



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON
4551 LLEWELLYN AVENUE, SUITE 5000
FORT GEORGE G. MEADE, MARYLAND 20755-5000

March 30, 2016

Environmental Division

Mr. Robert Stroud
U.S. Environmental Protection Agency
USEPA REGION 3
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Stroud:

This letter serves as notification that the *Draft 2015 Annual Maintenance Inspection Report for FGGM-007-R Inactive Landfill 2 (IAL2), Fort George G. Meade, Maryland* (Report) has been finalized. The U.S. Environmental Protection Agency, Maryland Department of the Environment, and Department of the Interior have approved the draft report without comment. A statement on page 2-1 was revised from "Anne Arundel County" to "Anne Arundel County Tipton Airport Authority" per Tipton Airport comment. Copies of the Report have been furnished to Francis Coulters (U.S. Army Environmental Command), Elisabeth Green (Maryland Department of the Environment), Brad Knudsen (Department of the Interior), Michael Wassel (Tipton Airport), and the Fort Meade Restoration Advisory Board.

If you have any questions, please feel free to contact Denise Tegtmeyer at (301) 677-9559 or me at (301) 677-7999.

Sincerely,

A handwritten signature in black ink, appearing to read "G. B. Knight".

George B. Knight, PG
Program Manager, Installation Restoration Program
Directorate of Public Works -Environmental Division

Enclosure

**FINAL 2015 Annual Maintenance Inspection Report
INACTIVE LANDFILL No. 2 (FGGM-007-R)
AT FORT GEORGE G. MEADE, MARYLAND**

Prepared By:
**Fort George G. Meade
Directorate of Public Works - Environmental Division
4216 Roberts Ave, Suite 5115
Fort Meade, Maryland 20755-7068**

March 2016



TABLE OF CONTENTS

Contents

1	EXECUTIVE SUMMARY	1-1
2	INTRODUCTION AND SITE BACKGROUND	2-1
2.1	SITE HISTORY	2-1
3	PROJECT ACTIVITIES	3-1
3.1	SUMMARY OF ACTIVITIES	3-1
3.2	MAINTENANCE AND INSPECTION RESULTS AND RECOMMENDATIONS	3-1
3.2.1	<i>Conclusions</i>	3-2
3.2.2	<i>Recommendations</i>	3-2
4	REFERENCES	4-1

Figures

2-1	Site Location Map.....	2-3
3-1	Field Activities Conducted at IAL2.....	3-4

Appendices

A	Photograph Documentation
B	USEPA Site Inspection Checklist
C	Regulatory Acceptance Letter(s)



List of Acronyms

BRAC	Base Realignment and Closure
FGGM	Fort George G. Meade
ft	foot
IAL2	Inactive Landfill No. 2
PRR	Patuxent Research Refuge
U.S.	United States
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USEPA	United States Environmental Protection Agency



1 EXECUTIVE SUMMARY

This Report presents the results of the 2015 annual maintenance inspection of Inactive Landfill No. 2 (IAL2) at Fort George G. Meade (FGGM), Anne Arundel County, Maryland. The maintenance inspection was conducted on 4 November 2015 by FGGM Directorate of Public Works – Environmental Division. The annual maintenance inspection complies with the Record of Decision (U.S. Army, 1998) that requires the Army to perform maintenance inspections to ensure the site remedies continue to provide protection to human health and the environment and to confirm the continuing observance of the land use controls. The purpose of the IAL2 inspection is to confirm the integrity of the perimeter fence and signage.

The IAL2 perimeter fence is intact following the 2015 vegetation maintenance and fence repair events. The security signs posted at the main gate and along Wildlife Loop Road are intact, although some are faded. The four gates are secured with chains and locks in good condition.

At certain locations, vegetation is prone to overgrowth; and if not addressed, it could impact the integrity of the fence and impair future visual inspections. At the time of the inspection, high water levels were observed near the pond/wetland area along the northern boundary. However, during dry periods, the fence does not provide an adequate safety control, resulting in a range of less than one foot to three feet gap between the surface and fence.



2 INTRODUCTION AND SITE BACKGROUND

Fort George G. Meade (FGGM) is located in northwestern Anne Arundel County, Maryland, directly west of the city of Odenton and directly east of the city of Laurel, Baltimore Washington Parkway (Route 295), and Maryland Route 32. FGGM has been a permanent United States (U.S.) Army installation since 1917 and comprised 13,596 acres. In December 1988, the Secretary of Defense issued a Base Realignment and Closure (BRAC) report identifying approximately 9,000 acres for closure and realignment at FGGM. To date, 8,100 acres have been transferred to the Department of the Interior Patuxent Research Refuge (PRR) for use as a wildlife refuge. The Army retained 900 acres of the BRAC parcel, which included the 366-acre Tipton Airfield. The Army began leasing the Tipton Airfield parcel to Anne Arundel County for use as a General Aviation Facility in 1998 and officially transferred the property to Anne Arundel County Tipton Airport Authority on November 1, 1999. Following the realignment, the installation covers approximately 5,100 acres.

The Inactive Landfill No. 2 (IAL2) site is approximately 20 acres, which includes the 10 acre landfill. The site is retained by the Army (did not transfer with the BRAC Tipton Airfield), and is located adjacent to the PRR parcel, south of Tipton Airport Authority parcel, and north of Wildlife Loop Road (**Figure 2-1**).

