "the platinum treatment."

"We want to nurture them and give them the best possible support," Laurent Freixe, a Nestlé executive said in November.

DISNEY

Continued from 10

and management can remain focused without the distraction of a proxy contest, and we have tremendous faith in Bob Iger's leadership and the transformative vision for Disney's future he set forth yesterday," Disney's board said in a statement.

Carrying out that vision will be difficult. Disney, like other big entertainment companies, is scrambling to make streaming profitable as a way to offset traditional television, which is in a free fall.

In Disney's most recent quarter, operating profit from traditional television (the ABC broadcast network and 15 cable channels, led by ESPN) totaled $1.3 billion, a 16% decrease from a year earlier. Disney attributed the declines to lower advertising revenue, reflecting a drop-off in viewership, especially overseas, as more people forgo cable and satellite hookups.

Across Hollywood, companies are slashing budgets. Warner Bros. Discovery has already cut thousands of jobs as part of a $3.5 billion retrenchment. But the playing field is not equal. Apple and Amazon continue to pour money into their streaming services, making it more difficult for older companies like Disney to compete for filmmakers, show creators and stars.

On Wednesday afternoon, Iger delivered quarterly financial results that broadly pleased investors. Profit and revenue exceeded Wall Street's expectations. Losses in Disney's streaming division abated. Walt Disney World, in Florida, and Disneyland, in California, generated $2.1 billion in profit, an increase of 36% from a year earlier.

Those were largely Chapek's results. The quarter was two-thirds finished by the time Iger took over in late November.

Iger, however, laid a framework for Disney's future on top of the numbers, one that left Peltz with little ground to stand on. Disney would cleave costs by a little, Iger said, but by $5.5 billion and eliminate 7,000 jobs. Disney's streaming businesses would be managed differently as part of a restructuring designed to galvanize Disney's film and television studios and focus on profitability. The company's dividend would be restored by the end of the year.

"Our cost-cutting initiatives will make this possible," Iger said of the dividend. "And while initially it will be a modest dividend, we hope to build upon it over time."

It added up to a master class in dismantling a corporate threat. Iger came across as tough, clearsyed and decisive. He even handed out candy to Disney fans, announcing plans to build an "Avatar" attraction at Disneyland and new installments in the "Toy Story" and "Frozen" franchises.

Disney shares rose 5% in after hours trading Wednesday following the results. "To Profitability ... and Beyond!" Michael Morris, a Guggenheim Securities analyst, wrote in a report to clients. Several other analysts raised their outlook for Disney shares.

Before dawn Thursday in Los Angeles, Iger continued his campaign on CNBC. He said that "everything was on the table" regarding Hulu, the general-audience streaming service that Disney controls. Some analysts have wondered if Disney should sell Hulu, but Disney previously signaled that it intended to double-down on the service. Comcast owns a 33% stake in Hulu, and Disney had been trying to buy it out.

"I'm concerned about undifferentiated general entertainment, particularly given the competitive landscape that we're operating in, and we're going to look at it very objectively," Iger said.

Peltz had also been pushing Disney to clean up its messy succession planning. Iger had delayed his retirement from Disney at least three times and, in some ways, seemed reluctant to leave the company when he did. In bringing him back, the board gave him two years to steer the company onto the right path and groom another successor.

Iger told CNBC that work to identify a successor was "already underway," with Disney's incoming board president, Mark Parker, scheduled to lead a private meeting about it Friday.

"My plan is to stay here for two years," Iger said. "That's what my contract says. That was the agreement with the board."

Shortly afterward, Peltz phoned CNBC to say Iger's restructuring announcement indicated Disney "plans to do everything we wanted them to do."

"We wish the very best to Bob, his management team, the board," Peltz said. "We will be watching. We will be rooting."

Shares of Disney closed down about 1.3% on Thursday, roughly in line with the market.

BETTING

Continued from 10

and columns that later get numbered 0 to 9 – predictions for the score. If the last digit of the score at the end of any quarter corresponds to your digits, you win part of the pot. Prizes grow as the game progresses, and the person with the winning final score usually gets half the take.

A 10-by-10 box works well for a small organization with under 100 employees, but some big employers have to expand their contests. For the past 15 years, tax and audit giant KPMG has asked staffers eight questions about the game, such as who will win the coin toss. The top scorers can win a high-end firepit, while anyone who enters can get a $50 gift card. Typically at least half of the firm's 35,000 workers take part, according to a representative for KPMG.

The decidedly old-school approach to office pools – many are still done by hand – could easily have fallen victim to the digital wizardry on display with gaming apps like FanDuel, DraftKings and BetMGM, with their parlay generators and livestreaming. Sports betting is legal in 33 states and the District of Columbia after the Supreme Court's 2018 decision to strike down the law barring sports betting.

This year, for the first time, more American adults plan to wager online, at a sportsbook or with a bookie than plan to bet casually with friends or as part of a pool contest, the American Gaming Association survey found.

David Forman, vice president of research at the American Gaming Association, figured office pools would lose popularity as legal betting proliferated, betting plateauing over the last few years," he said. "So we thought either more people wanted to bet legally now, or it's a longer-term decline. But from this year's data, it looks like it was just a COVID disruption. People are doing both now, both legal and casual."

Not all office pools benefit a work environment. They can alienate those who don't follow sports, and organizers might intentionally exclude some groups of workers from participating. They're also typically in violation of company codes of conduct, according to Jessica Kriegel, chief scientist of workplace culture at Culture Partners, a consultant.

Beyond those challenges, though, "they can be a way to foster community, lighthearted trash-talking, and allow employees to learn a little bit about each other," Kriegel said. "Who knew that Dan

GM

Continued from 10

Several chipmakers are building plants and expanding production in the U.S. with the help of funding from the CHIPS and Science Act, which President Joe Biden signed into law last year.

Based in Malta, New York, north of Albany, GlobalFoundries operates chip factories formerly owned by IBM and is hoping to secure funding to support its expansion plans. In November, its CEO, Thomas Caulfield, said GlobalFoundries wanted to increase output at a plant near Malta and another in Burlington, Vermont, and has bought a production area at an existing plant in Malta.

Automakers have been struggling with a computer chip shortage for the last two years and at times have had to idle plants while waiting for new supplies. In 2021, Ford Motor Co. reached an agreement with GlobalFoundries to collaborate on designing chips to help improve its supplies.

Analysts, however, say tight supplies will linger because cars use relatively simple chips and semiconductor manufacturers are investing more heavily in expanding production of advanced chips that generate more profit for them. It also takes about three years to build a new chip factory and bring it into

SPACEX

Continued from 10

liquid methane and liquid oxygen propellants. After the wet dress rehearsal, Starship was taken off the booster, which remained at the launchpad.

Thursday's static fire test was announced Wednesday by Gwynne Shotwell, president and chief operating officer of SpaceX, during remarks at the Federal Aviation Administration Commercial Space Transportation conference in Washington.

She said the launch attempt could occur within a month or so.

If all 33 engines had fired at full power Thursday, the Super Heavy booster would have unleashed 17 million pounds of thrust, which would make it the most powerful rocket ever ignited. NASA's new Space Launch System rocket, which launched for the first time in November to send the uncrewed Artemis I mission to the moon, generated 8.8 million pounds of thrust at liftoff. The Saturn V rocket used for the Apollo moon landings of the 1960s and 1970s generated 7.6 million pounds of thrust at launch.

Starship is designed to be reusable. The Super Heavy booster is designed to land much like the boosters of SpaceX's current Falcon 9, the most frequently launched rocket in the world. Starship is designed to go to orbit and then return to Earth, belly flopping through the atmosphere to slow down before pivoting to a vertical orientation for landing.

Before the rocket leaves the ground for an orbital test, SpaceX still needs to obtain a launch license from the FAA, which is in charge of ensuring the safety of people on the ground.

In June, the FAA concluded that SpaceX's launch plans would have "no significant impact" on the surrounding areas near Brownsville, Texas. But the FAA required SpaceX to take 75 actions to mitigate the environmental effects, including earlier notice of launches, monitoring of vegetation and wildlife by a biologist and minimizing closures of a highway that passes by the SpaceX site.

Northwest wheat

Forward exporter bids for wheat delivered to the Northwest coast in unit trains or barges. Prices in dollars per bushel.

Soft white*	Cash $ d	Change
Feb	XX	XX
March	XX	XX
Hard red winter (ordinary percent protein)		
	Cash $ d	Change
Feb	XX	XX
Hard red winter (11.5 percent protein)		
	Cash $ d	Change
Feb	XX	XX
March	XX	XX
Dark northern spring (14 percent protein)		
	Cash $ d	Change
Feb	XX	XX
March	XX	XX

Sources: USDA Market News, Portland
*Pacific Northwest Farmers Cooperative

NOTICE OF AVAILABILITY: DRAFT ENVIRONMENTAL IMPACT STATEMENT
NOTICE OF PUBLIC HEARINGS
UNITED STATES AIR FORCE

The U.S. Department of the Air Force invites you to review the Draft Environmental Impact Statement and attend Public Hearings for the Proposed Beddown of KC-46A Tanker Aircraft for Main Operating Base #6

PROPOSED ACTION AND ALTERNATIVES CONSIDERED. Pursuant to the National Environmental Policy Act, the U.S. Department of the Air Force (DAF) has prepared a Draft Environmental Impact Statement (EIS) for public review that analyzes the potential environmental consequences associated with the proposal to beddown and replace 1960s-era aerial refueling tankers with the KC-46A Main Operating Base #6 (MOB 6) aircraft and mission at either MacDill Air Force Base (AFB), Florida or at Fairchild AFB, Washington, to include the proposal's effect on historic properties. The MOB 6 beddown requires an active duty installation for the operational KC-46A tankers with the aerial refueling trackers and mission to be relocated, as well as the capacity to support KC-46A infrastructure, facilities, airfield operations, training activities, and personnel.

The DAF's Preferred Alternative is to beddown the MOB 6 mission with 24 KC-46A aircraft at MacDill AFB. The EIS also evaluates Fairchild AFB as a reasonable alternative for the MOB 6 beddown, and the No Action Alternative. Depending on the selected installation, the KC-46A would either fully or partially replace the current active duty tanker mission.

OBTAIN AND REVIEW THE DRAFT EIS. The DAF has initiated a 45 day comment period and invites the public to review and provide comments on the Draft EIS, which is available for download at **www.kc46amob6eis.com** and may also be viewed at the following local libraries:

MacDill AFB Area: Jan Kaminis Plan Regional Library (9812 S. Manhattan Ave, Tampa, FL 33611), John F. Germany Public Library (900 N. Ashley Dr, Tampa, FL 33602), Port Tampa City Public Library (4902 W Commerce St, Tampa, FL 33616), and MacDill AFB Library (8102 Condor St, Bldg 252, Tampa, FL 33621).

Fairchild AFB Area: Airway Heights Library (1213 S. Lundstrom St, Airway Heights, WA 99001), Medical Lake Library (321 E Hoth St, Medical lake, WA 99022), Spokane County Public Library (906 W Main Ave, Spokane, WA 99201), and Fairchild AFB Library (2 W Coolis St, Fairchild AFB, WA 99011).

VIRTUAL PUBLIC HEARINGS - *PLEASE ATTEND.* The DAF requests comments from interested local, state, and federal agencies; federally recognized tribes; and interested members of the public. The DAF is hosting two virtual public hearings to provide the public with the opportunity to learn more about the proposal, its effect on historic properties, and to provide input to March 2023 (see table below for specific dates and times). Information regarding the project assessment is accessible via the project website (**www.kc46amob6eis.com**), and a pre-recorded public hearing presentation will be available to access and listen to on the day of the virtual public hearing. A weblink and phone number to access the online virtual public hearings will be provided via flyers at the specified local libraries and on the project website allowing interested parties to participate in the public hearings either by phone or online. Those without internet access are invited to participate by phone.

One virtual public hearing will be held in the local time of each installation alternative. Each virtual public hearing will begin at 5:30 local time with the DAF giving a brief presentation about the proposal. Formal public testimony will begin at approximately 6 p.m. The hearing venue will close at 8:00 p.m., but may adjourn before 8:00 p.m. upon or after verification that all participants who desire to speak have been heard and there are no more registered speakers. All members of the public are invited and encouraged to attend. **Verbal comments will be accepted at the hearings, but you can also submit your comments in writing via email, postal mail, the project website (see details below). Verbal comments will be limited to 3 minutes or less; therefore, the DAF suggests submitting statements of considerable length in writing. Your input is valuable and assists the DAF in making more informed decisions.**

To request a CD of the hearing presentation, or if you need to request accommodation to access the printed or audio portion of the presentation or need additional accommodation to make a telephone comment (per the Americans with Disabilities Act), please submit your request at the project website (**www.kc46amob6eis.com**) or contact the MacDill AFB & Aerial Refueling Wing (ARW) Public Affairs Office (PAO) by phone (813-828-2715) or email (8.arw.pa@us.af.mil) or Fairchild AFB PAO by phone (509-247-5185) or email (60arw.pa@us.af.mil) no later than one week prior to the virtual hearing date. Dates for each virtual hearing are provided below:

Date	Time	Installation
March 7, 2023	5:30 to 8:00 p.m. Eastern Standard Time	MacDill AFB
March 9, 2023	5:30 to 8:00 p.m. Pacific Standard Time	Fairchild AFB

PUBLIC COMMENT. Comments on the Draft EIS can be submitted online at **www.kc46amob6eis.com**, verbally at the public hearings, via email to MacDill AFB & ARW PA at 8.arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or to Fairchild Arm PAO at 60arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or by postal mail via USPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, 2261 Hughes Ave, Ste 155 , JBSA Lackland, Texas 78236-9853 or via FedEx or UPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, Building 1 Bay 6 Room 6009, 3515 South General McAllen, San Antonio, TX 78226-1710. In order to fully address public concerns or comments, the DAF suggests attendees submit their intention to participate in the public hearing with an indication of which environmental impact(s) they wish to address prior to the hearing via e-mail or phone, though it is not required.

For additional information, or to request hard or CD copies of the Draft EIS, please contact MacDill AFB & ARW PAO via the phone, email, or postal mail contact information provided in this notice. Please consider the environment when requesting print materials.

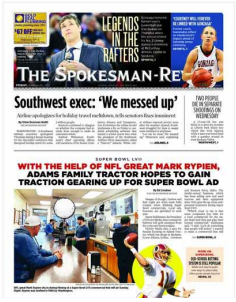
We will accept comments at any time during the environmental process. Written and oral comments will be given equal weight; however, to ensure the DAF has sufficient time to consider public input in preparation of the Final EIS, please submit comments by March 27, 2023.

Northwest Passages to welcome Mandi Price, producer of upcoming Amazon series 'Daisy Jones & the Six,' as panelist for celebration of young Black voices

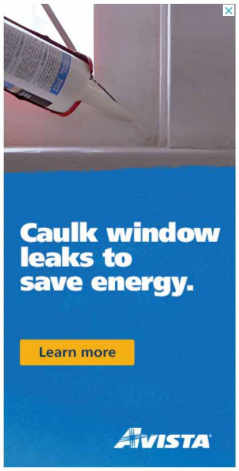
4 a.m.

The Shadle and Gonzaga University alumnus has become a sought-after producer, with her previous project, "Archive 81," becoming Netflix's No. 1 show in January 2022. "Daisy Jones & the Six" continues her work with the Hello Sunshine production company, cofounded by actress Reese Witherspoon. Price was also a producer on the adaptation of "Little Fires Everywhere," which starred Witherspoon and Kerry Washington in a Hulu series based on Celeste Ng's novel.

Notice of Availability: The U.S. Department of the Air Force (DAF) has prepared a Draft Environmental Impact Statement (EIS) for the KC-46A Main Operating Base #6 Beddown. The DAF has initiated a 45-day comment period and invites the public to review and provide comments on the Draft EIS, which is available for download at www.kc46amob6eis.com.



Notice of Availability: The U.S. Department of the Air Force (DAF) has prepared a Draft Environmental Impact Statement (EIS) for the KC-46A Main Operating Base #6 Beddown. The DAF has initiated a 45-day comment period and invites the public to review and provide comments on the Draft EIS, which is available for download at www.kc46amob6eis.com.



Pacific Northwest and South African beadwork exhibits open at Museum of Arts and Culture

Art collections by members of the Columbia Plateau tribes and South African women are coming to the MAC.

A.1.5.3 Pacific Northwest Inlander

MUSIC | VENUES

219 LOUNGE • 219 N. First Ave., Sandpoint • 208-263-5673
ARBOR CREST WINE CELLARS • 4705 N. Fruit Hill Rd., Spokane Valley • 509-927-9463
BABY BAR • 827 W. First Ave. • 509-847-1234
BARRISTER WINERY • 1213 W. Railroad Ave. • 509-465-3591
BEE'S KNEES WHISKY BAR • 1324 W. Lancaster Rd., Hayden • 208-758-0558
BERSERK • 125 S. Stevens St. • 509-315-5101
THE BIG DIPPER • 171 S. Washington St. • 509-863-8098
BIGFOOT PUB • 9115 N. Division St. • 509-467-9638
BING CROSBY THEATER • 901 W. Sprague Ave. • 509-227-7638
BLACK DIAMOND • 9614 E. Sprague Ave. • 509-891-8357
BOLO'S BAR & GRILL • 116 S. Best Rd., Spokane Valley • 509-891-8995
BOOMERS CLASSIC ROCK BAR • 18219 E. Appleway Ave., Spokane Valley • 509-368-9847
BUCER'S COFFEEHOUSE PUB • 201 S. Main St., Moscow • 208-596-0887
THE BULL HEAD • 10211 S. Electric St., Four Lakes • 509-838-9717
CHAN'S RED DRAGON • 1406 W. Third Ave. • 509-838-6688
COEUR D'ALENE CASINO • 37914 S. Nukwalqw St., Worley • 800-523-2464
COEUR D'ALENE CELLARS • 3890 N. Schreiber Way, Coeur d'Alene • 208-664-2336
CRUISERS BAR & GRILL • 6105 W Seltice Way, Post Falls • 208-446-7154
CURLEY'S HAUSER JUNCTION • 26433 W. Hwy. 53, Post Falls • 208-773-5816
EICHARDT'S PUB • 212 Cedar St., Sandpoint • 208-263-4005
FIRST INTERSTATE CENTER FOR THE ARTS • 334 W. Spokane Falls Blvd. • 509-279-7000
FOX THEATER • 1001 W. Sprague Ave. • 509-624-1200
IRON HORSE • 407 E. Sherman, Coeur d'Alene • 208-667-7314
IRON HORSE BAR & GRILL • 11105 E. Sprague Ave., Spokane Valley • 509-926-8411
JOHN'S ALLEY • 114 E. Sixth St., Moscow • 208-883-7662
KNITTING FACTORY • 911 W. Sprague Ave. • 509-244-3279
LEFTBANK WINE BAR • 108 N. Washington St. • 509-315-8623
LUCKY YOU LOUNGE • 1801 W. Sunset Blvd. • 509-474-0511
MARYHILL WINERY • 1303 W. Summit Pkwy. • 509-443-3832
THE MASON JAR • 101 F St., Cheney • 509-359-8052
MAX AT MIRABEAU • 1100 N. Sullivan Rd., Spokane Valley • 509-922-6252
MILLIE'S • 28441 Hwy 57, Priest Lake • 208-443-0510
MOOSE LOUNGE • 401 E. Sherman Ave., Coeur d'Alene • 208-664-7901
MOOTSY'S • 406 W. Sprague Ave. • 509-838-1570
NASHVILLE NORTH • 6361 W. Seltice Way, Post Falls • 208-457-9128
NORTHERN QUEST RESORT & CASINO • 100 N. Hayford Rd., Airway Heights • 877-871-6772
NYNE BAR & BISTRO • 232 W. Sprague Ave. • 509-474-1621
PEND D'OREILLE WINERY • 301 Cedar St., Sandpoint • 208-265-8545
THE PODIUM • 511 W. Dean Ave. • 509-279-7000
POST FALLS BREWING CO. • 112 N. Spokane St., Post Falls • 208-773-7301
RAZZLE'S BAR & GRILL • 10325 N. Government Way, Hayden • 208-635-5874
RED ROOM LOUNGE • 521 W. Sprague Ave. • 509-838-7613
THE RIDLER PIANO BAR • 718 W. Riverside Ave. • 509-822-7938
SEASONS OF COEUR D'ALENE • 1004 S. Perry St. • 208-664-8008
SPOKANE ARENA • 720 W. Mallon Ave. • 509-279-7000
SOUTH PERRY LANTERN • 12303 E. Trent Ave., Spokane Valley • 509-473-9098
STEAM PLANT • 159 S. Lincoln St. • 509-777-3900
STORMIN' NORMAN'S SHIPFACED SALOON • 12303 E. Trent Ave., Spokane Valley • 509-862-4852
TRANCHE • 705 Berney Dr., Wall Walla • 509-526-3500
ZOLA • 22 W. Main Ave. • 509-624-2416

NOTICE OF AVAILABILITY: DRAFT ENVIRONMENTAL IMPACT STATEMENT
NOTICE OF PUBLIC HEARINGS
UNITED STATES AIR FORCE

The U.S. Department of the Air Force invites you to review the Draft Environmental Impact Statement and attend Public Hearings for the Proposed Beddown of KC-46A Tanker Aircraft for Main Operating Base #6

PROPOSED ACTION AND ALTERNATIVES CONSIDERED. Pursuant to the National Environmental Policy Act, the U.S. Department of the Air Force (DAF), has prepared a Draft Environmental Impact Statement (EIS) for public review that analyzes the potential environmental consequences associated with the proposal to beddown and replace 1950s-era aerial refueling tankers with the KC-46A Main Operating Base #6 (MOB 6) aircraft and mission at either MacDill Air Force Base (AFB), Florida or at Fairchild AFB, Washington, to include the proposal's effect on historic properties. The MOB 6 beddown requires an active duty installation in the continental United States with the aerial refueling tankers and mission to be replaced, as well as the capacity to support KC-46A infrastructure, facilities, airfield operations, training activities, and personnel.

The DAF's Preferred Alternative is to beddown the MOB 6 mission with 24 KC-46A aircraft at MacDill AFB. The EIS also evaluates Fairchild AFB as a reasonable alternative for the MOB 6 beddown, and the No Action Alternative. Depending on the selected installation, the KC-46A would either fully or partially replace the current active duty tanker mission.

OBTAIN AND REVIEW THE DRAFT EIS. The DAF has initiated a 45-day comment period and invites the public to review and provide comments on the Draft EIS, which is available for download at **www.kc46amob6eis.com** and may also be viewed at the following local libraries:

MacDill AFB Area: Jan Kaminis Platt Regional Library (3910 S. Manhattan Ave, Tampa, FL 33611), John F. Germany Public Library (900 N. Ashley Dr, Tampa, FL 33602), Port Tampa City Public Library (4902 W Commerce St, Tampa, FL 33616), and MacDill AFB Library (8102 Condor St, Bldg 252, Tampa, FL 33621)

Fairchild AFB Area: Airway Heights Library (1213 S. Lundstrom St, Airway Heights, WA 99001), Medical Lake Library (321 E Herb St, Medical lake, WA 99022), Spokane Central Public Library (906 W Main Ave, Spokane, WA 99201), and Fairchild AFB Library (2 W Castle St, Fairchild AFB, WA 99011)

VIRTUAL PUBLIC HEARINGS - *PLEASE ATTEND.* The DAF requests comments from interested local, state, and federal agencies; federally recognized tribes; and interested members of the public. The DAF is holding two virtual public hearings to provide the public with the opportunity to learn more about the proposal, it's effect on historic properties, and to provide input in March 2023 (see table below for specific dates and times). Information regarding the impact assessment is accessible via the project website (**www.kc46amob6eis.com**), and a pre-recorded public hearing presentation will be available to access and listen to on the day of the virtual public hearing. A weblink and phone number to access the online virtual public hearings will be provided via flyers at the specified local libraries and on the project website allowing interested parties to participate in the public hearings either by phone or online. Those without internet access are invited to participate by phone.

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To request a CD of the hearing presentation, or if you need to request accommodation to access the printed or audio portion of the presentation or need additional accommodation to make a telephone comment (per the Americans with Disabilities Act), please submit your request at the project website (**www.kc46amob6eis.com**) or contact the MacDill AFB 6 Aerial Refueling Wing (ARW) Public Affairs Office (PAO) by phone (813-828-2215) or email (6.arw.pa@us.af.mil) or Fairchild AFB PAO by phone (509-247-5705) or email (92arw.pa@us.af.mil) no later than one week prior to the virtual hearing date. Dates for each virtual hearing are provided below:

Date	Time	Installation
March 7, 2023	5:30 to 8:00 p.m. Eastern Standard Time	MacDill AFB
March 9, 2023	5:30 to 8:00 p.m. Pacific Standard Time	Fairchild AFB

PUBLIC COMMENT. Comments on the Draft EIS can be submitted online at **www.kc46amob6eis.com**; verbally at the public hearings; via email to MacDill AFB 6 ARW PA at 6.arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or to Fairchild AFB PAO at 92arw.pa@us.af.mil, SUBJECT: KC-46A MOB 6 EIS, or by postal mail vis USPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, Texas 78236-9853 or via FedEx or UPS to AFCEC CZN, ATTN: KC-46A MOB 6 EIS, Building 1 Bay 8 Room 6009, 3515 South General McMullen, San Antonio, TX 78226-1710. In order to fully address public concerns or comments, the DAF suggests attendees submit their intention to participate in the public hearing with an indication of which environmental impact(s) they wish to address prior to the hearing via email or phone, though it is not required.

For additional information, or to request hard or CD copies of the Draft EIS, please contact MacDill AFB 6 ARW PAO via the phone, email, or postal mail contact information provided in this notice. Please consider the environment when requesting print materials.

We will accept comments at any time during the environmental process. Written and oral comments will be given equal weight; however, to ensure the DAF has sufficient time to consider public input in preparation of the Final EIS, please submit comments by March 27, 2023.

FEBRUARY 16, 2023 INLANDER 37

A.1.6 Draft EIS Comments and Responses

Sections A.1.6 and **A.1.7** contain all comments received during the public comment period for the KC-46A MOB 6 Beddown Draft EIS. The Notice of Availability for the Draft EIS appeared in the Federal Register on February 10, 2023 (see **Section A.1.4**), which initiated a 45-day comment period. In accordance with the National Environmental Policy Act, public and agency comments on the Draft EIS were reviewed and incorporated into the Final EIS. The comments and DAF responses are contained in **Table A-3**. The original comments are contained in **Section A.1.7**. These public and agency comments will be taken into consideration by the DAF in its decision-making process. Public comment was encouraged at the public hearings or through written submissions by newspaper display advertisements, flyers provided to multiple local libraries for each installation alternative, the project website, and in letters announcing the availability of the Draft EIS document that were sent to agencies and interested parties.

While all comments submitted were assessed and considered by the DAF, only substantive comments are addressed either individually or collectively in the Final EIS. Substantive comments are those that identify issues and concerns related to the quality of the document in consideration of the accuracy of the facts, adequacy of analysis, precision of language, consistency of analysis or facts, justifications for conclusions, and/or the merits of other alternatives than those discussed. Non-substantive comments are those that only express a conclusion, an opinion, or a vote for or against the proposal itself, or that otherwise state a personal preference or opinion.

Table A-3. Public Comment on the Draft EIS and DAF Responses

#	Commenter Name	Affiliation	Comment	Topic	DAF Response
Substantive Comments					
1	Ntale Kajumba	USEPA	The portion of Hillsborough County, Florida containing MacDill AFB is in attainment with National Ambient Air Quality Standards (NAAQS), however flight operations extend into the air mixing zone that is in maintenance status for lead and sulfur dioxide. DAF analyzed air quality impacts from the Proposed Action using the Air Force's Air Conformity Applicability Model. Air emissions inventories evaluated for the MOB 6 Beddown at MacDill AFB indicate that General Conformity requirements will be met because criteria pollutants would remain below the federal *de minimis* thresholds of 100-Tons Per Year (TPY) for sulfur dioxide and 25-TPY for lead. The air emissions inventory also determined that the Beddown would produce an additional 12,750.5 TPY of carbon dioxide equivalent greenhouse gasses. Section 2.5 of the Draft EIS identifies MacDill AFB's developmental mitigation plan in response to climate change that includes emergency response training, hardened facilities and utilities, stormwater drainage infrastructure, shore protection, and a regional resiliency response plan for sea level rise. The portion of Spokane County, Washington containing Fairchild AFB is in attainment with NAAQS, however flight operations extend into the air mixing zone that is in maintenance status for carbon monoxide and particulate matter (PM)	Air Quality and Climate Change	If Alternative 2 is selected for the MOB 6 beddown, the DAF will develop a comprehensive climate change mitigation plan, per USEPA's recommendation.

