

FINAL

ENVIRONMENTAL ASSESSMENT (EA)

for

Construction of a

Society for the Prevention of Cruelty to

Animals (SPCA) Facility

Charleston Air Force Base

South Carolina



Department of the Air Force
Air Mobility Command
Charleston Air Force Base, South Carolina

January 2007

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 10 JAN 2007		2. REPORT TYPE Environmental Assessment		3. DATES COVERED 00-00-2004 to 00-00-2007	
4. TITLE AND SUBTITLE Final Environmental Assessment for Construction of a Society for the Prevention of Cruelty to Animals (SPCA) Facility at Joint Base Charleston, South Carolina			5a. CONTRACT NUMBER		
			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) United States Air Force, JB Charleston, Charleston, SC, 29404			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 Final Environmental Assessment for Construction of a Society for the Prevention of Cruelty to Animals (SPCA) Facility at Joint Base Charleston, South Carolina					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 29	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINDING OF NO SIGNIFICANT IMPACT
**CONSTRUCTION OF SOCIETY FOR THE PREVENTION OF CRUELTY TO
ANIMALS (SPCA) FACILITY**

AGENCY

Department of the Air Force, Headquarters (HQ), Air Mobility Command (AMC), Charleston Air Force Base (CAFB), South Carolina.

BACKGROUND

The City of North Charleston and the John Ancrum SPCA have requested Air Force-owned property that is non-contiguous and just east of CAFB for construction of a new SPCA facility. The Air Force Real Property Agency is in the process of facilitating the transfer to Charleston County. The current North Charleston SPCA facility provides inadequate space and amenities to maintain the growing animal populace it is experiencing. Additionally, it is 26 years old and is not up to current standards for this type of facility. A new facility has been designed and funded. Additionally, Charleston County desires the current North Charleston SPCA facility property for expansion of the adjacent Charleston County Jail.

PROPOSED ACTION

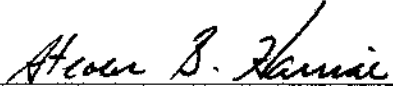
Construct a new SPCA facility to meet the growing requirements of the function. The facility would be located in a former housing area on an annex of Charleston Air Force Base known as the former Radar Annex. Utilities such as water, electricity, and natural gas will be connected to the proposed facility.

NO-ACTION ALTERNATIVE

The Air Force Environmental Impact Analysis Process (32 CFR 989.8(d)) states, "...except in those rare instances where excused by law, the Air Force must always consider and assess the environmental impacts of the 'no action' alternative." The No-Action Alternative would not meet the growing needs of the John Ancrum SPCA and is not a viable option.

DECISION

Based on my review of the facts and analyses contained in the environmental assessment, I conclude that implementation of the Proposed Action will not have a significant impact either by itself or with consideration of cumulative impacts. Accordingly, requirements of the National Environmental Policy Act (NEPA), regulations promulgated by the Council on Environmental Quality, and 32 CFR 989 are fulfilled and an environmental impact statement is not required.


STEVEN B. HARRISON, Colonel, USAF
Vice Commander, 437th Airlift Wing
Environment, Safety and Occupational Health Council Chairperson
Charleston AFB, South Carolina


Date

ISSUE TRACKING MATRIX

Resource	Proposed Action	No Action Alternative
Air Quality	No significant impact	No impact
Noise	No significant impact	No impact
Solid Waste	No significant impact	No impact
Water Resources	No impact	No impact
Biological Resources	No impact	No impact
Socioeconomic Resources	No significant impact	No significant impact
Cultural Resources	No impact	No impact
Land Use	No significant impact	No impact
Traffic and Transportation	No significant impact	No impact
Safety and Occupation Health	No significant impact	No impact
Geology and Soils	No significant impact	No impact
Hazardous Waste	Negligible amounts of hazardous waste would be generated during construction.	No impact

FINAL
ENVIRONMENTAL ASSESSMENT (EA)
for
Construction of a
Society for the Prevention of Cruelty to
Animals (SPCA) Facility

Charleston Air Force Base
South Carolina



Department of the Air Force
Air Mobility Command
Charleston Air Force Base, South Carolina

January 2007

PRIVACY ADVISORY NOTICE

Your comments on this Draft Environmental Assessment are requested. Letters or other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided will be used only to identify your intention to make a statement during the public comment portion of any public meetings or hearings, or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

COVER SHEET
ENVIRONMENTAL ASSESSMENT
CONSTRUCTION OF A SOCIETY FOR THE PREVENTION OF
CRUELTY TO ANIMALS FACILITY (SPCA) FACILITY
CHARLESTON AIR FORCE BASE, SOUTH CAROLINA

Responsible Agency: Department of the Air Force, Air Mobility Command, Charleston Air Force Base (AFB), South Carolina.

Proposed Action: Construct SPCA facility at the former Radar Annex, Charleston Air Force Base.