2.1 SITE HISTORY

Historical aerial photographs of IAL2 compiled by the United States Environmental Protection Agency (USEPA) show that IAL2 was initially operated as a soil borrow area (USEPA cited in United States Army Corps of Engineers [USACE], 2001). Large active excavations are apparent in aerial photographs from 1938 and 1943. According to the Enhanced Preliminary Assessment Report (United States Army Environmental Center [USAEC], 1989), sometime after 1952 the area was operated as an unlined rubble disposal area that reached its maximum extent by 1963. IAL2 was used sparingly between the years 1963 and 1970 when aerial photographs show the area was being increasingly re-vegetated. A single north-northwest trending trench was reported visible along the east side of the access road in 1970 (USEPA cited in USACE, 2001). Continued disposal activity occurred after 1980 in the northern portion of IAL2 where graded and disturbed areas are visible in 1986. During the remedial investigation fieldwork, piles of rubble (brush, concrete, and asphalt debris) which appear to be of more recent origin were observed in a pond/wetland area on the north side of IAL2. The site could not be cleared of suspected ordnance because of the large amounts of rubble debris and shallow water table. No buildings or structures are present at the IAL2.

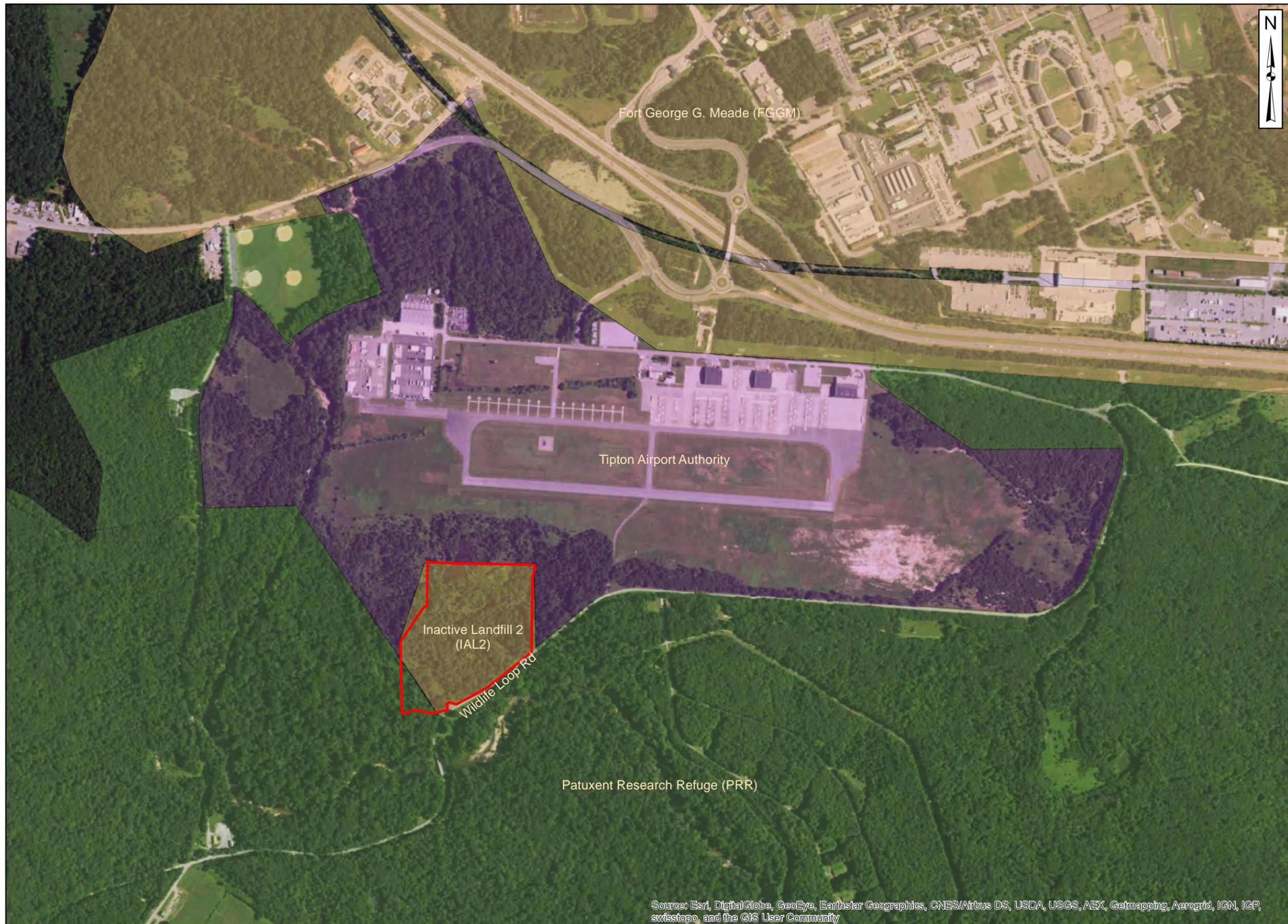
The Decision Document (U.S. Army, 1998) stated that an engineering control, a perimeter fence, be installed at the site; the fence encloses approximately 20 acres. The Decision



Document also stated that fence be inspected periodically and any damage be repaired. Three gates provide access to the site: at the southwest corner of the fence a gate opens to Wildlife Loop Road and in the north fence line two gates open to the Tipton Airfield; one at the northwest corner and the second near two groundwater monitoring wells. Based on an examination of aerial photographs, the perimeter fence is approximately 4,100 feet long. The seven foot high chain link fence is composed of three-strand barbed wire and ties into an existing fence along Wildlife Loop Road. Groundwater monitoring is documented in the Combined Groundwater Operable Units Long-Term Monitoring Report (EA, 2015).

