

SUPPLEMENTAL
ENVIRONMENTAL BASELINE SURVEY
SOUTH MILITARY FAMILY HOUSING
PATRICK AFB, FLORIDA



Contract No. F08650-98-D-0016

Prepared For:

45th CES/CEV
Patrick Air Force Base, Florida

Prepared By:

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42 North Brevard Ave.
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**EXECUTIVE SUMMARY
SUPPLEMENTAL ENVIRONMENTAL BASELINE SURVEY**

**PROPOSED PRIVATIZATION OF THE
SOUTH MILITARY FAMILY HOUSING AREA
PATRICK AIR FORCE BASE, FLORIDA**

Background

An Environmental Baseline Survey (EBS) was completed for the proposed out-grant/privatization of the South Military Family Housing (MFH) area, also known as Capehart Housing, at Patrick Air Force Base (PAFB), Florida in December 1998. The purpose of the EBS was to assess and document the existing environmental condition of real property inside the boundary fence in the South MFH area on PAFB as requested by the 45th Space Wing. This Supplemental EBS has been prepared to include additional data not available at the time of the original 1998 EBS. It includes relevant groundwater data collected in October 2000 in proximity to the western property boundary as well as updates to several sections of the 1998 EBS. The 1998 document included EBS Waivers as Appendices 7 and 8 for the Scorpion Court Elevated Water Storage Tank and Building 3650 (for which updated EBS information is presented in this supplement), a summary of the Water System Study for PAFB, and a EDR-Radius Map developed by Environmental Data Resources which meets the government records search requirements of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments, E 1527-97. Preparation of an EBS (or waiver) is required for all Air Force real property transactions under Air Force Instruction (AFI) 32-7066, *Environmental Baseline Surveys in Real Estate Transactions*. The 1998 EBS and this Supplemental EBS were conducted and formatted in accordance with this AFI. This EBS is also designed to include the environmental information required by AFI 32-9003, *Out-grant of Real Property*. Only altered sections of the 1998 EBS that were updated in January 2001 are included as text in this supplement.

Assessment of Adjacent Properties

Land use within a one-mile radius of South MFH is primarily private housing with numerous small businesses, many with underground storage tanks (USTs), and two small quantity generators of regulated hazardous wastes. However, there are currently no reported environmental violations at these facilities. Review of available information through the 45th SW Installation Restoration Program (IRP) and an ASTM Radius Map indicates that there is no evidence of contamination at South MFH neither from on-site contamination nor from contaminant migration from adjacent properties. Confirmation of uncontaminated groundwater conditions at the western entrance to South Housing was provided in a November 2000 groundwater investigation and report prepared for 45 CES/CEV

by Sigmatech. This Sigmatech report is included in this supplement as a new Appendix 12 to the 1998 EBS.

Conclusions

Based on the findings of this EBS, the property will be defined as falling into one of the following contamination level categories as defined in AFI 32-7066 and modified by the HQ USAF/ILEV correspondence of 09 FEB 1999, entitled, Interim Use of Environmental Baseline Survey (EBS) Property Categorization Codes.

Review of all pertinent historic and recent records, reports, and other documentation, as well as visual inspections of the property, indicate that the subject site has no documented history of hazardous material/waste and/or petroleum product release or disposal. Based on review of IRP documentation, the EDR-Radius Map, and the findings of this EBS and supplement, it is concluded that the subject property is classified as a contamination level **Category 1** property as defined in AFI 32-7066, amended by the HQ USAF/ILEV correspondence dated 09 FEB 1999, and Section 1.0 of this EBS.

Storage of petroleum products in one or more USTs has occurred continuously from 1959 through the present time. Storage of petroleum products occurs in aboveground storage tanks (ASTs) and formerly occurred in two USTs in South MFH. The two USTs were replaced with vaulted ASTs by the Air Force in 1999. Both former UST sites on the subject property (Facilities 3655 and 3659) showed no signs of contamination when these tanks were removed on June 10, 1999 and confirmation samples were collected and analyzed.