Written comments and inquiries regarding this document should be directed to: Joe Camp, Environmental Management Flight, 437 CES/CEV, 100 West Stewart Ave., Charleston AFB, SC, 29404-4827, tel. (843) 963-4125, email: joe.camp@charleston.af.mil

Report Designation: Draft Environmental Assessment

Abstract: The Air Force is considering transfer of an approximately 5 acre parcel of land at the former Radar Annex to the John Ancrum SPCA for construction of a new facility. The current John Ancrum SPCA Facility provides inadequate space and amenities to maintain the growing animal populace it experiencing. Additionally, it is 26 years old and is not up to current standards for this type of facility. A new facility is desired and has been designed and funded. Under the Proposed Action, a new SPCA facility would be constructed on an approximate 5 acre parcel of land currently owned by the Air Force at what is known as the former Radar Annex. No construction activities or operational changes to current SPCA activities would occur under the No Action Alternative. Resources considered in the impact analysis are safety and occupational health, air quality, noise, solid waste management, water resources, biological resources, cultural resources, land use, traffic and transportation, geology and soils, socioeconomic resources, coastal zone consistency, hazardous materials and wastes, and environmental justice. No significant environmental impacts would result from implementation of the Proposed Action or from the No Action Alternative.

TABLE OF CONTENTS

PRIVACY ADVISORY NOTICE.....	i
COVER SHEET	ii
TABLE OF CONTENTS.....	iii
ACRONYMS AND ABBREVIATIONS	v
CHAPTER 1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION.....	1-1
1.1 Introduction.....	1-1
1.2 Need for the Proposed Action.....	1-1
1.3 Objective of the Action	1-1
1.4 Scope of the Environmental Review.....	1-1
1.5 Applicable Environmental Regulatory Requirements.....	1-1
CHAPTER 2 DESCRIPTION OF THE ALTERNATIVES.....	2-1
2.1 Selection Criteria for Alternatives	2-1
2.2 Alternatives Considered.....	2-1
2.3 Description of the Proposed Action	2-1
2.4 Description of the No Action Alternative	2-1
2.5 Description of Past and Reasonably Foreseeable Future Actions.....	2-1
CHAPTER 3 DESCRIPTION OF THE AFFECTED ENVIRONMENT	3-1
3.1 Air Quality	3-1
3.2 Noise	3-1
3.3 Solid Waste Management	3-1
3.4 Hazardous Materials and Wastes	3-1
3.5 Asbestos-Containing Materials and Lead-Based Paint	3-2
3.6 Water Resources	3-2
3.7 Biological Resources.....	3-2
3.8 Socioeconomic Resources.....	3-2
3.9 Cultural Resources	3-3
3.10 Land Use	3-3
3.11 Traffic and Transportation	3-3
3.12 Safety and Occupational Health.....	3-3
3.13 Geology and Soils	3-3
3.14 Environmental Justice	3-3
3.15 Indirect and Cumulative Effects.....	3-4
3.16 Coastal Zone Management.....	3-4

TABLE OF CONTENTS (CONTINUED)

CHAPTER 4	ENVIRONMENTAL CONSEQUENCES	4-1
4.1	Air Quality	4-1
4.2	Noise	4-1
4.3	Solid Waste Management	4-1
4.4	Hazardous Materials and Wastes	4-1
4.5	Asbestos-Containing Materials and Lead-Based Paint	4-2
4.6	Water Resources	4-2
4.7	Biological Resources.....	4-2
4.8	Socioeconomic Resources.....	4-2
4.9	Cultural Resources	4-2
4.10	Land Use	4-3
4.11	Traffic and Transportation	4-3
4.12	Safety and Occupational Health.....	4-3
4.13	Geology and Soils	4-3
4.14	Environmental Justice	4-3
4.15	Indirect and Cumulative Effects.....	4-4
4.16	Coastal Zone Management.....	4-4
CHAPTER 5	PERSONS AND AGENCIES CONSULTED	5-1
CHAPTER 6	REFERENCES	6-1

LIST OF TABLES

Table 1	United States and South Carolina Ambient Air Quality Standards
---------	--

LIST OF FIGURES

Figure 1	Plat of Proposed SPCA Facility
----------	--------------------------------

LIST OF APPENDICES

Appendix A	Photo Log
------------	-----------

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	Micrograms per cubic meter
ACM	Asbestos-Containing Materials
AFB	Air Force Base
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
dB	A-Weighted Decibels
DNL	Day–Night Noise Level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
IRP	Installation Restoration Program
LBP	Lead-Based Paint
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NPS	National Park Service
NRCS	National Resource Conservation Service
OCRM	Office of Ocean and Coastal Resource Management
RCRA	Resource Conservation and Recovery Act
TCE	Trichloroethene
SCDHEC	South Carolina Department of Health and Environmental Control
SCSHPO	South Carolina State Historic Preservation Office
SPCA	Society for the Prevention of Cruelty to Animals
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geologic Survey

CHAPTER 1

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Charleston Air Force Base (AFB) is located in Charleston County in southeast South Carolina, approximately 10 miles northwest of downtown Charleston. Figure 1 shows the Charleston AFB and surrounding area. Charleston AFB lies within the corporate boundaries of the City of North Charleston on property formerly owned and operated by the Charleston Municipal Airport. Charleston AFB has a joint-use agreement with the Charleston County Aviation Authority for shared use of the runways and navigational aids by civilian, commercial, and military aircraft.

Charleston AFB encompasses approximately 3,700 acres between the Ashley and Cooper Rivers. The majority of the base, east of Dorchester Road, consists of the airfields, training facilities, administration buildings, medical facilities, housing for base personnel, and recreational areas. An approximate 5 acre parcel of land owned by the Air Force which is non-contiguous to CAFB located just east of the base is being considered for transfer to the John Ancrum SPCA. The parcel is located near the corner of Remount Road and Air Park Road. It is estimated that activities associated with the Proposed Action would begin in January of 2007.