Figure 2-1

Inactive Landfill 2 Site Location



Legend

-  IAL2 Land Use Control
-  FGGM
-  Tipton Airport
-  PRR

0 255 510 1,020 Feet



DPW-ED Installation Restoration Program,
US Army Garrison Fort George G. Meade
4216 Roberts Ave, Suite 5115,
Fort George G. Meade, MD 20755
301-677-9168

Fort Meade makes no warranties, implied or expressed, with respect to the information shown on this product. Data was derived from various official sources. Created using ESRI ArcGIS 10.2 by IRP, DPW-ED, FGGM. 18 Dec 2015.

For Official Use Only.



3 PROJECT ACTIVITIES

3.1 SUMMARY OF ACTIVITIES

Per the 2014 Annual Inspection Report (FGGM, 2015) recommendations, a contractor was obtained to provide maintenance for the fence perimeter, including vegetation clearing. The following actions were completed in July and November 2015, and are documented in the Site Specific Maintenance and Repairs Report (EA, 2015):

- Section of damaged fence (40ft) along the western boundary was repaired,
- Various fallen trees and limbs were removed from the fence perimeter,
- Buffer (5ft) along the interior and exterior fence perimeter was cleared of vegetation including saplings and herbaceous growth,
- Vines were removed from the chain link fence using hand tools, and
- Safety support for munitions and explosives of concern was conducted.

As part of the maintenance repairs oversight, the fence line was inspected on 28 July 2015 and 4 November 2015. The inspections confirmed vegetation removal and fence repair.

Additional site visits were conducted on 27 April, 22 May, 23 September, and 6 October 2015 to inspect for damage following significant storm events. Various tree limbs and debris were noted on the western fence following storm events. Herbaceous regrowth was observed at several locations along the fence line since the 10 September 2014 inspection and between the two 2015 maintenance events. Also during site visits, the northern section of fence was monitored for gaps in the pond/wetland areas and to evaluate frequency of dry periods; however, no seasonal dry periods or fence gaps were observed due to high water levels.

On 4 November 2015 FGGM Directorate of Public Works – Environmental Division conducted the annual maintenance inspection of the fence at IAL2. The annual maintenance inspection of IAL2 focused on examining the fence as a land use control. The inspection examined the fence for damage, warning sign postings, and security measures (gates, locks, holes in fence).

3.2 MAINTENANCE AND INSPECTION RESULTS AND RECOMMENDATIONS

The IAL2 inspection included a visual inspection of the fence, the gates, and the warning signs posted at the site. The entire fence was traversed. **Figure 3-1** presents a site map identifying key features and photograph locations. Photographs of IAL2 features are included in **Appendix A**. USEPA Site Inspection Checklist is included in **Appendix B**.



Photo 1 shows the gate at the southwest corner of IAL2 including signage stating that the property is “Off Limits To All Unauthorized Personnel.” Several signs stating “Danger: U.S. Government Property, Keep Out” are also posted along the fence perimeter. Signs along Wildlife Loop Rd are partially faded as shown in Photos 2, 10, and 12 but were not replaced.

Conditions along the fence perimeter are shown in Photos 4 and 5 (western boundary), 6 through 8 (northern boundary), 9 (eastern boundary), and 3, 10, 11 and 12 (southern boundary). Photos show cleared vegetation following the second 2015 vegetation maintenance event which allowed for adequate access. Photos 6 and 7 show the wetland area along the northern perimeter. Given the varying water levels in the pond/wetland, there is potential for a gap between the fence and the ground surface at varying water heights, however during the 2015 inspection no gaps were observed. The fence in this area is rusted but is intact.

Vegetation regrowth was observed between maintenance events on the fence and within the interior and exterior 5ft buffer clearance area along the perimeter fence. Minor mammal burrows under the fence were also noted.

Three gates are installed in the IAL2 fence and are identified on **Figure 3-1**. All gates are secured with chains and locks. Each lock was observed to be in working order at time of the inspection.

3.2.1 Conclusions

Following the 2015 repairs, the fence is intact. Additionally, significant vegetation regrowth was successfully removed following two vegetation clearance events at various locations on the fence and in the buffer area. Continued vegetation growth may impair future visual site inspections. Several signs along the southern fence at Wildlife Loop Rd were observed to be faded.

3.2.2 Recommendations

- In the event of future fence damage, repair or replace damaged sections including the barbed wire and braces.
- Conduct future inspections during late fall, winter, or early spring when vegetation is low.
- Continue to monitor the northern section of fence spanning the pond that compromises the security perimeter, in order to determine frequency of dry periods and evaluate if the fence should be extended to the ground.
- Replace faded signs.
- Signs should be redesigned to reflect appropriate land use control warnings, including the potential for unexploded ordnance.

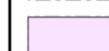
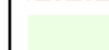


- Ensure signs are compliant and present at all gates and along entire fence.
- Vegetation, especially in sunny areas, is prone to regrowth along the fence line and interior and exterior 5ft buffer areas along the fence perimeter. Periodic, routine cutting of the vegetation is recommended. Due to the proximity to the PRR and the herbaceous nature of the vegetation, frequent vegetation clearing is recommended in lieu of herbicide applications.
- Actions should be taken to reduce or remove vegetation regrowth in/on the fence to ensure the continued integrity of the fence as a land use control measure.
- Continue to inspect the fence line at IAL2 after significant storm events that cause damage on the installation and surrounding community.

