FINDING OF NO SIGNIFICANT IMPACT
FROM
CONSTRUCTION OF A PLASMA RESOURCE RECOVERY SYSTEM AT HURLBURT FIELD, FLORIDA

RCS 08-009

Pursuant to the Council on Environmental Quality regulations for implementing procedural provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1500-1508) and Air Force regulations implementing NEPA procedures (32 CFR 989), the United States (U.S.) Air Force Special Operations Command has conducted an Environmental Assessment (EA) of probable environmental consequences for the construction of a Plasma Resource Recovery System (PRRS) at Hurlburt Field, Florida.

Purpose and Need

Purpose and Need (EA Section 1.3, page 1-1). Executive Order (EO) 13423, signed 24 Jan 07, mandates that federal agencies divert solid waste from landfills, increase their use of alternative fuels, reduce energy consumption, and lower greenhouse gas emissions. The technology of the proposed system would enable compliance with some of the EO 13423 mandates.

Issues Eliminated from Detailed Analysis

Issues Eliminated (EA Section 1.5.1, pages 1-2 to 1-5) Issues eliminated from detailed analysis include noise, wetlands, floodplains, safety and occupational health, cultural resources, biological resources, transportation, environmental justice, natural resources, and land use.

Description of Proposed Action and Alternatives

Proposed Action (EA Section 2.1, pages 2-1 to 2-7). The Proposed Action is the preferred alternative. AFSOC/A7AV proposes to construct and operate a transportable 10 metric ton per day (TPD) PRSS. The system would recycle Hurlburt Fields entire waste stream including classified, medical, municipal and hazardous materials. The total construction footprint would be approximately 14,000 square feet. Components of the system would be designed and constructed at the vendor facility and shipped to Hurlburt Field. Assembly of the PRRS unit would be performed by the vendor on or before March 2009. Operation of the facility would commence by February 2010. The contractor would assemble the transportable 10 TPD unit at a site located near the Hurlburt WWTP. This site is the Preferred Alternative.

The operation of the PRRS consists of four main processes:

1. **Storage and Separation.** A waste feeding system to include a heavy duty shredder, a ferrous metal separation, an eddy current separation, a conveyor system, a screw auger system, a recycle container system, a four-day silo storage system, and supporting facilities and infrastructure.

2. **Thermal Treatment.** A plasma thermal treatment system uses extremely high plasma furnace temperature to break down waste into an inert glass-like aggregate and molten metal. The molten metal would be recovered periodically as ingots.

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
APR 2008		**00-00-2008 to 00-00-2008**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Construction of a Plasma Resource Recovery System at Hurlburt Field, Florida. Final Environmental Assessment	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Science Applications International Corporation (SAIC),1140 Eglin Parkway,Shalimar,FL,32579**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**88**	

3. **Gas Treatment.** A plasma torch cleaning system treats raw synthesis gas from the previous step, breaking down toxic organic compounds and yielding clean synthesis gas for energy. Mechanisms for acid gas removal, hydrogen sulfide scrubbing, particulate matter removal, and heavy metal removal are implemented at this stage. Hot gas is cooled via quench water at this stage.

4. **Energy Recovery System.** The clean synthesis gas is converted to energy via an internal combustion engine-driven generator. The engine produces electricity which is used in the continued operation of the PRRS.

Alternative 1 Action (EA Section 2.2, page 2-7). The components, processes, and output of the PRRS are the same for this alternative as the Proposed Action. This alternative considers another siting option located near the Hurlburt Field old gate.

The No Action Alternative (EA Section 2.3, page 2-7). Under the No Action Alternative solid, medical, and classified waste would continue to be transported to off-base landfills. The mandates of EO 13423 would not be met.

Alternatives Considered But Not Carried Forward

Alternatives Not Carried Forward (EA Section 2.5, page 2-9). AFSOC considered locating the PRRS at the Okaloosa County Transfer Station, at which all county municipal waste is processed prior to transport to the landfill. This site, which is not located on Hurlburt, would require additional security considerations to process classified waste such as computer hard drives. Also, transporting the quench water to and from the PRRS would involve installing pipe under a nearby wetland. Constructing a landfill or constructing an incinerator were eliminated as alternatives.

Summary of Anticipated Impacts

Water Resources (EA Section 4.1, pages 4-1 to 4-2). Potential impacts to ground and surface water would be negligible. Furthermore, AFSOC would obtain all appropriate permits prior to the commencement of any ground-disturbing activities. Construction activities would require coverage under the Generic Permit for Stormwater Discharge. AFSOC would obtain all appropriate permits prior to the commencement of any ground-disturbing activities. If Alternative 1 is selected, a Finding of No Practicable Alternative is applicable for disturbance to a state regulated drainage ditch wetland located at the site.

Utilities and Infrastructure (EA Section 4.2, pages 4-2 to 4-4). There would be no increase in electricity or natural gas consumption from the new plasma facility. AFSOC does not anticipate significant impacts to water supply or wastewater treatment and usage as a result of the project and would comply and enforce actions as described under the wastewater permit.

Solid Waste (EA Section 4.3, pages 4-4 to 4-5). There would be no significant adverse impacts to solid waste. Solid waste generated at Hurlburt would be diverted from the landfills to the PRRS. The amount of solid waste disposed in the off-base landfills would decrease and potentially enable Hurlburt to exceed the mandates of EO 13423. Additional recyclable material generated and sold would also be expected to contribute to Base revenue. The PRRS would

produce an inert, glass-like aggregate and metal ingots that could be sold for other uses pending federal and state approval.

Topography and Soils (EA Section 4.4, pages 4-5 to 4-6). There would be no significant impact on topography and soils. The soil surrounding the project sites are composed of organic material which would not erode easily. The wooded area and flat terrain surrounding the site would also help minimize impacts from erosion.

Air Quality (EA Section 4.5, pages 4-6 to 4-8). No adverse impacts to air quality are expected from operation of the PRRS. A Prevention of Significant Deterioration (PSD) permit under the New Source Review (NSR) program established by the CAA may be required prior to beginning construction. Also, it may be determined that one or more National Environmental Standards for Hazardous Air Pollutants (NESHAP) rules are applicable to the facility.

Socioeconomics (EA Section 4.6, page 4-8 to 4-9). AFSOC does not expect any negative impacts on employment, income, housing, or base and county services. The only minor and temporary positive impact expected would be the creation of nine new positions to operate and maintain the system.

Cumulative Impacts (EA Section 4.7, pages 4-9 to 4-11). There would be a potential for cumulative impacts with regard to air permit requirements for this action, BRAC and military family housing construction projects. The Hurlburt wastewater plant could experience cumulative increases in demand from one or more of these projects.

Agency Review and Public Comment

Agency Review

The EA was provided to the State Clearinghouse for review. The State Clearinghouse review is included in Appendix A of the EA.

Public Comment

A public notice was published in the *Northwest Florida Daily News* on **13 February 2008** inviting the public to review and comment upon the EA. Appendix A of the EA addresses public notification. The public comment period closed on **28 February 2008**. No comments were received.

Permits and Regulatory Coordination

Stormwater. A National Pollutant Discharge Elimination System (NPDES) general permit for stormwater discharge (Chapter 62-621.300 [4], Florida Administrative Code [FAC]) and a stormwater pollution prevention plan (SWPPP) may be required. In addition to the NPDES permit, an individual permit for new stormwater discharge system (Chapter 62-346, FAC) may also be required.

Solid and Hazardous Waste. The PRRS may qualify for a state Research Development Demonstration permit for new technologies. The proponent would seek a permit to use the PRRS

process hazardous waste per 40 CFR 270. Additionally, a solid waste permit for Waste Processing Facilities under Rule 62-701.710 FAC is required.

Air Quality. The intent of this project is to insure that the project design will allow the Base to maintain its Synthetic Minor Status under the Clean Air Act. A Prevention of Significant Deterioration (PSD) permit under the New Source Review (NSR) program established by the CAA may be required prior to beginning construction. Also, it may be determined that one or more NESHAP rules are applicable to the facility.

Coastal Zone Management Act. This construction project requires consistency with Florida's Coastal Zone Management Act (CZMA). The Florida Department of Environmental Protection (FDEP) has reviewed a consistency determination for this project. The AFSOC CZMA Consistency Determination is provided in Appendix B.

Utilities. The PRRS shall comply with wastewater permit limits.

The Air Force Special Operations Command (AFSOC), as the proponent of this action will be responsible for submitting and enforcing all permitting issues and management actions described here and in EA Section 5.1 and 5.2, pages 5-1 to 5-2.

Finding of No Practicable Alternative

Taking the above information into consideration, together with the associated EA, pursuant to Executive Order 11990, *Protection of Wetlands*, and the authority delegated by Secretary of the Air Force Order 791.1 as further redelegated, I find there is no practicable alternative to the actions proposed in wetlands under Alternative 1, if selected, and that this alternative includes all practicable measures to minimize harm to the environment. This finding fulfills both the requirements of the referenced EOs and the Air Force *Environmental Impact Analysis Process* requirement (32 CFR 989.14) for a Finding of No Practicable Alternative.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and the environmental analysis contained in the attached EA and as summarized above, I find the proposed decision of the Air Force Special Operations Command to allow the construction of a Plasma Resource Recovery System at Hurlburt Field, Florida would not have a significant impact on the human or natural environment; therefore, an environmental impact statement is not required. This analysis fulfills the requirements of the National Environmental Policy Act, the President's Council on Environmental Quality and 32 CFR Part 989.

WILLIAM M. BARRETT, Lt Col, USAF
Chief, Asset Management Division
HQ AFSOC Installations & Mission Support

14 Apr 03
DATE

AIR FORCE SPECIAL OPERATIONS COMMAND
Hurlburt Field, Florida

CONSTRUCTION OF A PLASMA RESOURCE RECOVERY SYSTEM AT HURLBURT FIELD, FLORIDA

FINAL ENVIRONMENTAL ASSESSMENT

April 2008

CONSTRUCTION OF A PLASMA RESOURCE RECOVERY SYSTEM AT HURLBURT FIELD, FLORIDA

FINAL ENVIRONMENTAL ASSESSMENT

Submitted to:

Air Force Special Operations Command
Hurlburt Field, Florida

Submitted by:

Science Applications International Corporation
1140 Eglin Parkway
Shalimar, Florida 32579

RCS 08-009

April 2008

PRINTED ON RECYCLED PAPER

TABLE OF CONTENTS

Page

TABLE OF CONTENTS, CONT'D

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

µg/m³	micrograms per cubic meter
ACAM	Air Conformity Applicability Model
AFB	Air Force Base
AFI	Air Force Instruction
AFSOC	Air Force Special Operations Command
AFSOC/A7PP	Air Force Special Operations Command Planning and Programming Branch
BMP	best management practice
BRAC	Base Realignment and Closure
C&D	construction and demolition
CAA	Clean Air Act
CEMAS	continuous emission monitoring system
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CUP	consumptive use permit
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibels
DoD	Department of Defense
dscfm	dry standard cubic feet per minute
EA	Environmental Assessment
EIS	Environmental Impact Statement
EIAP	Environmental Impact Analysis Process
EO	Executive Order
FAC	Florida Administrative Code
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FONPA	Finding of No Practicable Alternative
FY	fiscal year
GJ/h	gigajoules per hour
gpm	gallons per minute
IC	internal combustion
IED	Improvised Explosive Device
ISWMP	integrated solid waste management plan
ITC	Integrated Training Center
JSF	Joint Strike Fighter
kg/h	kilograms per hour
kW	kilowatts
lb/h	pounds per hour
MFH	Military Family Housing
MGD	million gallons per day
mWh	megawatt-hours
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NRHP	National Register of Historic Places
NSR	New Source Review (Program)
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PM_{10}	particulate matter equal to or less than 10 microns in diameter

LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS, CONT'D

ppm	parts per million
PRRS	Plasma Resource Recovery System
PSD	prevention of significant deterioration
QRP	Qualified Recycling Program
ROI	region of influence
SO_2	sulfur dioxide
TPD	metric tons per day
U.S.	United States
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compound
WWTP	wastewater treatment plant

This page is intentionally blank.

1. PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

This Environmental Assessment (EA) analyzes and presents the potential environmental consequences associated with the construction and operation of a Plasma Resource Recovery System (PRRS) at Hurlburt Field, Florida. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), and Air Force regulations implementing NEPA procedures (32 CFR 989).

1.2 PROPOSED ACTION

The Proposed Action is to construct and operate a transportable PRRS at Hurlburt Field, Florida to process or recycle 100 percent of Hurlburt's waste stream including municipal solid waste, hazardous waste and classified waste. The project would demonstrate the viability of the system for future use with remotely deployed Air Force units. Once the viability of the system has been proven, the PRRS would be deployed for use at a remote location. The facility would be operational by February 2010. Details of the action are provided in Section 2, Description of Proposed Action and Alternatives.

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

Executive Order (EO) 13423, signed 24 Jan 2007, mandates that federal agencies divert solid waste from landfills, increase use of alternative fuels, reduce energy consumption, and lower greenhouse gas emissions. The technology of the proposed system would enable compliance with some of the EO 13423 mandates.

There are no systems currently in use at military installations that can efficiently and economically dispose of the entire waste stream in an environmentally sound manner (including municipal solid waste, medical waste, hazardous wastes, special waste, and classified wastes). Current methods typically involve expensive contracts with local waste haulers to remove and transport the waste to a landfill. Hazardous wastes, medical wastes, and special wastes are usually disposed of via contract. Classified wastes are sent to classified destruct facilities, which either incinerate or shred waste. Most of the nonhazardous waste is deposited in permitted landfills. Medical waste streams are either sterilized prior to landfill actions or sent to an incinerator.

At overseas locations, troops usually use open-pit burning, which poses a myriad of operational security, environmental health, and other serious exposure risks. In addition, at many of these locations, gravel is a valuable asset that is not locally available, and troops transporting gravel are put at risk from improvised explosive devices (IEDs) and ambushes. This system will produce electricity, hot water, an aggregate for use as gravel, and other valuable by-products. Implementation of an Air Force Special Operations Command (AFSOC) PRRS would allow Hurlburt to meet some of the mandates of EO 13423 and help spread this technology across the Department of Defense (DoD).

1.4 RELATED ENVIRONMENTAL DOCUMENTS

- Hurlburt Field Integrated Solid Waste Management Plan and Opportunity Assessment, 2005
- Air Force Form 813 for the PRRS

1.5 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The geographic scope of the EA includes Air Force-owned property upon which the two candidate locations are situated. The scope of the analysis includes the construction and operation of a 10-ton-per-day PRRS and potential issues associated with this action. Several issue categories were considered for detailed analysis. Appropriately, negligible issues were removed from detailed analysis consideration. Section 1.5.2 lists those issues that warranted closer inspection.

1.5.1 Issues Eliminated from Detailed Analysis

Issues eliminated from detailed analysis include noise, wetlands, floodplains, safety and occupational health, cultural resources, biological resources, environmental justice, surface water and groundwater, transportation, and land use. A brief explanation of their exclusion from detailed analysis follows.

Noise

The construction footprint of the project would occupy an area of about 14,000 square feet. Heavy machinery, such as bulldozers and trucks, would be involved in land clearing and would generate noise typical for the area. The proposed and alternative project locations are located near a highway and a wastewater treatment plant, respectively, away from residential areas or other noise receptors. The nearest residential area is located approximately 1,600 feet from the proposed location and 2,300 feet from the alternative location. Noise from system components such as the shredder and plasma torches would be dampened by the enclosing facility. Noise from specific components of the Hurlburt system design has not been measured. However, the shredder is typically the single noisiest component (AFSOC, 2007). A typical industrial shredder would approach a noise level of 92 A-weighted decibels (dB) at the source (Pichtel, 2005). This level of noise is primarily an occupational safety issue for those who would work at the plant. These workers would be required to wear proper hearing protection. The facility enclosing the system would dampen noise by approximately 20 dB, such that a person outside would not be exposed to loud noise. There are no sensitive noise receptors such as schools or residential areas near the system. Thus, noise would not be an issue.

Floodplains

The project area is not located within the 100-year floodplain. Thus, there are no issues with regard to flood risk.

