DEPARTMENT OF THE NAVY

BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE, NORTHEAST 4911 SOUTH BROAD STREET PHILADELPHIA, PA 19112-1303

> 5090 BPMO NE/WL Ser 12-095 July 16, 2012

Mr. Dennis Orenshaw
Remedial Project Manager
U.S. Environmental Protection Agency
Region III (3HS11)
1650 Arch Street
Philadelphia, PA 19103-2029

Ms. Margaret Pollich
Project Officer
Environmental Cleanup Program
PA Department of Environmental Protection
2 East Main Street
Norristown, PA 19401-4915

Dear Mr. Orenshaw and Ms. Pollich:

Enclosed is the signed Finding of Suitability to Transfer (FOST) for Naval Air Station Joint Reserve Base - Willow Grove Shenandoah Woods Housing Complex located in Warminster, PA.

Should you require any further information concerning this subject, please contact Willie Lin at (215) 897-4904.

Sincerely,

DAVID DROZD Director

Enclosure:

Signed FOST for Shenandoah Woods Housing Complex

Copy to:

EPA Region III (L. Cunningham)
Horsham Township Authority (T. Ames)
Aldie Foundation, Inc. (V. Deon)
Navy Caretaker Site Office (M. Schy)
Horsham Township Library

FINDING OF SUITABILITY TO TRANSFER

NAVAL AIR STATION JOINT RESERVE BASE – WILLOW GROVE SHENANDOAH WOODS HOUSING COMPLEX WARMINSTER, PENNSYLVANIA (APPROXIMATELY 55.12 ACRES)



Prepared by:

Department of the Navy
Base Realignment and Closure
Program Management Office Northeast
4911 S. Broad Street
Philadelphia, Pennsylvania 19112

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1.0 PURPOSE

This Finding of Suitability to Transfer (FOST) summarizes how the requirements and notifications for hazardous substances, petroleum products and other regulated material on the property have been satisfied, and documents my determination, as the responsible Department of Defense (DoD) component official, that certain real property and associated improvements known as Shenandoah Woods Housing Complex, Warminster, Pennsylvania (hereafter Subject Property) is environmentally suitable for deed transfer. This real property is associated with the former Naval Air Station Joint Reserve Base (NASJRB), Willow Grove, Pennsylvania. This FOST corrects reference errors contained in the March 2012 FOST.

2.0 PROPERTY DESCRIPTION

The Subject Property is located in Warminster, Pennsylvania (Exhibit B). Navy-owned property which is the subject of this FOST consists of approximately 55.12 acres of land. The Subject Property includes two adjoining parcels: Parcel 1 (51.23 acres) developed with the Shenandoah Woods Housing complex, and Parcel 2 (3.89 acres) improved with a ball field. Improvements on Parcel 1 include 40 buildings comprised of four, five, or six unit, two-story townhouse apartments built in 1974. There are 149 three-bedroom units approximately 1,262 square feet in size and 50 four-bedroom units approximately 1,373 square feet in size. The townhomes are standard wood frame construction with concrete slab on grade foundations. All of the units were renovated during 1994 and 1995. Parcel 1 is also improved with a building for the on-site maintenance contractor constructed in 1975, and several recreation areas. Parcel 2 contains only a ball field.

Prior to 1943, the Subject Property consisted of farmland and woods. The Naval Air Material Unit (NAMU), established in 1943 in Warminster, Pennsylvania, is where the United States Navy (Navy) coordinated its activities with the National Defense Research Committee and the Special Weapons Experimental Tactical Test Unit. The NAMU Warminster was designated the Naval Air Development Station (NADS) Warminster, prior to being changed to the Naval Air Development Center (NADC) Warminster in 1949 (Navy, 1999). During the period of development and expansion of NADC Warminster (1940s to 1960s), the land comprising the Subject Property remained undeveloped. Farming uses ceased around 1960. The Subject Property was then maintained as a grassy buffer associated with the airfield at NADC Warminster until the Shenandoah Woods housing units were constructed in 1974.

The NADC Warminster was renamed the Naval Air Warfare Center (NAWC) Warminster in January 1993; however, NAWC was closed on 31 March 1997 under the DoD BRAC II program. At that time, ownership of the housing area on the NAWC Warminster property was transferred to NASJRB Willow Grove located in nearby Horsham Township, Montgomery County, Pennsylvania.

Aerial photographs dated at intervals between the 1930s and the present were obtained for the Subject Property from Environmental Data Resources, Inc. during the CERFA review. The 1938 photograph indicated that the Subject Property consisted entirely of farmland. The subsequent photographs do not reveal land uses on the Subject Property other than agriculture and residential uses (TtNUS, 2007).

Parcels surrounding the Subject Property to the south, east and west are residential areas consisting of single family homes. Adjoining the Subject Property to the north is the former NAWC Warminster property that was transferred to the Town of Warminster which redeveloped and maintains the land as a pedestrian park.

The Local Redevelopment Authority for the subject property is the Horsham Township Authority for NASJRB Willow Grove (HLRA). On May 18, 2011, the HLRA for NASJRB Willow Grove submitted an Amendment and Supplement to the Redevelopment Plan and Homeless Assistance Submission dated August 20, 2010 for the surplus property at Shenandoah Woods and Jacksonville Road housing areas (the Plan) (HLRA, 2011a). On July 21, 2011, the Department of Housing and Urban Development (HUD) approved the Plan for the Shenandoah Woods Housing Area as follows: (1) HLRA would acquire a portion of the property (the 199 existing townhouse units situated on approximately 29 acres) through a negotiated sale with the Department of the Navy to create a new residential community; (2) Twenty (20) of the existing townhouse units to be conveyed to the Aldie Foundation; and (3) the remaining 26 acres will be conveyed to Warminster Township for parks and recreation uses via a Public Benefit Conveyance under the Department of the Interior's Federal Lands to Parks Program.

An executed "Legally Binding Agreement" among Horsham Township Authority for NAS-JRB Willow Grove, Warminster Township, and Aldie Foundation, Inc. (HLRA, 2011b) stated that after conveyance of the Shenandoah Woods Property to the HLRA, the HLRA will either implement the Aldie Foundation "Notice of Intent" (NOI) to serve homeless persons for a period of thirty years or

pay the Aldie Foundation (Provider) a fixed sum of three hundred fifty thousand dollars as an accommodation to allow the Aldie Foundation to provide addiction treatment services for homeless individuals at another location.

The Aldie Foundation NOI states that they will acquire five buildings containing 20 residential housing units at Shenandoah Woods to accommodate an average of 10 families and 16 individuals, a full time resident advisor/supervisor, and clinical support programming. This "Passage Program" will provide long term family transitional housing as a final step toward an individual's and family's road to recovery from chemical dependency. The 20 units to be conveyed were identified in the NOI.

The Warminster Township NOI includes transfer of 26 acres of wooded land and conservation district as well as five buildings in the southwest corner of the Subject Property. Warminster Township plans to demolish these five buildings to develop a water feature/detention pond. The other uses for this 26 acre land area include open space, parks, and storm water management areas (HLRA, 2011a).

The remaining 29 acres, minus the buildings to be conveyed to the Aldie Foundation, will be developed for single family detached and two family semi-detached homes. Forty seven existing townhomes will be demolished to accommodate 25 new single family detached homes. Existing building footings and foundations, selected sidewalks, curbs, and roads will be reused. Thirty nine existing townhomes will be demolished to create 88 semi-detached homes. Existing building footings, foundations, sidewalks, curbing, and all roads will be reused in this part of the development (HLRA, 2011a).

Exhibit C is the legal description and survey of the Subject Property. Exhibit D contains the interview forms from the 25 March 2009 site visit associated with this FOST, building floor plans, and the photographs taken during the March 2009 site visit.

3.0 SUMMARY OF ENVIRONMENTAL REQUIREMENTS AND NOTIFICATION

All available information concerning the past storage, release, or disposal of hazardous substances and/or petroleum products on the Subject Property, as collected through record searches, historic aerial photographs, personnel interviews, and on-site visual inspections, is

contained in the environmental reports cited in Exhibit A. The following sections summarize the findings as they related to the Subject Property; the actions and notification requirements associated with the past storage, release, or disposal of hazardous substances and/or petroleum products or other regulated materials; and, whether transfer restrictions are warranted to ensure protection of human health and the environment and the environmental restoration process.

A. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

<u>CERCLA Responses</u>: The NAWC Warminster was placed on the National Priorities List (NPL) in 1989. NAWC Warminster was subsequently closed under BRAC, and the custody and control of the housing area was transferred to NASJRB Willow Grove. All identified NAWC Warminster source areas have undergone Remedial Investigations (RI) to characterize potential sources of contamination. These investigation activities were completed as part of the Installation Restoration Program (IRP). One NAWC Warminster IRP site (Site 5) overlaps with the west corner of the Subject Property encompassing buildings numbered 401, 402 and 403, along Skyhawk Drive, paved roadways and walkways, and several housing unit lawns (See Exhibit B).

Based on observations during the RI, buried waste materials at Site 5 are in place at 3.5 to 8 feet below the ground surface. Wastes included ash, wood, paper, tree limbs, roots, brick fragments, wire, charcoal, and scrap metal in a matrix of fill material. The wastes appeared to be scattered within the subsurface area of disposal, suggesting that the wastes were either not disposed in linear trenches or that the contents of the trenches had been moved since placement. There are unconfirmed reports that some waste was encountered during construction of the housing area and removed. Also located adjacent to the Subject Property are two IRP sites (Site 6/7). This parcel was conveyed to the Federal Lands Reuse Authority (FLRA) in October 2000. Site 6/7 originally included trenches that were used as disposal areas for demolition wastes, paints, solvents, scrap metal, aircraft parts, and asphalt from the former NAWC Warminster. Groundwater within Area B is defined as groundwater potentially impacted by contamination attributable to Sites 5, 6 and 7 which are three of eight sites at the former NAWC Warminster reported by the Navy in 1980 to have been used for disposal of wastes which may contain

CERCLA hazardous substances. Exhibit B contains a figure showing the location of Sites 5, 6, and 7 relative to the Subject Property.

