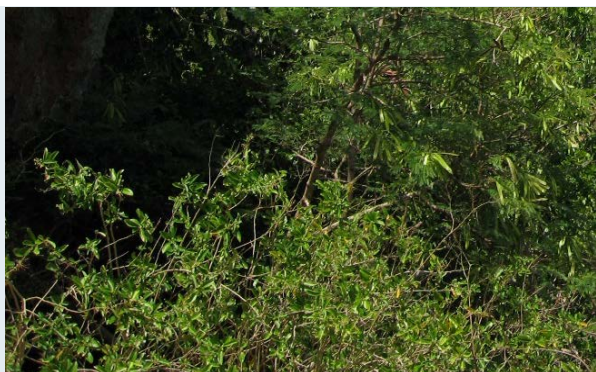
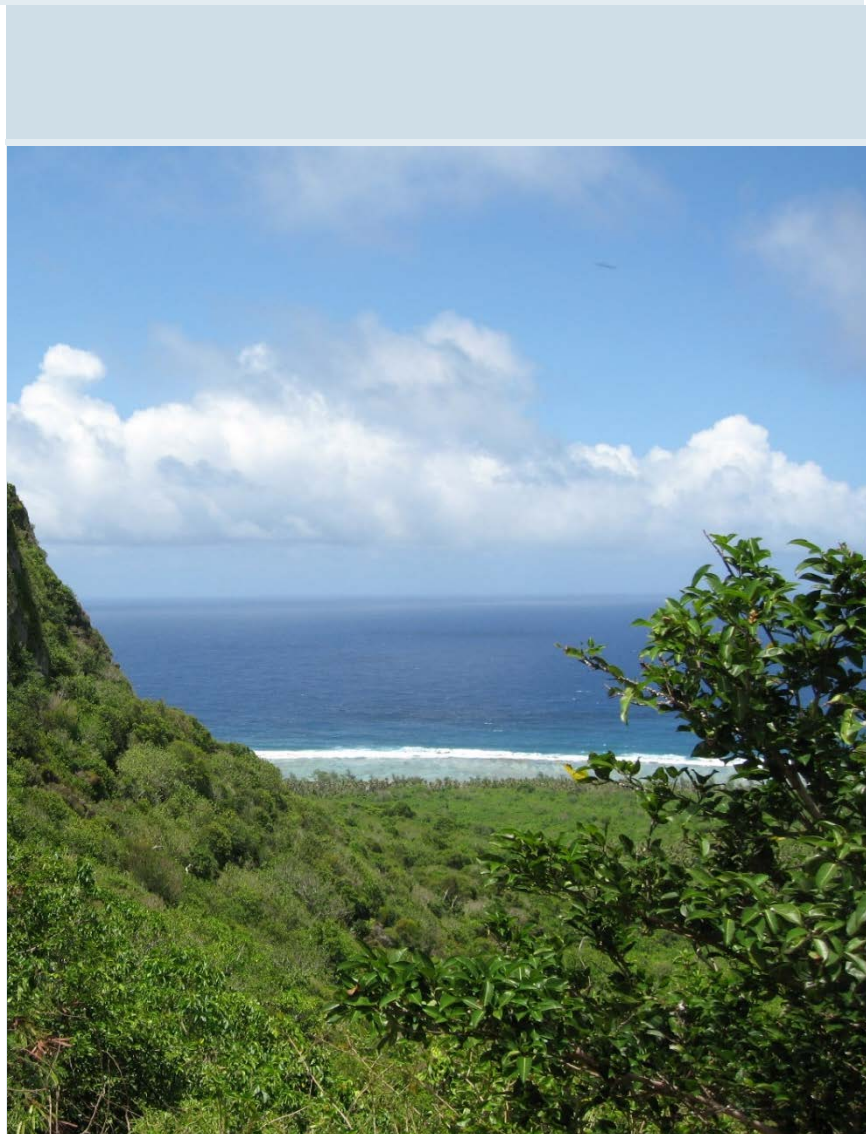


EXECUTIVE SUMMARY

Final

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

UNITED STATES AIR FORCE



July 2020

PRIVACY ADVISORY

This Supplemental Environmental Impact Statement (SEIS) is provided to the public 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.

Letters or other comments provided on this SEIS may be published. Providing personal information is voluntary. Any personal information provided will be used only to identify an individual's desire to make a statement during the Waiting Period or to fulfill requests for copies of the SEIS, Record of Decision (ROD), or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of this SEIS or ROD. Personal home addresses and telephone numbers will not be published in the ROD.