			10. Air emissions inventories evaluated for the MOB6 Beddown at Fairchild AFB indicate that General Conformity requirements will be met because criteria pollutants would remain below the federal *de minimis* thresholds of 100-TPY for each pollutant. *Recommendation*: While the USEPA acknowledges the Draft EIS's inclusion of a climate change mitigation plan for Alternative 1, we recommend that DAF develop a climate change mitigation plan for Fairchild AFB if Alternative 2 is identified as the ultimate site for the Beddown. A comprehensive mitigation plan may include analysis of potential social impacts to surrounding communities. Examples of off-base impacts may include those to subsistence economies, contributions to droughts at Fairchild AFB and the Spokane area, wildfire damage, and impacts to Native Americans.		
2	Ntale Kajumba	USEPA	The USEPA supports efforts to mitigate environmental impacts to communities surrounding the KC-46A Beddown. As identified in Section 3.3.12 Environmental Justice (EJ), U.S. Census Bureau data shows that one of three MacDill adjacent census tracts have a People of Color population of 64.8% residing within the project area. These three census tracts were also selected for EJ analysis because these tracts contain the populated extent of the Proposed Action's 65-dBA Day Night Average (DNL) noise contour. Three census tracts surrounding Fairchild AFB were also analyzed. One of these tracts was determined to have a low-income population of 22.2%. Sections 3.3.12.2.2 and 3.4.12.2.2 state that neither of the two proposed alternatives would result in	Environment-al Justice and Noise	The DAF engaged general stakeholders and the local communities through letters, flyers sent to multiple local libraries per installation alternative, Federal Register publications, print and online newspaper publications, and the project website announcing the scoping period and DEIS public comment periods, as well as providing copies of project related documents. During the NEPA scoping and DEIS comment periods, the public were asked to provide their feedback on the Proposed Action and alternatives, impacts analyses (including noise and vibration), and identification of additional alternatives. Additionally, virtual public hearings were held for each installation alternative's local community in their local time zone providing a presentation summarizing the

			disproportionately high and adverse human health or environmental effects on minority populations or low-income populations. The USEPA understands that final noise levels at MacDill AFB are projected to decrease following implementation of the Beddown because KC-46A engines are required to meet Federal Aviation Administration Part 36 Stage 4 noise standards- the most restrictive commercial aircraft noise standards. *Recommendation*: The USEPA recommends DAF identify efforts to meaningfully engage communities, including communities with EJ concerns, associated with MacDill AFB and Fairchild AFB. DAF should ensure that surrounding communities are aware of the Proposed Action and its impacts, and how to address any concerns including noise and vibration with DAF. Section 3.4.3.2.2 states that consultations with Tribal Governments associated with Fairchild AFB are ongoing. The Final EIS should describe issues raised by Tribal Governments during consultations and how those issues were addressed, consistent with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.		Proposed Action, alternatives, and potential impacts. Members of the public were invited to provide oral comment during the hearings, and were also invited to submit comments online through the project website or by postal mail. Further, the Cultural Resources section in Chapter 3 and Appendix A of the EIS address comments received from Tribal governments on the Proposed Action and alternatives.
3	Ntale Kajumba/Douglas White	USEPA	The construction of proposed facilities will result in soil disturbances of 16.6-acres at MacDill AFB or 70.7-acres at Fairchild AFB. DAF has identified construction stormwater permits that will be required before construction projects can begin. To prevent soil erosion, Best Management Practices (BMP) would be implemented and maintained, as indicated by Section 2.6, Sustained Compliance Actions. According to the Draft EIS, Alternative 1 would create up to 9.4-	Water Resources (Water Quality and Streams)	Text was added to Sections 3.3.6 (MacDill, Water Resources) and 3.4.6 (Fairchild, Water Resources) to clarify the status of WOTUS present within or near the respective project sites, and to note that the DAF would coordinate with the U.S. Army Corps of Engineers, as applicable, per comment.

			acres of impervious surfaces, while Alternative 2 would create up to 70.7-acres. In addition, existing stormwater runoff profiles of the proposed sites will be maintained, in accordance with Section 438 of the Energy Independence and Security Act of 2007. New construction will take place above the 100-year floodplain. The Draft EIS does not identify impacts to Water of the United States (WOTUS). *Recommendation*: The USEPA recommends that the Final EIS identify WOTUS on or near the project sites of the MOB6 Beddown or confirm that WOTUS do not exist at these locations. If the construction necessitates disturbance of WOTUS, DAF should coordinate with the U.S. Army Corps of Engineers.		
4	Ntale Kajumba	USEPA	The Draft EIS states that prior to the start of any construction, demolition, or renovation that would result in ground disturbance, DAF would coordinate with the MacDill AFB or the Fairchild AFB Environmental Restoration Program (ERP) office to ensure that ground disturbance is coordinated with ongoing remediation and investigation activities. The ERP office would ensure necessary consultation and coordination is completed with the USEPA and Florida Department of Environmental Protection (FDEP) or Washington State Department of Ecology. Some MOB6 proposed facilities are located above groundwater and soil contamination sites. At MacDill AFB, these ERP sites are Solid Waste Management Unit (SWMU) 35, SWMU 61, SWMU 76, and Site 57. At Fairchild AFB these ERP sites are SS039 and TU500. The proposed facilities would not impair the ability to monitor	Hazardous Materials and Containment	Text provided at EIS Sections 3.3.9.2 (MacDill AFB Hazardous Materials and Waste) and 3.4.9.2 (Fairchild AFB Hazardous Materials and Waste) emphasizes the DAF's commitment to appropriate coordination and planning with the FDEP, and WA Ecology, and implementation of appropriate control measures for ERP sites and secondary containment measures for storage and handling of POL.

			the ERP sites within the project area because any existing groundwater monitoring wells or treatment systems would be protected or relocated during ground-disturbing activities. Contractors would develop BMPs in accordance with site-specific contamination and would obtain all necessary permits prior to ground disturbance. Proper characterization, handling, and disposition procedures for contaminated groundwater and soils would be followed. *Recommendation*: The USEPA recommends communication and coordination of planned and ongoing activities between DAF, the FDEP, the Washington State Department of Ecology. DAF should implement appropriate control measures where disturbance is planned to approach ERP sites. In accordance with Section 3.3.9.2.2, the USEPA recommends the use of secondary containment for storage and handling of Petroleum, Oils, and Lubricants (POL) to protect surface waters of Hillsborough and Spokane Counties and as required by the Clean Water Act. Where secondary containment is not directly practicable, spill ponds and oil water separators should be constructed downstream of POL related activities. Construction and operations in support of the Proposed Action should ensure that Resource Conservation and Recovery Act-regulated solid wastes generated are disposed of in accordance with federal regulations.		
5	Ntale Kajumba	USEPA	The USEPA understands that DAF is coordinating with the U.S. Fish and Wildlife Service (USFWS) regarding Alternative 1's compliance with the Endangered Species Act. **Section 3.3.2**, Federally Listed Threatened and Endangered Species (TES) indicates that no critical habitat is present on MacDill AFB and the	Biological Resources	Recommended conservation measures identified by the USFWS during the Endangered Species Act Section 7 Consultation process were incorporated in the Final EIS and will be implemented by the DAF to the extent practicable.

			project area does not contain TES roosting sites. Burrowing sites for an owl and tortoise are adjacent to the project site. The Draft EIS states that USFWS has determined that consultation is not needed for Alternative 2 because all potentially impacted species had a "no effect" determination. *Recommendation:* The USEPA principally defers to USFWS regarding compliance with the Endangered Species Act. The USEPA recommends that all conservation measures identified by USFWS be implemented and included in the Final EIS.		
6	Ntale Kajumba	USEPA	Sections 3.3.7.2.2 and 3.4.7.2.2 indicate that Alternative 1 is projected to produce a total of 6,717-tons of construction and demolition debris, while Alternative 2 would produce 13,028-tons. MacDill AFB and Fairchild AFB have existing recycling rates of 59% and 70% respectively. The Draft EIS also states that all new construction and renovations will meet Leadership in Energy and Environmental Design silver certificate requirements for energy conservation. *Recommendation*: The USEPA recommends that any offsite disposal of recyclable materials such as concrete, steel, and asphalt prioritize recycling where practicable. The USEPA also recommends the use of renewable energy including solar power for infrastructure developed for the MOB 6 Beddown.	Infrastructure (Energy Efficiency and Recycling)	As recognized in the comment, and noted in the EIS sections specified in the comment, the DAF recycles construction and demolition debris to the extent practicable. The DAF will continue to prioritize recycling materials offsite to the maximum extent practicable and consider renewable energy options during design and construction of infrastructure, per USEPA's recommendation.
Non-Substantive Comments					
7	Greg Figg	WSDOT	WSDOT Eastern Region has reviewed the draft document and has been in contact with FAFB officials regarding this proposal. WSDOT finds that this action has the potential to add some employment at the base, however we do not see a significant adverse impact to traffic operations.	Transport-ation	Thank you for your review and comment.

			This is due in part to the base increasing operations of the Thrope Road gate as a means to divert some traffic away from the main gate on US 2. Please do not hesitate to contact us if you should have any questions regarding the above.		
8	Unidentified Local Washington State Stakeholder	N/A	The KC-46A MOB 6 EIS website is confusing. At the bottom of the first webpage, it refers to scoping in 2022.	Request for Information	The Home page of the project website (www.kc46amob6eis.com) does specify that scoping occurred and when it was conducted. Inclusion of this information on the project timeline highlights the DAF's decision to offer an extended scoping period to ensure the public had sufficient time to consider the action and provide comments. Language was added to the end of the Home page Welcome statement to guide members of the public to scroll down the page to the "EIS Process", so they can see where we are now in the KC-46A MOB 6 EIS effort. Further, the dates (February 10, 2023 – March 27, 2023) were added under the "We Are Here" that points to the 45-day Draft EIS public comment period, to clearly identify the current status of NEPA public involvement.
9	Spokane County Planning Director	Spokane County	The Spokane Planning Director plans on presenting the scoping presentation slides from the website to the Spokane Planning Board on Tuesday Feb 21. Are these slides the most current?	Request for Information	The commenter was referring to the project scoping presentation that was provided online via the project website. To support the Spokane Planning Director, the DAF provided a similar presentation (included in this Appendix) to the Spokane County Planning Director to present to the Spokane Planning Board on Tuesday February 21, 2023.
10	Spokane County Board of Commissioners	Spokane County	Spokane County thanks you for the opportunity to again reinforce our commitment to Fairchild Air Force Base, its current, and future missions. Please find the attached as statements of the Spokane County Board of Commissioners' support.	Approval of Project	Thank you for your review and comment.
11	Julia McHugh	Private Citizen	What has become of this issue or action? I have not seen any followup or decision statement(s).	Project Status Inquiry	The Record of Decision has not yet been prepared. A Notice of Availability of the draft EIS was placed in the Spokesman Review and Pacific Northwest Inlander on 10 and 16 February respectively. Hardcopies were placed in the following area libraries:

					Fairchild AFB Library (2 W Castle St, Fairchild AFB, WA 99011) Spokane Central Public Library (906 W Main Ave, Spokane, WA 99201) Airway Heights Library (1213 S. Lundstrom St, Airway Heights, WA 99001) Medical Lake Library (321 E Herb St, Medical Lake, WA 99022) To ensure the DAF has sufficient time to consider public input in preparation of the Final EIS, public comments were requested by March 27, 2023. However, we are still accepting comments and continue to make the draft EIS and supplemental materials available on the public website: https://www.kc46amob6eis.com/documents Please contact Fairchild Public Affairs office (cc'd here) for further questions: 92arw.pa@us.af.mil.

A.1.7 Copy of Public Comments

A.1.7.1 United States Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Mr. David R. Steele
Department of the Air Force
AFCEC/CZN
2261 Hughes Avenue, Suite 155
JBSA Lackland, Texas 78236-9853

Re: EPA Comments on the Draft Environmental Impact Statement for KC-46A Main Operating Base 6 Beddown at MacDill Air Force Base, Hillsborough County, Florida; CEQ No: 20230024

Dear Mr. Steele:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (Draft EIS) for the Main Operating Base 6 (MOB6) KC-46A Beddown (Beddown) in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The CAA Section 309 role is unique to EPA. It requires EPA to review and comment publicly on any proposed federal action subject to NEPA's environmental impact statement requirement.

The U.S. Department of the Air Force (DAF) is the lead federal agency for this action. The purpose of the Beddown is for DAF to transition from KC-135 tanker aircraft to the KC-46A aircraft, in support of the air refueling mission of the 6th Air Refueling Wing at MacDill Air Force Base (AFB) in Hillsborough County, Florida. DAF's projections indicate that future air combat missions, supported by bases throughout the Southeast, will require expanded capability beyond the currently used air refueling aircraft.

DAF identified site alternatives for analysis through an initial criteria screening process for all Air Force bases within the continental United States. The MOB6 Beddown specific criteria involved the presence of an existing refueling mission at an Air Mobility Command active duty-led base that is not yet planned to base KC-46A aircraft and adequate support infrastructure, such as a runway and hangars. Two acceptable sites were identified by DAF and analyzed in detail, in addition to the No-Action Alternative:

- **Alternative 1 (**Preferred Alternative): MacDill AFB, Florida.
- **Alternative 2:** Fairchild AFB, Washington.

Under the Proposed Action Alternative, DAF would recapitalize existing air refueling operations at MacDill AFB by replacing the 24 locally based KC-135 aircraft with 24 new KC-46A aircraft. In support of operations and maintenance of the new aircraft, DAF would construct 2 buildings including a Dash 21 Life Support facility and a warehouse. Further construction would include renovations and upgrades to 11 maintenance and support facilities, 5 aircraft hangars, 3 wash racks, and multiple refueling containment pits. The EPA understands that the transition to KC-46A flight operations would leave existing airspace configurations above Florida, the Gulf of Mexico, and Atlantic Ocean

unchanged. Under Alternative 2, DAF would base the 24 new aircraft at Fairchild AFB in Spokane County, Washington, instead of MacDill AFB. Alternative 2 would require the construction of a new hangar and 4 maintenance and support facilities, renovation of 9 support facilities, and upgrades to deicing, fueling, and engine run-up facilities. Under the No-Action Alternative, DAF would continue to operate KC-135 aircraft using existing infrastructure and limit air combat mission within the Southeast to levels that can be sustained by existing tanker aircraft.

On 5/31/2022, the EPA provided scoping comments for the MOB6 Beddown. The EPA made recommendations regarding air quality modeling, greenhouse gas quantification, water quality impacts and mitigations, environmental justice analysis, noise impacts, hazardous materials containment and disposal, energy efficiency and recycling, and alternatives analysis. Additionally, the EPA recommended that DAF coordinate with the U.S. Fish and Wildlife Service regarding compliance with the Endangered Species Act. The EPA notes that the EPA's scoping comments were generally addressed by this Draft EIS. We have enclosed additional technical recommendations for your consideration (see enclosure). The EPA requests that DAF continue to work with federal and local government partners, Tribal Governments, communities surrounding MacDill AFB and Fairchild AFB, and other stakeholders to address impacts as they are identified and to disseminate project status updates.

The EPA appreciates the opportunity to review the Draft EIS and looks forward to continued participation in the KC-46A Beddown process. If you have any questions regarding our technical recommendations, please contact Mr. Douglas White of the NEPA Section at (404) 562-8586 or at white.douglas@epa.gov.

Sincerely,

NTALE KAJUMBA Digitally signed by NTALE KAJUMBA Date: 2023.03.24 08:48:36 -04'00'

Ntale Kajumba
NEPA Chief
Strategic Programs Office

Enclosure

Enclosure
Detailed Technical Comments on the Draft Environmental Impact Statement (Draft EIS)
for KC-46A Main Operating Base 6 Beddown
CEQ No: 20230024

Air Quality and Climate Change: The portion of Hillsborough County, Florida containing MacDill AFB is in attainment with National Ambient Air Quality Standards (NAAQS), however flight operations extend into the air mixing zone that is in maintenance status for lead and sulfur dioxide. DAF analyzed air quality impacts from the Proposed Action using the Air Force's Air Conformity Applicability Model. Air emissions inventories evaluated for the MOB6 Beddown at MacDill AFB indicate that General Conformity requirements will be met because criteria pollutants would remain below the federal *de minimis* thresholds of 100-Tons Per Year (TPY) for sulfur dioxide and 25-TPY for lead. The air emissions inventory also determined that the Beddown would produce an additional 12,750.5 TPY of carbon dioxide equivalent greenhouse gasses.

Section 2.5 of the Draft EIS identifies MacDill AFB's developmental mitigation plan in response to climate change that includes emergency response training, hardened facilities and utilities, stormwater drainage infrastructure, shore protection, and a regional resiliency response plan for sea level rise.

1 The portion of Spokane County, Washington containing Fairchild AFB is in attainment with NAAQS, however flight operations extend into the air mixing zone that is in maintenance status for carbon monoxide and particulate matter (PM) 10. Air emissions inventories evaluated for the MOB6 Beddown at Fairchild AFB indicate that General Conformity requirements will be met because criteria pollutants would remain below the federal *de minimis* thresholds of 100-TPY for each pollutant.

Recommendation: While the EPA acknowledges the Draft EIS's inclusion of a climate change mitigation plan for Alternative 1, we recommend that DAF develop a climate change mitigation plan for Fairchild AFB if Alternative 2 is identified as the ultimate site for the Beddown. A comprehensive mitigation plan may include analysis of potential social impacts to surrounding communities. Examples of off-base impacts may include those to subsistence economies, contributions to droughts at Fairchild AFB and the Spokane area, wildfire damage, and impacts to Native Americans.

2 **Environmental Justice and Noise:** The EPA supports efforts to mitigate environmental impacts to communities surrounding the KC-46A Beddown. As identified in Section 3.3.12 Environmental Justice (EJ), U.S. Census Bureau data shows that one of three MacDill adjacent census tracts have a People of Color population of 64.8% residing within the project area. These three census tracts were also selected for EJ analysis because these tracts contain the populated extent of the Proposed Action's 65-dBA Day Night Average (DNL) noise contour. Three census tracts surrounding Fairchild AFB were also analyzed. One of these tracts was determined to have a low-income population of 22.2%. Sections 3.3.12.2.2 and 3.4.12.2.2 state that neither of the two proposed alternatives would result in disproportionately high and adverse human health or environmental effects on minority populations or low-income populations.

The EPA understands that final noise levels at MacDill AFB are projected to decrease following implementation of the Beddown because KC-46A engines are required to meet Federal Aviation Administration Part 36 Stage 4 noise standards- the most restrictive commercial aircraft noise standards.

Recommendation: The EPA recommends DAF identify efforts to meaningfully engage communities, including communities with EJ concerns, associated with MacDill AFB and Fairchild AFB. DAF should

ensure that surrounding communities are aware of the Proposed Action and its impacts, and how to address any concerns including noise and vibration with DAF. Section 3.4.3.2.2 states that consultations with Tribal Governments associated with Fairchild AFB are ongoing. The Final EIS should describe issues raised by Tribal Governments during consultations and how those issues were addressed, consistent with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

3 **Water Quality and Streams:** The construction of proposed facilities will result in soil disturbances of 16.6-acres at MacDill AFB or 70.7-acres at Fairchild AFB. DAF has identified construction stormwater permits that will be required before construction projects can begin. To prevent soil erosion, Best Management Practices (BMP) would be implemented and maintained, as indicated by Section 2.6, Sustained Compliance Actions. According to the Draft EIS, Alternative 1 would create up to 9.4-acres of impervious surfaces, while Alternative 2 would create up to 70.7-acres. In addition, existing stormwater runoff profiles of the proposed sites will be maintained, in accordance with Section 438 of the Energy Independence and Security Act of 2007. New construction will take place above the 100-year floodplain. The Draft EIS does not identify impacts to Water of the United States (WOTUS).

Recommendation: The EPA recommends that the Final EIS identify WOTUS on or near the project sites of the MOB6 Beddown or confirm that WOTUS do not exist at these locations. If the construction necessitates disturbance of WOTUS, DAF should coordinate with the U.S. Army Corps of Engineers.

4 **Hazardous Materials and Containment:** The Draft EIS states that prior to the start of any construction, demolition, or renovation that would result in ground disturbance, DAF would coordinate with the MacDill AFB or the Fairchild AFB Environmental Restoration Program (ERP) office to ensure that ground disturbance is coordinated with ongoing remediation and investigation activities. The ERP office would ensure necessary consultation and coordination is completed with the EPA and Florida Department of Environmental Protection (FDEP) or Washington State Department of Ecology. Some MOB6 proposed facilities are located above groundwater and soil contamination sites. At MacDill AFB, these ERP sites are Solid Waste Management Unit (SWMU) 35, SWMU 61, SWMU 76, and Site 57. At Fairchild AFB these ERP sites are SS039 and TU500. The proposed facilities would not impair the ability to monitor the ERP sites within the project area because any existing groundwater monitoring wells or treatment systems would be protected or relocated during ground-disturbing activities. Contractors would develop BMPs in accordance with site-specific contamination and would obtain all necessary permits prior to ground disturbance. Proper characterization, handling, and disposition procedures for contaminated groundwater and soils would be followed.

Recommendation: The EPA recommends communication and coordination of planned and ongoing activities between DAF, the FDEP, the Washington State Department of Ecology. DAF should implement appropriate control measures where disturbance is planned to approach ERP sites. In accordance with Section 3.3.9.2.2, the EPA recommends the use of secondary containment for storage and handling of Petroleum, Oils, and Lubricants (POL) to protect surface waters of Hillsborough and Spokane Counties and as required by the Clean Water Act. Where secondary containment is not directly practicable, spill ponds and oil water separators should be constructed downstream of POL related activities. Construction and operations in support of the Proposed Action should ensure that Resource Conservation and Recovery Act-regulated solid wastes generated are disposed of in accordance with federal regulations.

5 **Biological Resources:** The EPA understands that DAF is coordinating with the U.S. Fish and Wildlife Service (FWS) regarding Alternative 1's compliance with the Endangered Species Act. Section 3.3.2

Federally Listed Threatened and Endangered Species (TES) indicates that no critical habitat is present on MacDill AFB and the project area does not contain TES roosting sites. Burrowing sites for an owl and tortoise are adjacent to the project site. The Draft EIS states that FWS has determined that consultation is not needed for Alternative 2 because all potentially impacted species had a "no effect" determination.

Recommendation: The EPA principally defers to FWS regarding compliance with the Endangered Species Act. The EPA recommends that all conservation measures identified by FWS be implemented and included in the Final EIS.

6 **Energy Efficiency and Recycling:** Sections 3.3.7.2.2 and 3.4.7.2.2 indicate that Alternative 1 is projected to produce a total of 6,717-tons of construction and demolition debris, while Alternative 2 would produce 13,028-tons. MacDill AFB and Fairchild AFB have existing recycling rates of 59% and 70% respectively. The Draft EIS also states that all new construction and renovations will meet Leadership in Energy and Environmental Design silver certificate requirements for energy conservation.

Recommendation: The EPA recommends that any offsite disposal of recyclable materials such as concrete, steel, and asphalt prioritize recycling where practicable. The EPA also recommends the use of renewable energy including solar power for infrastructure developed for the MOB6 Beddown.

A.1.7.2 Washington State Department of Transportation

Name:
Greg Figg

Mailing Address:
2714 N Mayfair
Spokane, Washington 99202
United States

Email Address:
greg.figg@wsdot.wa.gov

Organization:
WSDOT

Comment:
Good Afternoon,
7 WSDOT Eastern Region has reviewed the draft document and has been in contact with FAFB officials regarding this proposal. WSDOT finds that this action has the potential to add some employment at the base, however we do not see a significant adverse impact to traffic operations. This is due in part to the base increasing operations of the Thrope Road gate as a means to divert some traffic away from the main gate on US 2. Please do not hesitate to contact us if you should have any questions regarding the above.

Upload File (Optional):

Please check box if you would like receive notifications and materials related to the EIS. Notices will be sent to the email or mailing address provided.:
No

A.1.7.3 Unidentified Local Washington State Stakeholder

From: POTTER, JOSHUA S CIV USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>
Sent: Wednesday, February 15, 2023 5:16 PM
To: Peer, Deborah <Deborah.Peer@hdrinc.com>
Cc: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Subject: RE: Fairchild Received Feedback on KC-46 EIS Website From Local Stakeholder

Hello Deborah,

Fairchild leadership recently received feedback from a local stakeholder that part of the KC-46 EIS website is confusing. At the bottom of the first webpage it refers to scoping in 2022. I took a look today and I would concur it is confusing. I would recommend removing this information and replacing it with a direct link to the draft EIS.

Very respectfully,

Joshua S. Potter

Fairchild Air Force Base Air Quality Engineer/EPCRA/Toxic/Rideshare/NEPA Program Manager
Phone: 509-247-8139
Cell: 360-516-7769
Email: joshua.potter.2@us.af.mil <mailto:joshua.potter.2@us.af.mil>

8 * Local stakeholder feedback was provided during a personal conversation with Fairchild AFB leadership. The concern was communicated with the FAFB NEPA Program Manager who raised awareness with the KC-46A MOB 6 EIS Team.

From: Peer, Deborah
To: POTTER, JOSHUA S CIV USAF AMC 92 CES/CEIE
Cc: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN; Humphreys, Abbey
Subject: RE: Fairchild Received Feedback on KC-46 EIS Website From Local Stakeholder
Date: Thursday, February 16, 2023 10:12:12 AM

Hi Josh,

Yes - the Home page of the project website does mention that scoping occurred and when it was conducted. That's deliberate, to highlight DAF's decision to offer an extended scoping period to ensure the public had sufficient time to consider the action and provide comments. And as noted on the website, all public involvement materials will be accessible from the point that they are posted for the duration of the project.

The "What's New" section of the Home page is clear about where we are in the EIS Process, and that the 45-day Public Comment Period for the Draft EIS is happening now. Also, folks can peruse the website's FAQs, Documents, and Get Involved pages to get the update on available documents and for additional guidance on the current public involvement stage – which is noted, throughout.

Considering the public stakeholder's and your feedback – we added language to the end of the Home Page Welcome statement to guide the public to scroll down the page to the EIS process - so they can see where we are now in the KC-46A MOB 6 EIS effort. And the actual dates (February 10, 2023 - March 27, 2023) were added under the existing "We Are Here" that points to the 45-day Draft EIS public comment period.

Do you think these additional clarifications cover the need?

Thanks,
Deb

Deborah Peer
She/Her
HDR, NEPA Project Manager
D [410-253-7215], C [410-610-1002]

Deborah.Peer@hdrinc.com
hdrinc.com/follow-us

A.1.7.4 Spokane County Planning Director

From: POTTER, JOSHUA S CIV USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>
Sent: Wednesday, February 15, 2023 6:03 PM
To: Peer, Deborah <Deborah.Peer@hdrinc.com>
Cc: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Subject: RE: KC-46 MOB 6

Hello Deborah,

The Spokane Planning Director is planning on presenting the attached slides to the Spokane Planning Board on Tuesday Feb 21. The slides are dated April 2022 and I have no idea where they got them. Do you have a more up-to-date set of slides I can pass off to the Director? I think what he is ultimately looking for is a couple of accurate comments to let the board know that they received the stakeholder letter and what it means and actions they need to take if any.

9

Very respectfully,

Joshua S. Potter

Fairchild Air Force Base Air Quality Engineer/EPCRA/Toxic/Rideshare/NEPA Program Manager
Phone: 509-247-8139
Cell: 360-516-7769
Email: joshua.potter.2@us.af.mil <mailto:joshua.potter.2@us.af.mil>

-----Original Message-----
From: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Sent: Tuesday, February 21, 2023 9:30 AM
To: Peer, Deborah <Deborah.Peer@hdrinc.com>; POTTER, JOSHUA S CIV USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>
Cc: Humphreys, Abbey <Abbey.Humphreys@hdrinc.com>
Subject: RE: KC-46 MOB 6_slides, maybe defer to the project website?

Hi Josh,

Did we close the loop on this? The project website has the most updated information. The following may also be helpful if they want the high level of what receiving the stakeholder letter means:

As far as what actions they need to take- nothing is required, but they can voluntarily participate in our public involvement process if they would like. Although the public scoping period occurred in spring/summer 2022, they are welcome to make a public comment NLT 27 March to ensure we can consider it for the final EIS. The Draft EIS materials are on the project website and they can make a comment that way. We also have hard copies in the public libraries listed on the website. (kc46amob6eis.com)

That being said, they are not obligated to do anything- or even acknowledge the receipt of the letter. It is up to them.

Thanks,
Helen Kellogg
AFCEC NEPA Division
Cell: 830-273-9156

-----Original Message-----
From: POTTER, JOSHUA S CIV USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>
Sent: Tuesday, February 21, 2023 12:34 PM
To: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>; Peer, Deborah <Deborah.Peer@hdrinc.com>
Cc: Humphreys, Abbey <Abbey.Humphreys@hdrinc.com>
Subject: RE: KC-46 MOB 6_slides, maybe defer to the project website?

I ended up making my own slides from the Public Scoping slides to hand to them.

Very respectfully,

Joshua S. Potter

Fairchild Air Force Base Air Quality Engineer/EPCRA/Toxic/Rideshare/NEPA Program Manager
Phone: 509-247-8139
Cell: 360-516-7769
Email: joshua.potter.2@us.af.mil <mailto:joshua.potter.2@us.af.mil>

Slides provided by Fairchild AFB in response to Spokane Planning Director's request

The National Environmental Policy Act (NEPA) of 1969 was enacted to address concerns about federal actions and their effects on the environment.

- Under NEPA, the analysis of environmental consequences is presented in an Environmental Impact Statement (EIS), which accomplishes the following objectives:
  - Identify and describe the affected environment
  - Evaluate the potential environmental consequences of reasonable alternatives
  - Identify environmental permits and specific mitigation measures to avoid, minimize, or reduce adverse environmental impacts, if required
- The NEPA process concludes with a Record of Decision (ROD) that identifies which alternative is selected and outlines any mitigation measures that are required.
- The U.S. Department of the Air Force (DAF) has issued a Notice of Intent to prepare an EIS in accordance with NEPA. Publication of the NOI in the Federal Register for the proposed KC-46A MOB 6 beddown.

Steps in the EIS Process

HEADQUARTERS AIR MOBILITY COMMAND
ENVIRONMENTAL IMPACT STATEMENT
KC-46A MOB 6 Beddown at MacDill AFB, FL or Fairchild AFB, WA
2

MOB6 KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Where Can I Find Information on the Project?

Copies of draft EIS materials are made available to the public as follows:

- **Electronic Copies on the Project Website:** www.kc46amob6eis.com.
- **Hard Copies at Local Libraries:**

Fairchild AFB Area
Fairchild AFB Library
Spokane Central Public Library
Airway Heights Library
Medical lake Library

MacDill AFB Area
MacDill AFB Library
Port City Public Library
John F. Germany Public Library

To request electronic copies by email, or hardcopies by postal mail, please use one of the methods listed below. For printed material requests, the standard U.S. Postal Service shipping timeline will apply. Please consider the environment before requesting printed material.

Postal Mail: Ms. Helen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853

Email: Helen.Kellogg.1@us.af.mil; Subject: KC-46A MOB 6 EIS

Project Website: www.kc46amob6eis.com

MOB6 KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Environmental Impact Statement
Public Hearing Flyer

The Department of the Air Force (DAF) invites you to remotely participate in a virtual Public Hearing for the KC-46A Main Operating Base #6 (MOB 6) Beddown at either MacDill Air Force Base (AFB), Florida (Preferred Alternative) or Fairchild AFB, Washington. The DAF encourages you to attend the meeting to provide your input.

What: DAF Virtual Public Hearing on the KC-46A MOB 6 Draft EIS

When and Where: www.kc46amob6eis.com

Scan the QR CODE for Project Details

Public involvement for the EIS is being conducted through the project website (www.kc46amob6eis.com). Additionally, two public hearings are planned that will accommodate the time zones of communities local to each installation. Webex event links and dial-in (phone) numbers to access the hearings are provided below. Members of the public without internet access are encouraged to participate by phone using the provided dial-in.

Accommodating the MacDill AFB, FL area, the virtual public hearing will be held on March 7, 2023 at 5:30 p.m. Eastern Time.

Webex Event Link:
https://meethdr.webex.com/meethdrl.php?MTID=m39e9acfc3d0db723d21fe533b4d37e42 Password: JWfMnu7mw67
Dial-In: 1-408-418-9388, Code: 2481 766 6934 #, Password: 59368876#

Accommodating the Fairchild AFB, WA area, the virtual public hearing will be held on March 9, 2023 at 5:30 p.m. Pacific Time.

Webex Event Link:
https://meethdr.webex.com/meethdrl.php?MTID=mdf9de25e48b5e11fe537a91723aa2103
Password: hZDtsRmkK66
Dial-In: 1-408-418-9388, Code: 2498 650 9689 #, Password: 49387765#

* Translation and teleprinter or typewriter (TTY) services would be provided upon request. Requests must be made at least 7 days in advance of the hearing.

Why: To learn about and submit comments on the Draft EIS for the KC-46A MOB 6 Beddown.

How: All members of the public are encouraged to attend via the Webex Event Link provided, or via telephone.

HEADQUARTERS AIR MOBILITY COMMAND

MOB6 KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Proposed Action Background and Overview

- In April 2006, the DAF completed an Analysis of Alternatives to determine the most appropriate strategy for modernizing the existing aerial refueling tanker aircraft fleet. Based on that analysis, the DAF concluded that a tanker derived from a commercial aircraft would result in the best value. In 2009, the DAF selected the KC-46A to replace the aging refueling tankers in the fleet. Since then, Congressional authority funded the purchase of 179 KC-46A aircraft to be phased into DAF operation by 2029 to modernize the fleet, enhance operations, and increase mission effectiveness.
- To date, the DAF has completed EISs for the KC-46A Formal Training Unit (FTU) and MOB 1, MOB 2, MOB 3, and MOB 4 missions addressing recapitalization (replacement) of existing tanker aircraft through the basing of KC-46A aircraft at Continental U.S. (CONUS) Air Force Bases (AFBs) in Oklahoma, New Hampshire, North Carolina, California, and New Jersey. The MOB 5 NEPA effort is anticipated to begin in 2022.
- The MOB 6 EIS, being prepared by the DAF's Air Mobility Command (AMC), addresses the proposal to replace KC-135 aircraft through the beddown of KC-46A aircraft at one active duty CONUS AFB with an existing aerial refueling mission.
- The DAF's proposed action would base 24 KC-46A Primary Authorized Aircraft (PAA), infrastructure, facilities, airfield operations, training activities, personnel to support the MOB 6 mission at either of the identified reasonable installation alternatives: MacDill AFB in Florida (Preferred Alternative) or Fairchild AFB in Washington State.