Thirty-six surface soil and 55 subsurface soil samples were taken in the area of Site 5 as part of the RI. Low levels of the volatile organic compound (VOC) trichloroethylene (TCE) were found in 15% of surface soil samples. In surface soils, copper, lead, vanadium, as well as benzo(a)pyrene in two samples and the PCB Aroclor-1254 in three samples were detected above the Risk Based Concentrations (RBCs) protective of residential land use. Arsenic, copper, lead, and vanadium exceeded their respective RBCs at one or more subsurface soil sample locations. Also, Aroclor-1254 (at two locations) and several PAHs (at one location) exceeded residential RBCs indicating that a release may have occurred at some point in time, but quantities are unknown.

The RI Reports for these IR sites, which included the western portion of the Subject Property, identified Area B or Operable Unit 1B (OU-1B, groundwater) (Navy, 2000a) and Operable Unit 10 (OU-10, soil) (Navy, 2000b) as areas of concern and included an assessment of any risk to human health and the environment. Risks posed to human health by surface and subsurface soils at Site 5, as well as Area B surface water and sediment, were found to be within the acceptable risk range for lifetime residential exposure scenarios. The Navy, in conjunction with the United States Environmental Protection Agency (USEPA) and Pennsylvania Department of Environmental Protection (PADEP), issued a No Further Action Record of Decision (ROD) for OU-1B (groundwater) in August 2000 and a No Further Action ROD for OU-10 (soil) in September 2000, indicating that no further action is necessary at either OU to be protective of human health and the environment.

In 2007, additional sediment samples were collected, as part of ongoing NAWC Warminster IRP monitoring activities of OU-10 to confirm there are no impacts on the sediments from Area B as required in the No Further Action ROD (Navy, 2000b). Samples were collected to expand on previous characterization of the creek and to determine whether additional sources of contamination were present. The report concluded that the overall pattern of contaminant distribution and concentrations suggests that Site 5 impacts on sediment are minimal. USEPA and PADEP concurrence

was received and no revisions to the ROD for OU-10 sediments were recommended based on the 2007 sediment sampling results (TtNUS, 2007).

<u>CERCLA Hazardous Substance Notice</u>: In accordance with Title 42, U.S.C., Section 9620 (h)(3)(A)(i) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), all deeds transferring federal property must provide notice, based on a complete search of agency files, of any hazardous substance stored for one year or more, known to have been released or disposed of, in excess of those reportable quantities specified under 40 CFR 373, and all response actions taken to date to address any such releases or disposals.

There are no records indicating that hazardous substances were used or stored in excess of their threshold quantities on the Subject Property. However, at the Site 5 landfill area, wastes consisting of ash, wood, glass, cardboard, paper, tree limbs, roots, brick fragments, wire, charcoal, and scrap metal were disposed in a matrix of fill material at 3.5 to 8 feet below the ground surface. Thirty-six surface soil and 55 subsurface soil samples were taken in the area of Site 5 and low levels of the volatile organic compound (VOC) trichloroethylene (TCE) as well as benzo(a)pyrene in two samples and the PCB Aroclor-1254 in three samples were detected indicating that a release may have occurred at some point in time, but quantities are unknown.

The hazardous substance notice for the Subject Property is provided in Exhibit E.

In addition, during the 25 March 2009 FOST site visit, Mr. John Floyd and Mr. Ed Strolsky mentioned the presence of what was thought to have been discarded drums buried near 403 Skyhawk Drive beneath the soil adjacent to the asphalt cul de sac and the concrete curbing. The suspected drums were discovered near the ground surface during an emergency action to remove the curbing to facilitate drainage during Hurricane Floyd. There was no visible sign of the suspected drums during the 25 March 2009 FOST site visit.

During the 29 April 2009 follow up investigation, a pipe locator was used to detect subsurface metal and excavations were performed by hand using shovels in the vicinity of 403 Skyhawk Drive. A photo-ionization device was used to evaluate the potential for

volatile organic compounds (VOC) in the vicinity of the excavations however no readings above background were detected. A large metal object was encountered a few inches beneath the surface. Upon further excavation it was not apparent whether this was a crushed drum or some other large crushed metal object. The metal object was removed from the excavation. Samples were taken from the soil surrounding the object as well as from a solid tar like substance found on the bottom of the object. Sampling analysis revealed that only the tar like substance and one soil sample had semi-volatile organic compounds (SVOC) above the detection limits. The location of the drum coincides with samples previously collected during the Remedial Investigation (RI) of Site 5 which did not exceed action levels. The excavations were backfilled after samples were collected and all debris collected was properly disposed. The debris encountered during the investigation did not indicate the presence of contamination in this area.

<u>CERCLA Covenant</u>: In accordance with CERCLA Section 120(h)(3)(A)(ii), the deed transferring the Subject Property shall contain a covenant warranting that all remedial action necessary to protect human health and the environment with respect to any hazardous substances remaining on the property have been taken before the date of transfer, and any additional remedial action found to be necessary after the date of transfer shall be conducted by the United States.

<u>CERCLA Access Clause</u>: In accordance with CERCLA Section 120(h)(3)(A)(iii), the deed transferring the Subject Property shall contain a clause granting to the United States, its officers, agents, employees, contractors, and subcontractors the right to enter upon the transferred property in any case in which remedial action or corrective action is found to be necessary after the date of transfer or such access is necessary to carry out a response action or corrective action on an adjoining property.

B. Resource Conservation and Recovery Act (RCRA)

Based on available information reviewed for this FOST, there are no records of any hazardous waste generation activity or hazardous waste accumulation or storage activity on the Subject Property, except those noted under Section 3A, above.

C. Presence of Petroleum Products and Derivatives

There are no records of any releases or disposal of petroleum products or their derivatives on the Subject Property. However, it was documented in the RI that the NAWC Warminster IR site (Site 5) overlapping the Subject Property contained buried ash, wood, paper, tree limbs, roots, brick fragments, asphalt and scrap metal in a matrix of fill material (Navy, 2000b). The exact location of the asphalt is unknown.

D. Underground/Aboveground Storage Tank

There are no records indicating that petroleum or petroleum products were stored in underground or aboveground storage tanks on the Subject Property.

E. Munitions and Explosives of Concern (MEC)

There are no records to indicate there are or have been MEC response actions or ordnance handling, storage, or disposal activities on the Subject Property.

F. Asbestos-Containing Material (ACM)

The Asbestos Management Plan, Shenandoah Woods (Navy, 1996a) states that a October through November 1996 comprehensive ACM survey prepared by the Navy identified ACM in several of the housing units. ACM was present in the flooring materials, sheet rock, and caulking compound. The recommendations called for the removal and replacement of all confirmed ACM identified as moderate to high hazard potential. The housing areas were abated by the housing department and it was determined that no further action was necessary. The NASJRB Willow Grove personnel interviewed during the 25 March 2009 FOST site visit confirmed the abatement. The Shenandoah Woods Housing Condition Assessment (Willow Grove Housing Department, 2005) described the remodeling of the housing units including the removal and replacement of ACM identified during the 1996 inspection. The condition assessment is included in the references reviewed for this decision.

An ACM inspection of the Shenandoah Woods housing area was completed from April 2011 to August 2011. The inspection included a survey of all 199 residential housing units, as well as the storage shed and the mini-mart non-residential structures. A total of 1,622 suspect ACM samples were collected and analyzed from the interiors of the housing units and garages, and from associated exteriors (e.g., roofing material). The presence of ACM was identified in two primary materials present in nearly all of the residences, a black sink undercoating, and adhesive coatings underlying renovated vinyl floor tiles and/or wood parquet floors. The floor adhesive that was identified as an ACM was designated as a hazard (e.g., damaged, friable, and accessible) at eleven locations in ten of the buildings as listed below. The findings of the ACM inspection are summarized in the Asbestos Inspection Summary Report (Michael Baker, 2011a).

| Building Number | Unit Number(s) | Material | Area in Square Feet |
|--------------------|---------------------|--|---------------------------|
| 415 | 607 | Black floor adhesive under parquet flooring material | 4422 |
| 417 | 617 | Black floor adhesive under parquet flooring material | 3721 |
| 421 | 1097, 1101, 1107 | Black floor adhesive under parquet flooring material | 4206 |
| 430 | 1097, 1103, 1105 | Black floor adhesive under vinyl floor tile | 3721 |
| 432 | 1119, 1127 | Black floor adhesive under vinyl floor tile | 2420 |
| 433 | 1131, 1139 | Black floor adhesive under vinyl floor tile | 2420 |
| 434 | 1146 | Black floor adhesive under vinyl floor tile | 1928 |
| 435 | 1134 | Black floor adhesive under vinyl floor tile | 2892 |
| 436 | 1116, 1118, 1120 | Black floor adhesive under vinyl floor tile | 2420 |
| 436 | 1116, 1120 | Black floor adhesive under parquet flooring material | 3721 |
| 437 | 1102 | Black floor adhesive under vinyl floor tile | 32 |

Of the twenty housing units set aside for conveyance to the Aldie Foundation, the 2011 ACM survey identified friable or damaged (hazard) ACM in two of the units, Units 607 and 617. It is likely that ACM in some or all of the remaining units will deteriorate further and become a hazard prior to transfer. Units not conveyed to the Aldie Foundation are planned for renovation or demolition, as specified in the Amendment and Supplement to the Redevelopment Plan and Homeless Assistance Submission (HLRA, 2011a). Abatement of ACM in all housing units, including those with friable and damaged ACM, will be the responsibility of the Transferee.

<u>ACM Hazards Advisory Statement</u>: The ACM hazards advisory is included in Exhibit F of this FOST and will be provided to the transferee for signing prior to transfer.

G. Lead-Based Paint (LBP), Target Housing and Residential Property

The Lead Management Plan, Shenandoah Woods (Navy, 1996b) states that a comprehensive lead paint survey was conducted October through November 1996 and did not identify the presence of lead based paint (LBP) in samples collected from any of the suspect LBP surfaces tested in several housing units. Paint, dust and soil samples analyzed did not have concentrations that exceeded the corresponding action limits.

A lead-based paint inspection and risk assessment was conducted at the Shenandoah Woods housing area from May 2011 to July 2011. The interior and exterior surfaces of 51 representative housing units were tested for LBP using a hand-held X-Ray Fluorescence (XRF) instrument, the Radiation Monitoring Devices (RMD) model LPA-1. Dust wipe samples were collected from window sills and floors in each representative unit and analyzed for lead via flame atomic absorption spectroscopy (AAS). All XRF-analyzed surfaces were negative for LBP. In addition, soil samples were collected from three locations at each inspected residence: from the building drip line, mid-yard, and in the play area. Soil samples were analyzed for lead via flame AAS. Lead was not detected above the positive threshold value in any of the dust wipe or soil samples collected from the Shenandoah Woods Housing property.

