

Final

**Annual Land Use Control Implementation Report
for Operable Unit 5 Munitions Response Sites
Military Munitions Response Program**

**Iowa Army Ammunition Plant
Middletown, Iowa**

September 2022

Prepared for:

**Iowa Army Ammunition Plant
17571 Highway 79
Middletown, Iowa 52638-5000**

Prepared by:

**U.S. Army Corps of Engineers, Omaha District
1616 Capitol Avenue
Omaha, NE 68102-4901**

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Abbreviations and Acronyms

AO LLC	American Ordnance, LLC
Army	Department of the Army
CB&I	CB&I Federal Services, LLC
CTA	Central Test Area
DoD	Department of Defense
EPS	Environmental Protection Specialist
ERRG	Engineering/Remediation Resources Group, Inc.
IAAAP	Iowa Army Ammunition Plant
InDA	Incendiary Disposal Area
LL6	Line 6 Ammo Production Area
LUCs	land use controls
MD	munitions debris
MEC	munitions and explosives of concern
MMRP	Military Munitions Response Program
MRSs	munitions response sites
OU-5	Operable Unit 5
PDS	Possible Demolition Site
ROD	Record of Decision
Shaw	Shaw Environmental & Infrastructure, Inc.
Techs	technicians
USACE	U.S. Army Corps of Engineers
UTV	utility vehicle
UXO	unexploded ordnance

The Iowa Army Ammunition Plant (IAAAP) Operable Unit 5 (OU-5) Record of Decision (ROD) from September 2014, signed by the Department of the Army (Army) and the U.S. Environmental Protection Agency, selected land use controls (LUCs) as the remedy for the following munitions response sites (MRSs): Central Test Area (CTA), Line 6 Ammo Production Area (LL6) – Inside Blast Radii, Possible Demolition Site (PDS), and Incendiary Disposal Area (InDA). The OU-5 ROD noted that, given the already restricted nature of the MRSs within the IAAAP and the ability of the government to control land use at the IAAAP, LUCs are deemed to be an effective remedy in the long-term (CB&I Federal Services, LLC [CB&I], 2014).

IAAAP conducted response actions that included installing LUCs at OU-5 in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986; the National Oil and Hazardous Substances Pollution Contingency Plan (Title 40 Code of Federal Regulations Part 300), and the Military Munitions Response Program (MMRP). The U.S. Department of Defense established the MMRP under the Defense Environmental Restoration Program to address munitions and explosives of concern (MEC)—to include unexploded ordnance (UXO), discarded military munitions, and munitions constituents—located on current and former military installations.

During April 2022, U.S. Army Corps of Engineers, Omaha District. (USACE-NWO) conducted the required annual LUC inspection for OU-5 at the IAAAP in Middletown, Iowa, as described in the Final Land Use Control Implementation Plan (ERRG, 2017a). All activities were conducted in accordance with the Accident Prevention Plan (USACE, 2022). Fence repairs are expected to be completed under a contract to be issued at a later date.

1.1. PURPOSE

This LUC Implementation Report describes the LUC inspection conducted in 2022 to verify that the following remedial action objective for MEC is met:

- Reduce explosives safety hazards to human receptors associated with potential MEC commensurate with current and reasonably anticipated future land use.

1.2. SITE BACKGROUND

The IAAAP occupies approximately 19,011 acres located roughly 8 miles west of Burlington and directly south of Middletown, Des Moines County, Iowa, and 9 miles northwest of the Skunk and Mississippi Rivers (Figure 1). The north side of the IAAAP is bordered by U.S. Highway 34, with upland agricultural farms to the east and west, and the Skunk River Valley to the south. Approximately one-third of the IAAAP property is occupied by active or formerly active production or storage facilities. The remaining land is either woodlands or property leased for agricultural usage.

The ROD presented selected remedies at eight MRSs within OU-5 at the IAAAP. Four of the eight (LL6 – Outside Blast Radii, West Burn Pads, West Burn Pads South of the Road, and Maneuver Area) were

recommended for no further action. The selected remedy for the other four areas (CTA, LL6 – Inside Blast Radii, PDS, and InDA) included LUCs to restrict access and exposure to MEC hazards because the future use will remain industrial ammunition production. The LUCs meet the MEC remedial action objectives by reducing explosives safety hazards to human and ecological receptors associated with potential MEC (CB&I, 2014).

The implemented LUCs include both institutional and engineering controls. Institutional controls include both administrative and legal mechanisms that prevent or restrict access or exposure. Institutional controls include access restrictions, lease restrictions, property transfer restrictions, and the development of an Installation Master Plan (ERRG, 2017a). Engineering controls are physical mechanisms and include fencing and warning signs surrounding the MRSs.

The following subsections briefly describe the locations and setting of the CTA, LL6 – Inside Blast Radii, PDS, and InDA MRSs and the LUCs implemented for each MRS.

1.2.1. Central Test Area

The CTA is a 22.9-acre MRS located in the north-central portion of IAAAP (Figure 2). The topography of the CTA is flat, with no surface water bodies, and the vegetative cover consists of tall grass with shrubs and some trees near the southern border. Access to the CTA is very limited because it is located inside a locked and secured Line 5 fence inside the IAAAP, which has additional general facility access restrictions (CB&I, 2014).

LUCs were constructed as described in the “Final After-Action Report, Fence Installation at the Central Test Area and Line 6 Ammo Production Area Inside the Blast Radii, Operable Unit 5, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa” (ERRG, 2017b). The LUCs included construction of a 6-foot-high chain link fence topped with three-stranded barbed wire with warning signs placed every 200 feet outside the fence and on all access gates as noted in the Final After Action Report (ERRG, 2017b).

1.2.2. Line 6 Ammo Production Area – Inside Blast Radii

LL6 – Inside Blast Radii is an 8-acre MRS defined by the blast radii of two explosions that occurred in 1968 and 1970 at Buildings 6-34-2 and 6-92, respectively (Figure 3). The topography of LL6 – Inside Blast Radii is flat, with no surface water bodies, and the vegetative cover consists of tall grass with shrubs. Access to LL6 – Inside Blast Radii is very limited because it is located inside a locked and secured Line 6 fence inside the IAAAP, which has additional access restrictions because it is located immediately adjacent to the active 40-millimeter Test Range (CB&I, 2014).

LUCs were constructed as described in the “Final After-Action Report, Fence Installation at the Central Test Area and Line 6 Ammo Production Area Inside the Blast Radii, Operable Unit 5, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa” (ERRG, 2017b). The LUCs included construction of a 6-foot-high chain link fence topped with three-stranded barbed wire with warning signs placed every 200 feet outside the fence. Additionally, the walls of several existing structures were

used to prevent access inside the MRS and signage was placed at the entrance points as noted in the Final After Action Report (ERRG, 2017b). Following the demolition of the building, the gaps created by the removal of the buildings were closed using 6-foot-high chain link fence.