MOB6 KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Purpose of and Need for the Proposed Action

Purpose

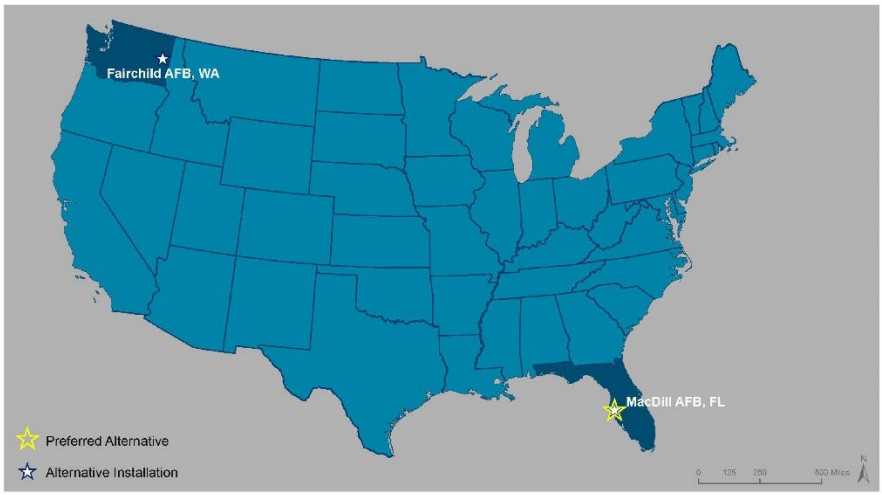
The purpose of the Proposed Action is to recapitalize aging tanker aircraft currently utilized by the DAF with the KC-46A model to better address future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 Stratotanker.

Need

The Proposed Action is needed because the KC-46A will provide capabilities currently lacking in the existing tanker fleet, resulting in a fully capable, combat operational tanker force to accomplish aerial refueling and related worldwide missions.

MOB6
KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Alternatives Consideration



Selection Criteria to Identify Reasonable Alternatives :

- Active duty CONUS AFB
- Existing KC-135 mission
- Runways at least 7,000 feet long
- Capacity to support the KC-46A aerial refueling mission.

Reasonable Alternatives:
Proposed Action at MacDill AFB, FL (Preferred Alternative)
Fairchild AFB, WA

MOB6
KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

Topics Analyzed in the EIS

Biological Resources

- Threatened and endangered species
- Wildlife and vegetation
- Wetlands and floodplains

Cultural Resources

- Archaeological resources (prehistoric and historic)
- Historic architectural resources
- Traditional resources

Water Resources

- Water quality (surface water and stormwater)
- Groundwater aquifers

Social Resources

- Land Use
- Health and Safety
- Socioeconomics
- Environmental Justice

Other Considerations

- Airfield management and aircraft safety
- Air Quality
- Geology and Soils
- Noise
- Infrastructure and Utilities
- Transportation
- Hazardous materials and waste

MOB6 KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

You are Invited To Submit Comments

Comments, suggestions, and relevant information are welcomed on the KC-46A MOB 6 Beddown proposal. Please submit comments using one of the following methods:

- **Postal Mail:** Ms. Helen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853
- **Email:** **Helen.Kellogg.1@us.af.mil;** Subject: KC-46A MOB 6 EIS
- **Project Website:** **www.kc46amob6eis.com**

The DAF also welcomes comments under Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Part 800).

A.1.7.5 Spokane County Board of Commissioners

From: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN
To: Peer, Deborah; Humphreys, Abbey
Subject: FW: Fairchild Air Force Base Support by Spokane County
Date: Wednesday, March 15, 2023 2:33:13 PM

-----Original Message-----
From: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN
Sent: Wednesday, March 15, 2023 1:33 PM
To: Chesney, Scott <SCHESNEY@SpokaneCounty.org>
Cc: JOHNSON, JEFFREY R CIV USAF AMC 92 MSG/DD
<jeffrey.johnson.64@us.af.mil>; Vasquez, Ginna <GVASQUEZ@spokanecounty.org>
Subject: RE: Fairchild Air Force Base Support by Spokane County

Mr. Chesney,

Thanks to Spokane County for participating in the Department of the Air Force's stakeholder and public involvement process for this EIS. I will ensure your submittal gets documented in accordance with our process.

Thank you,
Helen Kellogg
AFCEC NEPA Division
Cell: 830-273-9156

-----Original Message-----
From: Chesney, Scott <SCHESNEY@SpokaneCounty.org>
Sent: Wednesday, March 15, 2023 1:14 PM
To: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Cc: JOHNSON, JEFFREY R CIV USAF AMC 92 MSG/DD
<jeffrey.johnson.64@us.af.mil>; Vasquez, Ginna <GVASQUEZ@spokanecounty.org>
Subject: [URL Verdict: Neutral][Non-DoD Source] Fairchild Air Force Base Support by Spokane County

Ms. Kellogg,

10 Spokane County thanks you or the opportunity to again reinforce our commitment to Fairchild Air Force Base, its current, and future missions.

Please find the attached as statements of the Spokane County Board of Commissioners' support.

Original hard copy will follow via U.S. Mail.

Respectfully.

Scott R. Chesney, AICP | Planning Director | O: 509.477.7212 |
M: 509.850.8372
Spokane County Building & Planning | www.spokanecounty.org/BP
<http://www.spokanecounty.org/BP>

Spokane County
OFFICE OF COUNTY COMMISSIONERS

Chris Jordan, District 1 | Amber Waldref, District 2 | District Josh Kerns, District 3 |
Mary L. Kuney, District 4 | Al French, District 5

March 13, 2023

Helen Kellogg, AFCEC/CZN
Attn: KC-46A MOB 6 EIS
2261 Hughes Ave, Suite 155
JBSA Lackland, TX 78236-9853

Helen.Kellogg.1@us.af.mil

Re: KC-46 MOB 6 beddown and Fairchild Air Force Base

Ms. Kellogg,

Thank you for allowing Spokane County the opportunity to comment on the KC-46A EIS beddown decision regarding MacDill and Fairchild Air Force Bases.

We received notice of the Draft Environmental Impact Statement (EIS) for the KC-46A Main Operating Base 6 on February 9, 2023 via FedEx delivery. We understand that the Air Force will accept comments before final EIS preparation and an anticipated Record of Decision in the Fall of 2023.

We understand thar MacDill AFB is the preferred alternative.

Spokane County wishes to confirm again its long-term commitment to the current and future mission of Fairchild AFB. The County has continuously acted to preserve airspace through land use regulatory decisions including the 2012 Joint Land Use Study that resulted in the creation of a Spokane County zoning code prohibiting any increase in residential density within the areas defined by Military Influence Areas 3-4.

Since then, Spokane County has worked with the State of Washington on projects to clear mission-critical areas where feasible and has guided development to prevent encroachment on the mission and on Fairchild AFB itself.

Fairchild AFB is a critical national defense facility and Spokane County is steadfast in ensuring growth and development remains compatible with the base while supporting its mission and personnel through comprehensive planning and development regulations.

1116 WEST BROADWAY AVENUE, SPOKANE, WA 99260-0100
(509) 477-2265

FAFB KC46EIS Response
Page 2

(Continued)
Spokane County Opposition to NSC Funding Pause (Continued)
Page 2 of 2

Selection criteria show that Fairchild AFB is suitable for the KC-46A mission. We understand that the draft EIS shows no clear obstacle for the preferred alternative.

We ask for your consideration via the draft and final EIS processes that Fairchild AFB be reviewed for suitability for the MOB6 selection.

Respectfully,

BOARD OF COUNTY COMMISSIONERS
OF SPOKANE COUNTY, WASHINGTON

MARY L. KUNEY, CHAIR

JOSH KERNS, VICE-CHAIR

AL FRENCH, COMMISSIONER

AMBER WALDREF, COMMISSIONER

CHRIS JORDAN, COMMISSIONER

1116 WEST BROADWAY AVENUE, SPOKANE, WA 99260-0100
(509) 477-2265

NO. 23-0169

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF SPOKANE COUNTY, WASHINGTON

IN THE MATTER OF AUTHORIZING THE)
SIGNING OF A LETTER OF SUPPORT FOR)
FAIRCHILD AIR FORCE BASE AS AN) **RESOLUTION**
ALTERNATE MAIN OPERATING BASE 6)
SITE FOR THE KC-46A MISSION)

WHEREAS, pursuant to the Constitution and laws of the State of Washington, Spokane County, Washington is a class A county duly organized and existing; and

WHEREAS, pursuant to the provisions of the Revised Code of Washington ("RCW") 36.01.030, the powers of Spokane County can only be exercised through the Board of County Commissioners of Spokane County, Washington ("Board" or "Board of County Commissioners"); and

WHEREAS, the Board of County Commissioners has long supported Fairchild Air Force Base, its missions, and its personnel; and

WHEREAS, the Board received a letter on February 9, 2023 from Mr. David R. Steele Chief, Programs Division, Directorate of Strategy, Plans, Requirements and Programs, Headquarters Air Mobility Command soliciting comment on the draft Environmental Impact Statement for the KC-46A mission; and

WHEREAS, the Board believes that the support of Fairchild Air Force Base is in the interests of all Spokane County citizens, towns, and cities; and

WHEREAS, Fairchild Air Force Base is under consideration as a main operating base for the KC-46A mission; and

WHEREAS, the draft Environmental Impact Statement demonstrates that Fairchild Air Force Base is capable of serving as a main operating base for the KC-46A mission.

NOW, THEREFORE BE IT HEREBY RESOLVED by the Board of County Commissioners of Spokane County, Washington, that the Board hereby confirms its support of Fairchild Air Force Base and the potential KC-46A MOB6 mission, and hereby approves the signing of the attached letter to the Air Force Air Mobility Command noting that support. That the Chair of the Board, and or a majority of the Board be and are hereby authorized to sign the letter at other than an open public meeting.

[signature pages follow]

PASSED AND ADOPTED this 14th day of March, 2023.

BOARD OF COUNTY COMMISSIONERS
OF SPOKANE COUNTY, WASHINGTON

Mary L. Kuney, Chair

ATTEST:

Josh Kerns, Vice-Chair

Ginna Vasquez, Clerk of the Board

Al French, Commissioner

Amber Waldref, Commissioner

Chris Jordan, Commissioner

A.1.7.6 Private Citizen Comment (Julia McHugh)

> -----Original Message-----
> From: Julia McHugh <jemchugh@hotmail.com>
> Sent: Monday, May 1, 2023 10:43 AM
> To: KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN
> <helen.kellogg.1@us.af.mil>
> Subject: [Non-DoD Source] Re: kc46amob6eis
>
> Greetings Ms. Kellogg,
>
> What has become of this issue or action?
11 > I've not seen any followup or decision statement(s).
>
> Thank you,
>
> Julia McHugh, neighbor to FAFB
> 360-480-5080
>
-

To support this EIS, the DAF consulted on a government-to-government basis with potentially affected federally-recognized Native American tribes with historic cultural association to the areas around MacDill Air Force Base (AFB) and Fairchild AFB. **Table A-4** provides a list of Indian tribes, by installation.

Table A-4. KC-46A MOB 6 Tribal Contact List

Tribe	City	State
MacDill AFB		
Miccosukee Tribe of Indians	Miami	FL
Seminole Tribe of Florida	Hollywood	FL
The Seminole Nation of Oklahoma	Wewoka	OK
The Muscogee (Creek) Nation	Okmulgee	OK
Fairchild AFB		
Coeur d'Alene Tribe	Plummer	ID
Confederated Tribes of the Colville Reservation	Nespelem	WA
Kalispel Indian Community	Usk	WA
Spokane Tribe of Indians	Wellpinit	WA

Key: AFB = Air Force Base; FL = Florida; OK = Oklahoma; ID = Idaho; WA = Washington

Table A-5 summarizes the DAF's communications with each Native American tribe. All Native American tribes listed in **Table A-4** received notification letters of the DAF's intent to prepare an EIS for the Proposed Action and alternatives and initiating government-to-government consultation under Section 106 of the National Historic Preservation Act (NHPA), and follow up letters that defined the Area of Potential Effects (APE). Several tribes responded to consultation requests or coordination letters; these responses are included in **Table A-5**.

Follow-up correspondence was conducted for Native American tribes that did not respond to initial consultation and coordination efforts, as detailed in **Table A-5**. This additional outreach may have included additional telephone, email, or letter correspondence. Unless requested otherwise, all tribes received a copy of the Draft EIS.

Table A-5. Tribal Consultation Record

Tribe	Summary Response	Section 106 Initial Consultation	APE Letter	DEIS Notification Letter	Follow-up Correspondence
MacDill AFB					
Miccosukee Tribe of Indians	N/A	5/2/2022	5/2/2022	2/10/2023	Follow-up email sent on 09/09/22; no response.
Seminole Tribe of Florida	Tribe stated the project does fall within the Seminole Tribe of Florida Area of Concern, but that they have no objections to the Proposed Action based on the information provided prior to DEIS review.	5/2/2022	5/2/2022	2/10/2023	Follow-up email sent on 09/09/22, which garnered the response.
The Seminole Nation of Oklahoma	N/A	5/2/2022	5/2/2022	2/10/2023	Follow-up email sent on 09/09/22; no response.
The Muscogee (Creek) Nation	N/A	5/2/2022	5/2/2022	2/10/2023	Follow-up email sent on 09/09/22; no response.
Fairchild AFB					
Coeur d'Alene Tribe	N/A	4/14/2022	4/14/2022	2/10/2023	Follow-up emails sent on 5/20/2022 and 4/20/2023; no response.
Confederated Tribes of the Colville Reservation	Tribe agreed to being a consulting party for this project, expressing concern that the APE likely overlaps the Spokane Plains battleground.	4/14/2022	4/14/2022	2/10/2023	No additional follow up prior to DEIS release. Follow-up email post-DEIS release sent on 4/20/2023.
Kalispel Indian Community	N/A	4/14/2022	4/14/2022	2/10/2023	Follow-up emails sent on 5/20/2022 and 4/20/2023; no response.
Spokane Tribe of Indians	Tribe expressed no concern based on existing cultural surveys, but requests that the project include an inadvertent discovery plan of action.	4/14/2022	4/14/2022	2/10/2023	No additional follow up prior to DEIS release. Follow-up email post-DEIS release sent on 4/20/2023.

Key: AFB = Air Force Base; APE = Area of Potential Effect; EIS = Environmental Impact Statement; N/A = not applicable

A.1.8 Government-to-Government Consultation Initiation Letter from MacDill AFB Example

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

JAN 18 2022

Colonel Benjamin Jonsson
Commander
6th Air Refueling Wing
8208 Hangar Loop Drive, Suite 1
MacDill Air Force Base FL 33621-5407

Mr. Talbert Cypress
Chairman
Miccosukee Tribe of Indians of Florida
Tamiami Station
PO Box 440021
Miami FL 33144

Dear Mr. Cypress

The Department of the Air Force (DAF) intends to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. DAF has identified MacDill Air Force Base (AFB) in Florida as the preferred alternative and Fairchild AFB in Washington as a reasonable alternative for the MOB 6 mission. A Notice of Intent for this EIS is being published in the Federal Register per 32 Code of Federal Regulations (CFR) 989.17. This letter serves as notification of the start of the environmental impact assessment and scoping process.

The Air Force would like to initiate government-to-government consultation on the proposed beddown of KC-46A aircraft for MOB 6. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. This letter initiates our consultation under Section 106 of the National Historic Preservation Act (Code of Federal Regulations, Title 36, Part 800) and requests any information you have on properties of religious and cultural significance on MacDill AFB. The DAF will continue to contact your tribe under NEPA, and consult with your tribe under EO 13175, unless you request otherwise. Details on the proposed actions associated with the MOB 6 beddown are provided below.

The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission. Renovation of existing facilities and construction of new facilities would be required on-installation to support the KC-46A, and facility requirements would vary depending on the installation. All flight operations would take place within existing airspace; additions to or alterations of airspace are not being considered. Additional information about the MOB 6 Proposed Action is provided on the project website at www.kc46amob6eis.com.

MISSION FOCUSED...VALUED AIRMEN

The EIS will assess the potential environmental consequences of the proposed KC-46A MOB 6 Beddown at either Fairchild AFB, Washington or MacDill AFB, Florida. The No Action Alternative will be addressed in the EIS as well. Consultation will be incorporated into preparation of the Draft EIS and will include, but not be limited to, consultation under Section 7 of the Endangered Species Act and consultation under Section 106 of the National Historic Preservation Act. Increases of air emissions as a result of this action at either installation will be analyzed in the EIS. Currently, no short- or long-term notable impacts are anticipated. Additional analysis will be provided in the Draft EIS, which is anticipated in early 2023. The Final EIS and a decision on the Proposed Action are expected in late 2023 to early 2024.

Due to public health concerns related to COVID-19, the DAF will not hold face-to-face public scoping meetings. Public scoping is being accomplished remotely, in accordance with the 2020 version of 40 CFR Part 1506.6, via the project website at www.kc46amob6eis.com and two virtual public scoping meetings. The website provides posters, a presentation, an informational brochure, a capability for the public to provide public scoping comments, and information on the virtual public scoping meetings. Comments or questions regarding this project may be directed to Ms. Helen Kellogg via email at afcec.czn.workflow@us.af.mil including KC-46A MOB 6 EIS in the subject line or via postal mail to: AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853.

All tribal, public, agency, and stakeholder comments provided to the DAF will be considered during preparation of the EIS. We respect the unique government-to-government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting scoping comments by May 18, 2022 will ensure we have sufficient time to consider your input in the Draft EIS.

Please let us know when you would be available to discuss the proposed MOB 6 beddown and your expectations on how to proceed with consultation. Please contact me at (813) 828-4444 to discuss dates and times for consultation.

Sincerely

BENJAMIN R. JONSSON, Colonel, USAF
Commander

A.1.9 Government-to-Government Follow-Up Letter with APE from MacDill AFB Example

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

2 May 2022

Ms. Amy M. Doye
Director
6th Civil Engineer Squadron
7621 Hillsborough Loop Drive
MacDill Air Force Base FL 33621-5407

Mr. Talbert Cypress
Chairman
Miccosukee Tribe of Indians of Florida
Tamiami Station
PO Box 440021
Miami FL 33144

Dear Mr. Cypress

This letter provides an update on the proposed Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft at MacDill Air Force Base (AFB) in Florida. The Department of the Air Force (DAF) sent you an initial government-to-government consultation letter regarding preparation of an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the proposed undertaking at both Fairchild AFB and MacDill AFB in Florida. The beddown associated with this proposal would occur at one of the two bases with MacDill AFB identified as preferred alternative for the MOB 6 mission. The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission at the selected alternative. Renovation of existing facilities and construction of new facilities would be required at the selected installation to support the KC-46A. Facility requirements would vary depending on the installation. All flight operations would take place within existing airspace of the selected alternative; additions to or alterations of airspace are not being considered. Additional information about the MOB 6 Proposed Action is provided on the project website at www.kc46amob6eis.com. Please note this update/correction regarding virtual public scoping meetings: The initial letter sent to your tribe indicated virtual public scoping meetings would be held; however, the DAF determined all public scoping for this project will occur through the project website.

The DAF is providing this update as part of the consultation under Section 106 of the National Historic Preservation Act (Code of Federal Regulations, Title 36, Part 800). Since the mailing of the initial government-to-government consultation letter for the proposed beddown of KC-46A aircraft for MOB 6, the DAF has established an Area of Potential Effects (APE) for the MacDill AFB alternative based on preliminary site assessments. The proposed APE includes the following:

1) existing buildings and structures that would require alterations to accommodate the

KC-46 aircraft and mission,
2) the locations of proposed new buildings and structures necessary to support the KC-46A mission, and
3) a 0.25-mile buffer around the buildings and structures mentioned in items 1 and 2 above to evaluate potential effects of the proposed alternative on those buildings and structures and any historic properties that would have a view of the proposed construction activities.

A map of the APE is included as an Attachment 1. No ground disturbing activities would occur near known archaeological sites at MacDill AFB. A map of the APE and its proximity to the closest known archaeological sites is included as Attachment 2.

The DAF requests your review of the APE and any information you have on properties of religious and cultural significance in the APE on MacDill AFB. The DAF will continue to contact your tribe under NEPA, and consult with your tribe under EO 13175, unless you request otherwise. Comments or questions regarding this project may be directed to Ms. Helen Kellogg via email at afcec.Helen.Kellogg.1@us.af.mil including KC-46A MOB 6 EIS in the subject line or via postal mail to: Hellen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853. Please address all comments for this matter to the MacDill AFB point of contact, Mr. Andy Lykens, 6 CES/CEIE, to the address above, or via email at andrew.lykens.ctr@us.af.mil, or by phone at 813-828-0460.

All tribal, public, agency, and stakeholder comments provided to the DAF will be considered during preparation of the EIS. We respect the unique government-to-government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting scoping comments within 30 days of receipt of this letter will ensure we have sufficient time to consider your input in the Draft EIS.

Sincerely

AMY M. DOYE, P.E., DAF
Director, 6th Civil Engineer Squadron

Attachment 1: *Figure 1. Map Showing Area of Potential Effects (APE)*
Attachment 2: *Figure 2. Map Showing APE and Archaeological Resources*

Figure 1. Map Showing Area of Potential Effects (APE)

A.1.10 Sample Draft EIS Distribution Letter from MacDill AFB

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

JAN 24 2023

Ms. Amy M. Doye
Director
6th Civil Engineer Squadron
7621 Hillsborough Loop Drive
MacDill Air Force Base FL 33621-5407

Mr. Talbert Cypress
Chairman
Miccosukee Tribe of Indians of Florida
Tamiami Station
PO Box 440021
Miami FL 33144

Dear Mr. Cypress

The Department of the Air Force (DAF) is pleased to provide you with a copy of the Draft Environmental Impact Statement (EIS; Enclosure 1) for the KC-46A Main Operating Base #6 (MOB 6). The DAF previously contacted you via an initial government-to-government consultation letter and a follow-up letter regarding preparation of the EIS, which is now being provided in accordance with the National Environmental Policy Act (NEPA). This document is also available online at www.kc46amob6eis.com.

Notification of the availability of the Draft EIS will appear in the Federal Register to initiate the public review period. The EIS analyzes alternative installations (MacDill AFB, Florida [Alternative 1 – Preferred Alternative] and Fairchild AFB, Washington [Alternative 2]) for the MOB 6 beddown, which includes the basing of 24 KC-46A tanker aircraft and the infrastructure, facilities, airfield operations, training activities, personnel, and airspace to support the mission transition between fiscal years 2026 and 2028. The DAF understands that there is the potential for the MOB 6 beddown to affect properties of religious and cultural significance. The Draft EIS analyzes and presents the potential environmental consequences on properties of religious and cultural significance associated with the Proposed Action and Alternatives, including the No Action Alternative. The DAF is consulting with the appropriate resource agencies to determine the potential for significant impacts on cultural and natural resources and corresponding mitigation measures, if needed. Consultation will continue to be incorporated into the EIS process and includes, but is not limited to, consultation with Federally-Recognized Tribes, consultation under Section 7 of the Endangered Species Act, and consultation under Section 106 of the National Historic Preservation Act. It is anticipated that the potentially long-term, major, adverse effects on architectural resources under National Historic Preservation Act Section 106 that would result from Alternative 1 at MacDill AFB could be successfully mitigated in consultation with the Florida State Historic Preservation Office through the development and implementation of a Memorandum of Understanding, and the resulting long-term effects would be reduced to moderate. Therefore, no significant impacts would be expected on any resource

CHARGE THE STORM...LET'S GO!

on the Proposed Action are expected in Fall 2023. Additional information is also available on the project website at www.kc46amob6eis.com.

The DAF will hold two virtual public hearings on the Draft EIS via internet/phone on March 7, 2023 from 5:30 pm to 8 pm EST to accommodate the public located near the MacDill AFB Alternative and March 9, 2023 from 5:30 pm to 8 pm PST to accommodate the public located near the Fairchild AFB Alternative. The purpose of the hearings is to receive input on the proposed action and alternatives and the Draft EIS analysis. The hearings will also be announced through local media. Instructions for participating in the virtual public hearing and more information are provided on the project website, www.kc46mob6eis.com. Links to the on-line virtual public hearings will be provided on the project website allowing interested parties to electronically participate in the public hearings, and a phone number will be provided for those without internet access.

All tribal comments regarding properties of religious and cultural significance provided at the hearings and through written comments received via postal mail, email, and the project website will be considered in the preparation of the Final EIS. We respect the unique government-to-government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting comments within 45 days of receipt of this letter will ensure we have sufficient time to consider your input in the Final EIS. Please contact me at (813) 828-3577 with any comments or questions regarding this project.

Sincerely

AMY M. DOYE, GS-15, DAF
Director, 6th Civil Engineer Squadron

A.1.11 Responses from Tribes to MacDill AFB

A.1.11.1 Seminole Tribe of Florida

From:	Danielle Simon
To:	LYKENS, ANDREW S CTR USAF AMC 6 CES/CEIE
Cc:	THPO Compliance; RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE; KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE; KELLOGG, HELEN L GS-13 USAF AFMC AFCEC/CZN; SWICK, NOLAN T GS-13 USAF AFMC AFCEC/CZN; Scott Garrold
Subject:	[URL Verdict: Neutral][Non-DoD Source] RE: Sec 106 - KC-46A Main Operating Base #6 Beddown - MacDill Air Force Base
Date:	Tuesday, October 4, 2022 4:24:30 PM

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC PRESERVATION OFFICE
SEMINOLE TRIBE OF FLORIDA
30290 JOSIE BILLIE HIGHWAY
PMB 1004
CLEWISTON, FL 33440
THPO PHONE: (863) 983-6549
FAX: (863) 902-1117
THPO WEBSITE: WWW.STOFTHPO.COM

TRIBAL OFFICERS
MARCELLUS W. OSCEOLA JR.
CHAIRMAN
MITCHELL CYPRESS
VICE CHAIRMAN
LAVONNE ROSE
SECRETARY
PETER A. HAHN
TREASURER

October 4, 2022

Andrew Lykens
Contractor, Amentum
NEPA, Natural & Cultural Resources Manager
6th Civil Engineer Squadron, Environmental Element
7621 Hillsborough Loop Dr.
MacDill AFB, FL 33621
Office: 813-828-0460
DSN: 968-0460

Subject: KC-46A Main Operating Base #6 Beddown
THPO Compliance Tracking Number: 0033729

In order to expedite the THPO review process:

1. Please correspond via email and provide documents as attachments (a THPO FTP site is available for large files),
2. Please send all emails to THPOCompliance@semtribe.com,
3. Please reference the THPO Compliance Tracking Number if one has been assigned.

Dear Mr. Lykens,

Thank you for contacting the Seminole Tribe of Florida Tribal Historic Preservation Office (STOF THPO) Compliance Section regarding KC-46A Main Operating Base #6 Beddown.

The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents that you provided pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) as amended and its implementing regulations (36 CFR 800). Based on the limited information available, we have no objections to

the APE as proposed at this time. However, we look forward to providing additional comments upon review of a draft Environmental Impact Statement. Please continue to consult with our office and feel free to contact us with any questions or concerns.

Respectfully,
Danielle A. Simon, MA, RPA
Compliance Review Supervisor
STOF THPO, Compliance Review Section
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440
Email: daniellesimon@semtribe.com

From: LYKENS, ANDREW S CTR USAF AMC 6 CES/CEIE <andrew.lykens.ctr@us.af.mil>
Sent: Friday, September 9, 2022 11:08 AM
To: Paul Backhouse <PaulBackhouse@semtribe.com>
Cc: THPO Compliance <THPOCompliance@semtribe.com>; RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil>; KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE <jason.kirkpatrick.2.ctr@us.af.mil>; KELLOGG, HELEN L GS-13 USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>; SWICK, NOLAN T GS-13 USAF AFMC AFCEC/CZN <nolan.swick@us.af.mil>
Subject: RE: Sec 106 - KC-46A Main Operating Base #6 Beddown - MacDill Air Force Base

Good morning,

The Department of the Air Force has not received a response from your tribe regarding the preparation of an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the proposed Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft, which has identified MacDill Air Force Base in Tampa, FL as the preferred alternative. Please see attached letters and supporting figures, below email sent 2 May 2022, and/or the project website: www.kc46amob6eis.com, for more details. Please let us know of any feedback or comments about the proposed project your tribe may have.

Respectfully,
Andy

Andrew Lykens
Contractor, Amentum
NEPA, Natural & Cultural Resources Manager
6th Civil Engineer Squadron, Environmental Element
7621 Hillsborough Loop Dr.
MacDill AFB, FL 33621
Office: 813-828-0460
DSN: 968-0460

From: LYKENS, ANDREW S CTR USAF AMC 6 CES/CEIE
Sent: Monday, May 2, 2022 2:22 PM

To: paulbackhouse@semtribe.com
Cc: THPOCompliance@semtribe.com; RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil>; KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE <jason.kirkpatrick.2.ctr@us.af.mil>; KELLOGG, HELEN L GS-13 USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Subject: Sec 106 - KC-46A Main Operating Base #6 Beddown - MacDill Air Force Base

Good afternoon,

The Department of the Air Force (DAF) intends to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. DAF has identified MacDill Air Force Base (AFB) in Florida as the preferred alternative and Fairchild AFB in Washington as a reasonable alternative for the MOB 6 mission. The Air Force would like to initiate government-to-government consultation on the proposed beddown of KC-46A aircraft for MOB 6. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. The attached letters initiate the DAF consultation under Section 106 of the National Historic Preservation Act (Code of Federal Regulations, Title 36, Part 800) and requests any information you have on properties of religious and cultural significance on MacDill AFB. The DAF will continue to contact your tribe under NEPA, and consult with your tribe under EO 13175, unless you request otherwise. Details on the proposed actions associated with the MOB 6 beddown are provided in the attached letters and supporting figures. Additional project details can be found by visiting the project website: www.kc46amob6eis.com. A copy of these letters has also been mailed to your tribe. Please let us know of any feedback or comments about the proposed project your tribe may have.

We look forward to hearing from you.

Respectfully,
Andy

Andrew Lykens
Contractor, Amentum/PAE
NEPA, Natural & Cultural Resources Manager
6th Civil Engineer Squadron, Environmental Element
7621 Hillsborough Loop Dr.
MacDill AFB, FL 33621
Office: 813-828-0460
DSN: 968-0460

A.1.12 Government-to-Government Consultation Initiation Letter from Fairchild AFB Example

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

January 18, 2022

Colonel Cassius T. Bentley III
Commander
92d Air Refueling Wing
1 East Bong Street, Suite 221A
Fairchild AFB WA 99011

Honorable Chief James Allan
Coeur d'Alene Tribe
P.O. Box 408
850 A Street
Plummer ID 83851-0408

Dear Chief Allan

The Department of the Air Force (DAF) intends to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. DAF has identified MacDill Air Force Base (AFB) in Florida as the preferred location, and Fairchild AFB in Washington as a reasonable alternative for the MOB 6 mission. A Notice of Intent for this EIS is being published in the Federal Register per 32 Code of Federal Regulations (CFR) 989.17. This letter serves as notification of the start of the environmental impact assessment and scoping process.

The Air Force would like to initiate government-to-government consultation on the proposed beddown of KC-46A aircraft for MOB 6. This letter initiates our consultation under Section 106 of the National Historic Preservation Act (Code of Federal Regulations, Title 36, Part 800) and requests any information you have on properties of religious and cultural significance on Fairchild AFB. The DAF will continue to contact your tribe under NEPA, and consult with your tribe under EO 13175, unless you request otherwise. Details on the proposed actions associated with the MOB 6 beddown are provided below.

The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission. Renovation of existing facilities and construction of new facilities would be required on-installation to support the KC-46A, and facility requirements would vary depending on the installation. All flight operations would take place within existing airspace; additions to or alterations of airspace are not being considered. Additional information about the MOB 6 Proposed Action is provided on the project website at www.kc46amob6eis.com.