<u>LBP Hazards Advisory Statement</u>: The LBP hazards advisory, is included in Exhibit F of this FOST and will be provided to the transferee for signing prior to transfer.

H. Polychlorinated Biphenyls (PCBs)

All transformers within the Subject Property are Navy-owned and are considered non-PCB containing transformers, i.e. containing less than 50 parts per million PCB. Sampling of the main pad mounted transformer was conducted in 1998. The samples collected indicated that PCBs were found to be less than 1 part per million (AMEC, 2006).

The records indicate PCBs were never stored, released or disposed of on the Subject Property.

I. Environmental Restrictions, Provisions, and Conditions

Based on the current environmental condition of the property as described in this FOST, the following restrictions, provisions and conditions, as a minimum, shall be included in the transfer deed for the Subject Property to ensure the protection of human health and the environment and to prevent the interruption of any environmental restoration activities to be conducted by the Navy, if required.

- 1. <u>Notice Of Hazardous Substance Activity in accordance with 42 U.S.C.</u> §9620(h)(3)(A)(i): Exhibit "_" to this Quitclaim Deed provides information as to those hazardous substances which it is known, based upon GOVERNMENT's complete search of its files, were stored for one (1) year or more, or were released or disposed of on the PROPERTY. The information contained in Exhibit "_" is required under 42 U.S.C. § 9620(h)(3)(A)(i), and implementing EPA regulations at Title 40, Code of Federal Regulations, Part 373.
- 2. <u>CERCLA Covenants</u>: Pursuant to Section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. Section 9620(h)(3)(A)(ii) and (B)), the United States warrants that:
- (a) All remedial action necessary to protect human health and the environment with respect to any hazardous substances identified pursuant to Section 120(h)(3)(A)(i)(I) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 remaining on the PROPERTY has been taken before the date of this deed, and
- (b) Any additional remedial action found to be necessary after the date of this deed shall be performed by the United States.
- 3. Reservation of Access as Required by 42 U.S.C. §9620(h)(3)(A)(iii): The United States retains and reserves a perpetual and assignable easement and right of access on,

over, and through the PROPERTY, to enter upon the PROPERTY in any case in which an environmental response or corrective action is found to be necessary on the part of the United States, without regard to whether such environmental response or corrective action is on the PROPERTY or on adjoining nearby lands. Such easement and right of access includes, without limitation, the right to perform any environmental investigation, survey, monitoring, sampling, testing, drilling, boring, coring, test pitting, installing monitoring or pumping wells or other treatment facilities, response action, corrective action, or any other action necessary for the United States to meet its responsibilities under applicable laws and as provided for in this instrument. Such easement and right of access shall be binding on the GRANTEE and its successors and assigns and shall run with the land.

In exercising such easement and right of access, the United States shall provide the GRANTEE or its successors or assigns, as the case may be, with reasonable notice of its intent to enter upon the PROPERTY and exercise its rights under this clause, which notice may be severely curtailed or even eliminated in emergency situations. The United States shall use reasonable means to avoid and to minimize interference with the GRANTEE's and the GRANTEE's successors' and assigns' quiet enjoyment of the PROPERTY. At the completion of work, the work site shall be reasonably restored. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the PROPERTY at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the GRANTEE, nor its successor and assigns, for the exercise of the easement and right of access hereby retained by the United States.

In exercising such easement and right of access, neither the GRANTEE nor its successors and assigns, as the case may be, shall have any claim at law or equity against the United States or any officer, employee, agent, contractor of any tier, or servant of the United States based on actions taken by the United States or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this clause; Provided, however, that nothing in this paragraph shall be considered as a waiver by the GRANTEE and its successors and assigns of any remedy available to them under the Federal Tort Claims Act.

- 4. Discovery of Previously Unknown Contamination: The GRANTEE, its successors and assigns, or their subcontractors, shall stop all work and notify the Navy immediately if previously unknown contamination, such as, but without limitation, buried debris, stained soil, unusual odors, is discovered during soil disturbing activity such as soil excavation, drilling, digging or other ground-disturbing activities, including disturbance of building slabs, roads and other structures and paved areas.
- 5. Presence of Asbestos: The GRANTEE, its successors, and assigns, covenant and agree that they will comply with all federal, state and local laws relating to ACM in their use of the building and structures included in this transfer. The GRANTOR assumes no new or further liability as a result of this transfer than it would otherwise have for losses, judgments, claims, demands or expenses, or damages of whatever nature or kind from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with ACM from the building, structures, and underground utilities included in this transfer. Due to the presence of known hazard ACM associated with housing units on the Subject Property, the Grantee is responsible for abatement of ACM in all housing units prior to their maintenance, renovation or demolition. Any invasive work performed by the GRANTEE must be conducted in accordance with applicable regulations and conducted by trained, properly-equipped personnel. The buildings included in this transfer will be transferred "as is" and asbestos hazards in said building will become the responsibility of the GRANTEE. The GRANTEE will be required to sign the Asbestos Hazard Disclosure and Acknowledgment Form included as Exhibit F of the FOST prior to execution of the transfer deed.
- 6. Presence of Lead-Based Paint: The GRANTEE, its successors, and assigns agree that they will comply with all federal, state, and local laws relating to LBP in their use of the building and structures included in this transfer (including demolition and disposal of existing improvements). The GRANTOR assumes no new or further liability as a result of this transfer than it would otherwise have for losses, judgments, claims, demands, expenses, or damages of whatever nature or kind from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with LBP from the building or structures

included in this transfer. The buildings included in this transfer will be transferred "as is" and LBP hazards in said building will become the responsibility of the GRANTEE. The GRANTEE will be required to sign the Lead-based Paint Hazard Disclosure and Acknowledgment Form included as Exhibit F of the FOST prior to execution of the transfer deed.

7. Presence of Polychlorinated Biphenyls in Building Materials: The GRANTEE acknowledges that fluorescent light fixture ballasts in facilities on the Transfer Parcel may contain PCBs. Prior to beginning any maintenance, alterations, demolition, restoration, or construction work affecting fluorescent light fixtures, the GRANTEE must determine if PCB ballasts are present. If present, PCB ballasts and/or fixtures must be disposed of properly in accordance with all applicable Federal, State, and local laws and regulations. The GRANTEE also acknowledges that buildings constructed or renovated between 1950 and 1978 have the potential to have PCBs contained within caulking, and the PCBs can migrate from the caulk into air, dust and surrounding material, such as wood, bricks and soil. Such materials must be handled, managed and disposed of properly during maintenance, renovations or demolition by the GRANTEE.

J. Environmental Compliance Agreements/Permits/Orders

The Navy has identified one IRP Site, Site 5, known as OU-1B (groundwater) and OU-10 (soil) on the western portion of the Subject Property. The Navy, in conjunction with the USEPA and PADEP, issued a No Further Action ROD for OU-1B (groundwater) on 20 June 2000 and a No Further Action Record of Decision for OU-10 (soil) on 28 September 2000, indicating that no further action is necessary at either site OU to be protective of human health and the environment (Navy, 2000a and 2000b).

K. Availability of References

References will be available upon request from the Navy's BRAC Program Management Office Northeast, located in Philadelphia, PA.

L. Notification to Regulatory Agencies/Public

In accordance with Section C8.5.5.2 of the Base Redevelopment and Realignment Manual (DoD, 2006), the USEPA and the PADEP have been advised of the proposed transfer of the Subject Property, and copies of the CERFA Report (letter dated 23 April 2007) and this Draft FOST have been provided to PADEP and USEPA for review and comment. PADEP and USEPA indicated on February 27, 2012 that they had no comments on this Draft FOST (Exhibit G). A public notice of the Navy's intent to sign this FOST will be published at least 30 days prior to transfer by deed. Copies of all transfer documentation will be made available to the HLRA, the USEPA and PADEP upon request after execution of the same.

4.0 FINDING OF SUITABILITY TO TRANSFER

Based on the information contained in this FOST, the notices discussed herein, and the covenants that will be contained in the deed, the property is suitable for transfer.

16 Jaly 20/2
Date

David Drozd Director

BRAC Program Management Office Northeast

Philadelphia, Pennsylvania

Exhibit A References

REFERENCES

AMEC, 2006. Final Environmental Condition of Property Report for the Off-Base Housing Areas of the Naval Air Station Joint Reserve Base, Willow Grove, Pennsylvania. May.

DoD, 2006. (Department of Defense, Office of the Deputy Undersecretary of Defense [Installations and Environment]) DoD 4165.66-M Base Redevelopment and Realignment Manual. Washington, D.C., March 1, 2006.

HLRA, 2011a. Horsham Township Authority for NAS-JRB Willow Grove. Amendment and Supplement to the Redevelopment Plan and Homeless Assistance Submission. May.

HLRA, 2011b. Horsham Township Authority for NAS-JRB Willow Grove. Legally Binding Agreement Among HLRA, Warminster Township, and Aldie Foundation, Inc. July.

HUD (U.S. Department of Housing and Urban Development), 2011. Letter from Mark Johnston, Deputy Assistant Secretary for Special Needs, HUD to Michael McGee, Horsham Township Local Redevelopment Authority, re. Approval of Amendment and Supplement to the Redevelopment Plan, July

Michael Baker Jr., Inc., 2011a. Asbestos Inspection Summary Report for NASJRB Willow Grove. October.

Michael Baker Jr., Inc., 2011b. Lead-Based Paint Inspection Summary Report for NASJRB Willow Grove. October.

Navy (Department of the Navy), 1996a. Asbestos Management Plan, Shenandoah Woods, Naval Air Station Joint Reserve Base Willow Grove, Warminster, Pennsylvania. Norfolk, Virginia. December.

Navy, 1996b. Lead Management Plan, Shenandoah Woods, Naval Air Station Joint Reserve Base Willow Grove, Warminster, Pennsylvania. Norfolk, Virginia. December.

Navy, 1999. Draft Environmental Baseline Survey, Naval Family Housing, Naval Air Station Willow Grove, Pennsylvania. Lester, Pennsylvania. August.

