

**FINAL**

**PROPOSED PLAN FOR AN AMENDMENT TO THE  
1993 RECORD OF DECISION FOR THE LANDFILL AREA AT THE SUNSET GOLF COURSE  
OLMSTED AIR FORCE BASE (SUNSET ANNEX) Formerly Used Defense Site (FUDS)**

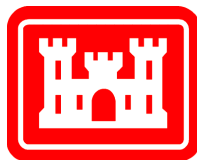
**LONDONDERRY TOWNSHIP, PENNSYLVANIA**

**FUDS Property Number: C03PA1016**

**May 2024**

**PREPARED BY:**

**U.S. Army Corps of Engineers  
Baltimore District**



Approved by:

Date:

---

JOHN L. PRIMAVERA, CDFM, SES  
Regional Business Director  
North Atlantic Division

[This page intentionally left blank.]

**Olmsted Air Force Base (Sunset Annex) Proposed Plan for  
Amendment to the 1993 Record of Decision**

<b>TABLE OF CONTENTS.....</b>	<b>3</b>
<b>LIST OF ACRONYMS.....</b>	<b>4</b>
<b>1.0 INTRODUCTION TO SITE AND STATEMENT OF PURPOSE.....</b>	<b>5</b>
<b>2.0 BACKGROUND .....</b>	<b>7</b>
2.1 Physical Characteristics.....	7
2.2 Land and Resource Use .....	7
2.3 History of Contamination .....	8
2.4 1993 ROD.....	8
2.5 Post-ROD Groundwater Studies .....	9
<b>3.0 SCOPE AND ROLE.....</b>	<b>14</b>
<b>4.0 SUMMARY OF SITE RISKS .....</b>	<b>15</b>
<b>5.0 SUMMARY OF FINDINGS AND PROPOSAL OF NO FURTHER ACTION .....</b>	<b>16</b>
<b>6.0 COMMUNITY PARTICIPATION .....</b>	<b>17</b>
<b>7.0 REFERENCES.....</b>	<b>18</b>
<b>8.0 APPENDIX.....</b>	<b>19</b>

## **List of Acronyms**

CB	chlorobenzene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COCs	Contaminants of Concern
DCE	dichloroethene
DoD	Department of Defense
PADEP	Pennsylvania Department of Environmental Protection
PP	Proposed Plan
ROD	Record of Decision
SHS	Statewide Health Standards
TCE	trichloroethene
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	Volatile Organic Compound

## 1.0 Introduction to Site and Statement of Purpose

This Proposed Plan (PP) recommends an amendment for a fundamental change to the groundwater remedy selected in the 1993 Record of Decision (ROD) for the Olmsted Air Force Base (Sunset Annex) at Sunset Golf Course, Londonderry Township, Pennsylvania. This PP considers additional information developed since the original ROD was approved.

This PP is prepared to satisfy Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9617(a). The PP explains the history of the Olmsted Air Force Base (Sunset Annex) as well as the type and extent of contamination found at the site.

The 1993 ROD for the Olmsted Air Force Base (Sunset Annex) included the following source control and exposure control measures:

1. Installation of a pervious cap over the Driving Range Landfill
2. Inventory and removal of exposed metal wastes on the Hillside Dump Area
3. Installation of fencing around the Hillside Dump Area

These source control components of the 1993 ROD were successfully performed between 1993 and 1994, and are not part of the scope of this PP.

The 1993 ROD also specified a groundwater remedy that included:

1. Installation of a groundwater extraction system, using a line of extraction wells located downgradient of the Hillside Dump Area. Extracted groundwater was to be treated on site by air stripping, with discharge of treated water to the Susquehanna River.
2. Performance of a pre-design round of groundwater sampling
3. Long-term groundwater quality monitoring program
4. Continuing enforcement of existing administrative controls on groundwater use.