The EIS will assess the potential environmental consequences of the proposed KC-46A MOB 6 beddown at Fairchild AFB, Washington or MacDill AFB, Florida. The No Action

Alternative will be addressed in the EIS as well. Consultation will be incorporated into preparation of the Draft EIS and will include, but is not limited to, consultation under Section 7 of the Endangered Species Act and consultation under Section 106 of the National Historic Preservation Act. Increases of air emissions as a result of this action at both installations will be analyzed in the EIS. Currently, no short- or long-term notable impacts are anticipated. Additional analysis will be provided in the Draft EIS, which is anticipated in early 2023. The Final EIS and a decision on the Proposed Action are expected in late 2023 to early 2024.

Due to public health concerns related to COVID-19, the DAF will not hold face-to-face public scoping meetings. Public scoping is being accomplished remotely, in accordance with the 2020 version of 40 CFR Part 1506.6, via the project website at www.kc46amob6eis.com and two virtual public scoping meetings. The website provides posters, a presentation, an informational brochure, a capability for the public to provide public scoping comments, and information on the virtual public scoping meetings. Comments or questions regarding this project may be directed to Ms. Helen Kellogg via email at afcec.czn.workflow@us.af.mil; include KC-46A MOB 6 EIS in the subject line or via postal mail to: AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853.

All tribal, public, agency, and stakeholder comments provided to the DAF will be considered during preparation of the EIS. We respect the unique government-to-government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting scoping comments by May 18, 2022 will ensure we have sufficient time to consider your input in the Draft EIS.

Please let us know if you have any preferences or expectations relative to consultation regarding the KC-46A MOB6 beddown. My Installation Tribal Liaison Officer (ITLO), Mr. Jeff Johnson, will continue to provide you updates at key milestones in the EIS process and he is always available to discuss any concerns with you. You can contact him at (509)247-1470 or jeffrey.johnson.64@us.af.mil.

Sincerely

BENTLEY.CASSIUS.T.III.1102901327 Digitally signed by BENTLEY.CASSIUS.T.III.1102901327 Date: 2022.01.28 12:36:58 -08'00'

CASSIUS T. BENTLEY, III, Colonel, USAF
Commander

A.1.13 Government-to-Government Follow-Up Letter with APE from Fairchild AFB Example

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

Jeffrey R. Johnson
Installation Tribal Liaison Officer
5 West Bong St
Fairchild AFB WA 99011

8 April 2022

Honorable Chief James Allan
Coeur d'Alene Tribe
PO Box 408
850 A Street
Plummer, ID 83851-0408

Dear Chief Allan,

This letter provides an update on the proposed Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft at Fairchild Air Force Base (AFB) in Washington State. The Department of the Air Force (DAF) sent you an initial government-to-government consultation letter regarding preparation of an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the proposed undertaking at both Fairchild AFB and MacDill AFB in Florida. The beddown associated with this proposal would occur at one of the two bases with MacDill AFB identified as preferred alternative for the MOB 6 mission. The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission at the selected alternative. Renovation of existing facilities and construction of new facilities would be required at the selected installation to support the KC-46A. Facility requirements would vary depending on the installation. All flight operations would take place within existing airspace of the selected alternative; additions to or alterations of airspace are not being considered. Additional information about the MOB 6 Proposed Action is provided on the project website at www.kc46amob6eis.com. Please note this update/correction regarding virtual public scoping meetings: The initial letter sent to your tribe indicated virtual public scoping meetings would be held; however the DAF determined all public scoping for this project will occur through the project website.

The DAF is providing this update as part of the consultation under Section 106 of the National Historic Preservation Act (Code of Federal Regulations, Title 36, Part 800). Since the mailing of the initial government-to-government consultation letter for the proposed beddown of KC-46A aircraft for MOB 6, the DAF has established an Area of Potential Effects (APE) for the Fairchild AFB alternative based on preliminary site assessments. The proposed APE includes the following:

1) existing buildings and structures that would require alterations to accommodate the KC-46 aircraft and mission,

2) the locations of proposed new buildings and structures necessary to support the KC-46 mission, and

3) a 0.25-mile buffer around the buildings and structures mentioned in items 1 and 2 above to evaluate potential effects of the proposed alternative on those buildings and structures and any historic properties that would have a view of the proposed construction activities. A map of the APE is included as an Attachment.

The DAF requests your review of the APE and any information you have on properties of religious and cultural significance in the APE on Fairchild AFB. The DAF will continue to contact your tribe under NEPA, and consult with your tribe under EO 13175, unless you request otherwise. Comments or questions regarding this project may be directed to Ms. Helen Kellogg via email at Helen.Kellogg.1@us.af.mil including KC-46A MOB 6 EIS in the subject line or via postal mail to: Helen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853.

All tribal, public, agency, and stakeholder comments provided to the DAF will be considered during preparation of the EIS. We respect the unique government-to-government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting scoping comments within 30 days of receipt of this letter will ensure we have sufficient time to consider your input in the Draft EIS.

Sincerely,

JOHNSON.JEFFREY.R.1044990268 Digitally signed by JOHNSON.JEFFREY.R.1044990268 Date: 2022.04.08 12:20:03 -07'00'

JEFFREY R. JOHNSON, GS-14, DAFC
Installation Tribal Liaison Officer

Attachment:
Figure 1. Map Showing Area of Potential Effects (APE)

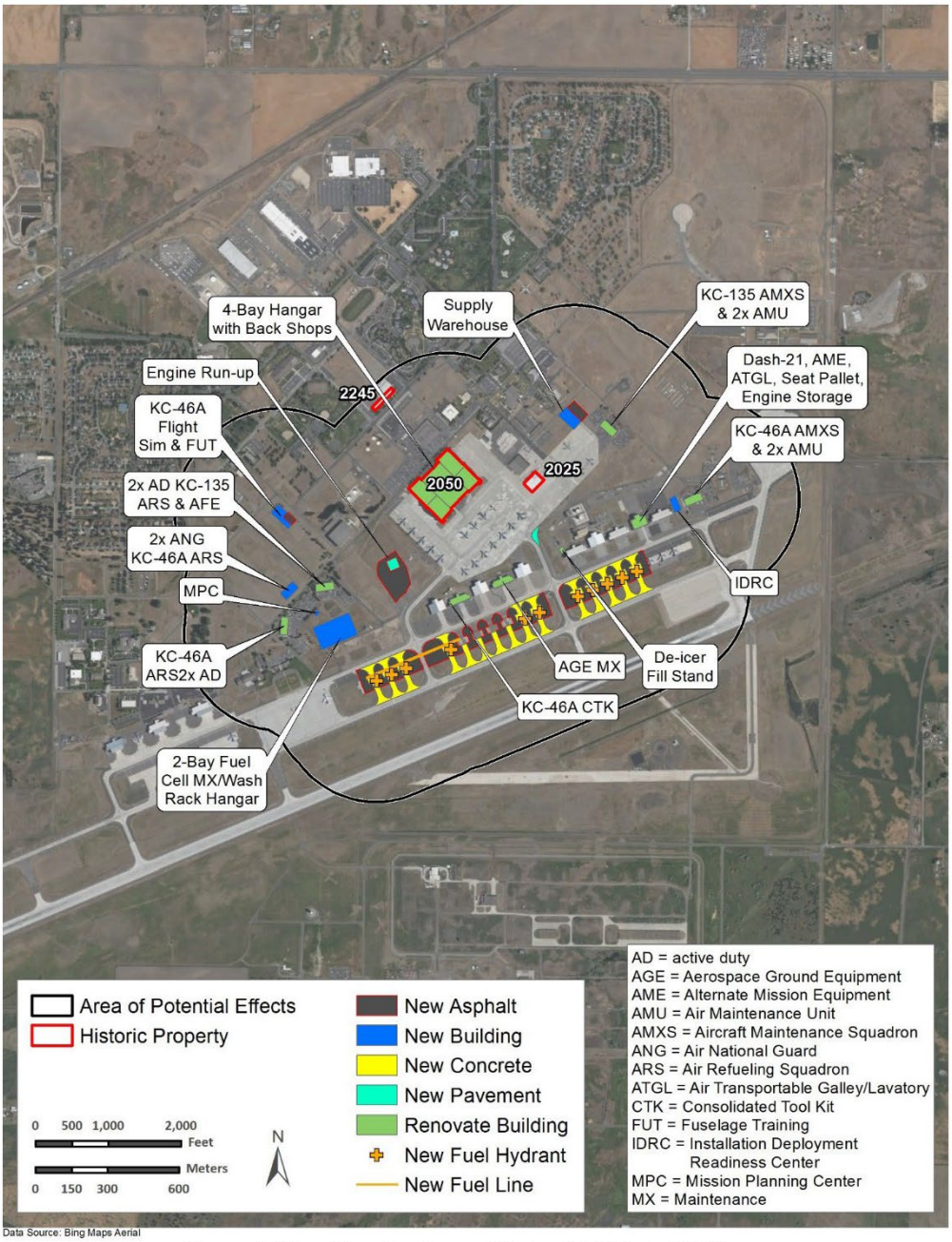


Figure 1. Map Showing Area of Potential Effects (APE)

A.1.14 Sample DEIS Distribution Letter from Fairchild AFB

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

Jeffrey R. Johnson
Installation Tribal Liaison Officer
5 West Bong St
Fairchild AFB WA 99011

27 January 2023

Honorable Chief James Allan
Coeur d'Alene Tribe
PO Box 408
850 A Street
Plummer, ID 83851-0408

Dear Chief Allan,

The Department of the Air Force (DAF) is pleased to provide you with a copy of the Draft Environmental Impact Statement (EIS; Enclosure 1) for the KC-46A Main Operating Base #6 (MOB 6). The DAF previously contacted you via an initial government-to-government consultation letter and a follow-up letter regarding preparation of the EIS, which is now being provided in accordance with the National Environmental Policy Act (NEPA). This document is also available online at www.kc46amob6eis.com.

Notification of the availability of the Draft EIS will appear in the Federal Register to initiate the public review period. The EIS analyzes alternative installations (MacDill AFB, Florida [Alternative 1 – Preferred Alternative] and Fairchild AFB, Washington [Alternative 2]) for the MOB 6 beddown, which includes the basing of 24 KC-46A tanker aircraft and the infrastructure, facilities, airfield operations, training activities, personnel, and airspace to support the mission transition between fiscal years 2026 and 2028. The Final EIS and a Record of Decision on the Proposed Action are expected in Fall 2023. Additional information is also available on the project website at http://www.kc46amob6eis.com.

The DAF will hold two virtual public hearings on the Draft EIS via internet/phone on March 7, 2023 from 5:30 pm to 8 pm EST to accommodate the public located near the MacDill AFB Alternative and March 9, 2023 from 5:30 pm to 8 pm PST to accommodate the public located near the Fairchild AFB Alternative. The purpose of the hearings is to receive input on the proposed action and alternatives and the Draft EIS analysis. The hearings will also be announced through local media. Instructions for participating in the virtual public hearing and more information are provided on the project website, www.kc46mob6eis.com. Links to the on-line virtual public hearings will be provided on the project website allowing interested parties to electronically participate in the public hearings, and a phone number will be provided for those without internet access.

All tribal comments regarding properties of religious and cultural significance provided at the hearings and through written comments received via postal mail, email, and the project website will be considered in the preparation of the Final EIS. We respect the unique government-to-

government relationship that exists between the DAF and your tribe, and your input on the project is welcome at any time during the EIS process. However, submitting comments within 45 days of receipt of this letter will ensure we have sufficient time to consider your input in the Final EIS. Please do not hesitate to contact me if you have any comments or questions regarding this project at (509) 247-1470 or jeffrey.johnson.64@us.af.mil.

Sincerely,

Jeffrey R. Johnson

JEFFREY R. JOHNSON, GS-14, DAFC
Installation Tribal Liaison Officer

Attachments:
DVD - KC-46 EIS MOB 6, Draft EIS

cc:
Dr. Jill Wagner, THPO

A.1.15 Responses from Tribes to Fairchild AFB

A.1.15.1 Spokane Tribe of Indians

Spokane Tribe of Indians

Tribal Historic Preservation Officer

P. Box 100 Wellpinit WA 99040

April 19, 2022

To: Joshua Potter, Fairchild Air Force Base Air Quality Engineer

RE: MOB 6- KC EIS

Mr. Potter,

Thank you for contacting the Tribe's Historic Preservation Office. We appreciate the opportunity to provide a cultural consult for your project, the intent of this process is to preserve and protect all cultural resources whenever protection is feasible.

After archive research of this area has a high probability for cultural resources this project is just renovation to the buildings there has been some cultural surveys completed on the base, T25, R41 sections 28,29,32, I have no further concern however, any new facilities would require more consultation.

RE: This project will require an **inadvertent discovery plan of action** implemented into the scope of work.

This letter is your notification that your project has been cleared, and your project may move forward.

As always, if any artifacts or human remains are found upon excavation, this office should be immediately notified and the work in the immediate area **cease**.

Should additional information become available or scope of work change our assessment may be revised. Again, thank you for this opportunity to comment and consider this a positive action that will assist in protecting our shared heritage.

If questions arise, please contact me at (509) 258 – 4222.

Sincerely,

Randy Abrahamson

Tribal Historic Preservation Officer – THPO

A.1.15.2 Confederated Tribes of the Colville Reservation

From: Robert Sloma <robert.sloma@colvilletribes.com>
Sent: Monday, May 9, 2022 1:02 PM
To: KELLOGG, HELEN L GS-13 USAF AFMC AFCEC/CZN <helen.kellogg.1@us.af.mil>
Cc: POTTER, JOSHUA S GS-12 USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>; JOHNSON, JEFFREY R GS-14 USAF AMC 92 MSG/DD <jeffrey.johnson.64@us.af.mil>; Guy Moura (HSY) <guy.moura@colvilletribes.com>
Subject: [URL Verdict: Neutral][Non-DoD Source] MOB 6 KC-46 EIS Section 106 Tribal Consultation Initiation and APE Description

Dear Ms Kellogg:

The Confederated Tribes of the Colville Reservation (also known as the Colville Confederated Tribes or CCT) received notice of the above referenced EIS from Colonel Cassius T. Bentley III, Commander of the 92d Air Refueling Wing at Fairchild Air Force Base, in Spokane, Washington and Jeffrey R. Johnson, Installation Tribal Liaison Officer via Joshua S. Potter, Fairchild Air Force Base Air Quality Engineer/EPCRA/Toxic/Rideshare/NEPA Program Manager.

Fairchild Air Force Base lies within the usual and accustomed grounds and areas of the CCT. The Area of Potential Effect (APE) also likely overlaps the Spokane Plains battleground, a conflict during the Coeur d'Alene War of 1858 in which Palus and other Native American Tribes participated. This running battle stretched for fourteen miles and according to Manring (1912:204, 207) resulted in at least six Native Americans dead and three wounded. Trogdon (1970) writes that this battle is "Perhaps, one of the most important episodes in our history as well as the most deplorable, is our treatment of the American Indian."

The Palus Tribe is one of the twelve tribes that make up the CCT, which is governed by the Colville Business Council (CBC). The CBC has delegated to the Tribal Historic Preservation Officer (THPO) the responsibility of representing the CCT with regard to cultural resources management issues throughout the traditional territories of all of the constituent tribes under Resolution 1996-29. This area includes parts of eastern Washington, northeastern Oregon, and the Palus (Palouse) territory in Idaho.

The CCT desires to be included as a consulting party in regard to the proposed MOB6 beddown of the KC-46A tanker aircraft at Fairchild Air Force Base EIS and concurs with the APE as described by Mr. Johnson.

The Fairchild Air Force Base is considered by the CCT to be highly sensitive for containing evidence of Pre Contact to historic period Native American activity. Information on Native American use in the project vicinity shows that prehistoric, ethnographic, historic, and traditional sites of value to the CCT surround the project area.

The CCT look forward to continuing consultation on this project and offer our appreciation for your assistance with protecting cultural resources. Please note that these comments are based on information available to us at this time. We reserve the right to revise our comments as information becomes available. Please contact me if you have any questions in regard to this response.

REFERENCES CITED

Manring, Benjamin Franklin
1912 The Conquest of the Coeur d'Alenes, Spokanes and Palouses: The Expeditions of Colonels E.J. Steptoe and George Wright Against the "Northern Indians" in 1858. Spokane, Washington: Inland Print. Co.

Trogdon, William H.
1970 Battle of Spokane Plains State Park [National Register of Historic Places Nomination Form.] Electronic document, http://properties.historicspokane.org/_pdf/properties/property-1985.pdf, accessed

May 13, 2020.

--
Robert A. Sloma
Archaeologist
History/Archaeology Program
Confederated Tribes of the Colville Reservation
PO Box 150
Nespelem, WA 99155
Tel: (509) 634-2692
Cell: (509) 557-2273
robert.sloma@colvilletribes.com

A.2 National Historic Preservation Act Section 106 Consultation

Section 106 consultation under the National Historic Preservation Act (NHPA) was conducted with the respective State Historic Preservation Office (SHPO) for each installation. Because MacDill AFB is the Preferred Alternative and modifications would be required to historic properties under the MOB 6 beddown, additional Section 106 consultation was conducted with the Advisory Council on Historic Preservation.

A.2.1 Section 106 SHPO Consultation Initiation Letter from MacDill AFB

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

2 May 2022

Ms. Amy M. Doye
Director
6th Civil Engineer Squadron
7621 Hillsborough Loop Drive
MacDill Air Force Base FL 33621-5407

Dr. Timothy A. Parsons
Director, State Historic Preservation Officer
Division of Historical Resources
Florida Department of State
500 South Bronough Street
Tallahassee, FL 32399

Dear Dr. Parsons

The Department of the Air Force (DAF) intends to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. MacDill Air Force Base (AFB) in Florida and Fairchild AFB in Washington State are proposed alternatives for the MOB 6 mission. As a federal undertaking, the KC-46A MOB 6 beddown is subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C 306108) and its implementing regulations in the Code of Federal Regulations, Title 36, Part 800 (36 CFR Part 800). This letter initiates our consultation under Section 106 of the NHPA for the proposed undertaking at MacDill AFB and requests your input. A Notice of Intent for this EIS is being published in the Federal Register per 32 Code of Federal Regulations (CFR) 989.17.

The EIS will assess the potential environmental consequences of the proposed KC-46A MOB 6 Beddown at MacDill AFB and Fairchild AFB, as well as addressing the No Action Alternative. The DAF proposes to beddown the MOB 6 mission at one of the two bases being analyzed. MacDill AFB has been identified as the Preferred Alternative for the proposed KC-46A MOB 6 Beddown. The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission. Renovation of existing facilities and construction of new facilities would be required at MacDill AFB to support the KC-46A. All flight operations would take place within existing airspace; additions to or alterations of airspace are not being considered.

Based on preliminary site assessments, an Area of Potential Effects (APE) for the proposed undertaking at MacDill AFB has been identified, including a 0.25-mile buffer to assess potential visual effects. Maps of the APE and its relation to previously identified historic properties can be found in Attachments 1 through 2. The proposed undertaking would require alterations and/or additions to 20 buildings, 11 of which are historic-age (50 years of age or older). Ten (10) of the buildings identified for alterations and/or additions are located in the MacDill Field Historic District (Buildings 6, 9, 44, 55, and 56 and Hangars 1–5). Five of those buildings (Buildings 6, 9, 44 55, 56) are non-contributing resources to the MacDill Field Historic District and have been determined individually ineligible for listing in the National Register of Historic Places (NRHP). The design of alterations to the non-contributing buildings have not been completed, but the alterations are expected to be minor in nature.

The remaining five buildings located in the MacDill Field Historic District (Hangars 1–5) are considered contributing resources to the district and are each individually eligible for listing in the NRHP. The KC-46A airframe does not safely fit inside the hangars, necessitating the proposed additions. While specifications for the proposed additions are unknown at this time, the additions would extend the entire width and height of each hangar on the flightline side to create enough space for the KC-46A to be housed in the hangar. The addition on each hangar is anticipated to be approximately 11,000 square feet. The existing hangar doors, which have been previously replaced in coordination with your office, may be reused as part of the alterations. However, if the proposed basing action occurs at MacDill AFB, the DAF has determined that any proposed additions to Hangars 1-5 would result in an adverse effect on historic properties.

No ground disturbing activities would occur near known archaeological sites at MacDill AFB. A map of the APE and its proximity to the closest known archaeological sites is included as Attachment 3.

The DAF anticipates having the initial (35 percent) planning design completed for Hangars 1, 4, and 5 by 1 August 2022; these projects are proposed Military Construction (MILCON) projects for fiscal year (FY) 2024. Hangars 2 and 3 are MILCON projects and would be designed at a later time. We seek your input to ensure we address your concerns during that process. As you may already be aware from the project scoping letter sent to your office, further information on this proposed basing action can be found via the project website at www.kc46amob6eis.com. The website provides posters, a presentation, an informational brochure, downloadable comment forms, and a capability for the public to provide public scoping comments online. Consultation with the Advisory Council on Historic Preservation will occur simultaneously with your office. The DAF is also consulting with four Native American tribes with cultural affiliation to the MacDill AFB area: the Miccosukee Tribe, the Muscogee (Creek) Nation, the Seminole Nation of Oklahoma, and the Seminole Tribe of Florida.

Comments or questions regarding this project are requested at your earliest convenience, but no later than 30 days from receipt of this correspondence. Please address all EIS comments or questions to Ms. Helen Kellogg via email at Helen.Kellogg.1@us.af.mil including KC-46A MOB 6 EIS in the subject line or via postal mail to: Ms. Helen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853. Please address all comments for this matter to the MacDill AFB point of contact, Mr. Andy Lykens, 6 CES/CEIE, to the address above, or via email at andrew.lykens.ctr@us.af.mil, or by phone at 813-828-0460.

Sincerely

AMY M. DOYE, P.E., DAF
Director, 6th Civil Engineer Squadron

Attachments:
1. *Figure 1. Map Showing Area of Potential Effects (APE)*
2. *Figure 2. Map Showing MacDill Field Historic District*
3. *Figure 3. Map Showing APE and Archaeological Resources*

Figure 1. Map Showing Area of Potential Effects (APE)

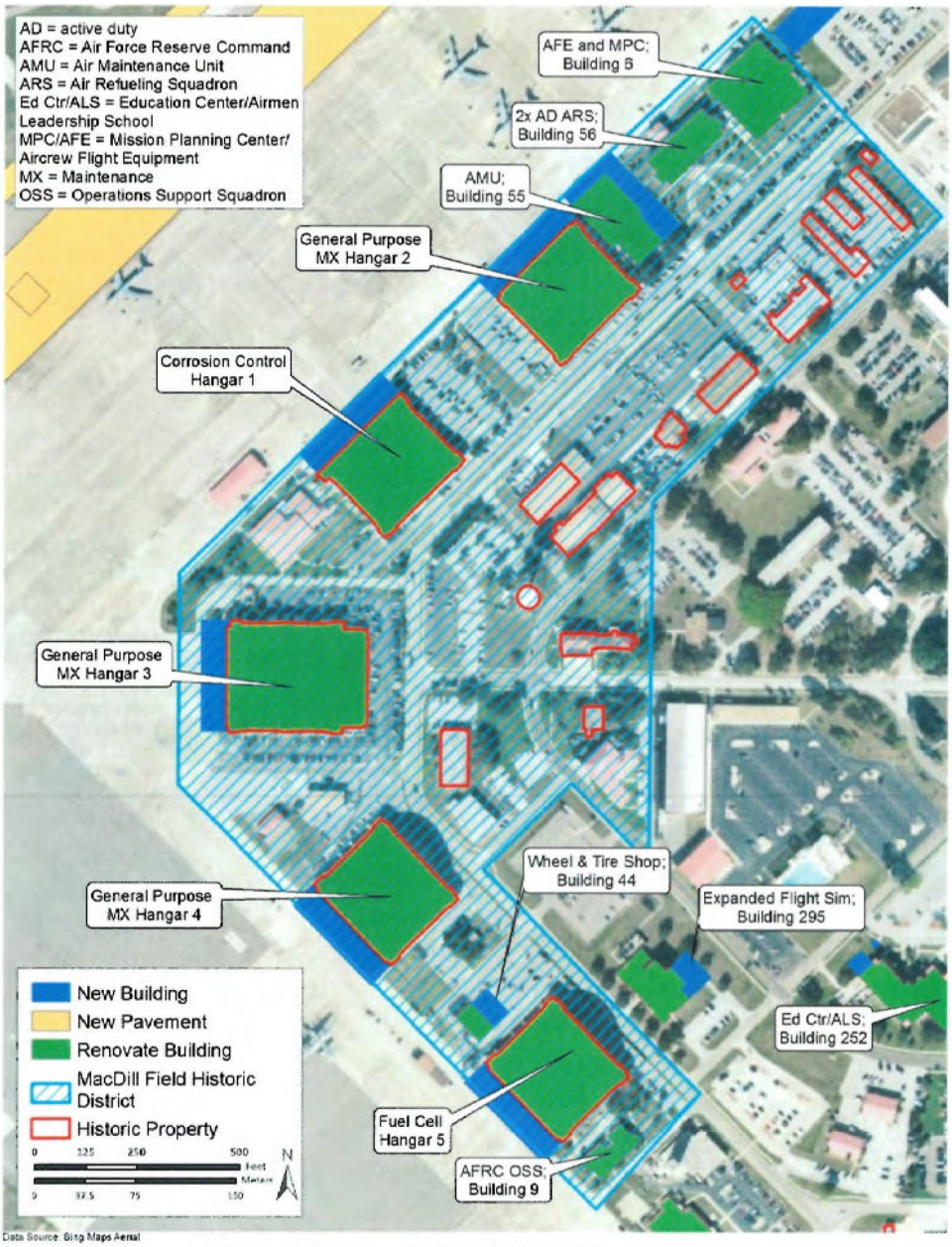


Figure 2. Map Showing MacDill Field Historic District

A.2.2 Section 106 ACHP Consultation Letter from MacDill AFB

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

2 May 2022

Ms. Amy M. Doye
Director
6th Civil Engineer Squadron
7621 Hillsborough Loop Drive
MacDill Air Force Base FL 33621-5407

Ms. Katharine Kerr
Program Analyst
Advisory Council on Historic Preservation
Federal Property Management Section
401 F Street NW, Suite 308
Washington DC 20001-2637

Dear Ms. Kerr

The Department of the Air Force (DAF) wishes to formally initiate consultation with the Advisory Council on Historic Preseration (ACHP) under Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C 306108) for the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft at MacDill Air Force Base (AFB) in Florida. The undertaking would require additions to Hangars 1–5, which are eligible for listing in the National Resgiter of Historic Places (NRHP). Hangars 1–5 are also the most prominent contributing resources in the MacDill Field Historic District, which is also eligible for listing in the NRHP. Therefore, DAF has determined that the undertaking would have an adverse effect on historic properties.

Attached, please find the information required under 36 C.F.R. § 800.11(e)., including an ACHP *Electronic Section 106 Documentation Submittal System Form* (Attachment 1). DAF is notifying the Florida State Historic Preservation Office (SHPO) of the proposed undertaking, along with the following Indian tribes with potential interests in the MacDill AFB area: the Miccosukee Tribe, the Muscogee (Creek) Nation, the Seminole Nation of Oklahoma, and the Seminole Tribe of Florida (see Attachment 2). Additionally, the DAF is inviting the public to comment on the Proposed Action during a 30-day scoping period in accordance with the National Environmental Policy Act (NEPA) (see Attachment 3). Upon receipt of comments, and in coordination with the Florida SHPO and the ACHP, additional consulting parties may be identified for this particular part of the Proposed Action and invited to comment further.

MISSION FOCUSED...VALUED AIRMEN

If you have any questions concerning the proposed undertaking, please contact the MacDill Environmental Element Chief, Andrew Rider, at (813) 828-2718 or andrew.rider.2@us.af.mil.

Sincerely

AMY M. DOYE, P.E., DAF
Director, 6th Civil Engineer Squadron

3 Attachments:
1. *ACHP Electronic Section 106 Documentation Submittal System Form*
2. *NHPA Section 106 Consultation Letters to Florida SHPO and Tribes*
3. *NEPA Stakeholder Letter*

A.2.3 Section 106 Consultation Responses for MacDill AFB

A.2.3.1 Advisory Council on Historic Preservation

May 17, 2022

Mr. Andrew Rider
Chief, Environmental Element
6th Civil Engineer Squadron
Department of the Air Force
7621 Hillsborough Loop Drive
MacDill AFB, FL 33621

Ref: *Main Operating Base #6 Beddown of the KC-46A Tanker Aircraft at MacDill Air Force Base Hillsborough County, Florida*
ACHP Project Number: 018290

Dear Mr. Rider:

On May 2, 2022, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the potential adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act, does not apply to this undertaking. Accordingly, we do not believe our participation in the consultation to resolve adverse effects is needed.

However, if we receive a request for participation from the State Historic Preservation Officer, Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Should the undertaking's circumstances change, consulting parties cannot come to consensus, or you need further advisory assistance to conclude the consultation process, please contact us.

Pursuant to Section 800.6(b)(1)(iv), you will need to file the final Section 106 agreement document (Agreement), developed in consultation with the Florida State Historic Preservation Office and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the Agreement and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require our further assistance, please contact Katharine Kerr at (202) 517-0216 or by e-mail at kkerr@achp.gov

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

and reference the ACHP Project Number above.

Sincerely,

Artisha Thompson
Historic Preservation Technician
Office of Federal Agency Programs

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

CORD BYRD
Secretary of State

Mr. Andrew Lykens
6 CES/CEIC
7621 Hillsborough Loop Drive
MacDill Air Force Base, Florida 33621-5407

June 3, 2022

Re: DHR Project File No.: 2022-3083
Proposed Environmental Impact Statement (EIS) for the Main Operating Base #6 (MOB 6) Beddown of the KC-46A Tanker Aircraft
MacDill Air Force Base, Hillsborough County

Dear Mr. Lykens:

The Florida State Historic Preservation Officer reviewed the referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

Based on the information provided, we note that the proposed undertaking would require alterations to 20 buildings. A number of these buildings are contributing to the MacDill Field Historic District (8HI 11656) which this office has previously determined to meet the criteria for listing in the *National Register*.

This office concur with your preliminary finding that the undertaking will have an adverse effect on historic properties. We are encouraged to see that the Department of the Air Force (DAF) is following the process described in 36 CFR Part 800.6, Resolution of Adverse Effects to complete the Section 106 process. We look forward to continuing consultation with your office develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties.

If you have any questions, please contact Scott Edwards, Historic Preservationist, by electronic mail *scott.edwards@dos.myflorida.com*, or at 850.245.6333 or 800.847.7278.

Sincerely,

Kelly L Chase
For

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street• Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com

Historical Resources

A.2.3.3 FL SHPO Follow-up Letter

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

CORD BYRD
Secretary of State

Mr. Andrew Lykens
6 CES/CEIC
7621 Hillsborough Loop Drive
MacDill Air Force Base, Florida 33621-5407

August 19, 2022

Re: DHR Project File No.: 2022-3083-B
Continuing Consultation for Hangars 1, 4, 5, and Building 24
Proposed Environmental Impact Statement (EIS) for the Main Operating Base #6 (MOB 6)
Beddown of the KC-46A Tanker Aircraft
MacDill Air Force Base, Hillsborough County

Dear Mr. Lykens:

The Florida State Historic Preservation Officer reviewed the referenced projects in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

Hangars 1, 4, and 5
We note that the first phase of the KC-46A beddown will include modifications to hangars 1 (8HI5392), 4 (8HI5391), and 5 (8HI5391) beginning in Fiscal Year 2024. Hangars 2 and 3 will be modified beginning in Fiscal Year 2026. As previously stated, Hangar No. 1, 4, and 5 are contributing resources to the MacDill Field Historic District (8HI1656), which this office has previously determined to meet the criteria for listing in the *National Register*.