7594 A-1

Navy, 2000a. Record of Decision for OU 1B (Area B Groundwater), Naval Air Warfare Center, Warminster, Pennsylvania. August.

Navy, 2000b. Record of Decision for OU 10 (Site 5 Soil and Area B Surface Water/Sediment), Naval Air Warfare Center, Warminster, Pennsylvania. September.

TtNUS (Tetra Tech NUS, Inc.), 2007a. CERFA Identification of Uncontaminated Property at the Naval Air Station Joint Reserve Base, Willow Grove, Pennsylvania. Germantown, Maryland. April.

TtNUS, 2007b. Operable Unit 10 Sediment Sampling Report, Former Naval Warfare Center Warminster, Warminster, Pennsylvania. King of Prussia, Pennsylvania. October.

Willow Grove Housing Department, 2005. Shenandoah Woods Housing Condition Assessment. Naval Air Station Joint Reserve Base, Willow Grove, Pennsylvania.

7594 A-2

Exhibit B

Site Map

Location Map - Sites 5, 6 and 7

Site Map

Location of Sites 5, 6, and 7
Relative to the Subject Property



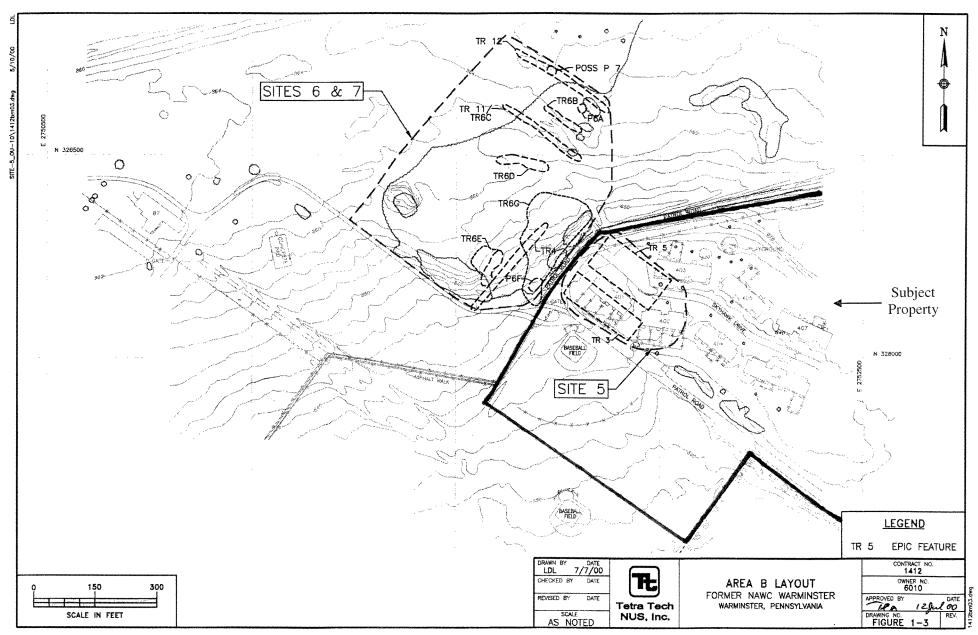


Exhibit C Legal Description and Survey Map

Ludgate Engineering Corporation

Engineers, Surveyors, Land Planners, Environmental Scientists

Robert B. Ludgate, Sr., PE, PLS, President Edwin H. Nordahl, II, PE, VP Engineering Services Robert B. Ludgate, Jr., VP Municipal Services Thomas B. Ludgate, PLS, VP Surveying Services Peter C. Eisenbrown, PE, VP Construction Services Lincoln Corporate Center 10 Vanguard Drive, Suite 90 Reading, PA 19606 610-404-7330 610-404-7371 (Fax) 1-888-646-6161 (Toll Free) www.ludgate-eng.com

June 30, 2009 Revised July 30, 2009

Deed Description Shenandoah Woods Housing

ALL THAT CERTAIN parcel

of ground with the improvements thereon on the southwest side of Bristol Road and the south of lands of Township of Warminster situate in Warminster Township, Bucks County, Pennsylvania shown on a Boundary Survey Plan of "Shenandoah Woods Housing" prepared by Ludgate Engineering Corporation Plan Number D-8400609 dated 6-30-09 and being more fully bounded and described as follows to WIT:

Parcel 1

BEGINNING at a P.K. on the

southwestern right-of-way line of Bristol Road and a corner of the subdivision plan of Countryside Estates Plan Book Volume 147 pg 17B;

Thence along Plan Book Volume 147 pg 17B and along Plan Book Volume 6 pg 49 and along Plan Book Volume 84 pg 5A South 45 degrees 04 minutes 22 seconds West 2697.77 feet to a point a corner of Plan Book Volume 25 page 39;

Thence along Plan Book Volume 25 page 39 North 44 degrees 48 minutes 26 seconds West 1224.05 feet to a point a corner of Parcel 2;

Thence along Parcel 2 North 44 degrees 50 minutes 39 seconds West 660.57 feet to a point a corner of lands of the Township of Warminster;

Thence along lands of the Township of Warminster the three following courses and distances:

- 1. North 44 degrees 43 minutes 11 seconds East 169.62 feet to a point.
- 2. North 88 degrees 33 minutes 21 seconds East 2653.05 feet to a point.
- 3. North 45 degrees 05 minutes 10 seconds East 599.65 feet to a point on the right of way of Bristol Road.

Thence along the right of way of Bristol Road South 44 degrees 54 minutes 58 seconds East 59.85 feet to a P.K. the Place of BEGINNING.

CONTAINING: 51.23 Acres.

Parcel 2

BEGINNING at a point a corner of the

subdivision of Briar Hill Farms, Inc. Plan Book Volume 25 pg 39 and a corner of Parcel #1;

Thence along Plan Book Volume 25 pg 39 South 45 degrees 11 minutes 04 seconds West 261.95 feet to a point a corner of lands of Pennsylvania State University;

Thence along lands of Pennsylvania State University the two following courses and distances:

- 1. North 46 degrees 43 minutes 19 seconds West 574.21 feet to a point.
- 2. North 23 degrees 13 minutes 17 seconds East 157.34 feet to a point a corner of lands of Warminster Township.

Thence along lands of the Township of Warminster North 33 degrees 31 minutes 04 seconds East 137.64 feet to a point. A corner of Parcel #1;

Thence along Parcel #1 South 44 degrees 50 minutes 39 seconds East 660.57 feet to a point the Place of BEGINNING

CONTAINING: 3.89 Acres

Being subject to the general notes from

the above referenced plan.

CHECK: 4V9 COMPUTER CHECK: 4V9

SURVEYOR
NO. 053111

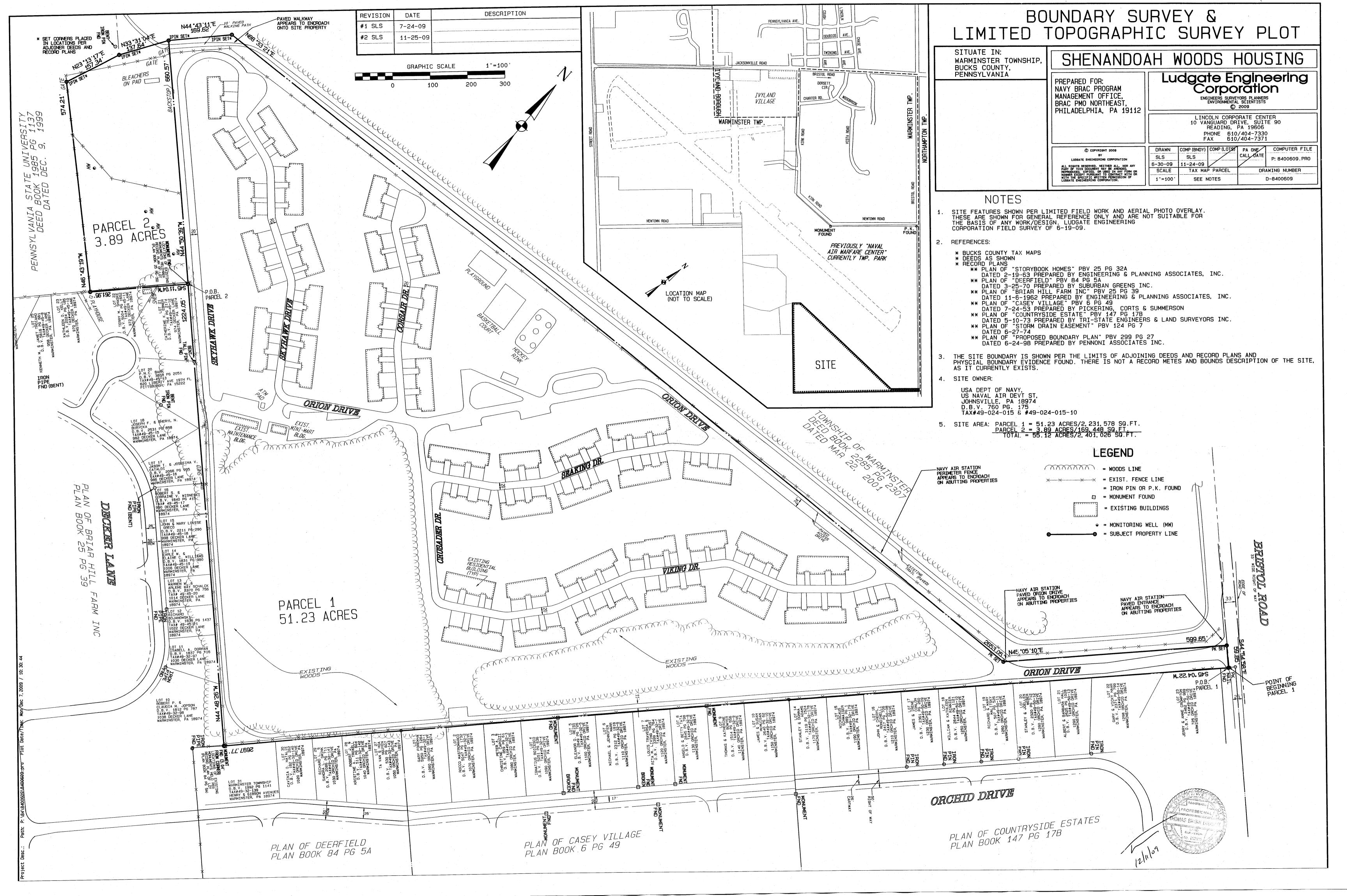


Exhibit D

Interview Forms, Floor Plans and Site Inspection Photographs

Interview Forms

FINDINGS OF SUITABILITY TO TRANSFER INTERVIEW RECORD

SUBJECT PROPERTY NAME:

Shenandoah Woods Housing Complex, Warminster, Pennsylvania (NASJRB Willow Grove)

INTERVIEW DATE:

INTERVIEWERS:

25 March 2009 Ms. Amy Stattel, Tetra Tech NUS, Inc.

Ms. Samantha Brenner, Tetra Tech NUS, Inc.