Figure 3-1

Inactive Landfill 2
Field Activities

Legend

-  IAL2 Land Use Control
-  IAL2
-  FGGM
-  Tipton Airport
-  PRR
-  Fence Line
-  Gate Location
-  Photograph Location

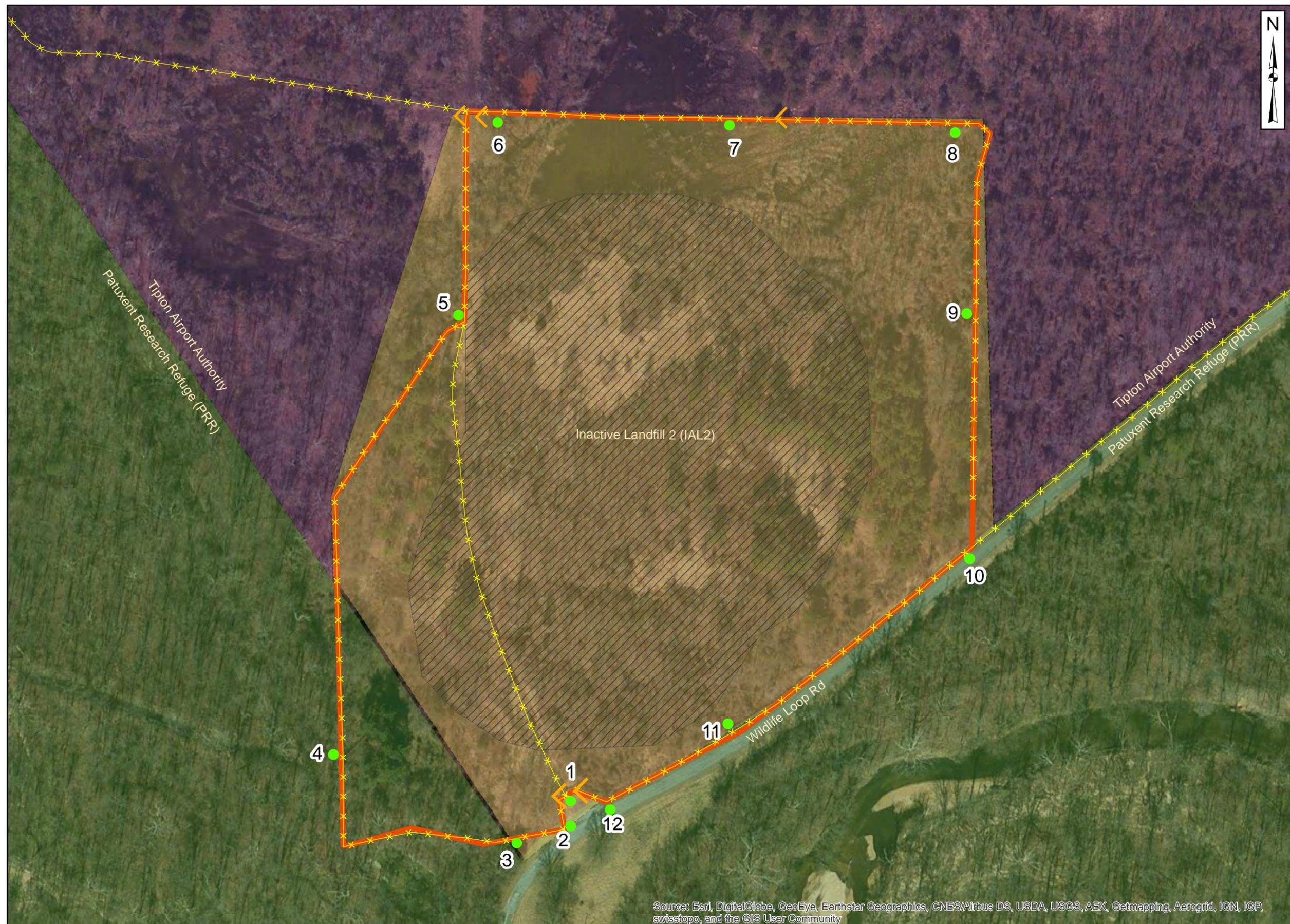
0 100 200
Feet



DPW-ED Installation Restoration Program,
US Army Garrison Fort George G. Meade
4216 Roberts Ave, Suite 5115,
Fort George G. Meade, MD 20755
301-677-9168

Fort Meade makes no warranties, implied or expressed, with respect to the information shown on this product. Data was derived from various official sources. Created using ESRI ArcGIS 10.2 by IRP, DPW-ED, FGGM. 18 Dec 2015.

For Official Use Only.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



4 REFERENCES

EA Engineering, Science, and Technology, Inc., 2015. Draft 2015 Combined Groundwater Operable Units Long-Term Monitoring Report, Fort George G. Meade, Legacy Base Realignment and Closure Program, Anne Arundel County, Maryland. December 2015.

EA Engineering, Science, and Technology, Inc., 2015. Draft 2015 Site Specific Maintenance and Repairs Report for FGGM-007-R Inactive Landfill No. 2, Fort George G. Meade, Maryland. December 2015.

FGGM, 2015. Final 2014 Annual Maintenance Inspection Report for FGGM-007-R Inactive Landfill No. 2, Fort George G. Meade, Maryland. February 2015.

U.S. Army Environmental Center (USAEC), 1989. Enhanced Preliminary Assessment Report: Fort George G. Meade, Maryland. Final. Environmental Research Division, Argonne, IL. October 1989.

U.S. Army, 1998. Decision Document Safety Precautions to be taken at Tipton Airfield, Fort George G. Meade. U.S. Army Fort George G. Meade, July 9, 1998.

USACE, 2001. Fort George G. Meade Long Term Monitoring Plan for Tipton Area, Draft, April 2001.