The overall design of the new additions appear to be compatible with the historic materials, features, size, scale and proportion, and massing of the historic hangars. However, in keeping with Standard 9 of the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, we recommend that the exterior finishes be differentiated from the historic finishes. This would include the concrete wainscot and metal corrugated wall panels.

In addition, our office request that the 3-D renderings for each hangar be sent to this office to serve as additional mitigation for the adverse effects. We look forward to receiving the 35% design drawings when they become available.

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street• Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com

Historical Resources

Mr. Lykens
DHR Project No.: 2022-3083-B
August 19, 2022
Page 2

Building 24
Based on the information provided, it is the opinion of this office that Building 24 does not appear to meet the criteria for listing in the *National Register*. Therefore, the proposed demolition will have no effect on historic properties.

We would like to compliment MacDill Air Force Base on protecting and preserving Florida's historic properties.

If you have any questions, please contact Scott Edwards, Historic Preservationist, by electronic mail *scott.edwards@dos.myflorida.com*, or at 850.245.6333 or 800.847.7278.

Sincerely,

Kelly L Chase
For

Alissa Slade Lotane
Director, Division of Historical Resources
and State Historic Preservation Officer

A.2.4 Memorandum of Agreement between DAF and Florida SHPO

MEMORANDUM OF AGREEMENT
BETWEEN
MACDILL AIR FORCE BASE
AND
THE FLORIDA STATE
HISTORIC PRESERVATION OFFICER
REGARDING
MODIFICATION TO HANGARS 1 THROUGH 5 FOR MAIN OPERATING BASE 6
BEDDOWN OF KC-46A TANKER AIRCRAFT
MACDILL AIR FORCE BASE, FLORIDA
FB4814-18XXX-106

WHEREAS, The Department of the Air Force plans to carry out the Main Operating Base #6 beddown of KC-46A tanker aircraft pursuant to the National Environmental Policy Act and if accomplished at MacDill Air Force Base would require modification of Hangar 1, Hangar 2, Hangar 3, Hangar 4 and Hangar 5 (undertaking) to safely accommodate the new airframe; and

WHEREAS, The undertaking consists of construction of a 36 foot addition on the flight line side of each hangar which will rise approximately 11 feet above the height of the existing hangar and will be compatible with the historic materials, features, size, scale and proportion, and massing of the historic hangar; and

WHEREAS, MacDill AFB has defined the undertaking's area of potential effects (APE) to include the MacDill Field Historic District; and

WHEREAS, Facility surveys have determined Hangar 1 (8HI5388; HABS FL-384), Hangar 2 (8HI5389; HABS FL-384), Hangar 3 (8HI5390; HABS FL-384), Hangar 4 (8HI5391; HABS FL-384), and Hangar 5 (8HI5392; HABS FL-384) are individually eligible for the National Register of Historic Places as central features of the MacDill Field Historic District, and obtained concurrence with these determinations from the Florida State Historic Preservation Office through previous consultations; and

WHEREAS, MacDill AFB has determined that the undertaking will have an adverse effect on historic properties, which are eligible for listing in the National Register of Historic Places and has consulted with the State Historic Preservation Office pursuant to 36 CFR. Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f); and

WHEREAS, MacDill AFB has consulted with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, Seminole Nation of Oklahoma, and the Muscogee (Creek) Nation regarding the effects of the undertaking on historic properties; and

WHEREAS, MacDill AFB has consulted with the City of Tampa, Tampa Historical Society Association, Tampa Bay History Center, St. Petersburg Historical Society, Military Officers

Association of America, Hillsborough County Planning and Growth Management, Tampa Architectural Review Commission, Florida Trust for Historic Preservation, and Tampa Preservation Inc. regarding the effects of the undertaking on historic properties and has invited them to sign this Memorandum of Agreement as concurring parties; and

WHEREAS, in accordance with 36 C.F.R. § 800.6(a)(1), MacDill AFB has notified the Advisory Council on Historic Properties of its adverse effect determination with specified documentation and the Advisory Council on Historic Preservation has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

NOW, THEREFORE, MacDill AFB and the State Historic Preservation Office agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

MacDill AFB shall ensure that the following measures are carried out:

I. MITIGATION

MacDill AFB has accomplished Historic American Building Survey documentation for the World War II era facilities that compose the MacDill Field Historic District. MacDill will maintain these records and provide copies to the Florida State Historic Preservation Office.

MacDill AFB will provide electronic copies of updated photographs of Hangars 1 through 5 to the Florida State Historic Preservation Office. Photographs will comply with the Florida Master Site File Photographic Documentation Policy.

MacDill AFB will provide electronic copies of the 3-D LiDAR laser scans created for each hangar during project design to provide up-to-date detailed imagery of the interior and exterior of the hangars.

II. DURATION

This Memorandum of Agreement shall be null and void if its terms are not carried out within five (5) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

III. DISPUTE RESOLUTION

Should any signatory or concurring party to this Memorandum of Agreement object at any time to any action proposed or the manner in which the terms of this Memorandum of Agreement are implemented, MacDill AFB shall consult with such party to resolve the objection. If MacDill AFB determines that such objection cannot be resolved, MacDill AFB will:

A. Forward all documentation relevant to the dispute, including MacDill AFB's proposed resolution, to the Advisory Council on Historic Preservation. The Advisory Council on Historic Preservation shall provide MacDill AFB with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, MacDill AFB shall prepare written response that takes into account any timely advice or comments regarding the dispute from the Advisory Council on Historic Preservation, signatories and concurring parties, and provide them with a copy of the written responses. MacDill AFB will then proceed according to its final decision.

B. If the Advisory Council on Historic Preservation does not provide advice regarding the dispute within the thirty (30) day time period, MacDill AFB may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, MacDill AFB shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the Memorandum of Agreement and provide them and the Advisory Council on Historic Preservation with a copy of the written response.

C. MacDill AFB's responsibility to carry out all other actions subject to the terms of this Memorandum of Agreement that are not the subject of the dispute remain unchanged.

IV. AMENDMENTS

This Memorandum of Agreement may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the Advisory Council on Historic Preservation.

V. TERMINATION

If any signatory of this Memorandum of Agreement determines the terms of this Memorandum of Agreement will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation IV, above. If within ninety (90) days an amendment cannot be reached, any signatory may terminate the Memorandum of Agreement upon written notification to the other signatories.

VI. COPIES

Three (3) copies of this Memorandum of Agreement will be provided, one to each signatory and concurring party. One (1) copy will be transmitted to the Advisory Council on Historic Preservation for inclusion in their files.

VII. COMPLIANCE

The parties agree that execution of the Memorandum of Agreement satisfies the Air Force's consultation requirement under National Historic Preservation Act Section 106 (see 36 CFR 800.6(b)(1)(iv)). Furthermore, it is agreed that accomplishment of the mitigation action set

forth in the Memorandum of Agreement are sufficient to resolve the adverse effect to historic resources associated with the modification of Hangars 1 through 5 as described for the Undertaking.

Execution of this Memorandum of Agreement by the Department of the Air Force and the Florida State Historic Preservation Office and implementation of its terms evidence that the Department of the Air Force has taken into account the effects of the project on historic properties and afforded the Advisory Council on Historic Preservation an opportunity to comment.

MACDILL AIR FORCE BASE

By: _____ Date: 22 JUNE 2023
ADAM D. BINGHAM, Colonel, USAF
Commander, 6th Air Refueling Wing

FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, STATE HISTORIC PRESERVATION OFFICE

By: _____ Date: 5/31/23
ALISSA SLADE LOTANE, Ph.D.
State Historic Preservation Officer
State of Florida

4

A.2.5 Section 106 ACHP Consultation Signed MOA Delivery Letter from MacDill AFB

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

26-Jun-2023

MEMORANDUM FOR ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 PENNSYLVANIA AVENUE NW, SUITE 803
OLD POST OFFICE BUILDING
WASHINGTON, D.C. 20004

FROM: 6 CES/CEIE
7621 Hillsborough Loop Drive
MacDill AFB FL 33621-5207

SUBJECT: Memorandum of Agreement for Modification of Hangars 1 Through 5 to Support KC-46A Aircraft at MacDill Air Force Base (ACHP Project Number: 018290)

1. The Department of the Air Force (DAF) has coordinated with the Florida State Historic Preservation Office (SHPO) regarding modification of Hangars 1 through 5 at MacDill Air Force Base (AFB). The proposed modifications involve the construction of an addition to each hangar on the flighline side of the building. The addition would create sufficient space for the new KC-46A aircraft to be stored safely in the hangars during maintenance and repair work. The proposed additions will be compatible with the historic materials, features, size, scale and proportion, and massing of the historic hangars. The DAF determined that the proposed hangar modifications would result in an adverse effect to historic resources. MacDill AFB and the Florida SHPO documented their agreement on the resolution of adverse effect through completion of a Memorandum of Agreement (MOA) (attached). In accordance with procedures in 36 CFR 800, this MOA between MacDill AFB and the Florida SHPO is being forwarded to your office to complete the coordination process.

2. If you have any questions about the attached MOA, please contact Mr. Jason Kirkpatrick at (813) 828-0459.

RIDER.ANDREW.WARRICK.1153194676
Digitally signed by RIDER.ANDREW.WARRICK.1153194676
Date: 2023.06.26 14:43:29 -04'00'

ANDREW W. RIDER, GS-12, DAF
Chief, Environmental Element

2 Attachments:
1. MOA for Modifications to Hangars 1 Through 5 at MacDill AFB
2. Florida SHPO Correspondence

CHARGE THE STORM...LET'S GO!

A.2.1 ACHP Letter Acknowledging Receipt of the MOA from the Florida SHPO

July 27, 2023

Mr. Andrew Rider
Chief, Environmental Element
6th Civil Engineer Squadron
Department of the Air Force
7621 Hillsborough Loop Drive
MacDill AFB, FL 33621

Ref: *Main Operating Base #6 Beddown of the KC-46A Tanker Aircraft*
MacDill Air Force Base, Hillsborough County, Florida
ACHP Project Number: 018290

Dear Mr. Rider:

On July 18, 2023, the Advisory Council on Historic Preservation (ACHP) received a copy of the executed Section 106 agreement document (Agreement) for the referenced undertaking. In accordance with 36 CFR § 800.6(b)(1)(iv), the ACHP acknowledges receipt of the Agreement. The filing of the Agreement and implementation of its terms fulfills the requirements of Section 106 of the National Historic Preservation Act and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800).

We appreciate receiving a copy of this Agreement for our records. Please ensure that all consulting parties are provided a copy of the executed Agreement in accordance with 36 CFR § 800.6(c)(9). If you have any questions or require additional assistance, please contact Katharine Kerr at (202) 517-0216 or by e-mail at kkerr@achp.gov and reference the ACHP Project Number above.

Sincerely,

Artisha Thompson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street NW, Suite 308 ▯ Washington, DC 20001-2637
Phone: 202-517-0200 ▯ Fax: 202-517-6381 ▯ achp@achp.gov ▯ www.achp.gov

A.2.2 Section 106 SHPO Consultation Initiation Letter from Fairchild AFB

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

Jeffrey R. Johnson
Deputy Director
92d Mission Support Group
5 West Bong St
Fairchild AFB WA 99011

8 April 2022

Dr. Allyson Brooks
State Historic Preservation Officer/Director
Department of Archaeology and Historic Preservation
P.O. Box 48343
Olympia, WA 98504-8343

Dear Dr. Brooks,

The Department of the Air Force (DAF) intends to prepare an Environmental Impact Statement (EIS) to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. Fairchild Air Force Base (AFB) in Washington State and MacDill AFB in Florida and are proposed alternatives for the MOB 6 mission. As a federal undertaking, the KC-46A MOB 6 beddown is subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C 306108) and its implementing regulations in the Code of Federal Regulations, Title 36, Part 800 (36 CFR Part 800). This letter initiates our consultation under Section 106 of the NHPA for the proposed undertaking at Fairchild AFB and requests your input. A Notice of Intent for this EIS is being published in the Federal Register per 32 Code of Federal Regulations (CFR) 989.17.

The EIS will assess the potential environmental consequences of the proposed KC-46A MOB 6 Beddown at Fairchild AFB and MacDill AFB, as well as addressing the No Action alternative. The DAF proposes to beddown the MOB 6 mission at one of the two bases being analyzed. MacDill AFB has been identified as the Preferred Alternative. Consultation under Section 106 of the NHPA will be incorporated into the preparation of the Draft EIS under the National Enivronmental Policy Act (NEPA). Additional analysis will be provided in the Draft EIS, which is anticipated in early 2023. The Final EIS and a decision on the Proposed Action are expected in late 2023 to early 2024. Additional information about the MOB 6 Proposed Action is provided on the project website at www.kc46amob6eis.com.

The basing action would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission at the selected alternative. Renovation of existing facilities and construction of new facilities would be required at the selected installation to support the KC-46A. Facility requirements would vary depending on the installation. All flight operations would take place within existing airspace of the selected alternative; additions to or alterations of airspace are not being considered. DAF intends to

submit a report to your office in Summer 2022 detailing the proposed actions at Fairchild AFB, an inventory of the cultural resources within the Area of Potential Effects (APE) for the undertaking, and an assessment of project effects on any historic properties in the APE. Based on preliminary site assessments, an APE for the proposed Fairchild AFB alternative has been identified. The proposed APE includes the following:

1) existing buildings and structures that would require alterations to accommodate the KC-46 aircraft and mission,

2) the locations of proposed new buildings and structures necessary to support the KC-46 mission, and

3) a 0.25-mile buffer around the buildings and structures mentioned in items 1 and 2 above to evaluate potential effects of the proposed alternative on those buildings and structures and any historic properties that would have a view of the proposed construction activities. A map of the APE is included as an Attachment. The DAF is requesting your review and concurrence on the APE at this time.

The DAF is also initiating consultation under Section 106 with four Native American tribes with cultural affiliation to the Fairchild AFB area: the Coeur d'Alene Tribe, the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians. The Air Force has sent scoping letters to these four tribes informing them of the DAF's intent to prepare the EIS and the opening of the public scoping period. Due to public health concerns related to COVID-19, the DAF will not hold face-to-face public scoping meetings. Public scoping is being accomplished remotely, in accordance with the 2020 version of 40 CFR Part 1506.6, via the project website at www.kc46amob6eis.com. The website provides posters, a presentation, an informational brochure, downloadable comment forms, and a capability for the public to provide public scoping comments online.

Comments or questions regarding this project may be directed to Ms. Helen Kellogg via email at Helen.Kellogg.1@us.af.mil including KC-46A MOB 6 EIS in the subject line or via postal mail to: Ms. Helen Kellogg, AFCEC/CZN, Attn: KC-46A MOB 6 EIS, 2261 Hughes Ave, Suite 155, JBSA Lackland, TX 78236-9853.

Thank you in advance for your assistance in this effort. We look forward to consultation with your office for this undertaking.

Sincerely,

JOHNSON.JEFFREY.R.1044990268 Digitally signed by JOHNSON.JEFFREY.R.1044990268 Date: 2022.04.08 12:21:20 -07'00'

JEFFREY R. JOHNSON, GS-14, DAFC
Installation Tribal Liaison Officer

Attachment:
Figure 1. Map Showing Area of Potential Effects (APE)

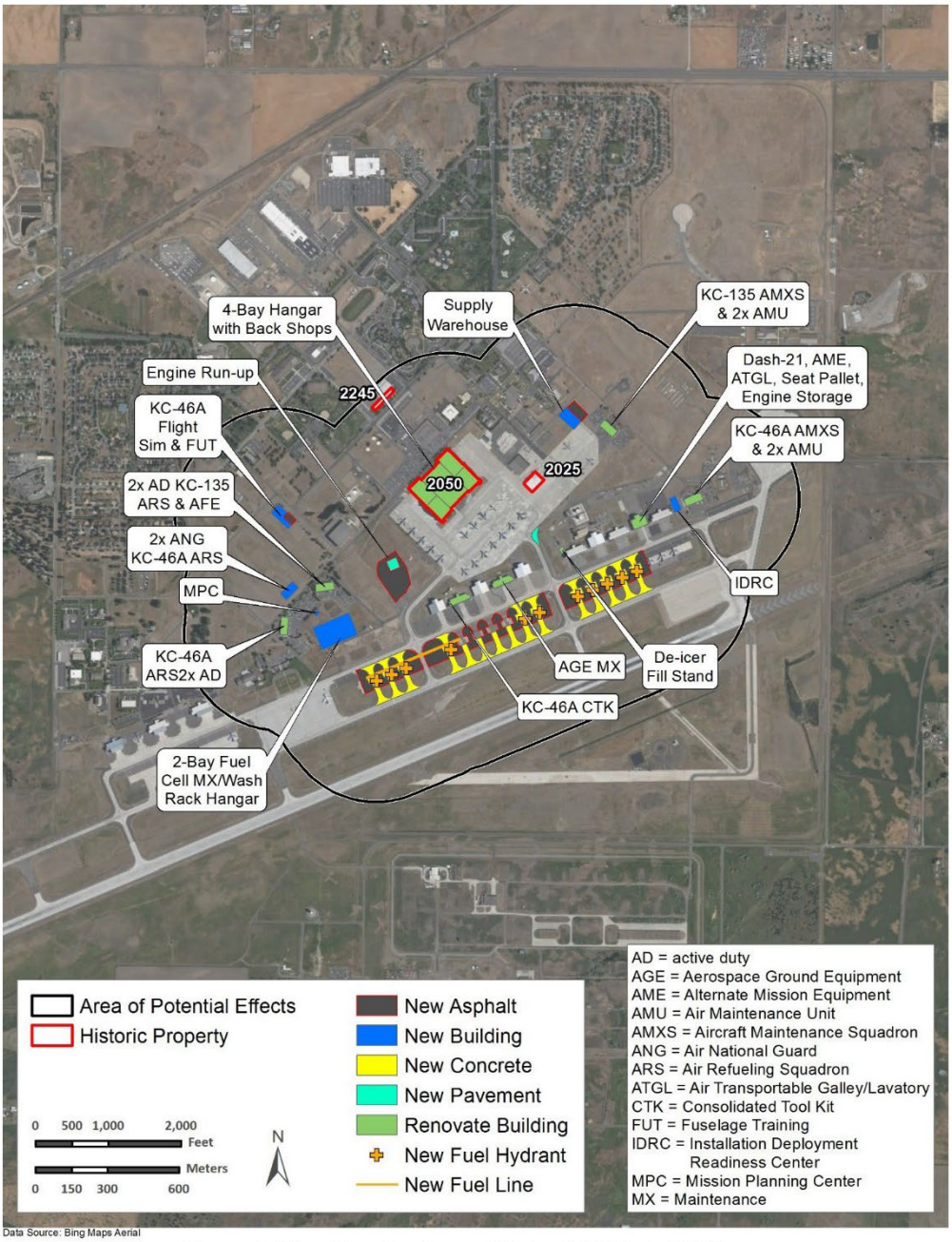


Figure 1. Map Showing Area of Potential Effects (APE)

A.2.3 Section 106 SHPO Consultation Follow-Up letter from Fairchild AFB

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

April 26, 2023

Mr. Tyler J. Smith
Deputy Base Civil Engineer
92d Civil Engineer Squadron
100 W. Ent Street
Fairchild AFB WA 99011

Dr. Allyson Brooks
State Historic Preservation Officer/Director
Department of Archaeology and Historic Preservation
P. O. Box 48343
Olympia WA 98504-8343

Dear Dr. Brooks,

The U.S. Department of the Air Force (DAF) has prepared an Environmental Impact Statement (EIS) under the national Environmental Policy Act to assess the potential environmental consequences associated with the Main Operating Base #6 (MOB 6) beddown of the KC-46A tanker aircraft. The mission would involve the beddown of 24 KC-46A at either MacDill Air Force Base AFB (Preferred Alternative) or Fairchild AFB (Reasonable Alternative). The undertaking would require infrastructure, facilities, airfield operations, training activities, and personnel to support the KC-46A mission at the selected installation. A No Action alternative, where the KC46A MOB 6 beddown would not be located at either installation, has also been analyzed. The Drat EIS is available for review on the project website at wwe.kc6amob6eis.com. An electronic copy of the Draft EIS is also enclosed with this memo.

As a federal undertaking, the KC-46A MOB 6 beddown is subject to the requirements of Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800. Pursuant to 36 CFR 800.3, Section 106 Consultation for the undertaking at Fairchild AFB was initiated by a previous letter sent in April 2022. This current letter and attachments provide further information regarding the DAF's plans for the Proposed Action at Fairchild AFB and Section 106 consultations. The Area of Potential Effects (APE) for the undertaking at Fairchild AFB is defined in Attachment 1.

Fairchild AFB identified 3 historic properties in the APE for the potential undertaking, buildings 2050, 2245, and 2025, each of which are individually eligible for listing in the National Register of Historic Places (NRHP). Should Fairchild AFB become the Preferred Alternative, renovation of building 2050 would be necessary to accommodate the KC-46A aircraft and we do anticipate these renovations would result in adverse effects. If Fairchild AFB becomes the

Preferred Alternative, we will contact SHPO to initiate additional consultations regarding any adverse effects and development of a Memorandum of Agreement to address mitigation.

The DAF is consulting with four Native American tribes with cultural affiliation to the Fairchild AFB area: the Coeur d'Alene Tribe, the Colville Confederated Tribes of the Colville Reservation, the Kalispel Tribe, and the Spokane Tribe of the Spokane Reservation. The DAF sent scoping letters to these four tribes on April 14, 2022, informing them of DAF's intent to prepare the EIS and the opening of the public scoping period and initiating Section 106 and government-to-government consultation. The letters provided and overview of the proposed beddown and requested scoping comments. Additional letters were sent to the tribes on February 10, 2023, alerting the tribes to the availability of the Draft EIS.

We request your comment and/or concurrence on the finding of Adverse Effects to Building 2050 and the plan to consult, if needed, should Fairchild AFB become the Preferred Alternative. In an effort to enable the NEPA process to continue in a timely manner, we respectfully request your reply within 30 days of receipt of this letter. If we do not receive your comments and/or concurrence within 30 days, we will assume concurrence and/or approval of the plan for Section 106 consultation related to the Proposed Action at Fairchild AFB.

For any questions or concerns, please do not hesitate to contact me at 509-247-2291, or email at, tyler.smith.102@us.af.mil,

Sincerely,

TYLER J. SMITH, P. E., GS-14, DAF
Deputy Base Civil Engineer

2 Attachments:
1. Figure 1, Map Showing Area of Potential Effects (APE)
2. DVD, KC-46A MOB6 Draft EIS

Attachment 1:

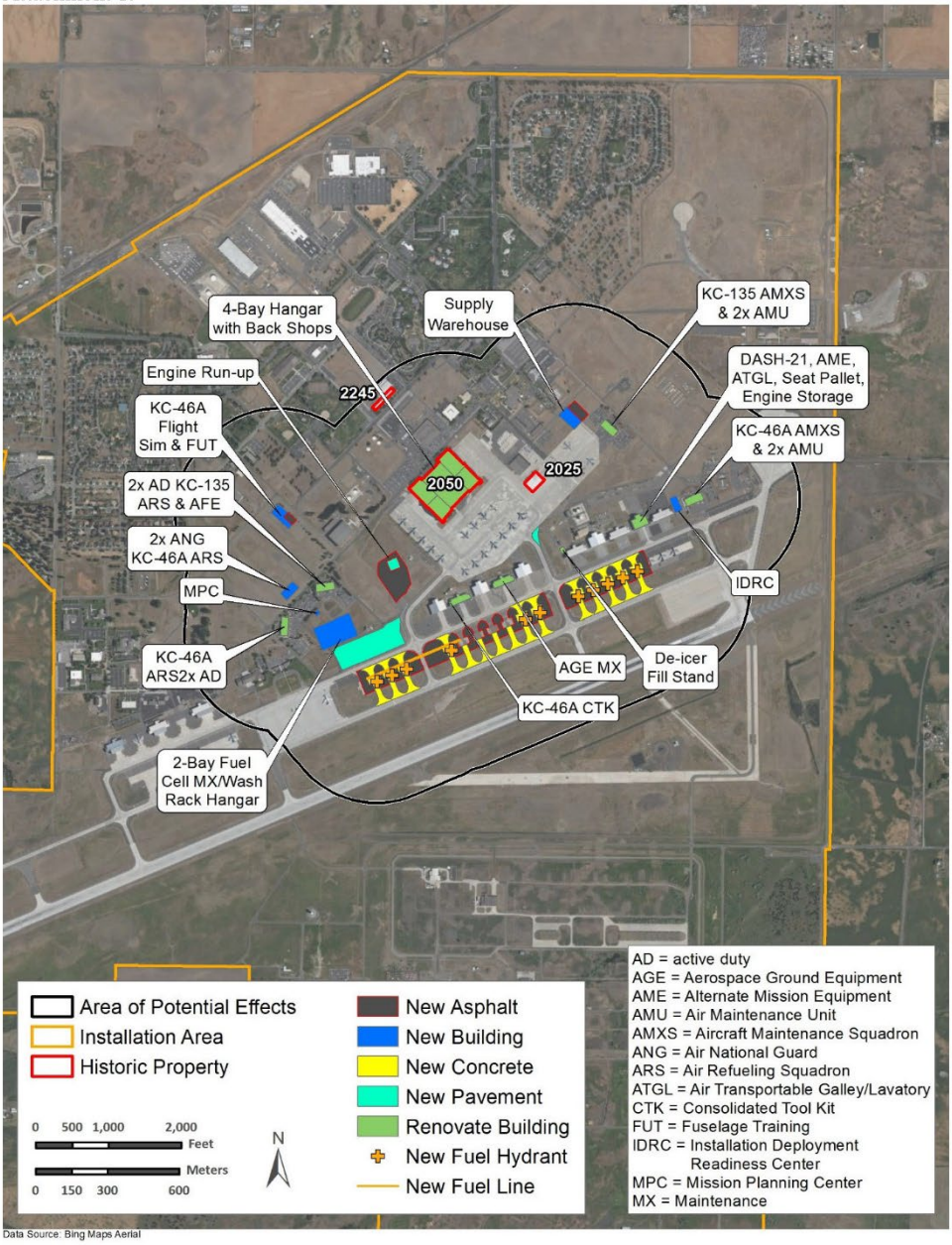


Figure 1. Map Showing Area of Potential Effects (APE)

3

A.2.4 Section 106 Consultation Response for Fairchild AFB

A.2.4.1 WA SHPO

dahp
protect the past, shape the future

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

June 29, 2023

Emily Rebert
Cultural Resources Program Manager
US Air Force - Fairchild AFB

In future correspondence please refer to:
Project Tracking Code: 2023-06-03865
Property: KC-46 draft Environmental Impact Statement
Re: APE Concur

Dear Emily Rebert:

Thank you for contacting the Department of Archaeology and Historic Preservation (DAHP) regarding the above referenced proposal. This action has been reviewed on behalf of the State Historic Preservation Office (SHPO) under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. Our review is based upon documentation provided in your submittal.

We concur with your definition of the APE. We look forward to reviewing the finalized Environmental Impact Statement (EIS) and updated Historic Property Inventory Forms (HPIFs) for any resources older than 45 years old that have not been assessed in the last ten years.

Also, we appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult for this project. Our comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106.

Thank you for the opportunity to review and comment. Should you have any questions, please feel free to contact me.

Sincerely,

Maddie Levesque
Architectural Historian
(360) 819-7203
Maddie.Levesque@dahp.wa.gov

State of Washington • **Department of Archaeology & Historic Preservation**
P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065
www.dahp.wa.gov

A.3 Endangered Species Act (ESA) Section 7 Consultation

A.3.1 ESA Section 7 Consultation Letter from MacDill AFB

DEPARTMENT OF THE AIR FORCE
6TH AIR REFUELING WING (AMC)
MACDILL AIR FORCE BASE, FLORIDA

22 November 2022

MEMORANDUM FOR MR. ROBERT CAREY
MANAGER, DIVISION OF ENVIRONMENTAL REVIEW
U.S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FL 32257-7517

FROM: 6 CES/CEIE
7621 Hillsborough Loop Drive
MacDill AFB FL 33621-5207

SUBJECT: Request for Initiation of Consultation for the KC-46A Main Operating Base #6 Beddown at MacDill Air Force Base (AFB), Florida.

1. The Department of the Air Force (DAF) requests initiation of formal consultation under Section 7(a)(2) of the Endangered Species Act on the effects to 26 species resulting from the proposed to recapitalize aging tanker aircraft (KC-135 Stratotanker) currently used by DAF with the KC-46A model. The Proposed Action at the MacDill AFB alternative requires minimal new construction because existing facilities would only require minor to moderate demolition or additions and existing utility infrastructure would continue to support new facilities in the proposed construction area; there is no in water work. Additionally, there would be an approximately 1 percent increase in installation personnel and dependents and an anticipated ~15 percent increase in the annual refueling mission operations at MacDill AFB. Operations would occur within existing airspace and training areas currently utilized by KC-135 aircraft that operate from MacDill AFB. The final biological assessment evaluating effects of the proposed KC-46A MOB 6 Beddown at MacDill AFB on listed species is attached for your review. The conclusions of the biological assessment are presented in the following paragraphs.

a. ***May affect and is likely to adversely affect*** 2 species, the rufa red knot (*Calidris canutus rufa*) and the wood stork (*Mycteria americana*).

b. ***May affect but is not likely to adversely affect*** 11 species; American alligator (*Alligator mississippiensis*), Audubon's crested caracara (*Polyborus plancus audubonii*), eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), eastern indigo snake (*Drymarchon couperi*), Florida scrub-jay (*Aphelocoma coerulescens*), gopher tortoise (*Gopherus polyphemus*)*, monarch butterfly (*Danaus plexippus*)*, piping plover (*Charadrius melodus*), red-cockaded woodpecker (*Leuconotopicus borealis*), tricolored bat (*Perimyotis subflavus*)*, and West Indian manatee (*Trichechus manatus*).

c. ***No effect*** on 13 species; American crocodile (*Crocodylus acutus*), Brooksville bellflower (*Campanula robinsiae*), Florida bonamia (*Bonamia grandiflora*), Florida golden aster (*Chrysopsis floridana*), giant manta ray (*Manta birostris*), green sea turtle (*Chelonia mydas*), gulf sturgeon (*Acipenser Oxyrinchus desotoi*), hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*),

CHARGE THE STORM...LET'S GO!

loggerhead sea turtle (*Caretta caretta*), pygmy fringe-tree (*Chionanthus pygmaeus*), and smalltooth sawfish (*Pristis pentinata*).

d. The DAF recognizes gopher tortoise (*Gopherus polyphemus*), monarch butterfly (*Danaus plexippus*), and tricolored bat (*Perimyotis subflavus*) do not require formal consultation; however, given either the listing status at the start of biological assessment or the potential for the species status to change throughout the course of the project, the DAF decided to include these species in analysis.

2. We value your support in our efforts to continue carrying out the DAF's responsibility regarding the management of its natural resources, and we seek your concurrence on our effects determinations. The primary points of contact for the biological assessment are myself and Mr. Andrew Lykens and can be reached at (813) 828-2718 or andrew.rider.2@us.af.mil and (813) 828-0460 or andrew.lykens.ctr@us.af.mil, respectively.

