EXECUTIVE SUMMARY

Draft

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR TINIAN DIVERT INFRASTRUCTURE IMPROVEMENTS, COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

UNITED STATES AIR FORCE











PRIVACY ADVISORY

This Draft Supplemental Environmental Impact Statement (SEIS) is provided for public comment in accordance with the National Environmental Policy Act, the President's Council on Environmental Quality National Environmental Policy Act Regulations (40 Code of Federal Regulations §§ 1500–1508), and 32 Code of Federal Regulations § 989, Environmental Impact Analysis Process.

The Environmental Impact Analysis Process provides an opportunity for public input on U.S. Air Force (USAF) decision making, allows the public to offer inputs on alternative ways for USAF to accomplish what it is proposing, and solicits comments on USAF's analysis of environmental effects.

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 Personal information, home addresses, telephone numbers, and emails addresses will not be published in the Final SEIS.

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SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

FOR

TINIAN DIVERT INFRASTRUCTURE IMPROVEMENTS

HEADQUARTERS PACIFIC AIR FORCES (HQ PACAF)

JOINT BASE PEARL HARBOR-HICKAM, HAWAI'I

MAY 2019

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Abbreviations and Acronyms

CEQ Council on Environmental Quality

CFR Code of Federal Regulations

CNMI Commonwealth of the Northern Mariana Islands

EFH Essential Fish Habitat

EIS Environmental Impact Statement

HQ PACAF Headquarters Pacific Air Forces

NEPA National Environmental Policy Act

PIM Plan Pipeline Integrity Management Plan

ROD Record of Decision

ROW right-of-way

SEIS Supplemental Environmental Impact Statement

TR Tinian Route

UFC Unified Facilities Criteria

USAF U.S. Air Force

UXO unexploded ordnance

Executive Summary

₂ ES 1. Introduction

- The U.S. Air Force (USAF) has prepared a Draft Supplemental Environmental Impact Statement
- 4 (SEIS) to address proposed changes since the September 2016 completion of the
- 5 Environmental Impact Statement (EIS) for Divert Activities and Exercises ("2016 Divert EIS")
- and Record of Decision (ROD), signed December 7, 2016. The ROD announced the USAF
- decision to select the Modified Tinian Alternative (Final EIS, Section 2.7), and specifically the
- 8 North Option (Final EIS, Section 2.5.2), as a future Divert location. The 2016 Divert ROD and
- 9 2016 Divert EIS are available for review or downloading from the project website at:
- 10 http://pacafdivertmarianaseis.com/archive.
- In the 2016 Divert EIS (Final EIS, Section 2.5.2), USAF proposed to construct facilities and
- infrastructure at the Tinian International Airport (North Option), on Tinian in the Commonwealth
- of the Northern Mariana Islands (CNMI), to support cargo, tanker, and similar aircraft and
- associated support personnel for divert operations, periodic exercises, and humanitarian
- assistance and disaster relief. The 2016 Divert EIS evaluated construction of fuel infrastructure
- at the Tinian airport and seaport, and also evaluated fuel transport from the seaport to the
- airport by tanker truck (Final EIS, Section 2.5.2). After the ROD was signed, USAF conducted
- further evaluation of fuel transfer methods and associated infrastructure, including the feasibility
- of different alternatives that were not considered in the 2016 Divert EIS. USAF now proposes to
- 20 construct a fuel pipeline, and associated infrastructure at the seaport, to transport fuel from the
- seaport to the airport. The proposed pipeline would eliminate the need for bulk fuel storage
- tanks at the Tinian seaport and the need for fuel tanker trucks to transport fuel from the seaport
- to the airport, both analyzed in the 2016 Divert EIS; however, the other components of the fuel
- 24 system evaluated in the 2016 Divert EIS would not change (Final EIS, Section 2.5.2). USAF
- 25 also proposes to improve certain existing roads between the seaport and airport to support
- 26 Divert activities. **Table 2.1-1** of the Main Volume of the SEIS provides a comparison of the
- actions proposed in the 2016 Divert EIS and those proposed in this SEIS.
- 28 This Executive Summary provides an overview of the SEIS and is organized to familiarize the
- reader with the structure and content of the Main Volume of the SEIS, which provides a more
- 30 comprehensive discussion of the requirements for and potential environmental impacts of the
- Proposed Actions. The entire Tinian Divert Infrastructure Improvements SEIS consists of this
- 32 Executive Summary, the Main Volume, and the Appendices Volume.
- This Draft SEIS was developed and prepared for public distribution prior to landfall of Typhoon
- Yutu on Tinian in October 2018. USAF recognizes that Typhoon Yutu caused island-wide
- damage on Tinian and resulted in potentially significant changes to the manmade and natural
- environment on the island. USAF conducted visual inspections on Tinian post-Typhoon Yutu
- and examined areas proposed for infrastructure in support of the Tinian Divert Infrastructure
- Improvements. During these inspections, USAF determined that no changes were necessary to
- the Tinian Divert Infrastructure Improvements that were proposed during scoping in May 2018,
- and which are presented in **Section ES 4**. USAF also gathered information regarding the
- 41 existing conditions of resource areas analyzed in this SEIS. To the extent practicable, the

- description of resources has been revised to be consistent with conditions observed during the
- visual inspections conducted on Tinian post-Typhoon Yutu. USAF recognizes that conditions
- for some resources presented in this SEIS could differ from those currently present on Tinian
- 4 and that resource conditions will continue to change as Tinian recovers from Typhoon Yutu.
- 5 USAF will reconsider these conditions upon completion of the Draft SEIS and during
- development of the Final SEIS. The impact analyses presented in **Sections ES 7** and **ES 8** are
- 5 based on the potential impacts that could result from implementation of the Proposed Actions,
- described in **Section ES 4**, on the resource conditions as they are described in the SEIS.
- 9 The lead agency for this SEIS is the Department of the Air Force. Headquarters Pacific Air
- 10 Forces (HQPACAF), a USAF major command headquartered at Joint Base Pearl Harbor-
- Hickam, Hawai'i, developed this SEIS on behalf of USAF. This SEIS was prepared in
- compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code
- § 4321 et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the
- 14 Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508), and the
- 15 USAF implementing regulation for NEPA, 32 CFR § 989, as amended.

16 ES 2. Purpose of and Need for the Proposed Action

- 17 The overall purpose and need in the SEIS are described in **Section ES 2.1** and remain
- unchanged from those stated in the 2016 Divert EIS (Final EIS, Sections 1.3.1 and 1.3.2). The
- 19 purpose and need for the two specific Proposed Actions addressed in the SEIS are discussed in
- 20 further detail in **Section ES 2.2**.