Appendix A

Photographic Documentation of Inactive Landfill No. 2



ANNUAL MAINTENANCE INSPECTION REPORT
APPENDIX A: PHOTOGRAPH DOCUMENTATION
INACTIVE LANDFILL 2, FGGM, MARYLAND

Photo No.: 1	Date: 11/4/2015	
Direction Photo Taken: North		
Description: View north along the southern exterior boundary showing the locked main access gate to IAL2 and the "Off Limits" signage. This area is adjacent to Wildlife Loop Road.		

Photo No.: 2	Date: 11/4/2015	
Direction Photo Taken: West		
Description: View west along the southern exterior fence. This area is adjacent to Wildlife Loop Road. "Danger" sign is faded and recommended for replacement.		



Photo No.: 3	Date: 11/4/2015	
Direction Photo Taken: West		
Description: View west along the southern exterior fence toward southwestern corner.		

Photo No.: 4	Date: 11/4/2015	
Direction Photo Taken: North		
Description: View north along the western exterior fence line showing repaired fence and cleared vegetation.		



ANNUAL MAINTENANCE INSPECTION REPORT
APPENDIX A: PHOTOGRAPH DOCUMENTATION
INACTIVE LANDFILL 2, FGGM, MARYLAND

Photo No.: 5	Date: 11/4/2015	
Direction Photo Taken: North		
Description: View north along the western exterior fence toward northern access gate.		

Photo No.: 6	Date: 11/4/2015	
Direction Photo Taken: East		
Description: View east along the northern interior fence showing cleared vegetation and standing water in wetland area.		



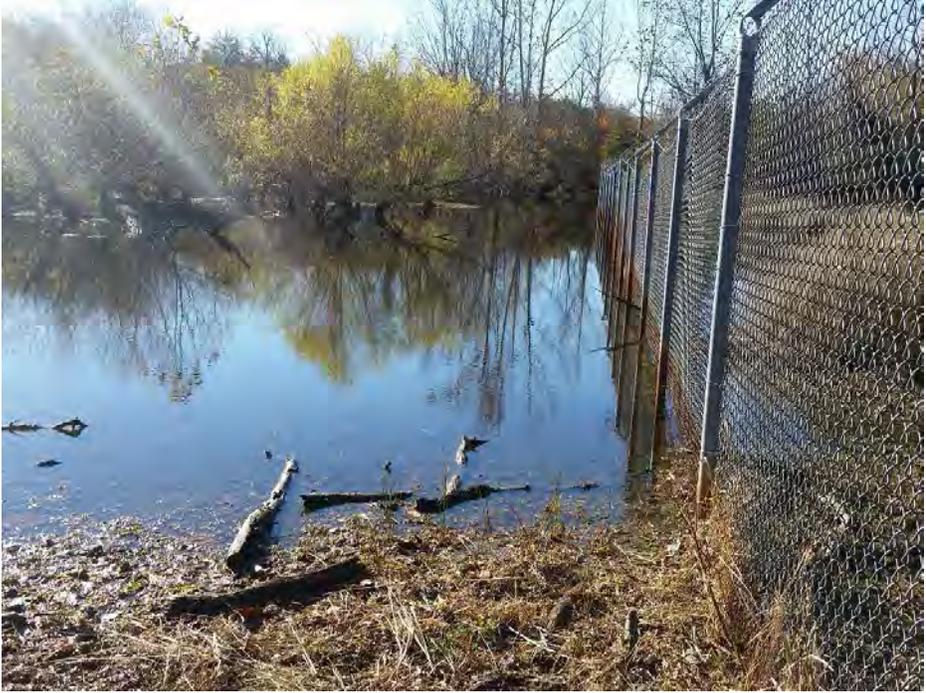
Photo No.: 7	Date: 11/4/2015	
Direction Photo Taken: West		
Description: View west along the northern interior fence showing pond in wetland area. Rust is visible from the water line.		

Photo No.: 8	Date: 11/4/2015	
Direction Photo Taken: West		
Description: View west along northern interior fence toward monitoring wells.		



Photo No.: 9	Date: 11/4/2015	
Direction Photo Taken: North		
Description: View north along the eastern interior fence showing recently cleared vegetation.		

Photo No.: 10	Date: 11/4/2015	
Direction Photo Taken: North		
Description: View north at the southeastern corner exterior boundary. "Danger" sign is faded and recommended for replacement.		



ANNUAL MAINTENANCE INSPECTION REPORT
APPENDIX A: PHOTOGRAPH DOCUMENTATION
INACTIVE LANDFILL 2, FGGM, MARYLAND

Photo No.: 11	Date: 11/4/2015	
Direction Photo Taken: East		
Description: View east along the southern interior fence showing recently cleared vegetation.		

Photo No.: 12	Date: 11/4/2015	
Direction Photo Taken: East		
Description: View east along the southern exterior boundary showing cleared vegetation and faded "Danger" signage recommended for replacement.		



Appendix B
USEPA Site Inspection Checklist

Site Inspection Checklist

I. SITE INFORMATION				
Site name: <i>Inactive Landfill 2 (IAL2)</i>	Date of inspection: <i>4 November 2015</i>			
Location and Region: <i>Fort Meade, MD (Region 3)</i>	EPA ID: <i>MD0910020567</i>			
Agency, office, or company leading the five-year review: <i>Fort Meade Environmental Division</i>	Weather/temperature: <i>partly cloudy, 75 °F</i>			
Remedy Includes: (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other: </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </td> </tr> </table>		<input type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other:	<input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls	
<input type="checkbox"/> Landfill cover/containment <input checked="" type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other:	<input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls			
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached				
II. INTERVIEWS (Check all that apply)				
1. O&M Site Manager : <u>n/a</u> _____ <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 40%; text-align: center;">Name</td> <td style="width: 30%; text-align: center;">Title</td> <td style="width: 30%; text-align: center;">Date</td> </tr> </table> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions; <input type="checkbox"/> Report attached _____ _____		Name	Title	Date
Name	Title	Date		
2. O&M staff <u>n/a</u> _____ <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 40%; text-align: center;">Name</td> <td style="width: 30%; text-align: center;">Title</td> <td style="width: 30%; text-align: center;">Date</td> </tr> </table> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions; <input type="checkbox"/> Report attached _____ _____		Name	Title	Date
Name	Title	Date		