RIDER.ANDREW.WARRICK.1153194676
Digitally signed by RIDER.ANDREW.WARRICK.1153194676
Date: 2022.11.22 06:18:17 -05'00'

ANDREW W. RIDER, GS-12, DAF
Chief, Environmental Element

Attachment:
Biological Assessment

A.3.2 ESA Section 7 Consultation Responses for MacDill AFB

A.3.2.1 USFWS

Received correspondence includes from the USFWS included a brief email (29 November 2022) confirming receipt of MacDill AFB's Biological Assessment for the project, and provision of the USFWS's Biological Opinion on the project (issued on 7 April 2023). The Biological Opinion contains USFWS concurrence with DAF's effects determinations and conservation measures for the rufa red knot and wood stork. Due to the volume of information in both the MacDill AFB BA (650 pages, including all attachments) and the USFWS BO (41 pages), both documents are retained on file in the EIS Administrative Record. The Biological Opinion can be made available upon request.

-----Original Message-----
From: Cornwell, Robert M <robert_cornwell@fws.gov> On Behalf Of FLESRegs, FW4
Sent: Tuesday, November 29, 2022 9:21 AM
To: LYKENS, ANDREW S CTR USAF AMC 6 CES/CEIE <andrew.lykens.ctr@us.af.mil>; RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil>; KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE <jason.kirkpatrick.2.ctr@us.af.mil>
Cc: Borchert, Sinead M <sinead_borchert@fws.gov>
Subject: [Non-DoD Source] Project (2022-0052141 (KC-46A MOB6 Beddown - MacDill AFB - Hillsborough))

Project documents have been uploaded.
Thank you for contacting the U.S. Fish and Wildlife Service, Florida Ecological Services Office.
Please do not reply to this automated response.
This message simply confirms that we received your request for consultation.
The project has been entered into our system and has been assigned the ECOSphere project code number: 2022-0052141

Please include your ECOSphere project code number, included in the top portion of this email, in all subsequent correspondence regarding this project.

A staff biologist will contact you directly should we require additional information. If you have not heard from us within 60 days, please submit a status request via e-mail to FW4FLESRegs@fws.gov <mailto:FW4FLESRegs@fws.gov> .

Thank you.

-----Original Message-----

From: Borchert, Sinead M <sinead_borchert@fws.gov>
Sent: Thursday, April 6, 2023 4:32 PM
To: RIDER, ANDREW W CIV USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil>
Cc: KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE <jason.kirkpatrick.2.ctr@us.af.mil>
Subject: [Non-DoD Source] Biological Opinion for the KC-46A Main Operating Base #6 Beddown

Mr. Rider,

The U.S. Fish and Wildlife Service (Service) has reviewed the KC-46A Main Operating Base #6 Beddown (the Action) proposed by the Department of the Air Force (FWS Log # 2022-0052141). After reviewing the current status of the species, the environmental baseline of the Action Area, and the effects of the Action, it is the Service's biological opinion that the Action is not likely to jeopardize the continued existence of the rufa red knot (*Calidris canutus rufa*) or the wood stork (*Mycteria americana*).

We evaluated the effects of the Action on the rufa red knot and wood stork and determined that incidental take of these species is reasonably certain to occur. The attached BO includes an Incidental Take Statement (ITS) for take in the form of harm to one red knot and one wood stork and annual take in the form of harass up to 539 wood storks.

Formal consultation for the Action considered in this BO is now concluded. In instances where the amount or extent of incidental take is exceeded, the DAF is required to immediately request a reinitiation of formal consultation.

If you have any questions regarding this response, please contact me by phone or e-mail.

Sincerely,
Sinead

Sinéad Borchert
Fish & Wildlife Biologist
USFWS Liaison to MacDill AFB
Florida Air Force Partnership
U.S. Fish and Wildlife Service
(850) 771-8917 work cell
(813) 828-0286 office
alternate e-mail: sinead.borchert@us.af.mil

A.3.2.1 NMFS

From: nmfs ser esa consultations - NOAA Service Account <nmfs.ser.esa.consultations@noaa.gov>
Sent: Tuesday, January 17, 2023 4:29 PM
To: RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil>
Cc: Karla Reece - NOAA Federal <karla.reece@noaa.gov>
Subject: [URL Verdict: Neutral][Non-DoD Source] Re: MacDill AFB KC-46A MOB 6 EIS Sec 7 - NMFS Letter

Hello,

Because you determined No Effect for all species, Section 7 consultation is not necessary. NMFS does not concur with or review "No Effect" determinations under Section 7 of the Endangered Species Act. You can find effect determination guidance for Section 7 of the ESA on our website here: Making a "No Effect" Determination. **Based on this, your consultation request has been withdrawn**.

Also, you may find a host of information about the ESA Section 7 Process on our Section 7 Guidance webpage. It would be prudent for you to document to your project files your rationale behind your No Effect determination. That way should you ever be questioned about your ESA responsibilities you will be able to share the rationale behind your determinations.

If you have any questions, please let me know.
Thank you,
Karla

I am 100% Teleworking due to Covid-19. Please email any questions or concerns for the most efficient response.

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Karla Reece- *(she/her)*
Section 7 Team Lead
Interagency Cooperation Branch
Protected Resources
NOAA Fisheries | U.S. Department of Commerce
Southeast Regional Office
National Marine Fisheries Service
email: karla.reece@noaa.gov

Section 7 Guidance Webpage - UPDATED URL
Updated Construction Conditions, (May 2021)

NOAA FISHERIES

On Tue, Nov 29, 2022 at 8:39 AM nmfs ser esa consultations - NOAA Service Account <nmfs.ser.esa.consultations@noaa.gov> wrote:

National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division has received your request for Endangered Species Act Section 7 consultation. Your consultation request will be logged in and assigned to a Consultation Biologist in the order it was received. Consultation requests are assigned to the next available Consultation Biologist as workload allows. Once it is assigned you will receive an email from the Consulting Biologist notifying you of their contact information.

Please note: Because of the large number of Requests for Additional Information we have to send due to incomplete consultation requests, we are starting to return consultation requests that aren't complete or that have conflicting information.

The project has been assigned a tracking number in our NMFS Environmental Consultation Organizer (ECO), SERO-2022-03003. Please refer to the ECO tracking number if you should have any future inquiries regarding this project. ECO does not have current project status at this time.

If you have any questions about the status of your request, please reply to this email.

On Tue, Nov 29, 2022 at 8:05 AM RIDER, ANDREW W GS-12 USAF AMC 6 CES/CEIE <andrew.rider.2@us.af.mil> wrote:

Good Morning,

MacDill AFB is pleased to provide you the attached request for consultation related to the KC-46A Main Operating Base (MOB) #6 project.

We seek input from NOAA-NMFS on the proposed work and our determination of effect, and/or recommended best management practices that could be utilized to improve listed species protection.

Please let us know if you have any questions about the proposed project.
Thanks

V/R
Andy Rider, PE, GS-12, DAF
Chief, Environmental Element
6 CES/CEIE
MacDill AFB, FL
DSN: 968-2718
(813) 828-2718
Cell: 352-536-5634

A.3.3 ESA Section 7 Consultation Letter from Fairchild AFB

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 92D AIR REFUELING WING (AMC)
FAIRCHILD AIR FORCE BASE WASHINGTON

13 December 2022

Lieutenant Colonel D. Jason Murley
Commander
92d Civil Engineer Squadron
100 W. Ent Street
Fairchild AFB WA 99011

Mr. Brad Thompson
State Supervisor
U.S. Fish and Wildlife Service
510 Desmond Drive, Suite 102
Lacey WA 98503

Dear Mr. Thompson:

The Department of the Air Force (DAF) is preparing an Environmental Impact Statement (EIS) to evaluate the potential environmental impacts associated with recapitalizing aging tanker aircraft (KC-135 Stratotanker) currently used by DAF with the KC-46A model to better address future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 Stratotanker (the Proposed Action) at Fairchild AFB in Washington State (reasonable alternative) or MacDill Air Force Base (AFB) in Florida (preferred alternative).

Pursuant to Section 7 of the Endangered Species Act of 1973 (16 USC 1531 to 1544), the DAF has determined the KC-46A Main Operating Base (MOB) 6 Beddown EIS at Fairchild AFB *will have no effect* on four federally listed species (atch 1). The Proposed Action would replace 24 KC-135 Stratotanker with 24 KC-46A aircraft and would require facilities and infrastructure development to establish one KC-46A active duty Continental United States location as part of the KC-46A MOB 6 beddown. Minimal new construction would be required for the Fairchild AFB Reasonable Alternative because redevelopment would occur within the developed cantonment (atch 2).

A copy of the Draft EIS addressing the KC-46A MOB 6 Beddown at Fairchild AFB, Washington or MacDill AFB, Florida is available at: www.kc46amob6eis.com.

Threatened, Endangered, and Candidate Species and Critical Habitat

The 2018 Fairchild AFB Integrated Natural Resource Management Plan and the U.S. Fish and Wildlife (USFWS) Information for Planning and Consultation (IPaC) System report for the project area (atch 3) were reviewed to determine if any federally listed, proposed, or candidate species, or their habitats, could potentially occur in the vicinity of the Proposed Action. None of the identified species have been reported or observed within the project area or within the immediate vicinity of the project area. There is no critical habitat within the project area. See Section 3.4.2 of the Draft EIS.

We seek your concurrence on the finding that the Fairchild AFB Alternative will have *no effect* for the species identified in Attachment 1. If you require additional information, please contact Mr. Joshua Potter, Fairchild AFB NEPA Program Manager, at joshua.potter.2@us.af.mil or 509-247-8139. Thank you for your support of this project.

Sincerely,

MURLEY.DAVID.J.1252091935 Digitally signed by MURLEY.DAVID.J.1252091935 Date: 2022.12.15 06:55:12 -08'00'

D. JASON MURLEY, Lt Col, USAF
Commander

Attachments:
1. Federally Listed Species with Potential to Occur on Fairchild AFB and Effects Determination
2. Proposed Action Area Map
3. USFWS IPaC Species List

Attachment 1. Federally Listed Species with Potential to Occur on Fairchild AFB and Effects Determination

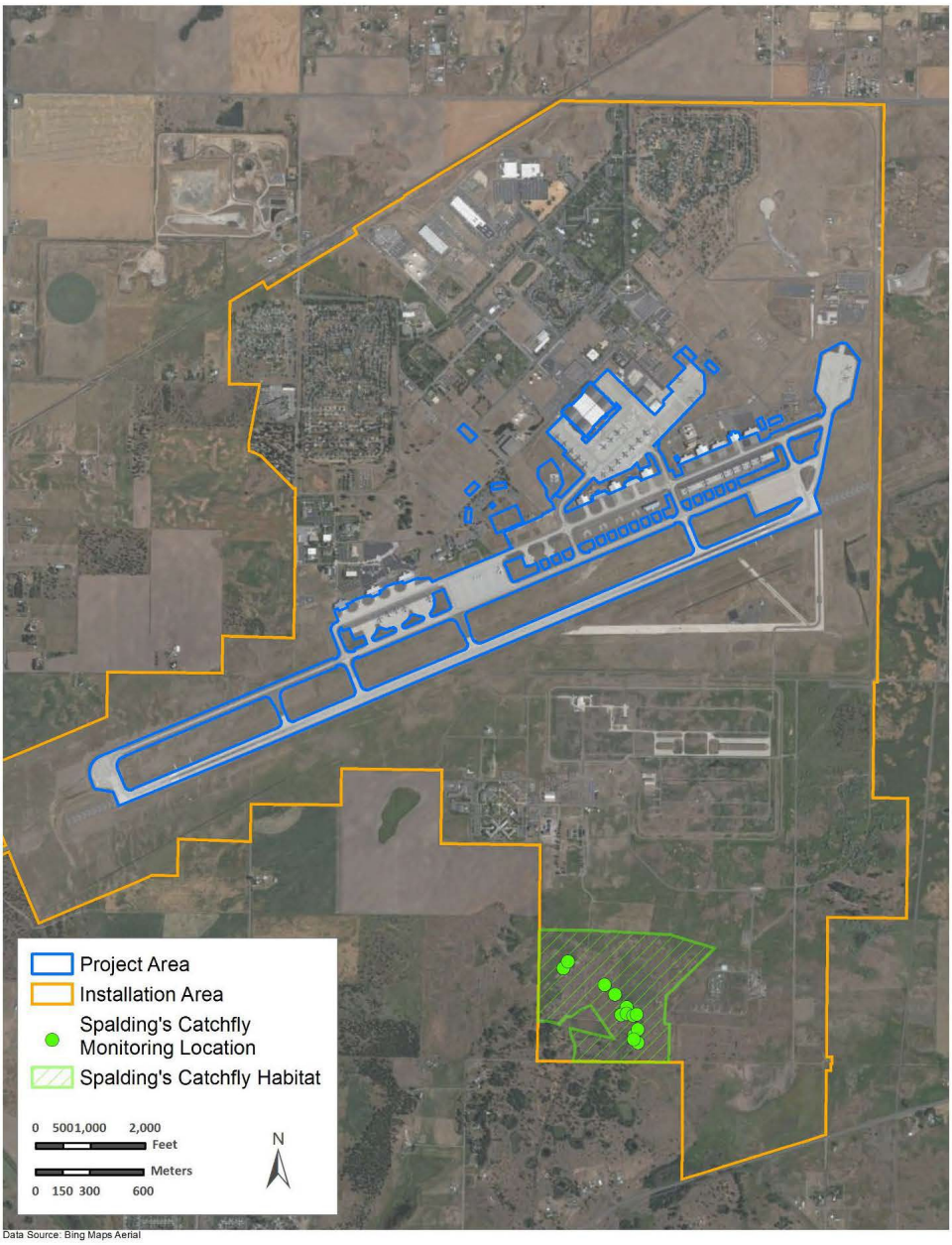
Species	Federal	Habitat Description and Distribution	Effect Determination and Justification
Birds			
Yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	Predominantly western Washington, but potentially in the southwest as well. Prefer large, continuous riparian zones with cottonwoods and willows.	**No effect** – No suitable habitat on or near the project area; no documented observations on the installation.
Insects			
Monarch butterfly (*Danaus plexippus*)	Candidate	Travels and breeds throughout Washington but does not overwinter. This species lays eggs on obligate milkweed plants (*Asclepia* spp.).	**No effect** – No suitable habitat on or near the project area; no documented observations on the installation.
Fishes			
Bull Trout[a] (*Salvelinus confluentus*)	Threatened	Cold, clean, and clear stream habitats, stable stream channels, and abundant overhead cover.	**No effect** – No suitable habitat on or near the project area; no documented observations on the installation.
Plants			
Spalding's catchfly (*Silene spaldingi*)	Threatened	In Washington, it occurs in the Blue Mountains and Columbia Basin physiographic provinces in Asotin, Lincoln, Spokane and Whitman Counties. Open native grasslands with a minor shrub component, occasionally with scattered conifers.	**No effect** – No suitable habitat on or near the project area; documented in the southern portion of the installation.

Sources: Fairchild AFB 2018 and USFWS 2022.

[a] Species is not within the Project Area but is listed in the USFWS IPaC report as a potentially occurring species within the expanded region of influence used for analysis of operational impacts.

Attachment 1

Attachment 2. Proposed Action Area Map



Data Source: Bing Maps Aerial

Attachment 2

Attachment 3. USFWS IPaC Species List

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
Phone: (360) 753-9440 Fax: (360) 753-9405

In Reply Refer To:
Project Code: 2022-0081698
Project Name: MOB 6 FAFB

September 01, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

Attachment 3

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment 3

Attachment(s):

- Official Species List

Attachment 3

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
(360) 753-9440

Attachment 3

Project Summary

Project Code: 2022-0081698
Project Name: MOB 6 FAFB
Project Type: Military Operations
Project Description: The Department of the Air Force is preparing an Environmental Impact Statement to evaluate the environmental impacts associated with recapitalizing aging tanker aircraft (KC-135 Stratotanker) currently used by DAF with the KC 46A model.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@47.61904585,-117.65503950830455,14z

Counties: Spokane County, Washington

Attachment 3

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout *Salvelinus confluentus* Population: U.S.A., conterminous, lower 48 states There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8212	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Attachment 3

Flowering Plants

NAME	STATUS
Spalding's Catchfly *Silene spaldingii*	Threatened

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/3681

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment 3

IPaC User Contact Information

Agency: Air Force
Name: Isha Alexander
Address: 1054 NE Pennington Loop
City: Coupeville
State: WA
Zip: 98239
Email isha.alexander@hdrinc.com
Phone: 3602208669

Lead Agency Contact Information

Lead Agency: Air Force

Attachment 3

A.3.4 ESA Section 7 Consultation Response for Fairchild AFB

A.3.4.1 USFWS

Fw: [EXTERNAL] RE: Fairchild AFB Section 7 Initiation KC-46 MOB 6 EIS

Campbell Hansen, Julie <julie_campbellhansen@fws.gov>
Mon 1/9/2023 2:06 PM
To: joshua.potter.2@us.af.mil <joshua.potter.2@us.af.mil>

1 attachments (1 MB)
[EXTERNAL] RE: Fairchild AFB Section 7 Initiation KC-46 MOB 6 EIS;

Hello Joshua

I am responding to the Air Force's request for concurrence with your "no effect" determination for federally listed species resulting from the KC-46 MOB 6 beddown, Fairchild AFB alternative. The US Fish and Wildlife Service has no regulatory or statutory authority under the ESA to concur with "no effect" determinations, and therefore, there is no requirement for the Air Force to consult. The "no effect" determination rests with the Air Force.

Thank you for informing us of the Draft EIS availability, and for your attention to conservation of federally listed species.

Regards,
Julie Campbell

Julie Campbell
Inland Columbia Basin Zone Supervisor
U.S. Fish and Wildlife Service
Eastern Washington Field Office
email: julie_campbellhansen@fws.gov
work cell: 509-393-5883

From: Thompson, Brad <brad_thompson@fws.gov>
Sent: Wednesday, December 21, 2022 8:00 AM
To: joshua.potter.2@us.af.mil <joshua.potter.2@us.af.mil>
Cc: Krupka, Jeff <jeff_krupka@fws.gov>; Campbell Hansen, Julie <julie_campbellhansen@fws.gov>; Froschauer, Ann <ann_froschauer@fws.gov>
Subject: Fw: [EXTERNAL] RE: Fairchild AFB Section 7 Initiation KC-46 MOB 6 EIS

Hi Joshua,

I am confirming receipt and have cc'd our eastern Washington office supervisors.

Thank you,
Brad

Brad Thompson
State Supervisor
US Fish and Wildlife Service
Washington Ecological Services Office
510 Desmond Dr. SE, Suite 102

Lacey, WA 98503

360-753-4652 office
360-790-8187 cell
brad_thompson@fws.gov
(He/His/Him)

From: POTTER, JOSHUA S GS-12 USAF AMC 92 CES/CEIE <joshua.potter.2@us.af.mil>
Sent: Wednesday, December 21, 2022 7:20 AM
To: Thompson, Brad <brad_thompson@fws.gov>
Subject: [EXTERNAL] RE: Fairchild AFB Section 7 Initiation KC-46 MOB 6 EIS

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

A.4 Coastal Zone Management Act – Coastal Consistency Determination

A.4.1 Coastal Consistency Determination Letter from MacDill AFB to Florida State Clearinghouse and Coastal Zone Consistency Review

From: KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE
To: State Clearinghouse
Cc: RIDER, ANDREW W CIV USAF AMC 6 CES/CEIE; KELLOGG, HELEN L CIV USAF AFMC AFCEC/CZN; Deborah.Peer@hdrinc.com
Subject: Consistency Statement - KC-46A MOB 6 - MacDill AFB
Date: Monday, February 27, 2023 6:51:31 AM
Attachments: MacDill AFB CZMA KC-46A MOB6.pdf

Dear State Clearinghouse;

The Department of the Air Force is preparing an Environmental Impact Statement evaluating the possible beddown of 24 KC-46A aircraft at MacDill AFB, to replace the existing 24 KC-135 aircraft, which will be retired from service. A coastal zone consistency determination has been prepared for this proposed action and we seek feedback from the Florida State Clearinghouse on our determination.

If you would like to review a copy of the Draft EIS information on the Draft EIS can be found mid-way down the page at the link below.

https://www.kc46amob6eis.com/documents

Please feel free to reach out with any comments or questions. We look forward to hearing back from you.

Jason K

JASON W. KIRKPATRICK, Contractor, Amentum
6th Civil Engineer Squadron
7621 Hillsborough Loop Dr.
MacDill AFB, FL 33621
Cell 813-614-5729
Comm 813-828-0459
DSN 968-0459

Customer Feedback Survey:
https://www.surveymonkey.com/r/HXV6TRQ

A.4.1.1 Introduction

This document provides the State of Florida with the DAF's Federal Consistency Determination under the Coastal Zone Management Act (CZMA) Section 307 and 15 Code of Federal Regulations (CFR) Section 930 Subpart C. The information in this Consistency Determination is provided pursuant to 15 CFR Part 930.39; Section 307 of the CZMA; and 16 United States Code 1456, as amended, and its implementing regulations at 15 CFR Part 930.

A.4.1.2 Proposed Federal Agency Action

This Federal Consistency Determination addresses the DAF's Main Operating Base #6 (MOB 6) mission to beddown 24 KC-46A aircraft as well as base facilities, infrastructure, and workforce to support two squadrons of 12 KC-46A Primary Aerospace Vehicle Authorization (PAA) at MacDill Air Force Base (AFB) between fiscal year (FY) 2026 and 2028.

Alternative 1 would base 24-KC46A PAA in two squadrons at MacDill AFB, replacing 24 KC-135 PAA, resulting in no net change of PAA supporting the aerial refueling missions. Facility construction and renovation would be required to support operations and maintenance of the KC-46A PAA. New construction would include two new storage facilities. Renovation of seven existing facilities as well as 18 alteration actions to expand existing facilities and infrastructure would be required, resulting in an increase of approximately 9.4 acres of impervious surfaces and approximately 16.6 acres of ground disturbance. Approximately 1,092 DAF personnel and 1,674 associated dependents would be added to support the KC-46A mission with the relocation or reassignment of approximately 858 KC-135 personnel and 1,625 associated dependents, representing an approximate 1 percent net increase in MacDill AFB's population. Annual refueling tanker aircraft operations at MacDill AFB would increase by approximately 15 percent, and would use existing airspace and training areas currently or previously used by refueling tanker aircraft.

The purpose of Alternative 1 at MacDill AFB is to recapitalize aging tanker aircraft with the KC-46A model to better address current and future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 aircraft. The Proposed Action under Alternative 1 to establish MOB 6 is intended to provide a fully capable, combat operational KC-46A aerial refueling force at MacDill AFB to accomplish aerial refueling and related missions. The mission-ready KC-46A squadrons would allow immediate and effective employment in exercises, peacekeeping operations, contingencies, and combat. The KC-46A beddown and operation would allow the DAF to maintain combat capability and mission readiness as U.S. military resources commit to missions throughout the world.

Alternative 1 at MacDill AFB is needed because the KC-46A would provide mission essential capabilities currently lacking in the existing tanker fleet, including receiver capability, night vision imaging system, multi-point refueling, command and control network, and defensive protection.

A.4.1.3 Federal Consistency Review

The Florida Statutes addressed as part of the Florida Coastal Management Program consistency review and considered in the analysis of Alternative 1 at MacDill AFB are discussed in **Table A-6**.

Table A-6. Florida Coastal Management Program Federal Consistency Review

Statute	Scope	Consistency
Chapter 161, F.S. *Beach and Shore Preservation*	Authorizes the Florida Department of Environmental Protection to regulate construction on or seaward of the state's beaches	Alternative 1 would not affect coastal areas, including beach and shore management, because no construction nor other activities would occur on or near beach areas.
Chapter 163, F.S. *Intergovernmental Programs: Growth Policy; County and Municipal Planning; Land Development Regulation*	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner that is consistent with the public interest	Alternative 1 would not impact local government comprehensive plans.
Chapter 186, F.S. *State and Regional Planning*	Details state-level planning requirements; requires the development of special statewide plans governing water use, land development, and transportation	State and regional agencies will be provided the opportunity to review the KC-46A MOB 6 Beddown Environmental Impact Statement. Alternative 1 would not affect nor interfere with the development of state plans for water use, land development, and transportation.
Chapter 252, F.S. *Emergency Management*	Directs the state to reduce the vulnerability of its people and property to natural and human-made disasters; prepare for, respond to, and reduce the impacts of disasters; and decrease the time and resources needed when responding to disasters	Alternative 1 would not have adverse impacts on the ability of the state to manage and respond to natural and human-made disasters.
Chapter 253, F.S. *State Lands*	Provides the framework for conservation and protection of natural and cultural resources on state-owned lands	Alternative 1 would occur on federal property and use existing airspace; therefore, no impact on state-owned lands would occur.
Chapter 258, F.S. *State Parks and Preserves*	Addresses administration and management of state parks, preserves, and recreation areas	Alternative 1 would not impact state parks, recreational areas, nor preserves.
Chapter 259, F.S. *Land Acquisitions for Conservation or Recreation*	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands	Alternative 1 would not affect publicly owned lands for tourism or outdoor recreation.

Statute	Scope	Consistency
Chapter 260, F.S. *Florida Greenways and Trails Act*	Authorizes acquisition of land to create a recreational trails system (Florida Greenways and Trails System) and to facilitate management of the system	Alternative 1 would not include the acquisition of land and would not affect the Greenways and Trails Program.
Chapter 267, F.S. *Historical Resources*	Addresses management and preservation of the state's archaeological and historic resources	Alternative 1 at MacDill AFB would affect historic resources through modifications of Hangars 1, 2, 3, 4, and 5, which are individually eligible for National Register of Historic Places (NRHP) listing and are contributing resources to the MacDill Field Historic District. Adverse effects under Section 106 of the National Historic Preservation Act (NHPA) would occur due to modification of the hangars. Temporary impacts (visual, noise, vibration) on historic properties would be expected during construction activities. Proposed new facilities would be designed to be compatible with the MacDill Field Historic District's architectural styles and consistent with other recent buildings constructed within the district. It is anticipated that the potentially long-term, major, adverse effects on architectural resources under NHPA Section 106 that would result from Alternative 1 could be successfully mitigated in consultation with the Florida State Historic Preservation Office (SHPO) through the development and implementation of a Memorandum of Understanding, and the resulting long-term effects would be reduced to moderate The DAF is satisfying its responsibilities under Section 106 of the NHPA concurrent with the National Environmental Policy Act process, as provided for in 36 CFR 800.8(a), by consulting with the Florida SHPO and the Advisory Council on Historic Preservation as necessary. Alternative 1 would not affect archaeological or traditional resources because no such properties have been identified within the Area of Potential Effects.
Chapter 288, F.S. *Commercial Development and Capital Improvements*	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy	Alternative 1 would not have adverse impacts on Florida industries or economic diversification efforts.

Statute	Scope	Consistency
Chapter 334, F.S. *Transportation Administration*	Addresses the transportation administration policies of the state	Short-term, negligible impacts are anticipated on the transportation network at MacDill AFB from construction vehicles, which would comprise a small percentage of the total existing traffic. Long-term, negligible to minor, adverse impacts could result from the increase in personnel and dependents, and potential increased congestion that would primarily occur at access gates during peak hours. No permanent impacts nor alterations to the transportation network would occur.
Chapter 339, F.S. *Transportation Finance and Planning*	Addresses the state's transportation systems finance and planning needs	Alternative 1 would not affect the finance and planning needs of the state's transportation system.
Chapter 373, F.S. *Water Resources*	Addresses conservation and preservation of water resources, water quality, and environmental quality.	Short-term, negligible to minor, adverse impacts would occur during construction and renovation projects associated with the beddown from potential intersection risk with the surficial aquifer as well as increased sedimentation. Long-term, minor, adverse impacts would occur on surface water and floodplains from the increased rate and volume of stormwater runoff due to an increase in impervious surfaces. Impacts would be minimized through implementation of environmental protection and best management practices (BMPs) and by following the project-specific and installation Stormwater Pollution Prevention Plans (SWPPPs). All applicable permits would be coordinated in accordance with Florida's statutes and the National Pollutant Discharge Elimination System. Therefore, the Alternative 1 would be consistent with Florida's statutes and regulations regarding the water resources of the state.
Chapter 375, F.S. *Outdoor Recreation and Conservation Lands*	Addresses the development of a comprehensive multipurpose outdoor recreation plan	Alternative 1 would not affect opportunities for outdoor recreation on state lands.
Chapter 376, F.S. *Pollutant Discharge Prevention and Removal*	Regulates the transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges	All petroleum, oils, and lubricants would be managed through implementation of the installation's Spill Prevention, Control, and Countermeasures Plan. Handling, storage, transportation, and disposal activities would be conducted in accordance with applicable federal, state, and local regulations; DAF Instructions; and the MacDill AFB Hazardous Waste Management Plan.
Chapter 377, F.S. *Energy Resources*	Addresses the regulation, planning, and development of oil and gas resources of the state	Alternative 1 would not affect energy resource production, including oil and gas, in Florida.

Statute	Scope	Consistency
Chapter 379, F.S. *Fish and Wildlife Conservation*	Addresses the management of the wildlife resources of the state	Alternative 1 would occur in improved or semi-improved areas that provide habitat for few native wildlife species. Implementation of Alternative 1 would result in short-term, negligible to minor, adverse impacts on wildlife and special status species from increased noise and potential displacement due to actions associated with construction, demolition, and renovation. Short-term, minor, adverse impacts on wildlife would occur from noise associated with heavy equipment use and increased human presence during facility construction, demolition, and renovation. Long-term, negligible, adverse impacts on wildlife would occur from the permanent loss of potential habitat for wildlife. Similarly, implementation of Alternative 1 would result in short-term, minor, adverse impacts to federally and state protected species from increased noise and potential displacement due to actions associated with construction, demolition, and renovation as well as long-term, minor, adverse impacts from the slightly increased BASH risk as a result of the proposed KC-46A aircraft operations. Impacts relating to noise exposures on special status species would be unchanged from existing conditions
Chapter 380, F.S. *Land and Water Management*	Establishes state land and water management policies to guide and coordinate local decisions relating to growth and development	Alternative 1 would be consistent with state and local policies regarding growth and development. Alternative 1 would not include changes to coastal infrastructure such as capacity increases of existing coastal infrastructure, nor use of state funds for infrastructure planning, designing, or construction.
Chapter 381, F.S. *Public Health: General Provisions*	Establishes public policy concerning the state's public health system	Alternative 1 would not affect the state's policy concerning the public health system.
Chapter 388, F.S. *Mosquito Control*	Addresses mosquito control efforts in the state	Alternative 1 would not affect mosquito control efforts.
Chapter 403, F.S. *Environmental Control*	Establishes public policy concerning environmental control (i.e., pollution control) in the state	Alternative 1 would have negligible to minor impacts on groundwater and surface water quality and quantity, protection of potable water supply, floodplains and wetlands, and the conservation of environmentally sensitive living resources. Alternative 1 would have minor to moderate impacts on air quality. Minimization measures for these impacts are identified in the EIS.

Statute	Scope	Consistency
Chapter 553, F.S. *Building Construction Standards*	Addresses building construction standards for a unified Florida Building Code	Alternative 1 would comply with the state's construction standards; therefore, no impacts on building construction standards would occur. New facilities would be constructed in conformance with Executive Order 14008, Department of Defense's (DoD's) UFC-2-100-01, the DoD's *2021 Climate Adaptation Plan,* Federal Emergency Management Agency Federal Flood Risk Management Standards, including elevating facilities above the floodplain, and Southwest Florida Water Management District permit requirements to avoid or minimize flood impacts.
Chapter 582, F.S. *Soil and Water Conservation*	Provides for the control and prevention of soil erosion	Soil disturbance would occur during construction and renovation projects associated with Alternative 1, but would be controlled through implementation of environmental protection measures and BMPs. Additionally, adherence to site-specific Erosion and Sediment Control Plans, both site-specific and installation SWPPPs, and Section 438 of the Energy Independence and Security Act would further minimize impacts.
Chapter 597, F.S. *Aquaculture*	Establishes public policy to enhance the growth of aquaculture	Alternative 1 would not affect aquaculture.