CATEGORY 1:

Areas where no release or disposal of hazardous or petroleum substances has occurred (including no migration of these substances from adjacent areas).

CATEGORY 2:

Areas where only release or disposal of petroleum substances has occurred.

CATEGORY 3:

Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require removal or remedial responses.

CATEGORY 4:

Areas where release, disposal, and/or migration of hazardous substances has occurred, all removal or remedial action has been taken.

CATEGORY 5:

Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial (actions) are underway, but not yet taken.

CATEGORY 6:

Areas where release, disposal, and/or migration of hazardous substances has occurred, but remedial actions have not been implemented.

CATEGORY 7:

Areas that are not evaluated or require additional evaluation.

Applicable Regulatory Compliance Issues

All future activities undertaken by the recipient at the site are subject to all applicable Federal, State, local and Department of Defense/Air Force regulations. Compliance issues associated with the intended use/transfer of the subject site may include but not be limited to the following:

- ACM abatement/reporting
- LBP exposure/abatement and Title X disclosure
- 45th SW Policy 98-21, Exterior Lighting Policy, dated 31 Mar 98
- Section 7 Consultation (Endangered Species Act of 1973, as amended)
- State of Florida Wildlife Code (Protection of State-listed species of concern)
- Abandonment of wells under FAC 40c-2

Recommendations

Based on the findings/conclusions of this EBS and supporting documentation, it is recommended that the out-grant/privatization of the subject property proceed as proposed. Although no further investigation of the environmental condition of the property is required to proceed with the real property transaction, additional actions regarding notification of health, occupational or safety risks such as the presence of ACM and LBP are required.

The following actions are recommended:

- Disclose the presence of ACM and provide ACM survey data
- Disclose the presence of LBP per Title X and provide LBP survey data
- Provide the information in the Water System Study, PAFB dated July 1998
- Provide data on condition and use of wells and requirements for permitting of wells to be used in abandonment of inactive wells
- Provide data of the potential for presence of threatened and endangered species

Property Disclosures

This EBS identifies substances of concern including ACM and LBP associated with structures at South MFH. Other items of concern include the drinking water quality, the condition of the wells, and the potential presence of threatened and or endangered species on the subject property. Although these factors are not used in making property category determinations, they are applicable to the proposed real property transaction and should be disclosed to the receiving party.

1.0 PURPOSE OF ENVIRONMENTAL BASELINE SURVEY

No changes made, refer to the 12/98 EBS.

1.1 Boundaries of the Property and Survey Area

No changes made, refer to the 12/98 EBS.

2.0 SURVEY METHODOLOGY

No changes made, refer to the 12/98 EBS.

2.1 Approach and Rationale

No changes made, refer to the 12/98 EBS.

2.1.1 Summary of Documents Reviewed

No changes made, refer to the 12/98 EBS.

2.1.2 Property Inspections

Visual inspections of the subject property were completed during the week of September 28, 1998 and during the week of October 30, 2000 by the Vista Technologies Inc. staff from the Environmental Support Contract (ESC) Indefinite Delivery Indefinite Quantity (IDIQ) office in Cocoa Beach, FL. The scope of this inspection included a visual review of the property inside the boundary perimeter fence and adjacent property accessible to the observers. All 550 buildings (containing 999 living units) and other facilities such as the Community Center, Youth Center, Chapel, Fire Station, water tower, potable water pumping station, sanitary sewer lift stations, as well as, ball fields and playground areas within the subject area were inspected during the original 1998 site visit and portions of the subject area were again inspected in 2000.