Implementation of the groundwater portion of the remedy stated in the 1993 ROD was delayed because of access issues with adjacent landowners. Promulgation of Pennsylvania's *Land Recycling and Environmental Remediation Standards Act* (35 P.S. §§ 6026.101 – 6026.909) ("Act 2"), in 1997, provided additional considerations for addressing groundwater concerns at the Olmsted Air Force Base (Sunset Annex). Volatile organic compounds (VOCs) were the primary contaminants of concern (COCs) in groundwater at the site, and with removal of sources from the landfill, VOC concentrations have attenuated sufficiently over time to meet closure requirements under Pennsylvania Act 2 provisions. The U.S. Air Force (USAF) completed additional studies at the site demonstrating that the mass and concentration of VOCs in groundwater was decreasing due to naturally occurring physical, chemical, and biological processes. The USAF 2007 Final Report Under Combined Statewide Health/Site-Specific Standards provided documentation that the source control measures implemented under the ROD met Act 2 requirements and would ensure that

exposure pathways do not become complete in the future. The report also demonstrated that Statewide Health Standards (SHS) were attained for groundwater at the Olmsted Air Force Base (Sunset Annex).

The U.S. Army Corps of Engineers (USACE) is issuing this PP to amend the 1993 ROD decision for groundwater to a decision of no further action at the Olmsted Air Force Base (Sunset Annex). Groundwater is not used as a drinking water source in the area, nor is it expected to be used as a drinking water source in the reasonably anticipated future. Therefore, there is no unacceptable risk to the public due to consumption of groundwater. The public water supply from Royalton Borough was extended to private properties downgradient of the landfill in the 1980s. The USAF also considered the potential future use of groundwater as a drinking water source and completed investigations which demonstrated that there were no detectable concentrations of VOCs above the SHS that could be attributed to the Olmsted Air Force Base (Sunset Annex). Contaminant fate and transport modeling demonstrated that groundwater containing VOCs above the SHS will not likely be transported downgradient of the VOC in the future.

Consistent with Section 117(a) of CERCLA, USACE has issued a notice of availability for interested members of the public to review this proposed plan for amendment of the 1993 ROD.

A final amendment to the 1993 Record of Decision will be made publicly available after approval. This PP summarizes information that can be found in greater detail in the USAF February 2007 Final Report Under Statewide Health/Site-Specific Standards, Sunset Landfill Site, Londonderry Township, Pennsylvania, which is available upon request from supporting documents for this site.

The public is encouraged to review other supporting documents to gain a more comprehensive understanding of the Olmsted Air Force Base (Sunset Annex) site details and restoration history. Additional supporting documents are listed in Section 7.0 References. Supporting documents are available for review upon request as specified in Section 6.0. This PP is divided into the following sections:

- Section 1.0 Introduction to the Site and Statement of Purpose
- Section 2.0 Site Background
- Section 3.0 Scope and Role
- Section 4.0 Summary of Site Risks
- Section 5.0 Summary of Findings and Proposal of No Further Action
- Section 6.0 Community Participation
- Section 7.0 References
- Section 8.0 Public Notice of Availability of this Proposed Amendment

## **2.0 Site Background**

### **2.1 Physical Characteristics**

The Olmsted Air Force Base (Sunset Annex) site is situated on Sunset Hill in Londonderry Township, Pennsylvania, located approximately 1.5 miles southeast of the Harrisburg International Airport, and just east of Pennsylvania Route 441 and the Susquehanna River. The Sunset Landfill Annex Site includes the onsite Landfill Area (Figure 1-2) used by the USAF, and the historical extent of groundwater impacts associated with the Olmsted Air Force Base (Sunset Annex). Therefore, the Olmsted Air Force Base (Sunset Annex) includes the closed Hillside Dump Area and Driving Range Landfill that is part of the Sunset Golf Course (Figure 2-1) located at 783 South Geyers Church Road, Middletown, Pennsylvania (source area) and the area of impacted groundwater (or “plume”) emanating from the landfilled area. The groundwater plume historically extended from the source area in two directions, toward the northwest (just south of 1872 River Road) and toward the southwest (within the Tri-County Boat Club property).

### **2.2 Land and Resource Use**

The Olmsted Air Force Base (Sunset Annex) site includes recreational, residential, and railroad areas. Within the property boundary, the Olmsted Air Force Base (Sunset Annex) includes the Sunset Golf Course Driving Range Landfill and the closed Hillside Dump Area. CSX railroad tracks are located adjacent to the west of the Olmsted Air Force Base (Sunset Annex). West of the railroad tracks are residential areas (with some interspersed commercial businesses), extending to the Susquehanna River. In all, portions of approximately ten residences, two commercial enterprises including Costik Marina (2212 River Road) and Tri-County Boat Club (2229 River Rd), the CSX railroad tracks, and River Road are located within the area of the historical groundwater contaminant plume.