1.2 NEED FOR THE PROPOSED ACTION

The current John Ancrum SPCA facility is inadequate to meet the growing needs of the community service which it provides. It is 26 years old and does not meet current standards for this type of facility.

1.3 OBJECTIVE OF THE ACTION

The objective of the action is to construct a new SPCA facility of sufficient size and configuration and conveniently located in the Charleston County area to provide an adequate facility that is up to current standards to maintain the growing animal populace the SPCA is experiencing.

1.4 SCOPE OF THE ENVIRONMENTAL REVIEW

This EA assesses the construction and operation of the proposed SPCA facility at the former Radar Annex as well as the No Action Alternative. This document identifies, describes, and evaluates the potential environmental impacts that may result from implementation of the Proposed Action, as well as possible cumulative impacts from other reasonably foreseeable actions planned for the area. This EA also identifies required environmental permits relevant to the Proposed Action. As appropriate, the affected environment and environmental consequences of the Proposed Action and No Action Alternative may be described in terms of site-specific descriptions or regional overview. Finally, this EA identifies mitigation measures to prevent or minimize environmental impacts, if required.

1.5 APPLICABLE ENVIRONMENTAL REGULATORY REQUIREMENTS

A Notice of Intent will be required to be submitted to the South Carolina Department of Health and Environmental Control (SCDHEC), Office of Ocean and Coastal Resource Management (OCRM). Additionally, a construction permit for water/wastewater will be applied for to SCDHEC.

CHAPTER 2 DESCRIPTION OF THE ALTERNATIVES

2.1 SELECTION CRITERIA FOR ALTERNATIVES

John Ancrum SPCA must ensure that it has the facilities and infrastructure to support the needs of a growing Charleston County population. Acquisition of property must be affordable and centrally located for efficient and convenient facility operation. Property under consideration would greatly meet these requirements. It would be provided free of charge, and would be in a prime location for service to the residents of Charleston County.

2.2 ALTERNATIVES CONSIDERED

The only site considered for the proposed SPCA facility is a parcel on the former Radar Annex location near the intersection of Remount Road for reasons stated in paragraph 2.1 above. This site is assessed in the Proposed Action of this EA.

2.3 DESCRIPTION OF THE PROPOSED ACTION

Under the Proposed Action, a 31,000 square foot SPCA facility would be constructed on an approximate 5 acre parcel. The shelter would have 162 dog kennels and 140 cat kennels. Various rooms such as a lobby, training room, offices, surgery room and retail space would also be constructed. There would also be an attached exercise yard. Paved parking spaces for 63 vehicles would be provided. Up to 42 employees are anticipated at the new facility. Utilities such as water, electricity, and natural gas that service the existing building will be connected to the proposed SPCA facility.

2.4 DESCRIPTION OF THE NO ACTION ALTERNATIVE

Under the No Action Alternative, the current SPCA facility located on Leeds Avenue would continue to offer its services to the residents of the Greater Charleston area. No construction activities would occur.

2.5 DESCRIPTION OF PAST AND REASONABLY FORESEEABLE FUTURE ACTIONS

Complete environmental impact analysis of the Proposed Action and alternative actions must consider cumulative impacts due to other actions. A cumulative impact is an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action, regardless of which agency or person undertakes such actions.

Other actions planned for the area adjacent to the proposed SPCA facility include potential demolition of 22 single-family housing units on the former Radar Annex for construction of municipal services buildings by the City of North Charleston. The demolition may include some lead-based paint and asbestos abatement, which would be a positive impact. As far as past and present actions, there is an ongoing environmental project that will clean up low level trichloroethene (TCE) and carbon tetrachloride (CTC) contamination in the groundwater on a portion of this (Plat B on attached Figure 1-4) and adjacent property, also considered a positive impact. For construction of the new facility, Plat A on Figure 1-4 is proposed for immediate transfer to the SPCA by the Air Force, and Plat B is proposed for future transfer. Plat A is considered "clean", as investigations have found no contamination there.

CHAPTER 3

DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 AIR QUALITY

The federal Clean Air Act (CAA), 42 U.S.C. 7401-7671(q) amended in 1977 and 1990, provides the basis for regulating air pollution to the atmosphere. The CAA also provides that emission sources must comply with air quality standards and regulations that have been established by federal, state, and county regulatory agencies. The CAA required the United States Environmental Protection Agency (USEPA) to establish ambient ceilings for certain criteria pollutants. These criteria pollutants are usually referred to as the pollutants for which the USEPA has established National Ambient Air Quality Standards (NAAQS). These standards focus on the maximum allowable ambient pollutant concentrations and the maximum allowable emission from individual sources.

Based on the requirements outlined in the USEPA's general conformity rule published in 58 Federal Register 63214 (November 30, 1993) and codified at 40 CFR Part 93, Subpart B (for federal agencies), a conformity analysis is required to analyze whether the applicable criteria air pollutant emissions associated with the project equal or exceed the threshold emission limits that trigger the need to conduct a formal conformity determination. The region is in attainment, and therefore a conformity determination would not be required.