Key: F.S. = Florida Statute; NHPA = National Historic Preservation Act; NRHP = National Register of Historic Places; SHPO = State Historic Preservation Officer; BMP = best management practices; SWPPP = Stormwater Pollution Prevention Plans; EIS = Environmental Impact Statement; DoD = Department of Defense; DAF = Department of the Air Force; CFR = Code of Federal Regulations

Based on the information and analysis provided in **Table A-5**, MacDill AFB finds that the Proposed Action Alternative at MacDill AFB, under which 24 KC-46A aircraft would replace 24 KC-135 aircraft, is consistent with the applicable enforceable policies and mechanisms of the Florida Coastal Management Program.

Pursuant to 15 CFR 930.41, the Florida State Clearinghouse has 60 days from receipt of this document to concur with, or object to, this Consistency Determination, or to request an extension in writing under 15 CFR 930.41(b). Florida's concurrence will be presumed if MacDill AFB does not receive its response by the 60th day from receipt of this determination.

A.4.2 Florida DEP CCD Response to MacDill AFB

From: Stahl, Chris
To: KIRKPATRICK, JASON W CTR USAF AMC 6 CES/CEIE
Cc: State Clearinghouse
Subject: [URL Verdict: Neutral][Non-DoD Source] State Clearance Letter for FL202303019728C - Draft Environmental Impact Statement (Eis) Kc-46a Main Operating Base #6 (Mob 6) Beddown At Macdill Air Force Base, Hillsborough County, Florida.
Date: Wednesday, April 19, 2023 1:43:32 PM

April 19, 2023

Jason Kirkpatrick
United States Air Force
MacDill Air Force Base
8209 Hanger Loop Drive
MacDill AFB, Florida 33621-5502

RE: Department of Defense, U.S. Air Force, Draft Environmental Impact Statement (EIS) KC-46A Main Operating Base #6 (MOB 6) Beddown at Macdill Air Force Base, Hillsborough County, Florida.
SAI # FL202303019728C

Dear Jason:

Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

A preapplication meeting with Southwest Florida Water Management District Environmental Resource Permit (ERP) staff is encouraged prior to any site work. For assistance or additional information concerning the District's ERP program, please contact Robin McGill, ERP senior professional engineer, at (813) 985-7481 or robin.mcgill@watermatters.org.

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

Based on the information submitted and minimal project impacts, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program

(FCMP). Thank you for the opportunity to review the proposed plan. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Sincerely,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
Chris.Stahl@floridadep.gov

B

Air Quality Analysis Supporting Documentation

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Appendix B: Air Quality Analysis Supporting Documentation

The emission factors presented in this appendix are imbedded within the United States Department of the Air Force (DAF) Air Conformity Applicability Model (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).

The following on-road vehicle type abbreviations and their definitions are used throughout this appendix.

LDGV: Light-Duty Gasoline Vehicle (Passenger Cars)
LDGT: Light-Duty Gasoline Truck (0–8,500 Pounds Gross Vehicle Weight Rating [GVWR])
HDGV: Heavy-Duty Gasoline Vehicle (8,501 to > 60,000 Pounds GVWR)
LDDV: Light-Duty Diesel Vehicle (Passenger Cars)
LDDT: Light-Duty Diesel Truck (0–8,500 Pounds GVWR)
HDDV: Heavy-Duty Diesel Vehicle (8,501 to > 60,000 Pounds GVWR)
MC: Motorcycles (Gasoline)

B.1 Alternative 1 – ACAM Report Record of Air Analysis (ROAA)

1. General Information: The DAF's ACAM was used to perform an analysis to assess the potential air quality impacts associated with the action in accordance with 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: MACDILL AFB
State: Florida
County(s): Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: KC-46A Main Operating Base #6 Beddown

c. Project Number/s (if applicable): Alternative 1: KC-46A Beddown at MacDill AFB, Florida

d. Projected Action Start Date: 10/2025

e. Action Description:

Alternative 1 would base 24 KC-46A aircraft in two squadrons of 12 PAA at MacDill AFB as an active duty, Continental United States location for the KC-46A MOB 6 beddown. The KC-46A beddown would occur in two stages: beddown and operational. The beddown stage would involve construction/retrofit of required facilities, infrastructure, and prepared surfaces, which includes renovation, alteration, and demolition. The beddown stage would also include preparing support facilities for new personnel and students to support the mission. The operational stage would involve conducting day-to-day activities (e.g., operational missions, maintenance) at the installation, including flight operations and training in the existing regional airspace.

f. Point of Contact:
Name: Carolyn Hein
Title: Contractor
Organization: HDR
Email:
Phone Number: (484) 612-1100

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 algorithms, emission factors, and methodologies used are described in detail in the DAF's *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and *Air Emissions Guide for Air Force Transitory Sources*.

"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/year Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5 percent of any NAAQS), and the GCR *de minimis* values (25 ton/year for lead and 100 ton/year for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5 percent of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see Chapter 4 of the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II – Advanced Assessments*.

The action's net emissions for every year through achieving steady state were compared against the insignificance indicator and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.441	250	No
NOx	2.350	250	No
CO	3.528	250	No
SOx	0.008	250	No
PM 10	41.342	250	No
PM 2.5	0.090	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	789.5		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.058	250	No
NOx	5.924	250	No
CO	8.660	250	No
SOx	0.018	250	No
PM 10	13.732	250	No
PM 2.5	0.233	250	No
Pb	0.000	25	No
NH3	0.007	250	No
CO2e	1772.9		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.018	250	No
NOx	5.744	250	No
CO	8.325	250	No
SOx	0.017	250	No
PM 10	0.228	250	No
PM 2.5	0.227	250	No
Pb	0.000	25	No
NH3	0.006	250	No
CO2e	1691.6		

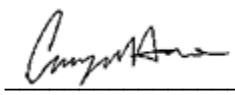
2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	12.297	250	No
NOx	39.685	250	No
CO	6.441	250	No
SOx	1.038	250	No
PM 10	-1.698	250	No
PM 2.5	-0.601	250	No
Pb	0.000	25	No
NH3	0.013	250	No
CO2e	4456.8		

2029 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	10.418	250	No
NOx	141.510	250	No
CO	0.768	250	No
SOx	4.101	250	No
PM 10	-7.478	250	No
PM 2.5	-3.085	250	No
Pb	0.000	25	No
NH3	0.032	250	No
CO2e	12750.5		

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 would not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.



Carolyn Hein, Contractor

10/27/2022

B.2 Alternative 1 – Detail ACAM Report for the Beddown of 24 KC-46A PAA at MacDill AFB

B.2.1 General Information

- Action Location
Base: MACDILL AFB
State: Florida
County(s): Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: KC-46A Main Operating Base #6 Beddown

- Project Number/s (if applicable): Alternative 1: KC-46A Beddown at MacDill AFB, Florida

- Projected Action Start Date: 10 / 2025

- Action Purpose and Need:
The purpose of the Proposed Action is to recapitalize aging tanker aircraft (KC-135 Stratotanker) currently used by the Department of the Air Force with the KC-46A model to better address current and future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 Stratotanker.

The Proposed Action to establish Main Operating Base #6 (MOB 6) is intended to provide a fully capable, combat operational KC-46A aerial refueling force at the MOB 6 location(s) to accomplish aerial refueling and related missions. The mission-ready KC-46A squadrons would allow immediate and effective employment in exercises, peacekeeping operations, contingencies, and combat. Bedding down and operating the KC-46A would allow DAF to maintain combat capability and mission readiness as U.S. military resources commit to missions throughout the world.

The MOB 6 beddown of the KC-46A is needed because the KC-46A would provide mission essential capabilities currently lacking in the existing tanker fleet, resulting in fully capable, combat-operational tanker force to accomplish aerial refueling and related worldwide missions. Additional capabilities include receiver capability, night vision, multi-point refueling, connectivity to command and control assets, and defensive protection.

- Action Description:
Alternative 1 would base 24 KC-46A aircraft in two squadrons of 12 Primary Aerospace Vehicle Authorization (PAA) at MacDill AFB as an active duty, continental United States location for the KC-46A Main Operating Base #6 (MOB 6) beddown. The KC-46A beddown would occur in two stages: a beddown stage and an operational stage. The beddown stage would involve construction/retrofit of required facilities, infrastructure, and prepared surfaces, which includes renovation, alteration, and demolition. The beddown stage would also include preparing support facilities for new personnel and students to support the mission. The operational stage would involve conducting day-to-day activities (e.g., operational missions, maintenance) at the installation, including flight operations and training in the existing regional airspace.

- Point of Contact
Name: Carolyn Hein

Title: Contractor
Organization: HDR EOC
Email:
Phone Number: (484) 612-1100

- Activity List:

	Activity Type	Activity Title
2.	Construction / Demolition	New Facility Construction
3.	Construction / Demolition	Facility Renovations
4.	Construction / Demolition	Facility and Airfield Improvements
5.	Personnel	Addition of Personnel
6.	Heating	Heating of New Facilities
7.	Paint Booth	KC-46A Maintenance Hangar Paint Booth
8.	Aircraft	Beddown of 24 KC-46A Aircraft at MacDill AFB, Florida - LTOs, APU, Engine Testing
9.	Aircraft	Remove 24 KC-135R Aircraft from MacDill AFB, Florida - LTOs, APU, Engine Testing
10.	Aircraft	Beddown of 24 KC-46A Aircraft at MacDill AFB, Florida - TGOs
11.	Aircraft	Remove 24 KC-135R Aircraft from MacDill AFB, Florida - TGOs

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

B.2.2 Construction/Demolition

B.2.2.1 General Information & Timeline Assumptions

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: New Facility Construction

- Activity Description:
Construction of New Facilities:
DASH-21 Facility (19,656 square feet)
High Bay Supply/Bulk Storage Warehouse (5,798 square feet)

Assumed no materials are required to be hauled on- or off-site due to site grading; excavated spoils will be used on-site. Conservatively assumed all site grading for new facility construction is done in FY2025.

Also assumed the following: (1) no new emergency generator(s), or if any were needed for new facilities, their emissions would be offset by removing a generator(s) that was supporting KC-135 operations/facilities; (2) for special vehicles and non-road combustion equipment needed to support KC-46A operations/facilities, their operation/emissions would be equally offset by eliminating or reusing vehicles and non-road equipment that were supporting KC-135 operations/facilities; (3) KC-46A deicing, fuel cell maintenance, composite repair, NDI testing, and fuel storage/dispensing operations/emissions would be equally offset by eliminating those corresponding operations/emissions supporting the KC-135 operations/facilities.

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.169184
SO_x	0.016317
NO_x	4.830554
CO	7.314629
PM 10	1.939042

Pollutant	Total Emissions (TONs)
PM 2.5	0.166124
Pb	0.000000
NH_3	0.004882
CO_2e	1572.4

B.2.2.2 Site Grading Phase

B.2.2.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

B.2.2.2.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 25454
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.2.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.2.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.2.3 Trenching/Excavating Phase

B.2.2.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration

Number of Month: 4
Number of Days: 0

B.2.2.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft^2): 25454
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.2.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851

LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.2.3.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.2.4 Building Construction Phase

B.2.2.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.2.2.4.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 25454
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.2.2.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.2.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.2.5 Architectural Coatings Phase

B.2.2.5.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 9
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 1
Number of Days: 0

2.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 25454
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.2.5.2 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.2.5.3 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.2.3 Construction/Demolition

B.2.3.1 General Information & Timeline Assumptions

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Facility Renovations

- Activity Description:
Facility Renovations [Assumed 25 percent of total square footage (229,376 square feet) is construction to equate the renovations]:
ATGL Storage; Building 1042 (6,417 square feet)
MPC/AFE; Building 6 (30,331 square feet)
AD ARSs x 2; Building 56 (30,037 square feet)
AFRC ARSs x 2; Building 53 (19,476 square feet)
AFRC OSS; Building 9 (8,304 square feet)
FUT; Building 1071 (27,370 square feet)
Washracks and Bird Bath Facilities 563, 580, and 1359 (107,441 square feet)

Total square footage = 229,376 square feet (25 percent of total square footage = 57,344 square feet)

Assumed 229,376 square feet would require architectural coatings.

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	3.396374
SO_x	0.013641
NO_x	4.178912
CO	6.235306
PM 10	0.143305

Pollutant	Total Emissions (TONs)
PM 2.5	0.142637
Pb	0.000000
NH_3	0.005041
CO_2e	1317.9

B.2.3.2 Building Construction Phase

B.2.3.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.2.3.2.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 57344
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.2.3.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.3.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.3.3 Architectural Coatings Phase

B.2.3.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 6
Number of Days: 0

B.2.3.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 229376
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.3.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.3.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.2.4 Construction/Demolition

B.2.4.1 General Information & Timeline Assumptions

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Facility and Airfield Improvements

- Activity Description:
Facility and Airfield Improvements:
Add/Alter AGE; Construct Jack Testing Pad in Maintenance Building; Building 552 (18,614 square feet)
Add/Alter Ed Ctr/ALS; Building 252 (37,685 square feet renovation area; 2,850 square feet addition)
Add/Alter Corrosion Control Hangar 1 (75,350 square foot renovation area; 11,302 square foot addition)
Add/Alter General Purpose MX Hangar 2 (69,707 square foot renovation area; 11,302 square foot addition)
Add/Alter General Purpose MX Hangar 3 (11,302 square foot addition)
Add/Alter General Purpose MX Hangar 4 (69,707 square foot renovation area; 11,302 square foot addition)
Add/Alter Fuel Cell Hangar 5 (47,716 square foot renovation area; 11,302 square foot addition)
Add/Alter Wheel and Tire Shop; Building 44 (4,000 square feet)
Add/Alter BOT; Building 295 (5,005 square foot renovation; 1,604 square footage addition)
Add/Alter AMU; Building 55 (22,199 square feet)
Add/Alter Apron & Hydrant Fueling Pits (679,666 square foot renovation; 371,667 square foot addition)

For buildings where renovations are to be determined or where both renovations and additions are to be determined, assumed total square footage would undergo renovations.

Assumed 25 percent of total building renovation area is construction to equate the renovations. Assumed 100 percent of additional square footage is construction to equate the additions. Assumed 100 percent of building renovations and additions would require architectural coatings.

Total building renovation square footage = 465,206 square feet
25 percent of total building renovation square footage = 116,301.5 square feet
Total building addition square footage = 49,662 square feet

Total assumed construction area: 165,963.5 square feet

Assumed 500 square feet needed for trenching plus total facility and airfield renovation/addition square footage for excavation.

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	7.643912
SO_x	0.026862
NO_x	9.316662
CO	13.212183
PM 10	53.389972

Pollutant	Total Emissions (TONs)
PM 2.5	0.411725
Pb	0.000000
NH_3	0.009976
CO_2e	2632.8

B.2.4.2 Trenching/Excavating Phase

B.2.4.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 4
Number of Days: 0

B.2.4.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 1331337
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.4.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.578	000.008	000.613	005.086	000.009	000.008		000.034	00391.932
LDGT	000.823	000.010	001.060	008.566	000.010	000.009		000.034	00522.586
HDGV	001.597	000.016	002.785	026.982	000.023	000.020		000.046	00814.010
LDDV	000.216	000.004	000.307	004.001	000.006	000.006		000.008	00402.372
LDDT	000.537	000.006	000.822	008.176	000.008	000.008		000.008	00626.077
HDDV	000.762	000.015	007.639	002.810	000.395	000.363		000.028	01633.017
MC	003.190	000.008	000.648	014.785	000.027	000.024		000.048	00392.026

B.2.4.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment

WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.4.3 Building Construction Phase

B.2.4.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36

Number of Days: 0

B.2.4.3.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft^2): 165963.5
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.2.4.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.4.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.4.4 Architectural Coatings Phase

B.2.4.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 8
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 1
Number of Days: 0

B.2.4.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 514868
Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.4.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.4.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.2.4.5 Paving Phase

B.2.4.5.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.2.4.5.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 1051333

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	8
Rollers Composite	2	6

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.2.4.5.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.578	000.008	000.613	005.086	000.009	000.008		000.034	00391.932
LDGT	000.823	000.010	001.060	008.566	000.010	000.009		000.034	00522.586
HDGV	001.597	000.016	002.785	026.982	000.023	000.020		000.046	00814.010
LDDV	000.216	000.004	000.307	004.001	000.006	000.006		000.008	00402.372
LDDT	000.537	000.006	000.822	008.176	000.008	000.008		000.008	00626.077

HDDV	000.762	000.015	007.639	002.810	000.395	000.363		000.028	01633.017
MC	003.190	000.008	000.648	014.785	000.027	000.024		000.048	00392.026

B.2.4.5.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
VOC_P = (2.62 * PA) / 43560

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)

B.2.5 Personnel

B.2.5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Addition of Personnel

- Activity Description:
Net change of additional 221 military personnel, additional 13 government civilian and contractor personnel, and additional 49 military dependents and family members. Conservatively assumed all military dependents and family members commute.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.524446
SO_x	0.003524
NO_x	0.423095
CO	6.010837
PM 10	0.009370

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.007978
Pb	0.000000
NH_3	0.032357
CO_2e	539.4

B.2.5.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 221
Civilian Personnel: 13
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule

Active Duty Personnel:	5 Days Per Week (default)
Civilian Personnel:	5 Days Per Week (default)
Support Contractor Personnel:	5 Days Per Week (default)
Air National Guard (ANG) Personnel:	4 Days Per Week (default)
Reserve Personnel:	4 Days Per Month (default)

B.2.5.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

B.2.5.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.282	000.002	000.207	003.392	000.006	000.005		000.023	00341.791
LDGT	000.376	000.003	000.373	004.889	000.007	000.006		000.024	00439.705
HDGV	000.832	000.005	000.964	016.217	000.016	000.014		000.046	00814.851
LDDV	000.084	000.003	000.127	002.822	000.004	000.004		000.008	00334.379
LDDT	000.227	000.004	000.365	004.850	000.007	000.006		000.008	00473.628
HDDV	000.423	000.014	004.175	001.653	000.176	000.162		000.028	01559.331
MC	003.040	000.003	000.626	013.017	000.026	000.023		000.052	00392.775

B.2.5.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year

$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.2.6 Heating

B.2.6.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Heating of New Facilities

- Activity Description:
Heating of new facilities: DASH-21 Facility (19,656 square feet); and High Bay Supply/Bulk Storage Warehouse (5,798 square feet). Heating for facility additions (49,662 total square feet).

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.014617
SO_x	0.001595
NO_x	0.265768
CO	0.223245
PM 10	0.020198

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.020198
Pb	0.000000
NH_3	0.000000
CO_2e	320.0

B.2.6.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 75116
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0743

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

B.2.6.3 Heating Emission Factor(s)

- Heating Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
5.5	0.6	100	84	7.6	7.6			120390

B.2.6.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement (MMBtu/ft^2)
HV: Heat Value (MMBTU/ft^3)
1000000: Conversion Factor

- Heating Emissions per Year
HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

B.2.7 Paint Booth

B.2.7.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: KC-46A Maintenance Hangar Paint Booth

- Activity Description:
KC-46A Maintenance Hangar Paint Booth. Assumed paint booth is relatively small and its operation and emissions will be similar to the reduction in maintenance painting conducted for the KC-135 aircraft that will be removed from the installation. Therefore, it is assumed no emissions increase due to painting.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.000000
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM 10	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

B.2.7.2 Paint Booth Assumptions

- Paint Booth
Coating throughput (gallons/year): 0

- Default Settings Used: Yes

- Paint Booth Consumption
Coating used: Quick Dry Enamel (default)
Specific gravity of coating: 1.19 (default)
Coating VOC content by weight (%): 32 (default)
Efficiency of control device (%): 0 (default)

B.2.7.3 Paint Booth Formula(s)

- Paint Booth Emissions per Year
PBE_{VOC}= (VOC / 100) * CT * SG * 8.35 * (1 - (CD / 100)) / 2000

PBE_{VOC}: Paint Booth VOC Emissions (TONs per Year)
VOC: Coating VOC content by weight (%)
(VOC / 100): Conversion Factor percent to decimal
CT: Coating throughput (gallons/year)
SG: Specific gravity of coating
8.35: Conversion Factor the density of water
CD: Efficiency of control device (%)
(1 - (CD / 100)): Conversion Factor percent to decimal (Not effected by control device)
2000: Conversion Factor pounds to tons

B.2.8 Aircraft

B.2.8.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Beddown of 24 KC-46A Aircraft at MacDill AFB, Florida - LTOs, APU, Engine Testing

- Activity Description:
Beddown 24 KC-46A Aircraft at MacDill AFB, and associated LTOs, APU, and Engine Run-up Testing operations. Assumed aerospace ground equipment (AGE) used for the KC-46A that would be added would be similar to the AGE used for the KC-135A that would be removed. Therefore, AGE-related emissions added from KC-46A beddown would be similar to the reduction in AGE-related emissions from KC-135 removal. Therefore, it is assumed no net emissions change from AGE.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	9.725478
SO_x	3.869567
NO_x	68.681025
CO	35.517619
PM 10	0.262188

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.227532
Pb	0.000000
NH_3	0.000000
CO_2e	11207.7

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	9.604696
SO_x	3.619114
NO_x	62.757517
CO	34.964277
PM 10	0.245676

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.213361
Pb	0.000000
NH_3	0.000000
CO_2e	10450.7

- Activity Emissions [Test Cell part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.120782
SO_x	0.250453
NO_x	5.923508
CO	0.553342
PM 10	0.016512

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.014171
Pb	0.000000
NH_3	0.000000
CO_2e	757.0

B.2.8.2 Aircraft & Engines

B.2.8.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: KC-46A
Engine Model: PW4062

Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.2.8.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1666.68	12.49	1.07	3.78	42.61	0.11	0.10	3234
Approach	5698.45	0.10	1.07	12.17	1.93	0.05	0.04	3234
Intermediate	16865.19	0.08	1.07	25.98	0.50	0.07	0.06	3234
Military	21627.13	0.09	1.07	34.36	0.61	0.08	0.07	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.2.8.3 Flight Operations

B.2.8.3.1 Flight Operations Assumptions

- Flight Operations
Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1306.5
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 1

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)
Taxi/Idle Out [Idle] (mins): 10.16
Takeoff [Military] (mins): 1.29
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 2.29
Approach [Approach] (mins): 6.54
Taxi/Idle In [Idle] (mins): 10.16

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test
Idle (mins): 12
Approach (mins): 27
Intermediate (mins): 9
Military (mins): 12
AfterBurn (mins): 0

B.2.8.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

AE_{LTO} = AEM_{IDLE_IN} + AEM_{IDLE_OUT} + $AEM_{APPROACH}$ + $AEM_{CLIMBOUT}$ + $AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

AE_{TGO} = $AEM_{APPROACH}$ + $AEM_{CLIMBOUT}$ + $AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.2.8.4 Auxiliary Power Unit (APU)

B.2.8.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer
1	0.87	No	GTCP 331-200ER	Honeywell Inc.

8.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
GTCP 331-200ER	267.9	0.115	0.284	2.548	1.110	-1.000	-1.000	-1.0

B.2.8.4.2 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.2.8.5 Aircraft Engine Test Cell

B.2.8.5.1 Aircraft Engine Test Cell Assumptions

- Engine Test Cell
Total Number of Aircraft Engines Tested Annually: 48

- Default Settings Used: No

- Annual Run-ups / Test Durations

Annual Run-ups (Per Aircraft Engine):	1
Idle Duration (mins):	12
Approach Duration (mins):	27
Intermediate Duration (mins):	9
Military Duration (mins):	12
After Burner Duration (mins):	0

B.2.8.5.2 Aircraft Engine Test Cell Emission Factor(s)

- See Aircraft & Engines Emission Factor(s)

B.2.8.5.3 Aircraft Engine Test Cell Formula(s)

- Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)

$TestCellPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * ARU / 2000$

$TestCellPS_{POL}$: Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pou
nds
EF: Emission Factor (lb/1000lb fuel)
NE: Total Number of Engines (For All Aircraft)
ARU: Annual Run-ups (Per Aircraft Engine)
2000: Conversion Factor pounds to TONs

- Aircraft Engine Test Cell Emissions per Year

$TestCell = TestCellPS_{IDLE} + TestCellPS_{APPROACH} + TestCellPS_{INTERMEDIATE} + TestCellPS_{MILITARY} + TestCellPS_{AFTERBURN}$

TestCell: Aircraft Engine Test Cell Emissions (TONs)
$TestCellPS_{IDLE}$: Aircraft Engine Test Cell Emissions for Idle Power Setting (TONs)
$TestCellPS_{APPROACH}$: Aircraft Engine Test Cell Emissions for Approach Power Setting (TONs)
$TestCellPS_{INTERMEDIATE}$: Aircraft Engine Test Cell Emissions for Intermediate Power Setting (TONs)
$TestCellPS_{MILITARY}$: Aircraft Engine Test Cell Emissions for Military Power Setting (TONs)
$TestCellPS_{AFTERBURN}$: Aircraft Engine Test Cell Emissions for After Burner Power Setting (TONs)

B.2.9 Aircraft

B.2.9.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location

County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Remove 24 KC-135R Aircraft from MacDill AFB, Florida - LTOs, APU, Engine Testing

- Activity Description:
Remove 24 KC-135R Aircraft and associated operations (LTOs, APU, and Engine Testing) at MacDill AFB.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	-0.158940
SO_x	-2.136611
NO_x	-15.188473
CO	-19.005545
PM 10	-2.915565

Pollutant	Emissions Per Year (TONs)
PM 2.5	-1.090785
Pb	0.000000
NH_3	0.000000
CO_2e	-6457.8

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.150614
SO_x	-1.956211
NO_x	-13.634753
CO	-18.159451
PM 10	-2.682746

Pollutant	Emissions Per Year (TONs)
PM 2.5	-0.969441
Pb	0.000000
NH_3	0.000000
CO_2e	-5912.5

- Activity Emissions [Test Cell part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.008326
SO_x	-0.180399
NO_x	-1.553719
CO	-0.846094
PM 10	-0.232820

Pollutant	Emissions Per Year (TONs)
PM 2.5	-0.121344
Pb	0.000000
NH_3	0.000000
CO_2e	-545.2

B.2.9.2 Aircraft & Engines

B.2.9.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: KC-135R
Engine Model: F108-CF-100
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 4

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.2.9.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1136.00	0.19	1.07	3.88	23.65	2.07	0.16	3234
Approach	2547.00	0.06	1.07	5.73	8.57	1.55	0.76	3234
Intermediate	5650.00	0.03	1.07	11.04	2.32	0.65	0.36	3234
Military	6458.00	0.03	1.07	12.05	0.36	1.59	1.02	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.2.9.3 Flight Operations

B.2.9.3.1 Flight Operations Assumptions

- Flight Operations
Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 631
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 1

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)
Taxi/Idle Out [Idle] (mins): 10.16
Takeoff [Military] (mins): 1.41
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 3.58
Approach [Approach] (mins): 10.4
Taxi/Idle In [Idle] (mins): 10.16

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test
Idle (mins): 12
Approach (mins): 27
Intermediate (mins): 9
Military (mins): 12
AfterBurn (mins): 0

B.2.9.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year
$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)

60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.2.9.4 Auxiliary Power Unit (APU)

B.2.9.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

B.2.9.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

B.2.9.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.2.9.5 Aircraft Engine Test Cell

B.2.9.5.1 Aircraft Engine Test Cell Assumptions

- Engine Test Cell
Total Number of Aircraft Engines Tested Annually: 96

- Default Settings Used: No

- Annual Run-ups / Test Durations

Annual Run-ups (Per Aircraft Engine):	1
Idle Duration (mins):	12
Approach Duration (mins):	27
Intermediate Duration (mins):	9
Military Duration (mins):	12

After Burner Duration (mins): 0

B.2.9.5.2 Aircraft Engine Test Cell Emission Factor(s)

- See Aircraft & Engines Emission Factor(s)

B.2.9.5.3 Aircraft Engine Test Cell Formula(s)

- Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)

$TestCellPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * ARU / 2000$

$TestCellPS_{POL}$: Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Total Number of Engines (For All Aircraft)
ARU: Annual Run-ups (Per Aircraft Engine)
2000: Conversion Factor pounds to TONs

- Aircraft Engine Test Cell Emissions per Year

$TestCell = TestCellPS_{IDLE} + TestCellPS_{APPROACH} + TestCellPS_{INTERMEDIATE} + TestCellPS_{MILITARY} + TestCellPS_{AFTERBURN}$

TestCell: Aircraft Engine Test Cell Emissions (TONs)
$TestCellPS_{IDLE}$: Aircraft Engine Test Cell Emissions for Idle Power Setting (TONs)
$TestCellPS_{APPROACH}$: Aircraft Engine Test Cell Emissions for Approach Power Setting (TONs)
$TestCellPS_{INTERMEDIATE}$: Aircraft Engine Test Cell Emissions for Intermediate Power Setting (TONs)
$TestCellPS_{MILITARY}$: Aircraft Engine Test Cell Emissions for Military Power Setting (TONs)
$TestCellPS_{AFTERBURN}$: Aircraft Engine Test Cell Emissions for After Burner Power Setting (TONs)

B.2.10 Aircraft

B.2.10.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Beddown of 24 KC-46A Aircraft at MacDill AFB, Florida - TGOs

- Activity Description:
Beddown 24 KC-46A Aircraft at MacDill AFB - TGOs only

- Activity Start Date
Start Month: 10

Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.512713
SO_x	5.941809
NO_x	106.494523
CO	6.688060
PM 10	0.334010

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.278479
Pb	0.000000
NH_3	0.000000
CO_2e	17958.7

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.512713
SO_x	5.941809
NO_x	106.494523
CO	6.688060
PM 10	0.334010

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.278479
Pb	0.000000
NH_3	0.000000
CO_2e	17958.7

B.2.10.2 Aircraft & Engines

B.2.10.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: KC-46A
Engine Model: PW4062
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.2.10.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1666.68	12.49	1.07	3.78	42.61	0.11	0.10	3234
Approach	5698.45	0.10	1.07	12.17	1.93	0.05	0.04	3234
Intermediate	16865.19	0.08	1.07	25.98	0.50	0.07	0.06	3234
Military	21627.13	0.09	1.07	34.36	0.61	0.08	0.07	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.2.10.3 Flight Operations

B.2.10.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft:	24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft:	0
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft:	5304
Number of Annual Trim Test(s) per Aircraft:	0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins):	0
Takeoff [Military] (mins):	0
Takeoff [After Burn] (mins):	0
Climb Out [Intermediate] (mins):	1.89
Approach [Approach] (mins):	5.43
Taxi/Idle In [Idle] (mins):	0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	12
Approach (mins):	27
Intermediate (mins):	9
Military (mins):	12
AfterBurn (mins):	0

B.2.10.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)

$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.2.10.4 Auxiliary Power Unit (APU)

B.2.10.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer
1	0.87	No	GTCP 331-200ER	Honeywell Inc.

