CHANUTE AFB
ILLINOIS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 628088

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MEMORANDUM

DATE: April 13, 2021

FROM: Douglas E. Ballotti, Director
Superfund & Emergency Management Division

Digitally signed by DOUGLAS BALLOTTI
Date: 2021.04.13 11:54:44 -05'00'

TO: Brigid Lowery
Director, Assessment and Remediation Division,
Office of Superfund Remediation and Technology Innovation

SUBJECT: Withdrawal of Previous Proposal to Add the Chanute Air Force Base Site to the National Priorities List (NPL)

I. Introduction

The purpose of this memorandum is to request withdrawal of the former Chanute Air Force Base (Site) located in Rantoul, Champaign County, Illinois from proposed addition to the National Priorities List (NPL). The Site was proposed for addition to the NPL in December 2000 (65 FR75215). The State of Illinois, through the Illinois Environmental Protection Agency (Illinois EPA), concurs with this request as documented in a December 2, 2020, letter to the U.S. Environmental Protection Agency (EPA) (Attachment 1).

The United States Air Force is performing cleanup activities at the site pursuant to their authority under Section 104 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) with oversight being conducted by Illinois EPA. EPA has reviewed all of the documentation supporting this action and is confident that Illinois EPA will take or ensure appropriate action through the Defense and State Memorandum of Agreement. Every two years, Illinois EPA enters into a Cooperative Agreement with the US Army Corps of Engineers, which administers the program for the Department of Defense installations, including the Site. All natural resource trustees were notified of the intention to de-propose the site and they have not raised an objection.

II. Site Background

The Site occupies an area of approximately 2,174 acres in Champaign County, Illinois, about 12 miles north of Champaign-Urbana in the Village of Rantoul. It was constructed in 1917. It initially served as a pilot training facility for Air Force personnel, civilian employees, and for other Department of Defense personnel, and as a storage depot for aircraft engines and paint. From 1922 to 1938, the base served as a training school for all Air Corps mechanics. Training activities focused on operation and maintenance of military aircraft and ground support

equipment. During World War II, technical training operations focused on aircraft maintenance and metal processing.

Military flight operations were terminated at the Air Force Base in 1971, and base closure began in 1990 in response to an order issued by the Secretary of Defense. All military operations at the base ceased in September 1993, and portions of the base became available for commercial and other uses. The Air Force Real Property Agency (AFRPA), known as the Air Force Base Conversion Agency (AFBCA) prior to 2002, currently oversees the base closure. Following the closure of the Air Force Base, the property was divided into two operable units (OUs), OU-1 and OU-2 for the purposes of conducting environmental investigations, remediation, and expediting transfer of property for reuse.

The first Five Year Review (FYR) was completed in September 2011 and covered the period of April 2000 through September 2010. The second FYR was completed in March 2017 and covered the period of October 2010 through April 2015. The third FYR for the Site covers the period of April 2015 through April 2020 (i.e., the start date is based on the end date of the second FYR and the end date is the 20-year anniversary of the triggering event (April 2000) – initiation of construction activities at Landfill 3). The Air Force completed the third FYR for the Site in August 2020.

Since the completion of the second FYR, the Air Force remediated an additional eleven (11) sites to UU/UE standards. Two additional sites, Building 922 OWS (SD027) and Area 130 Trichloroethene (TCE) Disposal Pit (WP080), were remediated to the standards specified in the Record of Decision (ROD); however, emerging contaminants are present above screening levels.

III. Enforcement History

EPA's main reason for proposing to add the site to the NPL in 2000 was the lack of cleanup progress since the 1990 base closure decision. In April 2003, the Base Realignment and Closure Cleanup Team (BCT) signed an agreement and milestone schedule with the Air Force and Illinois EPA (Attachment 2). EPA deferred adding the site to the final NPL in return for a commitment by the Air Force to complete cleanup by October 2005.

In the years following the signing of the April 2003 agreement, the Air Force made substantial progress on the site's remedial investigation, which facilitated the recent transfer of large tracts of uncontaminated parts of the base. However, most of the actual cleanup work was put on hold as the Air Force investigated various privatization and contracting options.