EXECUTIVE SUMMARY

Final

**SUPPLEMENTAL ENVIRONMENTAL
IMPACT STATEMENT**

FOR

TINIAN DIVERT INFRASTRUCTURE IMPROVEMENTS



HEADQUARTERS PACIFIC AIR FORCES (HQ PACAF)

JOINT BASE PEARL HARBOR-HICKAM, HAWAII

JULY 2020

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Abbreviations and Acronyms

AFI	Air Force Instruction
APE	Area of Potential Effect
bbls	barrels
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNMI	Commonwealth of the Northern Mariana Islands
DOD	Department of Defense
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
NEPA	National Environmental Policy Act
PIM Plan	Pipeline Integrity Management Plan
ROD	Record of Decision
SEIS	Supplemental Environmental Impact Statement
TR	Tinian Route
UFC	Unified Facilities Criteria
USAF	U.S. Air Force
UXO	unexploded ordnance

Executive Summary

ES 1. Introduction

The U.S. Air Force (USAF) has prepared a Supplemental Environmental Impact Statement (SEIS) to address proposed changes since the September 2016 completion of the 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 North Option (Final EIS, Section 2.5.2), as a future Divert location. The 2016 Divert ROD and 2016 Divert EIS are available for review or downloading from the project website at: <http://pacafdivertmrianaseis.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 construct and operate 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 system evaluated in the 2016 Divert EIS would not change (Final EIS, Section 2.5.2). USAF also proposes to improve certain existing roads between the seaport and airport to support 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.

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 comprehensive discussion of the requirements for and potential environmental impacts of the Proposed Actions. The entire Tinian Divert Infrastructure Improvements SEIS consists of this Executive Summary, the Main Volume, and the Appendices Volume.

This SEIS was developed from the Draft SEIS, which was 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 altered 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 existing conditions of resource areas analyzed in this SEIS. USAF reconsidered these conditions upon

completion of the Draft SEIS, during review of comments on the Draft SEIS, and in finalization of this SEIS. The impact analyses presented in **Sections ES 7** and **ES 8** are 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.

The lead agency for this SEIS is the Department of the Air Force. Headquarters Pacific Air Forces, 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 Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508), and the USAF implementing regulation for NEPA, 32 CFR § 989, as amended.

ES 2. Purpose of and Need for the Proposed Action

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 purpose and need for the two specific Proposed Actions addressed in the SEIS are discussed in 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 mission requirements in the event that access to Andersen Air Force Base or other western Pacific locations is limited or denied.

The original Proposed Action is needed because there is no existing divert or contingency airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed, or that supports humanitarian assistance and disaster relief in times of natural or man-made disasters.

ES 2.2 Purpose and Need for Supplemental Environmental Impact Statement

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 Airport. The fuel pipeline would result in lower overall lifecycle costs for fuel transfer and 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 (Final EIS, Section 2.5.2). According to a recent study, in terms of barrels (bbls) spilled per year, transporting oil and gasoline by truck is the least secure method of transportation. The study shows that trucks spilled more oil and gasoline than rail or pipeline, averaging around 326 bbls per million tons moved every mile by truck, 269 bbls per million tons moved every mile by pipeline, and 83 bbls per million tons moved every mile by rail (Strata 2017). When it comes to

human health and safety, the same study states that pipeline is the safest method of transporting oil and gasoline. Oil and gasoline transportation by pipeline resulted in 1.7 fatalities to operators, personnel, and the general public per year in the United States. Rail transportation resulted in 2.4 fatalities and transportation by truck killed 10.2 people per year (Strata 2017).

Roadway Improvements. The purpose of the proposed surface road improvements is to facilitate heavy vehicle traffic that is anticipated under the overall Divert project, while ensuring the roads continue to provide adequate service to the local community. The roadway 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 are in varying stages of disrepair and inadequate to support the heavy vehicle traffic that will be required to build the Divert infrastructure and, if required, transfer fuel via tanker truck.

ES 3. Interagency and Public Involvement

USAF completed public scoping for the SEIS, which began by issuing a Notice of Intent in the *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 17, 2018, at Tinian Elementary School.