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1.	O&M Documents	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> O&M manual	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Maintenance logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

2.	Site-Specific Health and Safety Plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

3.	O&M and OSHA Training Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

4.	Permits and Service Agreements	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Other permits _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

5.	Gas Generation Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

6.	Settlement Monument Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

7.	Groundwater Monitoring Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

8.	Leachate Extraction Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

9.	Discharge Compliance Records	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	Remarks _____			

10.	Daily Access/Security Logs	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	Remarks <u>This information is kept at the Patuxent Research Refuge (PRR) Visitor Center.</u>			

C. Institutional Controls (ICs)			
1.	Implementation and enforcement		
	Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Type of monitoring (e.g., self-reporting, drive by) <u>self-reporting</u>		
	Frequency <u>Annual</u>		
	Responsible party/agency <u>Fort Meade Environmental Division</u>		
	Contact <u>George Knight</u>	<u>IRP Manager</u>	<u>301-677-7999</u>
	Name	Title	Phone no.
	Reporting is up-to-date	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
	Reports are verified by the lead agency	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
	Specific requirements in deed or decision documents have been met	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
	Violations have been reported	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Other problems or suggestions: <input type="checkbox"/> Report attached		

2.	Adequacy	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A
	Remarks _____		

D. General			
1.	Vandalism/trespassing	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident
	Remarks _____		

2.	Land use changes on site	<input checked="" type="checkbox"/> N/A	
	Remarks _____		

3.	Land use changes off site	<input checked="" type="checkbox"/> N/A	
	Remarks _____		

VI. GENERAL SITE CONDITIONS			
A. Roads <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Roads damaged	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Roads adequate <input checked="" type="checkbox"/> N/A
	Remarks _____		

B. Other Site Conditions		
Remarks <u>n/a</u> _____ _____ _____		
VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
A. Landfill Surface		
1.	Settlement (Low spots) Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident
2.	Cracks Lengths _____ Widths _____ Depths _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Cracking not evident
3.	Erosion Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident
4.	Holes Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____ _____	
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks _____ _____	
7.	Bulges Areal extent _____ Height _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident
8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____ _____	

9. **Slope Instability** Slides Location shown on site map No evidence of slope instability
 Areal extent _____
 Remarks _____

B. Benches Applicable N/A
 (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** Location shown on site map N/A or okay
 Remarks _____

2. **Bench Breached** Location shown on site map N/A or okay
 Remarks _____

3. **Bench Overtopped** Location shown on site map N/A or okay
 Remarks _____

C. Letdown Channels Applicable N/A
 (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** Location shown on site map No evidence of settlement
 Areal extent _____ Depth _____
 Remarks _____

2. **Material Degradation** Location shown on site map No evidence of degradation
 Material type _____ Areal extent _____
 Remarks _____

3. **Erosion** Location shown on site map No evidence of erosion
 Areal extent _____ Depth _____
 Remarks: _____

4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Areal extent _____	Depth _____	
	Remarks _____		
<hr/>			
5.	Obstructions	Type _____	<input type="checkbox"/> No obstructions
	<input type="checkbox"/> Location shown on site map	Areal extent _____	Size _____
	Remarks _____		
<hr/>			
6.	Excessive Vegetative Growth	Type _____	
	<input type="checkbox"/> No evidence of excessive growth		
	<input type="checkbox"/> Vegetation in channels does not obstruct flow		
	<input type="checkbox"/> Location shown on site map	Areal extent _____	
	Remarks _____		
<hr/>			
D. Cover Penetrations <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Gas Vents	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	Remarks _____		
<hr/>			
2.	Gas Monitoring Probes	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Good condition		
	<input type="checkbox"/> N/A		
	Remarks _____		
<hr/>			
3.	Monitoring Wells (within surface area of landfill)	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Good condition		
	<input type="checkbox"/> N/A		
	Remarks _____		
<hr/>			
4.	Leachate Extraction Wells	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Good condition		
	<input type="checkbox"/> N/A		
	Remarks _____		
<hr/>			
5.	Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed
	<input type="checkbox"/> N/A		
	Remarks _____		
<hr/>			

E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____	
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____	
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	
F. Cover Drainage Layer <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
2.	Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Siltation Areal extent _____ Depth _____ <input type="checkbox"/> N/A <input type="checkbox"/> Siltation not evident Remarks _____ _____	
2.	Erosion Areal extent _____ Depth _____ <input type="checkbox"/> Erosion not evident Remarks _____ _____	
3.	Outlet Works <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
4.	Dam <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	

H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Deformations <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident Horizontal displacement_____ Vertical displacement_____	
	Rotational displacement_____	
	Remarks_____	
2.	Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Degradation not evident	
	Remarks_____	
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Siltation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Siltation not evident Areal extent_____ Depth_____	
	Remarks_____	
2.	Vegetative Growth <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input type="checkbox"/> Vegetation does not impede flow	
	Areal extent_____ Type_____	
	Remarks_____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent_____ Depth_____	
	Remarks_____	
4.	Discharge Structure <input type="checkbox"/> Functioning <input type="checkbox"/> N/A	
	Remarks_____	
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent_____ Depth_____	
	Remarks_____	
2.	Performance Monitoring Type of monitoring_____	
	<input type="checkbox"/> Performance not monitored	
	Frequency_____ <input type="checkbox"/> Evidence of breaching	
	Head differential_____	
	Remarks_____	