ES 2.1 Purpose and Need for 2016 Divert Environmental Impact Statement

- The purpose of the original Proposed Action is to establish divert capabilities to support and
- conduct current, emerging, and future USAF exercises, while ensuring the capability to meet
- 25 mission requirements in the event that access to Andersen Air Force Base or other western
- 26 Pacific locations is limited or denied.
- 27 The original Proposed Action is needed because there is no existing divert or contingency
- 28 airfield on U.S. territory in the western Pacific that is designed and designated to provide
- 29 strategic operational and exercise capabilities for U.S. forces when needed, or that supports
- 30 humanitarian assistance and disaster relief in times of natural or man-made disasters.

ES 2.2 Purpose and Need for Supplemental Environmental Impact Statement

- 33 *Pipeline and Support Infrastructure.* The purpose of the proposed fuel pipeline and support
- infrastructure is to provide fuel from the seaport to bulk storage tanks at Tinian International
- 35 Airport. The fuel pipeline would result in lower overall lifecycle costs for fuel transfer and
- 36 eliminate the need for construction of fuel tanks at the seaport and the need for transfer of fuel
- by tanker truck. The pipeline and support infrastructure are needed to provide a safer, more
- reliable, secure, efficient and less costly method than was analyzed in the 2016 Divert EIS
- 39 (Final EIS, Section 2.5.2).

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- 1 **Roadway Improvements.** The purpose of the proposed surface road improvements is to
- 2 facilitate heavy vehicle traffic that is anticipated under the overall Divert project, while ensuring
- 3 the roads continue to provide adequate service to the local community. The roadway
- 4 improvements are needed because recent reconnaissance surveys and information received
- from Tinian officials indicate that roadways anticipated to be used for the overall Divert project
- 6 are in varying stages of disrepair and inadequate to support the heavy vehicle traffic that will be
- 7 required to build the Divert infrastructure and, if required, transfer fuel via tanker truck.

8 ES 3. Interagency and Public Involvement

- 9 USAF completed public scoping for the SEIS and is making the Draft SEIS available for public
- 10 review and comment. The public scoping period began by issuing a Notice of Intent in the
- 11 Federal Register on April 19, 2018, and ended on May 31, 2018. USAF also issued notices in
- local newspapers and mailed scoping notification letters to federal and CNMI agencies; elected
- officials; nongovernmental organizations; and interested individuals, including those on the
- distribution list for the 2016 Divert EIS. One public scoping meeting was held on Tinian on May
- 15 17, 2018 at Tinian Elementary School.
- 16 USAF has released the Draft SEIS to the public and agencies for review and comment and
- published a Notice of Availability in the Federal Register, which initiated a 45-day public
- comment period. USAF also issued notices in local newspapers and mailed Draft EIS
- notification letters to federal and CNMI agencies; elected officials; nongovernmental
- organizations; and interested individuals. One public hearing is scheduled on Tinian and full
- details on the hearing are provided in the Notice of Availability. Substantive comments received
- on the Draft SEIS will be considered and incorporated into the Final SEIS, as appropriate.

23 ES 4. Description of the Proposed Action and Alternatives

24 USAF proposes the following actions:

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- Construct a fuel pipeline from the Tinian seaport to the Tinian International Airport, to include a booster pump house and associated fire protection systems, a boom storage building, and necessary utility connections at the seaport.
- Improve certain existing roads between the seaport and airport that were previously analyzed for Divert vehicles in the 2016 Divert EIS (Final EIS, Section 2.5.2).
- 30 Each Proposed Action is independent of the other and has standalone value for supporting the
- Divert Activities and Exercises project. While full implementation of each Proposed Action
- would result in the greatest benefit for the Divert project, each of the Proposed Actions would
- also benefit the Divert project if implemented alone. No other actions associated with the Divert
- Activities and Exercises project would differ from what was presented in the 2016 Divert EIS
- (Final EIS, Section 2.5.2), including but not limited to: infrastructure proposed at the airport;
- 36 supporting utilities, fencing, and access roads; fuel delivery and offload; aircraft operations;
- 37 operational support personnel; and mitigations for these actions including construction
- monitoring, stormwater management, and general road repair. **Table 2.1-1** in **Section 2.1** of

- the Main Volume of the SEIS provides a comparison of the actions proposed in the 2016 Divert
- 2 EIS and those proposed in this SEIS.
- 3 **Figure ES-1** provides the locations of the pipeline and support infrastructure proposed in this
- 4 SEIS, as well land areas that were addressed in the 2016 Divert EIS for construction and
- 5 associated laydown areas, utilities, proposed mitigations, and long-term lease.
- 6 ES 4.1 Fuel Pipeline and Support Infrastructure
- 7 **Construction.** The proposed fuel pipeline would eliminate the need for bulk fuel storage tanks
- 8 at the Tinian seaport, and the need for fuel tanker trucks to transport fuel from the seaport to the
- 9 airport, as described in the 2016 Divert EIS (Final EIS, Section 2.5.2). However, the other
- components of the fuel infrastructure system evaluated in the 2016 Divert EIS (Final EIS,
- 11 Section 2.5.2) would not change.
- The proposed fuel pipeline and support infrastructure construction would take place over
- approximately 2 to 3 years. All fuel infrastructure would be designed and constructed in
- accordance with all appropriate federal, CNMI, Department of Defense, and USAF regulations
- for petroleum fuel pipelines and facilities, including Unified Facilities Criteria (UFC) 3-460-01,
- 16 Petroleum Fuel Facilities; the Pipeline Hazardous Materials Safety Administration's pipeline
- safety regulations specified in 49 CFR Part 190, Pipeline Safety Enforcement And Regulatory
- Procedures; Part 194, Response Plans For Onshore Oil Pipelines; Part 195, Transportation of
- 19 Hazardous Liquids by Pipelines; and Part 199, Drug And Alcohol Testing. As stated in UFC
- 3-460-01, Section 2-14.1, it is the firm policy of the Department of Defense to design and
- 21 construct fueling facilities in a manner that will prevent damage to the environment by accidental
- discharge of fuels, their vapors, or residues. Additional information on compliance actions and
- industry standards for fuels infrastructure design is included in **Appendix F**.
- 24 Portions of the proposed pipeline would be constructed at Tinian International Airport and the
- 25 Tinian seaport on public land acquired or leased by USAF and proposed for construction in the
- 26 2016 Divert EIS (Final EIS, Section 2.5.2). The pipeline would also be constructed on public
- land within easement rights held by the U.S. federal government that allow it to install, operate,
- and maintain fuel infrastructure and other utilities. Appropriate routing for use of these
- 29 easement rights would be coordinated with the CNMI, platted, and recorded. The pipeline
- would be constructed underground to prevent breaches, vandalism, sabotage, or any other
- means to disrupt the flow of fuel. The pipeline would be installed to a depth of approximately
- 32 3 feet within a 20-foot easement; however, the impacts analysis in the SEIS will assume that an
- 33 80-foot wide corridor could be disturbed during construction to allow for materials laydown and
- 34 routing adjustments.
- A booster pump house (3,750 square feet) and boom storage building (800 square feet) would
- be constructed near the seaport to support the fuel pipeline operations. The booster pump
- house and boom storage building would be co-located with a construction laydown yard,
- 38 biosecurity area, parking area, sanitary sewer septic tank system with leach field, water storage
- tanks, bioinfiltration swales, and utility lines and connections. Gravel pedestrian pathways and
- 40 access roads would also be created or widened within this area; all existing roads would remain