2.1.3 Personal Interviews

The following individuals were contacted and questioned to obtain information regarding the previous and current land use and/or environmental condition of the subject property:

Ed Worth	45 CES/CEVR
Larry Smith	45CES/CEVC
Wesley Westphal	45CES/CEVP
Bill Riggs	45CES/CECB
Ed Carver	45CES/CEVC
Pat Giniewski	45CES/CEVC
Ron Bond	45CES/CEVR
Rene DeWitt	45CES/CEH
Linda O'Dell	45CES/CEH
David D'Amore	45CES/CERR

Of the original 1998 EBS interviewees listed above, all reasonable efforts were made to contact those who were still in the area. The consensus of the recalls to these individuals was that no significant environmental changes have taken place at the subject property in the past two years, to the best of their knowledge, with the exception of the demolition of some housing units. One interviewee did mention that the City of Melbourne water tower, located on the subject Air Force property is scheduled to be repainted in the near future and that care needs to be taken to ensure that the current paint removed be properly contained. Additionally, Mr. Michael Bowers, 45 CES/CEVC. was contacted in regard to the current status of petroleum product storage tanks on the subject property.

Relative to the Scorpion Court elevated water tower and Facility 3650 the following individuals were interviewed:

Judy Brown	Harbor City Volunteer Ambulance Squad
Martha Campbell	City of Melbourne, Florida

2.1.4 Sampling and Analysis

Engineering Science, Inc. completed the Air Force IRP Preliminary Assessment Report for ESMC Facilities in 1992. This report documented that there was no need for further investigation in the South MFH area.

AJT & Associates completed asbestos sampling of the houses in the subject area in 1992. Copies of these surveys are available in the 45th Civil Engineering Environmental Flight Office at PAFB. PEER Consultants completed asbestos

surveys of other facilities in the South MFH area in 1992. Excerpts from the summary of this report pertaining to the South MFH area are provided in Appendix 2 of the 1998 EBS. Paint on the houses in South MFH was analyzed for lead content using X-Ray Fluorescence equipment in 1988, 1995, and 1996 (Appendix 3). No sampling for radon has been completed or is proposed for this area based on historical information from the 45th Space Wing's Environmental Compliance Assessment and Management Program (ECAMP).

The potable water supply is tested every other week for bacteria, quarterly for trihalomethanes and annually for lead and copper by the PAFB Bioenvironmental Office, 45AMDS/SGPB. An analysis of the potable water system was completed in July 1998 (Appendix 4).

Sigmatech installed and sampled three temporary monitoring wells near the western entrance to the PAFB South Housing area in October 2000. The purpose of this sampling was to confirm or deny the migration of petroleum contamination from leaking underground storage tanks at a gasoline station across South Patrick Drive from the subject property. Conclusions from this sampling report indicate that no petroleum impacts to South Housing groundwater above State Cleanup Target Levels are present.

3.0 FINDINGS FOR THE SUBJECT PROPERTY

No changes made, refer to the 12/98 EBS.

3.1 History and Current Use

No changes made, refer to the 12/98 EBS.

3.2 Environmental Setting

No changes made, refer to the 12/98 EBS.

3.2.1 Natural Resources

No changes made, refer to the 12/98 EBS.

3.2.2. Threatened and Endangered Species

No changes made, refer to the 12/98 EBS.

3.3 Facilities

No changes made, refer to the 12/98 EBS.

3.4 Hazardous Substances

No changes made, refer to the 12/98 EBS.

3.4.1 Hazardous Materials and Petroleum Products

Storage and use of hazardous materials and petroleum products were common during the construction and operation of the South MFH. A complete list of

materials maintained at this site was not available. Items known or suspected to be associated with housing construction and operations include, but are not limited to, the following:

- Diesel Fuel
- RP-1 (kerosene)
- Hydraulic Fluid
- Petroleum Oils and Lubricants (POL)
- Paints containing lead and solvents
- Asbestos Containing Materials
- Chlorine Gas

Currently, storage of petroleum products exists in aboveground storage tanks (ASTs). Details are provided in Section 3.6 below.

3.4.2 Hazardous and Petroleum Wastes

No changes made, refer to the 12/98 EBS.