USAF released the Draft SEIS to the public and agencies for review and comment. The Draft SEIS public comment period was 45 days and began on the Notice of Availability publication date, May 17, 2019, and ended on July 1, 2019. The Notice of Availability was published in the *Federal Register*, in local newspapers, the *Saipan Tribune* and *Marianas Variety*, on the project website at <http://www.PACAFDivertMarianasEIS.com>; and in letters accompanying the direct mailing of the Draft SEIS. Copies of the Draft SEIS were sent to federal and CNMI agencies, elected officials, nongovernmental organizations, and interested individuals. One public hearing was held on Tinian from 5 p.m. until 8 p.m. on June 6, 2019.

While all comments submitted during the Draft SEIS public review were assessed and considered by USAF, only substantive comments are addressed, either individually or collectively, in this SEIS, consistent with 40 CFR § 1503.4. Substantive comments are regarded as those comments that challenge the analysis, methodologies, or information in the Draft SEIS as being factually inaccurate or analytically inadequate and may result in revisions to the SEIS; identify impacts not analyzed or identify reasonable alternatives or feasible mitigations not considered by the agency; or offer specific information that may have a bearing on the decision such as differences in interpretations of significance, scientific data, or technical conclusions. Non-substantive comments, which do not require a USAF response, are generally considered those comments that express a conclusion, an opinion, or a vote for or against the proposal itself, or some aspect of it; state a position for or against a particular alternative; or otherwise state a personal preference or opinion. Copies of all comments received on the Draft SEIS and responses to substantive comments are provided in **Appendix G**.

ES 4. Description of the Proposed Action and Alternatives

USAF proposes the following actions:

- Construct and operate 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, necessary utility connections, and additional support infrastructure 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).

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; supporting utilities, fencing, and access roads; fuel delivery and offload; aircraft operations; 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 EIS and those proposed in this SEIS.

Figure ES-1 provides the locations of the pipeline and support infrastructure proposed in this SEIS, as well land areas that were addressed in the 2016 Divert EIS for construction and associated laydown areas, utilities, proposed mitigations, and long-term lease.

ES 4.1 Fuel Pipeline and Support Infrastructure

Construction. The proposed fuel 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, 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, 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 (DOD), and USAF regulations for petroleum fuel pipelines and facilities, including Unified Facilities Criteria (UFC) 3-460-01. As stated in UFC 3-460-01, Section 2-13.1, it is the firm policy of the DOD to design and construct fueling facilities in a manner that will prevent damage to the environment by accidental discharge of fuels, their vapors, or residues.

The fuel pipeline and all facilities also would be constructed in accordance with seismic and tropical requirements, including those for seismic and wind loads outlined in American Society of Civil Engineers Standard 7-10 *Minimum Design Loads for Buildings and Other Structures*; UFC 3-310-04 *Seismic Design for Buildings*; UFC 3-301-01 *Structural Engineering*; and UFC 3-

440-05N *Tropical Engineering*. Prior to finalizing the design for and constructing the fuel pipeline, USAF would conduct a geotechnical investigation along the pipeline route to classify the subsurface composition and identify the presence of any faults. Results of the geotechnical investigation would be incorporated into the final pipeline design, which would adhere to specifications in American Society of Mechanical Engineers Standard B31.3 *Process Piping* and B31.4 *Transportation Systems for Liquids and Slurries*. The design could include buried low friction interfaces to allow pipes to move during fault lines movement.

USAF would complete the final detailed design for the fuel pipeline and support infrastructure after issuance of the ROD for this SEIS, and completion of the geotechnical investigation. The final detailed design for the fuel pipeline and support infrastructure would comply with applicable regulations and industry standards that direct fuels infrastructure design, construction, maintenance, and operation and are outlined in **Appendix F**. These design standards and requirements provide an adequate baseline for determining impacts under NEPA in this SEIS, as presented in **Section 4** of the Main Volume. As noted previously in this Section and in UFC 3-460-01, Section 2-13.1, it is the firm policy of the DOD to design and construct fueling facilities in a manner that will prevent damage to the environment by accidental discharge.

Portions of the proposed pipeline would be constructed at Tinian International Airport and the Tinian seaport on public land acquired or leased by USAF and proposed for construction in the 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 easement rights would be coordinated with the CNMI, platted, and recorded.