The westernmost portion of the Olmsted Air Force Base (Sunset Annex) site is situated near the top of Sunset Golf Course, at an elevation of between approximately 450 and 475 feet above mean sea level. The site slopes to the southwest toward the Susquehanna River. The river is located approximately 1,000 feet west of the landfill and is situated at an elevation of approximately 295 to 300 feet above mean sea level.

The Sunset Golf Course Driving Range Landfill has a cap, is vegetated with grass, and is currently used as the driving range of an active golf course. The Hillside Dump Area is steep (slopes an average of approximately 30 percent) and has a somewhat irregular topography. This dump area is covered with trees and a dense growth of deciduous vines. The toe of the Hillside Dump Area is located within 200 feet of the active CSX railroad line. The public water supply from Royalton Borough was extended to private properties downgradient of the landfill in the 1980s.

## **2.3 History of Contamination**

Sunset Hill was acquired by the USAF in 1956 as part of a program to upgrade the former Olmsted Air Force Base to accommodate jet aircraft. To achieve the proper glide angle for jet aircraft, 30 to 40 feet of rock were removed from the top of Sunset Hill. From 1956 to 1964 the USAF used approximately 15 acres of the property as a landfill, for a wide variety of wastes generated at the base. The landfill area is located on the western flank of the hill and is known as the Driving Range Landfill and Hillside Dump Area. Historical reports indicated wastes (hazardous and nonhazardous) were disposed at the landfill. No effort was made to segregate wastes by types.

In the summer of 1983, at the request of Londonderry Township, the Pennsylvania Department of Environmental Resources (now Pennsylvania Department of Environmental Protection [PADEP]) visited the Olmsted Air Force Base (Sunset Annex) and discovered a USAF drum labeled "TCE" (i.e., trichloroethene) on the western hillside within the Hillside Dump Area. PADEP sampled water from seeps on the hillside and at five residential wells immediately west of the site along Route 441 (River Road). Various solvents, including trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE), vinyl chloride (VC), and chlorobenzene (CB), were detected in the water.

The 1983 detections of chlorinated solvents in private wells resulted in the U.S. Environmental Protection Agency (USEPA) and the USAF extending the public water supply from Royalton Borough to the affected homes. The USAF completed characterization efforts in the 1980s as part of the Remedial Investigation, which led to the 1993 ROD. Groundwater data from the 1980s indicated that chlorinated solvents (VC, CB, 1,2-DCE, and TCE) were the primary COCs in groundwater, resulting from disposal of waste materials in the landfill. Manganese and iron were also identified as COCs in groundwater. The 2007 Act 2 closure document demonstrated that a secondary source area of groundwater contamination (tetrachloroethene) was present in the western edge of the plume, which was not related to military activities at the site. Tetrachloroethene had never been detected in soil or groundwater within the landfill limits.

## **2.4 1993 ROD**

The ROD for the Olmsted Air Force Base (Sunset Annex) was signed by the USAF on 13 January 1993 and by Pennsylvania Department of Environmental Resources (now PADEP) on October 30, 1992. The selected remedy addressed the principal threats identified at the site, which included exposure to contaminated groundwater, and exposure to contaminated surface soils and exposed metal wastes.

The 1993 ROD summarized the results of the human health risk assessment, which included exceedances of USEPA's risk management criteria for the potential future use of



groundwater as a drinking water source. Risk from exposure to surface water was deemed to be acceptable, at levels below USEPA's risk management criteria.

The major components of the source control remedy selected in the ROD included the following:

1. Installation of a pervious cap over the Driving Range Landfill
2. Inventory and removal of exposed metal wastes on the Hillside Dump Area
3. Installation of fencing around the Hillside Dump Area, to deter human entry.

The major components of the groundwater remedy selected in the ROD included the following:

1. Installation of a groundwater extraction system, using a line of extraction wells located downgradient of the Hillside Dump Area. Extracted groundwater was to be treated on site by air stripping, with discharge of treated water to the Susquehanna River.
2. Performance of a pre-design round of groundwater sampling
3. Long-term groundwater quality monitoring program
4. Continuing enforcement of existing administrative controls on groundwater use.