EPA notified the Air Force in May 2010 that it would no longer be providing regulatory oversight because the site was not added to the NPL. The Air Force has a good working relationship with the State of Illinois and EPA believes that proceeding with cleanup efforts under Illinois EPA oversight would be more efficient than under EPA oversight.

IV. Current Status of Cleanup

As previously stated, since April 2003, the signing of the agreement, the Air Force has made substantive progress on site investigations and cleanup. Attachment 4 includes all the sites in OU-1 and OU-2 and shows the environmental progress.

Illinois EPA partners with the United States Air Force in its remediation and monitoring efforts to facilitate the productive reuse of the former base. To that end, the comprehensive oversight performed by Illinois EPA to date will continue through closeout of all remaining Air Force environmental issues at the Site.

For a detailed description of the history and current cleanup status, see Attachment 3 – Cleanup History and Status of Implementation.

V. Conclusion

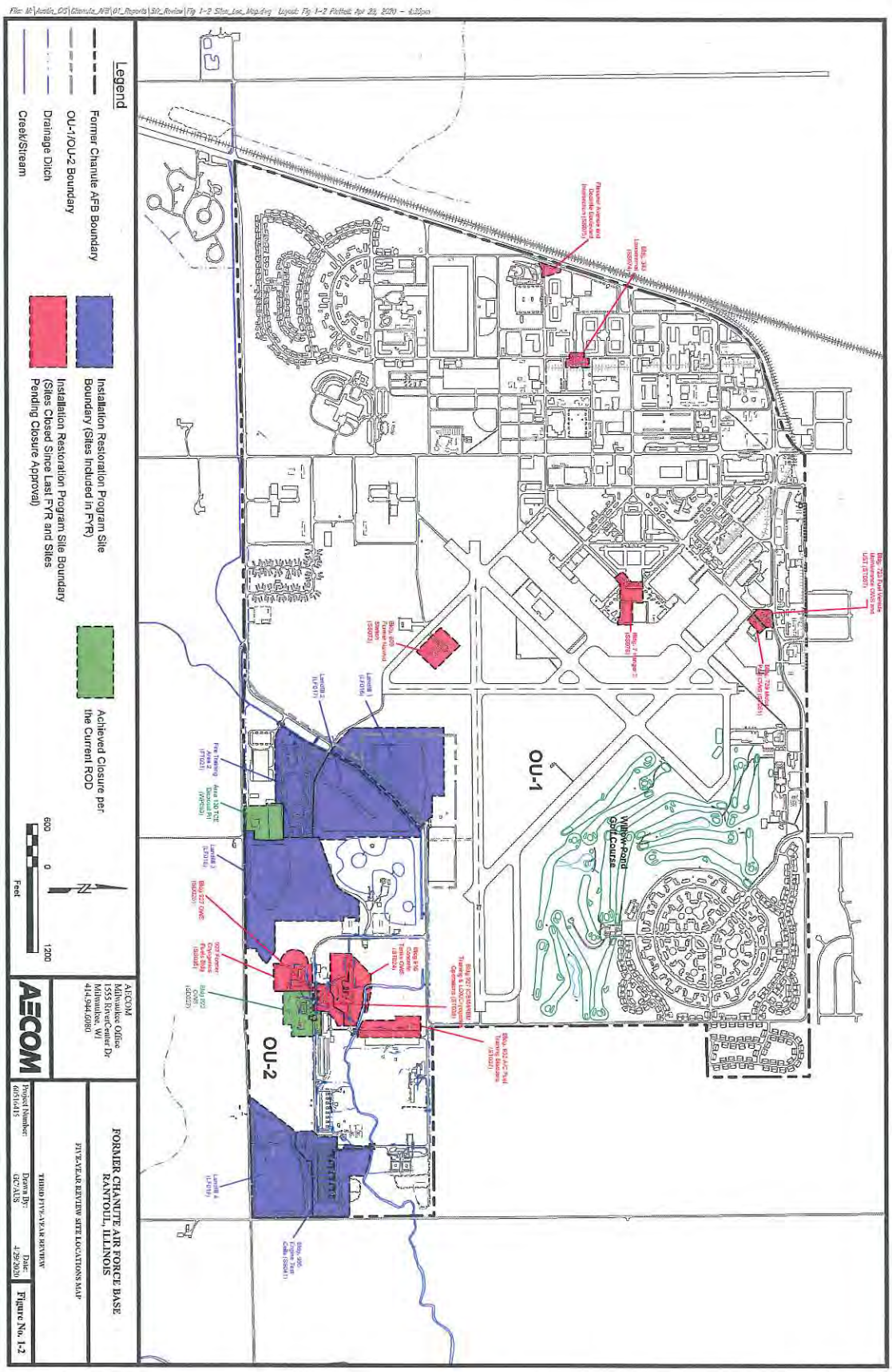
The Site cleanup efforts will continue to be conducted by the United States Air Force, under the regulatory authority of the State of Illinois. Illinois EPA will continue as the lead agency responsible for overseeing the cleanup. Illinois EPA believes that EPA Superfund involvement at this site is not warranted and requested that the site be de-proposed from the NPL in a letter to EPA dated December 2, 2020. EPA Region 5 concurs with Illinois EPA's request and based on EPA's review of the site file, believes that it is appropriate to de-propose the Site from listing on the NPL.