C. Treatment System		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Treatment Train (Check components that apply)	<input type="checkbox"/> Metals removal	<input type="checkbox"/> Oil/water separation
		<input type="checkbox"/> Air stripping	<input type="checkbox"/> Carbon adsorbers
		<input type="checkbox"/> Filters _____	<input type="checkbox"/> Bioremediation
		<input type="checkbox"/> Additive (<i>e.g.</i> , chelation agent, flocculent) _____	
		<input type="checkbox"/> Others _____	
		<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance
		<input type="checkbox"/> Sampling ports properly marked and functional	
		<input type="checkbox"/> Sampling/maintenance log displayed and up to date	
		<input type="checkbox"/> Equipment properly identified	
		<input type="checkbox"/> Quantity of groundwater treated annually _____	
		<input type="checkbox"/> Quantity of surface water treated annually _____	
	Remarks _____		

2.	Electrical Enclosures and Panels (properly rated and functional)	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Needs Maintenance	
	Remarks _____		

3.	Tanks, Vaults, Storage Vessels	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Proper secondary containment	<input type="checkbox"/> Needs Maintenance
	Remarks _____		

4.	Discharge Structure and Appurtenances	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Needs Maintenance	
	Remarks _____		

5.	Treatment Building(s)	<input type="checkbox"/> N/A	<input type="checkbox"/> Good condition (esp. roof and doorways)
		<input type="checkbox"/> Needs repair	
	<input type="checkbox"/> Chemicals and equipment properly stored		
	Remarks _____		

6.	Monitoring Wells (pump and treatment remedy)	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
		<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance
		<input type="checkbox"/> N/A	
	Remarks _____		

D. Monitoring Data		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A (<i>refer to BRAC Long-Term Monitoring reports</i>)
1.	Monitoring Data	<input type="checkbox"/> Is routinely submitted on time	<input type="checkbox"/> Is of acceptable quality
2.	Monitoring data suggests:	<input type="checkbox"/> Groundwater plume is effectively contained	<input type="checkbox"/> Contaminant concentrations are declining

D. Monitored Natural Attenuation Applicable N/A

1. **Monitoring Wells** (natural attenuation remedy)

- Properly secured/locked Functioning Routinely sampled Good condition
 All required wells located Needs Maintenance N/A

Remarks: _____

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The IAL2 perimeter fence is intact following necessary repairs. The security signs posted at the main gate and along Wildlife Loop Road are intact; at least two signs along Wildlife Loop are faded. The three gates are secured with chain and locks; all locks were in working order at the time of the inspection.

Portions of the fence line are prone to vegetation overgrowth, and if not addressed, it could impact the integrity of the fence. At the time of the inspection, the area near the pond/wetland was flooded, resulting in no gap between the ground and fence. During dry periods, the fence does not provide an adequate safety control. Recommend evaluating frequency of dry periods to determine if the current fence provides adequate protection.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

The fence line at IAL2 should continue to be inspected after a significant storm event that causes damage on the installation and in the surrounding community.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

Assure cost is included for maintenance of the fence. If the fence is damaged as a result of a storm event, there needs to be funds to cover the cost of the fence repair.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

The following items are recommended: conduct future inspections during late fall, winter, or early spring when vegetation is low, and recommend routine cutting of the vegetation to reduce and manage the growth rate of the vegetation. Faded signs should be replaced with updated UXO warning language.



Appendix C

Regulatory Acceptance Letters



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

February 19, 2016

George Knight
Installation Restoration Manager
Dept. of Army DPW - Environmental Division
4216 Roberts Ave,
Suite 5115
Fort George G. Meade, MD. 20755-7068

Subject: Draft Inactive Landfill No.2 Annual Maintenance Inspection Report, dated
December 2015

Dear Mr. Knight:

EPA has reviewed the above referenced document and has no comment. No comments will be submitted and if no changes are made the final version can be included in the administrative record for the site.

EPA reserves all rights and authorities relating to information not contained or referenced in this document whether or not such information was known when this document was issued or discovered after such issuance. If you have any questions, or need any additional information please contact me at 410-305-2748.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Stroud".

Robert W. Stroud, RPM

cc: Dr. Elisabeth Green

From: [Elisabeth Green -MDE-](#)
To: [McKinley, Erin Lee CTR USARMY \(US\)](#)
Cc: [Stroud, Robert](#); [Knight, George B CIV USARMY IMCOM ATLANTIC \(US\)](#); [Coulters, Francis J CIV USARMY IMCOM HQ \(US\)](#); [Tegtmeyer, Denise A CTR USARMY USAG \(US\)](#); [Michael Wassel](#); [Knudsen, Brad](#); Dionne_Briggs@fws.gov
Subject: [Non-DoD Source] Re: FGGM: Draft 2015 Inactive Landfill 2 Annual Maintenance Inspection Report submittal
Date: Thursday, January 28, 2016 2:16:26 PM

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Erin-

No comment from MDE on the Draft. I would like a hard copy of the final for our files.