The pipeline would be constructed underground to limit exposure to external factors, such as weather, environmental corrosion pressure, and foot and vehicle traffic, and to prevent breaches, vandalism, sabotage, or any other means to disrupt the flow of fuel. The pipeline would be seamless along its length, and the girth of the pipeline would be welded in the field. The pipeline would be installed to a depth of approximately 3 feet within a 20-foot easement; however, the impacts analysis in the SEIS will assume that an 80-foot-wide corridor could be disturbed during construction to allow for materials laydown and 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, 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 access roads also would be created or widened within this area; all existing roads would remain open to the public. The proposed seaport support infrastructure would be constructed in the same location at the Tinian seaport as the location proposed in the 2016 Divert EIS for the two 50,000-barrel fuel storage tanks (Final EIS, Section 2.5.2). The proposed fuel pipeline would eliminate the need for these bulk fuel storage tanks at the seaport proposed in the 2016 Divert EIS. Up to 8.23 acres could be utilized and disturbed for development of all seaport support infrastructure.

Construction Materials. Transport of materials to support construction of the fuel pipeline would not exceed the amount of fuel truck traffic analyzed in the 2016 Divert EIS, or would be conducted by construction workers as part of their daily commute to the construction site. Transport of construction materials to the seaport was addressed in the 2016 Divert EIS for construction of the fuel tanks. Fewer volumes of construction materials would be needed for development of the seaport support infrastructure than the fuel tanks because of the smaller 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.

Construction Workers and Support Personnel. USAF personnel and their contractors would be subject to applicable CNMI, DOD, and federal regulations while on or off-duty. 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 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 the maximum effect of construction workers.

Personnel required for maintenance and operation of the pipeline and fuels infrastructure would be supported by the exercise and support personnel (e.g., security guards) analyzed in the 2016 Divert EIS (Final EIS, Section 4.14.2.2). The impact analysis in **Section 4** of the Main Volume of the SEIS assumes that any additional personnel required to inspect and maintain the pipeline would be negligible (e.g., 0 to 5 personnel) and would be from on-island.

Operation. Once the pipeline and support infrastructure are constructed and installed, fuel 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 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 pipeline.

For fuel infrastructure operation and maintenance, USAF and their contractors would follow UFC 3-460-03 *Operation and Maintenance: Maintenance of Petroleum Facilities*. USAF also would comply with USAF Technical Order 37-1-1 *General Operations and Inspection of Installed Fuel Storage and Dispensing Systems*, Air Force Instruction (AFI) 23-201 *Fuels Management*, AFI 32-1067 *Water and Fuels Systems*, and AFI 32-7044 *Storage Tank Environmental Compliance* for the operation of the fuel pipeline and support infrastructure. A static line pipeline leak detection system that is listed by the National Work Group On Leak Detection Evaluations would be permanently installed and would be U.S. Environmental Protection Agency third-party-certified. The pipeline leak detection system would comply with American Petroleum Institute Recommended Practice 1130, *Computational Pipeline Monitoring*, and be able to detect a leak of 0.004 percent of the pipeline volume within one hour.

USAF would develop a memorandum of understanding with U.S. Coast Guard and U.S. Environmental Protection Agency to define the “point of demarcation” to facilitate compliance with applicable sections of 40 CFR § 112 *Oil Pollution Prevention*, 33 CFR § 154 *Facilities Transferring Oil or Hazardous Materials in Bulk*, and 33 CFR § 156 *Oil and Hazardous Material Transfer Operations*. 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 § 112.

The safe, efficient, and economical operation of petroleum storage, dispensing systems, and associated infrastructure depends largely on an effective and proactive recurring maintenance program. USAF would follow UFC 3-460-03 for pipeline maintenance, which 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 Plan) to assist with and guide pipeline integrity maintenance. PIM Plans improve the integrity 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, Repair, Alteration, and Rerating of In-Service Piping Systems* and federal and local regulations.

USAF would complete the final detailed design, to include operation and maintenance plans, for the fuel pipeline and support infrastructure after issuance of the ROD for this SEIS, and completion of the geotechnical investigation. The final detailed design for the fuel pipeline and support infrastructure would comply with applicable regulations and industry standards that direct fuels infrastructure design, construction, maintenance, and operation and are outlined in **Appendix F**. These design standards and requirements provide an adequate baseline for determining impacts under NEPA in this SEIS, as presented in **Section 4** of the Main Volume. As noted previously in this Section and in UFC 3-460-01, Section 2-13.1, it is the firm policy of the DOD to design and construct fueling facilities in a manner that will prevent damage to the environment by accidental discharge.

ES 4.1.1 Fuel Pipeline and Support Infrastructure Action Alternatives

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 proposed fuel pipeline route alternatives.