Air quality standards have been established for six criteria pollutants: ozone, nitrogen dioxide, particulate matter equal to or less than 10 microns in diameter, carbon monoxide, sulfur dioxide, and lead. Table 1 provides the ambient air quality standards for the state of South Carolina. Charleston and the surrounding area are in attainment with South Carolina air quality standards.

3.2 NOISE

In the context of this document, noise is defined as any undesirable or unwanted sound or audible disturbance that interferes with normal activity. Noise is considered undesirable if it interferes with speech and hearing during normal conversation and is intense and of sufficient duration to damage hearing.

The USEPA, based on studies conducted in 1974 (USEPA, 1974), recommended limiting daily equivalent sound level of 70 A-weighted decibels (dBA), which would translate into an average day-night noise level (DNL) of 75 dBA. The hearing loss projections are based on an average daily outdoor exposure of 16 hours (7:00 a.m. to 10:00 p.m.) over a 40-year period. Therefore, an outdoor DNL of 75 dBA is considered the threshold above which the risk of hearing loss may begin to occur in people. Typical noise levels for quiet urban areas such as this former housing area range from 40 dBA to 50 dBA (nighttime and daytime) as compared to normal speech at three feet (65 dBA) or a gas-powered lawn mower (95 dBA).

3.3 SOLID WASTE MANAGEMENT

There is no solid waste presently generated at the proposed project location. Area is green space only.

3.4 HAZARDOUS MATERIALS AND WASTES

Charleston AFB has a Part B Permit under the Resource Conservation and Recovery Act (RCRA). The RCRA Part B Permit currently identifies 111 sites (95 Solid Waste Management Units and 16 Areas of Concern) at Charleston AFB as potentially impacted by past hazardous material or hazardous waste activities that require investigation and potential remediation. This area has been investigated and

found to contain low levels of TCE and CTC contamination in the groundwater at 30 feet below ground surface on Plat B (see attached Figure 1-4). The adjacent area also contains low-level TCE contamination in the groundwater. All contaminated areas are being addressed by the base's Installation Restoration Program (IRP). Again, Plat A on Figure 1-4 is considered "clean", as investigations have found no contamination there.

3.5 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

The proposed project location has no structures present with the exception of two groundwater monitoring wells. There is no asbestos or lead based paint present on the parcel.

3.6 WATER RESOURCES

The state of South Carolina is divided into eight major drainage basins. There are two major river basins in the area, the Ashley and Cooper River basins, bounded by the Ashley River to the south-southwest and the Cooper River to the north-northeast (USAF, 2002b). The Cooper River basin encompasses eight watersheds (843 square miles), and the Ashley River Basin encompasses seven watersheds (894 square miles). Both river basins incorporate the Lower Coastal Plain and Coastal Zone regions of South Carolina. Charleston AFB is located in the Cooper River Watershed (U.S. Geological Survey [USGS] Cataloging Unit 03050201).

Forested wetlands and freshwater swamps are generally located on the fringes of the Charleston AFB (AFCEE, 2003). Surface water features within the Charleston AFB include Turkey Creek and tributaries to the Ashley and Cooper River basins. The drainage patterns at Charleston AFB include Filbin Creek, a tributary of the Cooper River located at the south end of Runway 15/33, the Ashley River, and small tributaries of the Ashley River. Flooding occasionally occurs, largely due to the flat terrain, high water table (0.25 to 13 feet below the ground surface), and poor drainage infrastructure (USAF, 2002b).

Within the proposed SPCA facility site or adjacent property, there are no jurisdictional wetlands, open water bodies or streams that would be regulated by the U.S. Army Corps of Engineers.

3.7 BIOLOGICAL RESOURCES

Vegetation on the proposed project location consists of planted grass surrounded by a buffer of typical native trees and shrubbery.

Wildlife in the area is primarily restricted to those species adapted to a suburban and urban environment. Adjacent wooded wetland and upland forested areas at Charleston AFB support a great deal of common generalist species of wildlife, including bobwhite quail, mourning dove, cottontail rabbits, gray squirrels, and white-tailed deer. The areas in and around the proposed project location have bird activity, and several species that prefer open habitat like the mourning doves (*Zenaida macroura*), northern mockingbirds (*Mimus polyglottis*), American robins (*Turdus migratorius*), and various species of sparrows.

3.8 SOCIOECONOMIC RESOURCES

The proposed project location lies within the Ashley and Cooper River basins. There are also residential developments in the vicinity that allow for a potential population growth for the area. Areas along the western banks of the Cooper River have been affected by the closure of the U.S. Navy Base and Shipyard in 1996. This area saw a population decline and subsequent rebirth. General office, retail, manufacturing, and industrial use of the area is very much on the rise.

As of 2005, the population of North Charleston was estimated at 86,313. The majority of the North Charleston population is black (49 percent), with the next group being white (43 percent).

3.9 CULTURAL RESOURCES

A 1984 site visit by the National Park Service (NPS) concluded that there are no architecturally or historically significant structures present at the proposed project site (August 30, 1984 letter from John Ehrenhard to Charles Lee).

3.10 LAND USE

Land uses within the vicinity include residential, commercial, industrial, and recreational. The site lies in a developed area within the corporate boundaries of North Charleston. Approximately 85 percent of the land in the area is “improved landscape” with roads, airfield, aircraft operations and maintenance buildings, administration buildings, roads, housing, schools, and various businesses and recreational facilities.