1.2.3. Possible Demolition Site

The PDS is a 40-acre MRS located in the south-central portion of IAAAP (Figure 4). A small arms firing range is within the PDS boundary, but is excluded from the MRS, because it is an active facility and thus ineligible under the MMRP. The topography of the PDS varies, with rolling to steep terrain that ranges in elevation. The vegetative cover consists predominately of dense wooded areas dominated by deciduous oak and hickory trees (Shaw Environmental & Infrastructure, Inc. [Shaw], 2013).

LUCs were constructed as described in the “After Action Report, Fencing of Possible Demolition Site and Incendiary Disposal Area MRSs, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa” (Shaw, 2013). The LUCs were constructed primarily with a 6-foot-high chain link fence with warning signs placed approximately every 200 feet outside the fence, except along the roadways where they were placed approximately every 656 feet.

1.2.4. Incendiary Disposal Area

The InDA is a 34-acre MRS located along the eastern edge of IAAAP (Figure 5). The topography of the InDA is rolling hills, with an unnamed drainage tributary of Spring Creek along the western portion of the MRS. The vegetative cover consists of a dense wooded area dominated by deciduous oak and hickory trees (CB&I, 2014).

LUCs were constructed as described in the “After Action Report, Fencing of Possible Demolition Site and Incendiary Disposal Area MRSs, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa” (Shaw, 2013). The LUCs were constructed primarily with a 6-foot-high chain link fence with warning signs placed every 200 feet outside the fence, except along the K Road inside the MRS where they were placed every 656 feet.

1.3. DOCUMENT ORGANIZATION

The remainder of this report is organized as follows:

- Section 2 describes the LUC inspection activities performed in 2022.
- Section 3 lists the supporting documents and guidance used to prepare this report.

Figures are provided after Section 4. The following additional information has been appended to this report:

- Appendix A – Inspection Checklists
- Appendix B – Photographic Log
- Appendix C – Maps of 2022 Inspection Results

Section 2. LUC Inspections and Maintenance

USACE-NWO conducted inspection activities for the OU-5 LUCs in April 2022. Appendix A includes the inspection checklists that document inspection and maintenance activities. Appendix B includes photographs of discrepancies noted during the inspection. Photographs are timestamped in Appendix B with the date, time, Munition Response Site, and GPS location to provide the location and extent of all discrepancies. The following sections summarize the inspection activities performed at each MRS. Appendix C includes maps of LL6, the PDS, and the InDA that indicate where the damaged sections of the fence are located.

2.1. CENTRAL TEST AREA

USACE-NWO conducted an inspection of the surface for evidence of MEC and the fences and signs on April 20, 2022. All portions of the fence had the vegetation removed in May 2021. No evidence of MEC or munitions debris (MD) was found, the fences were undamaged, and Danger signs were installed every 200 feet on the fencing; and the Danger, Caution, and Information signs were posted on all three access points to the MRS.

2.2. LINE 6 AMMO PRODUCTION AREA – INSIDE BLAST RADII

USACE-NWO conducted an inspection of the surface for evidence of MEC and the fences and signs on April 20, 2022. All portions of the fence had the vegetation removed in May 2021. No evidence of MEC or munitions debris (MD) was found, the fences were undamaged, and Danger signs were installed every 200 feet on the fencing except one location where the sign was missing; and the Danger, Caution, and Information signs were posted on all three access points to the MRS.

2.3. POSSIBLE DEMOLITION SITE

USACE-NWO conducted an inspection of the surface for evidence of MEC and the fences and signs on April 19, 2022. All portions of the fence had the vegetation removed in May 2021. No evidence of MEC or munitions debris (MD) was found, the Danger signs were present and installed every 200 feet along the fence line in the wooded areas, and along K Road and Danger, Caution, and Information signs were present on all swing gates and removable fence panels. During the inspection, USACE-NWO noted several trees had fallen on the fencing both north and south of K Road (see Appendix A and Appendix B). The damage in the north is new having occurred in the area that was repaired in Sept 2021. All damage along the southern portion of the fence is new since the completion of the F21 inspection in May 2021. The area of damage crossing B and I in the SW fence line is carryover from FY21 inspection that was not repaired in 2021 due to inaccessibility of the equipment mobilized. Repairs at the PDS MRS identified in the 2022 Annual LUC Report are expected to be completed under a contract to be issued at a later date.

2.4. INCENDIARY DISPOSAL AREA

USACE-NWO conducted an inspection of the surface for evidence of MEC and the fences and signs on

April 19, 2022. All portions of the fence had the vegetation removed in May 2021. No evidence of MEC or munitions debris (MD) was found, Danger signs were present and installed at 200-foot intervals along the fence line in the wooded areas and along K Road inside the InDA MRS, as required, and Danger, Caution, and Information signs were present on both swing gates. During the inspection, USACE-NWO noted fallen trees on the fence on the south, east, and west sides of the MRS (see Appendix A and Appendix B). It was only noted that one panel remained bent at the completion of the FY21 inspection. All damage during this inspection is new since that timeframe. Repairs at the InDA MRS identified in the 2022 Annual LUC Report are expected to be completed under a contract to be issued at a later date.

2.5. VERIFICATION OF INSTITUTIONAL CONTROLS

The LUC Implementation Plan (ERRG, 2017a) requires an annual review of the institutional controls for access, lease, and property transfer restrictions. USACE-NWO reviewed LUC institutional control management with the Army Environmental Protection Specialist (EPS) assigned to manage LUCs at IAAAP and confirmed that the property is still owned by the government and no recreational or agricultural activities are allowed within the MRS boundaries.

The LUC Implementation Plan (ERRG, 2017a) also noted that IAAAP was in the process of developing a Master Plan in accordance with Department of Defense (DoD) Instruction 4165.70, Real Property Management (DoD, 2005), and Unified Facilities Criteria 2-100-01, Installation Master Planning (DoD, 2012) and when approved, the verification of site-wide institutional controls will be included in the IAAAP Master Plan. The Master Plan was completed by IAAP on 30 September 2021 under the title of Area Development Execution Plan and will be updated in the fall of 2022. A contract has been issued to revise the remedy for the CTA, LL6, and the portion of the PDS MRS that is north of K-Road from MEC Alternative 2 - Land Use Controls to MEC Alternative 3 – MEC Subsurface Clearance to allow construction of new facilities within these areas and remove the current institutional controls.