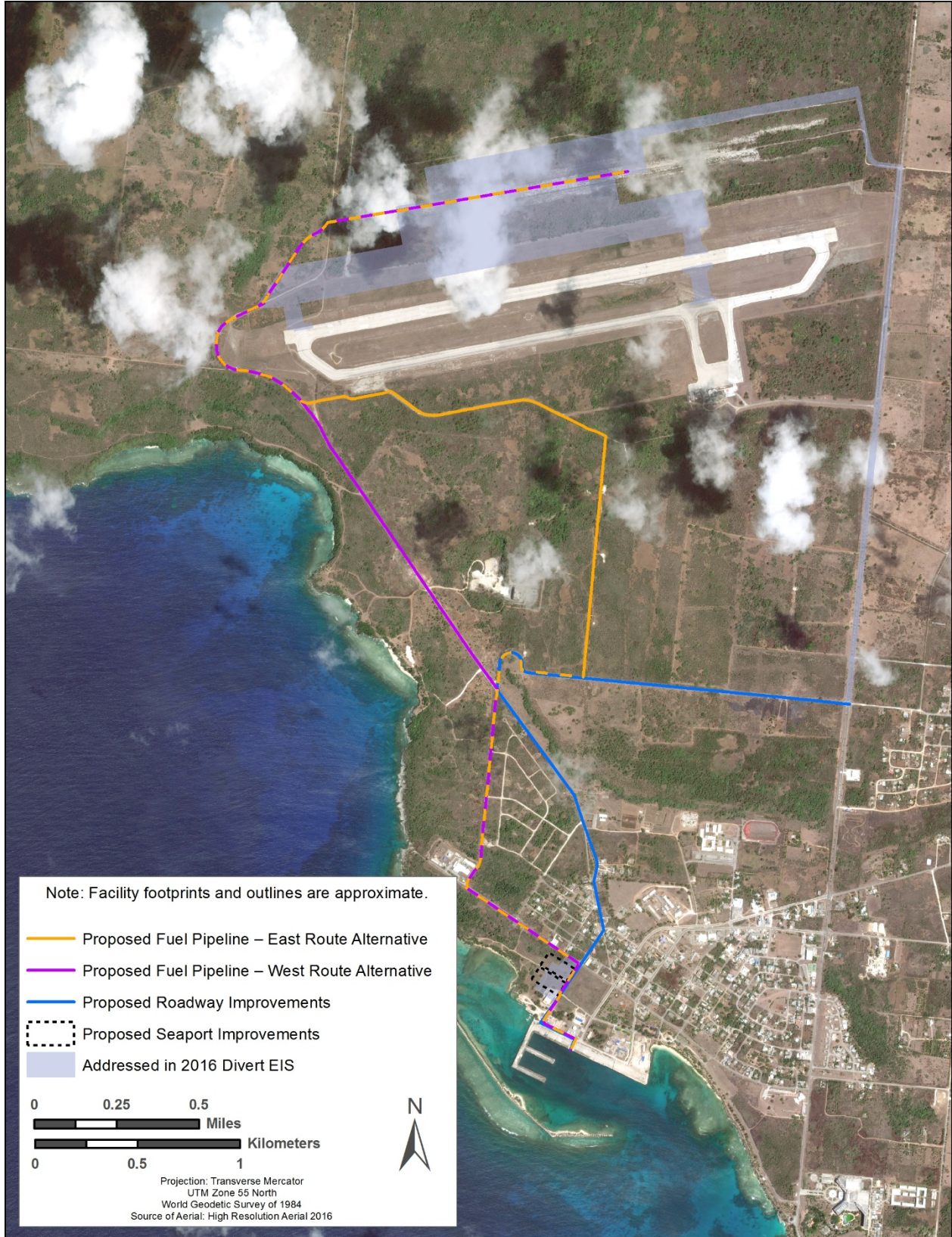


Figure ES-1. Summary of Proposed Actions and Alternatives

West Route. The West route travels north from the Tinian seaport until it intersects Tinian Route (TR) 26 (i.e., West Avenue), then stays on a northwestern path by following TR26, 6th 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.

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 4.94 miles long.

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 proposed for the bulk fuel storage facilities at the seaport and no other site alternatives were identified or considered.

The exact location and length of either pipeline route and size of the support infrastructure 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 potential changes requested by the Federal Aviation Administration for pipeline construction at the airport.