3.5 Installation Restoration Program Contamination

Engineering Science, Inc. completed the Air Force IRP Preliminary Assessment Report for ESMC Facilities in 1992. This report documented no evidence of contamination and therefore no need for further investigation in the South MFH area. As part of this updated EBS, the originally contacted interviewees were recalled to verify and update the environmental condition of PAFB South Housing since 1998. One of the interviewees contacted is assigned to 45 CES/CEVR and knows of no more recent investigations of the subject property that the one cited above.

3.6 Storage Tanks

Currently, storage of petroleum products exists in ASTs in South MFH. A 250-gallon, unregulated, diesel fuel (DF) AST located at the Capehart Lift Station, which was installed in 1958, was replaced by PAFB with a vaulted AST in Fiscal Year (FY) 99. A 500-gallon, unregulated, DF AST located at the Youth Center (Photo 4) was originally installed in 1966, replacing a UST. PAFB conducted a Site Assessment Report (SAR) in 1988 that resulted in a determination of no further action status by the Florida Department of Environmental Protection (FDEP). No contamination was detected at this site. A 1,000-gallon, unregulated, DF UST at the Chapel was installed in 1963 (Photo 5). This UST was replaced with a 500-gallon, vaulted, AST by PAFB in June 1999. A 1,000-gallon, unregulated, DF UST located at the Commissary was installed in 1959. This UST was replaced with a 500-gallon, vaulted, AST by PAFB in June 1999.

3.7 Oil Water Separators

No changes made, refer to the 12/98 EBS.

3.8 Pesticides

No changes made, refer to the 12/98 EBS.

3.9 Medical or Biohazardous Waste

No changes made, refer to the 12/98 EBS.

3.10 Ordnance

No changes made, refer to the 12/98 EBS.

3.11 Radioactive Waste Storage

No changes made, refer to the 12/98 EBS.

3.12 Solid Waste

No changes made, refer to the 12/98 EBS.

3.13 Groundwater

No changes made, refer to the 12/98 EBS.

3.14 Wastewater Treatment, Collection, and Discharge]

The area immediately south of PAFB, including South MFH, is serviced by Brevard County's South Beaches Water Reclamation Facility in Melbourne Beach. However, the wastewater from South MFH is pumped to the South PAFB pumping station. All collection and transmission lines from South MFH to the South PAFB pumping station are maintained by PAFB. At the South PAFB pumping station, the wastewater is combined with PAFB wastewater and pumped north to the Cocoa Beach Water Reclamation Facility (CBWRF). PAFB currently pays a lump sum negotiated fee for plant capacity not to exceed approximately 1.3 mgd. PAFB is currently discharging approximately 0.5 to 0.6 mgd. Flow from South MFH is not metered into the South PAFB pumping station but it is estimated that as much as 50% of PAFB's current flow is from South MFH. Wastewater from PAFB and Cocoa Beach is reclaimed and distributed as re-use water for irrigation. PAFB's contract with CBWRF includes usage of re-use water based on availability. This water is used primarily to irrigate the PAFB golf course (0.550 mgd), as well as, North and Central MFH. There have already been instances of water shortages during the dry season that have prompted CBWRF to restrict, and in some cases, cease distribution of re-use water to PAFB, impacting golf course operations. Eliminating South MFH waster flow to CBWRF may impact future availability of re-use water. Impact fees would be required for connections to the South Beaches Plant. There are no known or abandoned septic tank/drainfield systems on the property. A review of PAFB

spill reports through the present time does not indicate a release of wastewaters in the subject area, confirming the conclusions of the 1998 EBS.

3.15 Drinking Water Quality

No changes made, refer to the 12/98 EBS.

3.16 Asbestos

No changes made, refer to the 12/98 EBS.

3.17 Polychlorinated Biphenyl (PCB)

No changes made, refer to the 12/98 EBS.

3.18 Radon

No changes made, refer to the 12/98 EBS.