Annual maintenance to include brush clearance was not performed during the annual inspection due to the on-going actions to revise the remedy for the CTA, LL6, and the portion of the PDS MRS that is north of K-Road and perform removal of contamination and eliminate the requirements for the current institutional controls. A contract to achieve the same goals is anticipated to be awarded in FY22 for the portion of the PDS MRS that is South of K-Road and the InDA.

Section 3. References

CB&I Federal Services, LLC (CB&I), 2014. “Final Record of Decision, Operable Unit 5, Iowa Army Ammunition Plant, Middletown, Iowa.” September.

Department of Defense (DoD), 2005. Instruction, “Real Property Management.” April 6. Available Online at: <https://dmna.ny.gov/uspfo/mnpf-ca_references/DODI_4165.70.pdf>.

DoD, 2012. Unified Facilities Criteria 2-100-1, “Installation Master Planning.” May 15. Available Online at: <https://www.wbdg.org/FFC/DOD/UFC/ufc_2_100_01_2012.pdf>.

Engineering/Remediation Resources Group, Inc. (ERRG), 2017a. “Final Land Use Control Implementation Plan for the Central Test Area, Incendiary Disposal Area, Line 6 Ammo Production, and Possible Demolition Site Munitions Response Sites, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa.” July.

ERRG, 2017b. “Final After Action Report, Fence Installation at the Central Test Area and Line 6 Ammo Production Area Inside the Blast Radius, Operable Unit 5, Military Munitions Response Program, Iowa Army Ammunition Plant, Middletown, Iowa.” April.

USACE, 2022. “Final Abbreviated Accident Prevention Plan for Land Use Controls at Operable Unit 5, Iowa Army Ammunition Plant, Middletown, Iowa.” March.

Shaw Environmental & Infrastructure, Inc., 2013. “After Action Report, Fencing of Possible Demolition Site and Incendiary Disposal Area MRSs, Military Munitions Response Program, Middletown, Iowa.” February.

USACE, 2020. “Final Area Development Plan, Iowa Army Ammunition Plant, Industrial Core District.” January.

Figures

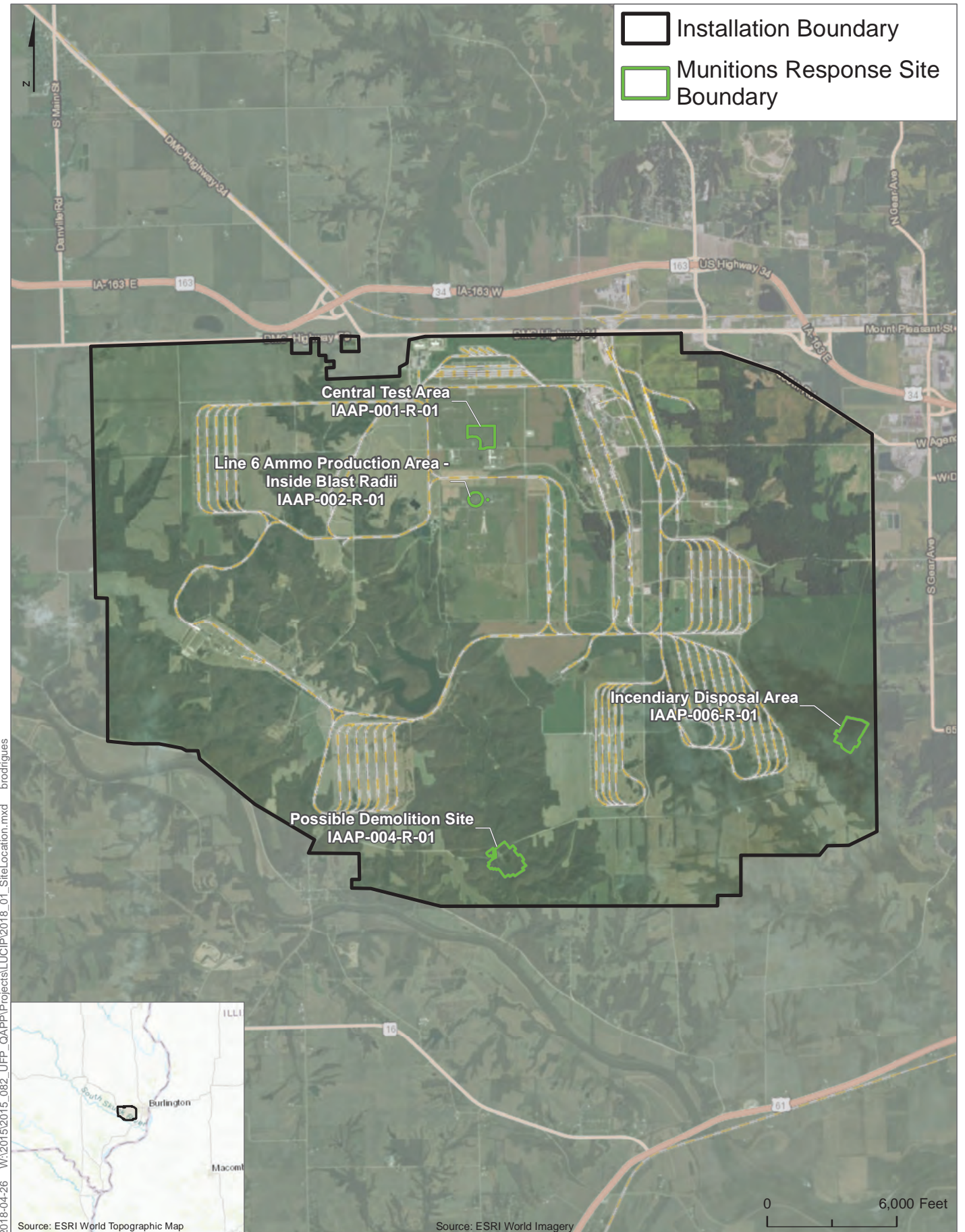





Figure 1. Installation and Munitions Response Site Locations Map
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



2018-04-26 W:\2015\2015_082_UFP_QAPP\Projects\LUCIP\2018_01_SiteLocation.mxd brodrigues

2018-04-26 W:\2015\2015_082_UFP_QAPP\Projects\LUCIP\2018_02_as-built_CTA.mxd ERRG-Martinez brodiriques