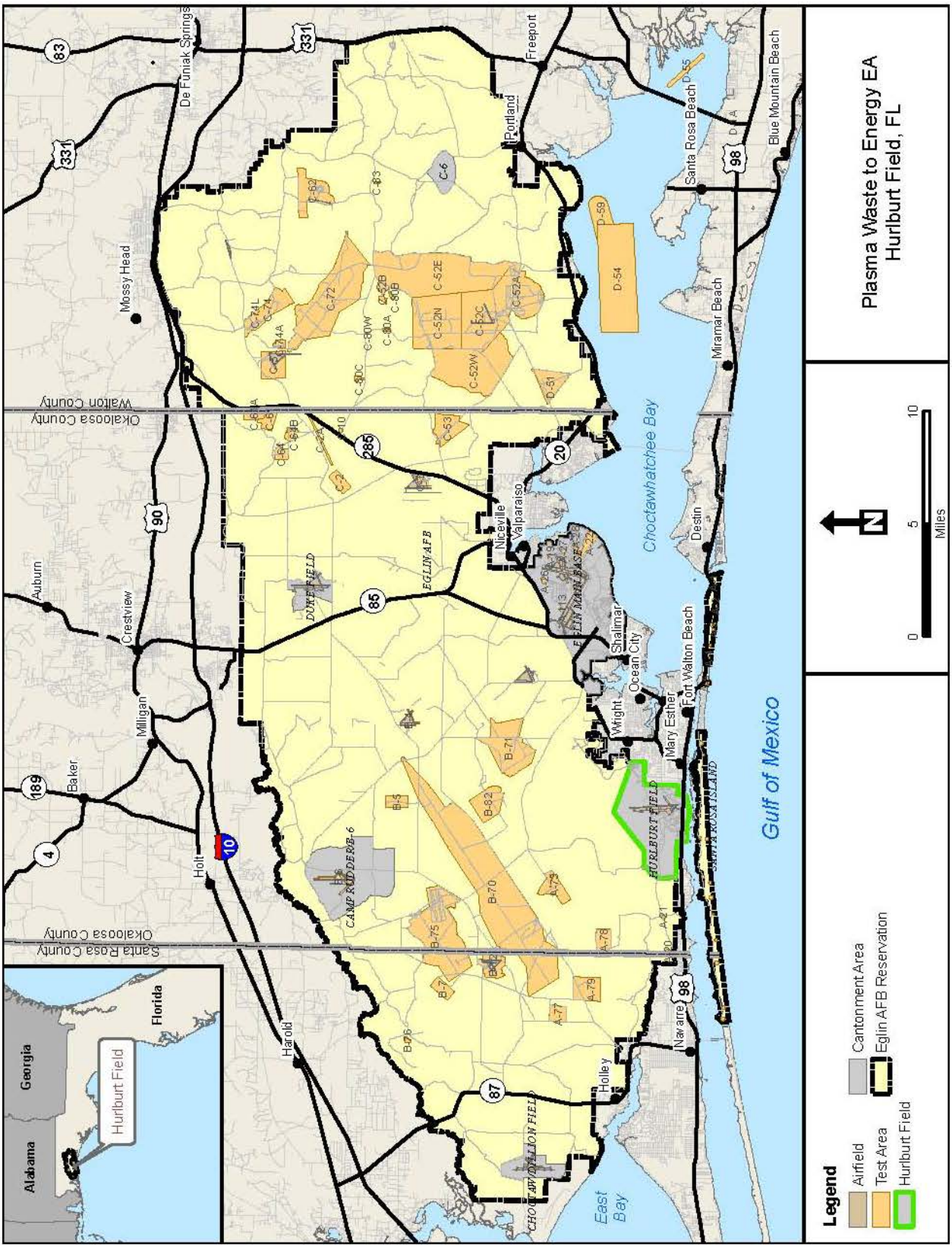

Figure 1-1. Regional Setting

Safety and Occupational Health

All proposed activities would conform to Occupational Safety and Health Administration (OSHA) standards and requirements. Industry and regulatory standards would govern all materials and equipment use. All proposed construction areas are within an area restricted to public access. The PRRS would comply with all fire and safety codes. The plasma furnace would be an automated system with system safety set points and monitoring to allow automatic safe shutdown as required. Workers would wear hearing protection as appropriate.

Cultural Resources

The project would be sited in an area away from known cultural resources.

Biological Resources

There are no issues with regard to biological resources. Some tree removal would be required. The proponent would ensure that a buffer of natural vegetation would be retained between the facility and the adjacent roadway, Heritage Road. Threatened and endangered plant and animal species would not be affected. The area is not within a migratory bird flyway. Migratory bird species would not be affected. The site, which is not located near the Hurlburt Field runway, would not be a bird attractant and thus would not pose a bird aircraft strike hazard to Hurlburt Field aircraft.

Environmental Justice

In 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (Environmental Justice)*, was issued to focus the attention of federal agencies on human health and environmental conditions in minority populations and low-income populations. The EO was established to ensure that disproportionately high and adverse human health or environmental effects of federal actions on these populations are identified and addressed. Preliminary analysis showed that no environmental justice concern areas, including low-income and/or minority populations, are adjacent to the proposed site for the PRRS.

In 1997, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (*Protection of Children*), was issued to identify and address issues that affect the protection of children under the age of 18. The proposed and alternative project sites are approximately 1 and 2 miles respectively southwest of an elementary school. Additionally, the facility would be on Hurlburt property, which would effectively restrict access to the public. Therefore, AFSOC does not expect any impacts to children. Furthermore, because the proposed activities would take place on Hurlburt Field, AFSOC does not anticipate any potential impacts to the public, including low-income or minority populations.

Surface Water and Groundwater

The nearest surface waters to the project area are a freshwater pond and former borrow pit adjacent to the Proposed Action (near the wastewater treatment plant [WWTP]) location and a golf course pond approximately 500 feet away from the Alternative 1 (near Old Gate) location. Neither the golf course pond or borrow pit pond would be directly affected. Groundwater would not be affected. The facility would be located outside of established well-head protection zones.

There would be no potential for waste materials to leach into groundwater. The system would be fully enclosed with built-in features designed to capture and process leachate. Quench water returning from the plant to the Hurlburt WWTP would be treated for nitrates and other nutrients. The Hurlburt WWTP currently meets National Pollution Discharge Elimination System (NPDES) permit requirements, which allow some discharge of treated wastewater into a wetland. Stipulations of the permit include not exceeding certain nitrate concentrations in groundwater monitoring wells at the discharge site. To continue to meet these requirements, the vendor contractor will include any needed precipitation, filtration or other measures for reducing nitrate in the outgoing quench water into the design for the PRRS.

Transportation

There would be no issues with transportation. The transport of Hurlburt solid waste materials to off-base landfills would cease.

Land Use

There would be no issues with land use. Proposed and alternative sites are located on base within an area of compatible land use. Both sites are designated as open land. However, the Alternative 1 site is located immediately adjacent to the golf course, which is a recreational land use. The Proposed Action site is more accurately characterized as industrial.

1.5.2 Issues Studied in Detail

Preliminary analysis based on the scope of the Proposed Action and alternatives identified the following potential environmental issues warranting detailed analysis.

Hazardous and Solid Waste

The Proposed Action entails the diversion of solid waste from landfills to the PRRS. Initially, the system would be used to process domestic solid waste and biomedical and classified waste. Eventually, AFSOC would expect to obtain the necessary permits to process items classified as hazardous waste (e.g., paint, solvents). Solid waste would be trucked to the project site and stored in a 4-day-capacity silo for processing. Solid waste would no longer be transported to landfills, decreasing landfill volume.

Water Use

While no surface waters would be at risk from the Proposed Action, some processed wastewater, if available, would be used in the quenching or cooling step of the PRRS. A water storage tower or holding pond would be constructed on the facility premises to hold processed wastewater. The facility would also use minor amounts of potable water for restrooms. There is a potable well located near the proposed action site. Sufficient area exists on the site to position the facility outside of the 500-foot wellhead protection zone. Per FAC 62-521 Wellhead Protection Program solid waste disposal facilities are not allowed within 500 feet of a potable well.

Wetlands

A wetland consisting of a drainage ditch at the Alternative 1 site would have to be crossed to access the site. The Air Force would prepare a Finding of No Practicable Alternative (FONPA).

Air Quality

A gas internal combustion engine/generator that runs off syngas by-products of the plasma arc gasification would produce minor amounts of air emissions. Syngas is composed of hydrogen and carbon monoxide. Analysis in Chapter 4 presents the amount and type of air emissions anticipated and compares the amounts to United States Environmental Protection Agency (USEPA) standards.

Utilities

The Proposed Action involves the production of energy as a by-product of waste processing. Because of the small amount of excess energy produced by this 10 metric tons per day (TPD) system, the energy would only be used to power the PRRS. The Hurlburt WWTP would supply the system with cooling or quench water if sufficient quantity is available. Otherwise, tap or well water would potentially be used at a rate of 10 to 15 gallons per minute during the quench phase.

Topography and Soils

The topography at the proposed or alternative project locations would be graded and soils disturbed and compacted during land clearing, which would occur prior to facility assembly and construction. Construction projects expose soil, increasing the potential for wind- and waterborne erosion.

Socioeconomics

The PRRS would generate revenue for the Hurlburt Field recycle center. The solid by-products could be recycled and sold for other uses. The system would generate approximately nine positions for full or part-time workers.

1.6 PERMITTING REQUIREMENTS, PUBLIC REVIEW, AND AGENCY COORDINATION

1.6.1 Stormwater

A NPDES general permit for stormwater discharge (Chapter 62-621.300 [4], Florida Administrative Code [FAC]) and a stormwater pollution prevention plan (SWPPP) may be required based on site and construction design inspection. The general requirements for NPDES stormwater permitting at construction sites are provided in Chapter 62-621, FAC. In addition to the NPDES permit, an individual permit for new stormwater discharge system (Chapter 62-346, FAC) would be required.

1.6.2 Air Emissions

Hurlburt Field currently operates as a synthetic minor source for USEPA permitting purposes, which provides exemptions from several operational, monitoring, and reporting requirements. If the determination is made that the facility would constitute a new major source or elevate Hurlburt Field to status as a major area source, several air quality permits may be required. The intent of this project is to insure that the project design will allow the base to maintain its Synthetic Minor Status under the Clean Air Act. A “prevention of significant deterioration”

(PSD) permit under the New Source Review (NSR) Program established by the Clean Air Act (CAA) may be required prior to beginning construction. Even though the facility would be on transportable skids, regulators may still consider the PRRS a stationary source. Classification of the system as a stationary source could trigger a Title V and PSD permit requirement for Hurlburt Field. Likewise, a Title V could be required if all of Hurlburt's air emission sources for any criteria pollutant exceed 100 tons per year, or if all sources exceed 10 tons per year for any hazardous air pollutant. Additionally, the PRRS may not fit exactly into existing regulatory waste processing facility categories. Thus, regulators may initially classify the PRRS as a waste combustor. If so, one or more National Environmental Standards for Hazardous Air Pollutants (NESHAP) rules would be applicable to the facility, depending on the exact operating parameters.

1.6.3 Solid and Hazardous Waste Processing Permits

The PRRS may qualify for a state Research Development Demonstration permit for new technologies. The proponent would seek a permit to use the PRRS to process hazardous waste per 40 CFR 270. Additionally, a solid waste permit for Waste Processing Facilities under Rule 62-701.710 Florida Administrative Code is required.

1.6.4 Public and Agency Review

AFSOC published a Notice of Availability for the EA to solicit public review and comment for inclusion in the Final EA as Appendix A. No public comments were received.

Analysis presented in this EA has determined that there are no threatened and endangered species or critical habitat within the project area. In addition, there are no cultural/historical resources in the project area identified as eligible to the National Register of Historic Places (NRHP). As a result, no consultations with respective regulatory agencies are required for this Proposed Action.

This construction project requires consistency with Florida's Coastal Zone Management Act (CZMA). A negative determination, which was reviewed by the state, is provided in Appendix B.

The EA was reviewed by the Florida State Clearinghouse who found the project to be consistent with the Florida Coastal Management Program. Some of the states concerns are incorporated into this Final EA. Others will be addressed prior to project implementation. State Clearinghouse comments are included in Appendix A.

1.7 DOCUMENT ORGANIZATION

This EA follows the organization established by the CEQ regulations (40 CFR 1500–1508). This document consists of the following chapters.

- Chapter 1 – Purpose and Need for the Proposed Action
- Chapter 2 – Description of Proposed Action and Alternatives
- Chapter 3 – Affected Environment

- Chapter 4 – Environmental Consequences
- Chapter 5 – Plans, Permits, and Management Actions
- Chapter 6 – List of Preparers
- Chapter 7 – List of Contacts
- Chapter 8 – References
- Appendix A – Public and Agency Review
- Appendix B – CZMA Consistency Determination

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION (PREFERRED ALTERNATIVE): NEAR THE WASTEWATER TREATMENT PLANT (WWTP)

The AFSOC EIAP (Environmental Impact Analysis Process) Working Group proposes to construct and operate a transportable 10 TPD PRRS, also known as a plasma resource recovery system (PRRS). The system would recycle Hurlburt Field's entire waste stream including classified, medical, and hazardous wastes. The proposed project would demonstrate the viability of the PRRS for possible future deployment with remote Air Force units. The total construction footprint would be approximately 14,000 square feet. Sighting of the facility would consider the possible future four-lane expansion of Heritage Road which runs adjacent to the proposed site. A vegetative buffer would be retained between the facility and Heritage Road.

2.1.1 Construction

Components of the system would be designed and constructed at the vendor facility and shipped to Hurlburt Field. The contractor would assemble the transportable 10 TPD unit at one of two potential locations. The location of the Proposed Action site, which is the AFSOC EIAP Working Group preferred location, is shown in Figure 2-1. It would be wholly contained on Hurlburt Field and separated by fence from the community. The alternate location is discussed in Section 2.2.

Assembly of the PRRS would be performed by the vendor on or before March 2009. Operation of the facility would commence by February 2010. The following section discusses the system components and their function.

2.1.2 System Components

The major PRRS components are described in Table 2-1 below.

Table 2-1. PRRS Components

Component	Description/Function
Shredder	Shreds solid domestic waste and any potential constituent that could be received in the waste stream, to include large metal objects. Handles any dangerous/hazardous/flammable object/substance received from the waste stream. Captures any explosive or noxious substances, (e.g., gas, liquid, or solid) for injection into the plasma furnace.
Ferrous Metal Separator	A self cleaning ferrous metal separator for removing ferrous (iron-based) metals from the waste stream. Ferrous metals would be deposited in recycle bins, prior to the eddy current separator.
Eddy Current Separator	Removes nonferrous metals from the waste stream and deposits them in recycle bins, prior to depositing materials in the storage silo.
Biomedical Waste Feeder	Allows the input of bio-medical waste into the plasma furnace safely without exposing operators to any bio hazards from the waste stream.

Table 2-1. PRRS Components, Cont'd

Component	Description/Function
Large 4-Day Waste-Storage Silo	Allows the accumulation and storage of waste equivalent to the average of 4 days of Hurlburt's entire waste stream. The 4-day waste storage silo capacity would have a negative air pressure to capture and retain noxious odors. It would safely collect, store and transport liquids, solids, and gases from the storage silo into the plasma furnace. The storage silo would collect leachate from the tipping floor collection system and transmit it to the furnace in a safe manner without exposing operators to any waste stream hazards. The dimensions of the silo would be determined during the design phase.
Storage Mixer, Conveyors	Transmits all waste streams to the plasma furnace. The Storage Mixer and conveyor system would capture and retain solids and liquids. It would convey the waste stream past ferrous and eddy current separators to allow removal of recyclable materials prior to storage in the silo and or transfer to the plasma furnace. The Storage Mixer and conveyor system would also collect leachate from the waste stream and transmit it to the furnace in a safe manner without exposing operators to any waste stream hazards
Plasma Gasification Furnace	The furnace, which would operate at 5,000 degrees Celsius, would safely accept all waste without exposing operators to any hazards from the waste stream, and separate organic and inorganic waste fractions. The plasma furnace system would comply with all fire and safety codes and be an automated system with system safety set points and monitoring to allow automatic safe shutdown as required.
Plasma Torch Power Supply	Powers the plasma torch subsystem.
Secondary Gasifier	Gas composed primarily of carbon monoxide and hydrogen, but also containing a certain amount of carbon soot, acid gases, moisture, and partially decomposed hydrocarbons, would be converted into a cleaner form.
Gas Treatment System	Hot gas exiting the secondary gasifier would be quenched with water, thus lowering the temperature from 1,200 degrees Celsius to 60 degrees Celsius in 0.5 seconds. The rapid cooling would retain the composition of the clean gas, preventing the formation of organic compounds such as furans and dioxins.

2.1.3 Operation

The operation of the PRRS consists of four main processes:

1. **Storage and Separation.** A waste feeding system to include a heavy-duty shredder, a ferrous metal separator, an eddy current separator, a conveyor system, a screw auger system, a recycle container system, a 4-day silo storage system, and supporting facilities and infrastructure. A dedicated enclosed area will be available to store hospital waste. The size of this area will depend on the frequency of hospital waste drop-off. The plasma operators will be advised to process hospital waste on a priority basis to reduce the volume of hospital waste storage.

2. **Thermal Processing.** A plasma thermal processing system uses extremely high plasma furnace temperature of 5,000 degrees Celsius to break down organic and inorganic waste. Organic waste is volatilized and directed to an eductor. Inorganic waste is converted into molten metal and metal oxides. The molten metal oxide would be recovered periodically as an inert glass-like aggregate. Metals would be recovered as ingots.