3.11 TRAFFIC AND TRANSPORTATION

Immediate area traffic is light. Adjacent roads and highways (Rivers Avenue, South Aviation Boulevard, Remount road and Interstates 26 and 526) are moderate to heavily traveled during peak weekday hours. Traffic is not otherwise of concern in the area.

3.12 SAFETY AND OCCUPATIONAL HEALTH

As there is no activity presently occurring on the parcel proposed for the facility, there is no effect to safety and occupational health.

3.13 GEOLOGY AND SOILS

The former Radar Annex is located approximately 16 miles northwest of the Charleston Harbor, between the Ashley and Cooper Rivers in the lower portion of the Atlantic Coastal Plain Charleston physiological province of South Carolina.

The geology of the former Radar Annex and the surrounding area consists of an underlying layer of Pleistocene-age sediments consisting of sandy and clayey deposits. The major geologic formations in the area include the Wando, Ten Mile Hill beds, and the Ashley (Weems and Lemon, 1988).

Former Radar Annex soils are typically composed of sand and sandy loam. Clay content generally increases with depth. Permeability is relatively high in surface soils but decreases with increasing clay content and depth (NRCS, 1993).

Radon, a radioactive gas that seeps out of rocks and soil, comes from uranium that has been in the ground since the time the earth was formed. Radon can occur in high concentrations in soils and rocks containing uranium, granite, shale, phosphate, and pitchblende. Under the Radon Assessment and Mitigation Program, the adjacent Charleston AFB was surveyed for radon gas and was determined to be in the “Low Probability Category.” The survey results were found to have radon concentrations far less than four picocuries per liter, which is the level of concern established by the USEPA.

3.14 ENVIRONMENTAL JUSTICE

Environmental justice is a concept involving race, ethnicity data, and economic status of population within the region of the project’s influence. On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The purpose of this order is to avoid the disproportionate placement of any adverse

environmental or economic impacts from federal policies and actions on minority and low-income populations. Environmental justice analysis is performed to identify potential disproportionately high and adverse impacts from a proposed action and to identify alternatives that might mitigate these impacts.

3.15 INDIRECT AND CUMULATIVE EFFECTS

Cumulative impacts result from the incremental impact of actions when added to other past, present, and reasonably foreseeable future actions, regardless of what agency undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

3.16 COASTAL ZONE MANAGEMENT

The former Radar Annex is located within the South Carolina coastal zone. A Notice of Intent will be required to be submitted to the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management (OCRM). This likely will trigger a Coastal Zone Certification review.

.

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

4.1 AIR QUALITY

The Proposed Action would be expected to produce minor quantities of fugitive dust from ground-disturbing activities, combustive emissions from construction equipment, and emissions from asphalt paving operations during construction. Fugitive emissions would be greatest during the initial site preparation activities and would decline during the construction period. The quantity of fugitive dust in the air would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions. Dust emissions would be reduced through the use of control measures such as wetting and covering of exposed soil.

Under the No Action Alternative, no significant impact on air quality would be anticipated because no building demolition or disturbance to the soils would occur.

4.2 NOISE

The Proposed Action would be expected to generate minor increases in noise levels during construction activity. However, the potential for hearing loss involves direct exposure, on a regular, continuing, long-term basis, to noise levels above 75 dBA. It is anticipated that the construction activities would occur between 7:30 a.m. and 4:00 p.m., five days per week for the duration of the project, and individuals would not be outdoors for the entire noise producing period. Therefore, nearby building occupants would not experience loss of hearing. Sleep interference is unlikely because the construction activities would occur during the daytime and there is no surrounding residential area.

In addition to the slight noise level increases during construction, there would be the expected noise from vehicles, people, dogs and cats once the facility is operating. Once inside the facility, there would be no outside noise from people and animals. The Proposed Action would not generate elevated noise levels above 75 dBA for sufficient duration to cause hearing loss.

No significant impact on current noise levels would occur under the no-build proposal alternative.

4.3 SOLID WASTE MANAGEMENT

The construction and operation of the SPCA facility under the Proposed Action are not expected to generate enough solid waste to require additional facilities or capacity to handle the minor increases in quantity generated. Solid waste generated during operation including animal feces and ashes from cremations would continue to be placed in a dumpster and transported to a solid waste landfill. It is assumed that the contractor would recycle materials to the maximum extent possible, thereby reducing the amount of construction and demolition debris placed into landfills.

Under the no-build action, no construction activities would occur and levels of solid waste generation and disposal would be similar to current conditions.

4.4 HAZARDOUS MATERIALS AND WASTES

Products containing hazardous materials could be used during the proposed construction activities for the Proposed Action. Contractors would be required to use and hazardous materials in accordance with all federal, state, and local regulations.

Hazardous wastes could be generated in small quantities during the construction activities. The construction contractor would maintain records of all waste generated. All waste would be properly

disposed in accordance with applicable regulations. The contractor would be responsible for proper characterization and disposal of any waste and cleanup materials generated.

No hazardous materials are used in the current SPCA facility operation, and none are expected to be used during the proposed facility's operation.

Bio-hazardous wastes created from operating procedures and animal euthanizations would be burned to ash at the on-site crematorium and disposed of in a solid waste dumpster.

Under the no-build action, no construction activities would occur and current levels of hazardous material use and/or hazardous waste generation and disposal would remain unchanged.