ES 4.1.2 Pipeline and Support Infrastructure No Action Alternative

CEQ's regulations for implementing NEPA, specifically 40 CFR § 1502.14(d), require the 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 alternatives. Under the No Action Alternative, USAF would not construct or operate the proposed fuel pipeline and support infrastructure. 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. The No Action Alternative would increase fuel resupply time and increase the risk of environmental impacts from potential fuel spills from trucks during loading, driving, and offloading (Strata 2017).

ES 4.2 Roadway Improvements

USAF proposes to improve roadways previously analyzed for Divert fuel vehicles in the 2016 Divert EIS (Final EIS, Section 2.5.2). The route proposed for improvements travels 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 2016 Divert EIS. Construction of the pipeline would eliminate the need for fuel transfer by vehicle; therefore, if the pipeline is constructed, USAF would utilize this route for all Divert 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 right-of-way alterations would occur. Road improvements would be constructed in accordance with UFC 3-250-18FA *General Provisions and Geometric Designs for Roads, Streets, Walks, and Open Storage Areas* and UFC 3-250-01 *Pavement Design for Roads and Parking Areas*, as feasible.

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 total construction time.

The impacts analysis in this SEIS assumes that all roadways proposed for improvements would be reconstructed with a new sub base and asphalt cap; however, portions of these roadways may require less extensive repairs based on geotechnical analysis. Additionally, lesser 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).

Construction Materials. Construction materials, excluding reused materials from asphalt removal, for the roadway improvements would be transferred from the seaport along the same 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 days over the course of 1 year.

Construction Workers. USAF personnel and their contractors would be subject to applicable CNMI, DOD, and federal regulations while on or off-duty. 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 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.

ES 4.2.1 Roadway Improvements No Action Alternative

Under the No Action Alternative, the proposed roadway improvements would not be 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). The No Action Alternative would cause the continued deterioration of the Tinian roadways proposed in the 2016 Divert EIS for Divert fuel trucks.

ES 5. Summary of Proposed Actions

In summary, USAF proposes to accomplish the following actions:

- Construct and operate 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 and operate 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**.

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 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 alternative in the final statement..." (CEQ 1981).

USAF's Preferred Alternative for the fuel pipeline and support infrastructure is the East route alternative, as described in **Section 2.2.2**. The East route was identified as the Preferred Alternative because the West route is partially encumbered by a long-term land lease by a private entity. 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 Action Alternative as described in **Section 2.2.3**.

USAF's Preferred Alternative for the roadway improvements is the Proposed Action, as described in **Section 2.3.2**. The roadway improvements Proposed Action was identified as the Preferred Alternative because of the mutual benefit it provides to USAF and Tinian by improving the level of service on roadways to be utilized by both entities.

USAF is identifying the Preferred Alternatives pursuant to 40 CFR § 1502.14(e); however, no final decisions selecting particular alternatives for implementation has been made. The USAF decision maker will use the SEIS to support the decisions about how best to satisfy the stated purposes and needs within mission constraints. The final decisions will be documented in the ROD.

ES 7. Summary of Environmental Impacts and Mitigation Measures

Environmental impacts that could result from implementing USAF's Pipeline and Support Infrastructure Proposed Action alternatives and the No Action Alternative are summarized in **Table ES-1**. Environmental impacts that could result from implementing USAF's Roadway Improvements Proposed Action and No Action Alternative are summarized in **Table ES-2**. These tables present potential adverse impacts that could occur, unless otherwise noted as beneficial impacts, and include consideration of compliance with federal and local regulations 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. 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, 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 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, DOD, 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 Proposed Action for which they would be implemented.

Following the ROD, a Mitigation Plan will be prepared in accordance with 32 CFR § 989.22(d). The Mitigation Plan will address specific mitigations identified and agreed to during the Environmental Impact Analysis Process. The Mitigation Plan will identify principal and subordinate organizations having responsibility for oversight and execution of specific mitigation and management actions. The plan will be prepared in accordance with the CEQ mitigation and monitoring guidance.