Thanks!
Lis

On Thu, Dec 31, 2015 at 12:41 PM, McKinley, Erin Lee CTR USARMY (US) <erin.l.mckinley.ctr@mail.mil < Caution-mailto:erin.l.mckinley.ctr@mail.mil > > wrote:
All,

The Draft 2015 Annual Maintenance Inspection Report for Inactive Landfill 2 (IAL2) FGGM-007-R at Fort George G. Meade has been submitted under George's cover letter per the distribution list. A complete PDF of the report is attached. Hard copies and CDs of the report are available upon request. The report will also be emailed to the RAB.

Please let us know if anyone has any questions or comments regarding this submittal.

Thank you, and have a Happy New Year!

Erin McKinley, Environmental Specialist
(Sundance Consulting, Inc.)
Fort George G. Meade Installation Restoration Program
Directorate of Public Works - Environmental Division
Office: Bldg 2460 at Wilson St & 85th Med BN Ave, Fort Meade, MD
Mailing Address: 4216 Roberts Ave, Suite 5115, Fort Meade, MD 20755
Email: erin.l.mckinley.ctr@mail.mil < Caution-mailto:erin.l.mckinley.ctr@mail.mil >
Phone: 301-677-9168
Fax: 301-677-9001

From: [Knudsen, Brad](#)
To: [Elisabeth Green -MDE-](#)
Cc: [McKinley, Erin Lee CTR USARMY \(US\)](#); [Stroud, Robert](#); [Knight, George B CIV USARMY IMCOM ATLANTIC \(US\)](#); [Coulters, Francis J CIV USARMY IMCOM HQ \(US\)](#); [Tegtmeier, Denise A CTR USARMY USAG \(US\)](#); [Michael Wassel](#); Dionne_Briggs@fws.gov
Subject: [Non-DoD Source] Re: FGGM: Draft 2015 Inactive Landfill 2 Annual Maintenance Inspection Report submittal
Date: Thursday, January 28, 2016 2:55:21 PM

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

None from FWS either - Brad

Brad Knudsen, Refuge Manager
301497 5582 or 240 882 9077

On Thu, Jan 28, 2016 at 2:15 PM, Elisabeth Green -MDE-
<elisabeth.green@maryland.gov < Caution-mailto:elisabeth.green@maryland.gov > > wrote:
Erin-

No comment from MDE on the Draft. I would like a hard copy of the final for our files.

Thanks!
Lis

On Thu, Dec 31, 2015 at 12:41 PM, McKinley, Erin Lee CTR USARMY (US)
<erin.l.mckinley.ctr@mail.mil < Caution-mailto:erin.l.mckinley.ctr@mail.mil > > wrote:
All,

The Draft 2015 Annual Maintenance Inspection Report for Inactive Landfill 2 (IAL2) FGGM-007-R at Fort George G. Meade has been submitted under George's cover letter per the distribution list. A complete PDF of the report is attached. Hard copies and CDs of the report are available upon request. The report will also be emailed to the RAB.

Please let us know if anyone has any questions or comments regarding this submittal.

Thank you, and have a Happy New Year!

Erin McKinley, Environmental Specialist
(Sundance Consulting, Inc.)
Fort George G. Meade Installation Restoration Program
Directorate of Public Works - Environmental Division
Office: Bldg 2460 at Wilson St & 85th Med BN Ave, Fort Meade, MD
Mailing Address: 4216 Roberts Ave, Suite 5115, Fort Meade, MD 20755
Email: erin.l.mckinley.ctr@mail.mil < Caution-mailto:erin.l.mckinley.ctr@mail.mil >

From: [Michael Wassel](#)
To: [McKinley, Erin Lee CTR USARMY \(US\)](#)
Subject: [Non-DoD Source] Re: FGGM: Draft 2015 Inactive Landfill 2 Annual Maintenance Inspection Report submittal
Date: Thursday, January 28, 2016 4:01:37 PM

Hi Erin,

The report looks fine to me. One minor point in Section 2, Introduction and Site Background. The next to last sentence in the first paragraph states that the Airport property was transferred to Anne Arundel County. Actually, the property was transferred to the Anne Arundel County Tipton Airport Authority, which is a body corporate and politic established by the County. The Authority is an instrumentality of the County, but is not part of the County government.

Michael

Michael A. Wassel
Manager, Tipton Airport
7515 General Aviation Drive, Suite 1
Fort Meade, MD 20755
410-222-6815 office
443-716-5096 cell

From: McKinley, Erin Lee CTR USARMY (US) <erin.l.mckinley.ctr@mail.mil>
Sent: Thursday, December 31, 2015 12:41 PM
To: Stroud, Robert
Cc: Elisabeth Green -MDE-; Knight, George B CIV USARMY IMCOM ATLANTIC (US); Coulters, Francis J CIV USARMY IMCOM HQ (US); Tegtmeyer, Denise A CTR USARMY USAG (US); Michael Wassel; Knudsen, Brad; Dionne_Briggs@fws.gov
Subject: FGGM: Draft 2015 Inactive Landfill 2 Annual Maintenance Inspection Report submittal
All,

The Draft 2015 Annual Maintenance Inspection Report for Inactive Landfill 2 (IAL2) FGGM-007-R at Fort George G. Meade has been submitted under George's cover letter per the distribution list. A complete PDF of the report is attached. Hard copies and CDs of the report are available upon request. The report will also be emailed to the RAB.

Please let us know if anyone has any questions or comments regarding this submittal.

Thank you, and have a Happy New Year!

Erin McKinley, Environmental Specialist
(Sundance Consulting, Inc.)

Fort George G. Meade Installation Restoration Program

Directorate of Public Works - Environmental Division

Office: Bldg 2460 at Wilson St & 85th Med BN Ave, Fort Meade, MD

Mailing Address: 4216 Roberts Ave, Suite 5115, Fort Meade, MD 20755