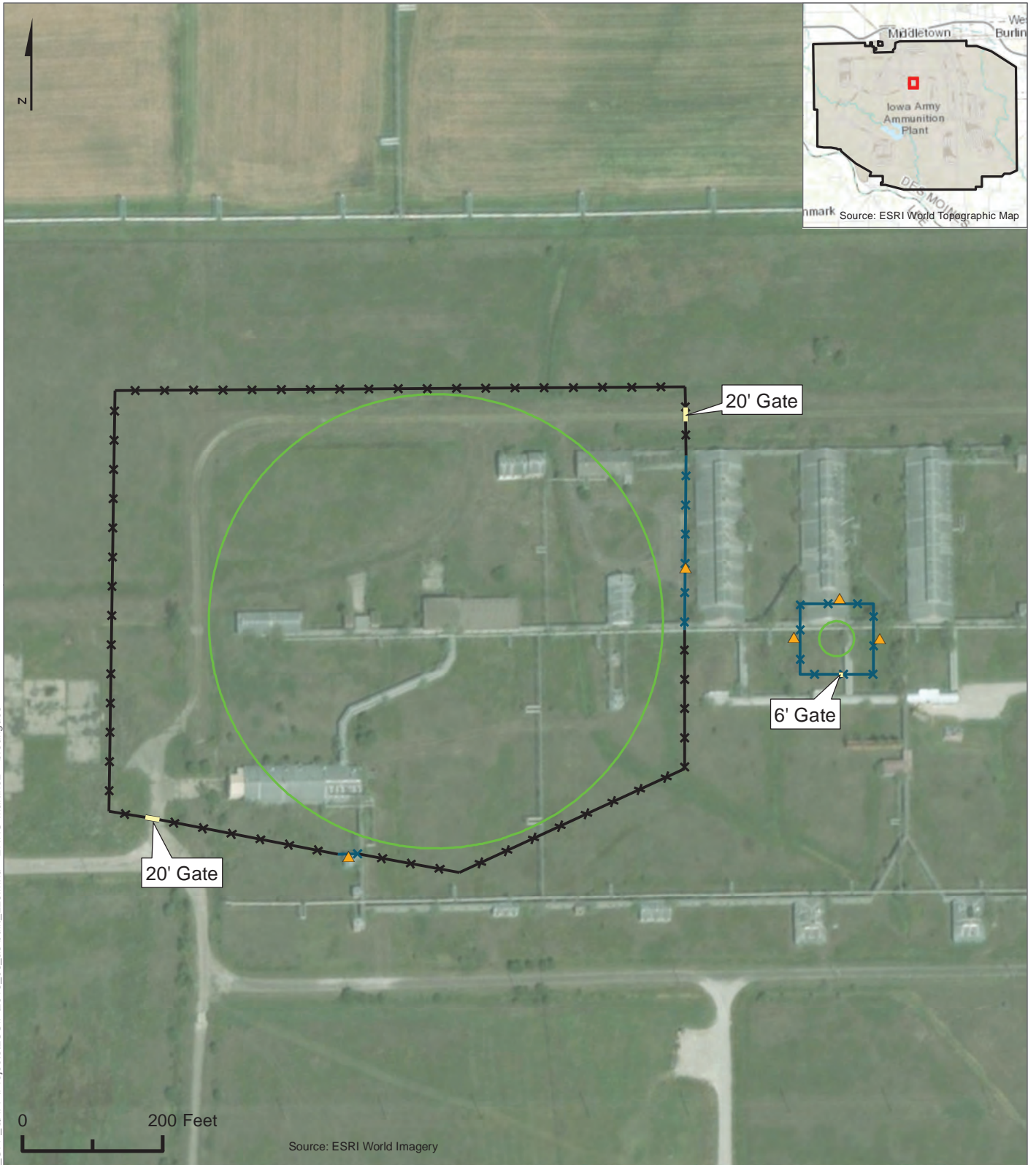
-  MRS Access Gate Posted with Danger, Caution, and Information Signs
-  As-Built Fence Alignment
-  MRS Boundary

Notes:
1) Danger signs posted every 200 feet on fencing
MRS - Munitions Response Site

Figure 2. As-Built Fencing Layout for the Central Test Area
Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
Iowa Army Ammunition Plant, Middletown, Iowa



2018-04-26 WA\2015\2015_082_UFP_QAPP\Projects\LLUCIP\2018_03_as-built_LL6.mxd ERRG-Martinez brodrigues



- MRS Access Gate Posted with Danger, Caution, and Information Signs
- As-Built Fence Alignment
- MRS Fencing Replaced 2017
- MRS Boundary
- New Danger Sign

Notes:
 1) Danger signs posted every 200 feet on fencing
 2) Most buildings in aerial image have been demolished
 MRS - Munitions Response Site

Figure 3. As-Built Fencing Layout for the Line 6 Ammo Production Area - Inside Blast Radii
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