The source control components of the 1993 ROD were successfully completed between 1993 and 1994. Installation of the groundwater extraction system portion of the remedy stated in the 1993 ROD was never implemented because of access issues with adjacent landowners.

## **2.5 Post-ROD Groundwater Studies**

Promulgation of Pennsylvania's Act 2 in 1997 provided additional considerations in addressing groundwater concerns at the Olmsted Air Force Base (Sunset Annex). Post-ROD groundwater sampling indicated that the concentration and mass of chlorinated solvents was decreasing due to naturally occurring processes, and attainment of the SHS was likely achievable without implementation of the groundwater extraction remedy. The USAF began additional characterization of groundwater and pursued closure of the Olmsted Air Force Base (Sunset Annex) based on the additional characterization performed and in compliance with the requirements of Act 2. Additional groundwater characterization and fate and transport modeling was completed between 1998 and 2004.

The follow-on investigations conducted by the USAF demonstrated that natural attenuation of contaminants was ongoing and that recent sampling results were below state Medium-Specific Concentrations that are applicable to this site in accordance with Act 2 and the CERCLA.

The USAF 2007 Final Report Under Combined Statewide Health/Site-Specific Standards provided documentation that the source control measures implemented under

the ROD met Act 2 requirements and in compliance with the CERCLA and would adequately ensure that site contaminants would not migrate from the landfill area in the future. The final report also demonstrated that SHS were attained for groundwater at the Olmsted Air Force Base (Sunset Annex). PADEP concurred that groundwater monitoring could be discontinued, and all monitoring wells were abandoned.