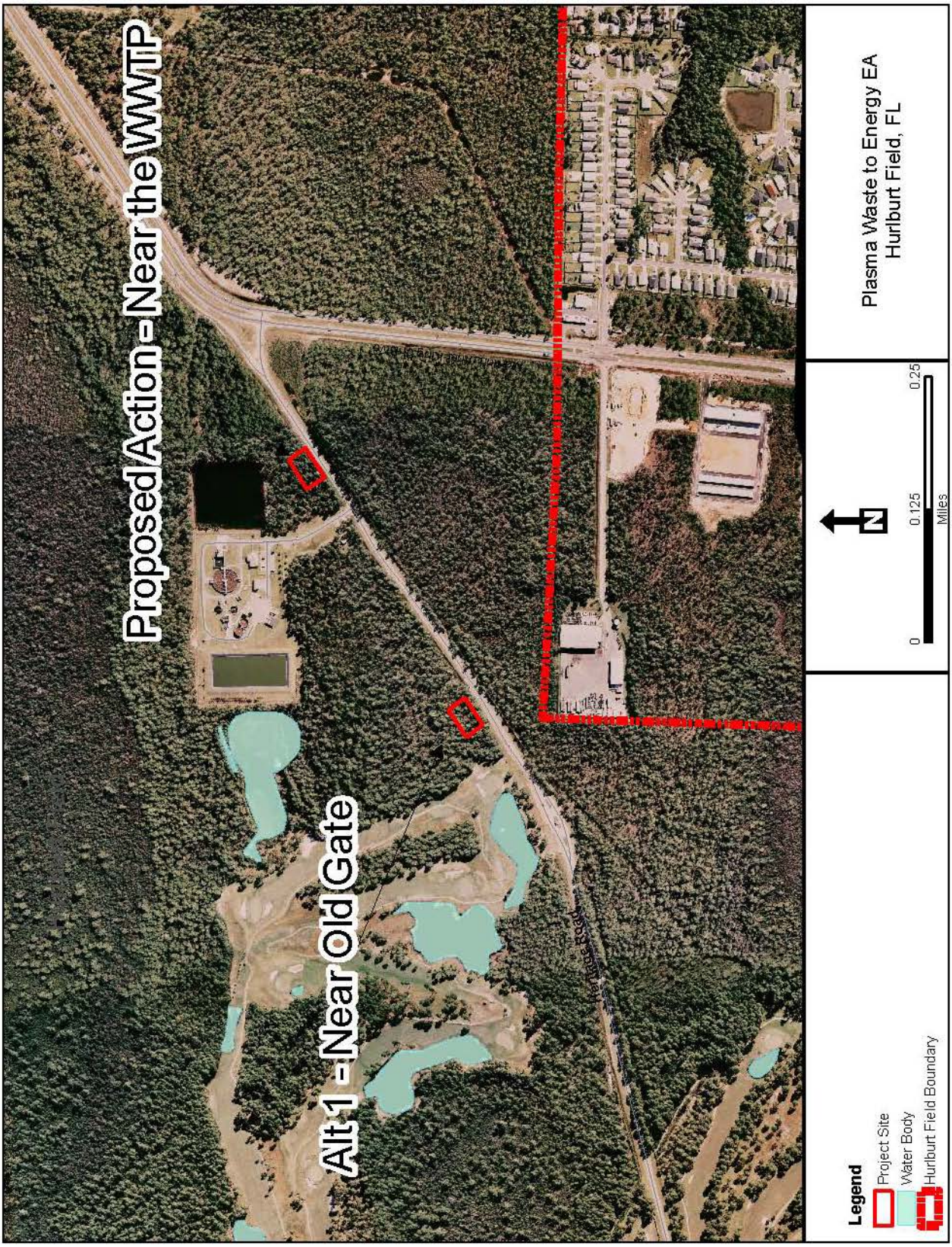

Figure 2-1. Proposed Action and Alternative Locations

3. **Gas Treatment.** A plasma torch cleaning system operating at a temperature of about 1,200 degress Celsius would treat raw synthesis gas from the previous step, breaking down toxic organic compounds and yielding clean synthesis gas for energy. Hot gas would be cooled via quench water from the WWTP. The temperature of quench water discharged back to the WWTP would be about 60 degrees Celsius. A holding tank or cooling pond may be required to allow cooling of the water before discharge to the WWTP. Mechanisms for acid gas removal, hydrogen sulfide scrubbing, particulate matter removal, and heavy metal removal are implemented at this stage.

4. **Energy Recovery System.** The clean synthesis gas is converted to energy via an internal combustion (IC) engine-driven generator. The engine produces electricity that is used in the continued operation of the PRRS. Steam from the cooling or quench water used to cool the plasma furnace would be available for conversion to energy.

Figure 2-2 depicts the PRRS process overview. Figure 2-3 illustrates the typical layout of the system and components.

2.1.4 System By-Products and Energy Consumption

System by-products, based on a waste capacity processing rate of 436 kilograms per hour (kg/h) (960 pounds per hour [lb/h]) and electrical consumption rate of 700 kW are listed in the table below.

Table 2-2. System Waste Capacity Processing Rate

By-product	Amount
Inert aggregate	54 kg/h
Metal	27 kg/h
Thermal energy available in off-gas	313 kW
Energy available from engine water jacket	313 kW

kg/h = kilograms per hour; kW = kilowatts

The power consumption for the system is estimated at 700 kilowatts (kW), as follows:

Table 2-3. System Energy Consumption

System Component	Energy Consumed
Primary gasifier (arc furnace)	355 kW
Secondary gasifier (plasma torch)	150 kW
Auxiliaries (shredder, pumps, conveyors, blowers)	195 kW
TOTAL	**700 kW**

kW = kilowatts

The 10-metric-ton-per-day system would produce enough electricity to be self-sufficient to operate all system components, including the facility lighting and approximately 626 kW (2.25 gigajoules per hour [GJ/h]) of thermal energy that could be used for other functions.

Depending on the status of the permitting process, the system would begin by processing nonhazardous waste and hospital waste followed by hazardous wastes at a later stage pending receipt of required permits. The PRRS would be able to process a minimum of 900 lb/h of waste

while meeting all relevant USEPA air emission standards. The aggregate produced would meet the applicable Toxicity Characteristic Leaching Procedure (TCLP) standards. The construction contractor would test the emissions and aggregate to ensure compliance with state of Florida and USEPA standards.

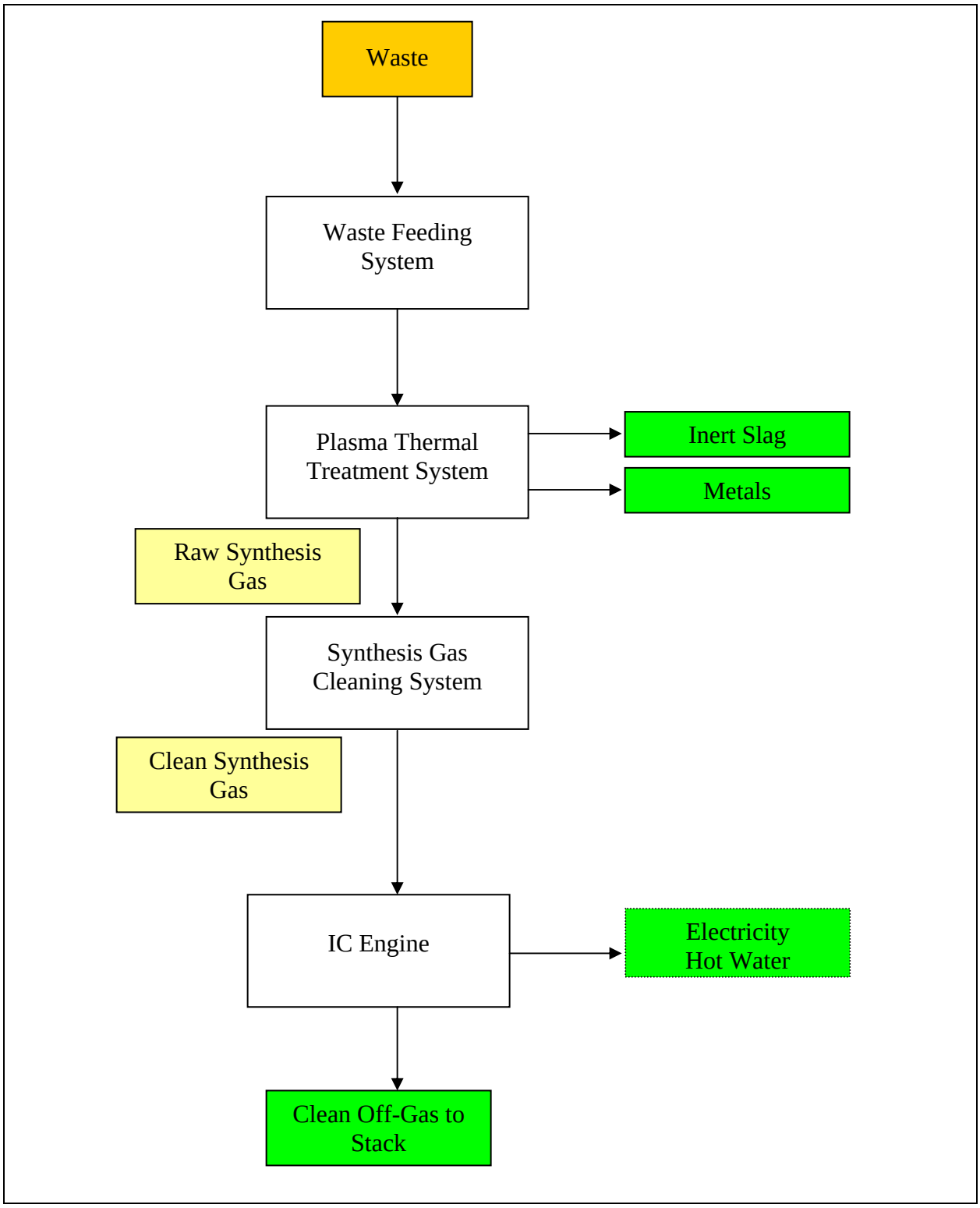

Figure 2-2. PRRS Process Overview

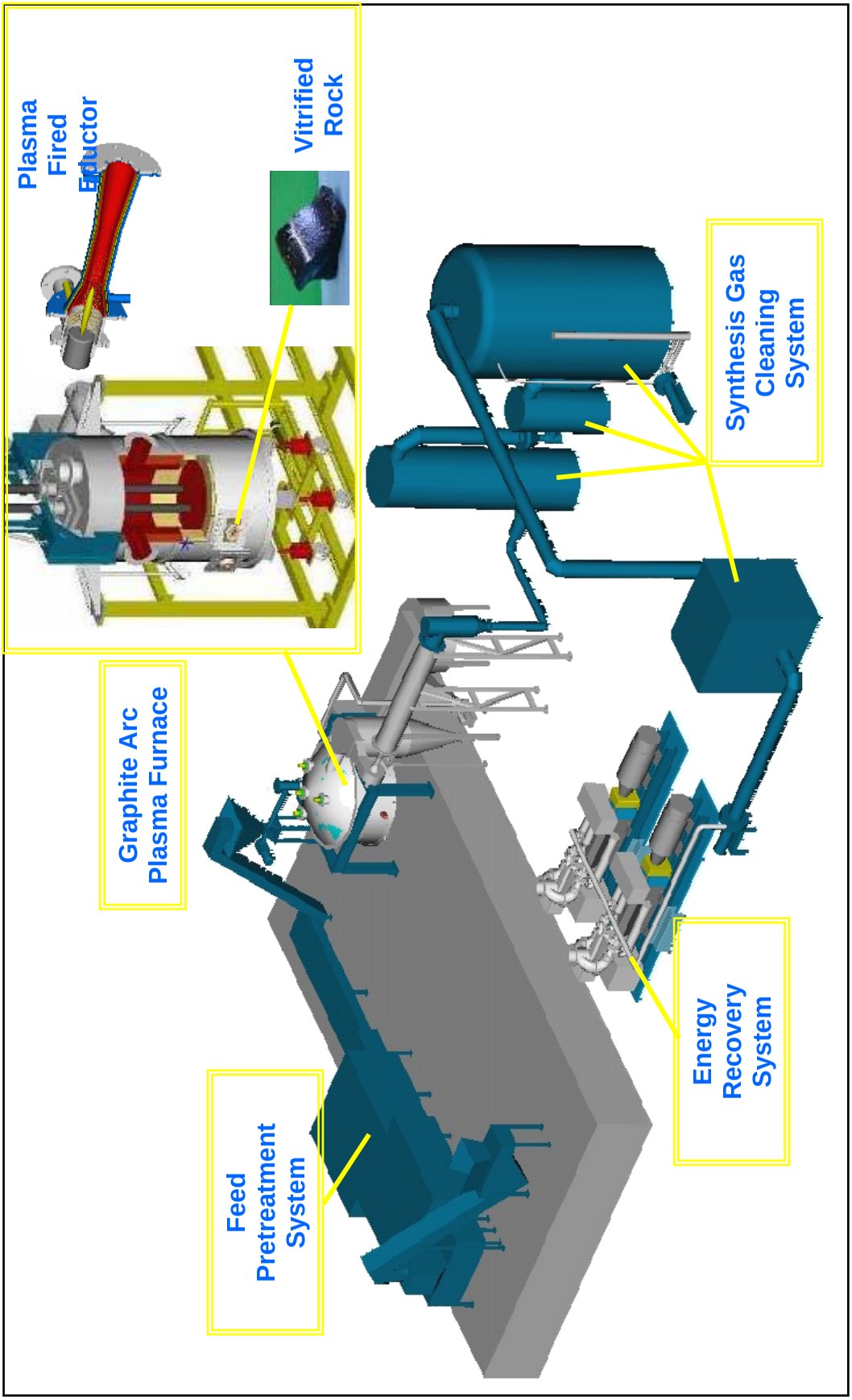

Figure 2-3. Typical PRRS

2.1.5 Actions Taken to Ensure Compliance With Applicable Regulations

The vendor contractor will arrange onsite emissions testing by a certified laboratory, per the permitting requirements, and provide input and expertise, as required, once the system is operating at full capacity. The system would be equipped with a continuous emission monitoring system (CEMAS) to ensure that emission standards are met. The vendor contractor will design all system filters and processes for air emissions and cooling water to meet applicable state and federal CAA and Clean Water Act (CWA) standards.

2.2 ALTERNATIVE 1: NEAR THE OLD GATE

The components, processes, and output of the PRRS are the same for Alternative 1 as the Proposed Action. This alternative considers another siting option located near the Hurlburt Field old gate (Figure 2-1). As with the Proposed Action, siting of the facility at this site would consider the possible future expansion of Heritage Road from two to four lanes. A vegetative buffer would be retained between the facility and Heritage Road.

2.3 NO ACTION ALTERNATIVE

Under the No Action Alternative solid, medical, hazardous and classified waste would continue to be transported to off-base landfills. The viability of the system would not be demonstrated and it would not be deployed for use with remotely deployed units.

2.4 COMPARISON OF ALTERNATIVES

Table 2-4 provides a comparison of alternatives.

Table 2-4. Proposed Action, Alternative Action, and No Action Alternative Potential Impacts

Issue	Proposed Action	Alternative Action	No Action
Water Resources	No indirect (runoff) impact on wetlands or water resources is expected. No wetlands occur within the project construction footprint. Surface waters would not be affected. A potable well is located near the site but the facility would be placed beyond the 500-foot wellhead protection zone.	The Alternative Action would not have any direct or indirect (runoff) impact on surface water resources. A drainage ditch surrounds the perimeter of this site and may have to be culverted to allow access to the site. Impacts would be minor. AFSOC has prepared a FONPA. Surface waters and groundwater would not be affected.	No impacts would occur.

Table 2-3. Proposed Action, Alternative Action, and No Action Alternative Potential Impacts, Cont'd

Issue	Proposed Action	Alternative Action	No Action
Utilities	The system would generate enough electricity from the processing of waste to run itself. Wastewater from the Hurlburt WWTP would be used as cooling or quench water which would again be re-used before return to the WWTP. The vendor would design the system so that quench water returning to the WWTP does not exceed the plant's permit requirements for heat, nutrients or other parameters. There would be negligible impacts from water use for the associated restroom. The amount of wastewater flow to the WWTP would not exceed acceptable flow limit of 1 MGD. There would be no noticeable increase in wastewater from this addition. Natural gas usage would be negligible. Therefore, no significant impact to utilities are expected.	Under the Alternative Action, there would be no significant impacts to utilities and infrastructure. Under Alternative 1, the demands on electricity, natural gas, water and wastewater systems would be the same as under the Proposed Action.	There would be no change to utilities use under the No Action Alternative.
Solid and Hazardous Waste	Hurlburt Field's solid waste would be diverted from a landfill to the PRRS. Once permitted, the facility would also accept hazardous waste. Potential effects are expected to be beneficial with regard to current methods for solid waste disposal at landfills. Landfills release methane, a greenhouse gas, have a limited lifespan and need to be properly monitored even after they have ceased to operate to ensure that the liner is intact.	Under Alternative 1 Hurlburt's solid waste would be diverted from a landfill to the PRRS located near the golf course. Potential beneficial effects with regard to solid waste disposal methods would be the same as the Proposed Action.	Under the No Action Alternative, solid waste would continue to be transported off-base.
Soils	For the Proposed Action, implementation of erosion control measures associated with permit requirements would minimize the potential for soil disturbance. AFSOC does not anticipate any adverse impacts.	For the Alternative Action, implementation of erosion control measures associated with permit requirements would minimize the potential for soil erosion. AFSOC does not anticipate any adverse impacts.	No impacts would occur to soils.
Air Quality	The Proposed Action would not adversely affect regional air quality. The facility would continuously monitor air emissions.	The Alternative Action would not adversely affect the regional air quality.	There would be no change with respect to air quality.

Table 2-3. Proposed Action, Alternative Action, and No Action Alternative Potential Impacts, Cont'd

Issue	Proposed Action	Alternative Action	No Action
Socio-economics	The Proposed Action would have slight positive socioeconomic impacts. Nine new jobs would be provided to operate the system.	The Alternative Action would have slight positive socioeconomic impacts. Nine new jobs would be provided to operate the system.	There would be no socioeconomic impacts.

MGD = million galls per day; WWTP = wastewater treatment plant

2.5 ALTERNATIVES DISCUSSED BUT NOT CARRIED FORWARD FOR ANALYSIS

2.5.1 Okaloosa County Transfer Station Location

AFSOC considered locating the PRRS at the Okaloosa County Transfer Station, at which all county municipal waste is processed prior to transport to the landfill. This site, which is not located on Hurlburt, would require additional security considerations to process classified waste such as computer hard drives. Also, transporting the quench water to and from the PRRS would involve installing pipe under a nearby wetland.

2.5.2 Construct a Landfill

Constructing a landfill was eliminated from consideration due to their cost, the large area required and environmental impacts. Municipal waste is currently being disposed of by transport to landfill. Introducing this course of action as an alternative does not improve upon the current situation. Landfills release green house gases, have a limited lifespan and need to be properly monitored even after they have ceased to operate.