PERSONS INTERVIEWED:

Mr. John Floyd, Navy Housing Facilities Manager, NASJRB Willow Grove

INTERVIEW LOCATION/SETTING:

NASJRB Willow Grove, Housing Office, Building 148, FOST Kickoff Meeting (In Person) and Shenandoah Woods Housing Complex, FOST Site Visit (In Person)

INTERVIEW LOG:

Mr. Floyd was asked to provide information about any environmental issues or property conditions that have changed since the completion of the 2007 CERFA Report for NASJRB Willow Grove, which included the CERFA assessment for the subject property (TtNUS, 2007). Mr. Floyd reported in the last two years the youth center was removed, and a sinkhole that had been previously repaired has reappeared below part of the hockey rink and near the basketball courts.

Mr. Floyd reported that about five years ago, there was a problem with flooding at the end of Skyhawk Drive due to heavy rainfall during Hurricane Floyd. The grounds maintenance contractor for Shenandoah Woods, Larad Services, had to perform an emergency drainage measure for water that was pooling in the back yard of unit #571, or 403 Skyhawk Drive. The emergency measure, completed in the middle of the night, was to use a loader to break up the curb along Skyhawk Drive and allow the water to flow downstream in a westerly direction onto the paved turnaround and then southeast with stormwater drainage along Skyhawk Drive. Mr. Floyd reported that Ed Strolsky, Director of Larad Services, observed the loader uncovered what appeared to be the tops of several drums as it scraped and disturbed the grass and soil near the curb. Mr. Floyd indicated that the lids of the drums were ajar, and the contents were unknown although at first they thought the contents were tar, possibly buried by the contractor for the original construction of the housing units. He indicated the suspected drums were then covered back over with the removed soil.

Mr. Floyd reported that there have been long-standing issues of surface drainage from the southwest border of the property spilling over across Decker Road. An engineering company was hired to do a study and drainage correction plan. The 75% design was implemented but not the portion of drainage

7594 Page 1 of 3

FINDINGS OF SUITABILITY TO TRANSFER INTERVIEW RECORD

system off Navy property; further action by the township is still required to fully implement the design. The Navy installed a standpipe system but existing detention basin is still not sufficient. Dewberry & Davis did a plan for two additional detention basins, but Mr. Floyd said that plan was rejected.

During inspection of housing unit at 1131 Viking Road, Mr. Floyd reported that the units all have new windows, new paint on the interior trim, and were renovated with new gas-fired furnaces and hot-water heaters in 1994-95. He reported that the units receive town water and sewer services.

Mr. Floyd provided copies of the Asbestos Management and Lead Management Plans that apply to the Shenandoah Woods housing complex.

FINDINGS OF SUITABILITY TO TRANSFER INTERVIEW RECORD

SUBJECT PROPERTY NAME:

Shenandoah Woods Housing Complex, Warminster, Pennsylvania (NASJRB Willow Grove)

<u>INTERVIEW DATE:</u> <u>INTERVIEWERS:</u>

25 March 2009 Ms. Amy Stattel, Tetra Tech NUS, Inc.

Ms. Samantha Brenner, Tetra Tech NUS, Inc.

PERSONS INTERVIEWED:

Mr. Ed Strolsky, Director, Larad Services (housing contractor, NASJRB Willow Grove)

INTERVIEW LOCATION/SETTING:

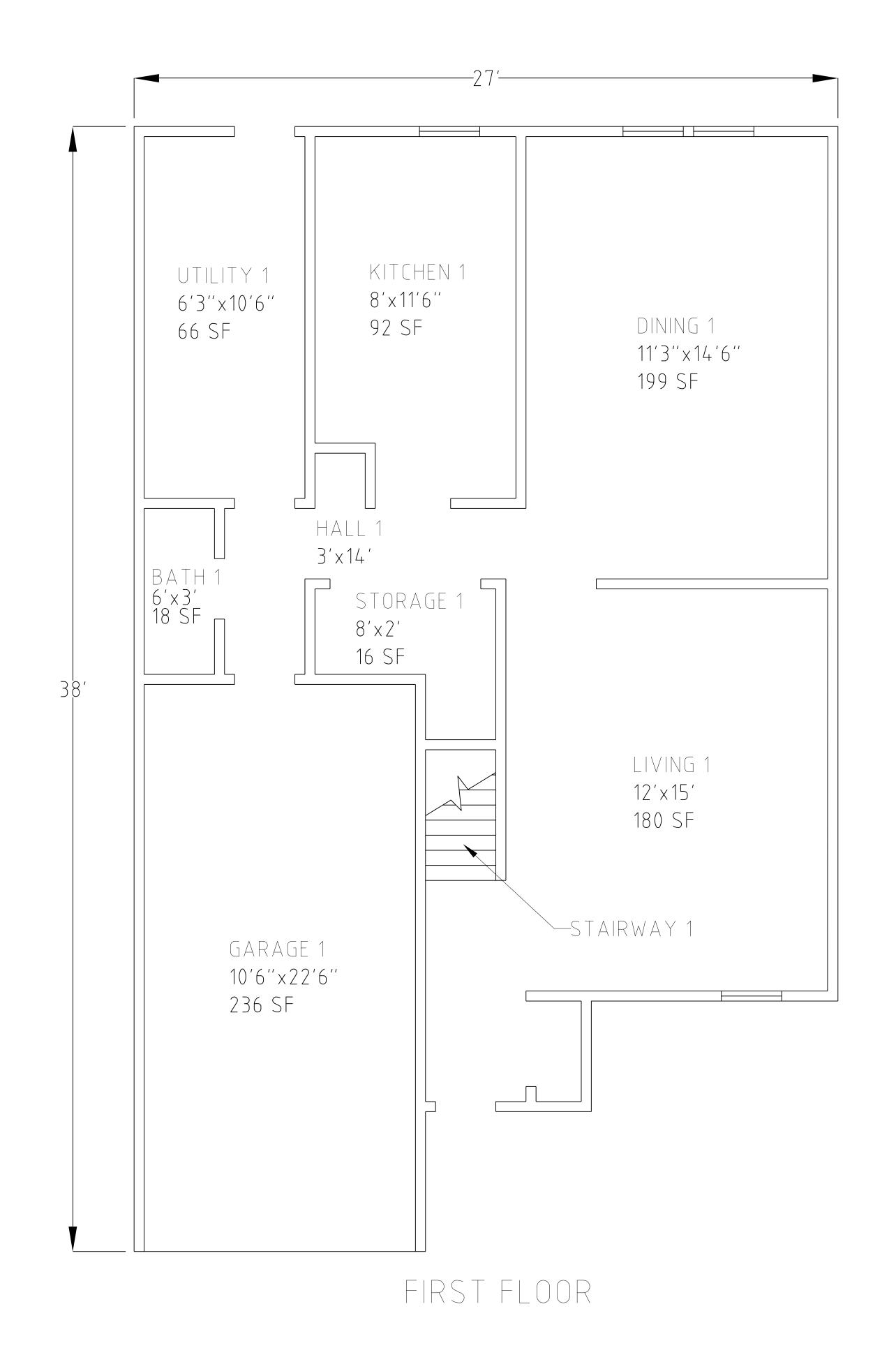
NASJRB Willow Grove, Housing Office, Building 148, FOST Kickoff Meeting (In Person)

INTERVIEW LOG:

Mr. Strolsky reported that about five years ago, heavy rainfall during Hurricane Floyd caused water to back up in the back yard of unit #571, or 403 Skyhawk Drive. Mr. Strolsky's company, Larad Services, had to perform an emergency drainage measure in the middle of the night to prevent water from flowing in the back patio door at this housing unit. They used a loader to break up the curb along Skyhawk Drive releasing the water pooled up on the grass behind the curb. As the loader scraped the grass and soil near the curb, they uncovered several suspected drums with the lids ajar. Mr. Strolsky reported that the suspected drums had unknown contents, that appeared to be purple and almost "fluorescent". He indicated the drums were then covered back over with the removed soil and to his knowledge were left in place since that time. He reported he did not uncover any other wastes or debris during grounds maintenance activities at Shenandoah Woods, including installation of drains along Skyhawk Drive.