- open to the public. A total area of 8.23 acres could be disturbed for development of all seaport
- 2 support infrastructure.
- 3 Construction Materials. Transport of materials to support construction of the fuel pipeline
- 4 would not exceed the amount of fuel truck traffic analyzed in the 2016 Divert EIS, or would be
- 5 conducted by construction workers as part of their daily commute to the construction site.
- 6 Transport of construction materials to the seaport was addressed in the 2016 Divert EIS for
- 7 construction of the fuel tanks. Fewer volumes of construction materials would be needed for
- 8 development of the seaport support infrastructure than the fuel tanks because of the smaller
- 9 impervious surface footprint of the support infrastructure. Therefore, transport of construction
- materials to the seaport is addressed in the 2016 Divert EIS (Final EIS, Section 2.5.2) and is not
- analyzed further in this SEIS.
- 12 **Construction Workers.** Approximately 75 construction workers, in addition to those analyzed
- in the 2016 Divert EIS (Final EIS, Section 2.5.2), could be required to support construction of
- the pipeline and support infrastructure during the course of the construction period. It is
- assumed the entire workforce to support pipeline construction would be from off-island because
- the on-island workforce would be supporting construction of the infrastructure presented in the
- 17 2016 Divert EIS. The impact analysis in **Section 4** of the Main Volume of the SEIS assumes all
- construction workers would be needed during the 2- to 3-year construction period to determine
- 19 the maximum effect of construction workers.
- 20 **Operation.** Once the pipeline and support infrastructure are constructed and installed, fuel
- 21 would be delivered to and offloaded at the Tinian seaport per the existing fuel supply chain and
- fuel receipt protocols, as described in the 2016 Divert EIS (Final EIS, Section 2.5.2). Once
- offloaded at the existing seaport bulk receipt header, the fuel would then enter the bulk receipt
- 24 pipeline rather than being transferred to bulk fuel storage tanks. Fuel deliveries and operation
- of the pipeline would be managed by USAF until Defense Logistics Agency capitalization of the
- 26 pipeline.
- 27 USAF would follow Pipeline Hazardous Materials Safety Administration's pipeline safety
- regulations specified in 49 CFR Parts 190, 194-195, and 199; 40 CFR § 112 Oil Pollution
- 29 Prevention; USAF Technical Order 37-1-1, General Operations and Inspection of Installed Fuel
- 30 Storage and Dispensing Systems; UFC 3-460-03, Operation and Maintenance: Maintenance of
- 31 Petroleum Facilities; AFI 23-201, Fuels Management; AFI 32-1067, Water and Fuels Systems;
- 32 and AFI 32-7044, Storage Tank Environmental Compliance for the operation of the fuel pipeline
- and support infrastructure. Additionally, a Spill Prevention, Control, and Countermeasures Plan
- and a Facility Response plan would be implemented in compliance with the Clean Water Act
- and the regulations contained in 40 CFR Part 112. The safe, efficient, and economical
- 36 operation of petroleum storage, dispensing systems, and associated infrastructure depends
- largely on an effective and proactive recurring maintenance program. UFC 3-460-03
- 38 establishes the required frequency intervals for the recurring maintenance. Operation and
- maintenance of the pipeline would be managed by a Pipeline Integrity Management Plan (PIM
- 40 Plan) to assist with and guide pipeline integrity maintenance. PIM Plans improve the integrity
- 41 management of piping systems and help prevent leaks or pipeline failures. PIM Plans are
- developed based on the principles of American Petroleum Institute Standard 570, *Inspection*,

- 1 Repair, Alteration, and Rerating of In-Service Piping Systems, and federal and local regulations.
- 2 Additional information on compliance actions and industry standards is included in **Appendix F**.
- 3 ES 4.1.1 Fuel Pipeline and Support Infrastructure Action Alternatives
- 4 USAF is considering two route alternatives for the installation of the underground pipeline, the
- West route and the East route. See **Figure ES-1** for the support infrastructure location and
- 6 proposed fuel pipeline route alternatives.
- 7 **West Route.** The West route travels north from the Tinian seaport until it intersects Tinian
- 8 Route (TR) 26 (i.e., West Avenue), then stays on a northwestern path by following TR26, 6th
- 9 Avenue, and TR25 (i.e., 8th Avenue), and then turns northeast along TR23 to approach the
- airport from the west. This route is approximately 4.08 miles long.
- 11 **East Route.** The East route extends north from the Tinian seaport until it intersects TR26 and
- then stays on a northwestern path by following TR26 and 6th Avenue until it reaches TR24 (i.e.,
- 42nd Street) where it turns east. The route then continues east on TR24 until just south of the
- airport runway, where it turns north towards the airport and then west and eventually reconnects
- with the proposed West route to approach the airport from the west. This route is approximately
- 16 **4.94 miles long.**
- 17 Based on review of the 2016 Divert EIS and consideration of technical and siting factors, USAF
- determined that the proposed support infrastructure should be sited in the location originally
- 19 proposed for the bulk fuel storage facilities at the seaport and no other site alternatives were
- 20 identified or considered.
- 21 The exact location and length of either pipeline route and size of the support infrastructure
- 22 presented in **Figure ES-1** could shift within the constraints of the environmental effects analysis
- presented in **Section 4** of the Main Volume of the SEIS based on engineering, environmental,
- or design limiting factors; input from CNMI agencies; negotiations with property owners; or
- 25 potential changes requested by the Federal Aviation Administration for pipeline construction at
- the airport.
- 27 ES 4.1.2 Pipeline and Support Infrastructure No Action Alternative
- 28 CEQ's regulations for implementing NEPA, specifically 40 CFR § 1502.14(d), require the
- 29 analysis of a No Action Alternative in EISs, which provides a benchmark, enabling decision
- makers to compare the magnitude of the environmental effects to a proposed action and
- 31 alternatives.
- Under the No Action Alternative, the proposed fuel pipeline and support infrastructure would not
- be constructed. Under this alternative, Divert activities and exercises at Tinian International
- Airport (North) would be dependent on fuel trucks to transport fuel from the Tinian seaport to
- Tinian International Airport and fuel tanks would be constructed and operated at the seaport, as
- was analyzed in the 2016 Divert EIS (Final EIS, Section 2.5.2) and later selected in the ROD.
- 37 The No Action Alternative would increase fuel resupply time and increase the risk of
- 38 environmental impacts from potential fuel spills from trucks during loading, driving, and
- 39 offloading.