2.5.3 Construct an Incinerator

The AFSOC EIAP Working Group briefly considered but eliminated the construction of a conventional incinerator as an alternative. An incinerator would not meet the objective of demonstrating a new technology which could be later deployed to remote locations. Additionally, fly ash, a by-product of incineration, can contain toxic compounds such as dioxins and furans. The fly ash would have to be captured and disposed of in a landfill.

This page is intentionally blank.

3. AFFECTED ENVIRONMENT

3.1 WATER RESOURCES

Water resources (Figure 3-1) addressed include stormwater and the coastal zone as defined by the CZMA. Wetlands, floodplains, and surface water and groundwater would not be affected.

3.1.1 Definition of Resource

The Coastal Zone

The CZMA provides for the effective, beneficial use, protection, and development of the United States (U.S.) coastal zone. The state of Florida defines the landward boundaries of the state, in accordance with Section 306(d)(2)(A) of the CZMA, as the entire state of Florida. Federal agency activities in the coastal zone are required to be consistent to the maximum extent practicable with approved state coastal zone management plans. Federal agencies make determinations as to whether their actions are consistent with approved state plans and submit these determinations for state review and concurrence. All relevant state agencies must review the Proposed Action and issue a consistency determination. The Florida Coastal Management Program (FCMP) is composed of 23 Florida statutes, which 11 state agencies and 4 of the 5 water management districts administer.

Any components of the Proposed Action that take place within the jurisdictional concerns of the state would require a consistency determination with respect to Florida's Coastal Management Plan (Appendix B).

Stormwater

Stormwater-transported sediment can alter water quality, aquatic habitats, and hydrologic characteristics of streams and wetlands and increase flooding. Land-disturbing activities (such as clearing) and addition of impermeable surfaces (i.e., concrete, asphalt) would result in increases in stormwater runoff. The effects, however, vary based on the amount of new impervious surface areas, topography, rainfall, soil characteristics, and other site conditions. The rate and volume of stormwater runoff has the potential to impact the quality and utility of water resources (FDEP, 2002). Permits for stormwater discharges may be required under the NPDES program of the CWA. Regulations under FAC Rule 62-346 and the NPDES require permitting for new stormwater discharges. FAC Rule 62-621 requires coverage under the Generic Permit for Stormwater Discharge for construction activities that disturb 1 or more acres of land. Florida Statutes Section 403.0885 requires a notice of intent to use the Generic Permit for Stormwater Discharge under the NPDES program. Compliance with this permit involves developing and implementing an SWPPP. An SWPPP requires the implementation of site-specific best management practices (BMPs) for erosion and sedimentation control such as silt fences, detention and retention ponds, and grassed swales.

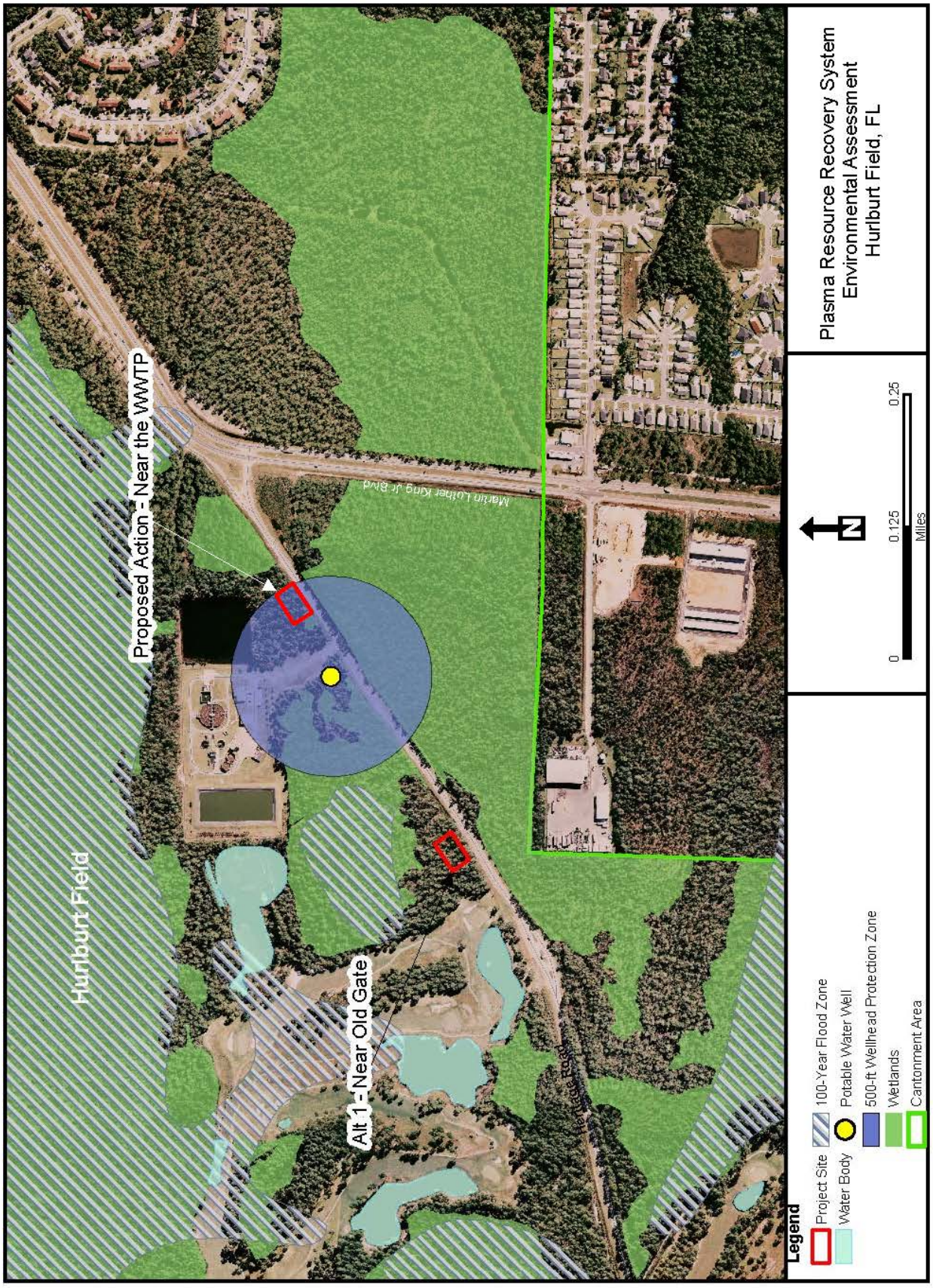

Figure 3-1. Water Resources Within the Project Area

Wetlands

"Jurisdictional wetlands" are those wetlands over which the U.S. Army Corps of Engineers (USACE) has regulatory control under Section 404 of the Clean Water Act. *Wetlands* are defined in the USACE Wetlands Delineation Manual as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987). The majority of jurisdictional wetlands in the United States are described using the three wetland delineation criteria: hydrophytic vegetation, hydric soils, and hydrology (USACE, 1987). USFWS uses a simpler classification system that is satisfied by any one of the above three characteristics.

3.1.2 Existing Conditions

The Proposed Action site (near the WWTP) and the Alternative 1 site (near the Old Gate) are relatively flat and consist of soils with a moderate potential for erosion (see Section 3.4).

The Coastal Zone

Some components of the Proposed Action would take place within the jurisdictional concerns of the FDEP and therefore would require a consistency determination with respect to the FCMP and the CZMA (Appendix B).

Stormwater

Stormwater transport characteristics within the project area are dependent on soil type, slope, and stormwater drainage infrastructure. Soil type, discussed further in Section 3.4, exhibits a moderate potential for erosion. Terrain at the proposed and alternative sites is flat, which would limit transport of stormwater.

Wetlands

Federal jurisdictional and state wetlands surround both the Proposed Action and Alternative 1 sites. A state regulated drainage ditch wetland is located along the perimeter of the Alternative 1 site. Access to the site would require crossing this ditch.

3.2 UTILITIES

This section presents information on infrastructure and utilities within the area potentially affected by the Proposed Action and Alternative 1.

3.2.1 Definition of Resource

Infrastructure refers to the system of public works, such as transportation and utilities, that provide the underlying framework for a community. Utilities include facilities such as water and power supply and waste management. During project and site planning, engineers consider the utility specifications that are required as part of the project. Potential modifications and upgrades to existing systems factor into the planning process.

3.2.2 Existing Conditions

Proposed Action (Preferred Alternative): Near the WWTP

Electrical

Gulf Power is the electric power provider to Hurlburt Field. During calendar year (CY) 2007, Hurlburt Field used 108,252 megawatt-hours (mWh) of electricity. The transmission lines to Hurlburt Field feed in from the Navarre substation off base. Service in the area is currently provided via aboveground wooden poles. The electrical infrastructure is currently being upgraded to underground transmission lines (Williams, 2008). Electric transmission lines run along the southern boundary of the project area and would require a tie-in to utilize (Figure 3-2).

Wastewater

A Biological Nutrient WWPT is located to the north of the project area. The wastewater average daily flow at Hurlburt Field is 0.529 million gallons per day (MGD) (Williams, 2008). This plant would supply cooling or quench water to the PRRS. After several re-uses this quench water would then be allowed to cool and returned to the wastewater facility. Potentially, it could also be used for heating, drying, or other industrial and commercial purposes (AFSOC, 2007). There are accessible wastewater lines running immediately south of the project area and would require a tie-in to utilize (Figure 3-2).

Water

Primary potable water supply to Hurlburt Field is from deep wells that tap into the Floridan Aquifer. The potable water system has a maximum pump capacity of 2,780 gallons per minute (gpm). If operated 24 hours per day at this rate, the throughput would equal 4,003,200 gallons per day; however, pumps operated at a maximum rate are expected to need greater maintenance, and failures with corresponding loss of service would be anticipated. The consumptive use permit (CUP) specifies a maximum withdrawal of 1.63 million gallons in a single day, not to exceed 31 million gallons monthly (Williams, 2008).

Natural Gas

The start-up function of the plasma facility requires either natural gas or propane fuel. Okaloosa Gas supplies natural gas on a contract basis to Hurlburt Field (Williams, 2008). The nearest gas transmission line is 0.25 miles from the proposed project area and would require a tie-in to utilize (Figure 3-2).

Alternative 1: Near the Old Gate

The affected environment for Alternative 1 is identical to that of the Proposed Action. The Alternative 1 project area is located approximately 1/3 mile southwest of the Proposed Action location and shares the same utility lines from the same utility infrastructure with service from the same sources. As with the Proposed Action, tie-ins to wastewater, water, electrical, and possibly natural gas would be required under this alternative.

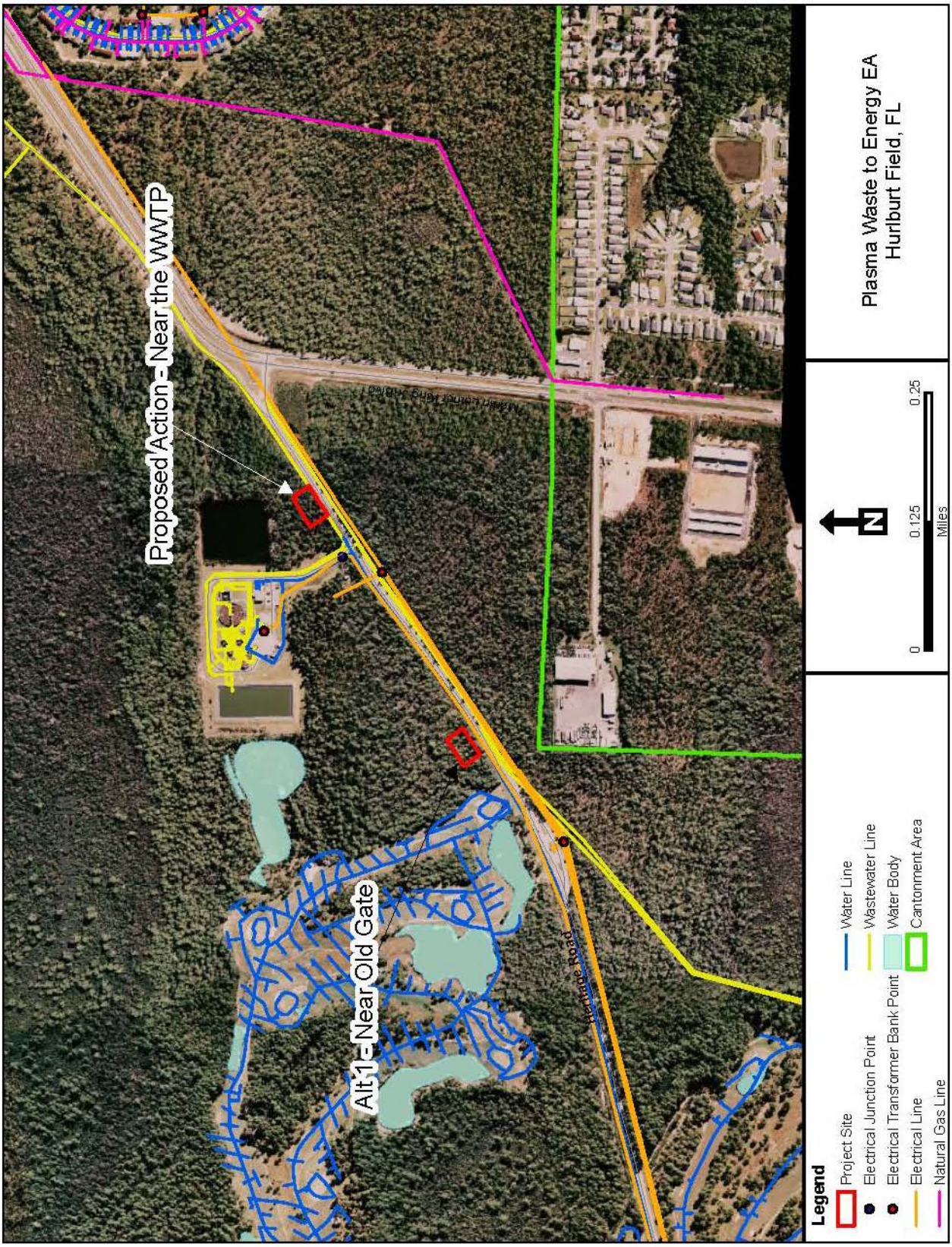

Figure 3-2. Utilities Near the Project Area

3.3 HAZARDOUS AND SOLID WASTE

3.3.1 Definition of Resource

Most of Hurlburt's hazardous waste comes from aircraft maintenance activities in the form of paint chips/dust, paint booth filters, and spent solvent from paint gun cleaning. Solid waste is defined in the Florida Solid Waste Disposal Facility regulations as any sludge (unregulated by the federal CWA or CAA), garbage, rubbish, refuse, special waste, or other discarded material resulting from domestic, industrial, commercial, mining, agricultural, or government activities. Solid waste is also commonly referred to as municipal solid wastes (such as garbage and refuse) and construction and demolition (C&D) debris, which consists of discarded materials generally not soluble in water (i.e., steel, glass, brick, concrete, and asphalt).

Under Air Force Instruction (AFI) 32-70042, all Air Force installations are required to implement a solid waste management program and develop and implement an integrated solid waste management plan (ISWMP) (U.S. Air Force, 2005). AFI 32-70042 was a result of EO 13101, which requires waste prevention, recycling, and green procurement to be incorporated into each executive agency's daily operations. Hurlburt Field is also required to have a Qualified Recycling Program (QRP) as part of their municipal solid waste management. The goal of the QRP is to make recycling a daily event and reduce municipal solid waste disposal by the most cost-effective means. Hurlburt's ISWMP outlines existing solid waste management programs at the installation. The majority of the information provided in this section is from Hurlburt's ISWMP (2005).

3.3.2 Existing Conditions

Hazardous Wastes

Hurlburt produces approximately 89 tons per year of hazardous wastes that require special disposal at a cost of $62,142 annually. Eglin AFB produces 133 tons of hazardous wastes with an annual disposal cost of over $300,000. As stated these wastes are primarily associated with aircraft and vehicle maintenance and solvents from paint gun cleaning.

Solid Waste

There are three distinct sources that generate waste on Hurlburt Field including Military Family Housing (MFH) and dormitory residents, personnel who work on base, and the commercial and industrial activities that take place on base. The types of waste collected are shown in Table 3-1 below:

Table 3-1. Solid Waste Collected at Hurlburt Field

Source	Materials
Solid Waste Disposal Contractor	Solid Waste; bulk collection; recyclable materials from MFH
Construction Contractors	Construction and demolition related waste
Hurlburt Field Waste Water Treatment Plant (WWTP)	Sludge from WWTP
Hurlburt Field Recycling Center	Recyclable Materials
DRMO	Usable materials purchased with appropriated funds

Source: U.S. Air Force, 2005

Currently, all nondiverted solid waste is collected by Arrow Inc., the solid waste disposal contractor (Halbert, 2008), and taken to the transfer station in Fort Walton Beach prior to final disposal at a landfill in Springhill, Alabama (Halbert, 2008). All C&D waste is collected in specified dumpsters and transported to the Santa Rosa County Landfill in Milton, Florida, for disposal (U.S. Air Force, 2005).

Yard debris, including wood waste and grass clippings, is transported to the Wright Landfill in Okaloosa County where it is converted into mulch. Through a lease agreement with the U.S. Air Force and the landfill, yard and wood debris from Hurlburt Field is accepted by the Wright Landfill at no cost. In exchange, the county reuses the mulch and wood waste for erosion control and landfill cover. The base receives recycling credit for the yard debris and also receives credit from the sludge generated from the WWTP that is treated and land farmed (U.S. Air Force, 2005).

A summary of the types of solid waste generated at Hurlburt Field for the years 2002 to 2004 is shown in Table 3-2.