Page 3 of 3

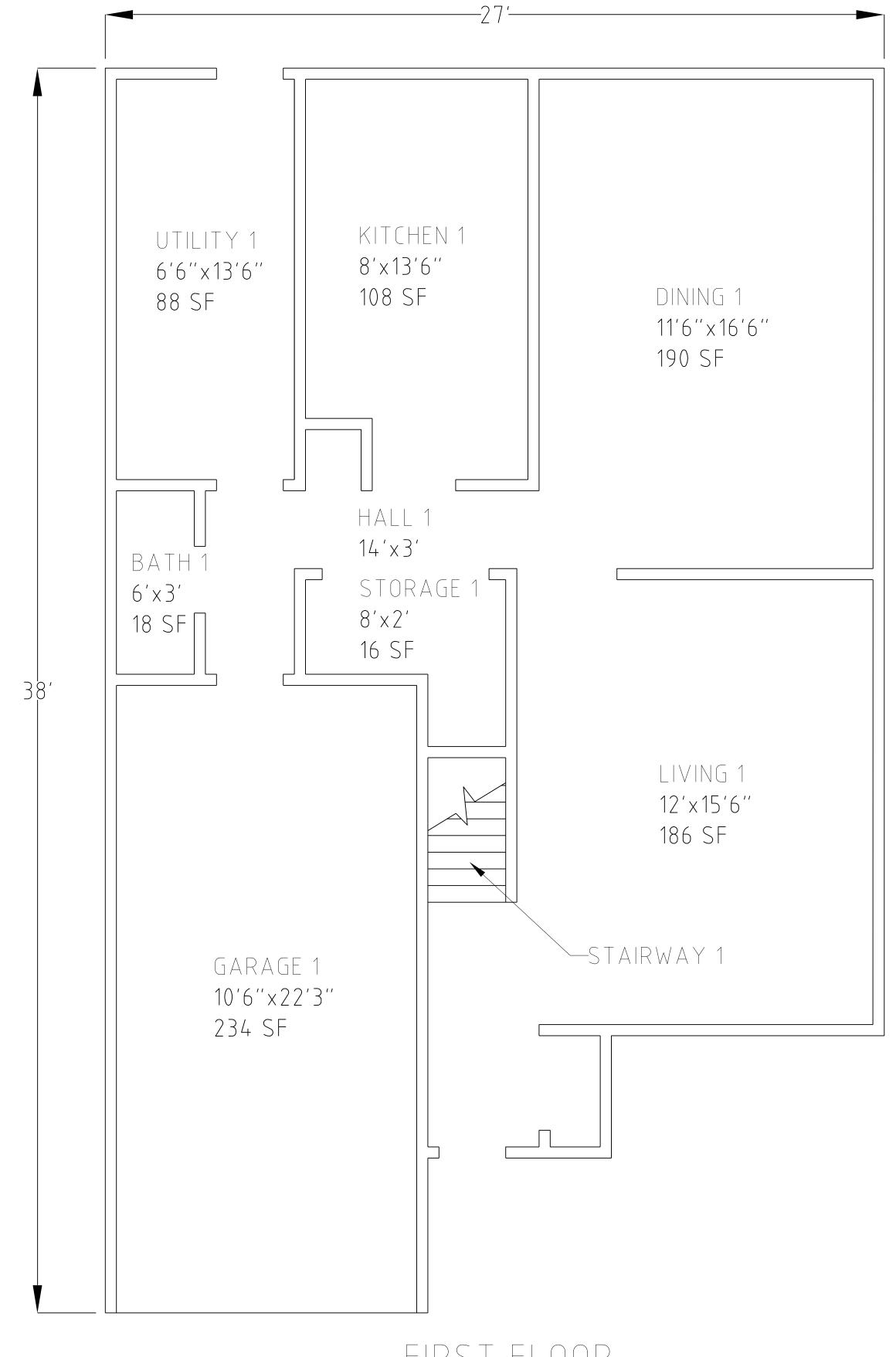
Floor Plans



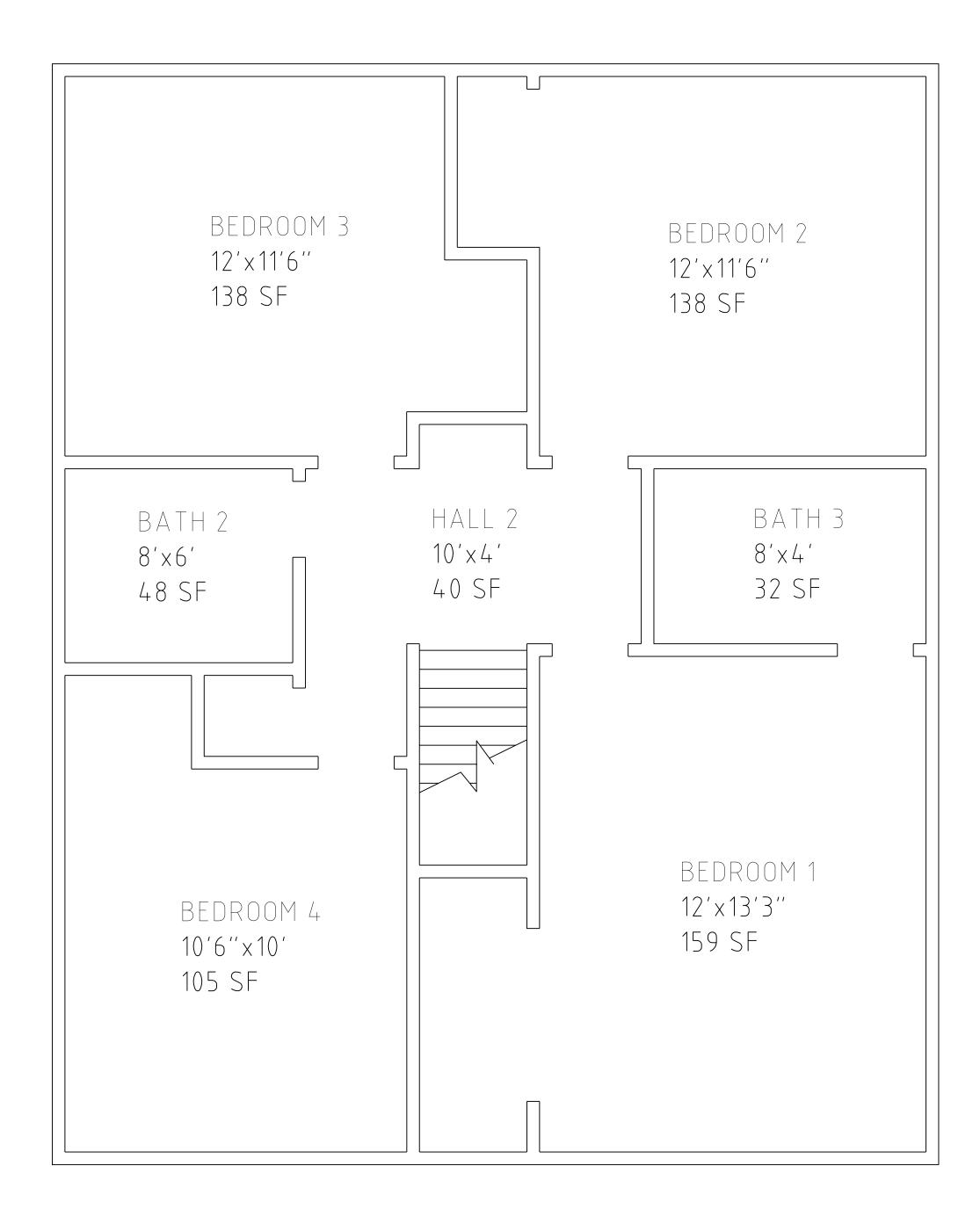
BEDROOM 2 BEDROOM 3 12′×11′6′′ 11′6′′×11′6′′ 138 SF 132 SF BATH 3 HALL 2 BATH 2 8'x4' 10′×4′ 8'x6' 32 SF 40 SF 46 SF STORAGE 2 12'x4' BEDROOM 1 12′x13′6′′ 162 SF

SECOND FLOOR

Shenandoah Woods - 3 Bedroom Floor Plan



FIRST FLOOR



SECOND FLOOR

Site Photographs

Naval Air Station Joint Reserve Base – Willow Grove Shenandoah Woods Housing Complex Warminster, Pennsylvania

25 March 2009



Photo 1
Typical Shenandoah Woods Housing Unit



Photo 2 Shenandoah Woods Power Transfer Station



Photo 3
Stormwater Retention Pond
Located South of Facilities Maintenance Department Garage



Photo 4
Curbing Removed to Facilitate Drainage during Hurricane Floyd
Located on the Northern Portion of the Property Near 403 Skyhawk Drive



Photo 5
Recreation Fields
Located on the Southwestern Portion of the Subject Property



Photo 6 Shenandoah Woods Housing Maintenance Building

Exhibit E CERCLA Hazardous Substances Notice

EXHIBIT E CERCLA HAZARDOUS SUBSTANCE NOTICE SHENANDOAH WOODS HOUSING COMPLEX WARMINSTER, PENNSYLVANIA

| Location | Substance Name | CAS Registry Number | 40 CFR 302.4 Regulatory Synonyms | RCRA Waste Number | Quantity Stored | Date of Storage | Quantity Released | Date of Release | Response |
|---|--|------------------------|--|-------------------------|--------------------|-----------------------|----------------------|--------------------|---|
| Site 5 North, East and South of Building 401 and West of Building 403 | Solid Waste incuding ash, wood, glass, cardboard, paper, tree limbs, roots, brick, wire, charcoal and scrap metal in a matrix of fill material | 79-01-6 | Trichloroethene | F001 | Unknown | 1960 to mid 1980's | Unknown | Unknown | RI, Risk Assessment, "No Action" ROD (September 2000) |
| | | 1336363 | Aroclors, PBCs | - | Unknown | 1960 to mid 1980's | Unknown | Unknown | RI, Risk Assessment, "No Action" ROD (September 2000) |
| | | 50-32-8 | Benzo(a)pyrene | U022 | Unknown | 1960 to mid 1980's | Unknown | Unknown | RI, Risk Assessment, "No Action" ROD (September 2000) |

Exhibit F Hazard Advisory Statements

ASBESTOS-CONTAINING MATERIALS HAZARD DISCLOSURE AND ACKNOWLEDGMENT FORM

ASBESTOS WARNING STATEMENT

YOU ARE ADVISED THAT CERTAIN HOUSING UNITS WITHIN THE SHENANDOAH WOODS HOUSING COMPLEX AT NAVAL AIR STATION JOINT RESERVE BASE WILLOW GROVE, PENNSYLVANIA HAVE ASBESTOS-CONTAINING MATERIALS. INDIVIDUALS (WORKERS) MAY SUFFER ADVERSE HEALTH EFFECTS AS A RESULT OF INHALATION EXPOSURE TO ASBESTOS. THESE ADVERSE HEALTH EFFECTS INCLUDE ASBESTOSIS (PULMONARY FIBROSIS) AND MESOTHELIOMAS (BENIGN OR MALIGNANT TUMORS).

ACKNOWLEDGMENT

I acknowledge that:

- (1) I have read and understand the above-stated Asbestos Warning Statement.
- (2) I have received from the Government the following document(s): (a) Asbestos Management Plan, Shenandoah Woods, Naval Air Station Joint Reserve Base Willow Grove, Warminster, Pennsylvania (Navy, 1996a); (b) Asbestos Inspection Summary Report, NASJRB Willow Grove (Baker, 2011a); and (c) Finding of Suitability to Transfer, Naval Air Station Joint Reserve Base-Willow Grove, Shenandoah Woods Housing Complex, Warminster, Pennsylvania (BRAC PMO NE, 2012) representing the best information available to the Government as to the presence of and condition of asbestos-containing-materials hazards in the housing units covered by this transfer (deed).