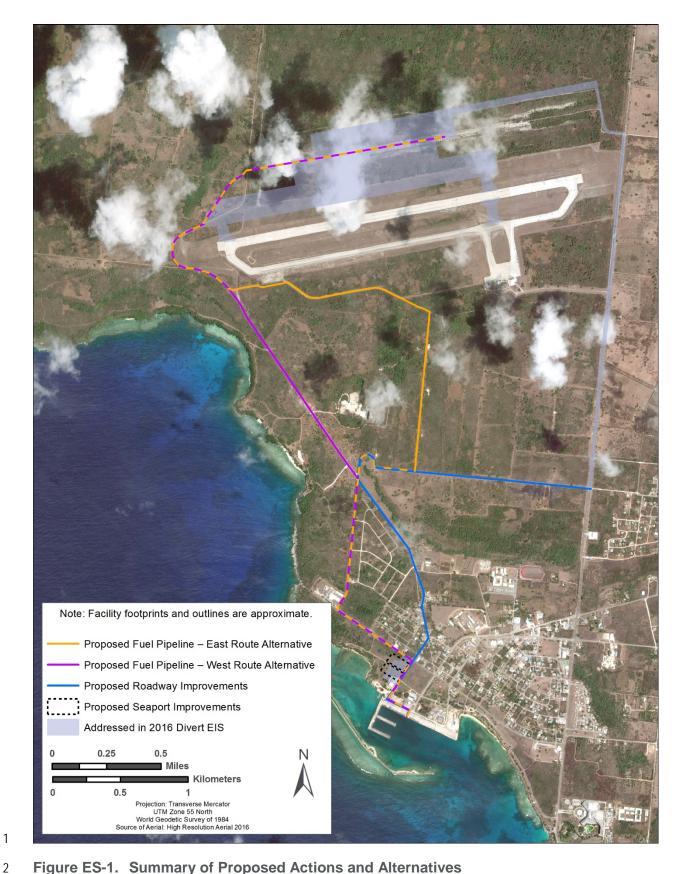


Figure ES-1. Summary of Proposed Actions and Alternatives

1 ES 4.2 Roadway Improvements

- 2 USAF proposes to improve roadways previously analyzed for Divert fuel vehicles in the 2016
- 3 Divert EIS (Final EIS, Section 2.5.2). The route proposed for improvements travels
- 4 approximately 2.51 miles from the Tinian seaport north to TR25, north along TR25 to its
- intersection with TR24, and east along TR24 to its intersection with TR21 (see **Figure ES-1**). If
- the pipeline is not constructed, this route would be utilized by fuel vehicles as described in the
- 7 2016 Divert EIS. Construction of the pipeline would eliminate the need for fuel transfer by
- 8 vehicle; therefore, if the pipeline is constructed, USAF would utilize this route for all Divert
- 9 construction vehicles rather than fuel vehicles.
- The road improvements would include replacement of the existing roadway surfaces, which
- would entail removing the existing deteriorated asphalt cap, grading the road subsurface, laying
- a new sub base, and finishing the surface with a new asphalt cap. Asphalt removed from the
- deteriorated cap would be reused as road improvement material or recycled on Tinian to the
- extent feasible. All roadway improvements would occur within the existing roadbeds and
- shoulders, and no roadbed widening or ROW alterations would occur. Road improvements
- would be executed either by USAF or the Defense Access Roads program and could take place
- prior to, during, or after construction of the Divert infrastructure identified in the 2016 Divert EIS
- (Final EIS, Section 2.5.2); however, road improvements are not anticipated to exceed 1 year of
- 19 total construction time.
- 20 The impacts analysis in this SEIS assumes that all roadways proposed for improvements would
- 21 be reconstructed with a new sub base and asphalt cap; however, portions of these roadways
- 22 may require less extensive repairs based on geotechnical analysis. Additionally, lesser
- 23 maintenance and repair of any road proposed for Divert, including TR21, could occur, as
- considered in the 2016 Divert EIS (Final EIS, Section 4.11.2).
- 25 **Construction Materials.** Construction materials, excluding reused materials from asphalt
- 26 removal, for the roadway improvements would be transferred from the seaport along the same
- 27 route that was proposed for fuel trucks in the 2016 Divert EIS (Final EIS, Section 2.5.2). An
- additional approximately 1,178 construction truck trips would be needed for the road
- improvements; this equates to approximately six dump trucks, making three trips per day, for 65
- 30 days over the course of 1 year.
- 31 **Construction Workers.** Approximately 25 construction workers, in addition to those analyzed
- in the 2016 Divert EIS, could be required to support construction of the road improvements. It is
- assumed the entire workforce to support the roadway improvements would be from off-island
- 34 because the on-island workforce would be supporting construction of the infrastructure
- presented in the 2016 Divert EIS (Final EIS, Section 2.5.2). The impact analysis in **Section 4** of
- the Main Volume of the SEIS assumes all construction workers would be needed during the 2-
- to 3-year construction period to determine the maximum effect of construction workers.
- 38 ES 4.2.1 Roadway Improvements No Action Alternative
- 39 Under the No Action Alternative, the proposed roadway improvements would not be
- 40 constructed. Under this alternative, only minor roadway repairs along the construction and fuel
- truck routes would occur, as was considered in the 2016 Divert EIS (Final EIS, Section 4.11.2).

- 1 The No Action Alternative would cause the continued deterioration of the Tinian roadways
- 2 proposed in the 2016 Divert EIS for Divert fuel trucks.

3 ES 5. Summary of Proposed Actions

- In summary, USAF proposes to accomplish the following actions:
 - Construct a fuel pipeline from the Tinian seaport to Tinian International Airport along either the West route or the East route. In support of the pipeline, construct infrastructure at the Tinian seaport, to include a booster pump house and associated fire protection systems, a boom storage building, and necessary utility connections.
 - Improve the roadway along the fuel truck route that was analyzed in the 2016 Divert EIS
 (Final EIS, Section 2.5.2), excluding TR21. If the pipeline is not constructed, this route
 would be used by fuel truck traffic as analyzed in the 2016 Divert EIS (Final EIS, Section
 2.5.2). If the pipeline is constructed, this route would be utilized to support construction
 of all Divert-related projects.
- The Proposed Actions and alternatives are shown in **Figure ES-1**.