Attachments

Figure 1-2
Figures 2-1 through 2-6

Attachment 1 – IEPA Support Letter for De-proposal
Attachment 2 – 2003 Agreement between EPA, Air Force and IEPA
Attachment 3 – Cleanup History and Status of Implementation
Attachment 4 – Environmental Restoration Progress

Figure 1-2


Legend
Former Chanute AFB Boundary
OU-1/OU-2 Boundary
Drainage Ditch
Creek/Stream
Installation Restoration Program Site Boundary (Sites Included in FYR)
Installation Restoration Program Site Boundary (Sites Closed Since Last FYR and Sites Pending Closure Approval)
Achieved Closure per the Current ROD
600
0
1200
Feet
OU-1
OU-2
Willow Pond Golf Course
AECOM
AECOM
Milwaukee Office
1555 RiverCenter Dr
Milwaukee, WI
414.944.6080
FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS
FIVE-YEAR REVIEW SITE LOCATIONS MAP
THIRD FIVE-YEAR REVIEW
Project Number
60516413
Drawn By:
GCASS
Date:
4/29/2020
Figure No. 1-2

Figures 2-1 through 2-6

Chanute AR 628088

OU-1
OU-2

Land Use Control Boundary

Former Post Dump and Incinerater (SS047)

Landfill 1 (LF016) North Detention Basin

Pistol Range (SS043)

Former Berm

Voodoo Road

Fire Training Area 1 (FT020)

Landfill 2 (LF017) North Detention Basin

Heritage Lake (SI034)

Landfill 1 (LF016)

Landfill 1 (LF016) South Detention Basin

Landfill 2 (LF017)

Salt Fork Creek

South Perimeter Road

Rip-Rap Access Road

ETBuffer planting rows - poplar and willow

Inv. 726.9
Inv. 726.9
Inv. 725.3
Inv. 722.8
Inv. 718.6
Inv. 718.32
Inv. 719.83
Inv. 716.28
Inv. 725.28
Inv. 715.0
Inv. 722.5
Inv. 720.82
LF1 LS
Inv. 713.79
Inv. 721.63
Inv. 716.84
Inv. 722.29
Inv. 715.49
Inv. 714.22
Inv. 716.41
LF2 LS
Inv. 720.38
Inv. 717.75

Note:

Refer to the Legend page at the beginning of the Figures section for icon, acronym, and/or analytical result qualifier definitions.