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 moderate impacts would be expected from construction noise. Impacts are not expected from operation, once construction is complete.	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.	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	
<p><i>Terrestrial Resources.</i> Short- and long-term, minor, direct impacts are expected on vegetation and wildlife, respectively. Adverse impacts are not expected on special status terrestrial species.</p> <p><i>Marine Biological Resources.</i> 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.</p>	<p><i>Terrestrial Resources.</i> 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.</p> <p><i>Marine Biological Resources.</i> While impacts on marine species could be expected because potential fuel spills from trucks are more common than from pipelines (Strata 2017); impacts are anticipated to be negligible.</p>	<ul style="list-style-type: none"> • Two individual Fadang, a cycad, have been planted within the landscaping of the Nanyo Kohatsu Kabushiki Kaisha Administration Building and Laboratory, along TR26 near the southern terminus of the West and East routes. These plants and the surrounding memorial would be avoided during construction of the pipeline. • USAF would implement all measures described in the 2012 Biological Opinion of Divert Capabilities and Conducting Divert Activities and Exercises, Saipan and Tinian, Commonwealth of the Northern Mariana Islands (01EPIF00-2012-F-0445) and in the 2015 USFWS Amendment to the Biological Opinion to prevent the spread of brown tree snakes and other invasive species. • To avoid harming nesting birds, surveys or monitoring during construction would be conducted and areas where active nests are found would be avoided, or other measures would be taken to avoid harming any migratory birds, nests, or eggs. • 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. 		

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Cultural Resources				
<p>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 determined the Undertaking would contribute to adverse effects from the Divert Activities and Exercises undertaking.</p>	<p>Construction of the fuel tanks and fuel truck traffic under the No Action Alternative would have no impact on cultural resources.</p>	<p>In accordance with the 2020 Amendment to the 2016 Programmatic Agreement:</p> <ul style="list-style-type: none"> • USAF would follow all aspects of the 2016 Programmatic Agreement that are not the subject of the Amendment. • USAF would complete development of an Interpretive Plan to document and interpret the prehistory and history of the Divert Activities and Exercises Area of Potential Effect (APE), including the area affected by the Tinian Divert Infrastructure Improvements project, for the public. • USAF would assess the feasibility and effectiveness of conducting a geophysical survey for the purpose of detecting subsurface anomalies that may represent buried archaeological features or human remains, and enabling avoidance of such anomalies. If the geophysical survey is determined to be feasible and effective, USAF would develop and implement a Geophysical Survey Work Plan, and, to the extent practical, adjust the routing of the fuel pipeline to avoid anomalies identified in the geophysical survey. • USAF would coordinate identification of subsurface historic properties with clearance of munitions and explosives of concern in areas within the APE identified as having moderate to high potential for buried archaeological deposits. • USAF would design the pipeline to avoid site TN-4-1010. • USAF would avoid site HDR-18-07 or conduct data recovery of the site. • USAF would, to the extent practical, minimize the use of steel-tracked equipment on intact airfield pavements and repair airport pavements affected by fuel pipeline construction. 		

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Socioeconomics				
<p>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. None to negligible beneficial long-term impacts on socioeconomics would occur during operation of the pipeline or seaport infrastructure.</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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				
<p>Construction and operation of the pipeline infrastructure 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 adverse impacts would occur, the impacts would be less than significant.</p>	<p>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.</p>	<p>USAF would adhere to federal and CNMI requirements and design standards that would reduce impacts on minority, low-income, elderly, or children populations in the unlikely event of a fuel spill. Appendix F provides further details on compliance actions and industry standard mitigation measures for stormwater and fuels management.</p>		
Health and Safety				
<p>Short-term, direct, negligible impacts on explosives safety and public health and safety could occur.</p>	<p>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.</p>	<p>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 increased potential for spills, leaks, or other hazardous risks because such issues with trucks are more common than with pipelines.</p>	<p>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.</p>	
<p>Short- and long-term, direct, minor impacts on contractor health and safety and airfield safety during construction and operations. Short-term, direct, negligible impacts on public safety during construction.</p>				

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Soils and Geology				
<p>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.</p>	<p>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.</p>	<p>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.</p>	<ul style="list-style-type: none"> • Prior to finalizing the design for and constructing the fuel pipeline, USAF would conduct a geotechnical investigation along the pipeline route to classify the subsurface composition and identify the presence of any faults. Results of the geotechnical investigation would be incorporated into the final pipeline design, which would adhere to specifications in American Society of Mechanical Engineers Standard B31.3 <i>Process Piping</i> and B31.4 <i>Transportation Systems for Liquids and Slurries</i>. • 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. 	
Water				
<p>Short- and long-term, minor to moderate impacts on groundwater resources and surface and coastal water resources.</p>		<p>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.</p>	<ul style="list-style-type: none"> • 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				
<p>Short-term, minor to moderate impacts on the water supply. Short-term, minor impacts on solid waste and local transportation.</p>	<p>Short-term, moderate impacts on the water supply. Short-term, minor to moderate impacts on solid waste and local transportation.</p>	<p>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.</p>	<ul style="list-style-type: none"> • USAF wells proposed in the 2016 Divert EIS (Final EIS, Section 4.13.2.1) would be designed to incorporate the need for water requirements for the proposed pipeline and support infrastructure. USAF would manage draw rates from the existing and proposed wells to ensure that water supply is not 	