15 ES 6. Identification of Preferred Alternatives

- According to CEQ guidelines, an agency's preferred alternative under NEPA is the alternative
- that the agency believes would fulfill its statutory mission and responsibilities, giving
- 18 consideration to economic, environmental, technical, and other factors (CEQ 1981). CEQ
- regulations require the section of the EIS on alternatives to "identify the agency's preferred
- alternative or alternatives if one or more exists, in the draft statement, and identify such
- 21 alternative in the final statement..." (CEQ 1981).
- 22 USAF's Preferred Alternative for the fuel pipeline and support infrastructure is the East route
- alternative, as described in **Section 2.2.2**. The analysis of impacts for the fuel pipeline and
- support infrastructure also includes the West route as described in **Section 2.2.2**, and the No
- 25 Action Alternative as described in **Section 2.2.3**. USAF is identifying the Preferred Alternative
- pursuant to 40 CFR § 1502.14(e); however, no final decision selecting a particular alternative for
- implementation has been made. The USAF decision maker will use the SEIS to support the
- decision about how best to satisfy the stated purpose and need within mission constraints. The
- 29 final decision will be documented in the ROD.
- 30 USAF has not identified a Preferred Alternative for the roadway improvements at this time. The
- 31 USAF will identify a Preferred Alternative for the roadway improvements in the Final SEIS from
- 32 the Proposed Action and No Action alternatives.

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ES 7. Summary of Environmental Impacts and Mitigation Measures

- 3 Environmental impacts that could result from implementing USAF's Pipeline and Support
- 4 Infrastructure Proposed Action alternatives and the No Action Alternative are summarized in
- 5 **Table ES-1**. Environmental impacts that could result from implementing USAF's Roadway
- 6 Improvements Proposed Action and No Action Alternative are summarized in **Table ES-2**.
- 7 These tables present potential adverse impacts that could occur, unless otherwise noted as
- 8 beneficial impacts, and include consideration of compliance with federal and local regulations
- 9 and requirements. Potential impacts identified in this document are also based on consultations
- with federal and CNMI agencies responsible for ensuring compliance with resource-specific
- regulations; for example, Section 106 consultation with the CNMI Historic Preservation Officer.
- 12 Detailed descriptions of the existing environmental conditions and environmental consequences
- for resources potentially affected by the Proposed Actions and alternatives are provided in
- Sections 3 and 4 of the Main Volume of the SEIS, respectively. Table ES-3 identifies the
- potential effects of combining implementation of the two Proposed Actions.
- Mitigation measures for implementing the Proposed Actions and avoiding, minimizing,
- 17 remediating, or compensating for potential impacts on specific resource areas have been
- identified and would be implemented as required, as shown in **Tables ES-1** and **ES-2**, **Section**
- 19 **2.6** and **Section 4** of the Main Volume of the SEIS, and **Appendix F**. Mitigation measures
- detailed in **Tables ES-1** and **ES-2** are those that have been developed to specifically address
- the impacts anticipated from the Proposed Actions and are also based on consultations with
- federal and CNMI agencies. **Tables ES-1** and **ES-2** also summarize mitigations measures that
- are routine or standard compliance actions dictated by federal, Department of Defense, USAF,
- or CNMI regulations and are built into the design, construction, and operation of the proposed
- infrastructure for USAF fuel facilities and roadways. **Appendix F** provides detailed information
- on compliance actions and industry standard mitigation measures by the resource area and
- 27 Proposed Action for which they would be implemented.

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Table ES-1. Summary of Pipeline and Support Infrastructure Environmental Impacts and Mitigation Measures

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Noise				
Short-term, minor to modera expected from construction i expected from operation, on	noise. Impacts are not	Construction noise levels and impacts would be similar to those presented for the Proposed Action. Noise impacts associated with fuel truck trips under the No Action Alternative would be short term and moderate on receptors adjacent to the roadways.	from construction equipment and restrict construction operating hours. Appendix F provides further de noise compliance actions and industry standard mitigation measures.	
Biological Resources				
Terrestrial Resources. Short- and long-term, minor, direct impacts are expected on vegetation and wildlife, respectively. Adverse impacts are not expected on special status terrestrial species. Marine Biological Resources. Short-term, no to minor, indirect impacts would be expected on nearshore marine resources, Essential Fish Habitat (EFH), and special status marine species during construction. Long-term, negligible, indirect impacts would be expected on nearshore marine resources, EFH, and special status marine species during operation.		Terrestrial Resources. Under the No Action Alternative, no vegetation along pipeline routes would be disturbed and there would be no loss of or disturbance of wildlife habitat along a pipeline route; impacts on vegetation and wildlife would be less than under the Proposed Action. Marine Biological Resources. While impacts on marine species could be expected because potential fuel spills from trucks are more common than from pipelines; impacts are anticipated to be negligible.	Two individual Fadang, a cy within the landscaping of the Kabushiki Kaisha Administra Laboratory, along TR26 near the West and East routes. surrounding memorial would construction of the pipeline. USAF would implement all I Biological Opinion for the 20 EIS to prevent the spread or other invasive species. To avoid harming nesting bid during construction would be where active nests are foun other measures would be tamigratory birds, nests, or egone As outlined in Appendix F, I federal and CNMI requirement for water quality, stormwate erosion and sediment controlimpacts on nearshore water	e Nanyo Kohatsu ation Building and ar the southern terminus of These plants and the d be avoided during measures described in the p16 Divert proposal and f brown tree snakes and rds, surveys or monitoring e conducted and areas d would be avoided, or ken to avoid harming any gs. JSAF would adhere to ents and design standards r management, and ol to minimize and prevent

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Cultural Resources				
Ground disturbance during construction of the pipeline would have potential to affect the physical integrity of historic properties, having minor to major impacts on the sites. Construction would also have short-term, minor to moderate impacts on the historic setting or feeling of the properties. Impacts from operation of the pipeline are not expected. As part of the Section 106 process, USAF has determined the Undertaking would contribute to adverse effects from the Divert Activities and Exercises undertaking. USAF is consulting with the CNMI SHPO and consulting parties on mitigation measures that will be included in an amendment to the existing Divert Activities and Exercises PA.		Construction of the fuel tanks and fuel truck traffic under the No Action Alternative would have no impact on cultural resources.	 USAF would, to the extent practicable, minimize the use of tracked equipment and replace excavated airport pavements consistent with the West Field runway's current appearance in accordance with the Secretary of the Interior's Guidelines for the Treatment of Historic Properties. USAF would design the pipeline to avoid sites HDF 18-07 and TN-4-1010. USAF would monitor pipeline construction in sensitive areas for archaeology and human remains and implement inadvertent discovery procedures established in the Programmatic Agreement. Additional mitigation measures will be outlined in the Programmatic Agreement developed under the Section 106 consultation. 	
Socioeconomics				
population, housing, public sissues would result from corbeneficial impacts on the locexpected. No to negligible to socioeconomics would or pipeline or seaport infrastructure.	term, minor to moderate impacts on the Tinian ation, housing, public services, and sociocultural would result from construction; however, direct, cial impacts on the local economy would be ted. No to negligible beneficial long-term impacts eror seaport infrastructure. The No Action Alternative would have no impacts on existing socioeconomic conditions. Beneficial impacts would be expected from operation of the fuel trucks and vehicle fuel purchases. Demand for public services and changes in sociocultural issues would not change from existing conditions. USAF personnel and their contractors we coordinate with local hotels to secure the number of hotel rooms prior to proposed minimize impacts and avoid supply issue. To minimize the impacts on the Tinian H the construction contractor would be responded in the construction contractor would be responded to rectify the increased demand increase in island population during constructions.		to secure the required r to proposed use to discussion the Tinian Health Center, would be responsible for an personnel. personnel could be assed demand due to an	
Environmental Justice and	Protection of Children			
Construction and operation would not result in significant high and adverse health or eminority, low-income, elderly Tinian. Although adverse in impacts would be less than a	t and disproportionately environmental impacts on v, or children populations on apacts would occur, the	Construction impacts under the No Action Alternative would be reduced in comparison to the Proposed Action. However, operation under the No Action Alternative would have long-term, periodic, negligible impacts on environmental justice populations due to the use of fuel trucks.	USAF would adhere to federa and design standards that wor minority, low-income, eldery, of the unlikely event of a fuel spil further details on compliance a standard mitigation measures management.	uld reduce impacts on or children populations in ll. Appendix F provides actions and industry