Buildings and housing units known to contain friable and damaged ACM are listed on the attached table.

| Friable, Accessible, | Damaged ACM | at Shenandoah \ | Woods Housin | g Buildings |
|----------------------|-------------|-----------------|--------------|-------------|
| | | | | |

| Building Number | Unit Number(s) | Material | Area in Square Feet |
|--------------------|---------------------|--|---------------------------|
| 415 | 607 | Black floor adhesive under parquet flooring material | 4422 |
| 417 | 617 | Black floor adhesive under parquet flooring material | 3721 |
| 421 | 1097, 1101, 1107 | Black floor adhesive under parquet flooring material | 4206 |
| 430 | 1097, 1103, 1105 | Black floor adhesive under vinyl floor tile | 3721 |
| 432 | 1119, 1127 | Black floor adhesive under vinyl floor tile | 2420 |
| 433 | 1131, 1139 | Black floor adhesive under vinyl floor tile | 2420 |
| 434 | 1146 | Black floor adhesive under vinyl floor tile | 1928 |
| 435 | 1134 | Black floor adhesive under vinyl floor tile | 2892 |
| 436 | 1116, 1118, 1120 | Black floor adhesive under vinyl floor tile | 2420 |
| 436 | 1116, 1120 | Black floor adhesive under parquet flooring material | 3721 |
| 437 | 1102 | Black floor adhesive under vinyl floor tile | 32 |

portion of the property offered will not constitute grounds for any claim or demand for adjustment or withdrawal of any bid or offer made after its opening or tender.

(4) I understand that, upon execution of this transfer (deed), I shall assume full responsibility for preventing future asbestos exposure by properly managing and maintaining or, as required by applicable federal, State, or local laws or regulations, for abating any asbestos hazard that may pose a risk to human health.

(3) I understand that my failure to inspect or to become fully informed of the condition of all or any

| Transferee (or duly authorized agent) | Da | ate |
|---------------------------------------|----|-----|

LEAD-BASED PAINT HAZARD DISCLOSURE AND ACKNOWLEDGMENT FORM

LEAD WARNING STATEMENT

YOU ARE ADVISED THAT STRUCTURES CONSTRUCTED PRIOR TO 1978 MAY PRESENT EXPOSURE TO LEAD FROM LEAD-BASED PAINT THAT MAY PLACE YOUNG CHILDREN AT RISK OF DEVELOPING LEAD POISONING. LEAD POISONING IN YOUNG CHILDREN MAY PRODUCE PERMANENT NEUROLOGICAL DAMAGE. YOU ARE FURTHER ADVISED THAT LEAD POISONING ALSO POSES A PARTICULAR RISK TO PREGNANT WOMEN. WORKERS MAY ALSO SUFFER ADVERSE HEALTH EFFECTS FROM LEAD DUST AND FUME EXPOSURE

ACKNOWLEDGMENT

I acknowledge that:

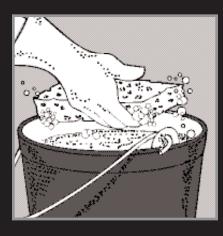
- 1. I have read and understand the above stated Lead Warning Statement;
- 2. I have received from the Federal Government the following document(s): (a) Lead Management Plan, Shenandoah Woods, Naval Air Station Joint Reserve Base Willow Grove, Warminster, Pennsylvania (Navy, 1996b); (b) Lead-Based Paint Inspection Summary Report for NASJRB Willow Grove (Baker, 2011b); and (c) Finding of Suitability to Transfer, Naval Air Station Joint Reserve Base-Willow Grove, Shenandoah Woods Housing Complex, Warminster, Pennsylvania (BRAC PMO NE, 2012), representing the best information available to the Government as to the presence of Lead-Based Paint and Lead-Based Paint hazards for the buildings covered by this Transfer;
- 3. I understand that my failure to inspect, or to become fully informed as to the condition of all or any portion of the property offered will not constitute grounds for any claim or demand for adjustment or withdrawal of any bid or offer made after its opening or tender; and
- 4. I understand that upon execution of this Transfer, I shall assume full responsibility for preventing future lead exposure by properly managing and maintaining or, as required by applicable Federal, state, or local laws or regulations, for abating any lead-based paint hazard that may pose a risk to human health.

| Transferee (or duly authorized agent) | Dat | te |
|---------------------------------------|-----|----|



Protect Your Family From Lead In Your Home







United States Environmental Protection Agency



United States
Consumer Product
Safety Commission



United States Department of Housing and Urban Development

Are You Planning To Buy, Rent, or Renovate a Home Built Before 1978?

any houses and apartments built before 1978 have paint that contains high levels of lead (called lead-based paint). Lead from paint, chips, and dust can pose serious health hazards if not taken care of properly.



OWNERS, BUYERS, and RENTERS are encouraged to check for lead (see page 6) before renting, buying or renovating pre-1978 housing.

ederal law requires that individuals receive certain information before renting, buying, or renovating pre-1978 housing:



LANDLORDS have to disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a disclosure about lead-based paint.



SELLERS have to disclose known information on lead-based paint and lead-based paint hazards before selling a house. Sales contracts must include a disclosure about lead-based paint. Buyers have up to 10 days to check for lead.



RENOVATORS disturbing more than 2 square feet of painted surfaces have to give you this pamphlet before starting work.

IMPORTANT!

Lead From Paint, Dust, and Soil Can Be Dangerous If Not Managed Properly

- **FACT:** Lead exposure can harm young children and babies even before they are born.
- **FACT:** Even children who seem healthy can have high levels of lead in their bodies.
- **FACT:** People can get lead in their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- **FACT:** People have many options for reducing lead hazards. In most cases, lead-based paint that is in good condition is not a hazard.
- **FACT:** Removing lead-based paint improperly can increase the danger to your family.

If you think your home might have lead hazards, read this pamphlet to learn some simple steps to protect your family.

Lead Gets in the Body in Many Ways

Childhood lead poisoning remains a major environmental health problem in the U.S.

Even children who appear healthy can have dangerous levels of lead in their bodies.

People can get lead in their body if they:

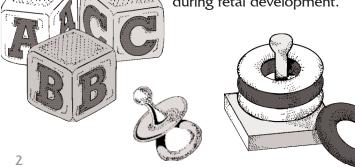
- Breathe in lead dust (especially during renovations that disturb painted surfaces).
- Put their hands or other objects covered with lead dust in their mouths.
- Eat paint chips or soil that contains lead.

Lead is even more dangerous to children under the age of 6:

- At this age children's brains and nervous systems are more sensitive to the damaging effects of lead.
- Children's growing bodies absorb more lead.
- Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.

Lead is also dangerous to women of childbearing age:

 Women with a high lead level in their system prior to pregnancy would expose a fetus to lead through the placenta during fetal development.



Lead's Effects

It is important to know that even exposure to low levels of lead can severely harm children.

In children, lead can cause:

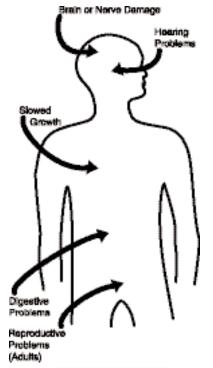
- Nervous system and kidney damage.
- Learning disabilities, attention deficit disorder, and decreased intelligence.
- Speech, language, and behavior problems.
- Poor muscle coordination.
- Decreased muscle and bone growth.
- Hearing damage.

While low-lead exposure is most common, exposure to high levels of lead can have devastating effects on children, including seizures, unconsciousness, and, in some cases, death.

Although children are especially susceptible to lead exposure, lead can be dangerous for adults too.

In adults, lead can cause:

- Increased chance of illness during pregnancy.
- Harm to a fetus, including brain damage or death.
- Fertility problems (in men and women).
- High blood pressure.
- Digestive problems.
- Nerve disorders.
- ♠ Memory and concentration problems.
- Muscle and joint pain.



Lead affects the body in many ways.

Where Lead-Based Paint Is Found

In general, the older your home, the more likely it has leadbased paint. Many homes built before 1978 have lead-based paint. The federal government banned lead-based paint from housing in 1978. Some states stopped its use even earlier. Lead can be found:

- ♦ In homes in the city, country, or suburbs.
- ♠ In apartments, single-family homes, and both private and public housing.
- ♠ Inside and outside of the house.
- In soil around a home. (Soil can pick up lead from exterior paint or other sources such as past use of leaded gas in cars.)

Checking Your Family for Lead

Get your children and home tested if you think your home has high levels of lead.

To reduce your child's exposure to lead, get your child checked, have your home tested (especially if your home has paint in poor condition and was built before 1978), and fix any hazards you may have. Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.

Consult your doctor for advice on testing your children. A simple blood test can detect high levels of lead. Blood tests are usually recommended for:

- ♦ Children at ages 1 and 2.
- Children or other family members who have been exposed to high levels of lead.
- Children who should be tested under your state or local health screening plan.

Your doctor can explain what the test results mean and if more testing will be needed.

Identifying Lead Hazards

Lead-based paint is usually not a hazard if it is in good condition, and it is not on an impact or friction surface, like a window. It is defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter, or more than 0.5% by weight.

Deteriorating lead-based paint (peeling, chipping, chalking, cracking or damaged) is a hazard and needs immediate attention. It may also be a hazard when found on surfaces that children can chew or that get a lot of wear-and-tear, such as:

- Windows and window sills.
- Doors and door frames.
- Stairs, railings, banisters, and porches.

Lead from paint chips, which you can see, and lead dust, which you can't always see, can both be serious hazards.

Lead dust can form when lead-based paint is scraped, sanded, or heated. Dust also forms when painted surfaces bump or rub together. Lead chips and dust can get on surfaces and objects that people touch. Settled lead dust can re-enter the air when people vacuum, sweep, or walk through it. The following two federal standards have been set for lead hazards in dust:

- 40 micrograms per square foot (μg/ft²) and higher for floors, including carpeted floors.
- 250 μ g/ft² and higher for interior window sills.