4.5 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

The proposed project location has no structures present with the exception of two groundwater monitoring wells. There is no asbestos or lead-based paint present on the parcel.

The no action alternative would have no effect, as there is no asbestos or lead-based paint present.

4.6 WATER RESOURCES

No jurisdictional wetlands or other water bodies currently exist on the site. Therefore, the Proposed Action would not affect any water resources.

The No Action Alternative would have no effect on any water resources.

4.7 BIOLOGICAL RESOURCES

The Proposed Action would occur within a virtually abandoned area with a modified and disturbed landscape. The activities would not substantially change habitat for plant or animal species, nor would they diminish important plant or animal species populations. There are no federal or state threatened or endangered species within or adjacent to the proposed site for the SPCA facility.

The demolition and construction contractor would not create long-term disturbance to any fish or wildlife in native environments adjacent to the project site. There are no trees on the proposed site. There would be no impacts to vegetation outside the developed areas of the SPCA facility. Use of best management practices, silt fences, and reestablishment of ground cover during construction would minimize the potential for adverse effects to vegetation at and near the construction site. Therefore, no significant adverse effects to wildlife and vegetation would be anticipated.

No impacts to any federal- or state-protected biological resources would occur under the No Action Alternative.

4.8 SOCIOECONOMIC RESOURCES

The Proposed Action would positively affect construction workers, current and potential future SPCA employees, and SPCA product and service providers.

No activity would take place under the no-build alternative; therefore, no impact to socioeconomic resources would occur.

4.9 CULTURAL RESOURCES

The Proposed Action would not affect any known historical or archeological resources. In the unlikely event that previously undetected archaeological remains are encountered during construction of the SPCA facility, construction would cease until the proper federal, state, and tribal entities are

contacted. The *Cultural Resources Management Plan* for Charleston AFB states that the individual who is responsible for implementing the work will immediately notify the Cultural Resources Manager (CRM) at the base, who will take steps to minimize impact to the resource. The CRM will then begin consultation with state and federal authorities, if necessary.

There would be no activity under the No Action Alternative; therefore, no impact to cultural resources would occur at the proposed site.

4.10 LAND USE

The Proposed Action would convert the existing unoccupied residential lot to an SPCA facility. There would also be a temporary and short-term increase in noise levels and traffic volumes during construction. Roadway improvements to the area for access to the facility are likely.

There would be no activity under the No Action Alternative; therefore no impact to land use would occur at the proposed site.

4.11 TRAFFIC AND TRANSPORTATION

The Proposed Action would have a minor impact on the local traffic and area roads during the operation of the facility due to the presence of personnel employed at the facility, as well as persons visiting the facility for drop-off and adoption of pets. In addition, there would be some temporary increases in traffic in the area during the construction of the facility.

Under the No Action Alternative, there would be no impact to traffic and transportation at the proposed site or on the adjacent roads.

4.12 SAFETY AND OCCUPATIONAL HEALTH

Construction workers and employees of the facility will be expected to comply with occupational safety and health regulations, so there should be a negligible safety and occupational health effect.

The No Action Alternative would result in no changes to safety and occupational health.

4.13 GEOLOGY AND SOILS

Construction activity under the Proposed Action would occur within an area where soils have been previously disturbed by previous construction. Erosion control techniques and best management practices would be implemented during the construction of the proposed facility to reduce erosion. Protection would be provided by accelerated growth of permanent vegetation, temporary vegetation, mulching, or netting. Use of best management practices such as silt fences and single point construction entries would minimize erosion during construction. Grass and other landscaping would be reestablished in the disturbed areas immediately after completion of construction, thereby reducing the potential for erosion. Therefore, no significant soils impacts would be expected.

Under the no-build alternative, there would be no disturbance to the soils on the site.

4.14 ENVIRONMENTAL JUSTICE

The Proposed Action would not have an adverse effect on the local community, individual health and safety, cultural resources, or nearby businesses. The activity is confined to the former Radar Annex and would not affect any adjacent property owners.

Under the No Action Alternative, the SPCA facility would not be built and no environmental justice issues would arise.

4.15 INDIRECT AND CUMULATIVE EFFECTS

As previously stated, cumulative impacts result from the incremental impact of actions when added to other past, present, and reasonably foreseeable future actions, regardless of what agency undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative effects such as noise, traffic, and solid waste associated with the project would be temporary and related to the construction of the proposed facility. Because of the short-term construction time and the size of the facility, the contribution of the project to cumulative effects should be minor.

The proposed project would contribute to one permanent cumulative impact on the former Radar Annex. The proposed SPCA site is on improved land, so no cumulative effects to natural landscapes/biological resources would occur. No known cultural resources are present on the site.

Under the No Action Alternative, the SPCA facility would not be built and no problems from indirect or cumulative effects would occur.

4.16 COASTAL ZONE MANAGEMENT

The former Radar Annex is located within the South Carolina coastal zone. A Notice of Intent will be required to be submitted to the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management (OCRM). This likely will trigger a Coastal Zone Certification review.

CHAPTER 5

PERSONS AND AGENCIES CONSULTED

The following persons and agencies were consulted during preparation of this EA.