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Health and Safety				
Short-term, direct, negligible impacts on explosives safety and public health and safety could occur.	Impacts on explosives safety and public health and safety during operations would be minor and similar to, but slightly greater than, those described for the West route.	Lesser impacts on construction personnel health and safety and explosives safety under the No Action Alternative in comparison to the Proposed Action because a lesser degree of construction would be required. Greater impacts on the health and safety of operational personnel and the public would be expected from the	USAF and their contractors would adhere to establish federal and CNMI safety regulations and industry standard safety protocols to minimize impacts on construction worker safety and public safety. Appen F provides further details on health and safety compliance actions and industry standard mitigation measures.	
Short- and long-term, direct, contractor health and safety construction and operations negligible impacts on public	and airfield safety during . Short-term, direct,	increased potential for spills, leaks, or other hazardous risks because such issues with trucks are more common than with pipelines.		
Soils and Geology				
Long-term, negligible to moderate impacts on physiography and topography from construction. Short- and long-term, minor to moderate impacts on soils from construction and operation. Long-term, minor to moderate impacts from geologic hazards during pipeline installation and operation.	Impacts on regional geology, physiography, topography, and soils would be greater than those described for the West route, but not significant. Impacts from geologic hazards would be slightly less than those described for the West route.	Lesser impacts on regional geology, physiography and topography, and soils, and from geologic hazards under the No Action Alternative in comparison to the Proposed Action. Greater impacts on soils within the seaport project area and from potential fuel contamination.	 USAF would design facilities CNMI requirements and design and sediment control, spill phazards. USAF would implement error measures and spill preventionst-construction. Appendix F provides further geology compliance actions mitigation measures. 	sign standards for erosion prevention, and geologic sion and sediment control on measures for facilities er details on soils and
Water				
Short- and long-term, minor groundwater resources and resources.		Increased impacts under the No Action Alternative in comparison to the Proposed Action due to increased potential for spills and larger area of impervious surfaces. Storm water runoff volumes could be increased under this scenario.	 USAF would design facilities CNMI requirements and design quality and stormwater mands. USAF would implement stom on itoring methods to ensure and after construction. Appendix F provides further compliance actions and indimeasures. 	sign standards for water lagement. rmwater management and lare water quality before er details on water

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Infrastructure and Transpo	ortation			
Short-term, minor to moderate impacts on the water supply. Short-term, minor impacts on solid waste and local transportation.	Short-term, moderate impacts on the water supply. Short-term, minor to moderate impacts on solid waste and local transportation.	Under the No Action Alternative, lesser impacts would be expected on the water supply than under the Proposed Action; however, greater impacts on solid waste and transportation would be expected.	USAF wells proposed in the 2016 Divert EIS (Final EIS, Section 4.13.2.1) would be designed to incorporate the need for water under the proposed pipeline and supporting infrastructure action. USAF would manage draw rates from the existing and proposed wells to ensure that water supply is not exceeded. USAF would implement measures to manage construction debris and promote energy efficiency as outlined in Appendix F.	
Short-term, negligible impact electrical system, and liquid timpacts would occur from jet capabilities. Short-term, min	fuel supply. Beneficial fuel receipt and transfer			
Land Use and Recreation				
Short-term, minor impacts on land ownership and recreation. Short- and long- term, minor to moderate impacts on land use. Proposed infrastructure could affect coastal uses and resources that are subject to Coastal Zone Management Act federal consistency requirements.		Use of fuel trucks would generate long- term, periodic, negligible impacts on recreation.	No mitigation measures for land identified.	d use have been
Hazardous Materials and W	Vastes			
Short-term, minor impacts would occur from the use of hazardous materials and petroleum products and the generation of hazardous wastes. Long-term, negligible impacts would occur from operation of the proposed fuel pipeline in the event of a release.		Long-term, negligible to minor impacts on hazardous materials and wastes would occur under the No Action Alternative.	The pipeline would be routed down the center of the Tinian dump access road until the pipeline is clear of the dump for at least 500 feet, and would be clearly marked in this area.	No additional mitigation measures for the East route for hazardous materials and wastes have been identified.
			 USAF would design, manage, operate, and constructive fuel infrastructure to adhere to federal and CNMI requirements and industry standards. 	
			 USAF would implement spill prevention and control hazardous material handling, and environmental contamination protocols. 	
			Appendix F provides further details on hazardous materials and wastes compliance actions and industry standard mitigation measures.	
Air Quality				
Short- and long-term, direct, would be expected from consdisturbance, and use of eme	struction emissions, land	Impacts on air quality would be minor and, depending on the air pollutant, would be greater or less than emissions under the Proposed Action.	USAF would implement fugitive and obtain necessary air permi further details on air quality cor industry standard mitigation me	ts. Appendix F provides mpliance actions and

Table ES-2. Summary of Road Improvements Environmental Impacts and Mitigation Measures