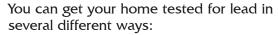
Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. The following two federal standards have been set for lead hazards in residential soil:

- ◆ 400 parts per million (ppm) and higher in play areas of bare soil.
- 1,200 ppm (average) and higher in bare soil in the remainder of the yard.

The only way to find out if paint, dust and soil lead hazards exist is to test for them. The next page describes the most common methods used.

Checking Your Home for Lead

Just knowing that a home has lead-based paint may not tell you if there is a hazard.



- A paint inspection tells you whether your home has lead-based paint and where it is located. It won't tell you whether or not your home currently has lead hazards.
- ♠ A risk assessment tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards.
- A combination risk assessment and inspection tells you if your home has any lead hazards and if your home has any lead-based paint, and where the lead-based paint is located.

Hire a trained and certified testing professional who will use a range of reliable methods when testing your home.

- Visual inspection of paint condition and location.
- ♠ A portable x-ray fluorescence (XRF) machine.
- Lab tests of paint, dust, and soil samples.

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency (see bottom of page 11) for more information, or call **1-800-424-LEAD** (5323) for a list of contacts in your area.

Home test kits for lead are available, but may not always be accurate. Consumers should not rely on these kits before doing renovations or to assure safety.



What You Can Do Now To Protect Your Family

If you suspect that your house has lead hazards, you can take some immediate steps to reduce your family's risk:

- ♠ If you rent, notify your landlord of peeling or chipping paint.
- Clean up paint chips immediately.
- ◆ Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner or a cleaner made specifically for lead. REMEMBER: NEVER MIX AMMONIA AND BLEACH PRODUCTS TOGETHER SINCE THEY CAN FORM A DANGEROUS GAS.
- Thoroughly rinse sponges and mop heads after cleaning dirty or dusty areas.
- Wash children's hands often, especially before they eat and before nap time and bed time.
- Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- Keep children from chewing window sills or other painted surfaces.
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Make sure children eat nutritious, low-fat meals high in iron and calcium, such as spinach and dairy products. Children with good diets absorb less lead.







Reducing Lead Hazards In The Home

Removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.

Always use a professional who is trained to remove lead hazards safely.



In addition to day-to-day cleaning and good nutrition:

- ◆ You can **temporarily** reduce lead hazards by taking actions such as repairing damaged painted surfaces and planting grass to cover soil with high lead levels. These actions (called "interim controls") are not permanent solutions and will need ongoing attention.
- ♠ To permanently remove lead hazards, you should hire a certified lead "abatement" contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not permanent removal.

Always hire a person with special training for correcting lead problems—someone who knows how to do this work safely and has the proper equipment to clean up thoroughly. Certified contractors will employ qualified workers and follow strict safety rules as set by their state or by the federal government.

Once the work is completed, dust cleanup activities must be repeated until testing indicates that lead dust levels are below the following:

- 40 micrograms per square foot (μg/ft²) for floors, including carpeted floors;
- 250 μ g/ft² for interior windows sills; and
- \spadesuit 400 μ g/ft² for window troughs.

Call your state or local agency (see bottom of page 11) for help in locating certified professionals in your area and to see if financial assistance is available.

Remodeling or Renovating a Home With Lead-Based Paint

Take precautions before your contractor or you begin remodeling or renovating anything that disturbs painted surfaces (such as scraping off paint or tearing out walls):

- Have the area tested for lead-based paint.
- ◆ Do not use a belt-sander, propane torch, high temperature heat gun, dry scraper, or dry sandpaper to remove lead-based paint. These actions create large amounts of lead dust and fumes. Lead dust can remain in your home long after the work is done.
- ◆ Temporarily move your family (especially children and pregnant women) out of the apartment or house until the work is done and the area is properly cleaned. If you can't move your family, at least completely seal off the work area.
- ♠ Follow other safety measures to reduce lead hazards. You can find out about other safety measures by calling 1-800-424-LEAD. Ask for the brochure "Reducing Lead Hazards When Remodeling Your Home." This brochure explains what to do before, during, and after renovations.

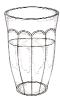
If you have already completed renovations or remodeling that could have released lead-based paint or dust, get your young children tested and follow the steps outlined on page 7 of this brochure.



If not conducted properly, certain types of renovations can release lead from paint and dust into the air.



Other Sources of Lead



While paint, dust, and soil are the most common sources of lead, other lead sources also exist.





- ◆ Drinking water. Your home might have plumbing with lead or lead solder. Call your local health department or water supplier to find out about testing your water. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might have lead in it:
 - Use only cold water for drinking and cooking.
 - Run water for 15 to 30 seconds before drinking it, especially if you have not used your water for a few hours.
- ◆ The job. If you work with lead, you could bring it home on your hands or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- Old painted toys and furniture.
- Food and liquids stored in lead crystal or lead-glazed pottery or porcelain.
- ◆ Lead smelters or other industries that release lead into the air.
- Hobbies that use lead, such as making pottery or stained glass, or refinishing furniture.
- Folk remedies that contain lead, such as "greta" and "azarcon" used to treat an upset stomach.

For More Information

The National Lead Information Center

Call 1-800-424-LEAD (424-5323) to learn how to protect children from lead poisoning and for other information on lead hazards. To access lead information via the web, visit www.epa.gov/lead and www.hud.gov/offices/lead/.



EPA's Safe Drinking Water Hotline

Call **1-800-426-4791** for information about lead in drinking water.

Consumer Product Safety Commission (CPSC) Hotline

To request information on lead in consumer products, or to report an unsafe consumer product or a product-related injury call 1-800-638-2772, or visit CPSC's Web site at: www.cpsc.gov.



Health and Environmental Agencies

Some cities, states, and tribes have their own rules for lead-based paint activities. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your local contacts on the Internet at www.epa.gov/lead or contact the National Lead Information Center at 1-800-424-LEAD.

For the hearing impaired, call the Federal Information Relay Service at **1-800-877-8339** to access any of the phone numbers in this brochure.

EPA Regional Offices

Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

EPA Regional Offices

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact U.S. EPA Region 1 Suite 1100 (CPT) One Congress Street Boston, MA 02114-2023 1 (888) 372-7341

Region 2 (New Jersey, New York, Puerto Rico, Virgin Islands)

Regional Lead Contact U.S. EPA Region 2 2890 Woodbridge Avenue Building 209, Mail Stop 225 Edison, NJ 08837-3679 (732) 321-6671

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, Washington DC, West Virginia)

> Regional Lead Contact U.S. EPA Region 3 (3WC33) 1650 Arch Street Philadelphia, PA 19103 (215) 814-5000

Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact U.S. EPA Region 4 61 Forsyth Street, SW Atlanta, GA 30303 (404) 562-8998

Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact U.S. EPA Region 5 (DT-8J) 77 West Jackson Boulevard Chicago, IL 60604-3666 (312) 886-6003 **Region 6** (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Regional Lead Contact U.S. EPA Region 6 1445 Ross Avenue, 12th Floor Dallas, TX 75202-2733 (214) 665-7577

Region 7 (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact U.S. EPA Region 7 (ARTD-RALI) 901 N. 5th Street Kansas City, KS 66101 (913) 551-7020

Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact U.S. EPA Region 8 999 18th Street, Suite 500 Denver, CO 80202-2466 (303) 312-6021

Region 9 (Arizona, California, Hawaii, Nevada)

Regional Lead Contact U.S. Region 9 75 Hawthorne Street San Francisco, CA 94105 (415) 947-4164

Region 10 (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact U.S. EPA Region 10 Toxics Section WCM-128 1200 Sixth Avenue Seattle, WA 98101-1128 (206) 553-1985

CPSC Regional Offices

Your Regional CPSC Office can provide further information regarding regulations and consumer product safety.

Eastern Regional Center

Consumer Product Safety Commission 201 Varick Street, Room 903 New York, NY 10014 (212) 620-4120

Western Regional Center

Consumer Product Safety Commission 1301 Clay Street, Suite 610-N Oakland, CA 94612 (510) 637-4050

Central Regional Center

Consumer Product Safety Commission 230 South Dearborn Street, Room 2944 Chicago, IL 60604 (312) 353-8260

HUD Lead Office

Please contact HUD's Office of Healthy Homes and Lead Hazard Control for information on lead regulations, outreach efforts, and lead hazard control and research grant programs.

U.S. Department of Housing and Urban Development

Office of Healthy Homes and Lead Hazard Control 451 Seventh Street, SW, P-3206 Washington, DC 20410 (202) 755-1785

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U.S. EPA Washington DC 20460 U.S. CPSC Washington DC 20207 U.S. HUD Washington DC 20410 EPA747-K-99-001 June 2003

Simple Steps To Protect Your Family From Lead Hazards

If you think your home has high levels of lead:

- Get your young children tested for lead, even if they seem healthy.
- ♦ Wash children's hands, bottles, pacifiers, and toys often.
- ♠ Make sure children eat healthy, low-fat foods.
- Get your home checked for lead hazards.
- Regularly clean floors, window sills, and other surfaces.
- ◆ Wipe soil off shoes before entering house.
- ◆ Talk to your landlord about fixing surfaces with peeling or chipping paint.
- ◆ Take precautions to avoid exposure to lead dust when remodeling or renovating (call 1-800-424-LEAD for guidelines).
- ◆ Don't use a belt-sander, propane torch, high temperature heat gun, scraper, or sandpaper on painted surfaces that may contain lead.
- Don't try to remove lead-based paint yourself.

Exhibit G

Comments and Responses

PADEP reviewed the Draft FOST and responded on February 27, 2012 that they have no comments.

From: Pollich, Margaret [mailto:mpollich@pa.gov] Sent: Monday, February 27, 2012 11:08 AM To: Lin, Willie CIV NAVFAC HQ, BRAC PMO

Cc: Lisa Cunningham

Subject: Draft FOST for Shenandoah Woods/Willow Grove NASJRB

I have reviewed the Draft FOST for the Shenandoah Woods Housing Area associated with NASJRB Willow Grove. Based on the information contained in the FOST, I do not have any issues or concerns with its findings that the property is suitable to transfer. My concurrence with the FOST is based on the notices discussed and the covenants that will be contained in the deed.

Margaret Pollich | Project Officer Department of Environmental Protection 2 East Main Street | Norristown, PA 19401 Phone: 484-250-5731 | Fax: 484-250-5961

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