B.2.10.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
GTCP 331-200ER	267.9	0.115	0.284	2.548	1.110	-1.000	-1.000	-1.0

B.2.10.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.2.11 Aircraft

B.2.11.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location
County: Hillsborough
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Remove 24 KC-135R Aircraft from MacDill AFB, Florida - TGOs

- Activity Description:
Remove KC-135R aircraft at MacDill AFB - TGOs only

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)

Pollutant	Emissions Per Year (TONs)

VOC	-0.200695
SO_x	-3.579069
NO_x	-19.166415
CO	-28.666000
PM 10	-5.187977

PM 2.5	-2.528763
Pb	0.000000
NH_3	0.000000
CO_2e	-10817.5

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.200695
SO_x	-3.579069
NO_x	-19.166415
CO	-28.666000
PM 10	-5.187977

Pollutant	Emissions Per Year (TONs)
PM 2.5	-2.528763
Pb	0.000000
NH_3	0.000000
CO_2e	-10817.5

B.2.11.2 Aircraft & Engines

B.2.11.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: KC-135R
Engine Model: F108-CF-100
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 4

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.2.11.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1136.00	0.19	1.07	3.88	23.65	2.07	0.16	3234
Approach	2547.00	0.06	1.07	5.73	8.57	1.55	0.76	3234
Intermediate	5650.00	0.03	1.07	11.04	2.32	0.65	0.36	3234
Military	6458.00	0.03	1.07	12.05	0.36	1.59	1.02	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.2.11.3 Flight Operations

B.2.11.3.1 Flight Operations Assumptions

- Flight Operations
Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 0
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 5130
Number of Annual Trim Test(s) per Aircraft: 0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military] (mins): 0
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 0
Approach [Approach] (mins): 7.68
Taxi/Idle In [Idle] (mins): 0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test
Idle (mins): 12
Approach (mins): 27
Intermediate (mins): 9
Military (mins): 12
AfterBurn (mins): 0

B.2.11.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.2.11.4 Auxiliary Power Unit (APU)

B.2.11.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

B.2.11.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

B.2.11.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.3 Alternative 2 – ACAM Report ROAA

1. General Information: The DAF's ACAM was used to perform an analysis to assess the potential air quality impacts associated with the action in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the EIAP (32 CFR 989); and the GCR (40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: FAIRCHILD AFB
State: Washington
County(s): Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: KC-46A Main Operating Base #6 Beddown

c. Project Number/s (if applicable): Alternative 2: KC-46A Beddown at Fairchild AFB, Washington

d. Projected Action Start Date: 10/2025

e. Action Description:

Alternative 2 would base 24 KC-46A aircraft in two squadrons of 12 PAA at Fairchild AFB as an active duty, Continental United States location for the KC-46A MOB 6 beddown. The KC-46A beddown would occur in two stages: beddown and operational. The beddown stage would involve construction/retrofit of required facilities, infrastructure, and prepared surfaces, which includes renovation, alteration, and demolition. The beddown stage would also include preparing support facilities for new personnel and students to support the mission. The operational stage would involve conducting day-to-day activities (e.g., operational missions, maintenance) at the installation, including flight operations and training in the existing regional airspace.

f. Point of Contact:
Name: Carolyn Hein
Title: Contractor
Organization: HDR EOC
Email:
Phone Number: (484) 612-1100

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 algorithms, emission factors, and methodologies used are described in detail in the DAF's *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and *Air Emissions Guide for Air Force Transitory Sources*.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the NAAQSs. These insignificance indicators are the 250 ton/year PSD major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5 percent of any NAAQS), and the GCR *de minimis* values (25 ton/year for lead and 100 ton/year for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5 percent of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see Chapter 4 of the *Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments*.

The action's net emissions for every year through achieving steady state were compared against the insignificance indicator and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.477	250	No
NOx	2.595	250	No
CO	3.734	250	No
SOx	0.009	250	No
PM 10	72.854	250	No
PM 2.5	0.098	250	No
Pb	0.000	25	No
NH3	0.003	250	No
CO2e	856.7		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.111	250	No
NOx	6.362	250	No
CO	8.825	250	No
SOx	0.019	250	No
PM 10	21.365	250	No
PM 2.5	0.245	250	No
Pb	0.000	25	No
NH3	0.008	250	No
CO2e	1883.3		

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.071	250	No
NOx	6.181	250	No
CO	8.491	250	No
SOx	0.018	250	No
PM 10	0.241	250	No
PM 2.5	0.239	250	No
Pb	0.000	25	No
NH3	0.008	250	No
CO2e	1802.0		

2028

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	14.613	250	No
NOx	39.994	250	No
CO	7.869	250	No
SOx	1.185	250	No
PM 10	-1.217	250	No
PM 2.5	-0.368	250	No
Pb	0.000	25	No
NH3	0.018	250	No
CO2e	5351.4		

2029 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	7.979	250	No
NOx	141.432	250	No
CO	5.977	250	No
SOx	4.683	250	No
PM 10	-5.590	250	No
PM 2.5	-2.189	250	No
Pb	0.000	25	No
NH3	0.047	250	No
CO2e	15996.8		

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 would not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

Carolyn Hein, Contractor

11/18/2022
DATE

B.4 Alternative 2 – Detail ACAM Report for the Beddown of 24 KC-46A PAA at Fairchild AFB

B.4.1 General Information

- Action Location
Base: FAIRCHILD AFB
State: Washington
County(s): Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: KC-46A Main Operating Base #6 Beddown

- Project Number/s (if applicable): Alternative 2: KC-46A Beddown at Fairchild AFB, Washington

- Projected Action Start Date: 10 / 2025

- Action Purpose and Need:
The purpose of the Proposed Action is to recapitalize aging tanker aircraft (KC-135 Stratotanker) currently used by the Department of the Air Force with the KC-46A model to better address current and future mission requirements, offer expanded capability, and provide life-cycle cost savings in comparison to continued operation of existing KC-135 Stratotanker.

The Proposed Action to establish Main Operating Base #6 (MOB 6) is intended to provide a fully capable, combat operational KC-46A aerial refueling force at the MOB 6 location(s) to accomplish aerial refueling and related missions. The mission-ready KC-46A squadrons would allow immediate and effective employment in exercises, peacekeeping operations, contingencies, and combat. Bedding down and operating the KC-46A would allow DAF to maintain combat capability and mission readiness as U.S. military resources commit to missions throughout the world.

The MOB 6 beddown of the KC-46A is needed because the KC-46A would provide mission essential capabilities currently lacking in the existing tanker fleet, resulting in fully capable, combat-operational tanker force to accomplish aerial refueling and related worldwide missions. Additional capabilities include receiver capability, night vision, multi-point refueling, connectivity to command and control assets, and defensive protection.

- Action Description:
Alternative 2 would base 24 KC-46A aircraft in two squadrons of 12 Primary Aerospace Vehicle Authorization (PAA) at Fairchild AFB as an active duty, continental United States location for the KC-46A Main Operating Base #6 (MOB 6) beddown. The KC-46A beddown would occur in two stages: a beddown stage and an operational stage. The beddown stage would involve construction/retrofit of required facilities, infrastructure, and prepared surfaces, which includes renovation, alteration, and demolition. The beddown stage would also include preparing support facilities for new personnel and students to support the mission. The operational stage would involve conducting day-to-day activities (e.g., operational missions, maintenance) at the installation, including flight operations and training in the existing regional airspace

- Point of Contact

Name: Carolyn Hein
Title: Contractor
Organization: HDR EOC
Email:
Phone Number: (484) 612-1100

- Activity List:

	Activity Type	Activity Title
2.	Aircraft	Beddown 24 KC-46A Aircraft at Fairchild AFB, Washington - LTOs, APU, and Engine Testing
3.	Aircraft	Remove 24 KC-135R Aircraft from Fairchild AFB, Washington - LTOs, APU, Engine Testing
4.	Construction / Demolition	New Facility Construction
5.	Construction / Demolition	Facility Renovations
6.	Construction / Demolition	Facility and Airfield Improvements
7.	Personnel	Addition of Personnel
8.	Heating	Heating of New Facilities
9.	Paint Booth	KC-46A Maintenance Hangar Paint Booth
10.	Aircraft	Beddown 24 KC-46A Aircraft at Fairchild AFB, Washington - TGOs
11.	Aircraft	Remove 24 KC-135R Aircraft from Fairchild AFB, Washington - TGOs

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

B.4.2 Aircraft

B.4.2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Beddown 24 KC-46A Aircraft at Fairchild AFB, Washington - LTOs, APU, and Engine Testing

- Activity Description:
Beddown 24 KC-46A Aircraft at Fairchild AFB, and associated LTOs, APU, and Engine Run-up Testing operations. Assumed aerospace ground equipment (AGE) used for the KC-46A that would be added would be similar to the AGE used for the KC-135A that would be removed. Therefore, AGE-related emissions added from KC-46A beddown would be similar to the reduction in AGE-related emissions from KC-135 removal. Therefore, it is assumed no net emissions change from AGE.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes

End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	6.941093
SO_x	3.227617
NO_x	62.605160
CO	25.669911
PM 10	0.217618

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.188962
Pb	0.000000
NH_3	0.000000
CO_2e	9267.4

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	6.820312
SO_x	2.977164
NO_x	56.681652
CO	25.116568
PM 10	0.201106

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.174790
Pb	0.000000
NH_3	0.000000
CO_2e	8510.4

- Activity Emissions [Test Cell part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.120782
SO_x	0.250453
NO_x	5.923508
CO	0.553342
PM 10	0.016512

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.014171
Pb	0.000000
NH_3	0.000000
CO_2e	757.0

B.4.2.2 Aircraft & Engines

B.4.2.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: KC-46A
Engine Model: PW4062
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.4.2.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1666.68	12.49	1.07	3.78	42.61	0.11	0.10	3234
Approach	5698.45	0.10	1.07	12.17	1.93	0.05	0.04	3234
Intermediate	16865.19	0.08	1.07	25.98	0.50	0.07	0.06	3234
Military	21627.13	0.09	1.07	34.36	0.61	0.08	0.07	3234

After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.4.2.3 Flight Operations

B.4.2.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 1306.5
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 0
Number of Annual Trim Test(s) per Aircraft: 1

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 7.125
Takeoff [Military] (mins): 1.74
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 1.24
Approach [Approach] (mins): 4.88
Taxi/Idle In [Idle] (mins): 7.125

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins): 12
Approach (mins): 27
Intermediate (mins): 9
Military (mins): 12
AfterBurn (mins): 0

B.4.2.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)

AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.4.2.4 Auxiliary Power Unit (APU)

B.4.2.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer
1	0.87	No	GTCP 331-200ER	Honeywell Inc.

2.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
GTCP 331-200ER	267.9	0.115	0.284	2.548	1.110	-1.000	-1.000	-1.0

B.4.2.4.2 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.4.2.5 Aircraft Engine Test Cell

B.4.2.5.1 Aircraft Engine Test Cell Assumptions

- Engine Test Cell
Total Number of Aircraft Engines Tested Annually: 48

- Default Settings Used: No

- Annual Run-ups / Test Durations
Annual Run-ups (Per Aircraft Engine): 1
Idle Duration (mins): 12
Approach Duration (mins): 27
Intermediate Duration (mins): 9
Military Duration (mins): 12
After Burner Duration (mins): 0

B.4.2.5.2 Aircraft Engine Test Cell Emission Factor(s)

- See Aircraft & Engines Emission Factor(s)

B.4.2.5.3 Aircraft Engine Test Cell Formula(s)

- Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)

$TestCellPS_{POL}$ = (TD / 60) * (FC / 1000) * EF * NE * ARU / 2000

$TestCellPS_{POL}$: Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Total Number of Engines (For All Aircraft)
ARU: Annual Run-ups (Per Aircraft Engine)
2000: Conversion Factor pounds to TONs

- Aircraft Engine Test Cell Emissions per Year
$TestCell = TestCellPS_{IDLE} + TestCellPS_{APPROACH} + TestCellPS_{INTERMEDIATE} + TestCellPS_{MILITARY} + TestCellPS_{AFTERBURN}$

TestCell: Aircraft Engine Test Cell Emissions (TONs)
$TestCellPS_{IDLE}$: Aircraft Engine Test Cell Emissions for Idle Power Setting (TONs)
$TestCellPS_{APPROACH}$: Aircraft Engine Test Cell Emissions for Approach Power Setting (TONs)
$TestCellPS_{INTERMEDIATE}$: Aircraft Engine Test Cell Emissions for Intermediate Power Setting (TONs)
$TestCellPS_{MILITARY}$: Aircraft Engine Test Cell Emissions for Military Power Setting (TONs)
$TestCellPS_{AFTERBURN}$: Aircraft Engine Test Cell Emissions for After Burner Power Setting (TONs)

B.4.3 Aircraft

B.4.3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Remove 24 KC-135R Aircraft from Fairchild AFB, Washington - LTOs, APU, Engine Testing

- Activity Description:
Remove 24 KC-135R aircraft and associated operations (LTOs, APU, and Engine Run-up Testing) from Fairchild AFB, Washington.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	-0.126188
SO_x	-1.461731
NO_x	-9.604017
CO	-15.337217
PM 10	-2.210900

Pollutant	Emissions Per Year (TONs)
PM 2.5	-0.762207
Pb	0.000000
NH_3	0.000000
CO_2e	-4418.0

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.117862
SO_x	-1.281332
NO_x	-8.050297
CO	-14.491123
PM 10	-1.978081

Pollutant	Emissions Per Year (TONs)
PM 2.5	-0.640863
Pb	0.000000
NH_3	0.000000
CO_2e	-3872.7

- Activity Emissions [Test Cell part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.008326
SO_x	-0.180399
NO_x	-1.553719
CO	-0.846094
PM 10	-0.232820

Pollutant	Emissions Per Year (TONs)
PM 2.5	-0.121344
Pb	0.000000
NH_3	0.000000
CO_2e	-545.2

B.4.3.2 Aircraft & Engines

B.4.3.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: KC-135R
Engine Model: F108-CF-100
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 4

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.4.3.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1136.00	0.19	1.07	3.88	23.65	2.07	0.16	3234
Approach	2547.00	0.06	1.07	5.73	8.57	1.55	0.76	3234
Intermediate	5650.00	0.03	1.07	11.04	2.32	0.65	0.36	3234
Military	6458.00	0.03	1.07	12.05	0.36	1.59	1.02	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.4.3.3 Flight Operations

B.4.3.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft:	24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft:	811
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft:	0
Number of Annual Trim Test(s) per Aircraft:	1

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins):	7.125
Takeoff [Military] (mins):	0.83
Takeoff [After Burn] (mins):	0
Climb Out [Intermediate] (mins):	0.61
Approach [Approach] (mins):	5.13
Taxi/Idle In [Idle] (mins):	7.125

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	12
Approach (mins):	27
Intermediate (mins):	9
Military (mins):	12
AfterBurn (mins):	0

B.4.3.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)

$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.4.3.4 Auxiliary Power Unit (APU)

B.4.3.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

B.4.3.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

B.4.3.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.4.3.5 Aircraft Engine Test Cell

B.4.3.5.1 Aircraft Engine Test Cell Assumptions

- Engine Test Cell
Total Number of Aircraft Engines Tested Annually: 96

- Default Settings Used: No

- Annual Run-ups / Test Durations

Annual Run-ups (Per Aircraft Engine):	1
Idle Duration (mins):	12
Approach Duration (mins):	27
Intermediate Duration (mins):	9
Military Duration (mins):	12
After Burner Duration (mins):	0

B.4.3.5.2 Aircraft Engine Test Cell Emission Factor(s)

- See Aircraft & Engines Emission Factor(s)

B.4.3.5.3 Aircraft Engine Test Cell Formula(s)

- Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)

$TestCellPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * ARU / 2000$

$TestCellPS_{POL}$: Aircraft Engine Test Cell Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Total Number of Engines (For All Aircraft)
ARU: Annual Run-ups (Per Aircraft Engine)
2000: Conversion Factor pounds to TONs

- Aircraft Engine Test Cell Emissions per Year

$TestCell = TestCellPS_{IDLE} + TestCellPS_{APPROACH} + TestCellPS_{INTERMEDIATE} + TestCellPS_{MILITARY} + TestCellPS_{AFTERBURN}$

TestCell: Aircraft Engine Test Cell Emissions (TONs)
$TestCellPS_{IDLE}$: Aircraft Engine Test Cell Emissions for Idle Power Setting (TONs)
$TestCellPS_{APPROACH}$: Aircraft Engine Test Cell Emissions for Approach Power Setting (TONs)
$TestCellPS_{INTERMEDIATE}$: Aircraft Engine Test Cell Emissions for Intermediate Power Setting (TONs)
$TestCellPS_{MILITARY}$: Aircraft Engine Test Cell Emissions for Military Power Setting (TONs)
$TestCellPS_{AFTERBURN}$: Aircraft Engine Test Cell Emissions for After Burner Power Setting (TONs)

B.4.4 Construction/Demolition

B.4.4.1 General Information & Timeline Assumptions

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: New Facility Construction

- Activity Description:
Construction of New Facilities:
2-Bay Fuel Cell and Wash Rack Hangar with Back Shops (178,013 square feet)
Mission Planning Center (4,238 square feet)
Installation Deployment Readiness Center (21,435 square feet)
Squadron Operations Facility (2 KC-46A ANG) (29,745 square feet)
Supply Warehouse (81,616 square feet)

Total = 315,047 square feet

Assumed no materials are required to be hauled on- or off-site due to site grading; excavated spoils will be used on-site. Conservatively assumed all site grading for new facility construction is done in FY2028.
Also assumed the following: (1) no new emergency generator(s), or if any were needed for new facilities, their emissions would be offset by removing a generator(s) that was supporting KC-135 operations/facilities; (2) For special vehicles and non-road combustion equipment needed to support KC-46A operations/facilities, their operation/emissions would be equally offset by eliminating or reusing vehicles and non-road equipment that were supporting KC-135 operations/facilities; (3) KC-46A deicing, fuel cell maintenance, composite repair, NDI testing, and fuel storage/dispensing operations/emissions would be equally offset by eliminating those corresponding operations/emissions supporting the KC-135 operations/facilities.

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	4.684260
SO_x	0.020011
NO_x	6.127169
CO	8.065448
PM 10	22.148181

Pollutant	Total Emissions (TONs)
PM 2.5	0.206927
Pb	0.000000
NH_3	0.009927
CO_2e	1963.9

B.4.4.2 Site Grading Phase

B.4.4.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

B.4.4.2.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 315047
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.4.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.4.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.4.3 Trenching/Excavating Phase

B.4.4.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration

Number of Month: 4
Number of Days: 0

B.4.4.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 315047
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.4.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0676	0.0014	0.3314	0.5695	0.0147	0.0147	0.0061	132.89
Other Construction Equipment Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0442	0.0012	0.2021	0.3473	0.0068	0.0068	0.0039	122.60
Rubber Tired Dozers Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.1671	0.0024	1.0824	0.6620	0.0418	0.0418	0.0150	239.45
Tractors/Loaders/Backhoes Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211

HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.4.3.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.4.4 Building Construction Phase

B.4.4.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.4.4.4.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 315047
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	7
Forklifts Composite	2	7
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.4.4.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.4.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

B.4.4.5 Architectural Coatings Phase

B.4.4.5.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 9
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 1
Number of Days: 0

B.4.4.5.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 315047
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.4.5.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.4.5.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)

800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.4.5 Construction/Demolition

B.4.5.1 General Information & Timeline Assumptions

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Facility Renovations

- Activity Description:
Facility Renovations [Assumed 25% of total square footage (652,671 square feet) is construction to equate the renovations]:
KC-46A AMXS & 2 AMUs; Building 2090 (27,076 square feet)
KC-135 AMXS & 2 AMUs; Building 2097 (25,254 square feet)
Squadron Operations Facility (2 KC-46A AD ARSs); Building 2005 (23,892 square feet)
Squadron Operations Facility (2 KC-135 AD ARSs); Building 2007 (26,326 square feet)
4-Bay Hangar with Backshops; Building 2050 (463,498 square feet)
DASH-21, AME, ATGL, Seat Pallet, Engine Storage; Building 1003 (31,499 square feet)
AGE MX; Building 1013 (27,563 square feet)
KC-46A CTK; Building 1017 (27,563 square feet)
Enclosed water fill station for deicing operations (4,679 square feet)

Total square footage = 652,671 square feet (25 percent of total square footage = 163,167.75 square feet).

Assumed 652,671 square feet would require architectural coatings.

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	8.339394
SO_x	0.014455
NO_x	4.547789
CO	6.314027
PM 10	0.154533

Pollutant	Total Emissions (TONs)
PM 2.5	0.153051
Pb	0.000000
NH_3	0.006879
CO_2e	1407.8

B.4.5.2 Building Construction Phase

B.4.5.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.4.5.2.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 163167.75
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.4.5.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.5.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.5.3 Architectural Coatings Phase

B.4.5.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 6
Number of Days: 0

B.4.5.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 652671
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.5.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.5.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase
$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.4.6 Construction/Demolition

B.4.6.1 General Information & Timeline Assumptions

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Facility and Airfield Improvements

- Activity Description:
Facility and Airfield Improvements:
Flight Simulator Facility / FUT Complex (50,719 square foot addition)
Parking apron and hydrant fuel system expansion (1,612,029 square foot renovation; 398,995 square foot addition)
Engine run-up area (195,553 square foot renovation)
Total renovations = 1,137,582 square feet
Total additions = 449,714 square feet

Total assumed construction area: 50,719 square feet (i.e., Flight Simulator Facility/FUT Complex)
(Assumed 500 square feet needed for trenching plus total facility and airfield renovation/addition square footage for excavation)

- Activity Start Date
Start Month: 10
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9

End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	2.253511
SO_x	0.025918
NO_x	9.098818
CO	13.045229
PM 10	72.338287

Pollutant	Total Emissions (TONs)
PM 2.5	0.401796
Pb	0.000000
NH_3	0.008191
CO_2e	2522.4

B.4.6.2 Trenching/Excavating Phase

B.4.6.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 4
Number of Days: 0

B.4.6.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 1807796
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	50.00	50.00	0	0	0	0	0

B.4.6.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.541	000.007	000.605	004.970	000.014	000.013		000.034	00366.775
LDGT	000.730	000.010	001.051	007.932	000.016	000.014		000.034	00491.466
HDGV	001.333	000.015	003.076	026.359	000.041	000.036		000.045	00764.988
LDDV	000.257	000.003	000.316	003.374	000.007	000.006		000.008	00372.571
LDDT	000.574	000.005	000.856	006.977	000.009	000.008		000.008	00581.646
HDDV	000.839	000.014	009.019	002.812	000.375	000.345		000.029	01554.798
MC	002.423	000.008	000.845	015.088	000.029	000.026		000.050	00398.949

B.4.6.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.6.3 Building Construction Phase

B.4.6.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.4.6.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 50719
Height of Building (ft): 35
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

B.4.6.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0680	0.0013	0.4222	0.3737	0.0143	0.0143	0.0061	128.77
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0236	0.0006	0.0859	0.2147	0.0025	0.0025	0.0021	54.449
Generator Sets Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0287	0.0006	0.2329	0.2666	0.0080	0.0080	0.0025	61.057
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0335	0.0007	0.1857	0.3586	0.0058	0.0058	0.0030	66.872
Welders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0214	0.0003	0.1373	0.1745	0.0051	0.0051	0.0019	25.650

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.6.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.6.4 Architectural Coatings Phase

B.4.6.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 9
Start Quarter: 1
Start Year: 2028

- Phase Duration
Number of Month: 1
Number of Days: 0

B.4.6.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 50719
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.6.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

6.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase
$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

B.4.6.5 Paving Phase

B.4.6.5.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 36
Number of Days: 0

B.4.6.5.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 1756577

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	8
Rollers Composite	2	6

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

B.4.6.5.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.541	000.007	000.605	004.970	000.014	000.013		000.034	00366.775
LDGT	000.730	000.010	001.051	007.932	000.016	000.014		000.034	00491.466
HDGV	001.333	000.015	003.076	026.359	000.041	000.036		000.045	00764.988
LDDV	000.257	000.003	000.316	003.374	000.007	000.006		000.008	00372.571
LDDT	000.574	000.005	000.856	006.977	000.009	000.008		000.008	00581.646
HDDV	000.839	000.014	009.019	002.812	000.375	000.345		000.029	01554.798
MC	002.423	000.008	000.845	015.088	000.029	000.026		000.050	00398.949

B.4.6.5.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)

HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)

B.4.7 Personnel

B.4.7.1.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Addition of Personnel

- Activity Description:

Net change of additional 334 military personnel, additional 4 government civilian and contractor personnel, and additional 500 military dependents and family members. Conservatively assumed all military dependents and family members commute.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.699765
SO_x	0.005090
NO_x	0.637645
CO	8.213569
PM 10	0.018607

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.016563
Pb	0.000000
NH_3	0.046812
CO_2e	733.8

B.4.7.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 334
Civilian Personnel: 4
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule
Active Duty Personnel: 5 Days Per Week (default)
Civilian Personnel: 5 Days Per Week (default)
Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

B.4.7.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

B.4.7.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e

LDGV	000.278	000.002	000.219	003.276	000.008	000.007		000.023	00320.329
LDGT	000.351	000.003	000.382	004.545	000.010	000.009		000.024	00414.211
HDGV	000.705	000.005	001.074	015.763	000.025	000.022		000.045	00763.488
LDDV	000.122	000.003	000.133	002.396	000.004	000.004		000.008	00309.634
LDDT	000.266	000.004	000.384	004.133	000.007	000.007		000.008	00440.653
HDDV	000.498	000.013	005.110	001.743	000.169	000.156		000.028	01479.227
MC	002.339	000.003	000.821	013.581	000.029	000.025		000.054	00399.711

B.4.7.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year
$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year
$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year
$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

B.4.8 Heating

B.4.8.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Heating of New Facilities

- Activity Description:
Heating of new facilities:
2-Bay Fuel Cell and Wash Rack Hangar with Back Shops (178,013 square feet)

Mission Planning Center (4,238 square feet)
Installation Deployment Readiness Center (21,435 square feet)
Squadron Operations Facility (29,745 square feet)
Supply Warehouse (81,616 square feet)

Heating for facility additions:
Flight Simulator Facility/FUT Complex (50,719 square feet)

Assumed heating occurs over a 6 month period for 4380 hours per year

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.074817
SO_x	0.008162
NO_x	1.360301
CO	1.142653
PM 10	0.103383

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.103383
Pb	0.000000
NH_3	0.000000
CO_2e	1637.7

B.4.8.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 365766
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0781

- Default Settings Used: No

- Boiler/Furnace Usage
Operating Time Per Year (hours): 4380

B.4.8.3 Heating Emission Factor(s)

- Heating Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
5.5	0.6	100	84	7.6	7.6			120390

B.4.8.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year

FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year

HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

B.4.9 Paint Booth

B.4.9.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: KC-46A Maintenance Hangar Paint Booth

- Activity Description:
KC-46A Maintenance Hangar Paint Booth. Assumed paint booth is relatively small and its operation and emissions will be similar to the reduction in maintenance painting conducted for the KC-135 aircraft that will be removed from the installation. Therefore, it is assumed no emissions increase due to painting.

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.000000
SO_x	0.000000
NO_x	0.000000
CO	0.000000

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

PM 10	0.000000		

B.4.9.2 Paint Booth Assumptions

- Paint Booth
Coating throughput (gallons/year): 0

- Default Settings Used: Yes

- Paint Booth Consumption
Coating used: Quick Dry Enamel (default)
Specific gravity of coating: 1.19 (default)
Coating VOC content by weight (%): 32 (default)
Efficiency of control device (%): 0 (default)

B.4.9.3 Paint Booth Formula(s)

- Paint Booth Emissions per Year
PBE_{VOC}= (VOC / 100) * CT * SG * 8.35 * (1 - (CD / 100)) / 2000

PBE_{VOC}: Paint Booth VOC Emissions (TONs per Year)
VOC: Coating VOC content by weight (%)
(VOC / 100): Conversion Factor percent to decimal
CT: Coating throughput (gallons/year)
SG: Specific gravity of coating
8.35: Conversion Factor the density of water
CD: Efficiency of control device (%)
(1 - (CD / 100)): Conversion Factor percent to decimal (Not effected by control device)
2000: Conversion Factor pounds to tons

B.4.10 Aircraft

B.4.10.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Beddown 24 KC-46A Aircraft at Fairchild AFB, Washington - TGOs

- Activity Description:
Beddown 24 KC-46A Aircraft at Fairchild AFB - TGOs only

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.553461
SO_x	6.346934
NO_x	110.278778
CO	7.504077
PM 10	0.351748

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.292431
Pb	0.000000
NH_3	0.000000
CO_2e	19183.2

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.553461
SO_x	6.346934
NO_x	110.278778
CO	7.504077
PM 10	0.351748

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.292431
Pb	0.000000
NH_3	0.000000
CO_2e	19183.2

B.4.10.2 Aircraft & Engines

B.4.10.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: KC-46A
Engine Model: PW4062
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 2

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.4.10.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1666.68	12.49	1.07	3.78	42.61	0.11	0.10	3234
Approach	5698.45	0.10	1.07	12.17	1.93	0.05	0.04	3234
Intermediate	16865.19	0.08	1.07	25.98	0.50	0.07	0.06	3234
Military	21627.13	0.09	1.07	34.36	0.61	0.08	0.07	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.4.10.3 Flight Operations

B.4.10.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 0
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 5304
Number of Annual Trim Test(s) per Aircraft: 0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins):	0
Takeoff [Military] (mins):	0
Takeoff [After Burn] (mins):	0
Climb Out [Intermediate] (mins):	1.85
Approach [Approach] (mins):	6.3
Taxi/Idle In [Idle] (mins):	0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	12
Approach (mins):	27
Intermediate (mins):	9
Military (mins):	12
AfterBurn (mins):	0

B.4.10.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)

60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.4.10.4 Auxiliary Power Unit (APU)

B.4.10.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer
1	0.87	No	GTCP 331-200ER	Honeywell Inc.

B.4.10.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
GTCP 331-200ER	267.9	0.115	0.284	2.548	1.110	-1.000	-1.000	-1.0

B.4.10.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

B.4.11 Aircraft

B.4.11.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location
County: Spokane
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Remove 24 KC-135R Aircraft from Fairchild AFB, Washington - TGOs

- Activity Description:
Remove 24 KC-135R aircraft from Fairchild AFB, Washington - TGOs only

- Activity Start Date
Start Month: 10
Start Year: 2028

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	-0.163561
SO_x	-3.443342
NO_x	-23.845448
CO	-21.216073
PM 10	-4.070915

Pollutant	Emissions Per Year (TONs)
PM 2.5	-2.027680
Pb	0.000000
NH_3	0.000000
CO_2e	-10407.3

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Emissions Per Year (TONs)
VOC	-0.163561
SO_x	-3.443342
NO_x	-23.845448
CO	-21.216073
PM 10	-4.070915

Pollutant	Emissions Per Year (TONs)
PM 2.5	-2.027680
Pb	0.000000
NH_3	0.000000
CO_2e	-10407.3

B.4.11.2 Aircraft & Engines

B.4.11.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: KC-135R
Engine Model: F108-CF-100
Primary Function: Transport - Bomber
Aircraft has After burn: No
Number of Engines: 4

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

B.4.11.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e
Idle	1136.00	0.19	1.07	3.88	23.65	2.07	0.16	3234
Approach	2547.00	0.06	1.07	5.73	8.57	1.55	0.76	3234
Intermediate	5650.00	0.03	1.07	11.04	2.32	0.65	0.36	3234
Military	6458.00	0.03	1.07	12.05	0.36	1.59	1.02	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

B.4.11.3 Flight Operations

B.4.11.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 24
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft: 0
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft: 3378.5
Number of Annual Trim Test(s) per Aircraft: 0

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military] (mins): 0
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 1.6
Approach [Approach] (mins): 7.67
Taxi/Idle In [Idle] (mins): 0

Per the Air Emissions Guide for Air Force Mobile Sources, the defaults values for military aircraft equipped with after burner for takeoff is 50% military power and 50% afterburner. (Exception made for F-35 where KARNES 3.2 flight profile was used)

- Trim Test

Idle (mins):	12
Approach (mins):	27
Intermediate (mins):	9
Military (mins):	12
AfterBurn (mins):	0

B.4.11.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

B.4.11.4 Auxiliary Power Unit (APU)

B.4.11.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

B.4.11.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO_2e

B.4.11.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year

$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)

LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

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MOB6

KC-46A MAIN OPERATING BASE NO.6 BEDDOWN

HEADQUARTERS AIR MOBILITY COMMAND