Table 3-2. Solid Waste Generated at Hurlburt Field (Tons)

Description	FY 2002	FY 2003	FY 2004
Composted	0	0	0
Mulched	579	903	642
Recycled	1,538	1,733	1,789
Reused	372	47	63
Donated	0	0	10
C&D Diverted	313	0	10
Disposed	2,762	3,181	3,506
C&D Disposed	218	60	122
Disposed to Waste to Energy	80	366	204
C&D to Waste to Energy	0	0	0
TOTAL	5,861	6,290	6,348

Source: U.S. Air Force, 2005
FY = fiscal year; C&D = construction and demolition

The current amount of waste generated at Hurlburt Field is estimated at 8.3 tons per day (TPD), which is almost 3,030 tons per year (U.S. Air Force, 2008). The amount of waste generated on base fluctuates heavily depending on activities occurring on base. Between 2002 and 2004, waste disposal rates increased from 8.4 TPD to 10.5 TPD (U.S. Air Force, 2005). The increase of waste disposed during the period might have been caused by an increase in construction activities or an increase in contractor personnel working on base.

Recyclable Material

Recycling is one method of source reduction. Recyclable materials refer to those materials that are collected and used as raw materials for new products. The Hurlburt Field Recycling Center collects and recycles materials generated by activities on the Main Base and at MFH areas and is operated through 1 SOSVS. The Recycling Center occupies three buildings with additional storage areas and is staffed by nonappropriated funded (NAF) employees. In 2004, nearly 30 percent of all solid waste generated and managed at Hurlburt Field was recycled (U.S. Air Force, 2005). Approximately 38 percent of the solid waste is currently recycled. The majority

of recyclable material collected is cardboard and scrap metal (U.S. Air Force, 2005). The Hurlburt Field Recycle Center sells the used oil and off-spec fuel collected to Texpar, Inc. (U.S. Air Force, 2008). In 2004, the Hurlburt Recycling Center generated more than 1,780 tons of recyclable material and earned $202,500 from selling the material. Table 3-3 below, shows the types and amount of solid waste recycled by the Hurlburt Recycling Center in fiscal year (FY) 2004.

Table 3-3. Recycled Solid Waste at Hurlburt (FY 2004)

Type of Solid Waste Recycled	Tons of Recycled Material (percent of FY 2004)	Revenue Generated ($)
Misc/Cell Phones	0.18 (0.01)	20.25
Used Oil	152.24 (8.51)	17,232.75
Sorted Office Waste	85.34 (4.77)	9,659.25
Scrap Metal	420.06 (23.48)	47,547.00
White Paper	86.40 (4.83)	9,780.75
Toners	4.83 (0.27)	546.75
Plastics	13.60 (0.76)	1,539.00
Pallets	8.77 (0.49)	992.25
Newsprint	57.24 (3.20)	6,480.00
Glass	20.40 (1.14)	2308.5
Mixed Office Paper	109.67 (6.13)	12,413.25
Cardboard	783.76 (43.81)	88,715.25
Brass	34.89 (1.95)	3,948.75
Aluminum Cans	11.63 (0.65)	1,316.25
TOTAL	1,789 (100)	$202,500

Source: U.S. Air Force, 2005

The solid waste contractor, Arrow Inc., provides curbside sorting to MFH residents. The contractor is also responsible for transporting recyclable materials to the Hurlburt Recycling Center for further processing and marketing. Other types of recyclable waste can be disposed of in containers in various locations around Hurlburt. These containers are checked and emptied frequently by Recycling Center personnel.

3.4 TOPOGRAPHY AND SOILS

This section presents information on the soil environment and on soil erosion potential within the area that could potentially be impacted by the proposed construction.

3.4.1 Definition of Resource

Depending on their properties and the topography in which they occur, soils have varying susceptibility to erosion. Soil disturbance associated with development may potentially result in erosion and the transport of eroded soils into nearby drainages. During rainfall events, water moves across impervious surfaces into stormwater drains and retention basins, and is ultimately transported into local water bodies. The Clean Water Act prohibits the deposition of sediments into surface waters. Sediments affect water clarity, decrease oxygen levels in water, and transport pollutants. As soil quality declines (erosion), adverse impacts to on-site and off-site environments increase. Therefore, the maintenance of soil quality is important for efficient and productive land management and utilization. Areas most prone to erosion are identified based on slope, soil type, and vegetative cover.

Soils in the proposed project area were evaluated to identify soil types, define prominent soil properties, and describe relevance to possible soil erosion. Soil is defined in terms of permeability, erodibility, composition, and the topography at proposed project location and its alternative. Soil drainage, texture, and strength combine to determine erosion, thus determining the suitability of the ground to support structures and associated infrastructure (utilities).

The primary effect on soils and sediments is erosion. Under certain conditions, interaction between stormwater runoff and the soil surface, in association with land disturbances, can create conditions prone to exacerbate erosion. This may result in adverse effects to land and water resources. In the absence of intervention, the loss of soil through human-induced activity can lead to erosion and permanent loss of soil. The topography of the proposed project area is relatively flat, with slopes that range from 0 to 5 percent slope. Vegetation that is present at both the Proposed Action and Alternative 1 regions of influence (ROIs) would be removed, thus altering the topography. Either location would be graded; soils would be disturbed and compacted during land clearing, which would occur prior to facility assembly and construction.

Soil erosion is a process of displacement and deposition of surface materials by either wind (eolian) or water. Erosion caused by humans can occur at rates much greater than natural erosion conditions and has detrimental effects on soils and related ecosystems such as aquatic and biological environments. Erosion can reduce land productivity, pollute waters, and degrade habitats. Construction projects expose soil, increasing the potential for wind- and water-borne erosion.

3.4.2 Existing Conditions

The Proposed Action (located near the WWTP) and Alternative 1 (near old gate) sites for this EA are both areas that fall under the Chipley & Hurricane soil series (Figure 3-3). The Proposed Action and Alternative 1 sites require ground disturbance of 14,000 square feet for installation of the PRRS, additional facility requirements, and underground utilities.

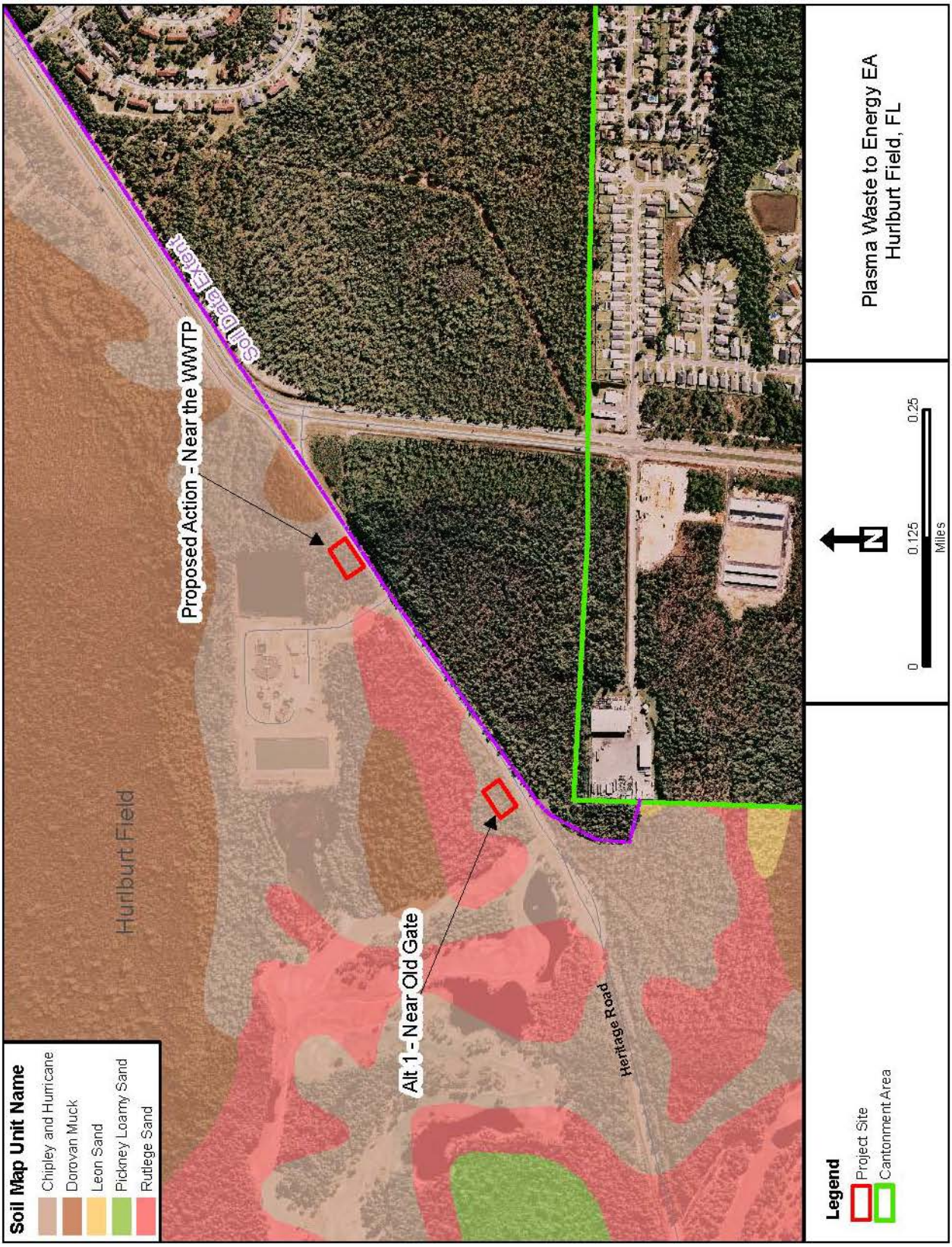

Figure 3-3. Soils at the Project Area

Chipley series soils typically occur on relatively level, low ridges. They can also occur on sloping uplands, but within project area there is very little slope. The water table rises only seasonally (during wet months) and occurs at a depth of 20 to 40 inches. Chipley soils, formed out of sandy marine sediments, are poorly drained and rapidly permeable. The Hurricane soil series also occurs on nearly level to slightly sloping areas within flatwoods. Hurricane soils are poorly drained; the water table is between 24 and 42 inches and holds water for up to 6 months (Overing et al., 1995). Typically, the Hurricane soil series occurs in tandem with the Chipley series. Oftentimes, they are referred to as the Chipley/Hurricane series since they can be visually indistinguishable from one another. Chipley/Hurricane soils have a moderate risk for erosion.

3.5 AIR QUALITY

Identifying the affected area for an air quality assessment requires knowledge of sources of air emissions, pollutant types, emission rates, release parameters, proximity to other emissions sources, and local conditions.

3.5.1 Definition of Resource

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Pollutant levels are generally expressed on a concentration basis in units of parts per million (ppm) or micrograms per cubic meter (µg/m³). For this air quality analysis, the ROI centers on Okaloosa County for both the Proposed Action and Alternative 1.

Air quality is described by the atmospheric concentration of six pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter equal to or less than 10 microns in diameter (PM_{10}), and lead (Pb).

The baseline standards for pollutant concentrations are the National Ambient Air Quality Standards (NAAQS) and state air quality standards. These standards represent the maximum allowable atmospheric concentration that may occur and still protect public health and welfare Table 3-4).

Table 3-4. National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary Standards	Averaging Times	Secondary Standards
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour[(1)]	None
	35 ppm (40 mg/m^3)	1-hour[(1)]	None
Lead	1.5 µg/m^3	Quarterly Average	Same as Primary
Nitrogen Dioxide	0.053 ppm (100 µg/m^3)	Annual (Arithmetic Mean)	Same as Primary
Particulate Matter (PM_{10})	Revoked[(2)]	Annual[(2)] (Arith. Mean)	Revoked[(2)]

Table 3-4. National Ambient Air Quality Standards (NAAQS) ,Cont'd

Pollutant	Primary Standards	Averaging Times	Secondary Standards
	150 µg/m^3	24-hour(3)	Same as Primary
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual(4) (Arith. Mean)	Same as Primary
	35 µg/m^3	24-hour(5)	Same as Primary
Ozone	0.08 ppm	8-hour(6)	Same as Primary
	0.12 ppm	1-hour(7)	Same as Primary
		(Applies only in limited areas)	
Sulfur Oxides	0.03 ppm	Annual (Arith. Mean)	-------
	0.14 ppm	24-hour(1)	-------
	-------	3-hour(1)	0.5 ppm
			(1300 µg/m^3)

Source: U.S. Environmental Protection Agency (USEPA), 2007

(1) Not to be exceeded more than once per year.

(2) Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM_{10} standard in 2006 (effective 17 December 2006).

(3) Not to be exceeded more than once per year on average over 3 years.

(4) To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3.

(5) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3 (effective 17 December 2006).

(6) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

(7) (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is $\leq$ 1, as determined by Appendix H.
(b) As of 15 June 2005, USEPA revoked the 1-hour ozone standard in all areas except the fourteen 8-hour ozone nonattainment Early Action Compact (EAC) Areas.

For analysis purposes, the emissions from the Proposed Action were compared to the Okaloosa County emissions data obtained from the USEPA's 2002 National Emissions Inventory (NEI), which are presented in Table 3-5. The county data include emissions data from point sources, area sources, and mobile sources. *Point sources* are stationary sources that can be identified by name and location. *Area sources* are point sources with emissions that are too small to track individually, such as a home, small office building or diffuse stationary source, such as wildfires or agricultural tilling. *Mobile sources* include any kind of vehicle or equipment with gasoline or diesel engine, an airplane, or a ship. Two types of mobile sources are considered: on-road and nonroad. On-road mobile sources consist of vehicles such as cars, light trucks, heavy trucks, buses, engines, and motorcycles. Nonroad mobile sources include aircraft, locomotives, diesel and gasoline boats and ships, personal watercraft, lawn and garden equipment, agricultural and construction equipment, and recreational vehicles.

Table 3-5. Baseline Emissions Inventory for Okaloosa County, Florida

Source Type	Emissions (Tons/yr)				
	CO	NO_x	PM_{10}	SO_x	VOC
Area Sources	644	35,380	11,648	997	12,235
Nonroad Mobile	1,416	16,520	168	147	2,816
On-Road Mobile	5,703	45,228	152	256	3,829
Point Sources	49	28	15	12	79
Total	***7,813***	***97,156***	***11,984***	***1,412***	***18,959***

Source: USEPA, 2002

CO = Carbon Monoxide; NO_x= Nitrogen Oxides; PM_{10} = Particulate Matter with a diameter $\leq$ 10 microns; SO_x = Sulfur Oxides; VOC = volatile organic compounds

3.5.2 Existing Conditions

Hurlburt Field is located within the Mobile (Alabama) - Pensacola - Panama City (Florida) – Southern Mississippi Interstate Air Quality Control Region (federal AQCR 5). The USEPA has classified all Florida counties, including Okaloosa, in AQCR 5 as attainment areas for all criteria pollutants.

An attainment area is an area considered to have air quality as good as or better than the national ambient air quality standards as defined in the CAA. An area may be an attainment area for one pollutant and a nonattainment area for others.

3.6 SOCIOECONOMICS

This section presents information on the socioeconomic environment within the area that could potentially be impacted by the proposed installation and operation of the PRRS.

3.6.1 Definition of Resource

Socioeconomic resources are defined as basic attributes associated with human activities. The resources typically considered include population characteristics, economic factors including employment and income, and public services including schools, law enforcement, and emergency services. Actions that impact these socioeconomic indicators might have ramifications for other socioeconomic factors such as housing availability and budgetary requirements for local governments.

3.6.2 Existing Conditions

Hurlburt Field is located on 6,634 acres in Okaloosa County within the Florida Panhandle (Figure 1-1). In 2006, Okaloosa County had a total population of 180,291 (U.S. Census, 2007). During the same time, over 64 percent of the county population was in the labor force (U.S. Census, 2007). The major industries in the area include educational services, public administration, and professional, scientific, and management services. However, the primary economic generator for Okaloosa County is the military, followed by tourism.

There are three military installations in Okaloosa County: Hurlburt Field, Duke Field, and Eglin Air Force Base (AFB). Together, these three installations make up the Eglin Complex. The overall economic impact of the Eglin Complex for Okaloosa County is $5 billion annually (EDC,

2007). The Eglin Complex contributions account for over 60 percent of the economy in Okaloosa County and over 34 percent of the economy in northwest Florida (EDC, 2007). In 2005, over 21,000 jobs in other industries were indirectly and directly supported by military spending (EDC, 2007). In FY 2006, Eglin AFB directly employed nearly 11,000 military personnel and 11,000 civilians, while personnel at Hurlburt included 7,812 active duty members and 1,069 civilians (EDC, 2007).

4. ENVIRONMENTAL CONSEQUENCES

4.1 WATER RESOURCES

Potential effects to groundwater and surface waters would be negligible. The system would collect liquids, such as waste leachate so there would not be a risk to groundwater. Floodplains and federal jurisdictional wetlands and would not be affected, since neither candidate location occurs within these areas. A drainage ditch is located on the Alternative 1 site. The use of treated wastewater as quenching or cooling water for the PRRS is discussed here.

Preparing the site for construction triggers certain state stormwater permit requirements, due to the increased potential for sediment transport during rain events. Coordination with the state is required for this action per the Coastal Zone Management Act (CZMA). The entire state of Florida is considered part of the coastal zone. These permit and coordination requirements are explained in this section.

4.1.1 Proposed Action (Preferred Alternative): Near the WWTP

The Proposed Action would not have a significant impact on water use or the coastal zone, nor would it result in major changes in stormwater production at the site.