Figure 1-1: Site Location Map

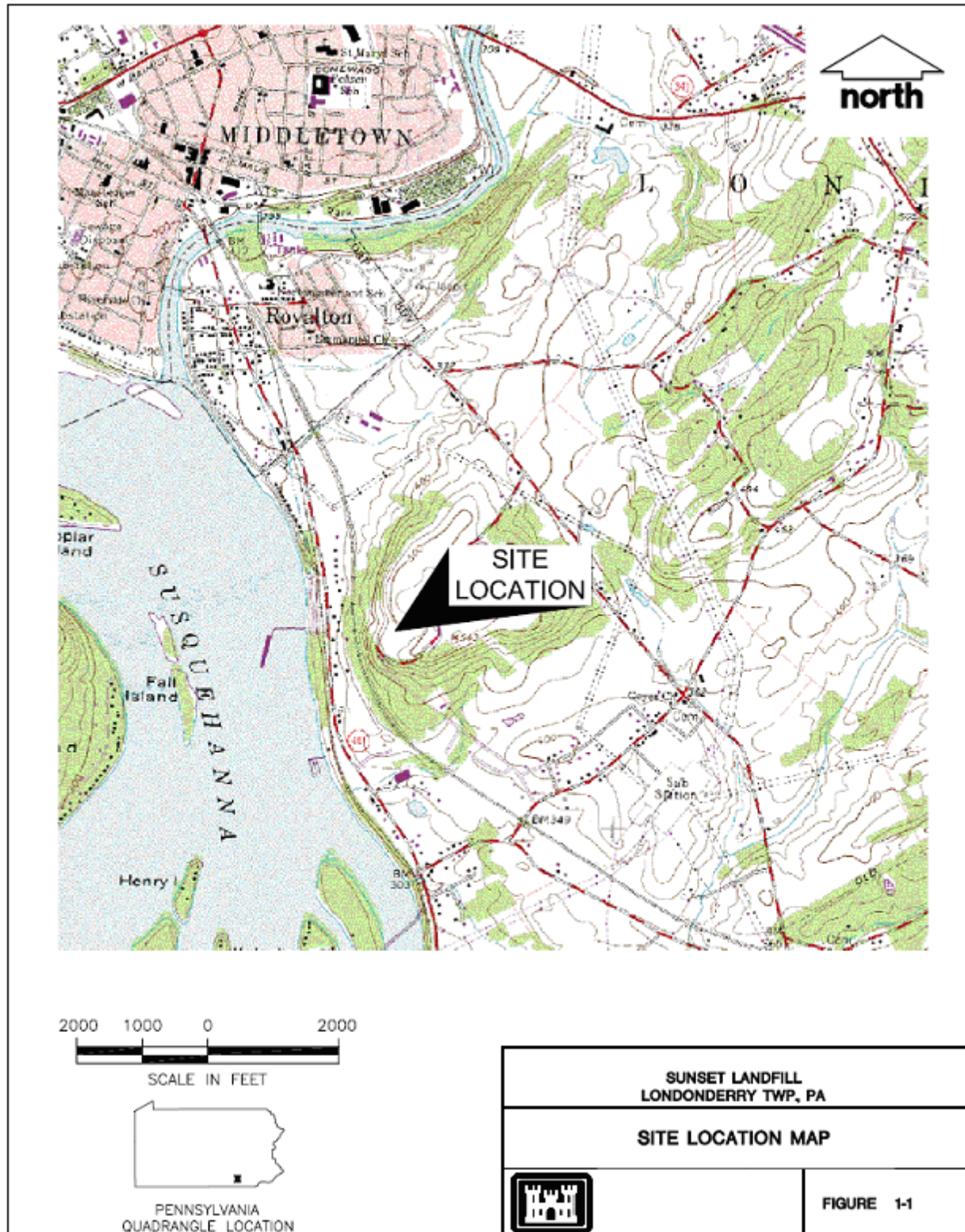