West Route Alternative	East Route Alternative	No Action Alternative	West Route Mitigation Measures	East Route Mitigation Measures
Short-term, negligible impacts on the airfield, seaport, electrical system, and liquid fuel supply. Beneficial impacts would occur from jet fuel receipt and transfer capabilities. Short-term, minor, impacts on stormwater.			<p>exceeded.</p> <ul style="list-style-type: none"> USAF would coordinate with Commonwealth Utilities Corporation to manage withdraw rates from the municipal water system during fill of the seaport fire suppression water tanks to ensure that water supply is not exceeded. If coordination with Commonwealth Utilities Corporation deems use of the municipal system is not feasible for the initial fill of the tanks, USAF would utilize water from the two proposed USAF wells at the airport. USAF would implement measures to manage construction debris and promote energy efficiency as outlined in Appendix F. 	
Land Use and Recreation				
Short-term, minor to moderate 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.	USAF would obtain a CNMI major siting permit.		
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. 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.	
		<ul style="list-style-type: none"> USAF would design, manage, operate, and construct 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, negligible to minor impacts would be expected from construction emissions, land disturbance, and use of emergency generators.	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 dust control measures and obtain necessary air permits. Appendix F provides further details on air quality compliance actions and industry standard mitigation measures.		

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		
<p><i>Terrestrial Resources.</i> Negligible, short-term, direct impacts would be expected on native vegetation and wildlife. No adverse impacts on special status terrestrial species.</p> <p><i>Marine Biological Resources.</i> Short-term, no to negligible, indirect impacts would be expected on nearshore marine resources, EFH, and special status marine species during roadway improvements.</p>	Under the No Action Alternative, minor roadway repairs associated with routine use would have no impact on terrestrial or marine biological resources.	<ul style="list-style-type: none"> • USAF would implement all measures described in the 2012 Biological Opinion of Divert Capabilities and Conducting Divert Activities and Exercises, Saipan and Tinian, Commonwealth of the Northern Mariana Islands (01EPIF00-2012-F-0445) and in the 2015 USFWS Amendment to the Biological Opinion to prevent the spread of brown tree snakes and other invasive species. • 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.	Minor roadway repairs would have no impact on cultural resources.	<p>In accordance with the 2020 Amendment to the 2016 Programmatic Agreement:</p> <ul style="list-style-type: none"> • USAF would follow all aspects of the 2016 Programmatic Agreement that are not the subject of the Amendment. • Although the roadway improvements would have no impacts on historic properties, these areas were defined in the Section 106 process as part of the Divert Activities and Exercises APE and therefore would be included in USAF's development of an Interpretive Plan to document and interpret the prehistory and history of the Divert Activities and Exercises APE for the public.

Road Improvements	No Action Alternative	Mitigation Measures
Socioeconomics		
<p>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.</p>	<p>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 Action. Demand for public services and changes in sociocultural issues would not change from existing conditions.</p>	<ul style="list-style-type: none"> • 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		
<p>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.</p>	<p>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.</p>	<p>No mitigation measures for environmental justice and protection of children have been identified.</p>
Health and Safety		
<p>Short-term, direct, negligible to minor impacts on contractor health and safety, explosives safety, and public safety could occur.</p>	<p>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.</p>	<p>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.</p>
Soils and Geology		
<p>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.</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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.	USAF would obtain a CNMI major siting permit.
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.	<ul style="list-style-type: none"> • 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 determined the Undertaking would contribute to adverse effects from the Divert Activities and Exercises undertaking.
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, beneficial 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 alternatives. 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.

ES 8. Cumulative Effects

CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” Informed decision making is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably 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.

ES 9. References

- CEQ 1981 Council on Environmental Quality (CEQ). 1981. President’s Council on Environmental Quality. Forty Most Asked Questions Concerning CEQ’s NEPA Regulations. March 23, 1981. Available online: <<https://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf>>. Accessed February 19, 2018.
- Strata 2017 Strata. 2017. *Pipelines, Rail, and Trucks: Economic, environmental, and safety impacts of transporting oil and gas in the U.S.* Available online: <<https://www.strata.org/pipelines-rails-trucks/>>. August 2017.

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