The Coastal Zone

This construction project requires consistency with Florida's CZMA. Appendix B provides the state of Florida with AFSOC's negative determination under Section 307 of the Coastal Zone Management Act (CZMA), 16 United States Code (USC) § 1456, and 15 CFR Part 930.35. The Negative Determination is provided pursuant to 15 CFR. Section 930.35.

A "negative determination" means that after review of the Florida Coastal Management Program and its enforceable policies, AFSOC has made a determination that this activity would not have an affect on the state of Florida coastal zone or its resources.

Stormwater

The addition of new impervious-surface or land-clearing activities would potentially increase the rate and volume of stormwater runoff (FDEP, 2002). For the small footprint of the site, which is barely one-third of an acre, the additional volume would not be significant. Terrain at the site is flat, limiting off-site transport of stormwater. The site is sufficiently removed from any natural surface waters such that discharge of untreated stormwater would not be an issue. The Proposed Action is located adjacent to a freshwater pond, formerly a borrow pit used in the construction of the WWTP.

The construction contractor would adhere to applicable permitting requirements in accordance with FAC Rule 62-346 and the NPDES. AFSOC would coordinate with 1 SOCES to submit appropriate stormwater permit applications.

Construction activities would also require coverage under the Generic Permit for Stormwater Discharge, where one or more acres of land are disturbed (FAC Rule 62-621) if determined necessary after site and construction design inspection. Under this permit, the proponent would incorporate a comprehensive SWPPP into the final design plan. Stormwater permits and any necessary utility extension permits would require coordination between the AFSOC proponent and 1 SOCES. AFSOC or its contractor would obtain all appropriate permits prior to the commencement of any ground-disturbing activities.

4.1.2 Alternative 1: Near the Old Gate

Stormwater

There would be no significant impacts to water resources from Alternative 1. Impacts to water resources would be the same as the Proposed Action for this alternative. The risk of stormwater transport is low, and the nearest water body, a Hurlburt Field golf course pond, is located over 500 feet away. Selection of this alternative would not have an affect on the state of Florida coastal zone or its resources. All permit requirements and regulatory coordination would be the same for this alternative as for the Proposed Action.

Wetlands

There is a state regulated drainage ditch that would have to be crossed to access the Alternative 1 site. A culvert may need to be installed. Because selection of this alternative would have minor but unavoidable impacts to the drainage ditch, the Air Force would prepare a Finding of No Practicable Alternative to be submitted with the Finding of No Significant Impact.

4.1.3 No Action Alternative

Under the No Action Alternative, the PRRS would not be constructed.

4.2 UTILITIES AND INFRASTRUCTURE

4.2.1 Proposed Action (Preferred Alternative): Near the WWTP

Electricity

Under the Proposed Action (Preferred Alternative) there would be no increase in electricity consumption from the new Plasma Facility. Due to the pilot nature of this program, it is difficult to calculate estimates of efficiency and power production. The system would be tied into the power grid to allow electricity to be available for resale should the plant produce any excess. Initial estimates from the manufacturer suggest that the 10-metric-ton-per-day system proposed would produce enough electricity to be self-sufficient in the operation of all system components, including the facility lighting. The system is not expected to have much excess electrical energy available for sale, but would be the most efficient system obtainable (AFSOC, 2007).

Water

No significant additional use of potable water is expected as a result of this project. The only water increase would be for the operation of the restroom attached to the plasma facility.

Wastewater

Under the Preferred Alternative, wastewater treatment would be handled by connecting the plasma facility to the sewer lines currently served by the Hurlburt Field wastewater treatment plant. As with the water usage rate, operation of the plasma facility would not significantly increase the wastewater flow. Assuming the water usage rate would be the same for future operations, the only other increases would result from adding a single restroom at the plasma facility and carrying the flow of used quench water. The plasma facility would take in 9.8 million gallons of tertiary treated water per year. Approximately 3.1 to 5.3 million gallons per year of this water (32 to 54 percent) would become excess steam from the facility rather than enter the WWTP.

The quench water would have to be cooled prior to being returned to the wastewater treatment plant to meet that facility's permit requirements of no increase in influent temperature by an average of 5 degrees Celsius. A cooling tower, heat exchanger, or holding pond would need to be constructed to cool the quench water which exits the plasma process at temperatures of 60 degrees Celsius. After the holding and cooling period the quench water would be returned to the WWTP to be treated in the wastewater stream. The increase in wastewater flow to the WWTP from the quench water would not exceed the acceptable flow limit of 1 MGD (Williams, 2008a).

If proper design mitigations by the vendor contractor are implemented, there would be no impacts to the environment from the Proposed Action. However, without design modifications, the PRRS is expected to produce excess contaminated steam, salts, nitrates, and sulfates, which would exceed acceptable wastewater permits and Clean Water Act statutes.

Since the plasma facility is currently in the design phase, the vendor contractor will design the facility to ensure current Hurlburt WWTP permit specifications would not be exceeded by for waste quench water outflows. Major wastes produced by the quenching process would include chlorine, nitrates, sulfates, and dissolved sodium chloride salts (R.W. Beck, 2003). The vendor contractor will design the plant to meet current Clean Water Act guidelines for sulfates and salts and remove excess nitrates from the wastewater.

The facility would have required restroom facilities. There would be no noticeable increase in wastewater from this addition. The additional wastewater flow could be accommodated within the existing infrastructure.

Natural Gas

Assuming that natural gas would be used as the start-up fuel for the facility rather than propane, use of natural gas in the system would be extremely minor. Natural gas would be required at the initial start-up and in subsequent start-ups if the facility is required to shutdown and restart for

maintenance. After start-up, generation of operating fuel is provided by the ongoing process. No noticeable increase in natural gas usage is expected.

4.2.2 Alternative 1: Near the Old Gate

There would be no significant impacts to utilities and infrastructure from Alternative 1. Under Alternative 1, the demands on electricity, natural gas, water, and wastewater systems would be the same as under the Proposed Action.

4.2.3 No Action Alternative

Under the No Action Alternative, the PRRS would not be constructed. Utilities usage would remain at baseline levels.

4.3 HAZARDOUS AND SOLID WASTE

4.3.1 Proposed Action (Preferred Alternative): Near the WWTP

Hazardous Wastes

The PRRS would convert hazardous wastes such as oil and fuel cleanup materials, and products used in aircraft and vehicle maintenance into energy. The system would potentially accommodate all of Hurlburt's and Eglin's hazardous wastes.

Solid Waste

Under the Proposed Action, all solid waste generated by the entire Hurlburt military and civilian populations (assuming solid waste generated is within 10 metric TPD, the capacity of the system) would no longer be transferred to the Fort Walton Beach transfer station and then to an off-base landfill. Instead, the current waste stream would be diverted to the PRRS. Less waste accumulating in the landfill would make it possible for Hurlburt to fulfill some of the mandates of EO 13423. The Proposed Action would have a beneficial impact with regard to solid waste management.

Recyclable Material

There would be no changes to the existing recycling program under the Proposed Action. The PRRS is expected to recycle the waste that is not currently being recycled. The ferrous metal separator and eddy current separator would remove metal items from the waste stream. These items would be collected and transported to the Hurlburt Field Recycling Center. The additional recycled material would be expected to increase recycle revenues. Therefore, under the Proposed Action the PRRS would potentially result in beneficial impacts in the form of additional revenues from increased sales of recyclable material.

The Proposed Action would result in the production of metal ingots and a glass-like aggregate. These items would be recycled and sold for other uses pending state and federal approval. The aggregate would meet all required state and federal standards for contaminants as determined by

the TCLP. The PRRS vendor contractor would be responsible for ensuring the aggregate meets all required standards.

4.3.2 Alternative 1: Near the Old Gate

The impacts under Alternative 1 would be the same as those described under the Proposed Action, since the processes and output of the PRRS would not change. Therefore, under Alternative 1 there would be potential for Hurlburt to exceed the mandates of EO 13423 that would also potentially result in beneficial health and environmental impacts.

Recyclable Material

The impacts under Alternative 1 would be the same as those described under the Proposed Action, since the processes and output of the PRRS would not change. Therefore, under Alternative 1 there would be potential for Hurlburt to meet some of the mandates of EO 13423 that would also potentially result in beneficial health and environmental impacts.

4.3.3 No Action Alternative

Under the No Action Alternative, solid, medical, and classified waste and hazardous wastes would continue to be transported to off-base landfills. The mandates of EO 13423 would not be met. Therefore, it is expected that there would be adverse impacts to solid waste management under the No Action Alternative.

4.4 TOPOGRAPHY AND SOILS

This section discusses potential for soil erosion to occur from project construction. Soil erosion is related to the transportability of soils caused by stormwater runoff from increased impervious surface areas (i.e., roads, buildings, and compacted soil) and from erosive properties of soil.

4.4.1 Proposed Action (Preferred Alternative): Near the WWTP

The Proposed Action would not have a significant impact on soils. Soils within the affected environment are somewhat sandy, with a moderate potential for erosion. The terrain slope is low at <5 percent. Slopes of 12 percent or greater would indicate a relatively high risk for waterborne erosion. Because the terrain is relatively flat, erosion from site preparation activities would be minimal. Construction and operation of the PRRS would not have a negative impact on soils.

The addition of impervious surfaces and land-clearing activities would not have a negative impact on the Chipley/Hurricane soil series, since this soil series contains organic matter and is not easily eroded. Soil stability should remain intact for associated infrastructure (utilities), although the soils will be disturbed during the assembly phase of the project.

Soil compaction will most likely occur due to heavy machinery and the facility itself. Additionally, the potential for stormwater transport is limited due to the wooded areas that surround the Proposed Action site (see Water Resources for all construction permitting

requirements for stormwater permits). AFSOC would obtain all appropriate permits prior to the commencement of any ground-disturbing activities.

4.4.2 Alternative 1: Near the Old Gate

No significant impacts to soils would occur under Alternative 1. Impacts to soil would be the same as the Proposed Action, since the same soil type exists in both locations. All permit requirements and regulatory coordination would be the same for this alternative as for the Proposed Action (see Water Resources section for required permits).

4.4.3 No Action Alternative

Under the No Action Alternative, the PRRS would not be constructed. Therefore, no impacts to soils would occur.

4.5 AIR QUALITY

This section discusses the potential impacts to air quality from the Proposed Action and alternatives. For the analysis of the Proposed Action and Alternative 1, a threshold on an individual pollutant-by-pollutant basis was established.

In order to evaluate the air emissions and their impact to the overall ROI, the emissions associated with the project activities were compared to the total emissions on a pollutant-by-pollutant basis for ROI 2002 National Emissions Inventory (NEI) data. Potential impacts to air quality are identified as the total emissions of any pollutant that equals 10 percent or more of the ROI's emissions for that specific pollutant. The 10 percent criterion approach is used in the General Conformity Rule as an indicator for impact analysis for nonattainment and maintenance areas. Although the entire state of Florida is in attainment, the General Conformity Rule's impact analysis was utilized to provide a consistent approach to evaluating the impact of construction and aircraft emissions. To provide a more conservative evaluation, the impacts screening in this analysis used a more restrictive criterion than required in the General Conformity Rule. Rather than comparing emissions from construction activities to regional inventories (as required in the General Conformity Rule), emissions were compared to the individual county potentially impacted (Okaloosa), which is a smaller area.

A DoD-developed model, the Air Conformity Applicability Model (ACAM), which the U.S. Air Force uses for conformity evaluations, was utilized to provide a level of consistency with respect to emissions factors and calculations. Air emissions estimated using the ACAM are compared to the established 10 percent criterion for Okaloosa County as represented in the USEPA 2002 NEI (USEPA, 2002). Emissions associated with the Proposed Action are generated by two separate processes: facility construction and system operation.

4.5.1 Proposed Action (Preferred Alternative): Near the WWTP

Construction Emissions

Construction emissions (Table 4-1) are based on the assumption that the facility will encompass 14,000 square feet located on Hurlburt Field and described in greater detail in Section 2.1.1. The

largest emissions outputs from construction activities will be CO and NO_x composing 0.063 and 0.015 percent of Okaloosa County annual emissions, respectively. PM_{10} emissions would be related to grading the construction area. These emissions are minimal (less than 1 ton) and are not included in the output from the ACAM modeling tool. These could also be mitigated further by implementing controls such as wetting the soil periodically. All construction-related emissions of criteria pollutants would be less than 1 percent of ROI annual emissions, so there would be no potential adverse impacts to air quality from construction under the Proposed Action.

Table 4-1. Proposed Action (Construction) Emissions

Emission Source	Pollutant (tons/yr)				
	NO_x	CO	PM_{10}	VOCs	SO_2
Proposed Action	5	15	0	1	1
Okaloosa County	7,813	97,157	11,984	18,959	1,412
Percent of ROI	***<1%***	***<1%***	***<1%***	***<1%***	***<1%***

NO_x = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter with a diameter less than or equal to 10 microns; VOC = volatile organic compound; SO_2 = sulfur dioxide

Operational Emissions

Emissions from the PRRS process are shown in Table 4-2. Although the plasma gasification process is not technically solid waste incineration because of the implementation of new and novel configuration of technologies, solid waste incineration NESHAP standards are provided for comparison. The PRRS meets all standards under Subpart CCCC and AAAA. Only the standard for mercury is exceeded under Subpart DDDD, and only CO and SO_2 are exceeded under Subpart EEEE. AFSOC, in cooperation with the vendor contractor, will modify the process or equipment in any way necessary to meet all applicable state, local, or federal air quality regulations.

Table 4-2. PRRS Operational Emissions and Pertinent NESHAP Standards

Air Pollutants		USEPA Limits 7% O_2, std cond., dry basis				Plasma Resource Recovery Results
		CCCC	DDDD	EEEE	AAAA	
Dioxins and Furans	ng/dscm	0.41	0.37	33	13	<0.0041
Metals						
Total Metals	mg/dscm					<1.0
Cadmium	mg/dscm	0.4	0.03	0.02	0.02	0.001
Lead	mg/dscm	0.04	2.1	0.23	0.2	0.03
Mercury	mg/dscm	0.47	0.0005	0.07	0.08	0.002
Opacity	%	10	10	10	10	
Particulate Matter	mg/dscm	70	70	30	24	<5
Gases						
Carbon Monoxide	ppmv	157	157	40	50	44
Hydrogen Chloride	ppmv	62	62	15	25	0.3
Nitrogen Oxides	ppmv	388	388	103	500	93
Sulfur Dioxide	ppmv	20	20	3	30	10

40 CFR Part 60 -Subpart CCCC- Commercial and Industrial Solid Waste Incineration Units built after – 30 November 1999
40 CFR Part 60 -Subpart DDDD- Commercial and Industrial Solid Waste Incineration Units – 30 November 1999
40 CFR Part 60 -Subpart EEEE- …Other Solid Waste Incineration Units – 16 December 2000
40 CFR Part 60 -Subpart AAAA- New Small Municipal Waste Combustion Units – 6 December 2000

Assuming an exhaust gas flow rate of 10,000 dry standard cubic feet per minute (dscfm) and an annual operating time of 7,446 hours, it is possible to estimate the annual operational emissions of all criteria pollutants except VOCs (Table 4-3). Because the PRRS will incorporate a draft fan to maintain negative pressure and the synthesis gas produced will be recycled to power the turbines, it is highly unlikely that VOC emissions will exceed 1 percent. Nitrogen oxides make up the greatest portion of pollutant emissions, however, all criteria pollutants are emitted at levels less than 1 percent of the ROI's annual emissions—well below the 10 percent threshold. No adverse impacts to air quality are expected from operation of the plasma facility.

Table 4-3. Proposed Action (Operational) Emissions

Emission Source	Pollutant (tons/yr)				
	NO_x	CO	PM_{10}	VOCs	SO_2
Proposed Action	19.7	7.0	0.7	Data Not Available	1.7
Okaloosa County	7,813	97,157	11,984	18,959	1,412
Percent of ROI	***<1%***	***<1%***	***<1%***	***NA***	***<1%***

NOx = nitrogen oxides; CO = carbon monoxide; PM10 = particulate matter with a diameter less than or equal to 10 microns; VOC = volatile organic compound; SO2 = sulfur dioxide

4.5.2 Alternative 1: Near the Old Gate

The environmental consequences of Alternative 1 would be the same as those discussed under the Proposed Action. Because the two locations are located in relatively close proximity, both are within the air quality ROI (Okaloosa County), and the project dimensions do not change, the effects to air quality would be the same for both alternatives.

4.5.3 No Action Alternative

Under the No Action Alternative, the PRRS project would not occur. Therefore, regional air quality would remain at baseline conditions.

4.6 SOCIOECONOMICS

4.6.1 Proposed Action (Preferred Alternative): Near the WWTP

The local economy would experience a temporary positive impact during the operation of the PRRS, because it would provide nine additional jobs. However, this impact would be small and is, therefore, considered negligible. AFSOC does not expect any negative impacts on employment, income, housing, and base and county services. Therefore, no significant impacts would occur to socioeconomic factors under the Proposed Action.

4.6.2 Alternative 1: Near the Old Gate

The impacts under Alternative 1 would be the same as those presented under the Proposed Action because the components, processes, and output of the PRRS would be the same for this alternative and the Proposed Action. However, under Alternative 1 the project site would be near the Hurlburt Field old gate (Figure 2-1) instead of the WWTP site. Therefore, no significant impacts would occur to socioeconomic factors under Alternative 1.

4.6.3 No Action Alternative

Under the No Action Alternative, AFSOC would not install and operate the PRRS at Hurlburt Field. Therefore, there would be no significant impacts to socioeconomic resources under the No Action Alternative.

4.7 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

According to the CEQ regulations, cumulative impact analysis in an EA should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7).

40 CFR 1508.7 defines impacts or effects as:

(a) Direct effects, which are caused by the action and occur at the same time and place.