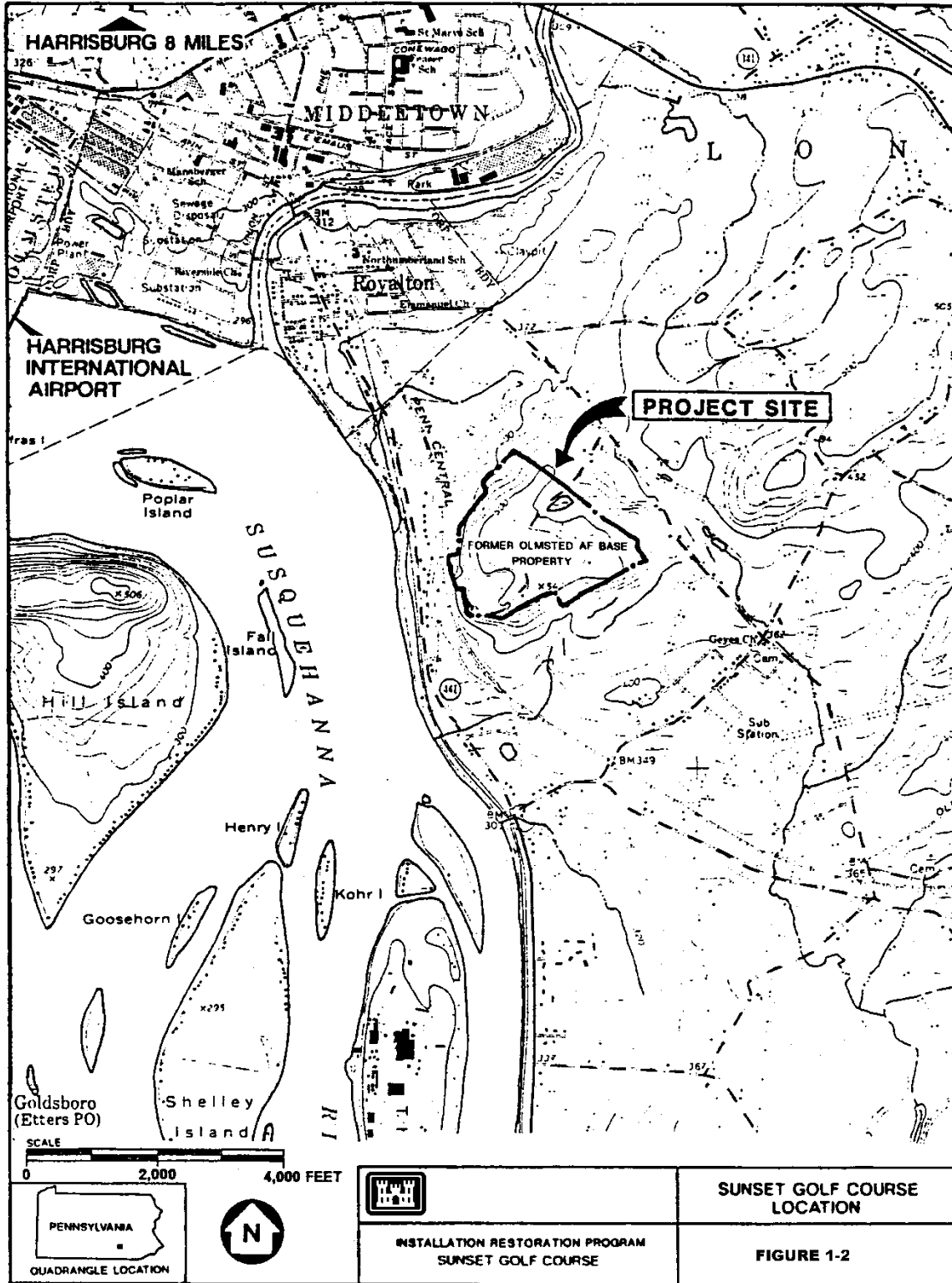
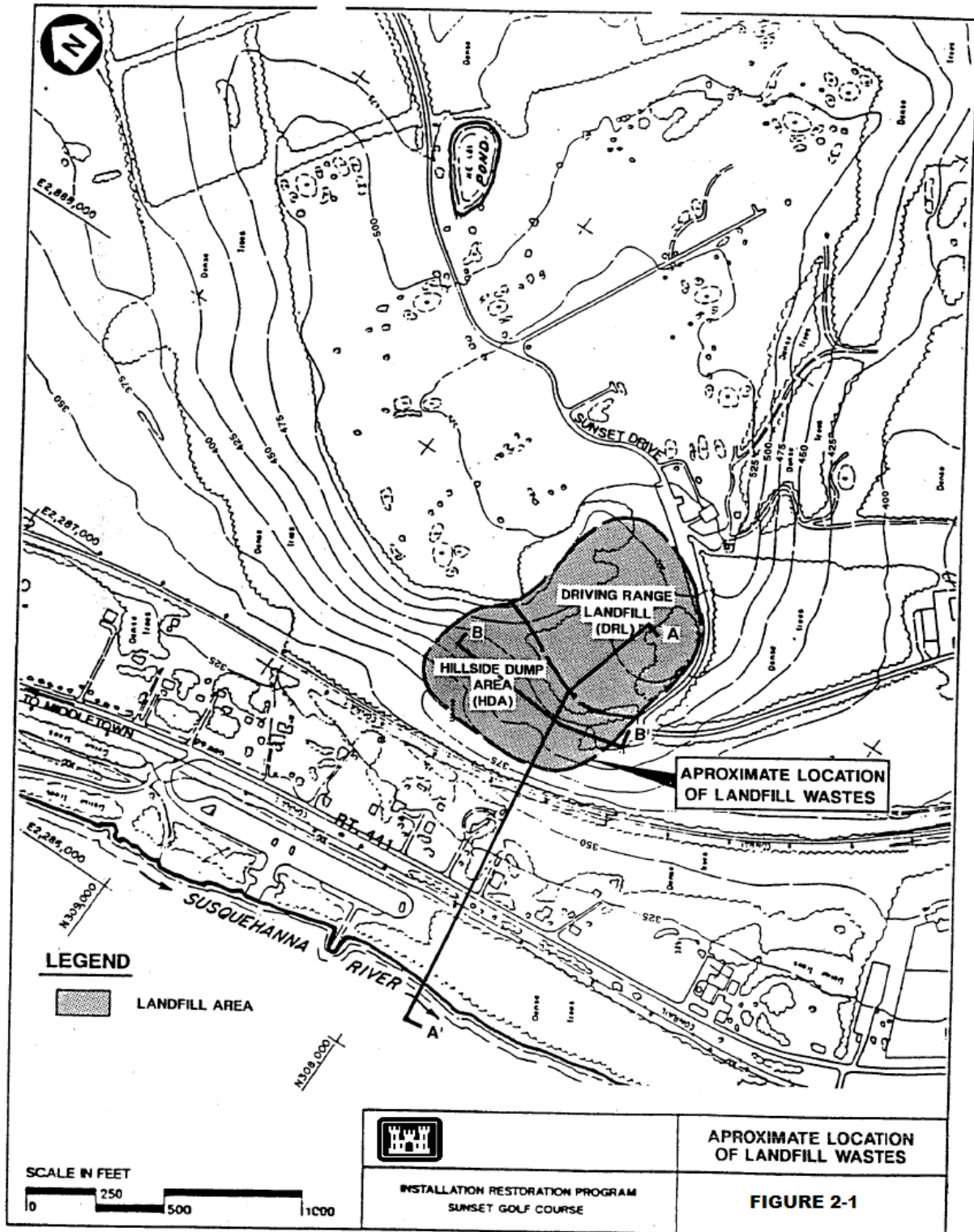