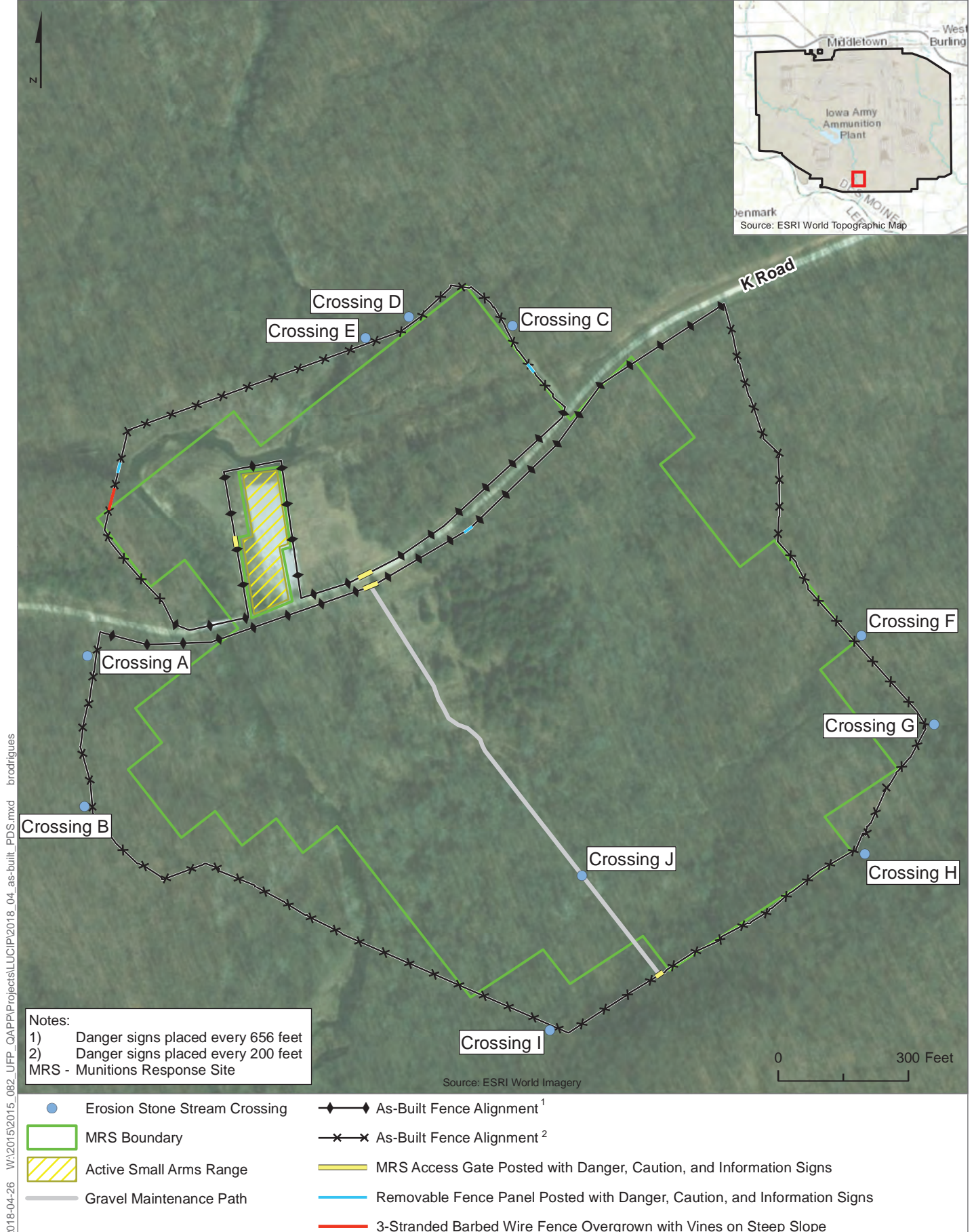


Figure 4. As-Built Fencing Layout for the Possible Demolition Site
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



2018-04-26 W:\2015\2015_082_UFP_QAPP\Projects\LUCIP\2018_05_as-built_inDA.mxd brodrigues

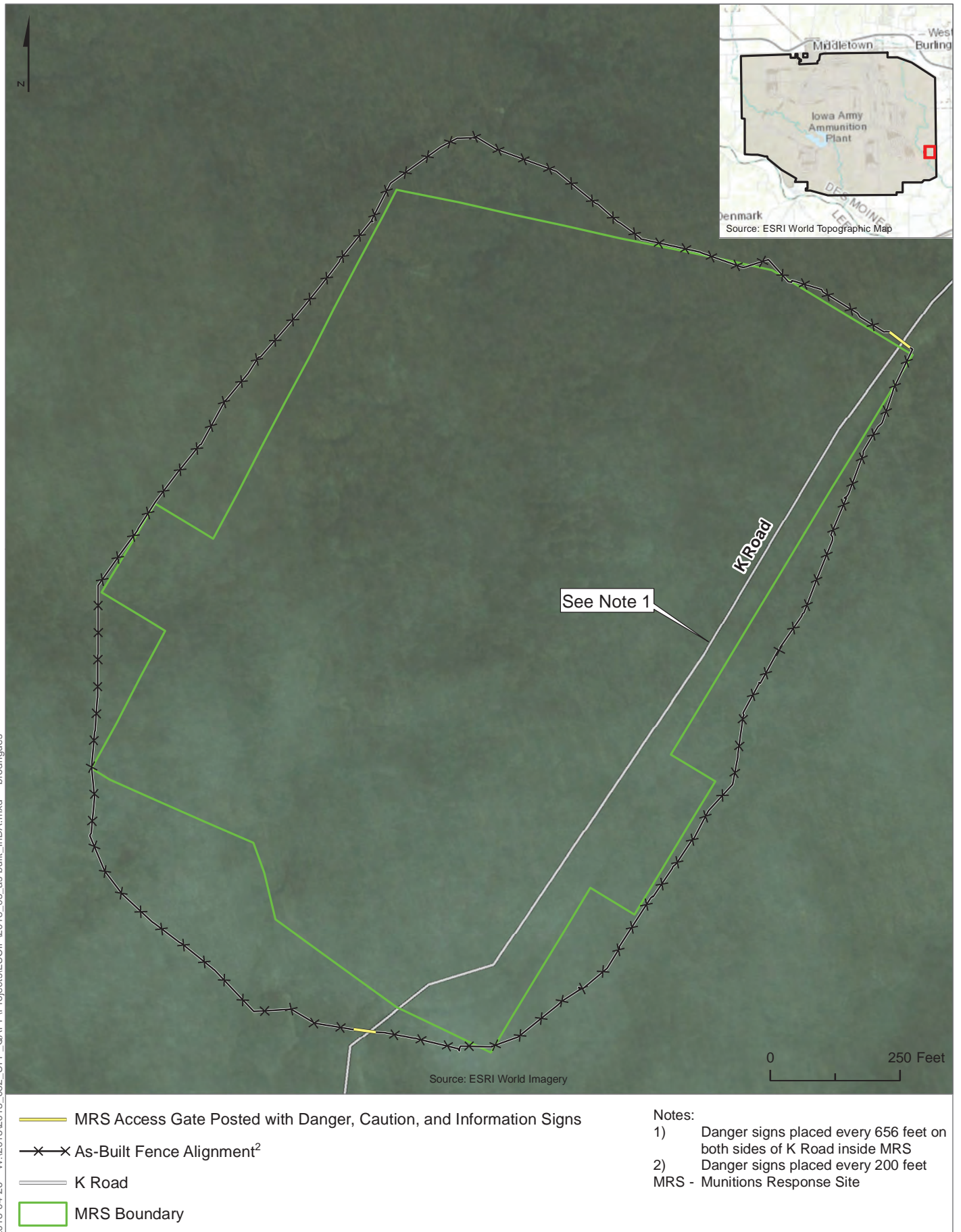


Figure 5. As-Built Fencing Layout for the Incendiary Disposal Area
Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
Iowa Army Ammunition Plant, Middletown, Iowa



Appendix A. Inspection Checklists

LUC Fence Inspection / Maintenance Form

MRS Name:	CTA (IAAP-001-R-01)	X	LL6 (IAAP-002-R-01)		PDS (IAAP-0040R-01)		InDA (IAAP-006-R-01)		Inspection Date:	20-Apr-22
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Inspector Name, Company and Title: Jeff Young, USACE Ordnance and Explosive Safety Specialist (OESS) / Valentino Pajarin, USACE OESS

Surface Sweep Performed (Y/N): No, a inspection of the surface for the presence of MEC/MD was performed during the LUC inspection.