Road Improvements	No Action Alternative	Mitigation Measures
Noise		
Noise impacts on San Jose residential areas would be short-term and moderate for individual residences located nearest the proposed road improvement segments of TR25 and TR26.	Noise level increases associated with minor road repairs would be short-term and minor.	USAF would utilize available technology to reduce noise from construction equipment and restrict construction operating hours. Appendix F provides further details on noise compliance actions and industry standard mitigation measures.
Biological Resources		
Terrestrial Resources. Negligible, short-term, direct impacts would be expected on native vegetation and wildlife. No adverse impacts on special status terrestrial species.	Under the No Action Alternative, minor roadway repairs associated with routine use would have no impact on terrestrial or marine biological resources.	USAF would implement all measures described in the Biological Opinion for the 2016 Divert proposal and EIS to prevent the spread of brown tree snakes and other invasive species.
Marine Biological Resources. Short-term, no to negligible, indirect impacts would be expected on nearshore marine resources, EFH, and special status marine species during roadway improvements.		As outlined in Appendix F, USAF would adhere to federal and CNMI requirements and design standards for water quality, stormwater management, and erosion and sediment control to minimize and prevent impacts on nearshore waters.
Cultural Resources		
Roadway improvements would have potential to impact cultural resources during excavation and ground disturbance within the roadway and limited surface disturbance from foot and vehicle traffic within 5 feet of the roadway. However, cultural resources surveys in proposed road improvement areas did not identify any historic properties. As part of the Section 106 process, USAF has determined the Undertaking would contribute to adverse effects from the Divert Activities and Exercises undertaking. USAF is consulting with the CNMI SHPO and consulting parties on mitigation measures that will be included in an amendment to the existing Divert Activities and Exercises PA.	Minor roadway repairs would have no impact on cultural resources.	If inadvertent discoveries of buried archaeological deposits or human remains were to occur during construction, USAF would implement the procedures for inadvertent discoveries in the Programmatic Agreement.

Road Improvements	No Action Alternative	Mitigation Measures
Socioeconomics		
Short-term, minor to moderate impacts on the Tinian population, housing, public services, and sociocultural issues would result from construction; however, direct, beneficial impacts on the local economy would be expected.	The No Action Alternative would have no impacts on existing socioeconomic conditions but would result in fewer beneficial impacts on the local economy than the Proposed Acton. Demand for public services and changes in sociocultural issues would not change from existing conditions.	 USAF personnel and their contractors would coordinate with local hotels to secure the required number of hotel rooms prior to proposed use to minimize impacts and avoid supply issues. To minimize the impacts on the Tinian Health Center, the construction contractor would be responsible for medical care for construction personnel. Additional security and fire personnel could be required to rectify the increased demand due to an increase in island population during construction.
Environmental Justice and Protection of Children		
Construction of roadway improvements would not result in significant and disproportionately high and adverse health or environmental impacts on minority, low-income, elderly, or children populations on Tinian. Although impacts would occur, the impacts would be less than significant.	The No Action Alternative would require minimal construction along the routes and, therefore, fewer impacts on minority and low income populations with no impact to environmental justice.	No mitigation measures for environmental justice and protection of children have been identified.
Health and Safety		
Short-term, direct, negligible to minor impacts on contractor health and safety, explosives safety, and public safety could occur.	Impacts on contractor health and safety, explosives safety, and public health and safety would be less under the No Action Alternative. Long-term, direct, minor impacts on public health and safety would be expected from continued use of degraded roadways.	USAF and their contractors would adhere to established federal and CNMI safety regulations and industry standard safety protocols to minimize impacts on construction worker safety and public safety. Appendix F provides further details on health and safety compliance actions and industry standard mitigation measures.
Soils and Geology		
Long-term, negligible impacts on regional geology, physiography, and topography. Short-term, minor impacts on soils. Long-term, direct, minor to moderate impacts from geologic hazards.	Lesser impacts under the No Action Alternative on regional geology, physiography and topography, and soils, and less susceptibility to geologic hazards due to reduced ground disturbance.	 USAF would design facilities to adhere to federal and CNMI requirements and design standards for erosion and sediment control, spill prevention, and geologic hazards. USAF would implement erosion and sediment control measures and spill prevention measures for facilities post-construction. Appendix F provides further details on soils and geology compliance actions and industry standard mitigation measures.

Road Improvements	No Action Alternative	Mitigation Measures
Water		
Short-term, negligible to minor impacts on groundwater and surface water.	Under the No Action Alternative, there would be an increase in the potential for accidental spills or leaks of fuels during transport on roads that have had only minor repairs.	 USAF would design facilities to adhere to federal and CNMI requirements and design standards for water quality and stormwater management. USAF would implement stormwater management and monitoring methods to ensure water quality before and after construction. Appendix F provides further details on water compliance actions and industry standard mitigation measures.
Infrastructure and Transportation		
Short-term, negligible impacts on the seaport and liquid fuel supply. Long-term, minor, beneficial impacts on the seaport. Short-term, minor impacts on solid waste and transportation. Long-term, minor to moderate, beneficial impacts on the transportation network.	Under the No Action Alternative, lesser impacts would be expected on the water supply and solid waste than under the Proposed Action; however, greater short- and long-term impacts on the transportation network would be expected.	USAF wells proposed in the 2016 Divert EIS (Final EIS, Section 4.13.2.1) would be designed to incorporate the need for water under the proposed roadway improvements construction. USAF would manage draw rates from the existing and proposed wells to ensure that water supply is not exceeded. USAF would implement measures to manage construction debris as outlined in Appendix F.
Land Use and Recreation		
Short-term, negligible to minor impacts on land use and recreation. Proposed infrastructure could affect coastal uses and resources that are subject to Coastal Zone Management Act federal consistency requirements.	Short- and long-term, periodic, negligible impacts on land use and recreation due to continuous need for road repairs.	No mitigation measures for land use have been identified.
Hazardous Materials and Wastes		
Short-term, minor impacts would occur from the use of hazardous materials and petroleum products and the generation of hazardous wastes.	No impacts on hazardous materials and wastes would occur under the No Action Alternative.	 USAF would implement spill prevention and control, hazardous material handling, and environmental contamination protocols. Appendix F provides further details on hazardous materials and wastes compliance actions and industry standard mitigation measures.
Air Quality		
Short-term, negligible to minor impacts on air quality from air emission during construction.	Periodic, long-term, negligible to minor impacts on air quality from air emissions during minor roadway repairs.	USAF would implement fugitive dust control measures. Appendix F provides further details on air quality compliance actions and industry standard mitigation measures.