3.19 Lead-Based Paint (LBP)

No changes made, refer to the 12/98 EBS.

4.0 FINDINGS FOR ADJACENT PROPERTIES

No changes made, refer to the 12/98 EBS.

4.1 Land Use

No changes made, refer to the 12/98 EBS.

4.2 Findings

Review of available information through the 45th SW IRP and the EDR-Radius Map (Appendix 9) indicates that there is no evidence of contamination at South MFH from onsite contamination or due to contaminant migration from adjacent contaminated properties. Groundwater sampling and analysis performed in October 2000 confirmed that migration of petroleum contaminants from an adjacent LUST has not occurred.

The previously mentioned Sigmatech groundwater report from October 2000 Conclusions section states that: "Analytical results of the groundwater samples collected from three temporary wells located at the western entrance to South Housing, revealed no petroleum impacts to groundwater above the State groundwater Cleanup Target Levels. The groundwater analytical results from the 27 October 2000 sample event are summarized in Table 1. Three chemicals were detected in the groundwater sample from SHTMW-1 and SHTMW-2. The detected chemicals were Dibenzo(a,h)anthracene at a concentration of 0.14 ug/l, Indeno(1,2,3-cd)pyrene at a concentration of 0.07 ug/l, and lead at a maximum concentration of 12 ug/l. The allowable State groundwater CTL for these chemicals is 0.2 ug/l, 0.2 ug/l, and 15 ug/l, respectively.

The groundwater flow on the barrier island is generally toward the Banana River (west); therefore, it would be expected that any petroleum from LUSTs would move west from the Amoco gas station toward the Banana River.”

5.0 APPLICABLE REGULATORY COMPLIANCE ISSUES

No changes made, refer to the 12/98 EBS.

6.0 CONCLUSIONS

No changes made, refer to the 12/98 EBS.

6.1 Facility Findings

Review of all pertinent historic and recent records, reports, and other documentation as identified in Section 2.1.1 of this EBS, as well as visual inspection of the property, indicate that the subject site has not had a history of hazardous material/waste and petroleum product storage, accidental release or disposal. Based on review of IRP documentation, the EDR-Radius Map, and the findings of this EBS, it is concluded that the subject property is classified as a contamination level Category 1 property as previously discussed in AFI 32-7066 and section 1.0 of this EBS.

7.0 RECOMMENDATIONS

No changes made, refer to the 12/98 EBS.

7.1 Property Disclosures

No changes made, refer to the 12/98 EBS.

8.0 CERTIFICATIONS

No changes made, refer to the 12/98 EBS.

8.1 Certification of the Environmental Baseline Survey for South Military Family Housing, also known as Capehart Housing, Patrick Air Force Base, Florida

Vista Technologies conducted this Environmental Baseline Survey (EBS) on South Military Housing, also known as Capehart Housing, Patrick Air Force Base, Florida, on behalf of the 45th Space Wing. Records were reviewed, original interviewees recontacted, and current visual site inspections of the subject property were conducted. The information contained in this EBS is based primarily on records made available pertaining to the period of Air Force occupation of the subject property, the EDR-Radius Map, and on the preparer's professional knowledge. The information contained within is correct and current as of January 2001.

Certified By: _____ **Date:** _____
E. ALEXANDER STOKES III, GS-14
Chief, Environmental Flight

Approved by: _____ **Date:** _____
THOMAS C. RUSSELL, P.E., GM-14
Deputy, Range/Base Civil Engineer

8.2 Certification of PCB Clearance

No changes made, refer to the 12/98 EBS.

9.0 ACRONYMS AND ABBREVIATIONS

No changes made, refer to the 12/98 EBS.

APPENDIX 7

The December 1998 South Housing EBS included an Appendix 7 that provided an EBS waiver for the Elevated Water Storage Tank located on approximately 1.18 acres of PAFB land. The USAF has provided an easement, through DACA 17-2-68-4, dated December 13, 1967, to the City of Melbourne, Florida to construct, operate, inspect, and maintain this one million gallon, torospherical type, welded steel tank. The easement is granted for five-year periods with renewal options.