Urrutia, Al	Element Chief, Restoration, Conservation and Planning, Environmental Flight, Charleston AFB
Thompson, Keith	Conservation, Environmental Flight, Charleston AFB
Wannamaker, Charles	Water/USTs, Environmental Flight, Charleston AFB
Hardin, Tommy	Hazardous Waste, Environmental Flight, Charleston AFB
Morrill, James	John Ancrum SPCA

CHAPTER 6

REFERENCES

- AFCEE. 2003. Integrated Natural Resources Management Plan update for 2003–2007 Charleston Air Force Base and North Auxiliary Air Field, South Carolina. March 2003. AFCEE/ECS.
- ANSI. 1983. American National Standards Institute, American National Standard Specification for Sound Level Meters, April 1983.
- CFR. 2003. Code of Federal Regulations. Title 40, Part 763. U.S. Government Printing Office.
- NRCS. 1993. Natural Resources Conservation Service. 1993, Soils of the Charleston AFB, Charleston, SC, USDA.
- Hardin, Tommy. 2006. Personal Meeting between Tommy Hardin, Charleston AFB Environmental Flight, and Joe Camp, Charleston AFB Environmental Management. November 1 2006.
- SCDHEC. 2003. South Carolina Department of Health and Environmental Control Regulation 61-62, Air Pollution Control Regulations and Standards. Effective June 27, 2003.
- Wannamaker, Charles. 2006. Personal Meetings between Charles Wannamaker, Charleston AFB Environmental Flight, and Joe Camp, Charleston AFB Environmental Management. November 1, 2006.
- Morrill, James. 2006. John Ancrum SPCAVarious communication via telephone and email, October 2006.
- Thompson, Keith. 2006. Personal Meetings between Keith Thompson, Charleston AFB Environmental Flight, and Joe Camp, Charleston AFB Environmental Management.
- Urrutia, Al. 2006. Personal Meetings between Al Urrutia, Charleston AFB Environmental Flight, and Joe Camp, Charleston AFB Environmental Management. November 2, 2006.
- USAF. 1978. Departments of the Air Force, the Army, and the Navy, AFM 19-10, TM 5-803-2, NAVFAC P-970, Environmental Protection, Planning in the Noise Environment, June 15, 1978.
- USAF. 2002a. United States Air Force. Environmental Assessment for the Proposed Removal of Airfield Obstruction at Charleston Air Force Base. July 2002.
- USAF. 2002b. Charleston Air Force Base, Base General Plan, Zapata Engineering, P.A. 2002.
- USAF. 2002c. Environmental Assessment for Construction of Base Perimeter Fence at Charleston Air Force Base. August 2002.
- USAF. 2003a. Environmental Assessment for Anti-terrorism/Force Protection at Charleston Air Force Base. July 2003.
- USAF. 2003b. Environmental Assessment for the Construction of 315th Airlift Wing War Readiness Material Warehouse at Charleston Air Force Base. November 2003.
- USDOT. 1992. United States Department of Transportation, Federal Aviation Administration, Guidelines for the Sound Insulation of Residences Exposed to Aircraft Operations, 1992.
- USEPA. 1974. United States Environmental Protection Agency. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, Publication No. 550/9-74.004, Washington DC, March 1974.
- USEPA. 1995. United States Environmental Protection Agency, Compilation of Air Pollutant Factors, Volume 1: Stationary Point and Area Sources (AP-42), 5th edition, Ann Arbor, January 1995.

Weems, R. E., and Lemon, E. M., Jr. 1988. Geologic Map of the Ladson Quadrangle, Berkeley, Charleston, and Dorchester Counties, South Carolina. U.S. Geological Survey Geologic Quadrangle Map GQ-1630, scale 1:24,000.

TABLE

Table 1. United States and South Carolina Ambient Air Quality Standards

Criteria Pollutant	Measuring Interval	Primary NAAQS ^{a, c}	Secondary NAAQS ^{b, c}	South Carolina Standards ^c
Carbon Monoxide	8-hour	10 mg/m ³	No Standard	10 mg/m ³
	1-hour	40 mg/m ³	No Standard	40 mg/m ³
Lead	Quarterly	1.5µg/m ³	1.5µg/m ³	1.5µg/m ³
Nitrogen Oxide	Annual	100µg/m ³	100µg/m ³	100µg/m ³
Ozone ^f	8-hour ^d	157µg/m ³	157µg/m ³	157µg/m ³
	1-hour ^d	235µg/m ³	235µg/m ³	235µg/m ³
Particulate Matter (measured as PM ₁₀)	Annual ^d	50µg/m ³	50µg/m ³	50µg/m ³
	24-hour ^d	150µg/m ³	150µg/m ³	150µg/m ³
Particulate Matter (measured as PM _{2.5})	Annual	15µg/m ³	15µg/m ³	No Standard
	24-hour	66µg/m ³	66µg/m ³	
Total Suspended Particulates	Annual Geometric Mean	No Standard	No Standard	75µg/m ³
Sulfur Oxides	Annual	80µg/m ³	No Standard	80µg/m ³
	24-hour ^e	365µg/m ³	No Standard	365µg/m ³
	3-hour ^e	No Standard	1,300µg/m ³	1,300µg/m ³

a Primary Standards: The levels of air quality necessary to protect the public health with an adequate margin of safety. Each state must attain the primary standards no later than three years after the state implementation plan is approved by the USEPA.

b National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a “reasonable time” after the state implementation plan is approved by the USEPA.

c The NAAQS and South Carolina standards are based on standard temperature and pressure of 25 degrees Celsius and 760 millimeters of mercury.