Figure 1-2: Sunset Golf Course Location



5093-03

Figure 2-1: Approximate Location of Landfill Wastes



### **3.0 Scope and Role**

This PP discusses groundwater contamination issues concerning the Department of Defense's (DoD) previous use of the Olmsted Air Force Base (Sunset Annex). The site is currently a golf course and golf driving range known as the Sunset Golf Course, owned by Londonderry Township. This PP does not involve any environmental impacts associated with the current use of the site, nor is it intended to address non-DoD contaminants.

This PP addresses groundwater contaminants that were initially detected at the Driving Range Landfill and the Hillside Dump Area. The 1993 ROD included source control remedies that were successfully implemented. The need for remedial action of groundwater was driven by the indication of unacceptable risks to human health and the environment posed at that time by groundwater contamination at the Olmsted Air Force Base (Sunset Annex) as identified in the 1993 ROD.

The major components of the groundwater remedy were not implemented due to access issues with adjacent landowners. This PP summarizes activities performed to date to investigate and re-evaluate the need for a groundwater remedial action at the site.



#### **4.0 Summary of Site Risks**

The 1993 ROD summarized the results of the human health risk assessment, which at that time included exceedances of USEPA's risk management criteria for the potential future use of groundwater as a drinking water source. Groundwater is not used as a drinking water source in the area. Human health and ecological risk from exposure to surface water was deemed to be acceptable, at levels below USEPA's risk management criteria.

The USAF 2007 Final Report Under Combined Statewide Health/Site-Specific Standards demonstrated that groundwater contaminant concentrations had reduced significantly since the original ROD was signed in 1993. The final report demonstrated that groundwater contaminant concentrations at the Olmsted Air Force Base (Sunset Annex) were all below Pennsylvania's SHS for an aquifer used as a residential drinking water source. The unacceptable risk from exposure to groundwater that was identified in the 1993 ROD no longer exists. Based on the new data in the USAF 2007 report, the PADEP concurred that groundwater monitoring could be discontinued, and all monitoring wells were abandoned.

## **5.0 Summary of Findings and Proposal of No Further Action**

Data collected since the 1993 ROD indicates that site conditions have significantly changed, and that natural attenuation of groundwater contaminants has occurred. Groundwater contaminant concentrations are now all below the residential SHS applicable to this site and is in compliance with CERCLA. Based on this recent data, groundwater at the site does not pose any unacceptable risks to human health or the environment and therefore a groundwater response action is not warranted for the Olmsted Air Force Base (Sunset Annex). Accordingly, USACE proposes to amend the ROD to a determination of No Further Action for groundwater for this site.



## **6.0 Community Participation**

Consistent with Section 117(a) of CERCLA, USACE has issued a notice of availability for interested members of the public to review this proposed plan for amendment of the 1993 ROD for the landfill area at the Sunset Golf Course.

A final amendment to the 1993 Record of Decision will be made publicly available after approval. To obtain further information, please contact the following representative:

U.S. Army Corps of Engineers, Baltimore District  
ATTN: Mr. Kendrick Nelson, CENAB-ENE-C  
2 Hopkins Plaza  
Baltimore, MD 21201

## 7.0 References

ABB Environmental Service, Inc. 1992. *Final Record of Decision for the Landfill Area at Sunset Golf Course, Londonderry Township, PA*. 30 September.

USAF. 2007. *Final Report Under Combined Statewide Health/Site-Specific Standards, Sunset Landfill Site, Londonderry Township, PA*. February.

USACE, Baltimore District. 2011. *Annual Review of the Sunset Landfill Site, Post-Remediation Care Plan, Londonderry Township, PA, 2008 through 2023*.

USACE, Baltimore District. 2024. *Third Five Year Review of the Olmsted Air Force Base (Sunset Annex), Post-Remediation Care Plan, Londonderry Township, PA, March 2024*.