Visual site inspections, personal interviews, and record searches were conducted by VISTA in December 2000 and January 2001 to confirm or deny the past storage, release, or disposal of hazardous substances or petroleum products on the water tower site at 260 Scorpion Court, Satellite Beach, Florida. The Chlorine Residual Booster Station associated with this tank and the tank property records reviewed from PAFB and City of Melbourne, Florida reveal no evidence of the release or disposal of hazardous substances or petroleum products.

The subject water tank is currently being repainted, based upon an independent inspection of the facility performed for the City of Melbourne by Tank Engineering and Management (TEAM) Consultants, Inc. of Tampa, Florida. Conclusions made in the TEAM inspection report of January 1999 were that the tank was in good overall structural condition, but required repainting in the near future. Figure 1 presents a photograph of the water tank with the paint containment tarp in place. Also included in the TEAM report were analyses of the percentage of lead by weight of the existing tank coating. These analyses showed that the interior tank paint was < 0.0050% lead (lowest detectable level), the interior riser coating contained 7.2% lead, and that the exterior tank paint contained 2.6% lead. The TEAM report concluded that, based on these lead percentages, the lead levels in the tank exterior and riser coatings exceed OSHA allowable levels and that compliance with OSHA requirements would be required by the painting contractor. RCRA metals and TCLP analyses were not performed at this time.

The repainting of the water tank is being performed by Worth Contracting of Jacksonville, Florida and is currently in progress. The Florida Department of Environmental Protection (FDEP) performed an inspection of the blasting and painting operations at this site on December 18, 2000. The FDEP inspection noted concerns relative to State and RCRA hazardous waste regulations, which have been addressed by the painting contractor, their environmental consultant, and the City of Melbourne in a December 29, 2000 City of Melbourne correspondence to the FDEP. Applicable portions of this correspondence are attached to this updated Appendix 7 of the 12/98 South Housing EBS.



FIGURE 1 - SOUTH HOUSING ELEVATED WATER STORAGE TANK, WITH CONTAINMENT TARP, 12/27/00

APPENDIX 8

The December 1998 South Housing EBS also included an Appendix 8, which provided for an EBS Waiver for the South Housing Fire Station, Facility Number 3650, constructed in 1959. PAFB granted a Right-of-Entry and a License to the Harbor City Volunteer Ambulance Squad (HCVAS) in 1997 for use of this Fire Station. These documents allowed the HCVAS to provide 24-hour-per-day advanced cardiac life support ambulance service to PAFB areas.

Visual site inspections, personal interviews, and record searches were conducted by VISTA in December 2000 and January 2001 to confirm or deny the past storage, release, or disposal of hazardous substances or petroleum products at Facility 3650.

PAFB real property records revealed no evidence of the release or disposal of hazardous substances or petroleum products. HCVAS records were unavailable for review, as this organization ceased operations in March 2000. The Fire Station is currently unoccupied and is believed to contain Asbestos Containing Materials (ACM). No readily observable signs of environmental concerns or damage were noted during recent visual site inspections. Prior comments indicated that it was believed that the HCVAS had performed maintenance activities on their vehicles in this facility, involving the use of petroleum products. One of the few remaining HCVAS volunteers was located, interviewed, and reported that ambulance oil changes, other routine maintenance activities, and vehicle repairs were performed in a separate HCVAS facility located in Melbourne, Florida.

No HCVAS records of petroleum product or hazardous substance storage, use, release, or disposal are known to exist for Facility 3650.

Figure 1 presents a current photograph of Facility 3650.



FIGURE 1 – SOUTH HOUSING FIRE STATION, 12/27/00

APPENDIX 12

**GROUNDWATER SAMPLING REPORT AT SOUTH HOUSING AREA,
NOVEMBER 2000**