(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

4.7.1 Past and Present Actions Relevant to the Proposed Action

As pertinent to cumulative environmental analysis, AFSOC has not identified past and present actions relevant to the Proposed Action.

4.7.2 Reasonably Foreseeable Future Actions

An EIS is currently underway for the 2005 Base Realignment and Closure (BRAC) decision to establish the Joint Strike Fighter (JSF) Integrated Training Center (ITC) at Eglin AFB. This would establish an initial joint training site for joint Air Force, Navy, and Marine Corps JSF training organizations to teach aviators and maintenance technicians how to properly operate and maintain this new weapon system. The proposed plan would relocate 200 instructors to Eglin AFB. The 7th Special Forces Group (Airborne) (7SFG[A]) would also relocate from Fort Bragg, North Carolina to Eglin AFB. Potential impacts from these programs due to changing mission and additional personnel may include noise, air quality, munitions storage concerns, transportation, and utilities concerns, among others. A full analysis of these activities has not taken place, so only a generalized analysis of cumulative impacts can occur.

The U.S. Air Force is accelerating the improvement of MFH through privatization. This improvement process involves the demolition, construction, and renovation of MFH units at Eglin AFB and Hurlburt Field through implementation of the MFH Demolition, Construction, Renovation, and Leasing Program, otherwise known as MFH Privatization. A Revised Draft Environmental Impact Statement (EIS) was published for public comment in 2006 to assess the impacts of MFH privatization.

4.7.3 Analysis of Cumulative Impacts

Water Resources

The minor increase in impervious surface area from the Proposed Action would make a negligible and incremental addition compared to overall stormwater increases associated with BRAC and military family housing construction. Both of these projects involve several hundred acres of ground disturbance. In common with all construction related projects are FDEP requirements to design and implement project-specific stormwater management controls. Thus, adverse impacts for any major construction projects within the ROI would be addressed and remedied through the regulatory process.

Utilities

The PRRS requires minimal use of electrical and potable water utilities. There is a potential for a cumulative effect regarding demands placed on the Hurlburt WWTP from the PRRS and the MFH action. The plasma system would return up to 6 to 9 million gallons (15 to 20 gallons per minute) of cooling water per year (initially obtained from the WWTP), but alone it would not exceed the permitted WWTP allowance of 1 million gallons per day. Though presently unknown, the MFH action may cumulatively add to the wastewater processed at the plant.

Topography and Soils

Construction disturbance from the Proposed Action or Alternative 1 would not result in soil erosion. The construction footprint is very small and soils, though they have a moderate erosion potential, are situated in flat terrain where transport mechanisms are limited. Impacts from major BRAC and MFH construction actions in the area would not have a cumulative effect on soil disturbance with respect to the Proposed Action.

Socioeconomics

The Proposed Action would not have significant cumulative effects on the local economy.

Air Quality

The Proposed Action, BRAC, and MFH may have a cumulative impact with regard to air quality permitting on Hurlburt and Eglin. The specifics cannot be ascertained until analysis on BRAC and MFH have been completed. Long-term adverse impacts to the air quality of the region are not anticipated.

Hazardous and Solid Waste

There would be no cumulative impacts with regard to hazardous and solid waste. The Proposed Action would divert solid waste from off-base landfills, and treat hazardous wastes locally in a more cost-efficient way. It would be able to accommodate Hurlburt's solid waste and Eglin and Hurlburt's hazardous waste stream. Related solid waste from BRAC and MFH personnel increases would have to be disposed of in off-base landfills if this were to exceed the capacity of the system.

4.7.4 Irreversible and Irretrievable Commitment of Resources

NEPA requires that environmental analysis include identification of any irreversible and irretrievable commitment of resources that would be involved in the implementation of the Proposed Action or Alternative 1.

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the Proposed Action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural site).

The Proposed Action would not result in an irreversible or irretrievable commitment of resources. Vegetation removed during construction is considered a renewable resource. Implementing the technology would mean that less land would be required for waste disposal. Primary water use is reliant upon treated wastewater. With respect to energy, the system would be largely self-sustaining.

This page is intentionally blank.

5. PLANS, PERMITS, AND MANAGEMENT ACTIONS

The following is a list of regulations, plans, permits, and management actions associated with the Proposed Action. The environmental impact analysis process for this EA identified the need for these requirements, and the proponent and interested parties involved in the Proposed Action cooperated to develop them. These requirements are, therefore, to be considered as part of the Proposed Action and would be implemented through the Proposed Action's initiation. The proponent is responsible for adherence to and coordination with the listed entities to complete the plans, permits, and management actions.

5.1 REGULATIONS, PLANS, AND PERMITS

- CZMA Consistency Determination (Appendix B)
- Stormwater Facility Design and Construction Permit (applicable as determined by site and construction design inspection)
- Air Emissions Permits (see Section 1.6.2)
- Wastewater permit modification to allow re-use water for the plasma quench water
- Solid and Hazardous Waste permits (see Section 1.6.2)

In addition, applicable U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations covering these activities include, but are not limited to:

- Construction Title 29, Part 1910, Section 12 of the Code of Federal Regulations

5.2 MANAGEMENT ACTIONS

The proponent is responsible for the implementation of the following management actions.

5.2.1 Utilities and Infrastructure

Cooling water from the PRRS shall be tested to ensure compliance with Hurlburt WWTP permit and Clean Water Act requirements. The vendor contractor will be responsible for this action.

5.2.2 Air Quality

The vendor shall implement a continuous air emissions monitoring system (CEMAS) to ensure continuous compliance with state and federal air quality standards.

5.2.3 Soils/Water Resources

The proponent will ensure that the design engineer coordinates with AFSOC Compliance Engineering (850-884-2875) for final stormwater design and permitting.

The proponent would ensure that the construction contractor implements the following stormwater and soils BMPs:

- Site preparation and construction would disturb the soil. Heavy machinery would compact soil and alter terrain. It is suggested that BMPs such as silt fences and hay bales be implemented during construction to avoid soil run-off into the nearby drainage ditch.
- Inspect BMPs on a weekly basis and after rain events. Replace fencing as needed.
- In permits and site plan designs, include site-specific management requirements for erosion and sediment control.
- Store chemicals, cements, solvents, paints, or other potential water pollutants in locations where they cannot cause runoff pollution.
- For construction equipment (e.g., cement mixers), designate "staging areas" to contain any chemicals, solvents, or toxins and prevent them from entering surface waters.
- Stabilize the construction site entrance using FDOT-approved stone and geotextile (filter fabric).
- Inspect and maintain the aforementioned BMPs to ensure effectiveness.

5.2.4 Solid Waste

- The PRRS will implement vapor controls in the storage silo to control dust and odors.
- The aggregate produced shall be tested to ensure that it meets TCLP standards.

5.2.5 Other

- The proponent would be responsible for ensuring that a buffer of natural vegetation be preserved between the facility and the adjacent Heritage Roadway.

6. LIST OF PREPARERS

Name/Qualifications	Contribution	Experience
Baker-Littman, Sherri L. Geoscientist/Archaeologist M.S., Geology & Geophysics B.A., Anthropology	Author	17 years archaeological science, 8 years geosciences with 5 years environmental science
Boykin, Brad Environmental Scientist B.S., Biomedical Science MBT, Biotechnology	Author	3 years experience in biotechnology and chemistry fields
Combs, Jennifer B.S., Journalism	Technical Editor	20 years technical writing and editing
Koralewski, Jason Archaeologist/NEPA Specialist B.A., Anthropology M.L.S., Archaeology M.A., Anthropology	Author, QA Review	12 years environmental science
McCarty, Pam B.S./B.A., Economics M.A., Applied Economics	Author	2 years of economics
McKee, W. James (Jamie) Environmental Scientist B.S., Marine Biology	Project Manager, Author	21 years Environmental Science with experience in freshwater, estuarine and marine applications
Nation, Mike Environmental Scientist B.S., Environmental Science/Policy, Minor in Geography; A.A., General Science	GIS Analyst	4 years experience as an environmental consultant; Interagency Coordination; GIS Arc View applications

This page is intentionally blank.

7. LIST OF CONTACTS

Mr. Ron Omley
AFSOC/A7AV
Hurlburt Field, Florida

Ms. Gillian Holcroft
PyroGenesis
Montreal, Canada

Ms. Lauren Milligan,
Florida State Clearinghouse
Tallahassee, Florida

Ms. Amy Tharp
1 SOCES/CEV
Hurlburt Field, Florida

Mr. Don Williams
1 SOCES/CEOI
Hurlburt Field, Florida

This page is intentionally blank.

8. REFERENCES

AFSOC, 2007. Statement of Work for the Transportable PRRS for Domestic and Foreign Military Bases. Project SOW with project expectations and parameters provided by Ron Omley, Hurlburt Field.

Economic Development Council of Okaloosa County (EDC). 2007. "Military." Available at: http://www.florida-edc.org/Military.htm. Accessed on 4 February, 2008.

Florida Department of Environmental Protection (FDEP). 2002. *Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual*. Technical Report.

Florida Department of Environmental Protection (FDEP). 2007. Florida's NPDES Stormwater Program. Retrieved from http://www.dep.state.fl.us/water/stormwater/npdes, on 29 August 2007.

Halbert, Ann. 2008. Personal communication between SAIC and Ann Halbert, Public Works North Okaloosa County.

Overing, J. D., H. H. Weeks, J. P. Wilson, Jr., J. Sullivan, and R. D. Ford. 1995. *Soil Survey of Okaloosa County, Florida*. U.S. Department of Agriculture, Natural Resources, Soil Conservation Service.

R.W. Beck, Inc., 2003. City of Honolulu: Review pf Plasma Arc Gassification and Vitrification Technology for Waste Disposal. Final Report prepared on January 23.

U.S. Army Corps of Engineers (USACE), 1987. Wetlands Delineation Manual.

U.S. Census Bureau. 2007. Okaloosa County, Florida. Available at: http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&_name=Okaloosa+County&_state=04000US12&_county=Okaloosa+County&_cityTown=Okaloosa+County&_zip=&_sse=on&_lang=en&pctxt=fph. Accessed on 4 February, 2008.

U.S. Environmental Protection Agency (USEPA), 2002. 2002 National Emissions Inventory Database; Office of Air Quality Planning and Standards, Technology Transfer Network, Clearing House for Inventories and Emissions Factors, http://www.epa.gov/ttn/chief/net/2002inventory.html February.

USEPA, 2007. National Ambient Air Quality Standards (NAAQS); Accessed online at http://epa.gov/air/criteria.html. February 2008.

U.S. Air Force, 2005. Hurlburt Field Integrated Solid Waste Management Plan and Opportunity Assessment (ISWMP). August 2005.

U.S. Air Force, 2008. Personal communication between SAIC and 1 SOCES/CEV, Hurlburt Field, Florida.

Williams, Donald, 2008. Personal Communication (Phone) between Jason Koralewski (SAIC) and Donald Williams regarding utilities baseline information for Hurlburt Field for 2007. February 4, 2008.

Williams, Donald, 2008a. Personal Communication (E-mail) between Jason Koralewski (SAIC) and Donald Williams regarding utilities baseline information for Hurlburt Field for 2007. February 7, 2008.

This page is intentionally blank.

APPENDIX A

PUBLIC AND AGENCY COMMENTS

A.1 INTRODUCTION

This appendix provides the record of coordination with the Florida State Clearinghouse (Attachment A-1). A public notice was published in the *Northwest Florida Daily News* on 13 February 2008 inviting the public to review and comment upon the EA. The public notification as it appeared in the *Northwest Florida Daily News* is provided as Attachment A-2. No comments were received during the public review period, which ended 28 February 2008.

Attachment A-1. Florida State Clearinghouse Review

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

April 3, 2008

Mr. Jamie McKee, Project Manager
Science Applications International Corp.
1140 North Eglin Parkway
Shalimar, FL 32579

RE: Department of the Air Force – Draft Environmental Assessment, Construction of a Plasma Waste-to-Energy System at Hurlburt Field – Okaloosa County, Florida.
SAI # FL200802134015C

Dear Mr. McKee:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the referenced Draft Environmental Assessment (EA).

The Florida Department of Environmental Protection's (DEP) regulatory program staffs have provided a number of comments regarding solid and hazardous waste management requirements, testing and proper disposal of the resulting slag material, setbacks from potable water wells, air construction permitting and environmental resource permitting. For detailed comments and recommendations on the Draft EA and the state's regulatory requirements, please refer to the enclosed DEP memorandum.

Though the West Florida Regional Planning Council (WFRPC) has no concerns with the proposed project, staff recommends that a continuous air emissions monitoring system be implemented prior to operation and modifications to the process and equipment be made as necessary to ensure that the facility does not exceed air quality standards. Please refer to the enclosed WFRPC comments for additional information.

Based on the information contained in the Draft EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed federal activity is consistent with the Florida Coastal Management Program (FCMP). The issues identified by our reviewing agencies must, however, be addressed prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews. The state's final

concurrence of the project's consistency with the FCMP will be determined during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2170.

Sincerely yours,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm
Enclosures

cc: Darryl Boudreau, DEP, Northwest District
Linda Frohock, DEP, DWM
Becky Ajhar, DEP, DARM
John Gallagher, WFRPC

DEP Home | OIP Home | Contact DEP | Search | DEP Site Map

Project Information	
Project:	FL200802134015C
Comments Due:	03/19/2008
Letter Due:	04/13/2008
Description:	DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT, CONSTRUCTION OF A PLASMA WASTE-TO-ENERGY SYSTEM AT HURLBURT FIELD - OKALOOSA COUNTY, FLORIDA.
Keywords:	USAF - PLASMA WASTE-TO-ENERGY SYSTEM AT HURLBURT FIELD - OKALOOSA CO.
CFDA #:	12.200
Agency Comments:	
WEST FLORIDA RPC - WEST FLORIDA REGIONAL PLANNING COUNCIL	
The WFRPC has no concerns with the proposed project and recommends that a continuous air emissions monitoring system be implemented prior to operation and modifications to the process and equipment be made as necessary to ensure that the facility does not exceed air quality standards. The facility will have no significant impacts to the following: noise, wetlands, floodplains, cultural resources, biological resources, environmental justice, surface water and groundwater, transportation and land use. As such, these issues were eliminated from the detailed analysis of the EA.	
OKALOOSA - OKALOOSA COUNTY	
No Comment	
COMMUNITY AFFAIRS - FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS	
DCA has no comment.	
FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION	
NO COMMENT BY TED HOEHN ON 2/28/08.	
STATE - FLORIDA DEPARTMENT OF STATE	
No Comment/Consistent	
ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	
DEP regulatory program staffs have provided a number of comments regarding solid and hazardous waste management requirements, testing and proper disposal of the resulting slag material, setbacks from potable water wells, air construction permitting and environmental resource permitting. For detailed comments and recommendations on the Draft EA and the state's regulatory requirements, please refer to the enclosed DEP memorandum.	
NORTHWEST FLORIDA WMD - NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT	
No Comment	

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

Visit the Clearinghouse Home Page to query other projects.

Copyright and Disclaimer
Privacy Statement

Florida Department of
Environmental Protection

Memorandum

TO: Florida State Clearinghouse

FROM: Lauren P. Milligan, Environmental Manager
Office of Intergovernmental Programs

DATE: April 2, 2008

SUBJECT: Department of the Air Force – Draft Environmental Assessment, Construction of a Plasma Waste-to-Energy System at Hurlburt Field – Okaloosa County, Florida.
SAI # FL08-4015C

The Department's Division of Waste Management, Solid Waste Section has reviewed the proposed plasma arc facility at Hurlburt Field and offers the following comments:

Draft Finding of No Significant Impact, RCS 08-009

- Page 2-3, Summary of Anticipated Impacts, Solid Waste – The document states that the system will produce an "inert, glass-like aggregate and metal ingots that could be sold for other uses." This may be accurate, but further information must be provided. The slag will need to be tested beyond utilization of the TCLP (EPA Method 1311) and should not be sold for beneficial use without the Department's approval.

- Page 3, Permits and Regulatory Coordination – A solid waste permit, probably as a Waste Processing Facility under Rule 62-701.710, *Florida Administrative Code* (*F.A.C.*), will also be necessary.

Draft Environmental Assessment, Prepared by SAIC, RCS 08-009, February 2008

- Page 1-4, Safety and Occupational Health – The document describes this system as a "Plasma Waste-to-Energy System." If the proposed system meets the definition of waste-to-energy (WTE) in Section 403.7061(4), *Florida Statutes* (*F.S.*), it will also be subject to the WTE criteria contained in Section 403.7061(3), *F.S.* Staff does not believe plasma arc facilities meet the definition of WTE facilities in the statutes, but further evaluation is needed.

- Page 1-5, Hazardous Materials/Solid Waste – The document states this facility initially will treat "solid waste, biomedical waste and classified waste" and then later may add hazardous materials. The Waste Processing Facility permit issued by the Department's Solid Waste Section can only address treatment of non-hazardous

wastes. If the facility operators plan to treat hazardous wastes in the future, significant permitting requirements from the Hazardous Waste Program are likely.

- Page 1-5, Water Resources – The document states there is a potable well within 500 feet of the proposed site and raises the question of whether Chapter 62-521, *F.A.C.*, would treat this facility as a "solid waste disposal facility." Staff does not believe Rule 62-521(1)(h), *F.A.C.*, applies in this case since it refers to "new solid waste disposal facilities." Staff would interpret this as Class I or Class III landfills or C&D debris disposal facilities, not plasma arc waste processing facilities. The Department does have a prohibition in Rule 62-701.300(2)(b), *F.A.C.*, however, that may apply. It indicates that solid waste cannot be stored or disposed of within 500 feet of an existing or approved potable water well. Depending of the layout of the facility, there may be a setback issue for this well.