Was any MEC/MD observed (Y/N): No If YES, complete the following:

Location:	Description:	Quantity:	Location:	Description:	Quantity:

Notes:

Fence and Signage Inspection Performed (Y/N): Yes

Notes: 1) All gates should be locked and have Danger, Caution and Informational signs posted on them. 2) Danger signs should be every 200 feet on all fences, except on K-Road that bisects the PDS, where they should be every 565 feet (200 meters). Also, Danger signs should be posted every 656 feet (200 meters) on both sides of K-Road inside the InDA LUC fencing.

Were any deficiencies noted during the inspection of fencing and signs (Y/N): No If YES, complete the following:

Location:	Description of deficiency and repair needed::	Photo ID:

Additional Notes: No Damage or discrepancies noted.

Vegetation Removal Performed (Y/N): No

Notes:

LUC Fence Inspection / Maintenance Form

MRS Name:	CTA (IAAP-001-R-01)		LL6 (IAAP-002-R-01)	X	PDS (IAAP-004R-01)		InDA (IAAP-006-R-01)		Inspection Date:	20-Apr-22
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Inspector Name, Company and Title: Jeff Young, USACE Ordnance and Explosive Safety Specialist (OESS) / Valentino Pajarin, USACE OESS

Surface Sweep Performed (Y/N): No, a inspection of the surface for the presence of MEC/MD was performed during the LUC inspection.

Was any MEC/MD observed (Y/N): No If YES, complete the following:

Location:	Description:	Quantity:	Location:	Description:	Quantity:

Notes:

Fence and Signage Inspection Performed (Y/N): Yes

Notes: 1) All gates should be locked and have Danger, Caution and Informational signs posted on them. 2) Danger signs should be every 200 feet on all fences, except on K-Road that bisects the PDS, where they should be every 565 feet (200 meters). Also, Danger signs should be posted every 656 feet (200 meters) on both sides of K-Road inside the InDA LUC fencing.

Were any deficiencies noted during the inspection of fencing and signs (Y/N): Yes If YES, complete the following:

Location:	Description of deficiency and repair needed::	Photo ID:
40.8054, -91.24797	No UXO Danger Sign visible for a 200ft. span. Replace signage.	11

Additional Notes:

Vegetation Removal Performed (Y/N): No

Notes:

LUC Fence Inspection / Maintenance Form

MRS Name:	CTA (IAAP-001-R-01)		LL6 (IAAP-002-R-01)		PDS (IAAP-0040R-01)	X	InDA (IAAP-006-R-01)		Inspection Date:	19-Apr-22
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Inspector Name, Company and Title: Jeff Young, USACE Ordnance and Explosive Safety Specialist (OESS) / Valentino Pajarin, USACE OESS

Surface Sweep Performed (Y/N): No, a inspection of the surface for the presence of MEC/MD was performed during the LUC inspection.

Was any MEC/MD observed (Y/N): No If YES, complete the following:

Location:	Description:	Quantity:	Location:	Description:	Quantity:

Notes:

Fence and Signage Inspection Performed (Y/N): Yes

Notes: 1) All gates should be locked and have Danger, Caution and Informational signs posted on them. 2) Danger signs should be every 200 feet on all fences, except on K-Road that bisects the PDS, where they should be every 565 feet (200 meters). Also, Danger signs should be posted every 656 feet (200 meters) on both sides of K-Road inside the InDA LUC fencing.

Were any deficiencies noted during the inspection of fencing and signs (Y/N): Yes If YES, complete the following:

Location:	Description of deficiency and repair needed::	Photo ID:
40.76047, -91.23987	Future/potential fence damage (fallen tree). Remove tree.	1
40.75926, -91.23955	Tree has been cut away from fence after damage. Damage approximate 10 feet. Reattach/replace section of fence.	2
40.75871, -91.24013	Each section of fence is approximately 10 feet. Damage to fence is approximately 20 feet. Reattach/replace section of fence.	3
40.75832, -91.24077	Damage to fence is approximately 20 feet. In two locations ~ 30ft. apart. Reattach/replace section of fence.	4
40.75818, -91.24136	Damage to fence is approximately 20 feet total. In two locations ~ 20ft. apart. Reattach/replace section of fence.	5
40.75812, -91.24133	Damage to fence is approximately 20 feet. Reattach/replace section of fence.	6
40.75795, -91.24214	Damage to fence is approximately 10 feet. Post is leaning but is still stable. The soil is very wet. Reattach/replace section of fence.	7
40.75811, -91.24298	Damage to fence is approximately 10 feet. Reattach/replace section of fence	8
40.75883, -91.24545	Damage to fence is approximately 10 feet. Reattach/replace section of fence.	9
40.76203, -24367	Damage to fence is approximately 10 feet. Reattach/replace section of fence	10

Additional Notes:

Vegetation Removal Performed (Y/N): No

Notes:

LUC Fence Inspection / Maintenance Form

MRS Name:	CTA (IAAP-001-R-01)		LL6 (IAAP-002-R-01)		PDS (IAAP-0040R-01)		InDA (IAAP-006-R-01)	X	Inspection Date:	21-Apr-22
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Inspector Name, Company and Title: Jeff Young, USACE Ordnance and Explosive Safety Specialist (OESS) / Valentino Pajarin, USACE OESS

Surface Sweep Performed (Y/N): No, a inspection of the surface for the presence of MEC/MD was performed during the LUC inspection.

Was any MEC/MD observed (Y/N): No If YES, complete the following:

Location:	Description:	Quantity:	Location:	Description:	Quantity:

Notes:

Fence and Signage Inspection Performed (Y/N): Yes

Notes: 1) All gates should be locked and have Danger, Caution and Informational signs posted on them. 2) Danger signs should be every 200 feet on all fences, except on K-Road that bisects the PDS, where they should be every 565 feet (200 meters). Also, Danger signs should be posted every 656 feet (200 meters) on both sides of K-Road inside the InDA LUC fencing.

Were any deficiencies noted during the inspection of fencing and signs (Y/N): Yes If YES, complete the following:

Location:	Description of deficiency and repair needed::	Photo ID:
40.77378, -91.18305	Damage to fence is approximately 10 feet in two locations. Reattach/replace section of fence	12
40.77378, -91.18303	Minimal damage to fence here ~2 ft. Reattach/replace section of fence.	13
40.77416, -91.18282	Damage to fence is approximately 10 feet. Reattach/replace section of fence.	14
40.77495, -91.18229	Damage to fence is approximately 10 feet. Reattach/replace section of fence.	15
40.77599, -91.18168	Damage to fence is approximately 20 feet. Reattach/replace section of fence	16

Additional Notes:

Vegetation Removal Performed (Y/N): No

Notes:

Appendix B. Photographic Log



Photo 1 - PDS, Future/potential fence damage (fallen tree).



Photo 2 – PDS, Tree has been cut away from fence after damage. Approximately 10 feet damaged fence.