Table ES-3. Combined Impacts of the Two Proposed Actions and Alternatives

Resource Area	Impact Description
Noise	Anticipated construction noise impacts on the ambient sound environment would include short-term, intermittent, moderate increases of the outdoor noise levels at residences located immediately proximal to roads where operation of equipment and vehicles to construct the proposed fuel pipeline, seaport infrastructure, and roadway improvements would occur. These impacts would be experienced within 0.5 mile of each affected residence along the construction route. Operation of the pipeline and support infrastructure would have no impacts on the noise environment.
Biological Resources	The Proposed Actions would have short- to long-term, negligible to moderate impacts on terrestrial and marine biological resources. The majority of impacts would be generated from the removal of vegetation and wildlife habitat for construction of the pipeline, and impacts would be similar across both the West route and East route. USAF would implement compliance actions and industry standards for erosion and sediment control, stormwater management, and spill prevention and control during construction and operation—discussed in more detail in Appendix F —to minimize or eliminate potential impacts from stormwater runoff or spills. No adverse effects on terrestrial or marine special status species are expected to occur.
Cultural Resources	The Proposed Actions would have short- to long-term, minor to moderate impacts on cultural resources. Most impacts would be generated from construction of the pipeline, and impacts would be similar across both the West and East routes because all identified historic properties occur in areas shared among both routes. However, the East route would have slightly greater impacts on site TN-6-0030, West Field, due to the greater extent of pipeline that would affect historic features of this site. Construction of roadway improvements and operation of the pipeline and seaport support infrastructure would not be expected to impact cultural resources. As part of the Section 106 process, USAF has determined the Undertaking would contribute to adverse effects from the Divert Activities and Exercises undertaking. USAF is consulting with the CNMI SHPO and consulting parties on mitigation measures that will be included in an amendment to the existing Divert Activities and Exercises PA.
Socioeconomics	Increases in the Tinian population from construction workers would result in increased sales volumes in the local community, which could in turn generate indirect and induced jobs in affected industries. While existing housing/hotels on Tinian likely would be able to temporarily support the increased population, the large inflow of people could result in short-term impacts due to capacity constraints for the hotel/housing market and public services. The population increase would increase demand on public services, especially the Tinian Health Center, but medical services and other public services such as law enforcement would be augmented by the construction contractor during peak construction work periods to minimize impacts. During construction, short-term benefits on the local economy would result from the employment of construction workers and the purchase of construction-related materials and other goods and services, as well as secondary purchases of goods and services in the community.
Environmental Justice and the Protection of Children	Disproportionately high impacts on environmental justice populations would not be expected during construction and operation of the Proposed Actions. While most of the Tinian population consists of minority persons and more than half of the population is low-income, the potential impacts from the Proposed Actions would be less than significant.
Health and Safety	Impacts on contractor health and safety could occur during construction from the risk of exposure to chemical, physical, and biological hazards; ergonomic stressors; and traffic if working along or within roadways. Additional impacts on contractor health and safety would be expected from hazards that are unique to pipeline construction. Impacts on contractor health and safety could occur due to the potential for jet fuel leaks and spills, use of equipment, and exposure to chemicals and petroleum products. No health and safety impacts on USAF personnel would be expected during pipeline, seaport support infrastructure, or roadway improvements construction. Impacts on airfield safety could occur during pipeline construction and operation within the Runway Protection Zone because equipment could be obstructions for pilots and personnel would be within approach zones where accidents could occur. Impacts on explosives safety could occur if construction activities occur within areas with potential unexploded ordnance (UXO). Impacts on public safety could occur during construction from increased traffic on roadways and during operation due to the potential for spills, leaks, or other hazardous risks.

Resource Area	Impact Description
Soils and Geology	Impacts on regional geology, physiography, and typography would occur from site preparation and construction, which would disturb the underlying limestone formations, compact soils, and temporarily alter the landscape, surface drainage patterns, and potential slope instability. Impacts on soils would also occur from site preparation resulting in soil disturbance, erosion, and compaction. Long-term impacts on soils could occur from pipeline operations in the event of a spill or leak. Impacts from geological hazards on the project areas could occur due to the potential for damage from earthquakes, tsunamis, landslides, and liquefaction. All impacts would be minimized through adherence to applicable standards, the use of appropriate engineering techniques, and implementation of the measures discussed in Appendix F .
Water	Through the design, implementation, and adaptive management of an effective stormwater management system and erosion control procedures as described in Appendix F , construction and increases in impervious surfaces required for the Proposed Actions and alternatives would result in no or an unmeasurably small increase in the amount of sediment entering water resources on Tinian. In addition, the fuel pipeline and seaport support facilities would be designed to prevent and contain spills of hazardous materials, and plans would be developed and implemented to maintain that infrastructure and ensure rapid response in the unlikely event of a spill.
Infrastructure and Transportation	Short-term, negligible to minor impacts on infrastructure and transportation would be expected under the Proposed Actions during construction and in the unlikely event of a fuel spill. However, long-term, benficial impacts would be expected from the installation of the jet fuel pipeline and distribution, and improvements to the local roadways.
Land Use	The Proposed Actions would occur on public land on which the U.S. federal government retains easement rights that allow it to install, operate, and maintain fuel infrastructure and other utilities. Construction and operation of the Proposed Actions would be consistent with the public land ownership and compatible with designated land uses within the project areas and surrounding areas. Portions of each Proposed Action would occur adjacent to private land with residential uses, and could create temporary disturbances such as increased noise and traffic. These disturbances would result in short-term, minor impacts on land use and recreation. The presence of the pipeline would preclude the future siting of other land uses in a 20-foot utility easement. Therefore, operation of the pipeline would result in long-term, minor to moderate impacts on land use and ownership.
Hazardous Materials and Wastes	The Proposed Actions would have short-term, minor impacts from the use of hazardous materials and petroleum products and the generation of hazardous wastes during construction. All hazardous materials, petroleum products, and hazardous wastes used or generated during construction would be contained, stored, and managed appropriately in accordance with applicable regulations to minimize the potential for releases. Additionally, the possibility exists for the discovery of UXO during construction. If soil or groundwater that is believed to be contaminated or UXO were discovered, the contractor would be required to immediately stop work, report the discovery to USAF, and implement appropriate safety measures. Long-term, negligible impacts would occur from operation of the proposed fuel pipeline under the West and East routes and the seaport support infrastructure. While a breach or failure of the pipeline could result in a sizable release, a release is unlikely and all fuels infrastructure would be designed in accordance with the applicable regulations, as described in Appendix F .
Air Quality	Short- and long-term, negligible to minor impacts would be expected on air emissions from the Proposed Actions and alterantives. Construction of pipeline and roadway infrastructure would generate short-term air emissions but would not exceed significance thresholds. Long-term impacts would only be expected from operation of emergency generators for the pipeline and support infrastructure.

1 ES 8. Cumulative Effects

- 2 CEQ defines cumulative impacts as "the impact on the environment which results from the
- 3 incremental impact of the action when added to other past, present, and reasonably foreseeable
- 4 future actions regardless of what agency (federal or non-federal) or person undertakes such
- 5 other actions. Cumulative impacts can result from individually minor but collectively significant
- 6 actions taking place over a period of time." Informed decision making is served by
- 7 consideration of cumulative impacts resulting from projects that are proposed, under
- 8 construction, recently completed, or anticipated to be implemented in the reasonably
- 9 foreseeable future. A description of the cumulative projects considered and the potential
- cumulative effects are provided in **Section 5** of the Main Volume of the SEIS.