## 8.0 Public Notice of Availability of this Proposed Amendment



**US Army Corps  
of Engineers®**

### **OLMSTED AIR FORCE BASE (SUNSET ANNEX), FORMERLY USED DEFENSE SITE**

### **NOTICE OF AVAILABILITY OF THE PROPOSED AMENDMENT TO THE 1993 RECORD OF DECISION FOR THE LANDFILL AREA AT SUNSET GOLF COURSE, LONDONDERRY TOWNSHIP**

The U.S. Army Corps of Engineers, Baltimore District, is proposing an amendment to the 1993 Record of Decision (ROD) for the United States Air Force (USAF) Sunset Annex, Landfill Area at Sunset Golf Course, Formerly Used Defense Site, also known as Olmsted Air Force Base (Sunset Annex). This Proposed Amendment considers additional information developed since the original 1993 ROD was approved.

The Sunset Annex Landfill Area is situated on Sunset Hill in Londonderry Township, Pennsylvania, located approximately 1.5 miles southeast of the Harrisburg International Airport, and just east of Pennsylvania Route 441 and the Susquehanna River. The site currently functions as the Sunset Golf Course driving range area. The non-contiguous Sunset Hill was acquired by the USAF in 1956 as part of a program to upgrade the former Olmsted Air Force Base (AFB) to accommodate jet aircraft. To create a proper glide angle for jets, the top of Sunset Hill was removed. Following the removal of the hilltop and prior to construction of the golf course, the USAF used approximately 15 acres of the property as a landfill to dispose of metals, wood, paper, and liquids wastes, including spent solvents generated at the AFB. The landfill was used from 1956 to 1964. Olmsted AFB was retired in 1966, and in 1968, the Sunset Golf Course, including the Landfill Site and the Hillside Dump, were sold to Londonderry Township, a municipal subdivision of the Commonwealth of Pennsylvania. In 1983 nearby residents were integrated into the public water supply after the discovery of a drum labeled "TCE" (i.e., trichloroethene) and collection of water samples indicating the presence of various solvents in ground water in the landfill area. The original ROD called for the installation of a groundwater extraction system using a line of extraction wells located downgradient of the Hillside Dump Area. Extracted groundwater was to be treated on site by air stripping, with discharge of treated water to the Susquehanna River. After encountering access issues with adjacent landowners, the groundwater extraction system could not be implemented. Data collected since the 1993 ROD indicates that site conditions have significantly changed, and that natural attenuation of groundwater contaminants has occurred. In 2007, it was determined that groundwater at the Sunset Annex Landfill Site attained the Residential Statewide

Health Standard for organic and inorganic contaminants. Environmental monitoring confirmed that the site is safe for recreational use. Groundwater contaminant concentrations are now all below the residential Statewide Health Standards (SHS) applicable to this site. Based on this recent data, the USACE proposes to amend the 1993 Record of Decision to a remedy of No Further Action for groundwater for the Landfill Area at the Sunset Golf Course.

The proposed amendment to the 1993 ROD is available for public review at <https://www.nab.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/>, and at the Londonderry Township Building located in Dauphin County, Pennsylvania at 783 South Geyers Church Road - Middletown, PA 17057, and at the USACE Baltimore District Office at 2 Hopkins Plaza Baltimore, MD 21201. The point of contact for further information is Mr. Kendrick Nelson, Project Manager, U.S. Army Corps of Engineers, Baltimore District at (443) 666-0633 or [Kendrick.J.Nelson@usace.army.mil](mailto:Kendrick.J.Nelson@usace.army.mil). Once the ROD amendment is approved, anticipated date sometime in May 2024, the amendment document will be available on the Baltimore District environment Public Notice site <https://www.nab.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/>, and at the Londonderry Township Building located in Dauphin County, Pennsylvania at 783 South Geyers Church Road - Middletown, PA 17057, and at the USACE Baltimore District Office at 2 Hopkins Plaza Baltimore, MD 21201.

**Contact Information:** For further information please contact Mr. Kendrick Nelson, Project Manager, U.S. Army Corps of Engineers, Baltimore District at (443) 666-0633 or by email at [Kendrick.J.Nelson@usace.army.mil](mailto:Kendrick.J.Nelson@usace.army.mil).