Photo 3 – PDS, Approximately 20 feet damaged fence.



Photo 4 – PDS, Two 10 foot sections of damaged fence, approximately 30 feet apart. (Total of 20 feet fence damaged).



. Photo 5 – PDS, Two 10 foot sections of damaged fence (Total of 20 feet fence damaged).



Photo 6 – PDS, Approximately 20 feet damaged fence.



Photo 7– PDS, Approximately 10 feet damaged fence. Post is leaning but stable.



Photo 8– PDS, Approximately 10 feet damaged fence



Photo 9– PDS, Approximately 10 feet damaged fence



Photo 10– PDS, Approximately 10 feet damaged fence



Photo 11 – LL6, Missing UXO Danger Sign



Photo 12 – InDA, Two 10 foot sections of damaged fence (Total of 20 feet fence damaged).



Photo 13 – InDA, Two foot section of damaged fence.



Photo 14 – InDA, 10 foot section of damaged fence.



Photo 15 – InDA, 10 foot section of damaged fence.



Photo 16 – InDA, 20 foot section of damaged fence.

Appendix C. Map of 2022 Inspection Results



Figure C1. Results from 2022 Inspection, Central Test Area
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



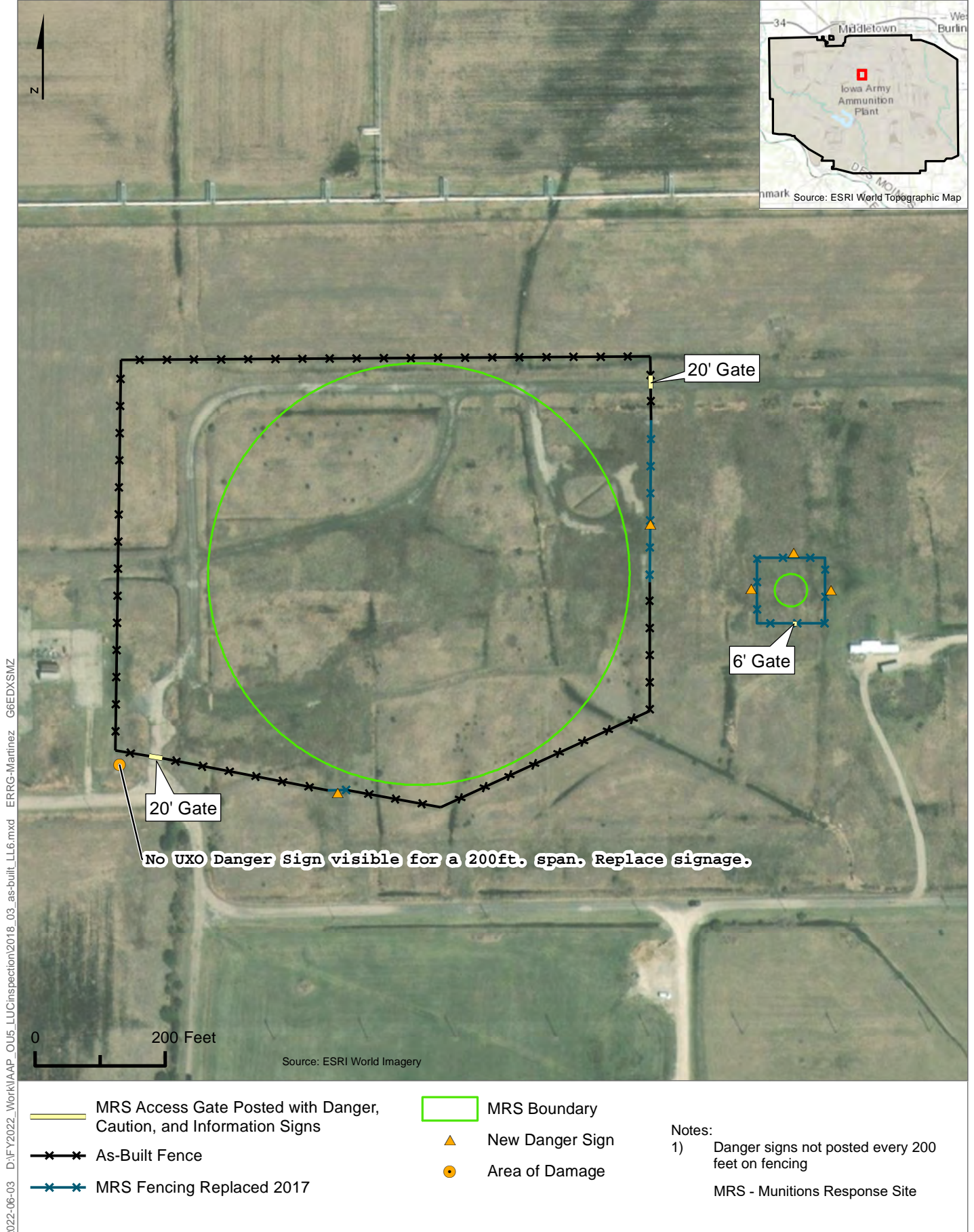


Figure C2. Results from 2022 Inspection, Line 6 Ammo Production Area - Inside Blast Radii
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