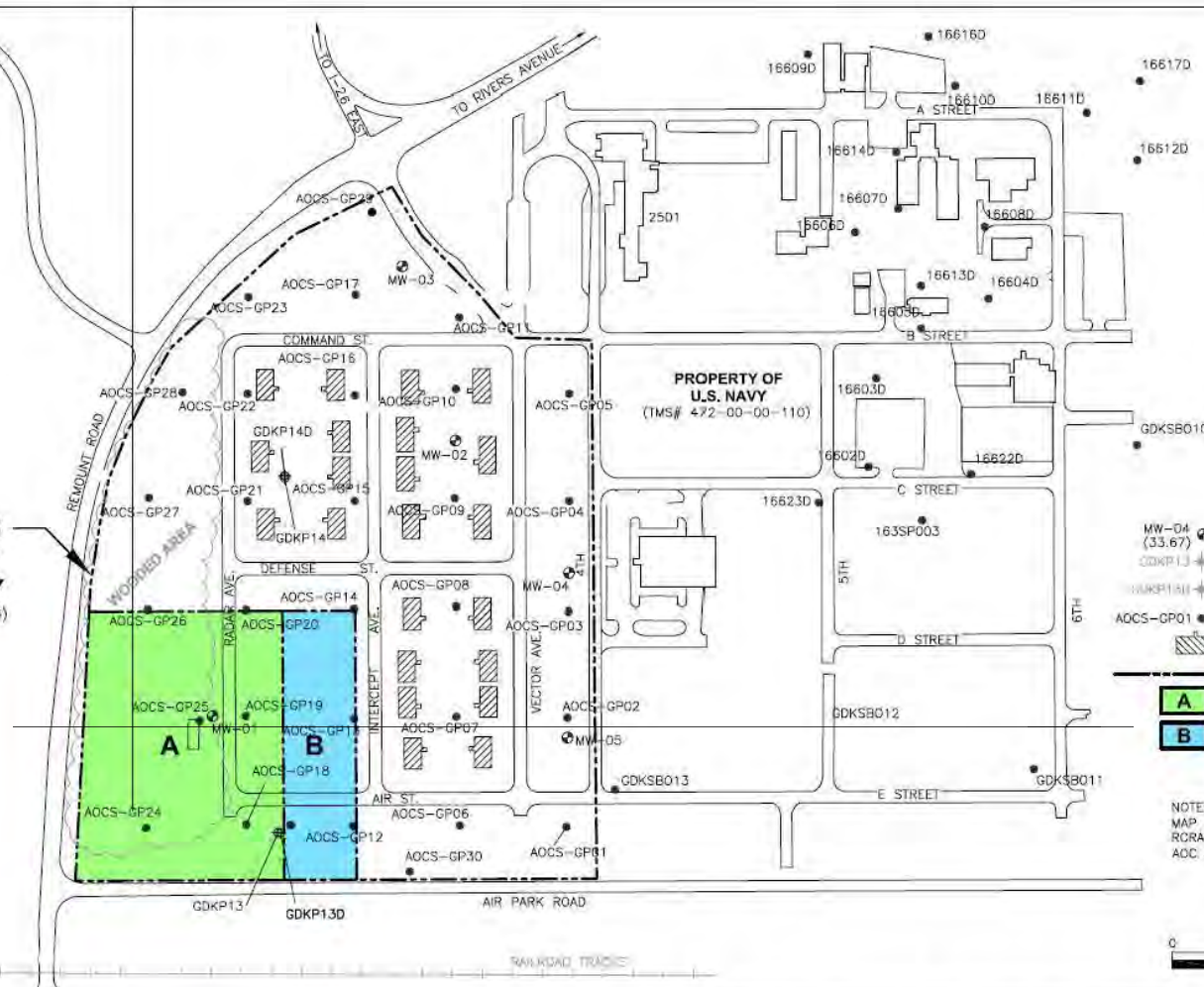
d Attainment determinations will be made based on the criteria contained in 40 CFR 50, July 1, 1987.

e National and state standards, other than those based on an annual or quarterly arithmetic mean, are not to be exceeded more than once per year.

f The ozone 8-hour standard and PM_{2.5} standards are included for information only. A 1999 federal court ruling blocked implementation of these standards, which the USEPA proposed in 1997.

FIGURES

**SITE AOC S
PROPERTY
BOUNDARY**
(TMS# 472-00-00-014)



LEGEND

- MW-04 (33.67) ● MONITORING WELL LOCATIONS
- GDKP13 ● EXISTING PERMANENT SHALLOW WELL
- GDKP15 ● EXISTING PERMANENT DEEP WELL
- AOCs-GP01 ● GEOPROBE WELL LOCATION
- ▨ HOUSE (SINGLE STORY)
- PROPERTY LINE
- A PROPOSED FOR TRANSFER
- B PROPOSED FOR FUTURE TRANSFER

NOTE:
MAP EXTRACTED FROM REVISED FINAL/FINAL
RCRA FACILITY INVESTIGATION REPORT FOR
AOC S (SEPTEMBER 15, 2005)

0 100 200 400
SCALE IN FEET

APPENDIX A

Photo Log



Parcel View Looking Northwest



Parcel View Looking Southwest