- Page 1-7, Section 1.6.3 Solid Waste Processing Permit – The document states this process may qualify for a Research, Development and Demonstration (RD&D) permit. In earlier discussions with the U.S. Air Force (USAF), staff agreed that this may be the best approach. At the 2007 meeting, one reason staff recommended the RD&D permit was that it may be a faster permitting process. This will need further verification, since the RD&D process is not well-defined. The Department also desires to be consistent in processing other permit applications for proposed plasma arc facilities should they move forward. With that in mind, it would be preferable to use the established Waste Processing Facility permit process in Rule 62-701.710, *F.A.C.*, for this project rather than the RD&D approach in Section 403.70715, *F.S.* Many of the same information and process steps will be required regardless of the permit process used. Agency staff, therefore, currently recommends that the USAF consider permitting this facility as a Waste Processing Facility (WPF) rather than a RD&D facility. The fee for the WPF permit is $2,000 and it is normally issued for 5 years.

- Page 2-4, Section 2.1.4 System By-Products and Energy Consumption – The document states the aggregate produced would meet the applicable TCLP requirements. The Department agrees that the slag produced will need to pass the TCLP test. Before it can be beneficially utilized in Florida, however, staff will also require data verifying that the proposed use will not cause ground water or surface water contamination. The TCLP is a test for characteristic hazardous wastes. Due to its typically high detection levels, it may not be able to demonstrate that the slag, if used in the environment, will not cause pollution. Additional testing will be required. It is also advisable to consider disposing of this slag initially until the appropriate testing and authorization for use can be achieved.

For further information and assistance, please contact Mr. Richard B. Tedder, P.E., Program Administrator in the Department's Solid Waste Section at (850) 245-8735 or Richard.Tedder@dep.state.fl.us.

The Department's Division of Waste Management, Hazardous Waste Regulation Section notes the following:

> The Draft Environmental Assessment uses the generic term "hazardous materials" within the document. On page 3-6, paragraph 3.3.2 Existing Condition, Hazardous Materials - the annual amount of materials generated and cost of proper disposal is provided. The total appears to be a combination of Resource Conservation and Recovery Act (RCRA)-regulated Hazardous Waste, RCRA-regulated Universal Waste, non-regulated hazardous materials, medical wastes and other special wastes. With respect to RCRA-regulated wastes, it appears this facility would be considered a RCRA Treatment, Storage, or Disposal Facility and would require permitting under Section 40 C.F.R. 270 - EPA Administered Permit Program: The Hazardous Waste Permit Program. Within Florida, this Program is implemented in the Hazardous Waste Regulation Section of the Bureau of Solid and Hazardous Waste in Tallahassee, Florida. The point of contact for this permit requirement is Mr. Tim Bahr, Environmental Administrator, at (850) 245-8790 or Tim.Bahr@dep.state.fl.us.

The Department's Division of Air Resource Management offers the following comments:

> As indicated in the Environmental Assessment, a Plasma Waste-to-Energy System will require one of two types of air construction permits. The USAF should determine whether the project will require a prevention of significant deterioration (PSD) permit or a minor air construction permit. Please forward the permit application to the Department's Division of Air Resource Management in Tallahassee. Hurlburt Field is currently permitted as a synthetic minor facility (i.e., it has taken limits to avoid certain major source requirements). Depending upon the emissions from the Waste-to-Energy System, the facility may no longer be eligible for synthetic minor status. Division staff appreciates the USAF's analysis of the New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants. The USAF's comparison to municipal waste combustors seems to be appropriate despite acknowledged differences in the processes involved (i.e., combustion of waste stream not actually taking place).

If you have any questions, please contact Ms. Trina Vielhauer, Chief, Bureau of Air Regulation at (850) 921-9503.

In addition, the Department's Northwest District office in Pensacola advises that the proposed activities would require issuance of a stormwater permit, as identified in section 1.6.1 of the document submitted. Stormwater permitting in Northwest Florida is now subject to the requirements of the Environmental Resource Permitting Program, Phase I in accordance with Chapter 62-346, *F.A.C.* Since there are no proposed wetland impacts, the stormwater application would be processed by the Northwest Florida Water Management District. Please contact Mr. Lee Marchman at (850) 921-2986 for further information.

Thank you for the opportunity to comment.

03/27/2008 10:21 8506371932 WFRPC PAGE 01/04

West Florida Regional Planning Council

FAX TRANSMITTAL (S) Total # of Pages (including cover) 1

TO: STATE CLEARINGHOUSE ▪ FAX: (850) 245-2190/(850) 245-2189
Phone: 850-245-2161

DATE: March 27, 2008

FROM: John Gallagher, Director, Housing & Homeland Security & Emergency Mgmt.
John.Gallagher@wfrpc.org

SUBJECT: State Clearinghouse Review(s) Fax Transmittals:

SAI #	Project Description	RPC #
FL200802134015C	Draft Environmental Assessment Construction of Waste-to-Energy System, Hurlburt Field	0 86-2-20-08

	No Comments – Generally consistent with the WFSRPP
X	Comments Attached

NOTE: Comments pages from two WFRPC staff and one from Okaloosa County to WFRPC.

If you have any questions, please call.

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.332-7976 • 1.800.226.8914 • F: 850.637-1923
4081 East Olive Road, Suite A; Pensacola, FL 32514
651 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

West Florida Regional Planning Council

MEMORANDUM

To: Ms. Laura Milligan, Clearinghouse Coordinator, Florida State Clearing House, Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 47, Tallahassee, FL 32399-3000.

From: Mary F. Gutierrez, Environmental Planner, West Florida Regional Planning Council

Date: March 7, 2008

Subject: Review of the Environmental Assessment of Construction of a Plasma Waste-to-Energy System at Hurlburt Field, Florida. FL200802134015C; RPC# O 86-02-20-08

The proposal is for the construction and operation of a 10-ton per day Plasma Waste-to-Energy System also known as a plasma resource recovery system (PRRS) to process and recycle 100% of Hurlburt, AFB waste stream initially including municipal solid waste, biomedical and domestic waste. Future waste streams include hazardous waste. The structure is anticipated to be approximately 14,000 square feet and operational by February 2010.

Based on the information provided, the Council has no comments or concerns associated with this project only that a continuous air emissions monitoring system is implement prior to operation and modifications to the process and equipment is made as necessary to ensure that the facility does not exceed air quality standards.

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.332.7976 • 1.800.226.8914 • F: 850.637.1923
651 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

West Florida Regional Planning Council

MEMORANDUM

To: Ms. Laura Milligan, Clearinghouse Coordinator, Florida State Clearing House, Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 47, Tallahassee, FL 32399-3000.

From: Bruce Stitt, Director of Economic Development & Land Use, West Florida Regional Planning Council

Date: March 20, 2008

Subject: Review of the Environmental Assessment of Construction of a Plasma Waste-to-Energy System at Hurlburt Field, Florida. FL200802134015C; RPC# O 86-02-20-08

The Proposed Action is for the construction and operation of a 10-ton per day Plasma Waste-to-Energy System also known as a plasma resource recovery system (PRRS) to process and recycle 100 percent of the Hurlburt Field, Air Force Base waste stream. The PRRS structure is anticipated to be approximately 14,000 square feet and to be operational by February 2010.

The PRRS preferred site location (near the waste water treatment plant [WWTP]), and the alternate site location (near Old Gate), are both located within the cantonment area and are compatible with adjacent land uses. The Proposed Action would have no significant impacts to the following: noise, wetlands, floodplains, cultural resources, biological resources, environmental justice, surface water and groundwater, and transportation and land use. As such, these issues were eliminated from the detailed analysis of the Environmental Assessment.

Based on the information provided, the Council has no comments or concerns associated with this project.

P.O. Box 11399 • Pensacola, FL 32524-1399 • P: 850.332.7976 • 1.800.226.8914 • F: 850.637.1923
661 West 14th Street, Suite E • Panama City, FL 32401 • P: 850.769.4854 • F: 850.784.0456
www.wfrpc.org

COUNTY: OKALOOSA
106-SCH-USAF

DATE: 2/13/2008
COMMENTS DUE DATE: 3/19/2008
CLEARANCE DUE DATE: 4/13/2008
SAI#: FL200802134015C

MESSAGE: 2008-1336

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	NORTHWEST FLORIDA WMD		
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
X STATE			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

_ **Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.**

X **Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.**

Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

_ **Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.**

Project Description:

DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT, CONSTRUCTION OF A PLASMA WASTE-TO-ENERGY SYSTEM AT HURLBURT FIELD - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA
☒ No Comment
☐ Comment Attached
☐ Not Applicable

Federal Consistency
☒ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: Division of Historical Resources / Bureau of Historic Preservation

Reviewer: Samantha Earnest — Laura A. Kammerer, Deputy SHPO

Date: 03/19/08 — 3.19.2008

RECEIVED
2008 FEB 18 A 9:40
BUREAU OF
HISTORIC PRESERVATION

COUNTY: OKALOOSA

DATE: 2/13/2008
COMMENTS DUE DATE: 3/19/2008
CLEARANCE DUE DATE: 4/13/2008
SAI#: FL200802134015C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	X NORTHWEST FLORIDA WMD		
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
STATE			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

X **Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.**

_ **Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.**

_ **Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.**

Project Description:

DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT, CONSTRUCTION OF A PLASMA WASTE-TO-ENERGY SYSTEM AT HURLBURT FIELD - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA
☑ No Comment
☐ Comment Attached
☐ Not Applicable

Federal Consistency
☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:

Division/Bureau: NWFWMD
Resource Management Div.
Reviewer: Duncan J. Cairns
Date 3/10/08

Date: ____

RECEIVED
MAR 19 2008
OIP / OLGA

Attachment A-2. Public Notification

Public Notification

In compliance with the National Environmental Policy Act (NEPA), Air Force Special Operations Command at Hurlburt Field announces the availability of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for Construction of a Plasma Waste to Energy System at Hurlburt Field, Florida for public review.

The AFSOC/A7AV proposes to construct and operate a transportable 10 metric ton per day Plasma Waste to Energy System. The system would recycle Hurlburt Field's entire waste stream. The total construction footprint would be approximately 14,000 square feet. Assembly of the Plasma Waste to Energy unit would be performed by the vendor in or before March 2009. Operation of the facility would commence by February 2010.

Agencies and the public are invited to provide written comments on issues or concerns they may have with the proposed action.

Copies of the Draft EA and Draft FONSI are now available for public review and comment at the following public libraries:

Mary Esther Library, located at 100 W Hollywood, Mary Esther, FL. Library hours are Monday 11 A.M. – 6 P.M, Tuesday and Thursday from 9 A.M. – 8 P.M., Wednesday 9 A.M. – 6 P.M, and Friday and Saturday from 9 A.M. – 5 P.M.

Fort Walton Beach Public Library, located at 185 Miracle Strip Pkwy., SE, Ft. Walton Beach, FL. Library hours are Monday through Thursday 9 A.M. – 9 P.M.; and Friday and Saturday 9 A.M. – 5 P.M.

Niceville Library, located at 206 N Partin Drive, Niceville, FL. Library hours are Monday and Friday 9 A.M. – 5 P.M. Tuesday and Thursday, 9 A.M. – 8 P.M. Wednesday 1 P.M. – 5 P.M. and Saturday 9 A.M. – 5 P.M.

Copies will be available for review for a period of 15 days, from February 12, 2008, through February 27, 2008. Comments must be received by February 29, 2008.

2010237

APPENDIX B

COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

Florida Coastal Management Program Consistency Review

Statute	Consistency	Scope
Chapter 161 *Beach and Shore Preservation*	The Proposed Action would not affect beach and shore management, specifically as it pertains to: • The Coastal Construction Permit Program. • The Coastal Construction Control Line (CCCL) Permit Program. • The Coastal Zone Protection Program. All land activities would occur on federal property.	Authorizes the Bureau of Beaches and Coastal Systems within DEP to regulate construction on or seaward of the states' beaches.
Chapter 163, Part II *Growth Policy; County and Municipal Planning; Land Development Regulation*	The Proposed Action would not affect local government comprehensive plans.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 *State and Regional Planning*	The Proposed Action, which occurs on federal property, would conform to the State Comprehensive Plan and associated translational plans, in regards to the Florida Water Plan.	Details state-level planning efforts. Requires the development of special statewide plans governing water use, land development, and transportation.
Chapter 252 *Emergency Management*	The Proposed Action would not affect the state's vulnerability to natural disasters. The Proposed Action would not affect emergency response and evacuation procedures.	Provides for planning and implementation of the state's response to, efforts to recover from, and the mitigation of natural and manmade disasters.
Chapter 253 *State Lands*	All activities would occur on federal property; therefore the Proposed Action would not affect state or public lands.	Addresses the state's administration of public lands and property of this state, and provides direction regarding the acquisition, disposal, and management of all state lands.
Chapter 258 *State Parks and Preserves*	The Proposed Action would not affect state parks, recreational areas, and aquatic preserves.	Addresses administration and management of state parks and preserves.
Chapter 259 *Land Acquisition for Conservation or Recreation*	The Proposed Action would not affect tourism and/or outdoor recreation.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands.
Chapter 260 *Recreational Trails System*	The Proposed Action would not include the acquisition of land and would not affect the Greenways and Trails Program.	Authorizes acquisition of land to create a recreational trails system and to facilitate management of the system.
Chapter 375 *Multipurpose Outdoor Recreation; Land Acquisition, Management, and Conservation*	The Proposed Action would not affect opportunities for recreation on state lands.	Develops comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate need for additional recreational opportunities, and propose means to meet the identified needs.

Florida Coastal Management Program Consistency Review, Cont'd

Statute	Consistency	Scope
Chapter 267 *Historical Resources*	The Proposed Action is not anticipated to impact cultural resources of the state. However, in the event that additional archaeological resources are inadvertently discovered during construction, 1 SOCES/CEV would be notified immediately and further ground-disturbing activities would cease in that area. Identified resources would be managed in compliance with Federal law and Air Force regulations.	Addresses management and preservation of the state's archaeological and historical resources.
Chapter 288 *Commercial Development and Capital Improvements*	A successful demonstration of the Proposed Action may encourage future similar projects on state lands. The promotion of tourism in the region.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 *Transportation Administration*	The Proposed Action would not affect transportation.	Addresses the state's policy concerning transportation administration.
Chapter 339 *Transportation Finance and Planning*	The Proposed Action would not affect the finance and planning needs of the state's transportation system.	Addresses the finance and planning needs of the state's transportation system.
Chapter 370 *Saltwater Fisheries*	The Proposed Action would not affect saltwater fisheries.	Addresses management and protection of the state's saltwater fisheries.
Chapter 372 *Wildlife*	Impacts to biological resources would be minimal. Some vegetation would be removed. No threatened or endangered species would be affected. Therefore, the proposed action would not adversely affect wildlife resources.	Addresses the management of the wildlife resources of the state.
Chapter 373 *Water Resources*	Hurlburt Fields' Water Resources Section would coordinate all applicable permits in accordance with the Florida Administrative Code (FAC). The Proposed Action would increase the potential for impact from the increased rate and volume of stormwater runoff, due to an increase in impervious surface area. In order to limit the effects the Proposed Action would have on water resources, Best Management Practices would be applied to control erosion and stormwater runoff. Applicable permitting requirements would be satisfied in accordance with 62-25 of the FAC and National Pollutant Discharge Elimination System (NPDES). Hurlburt Field would submit a notice of intent to use the generic permit for stormwater discharge under the NPDES program prior to project initiation according to Section 403.0885, Florida Statutes (FS). The Proposed Action would also require coverage under the generic permit for stormwater discharge from construction activities that disturb one or more acres of land (FAC 62-621). Potable water use would be minimal.	Addresses the state's policy concerning water resources.

Florida Coastal Management Program Consistency Review, Cont'd

Statute	Consistency	Scope
Chapter 376 *Pollutant Discharge Prevention and Removal*	The Proposed Action would redirect the transfer, storage, and transportation of pollutants related to municipal solid waste and hazardous wastes from an off-base location to the PRRS.	Regulates transfer, storage, and transportation of pollutants, and cleanup of pollutant discharges.
Chapter 377 *Energy Resources*	The Proposed Action would not affect energy resource production, including oil and gas, and/or the transportation of oil and gas. Once underway, the system would be virtually self-sustaining producing its own energy from waste materials.	Addresses regulation, planning, and development of oil and gas resources of the state.
Chapter 380 *Land and Water Management*	The Proposed Action would not affect development of state lands with regional (i.e. more than one county) impacts. The Proposed Action would not include changes to coastal infrastructure such as capacity increases of existing coastal infrastructure, or use of state funds for infrastructure planning, designing or construction.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 *Public Health, General Provisions*	The Proposed Action would not affect the state's policy concerning the public health system.	Establishes public policy concerning the state's public health system.
Chapter 388 *Mosquito Control*	The Proposed Action would not affect mosquito control efforts.	Addresses mosquito control effort in the state.
Chapter 403 *Environmental Control*	Hurlburt Field would take reasonable precautions to minimize fugitive particulate (dust) emissions during any ground disturbing/construction/renovation activities in accordance with FAC 62-296. Therefore, the Proposed Action would not affect water quality, air quality, pollution control, solid waste management, or other environmental control efforts.	Establishes public policy concerning environmental control in the state.
Chapter 582 *Soil and Water Conservation*	Major impacts to soils and sediments are not anticipated. Some soil disturbance would occur from construction, but transportation of soil off-site would be controlled through Best Management Practices. Therefore, the Proposed Action would not affect soil and water conservation efforts.	Provides for the control and prevention of soil erosion.

This page is intentionally blank.