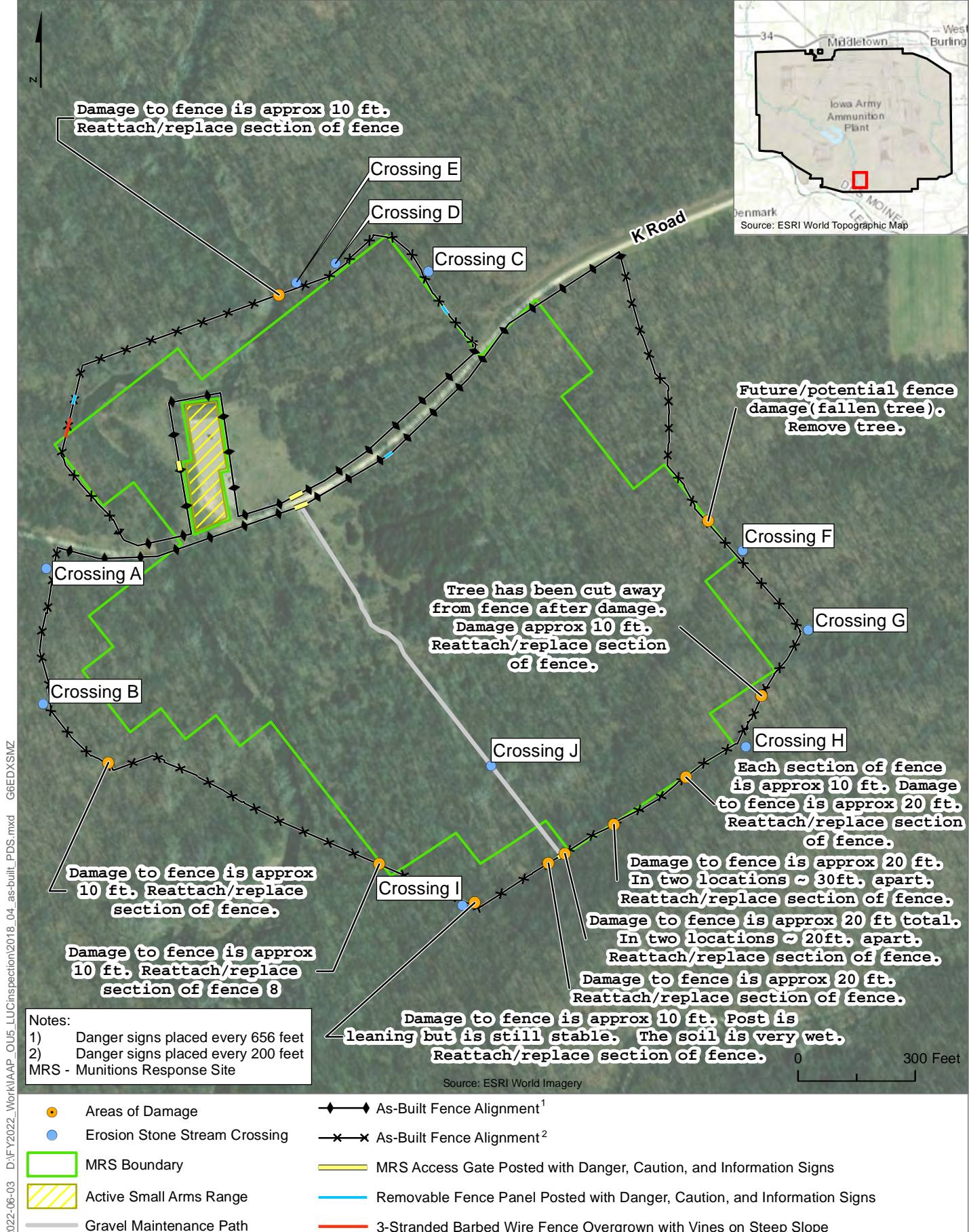


Figure C3. Results from 2022 Inspection, Possible Demolition Site
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa



2022-06-03 D:\FY2022_Work\IAAP_OU5_LUC\inspection\2018_04_as-built_PDS.mxd G6EDXSMZ

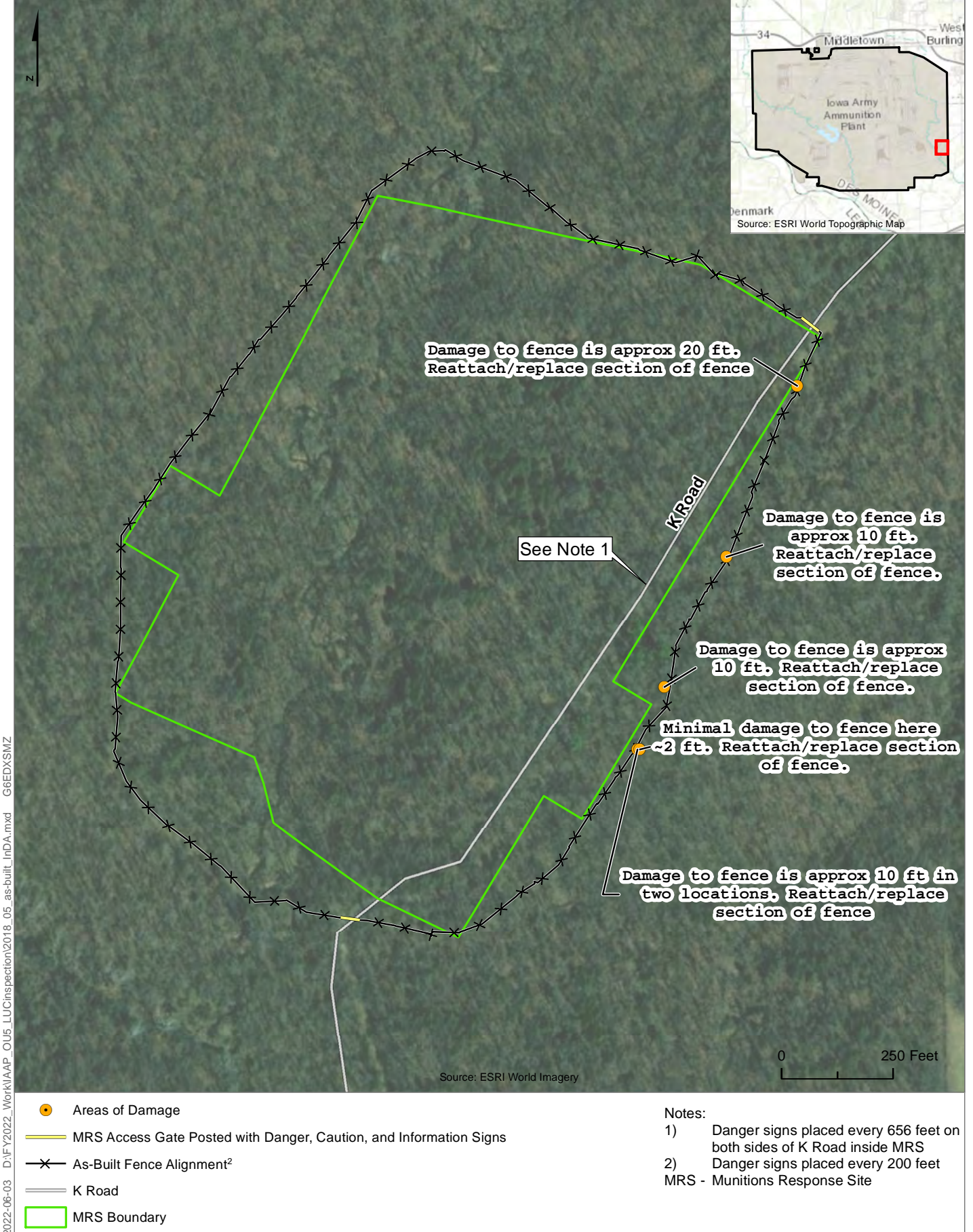


Figure C4. Results from 2022 Inspection, Incendiary Disposal Area
 Annual Land Use Control Implementation Report, Operable Unit 5 Munitions Response Sites
 Iowa Army Ammunition Plant, Middletown, Iowa