N

75 0 150

Feet

AECOM
Milwaukee Office
1555 RiverCenter Dr
Milwaukee, WI
414.944.6080

AECOM

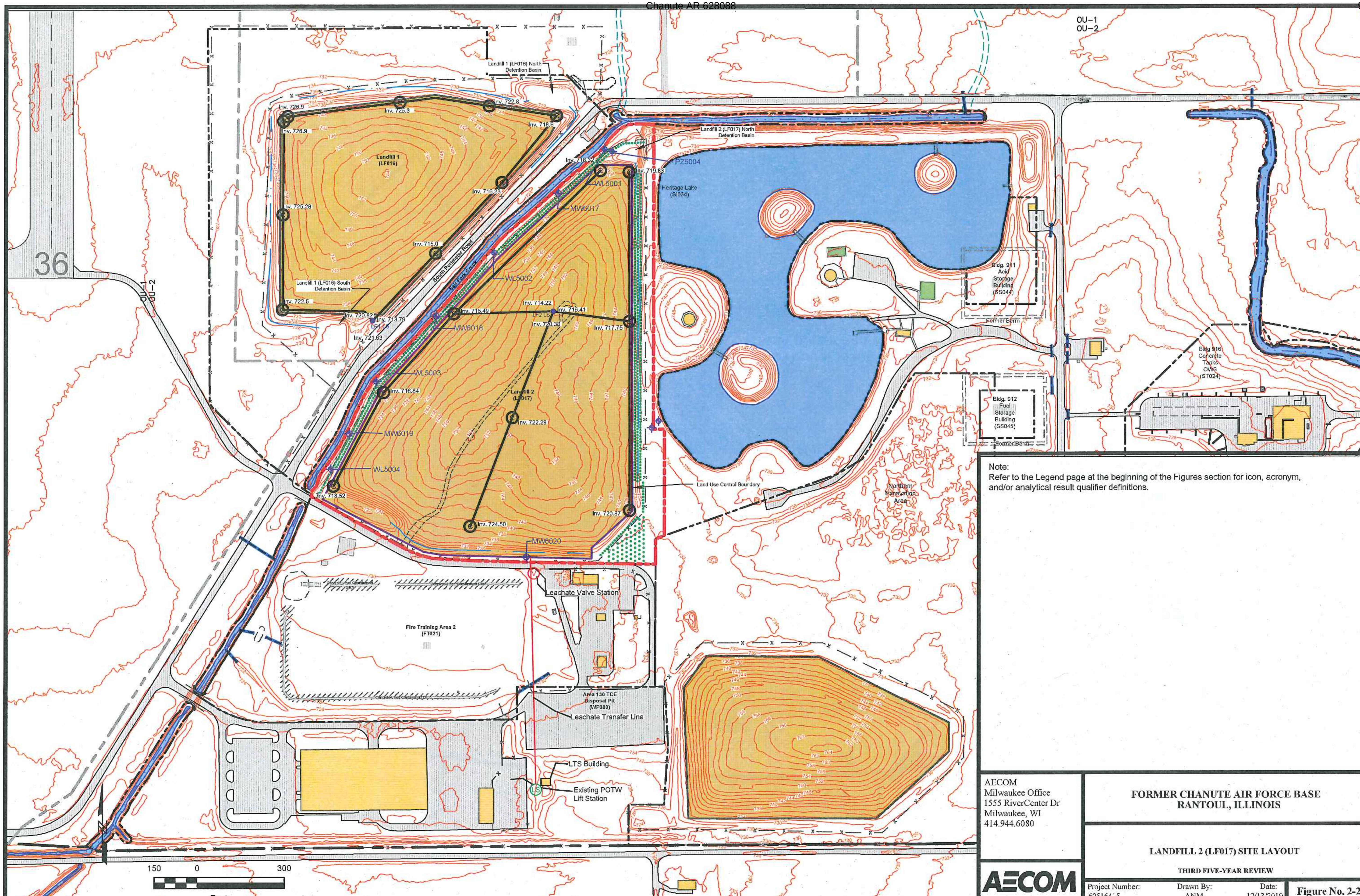
FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

LANDFILL 1 (LF016)
SITE LAYOUT

THIRD FIVE-YEAR REVIEW

Project Number:	Drawn By:	Date:	Figure No. 2-1
60516415	ANM	01/22/2020	

File: M:\Austin_GIS\Chanute_AFB\01_Reports\5Yr_Review\Fig 2-1 Landfill 1.dwg Layout: Fig 2-1 Plotted: Apr 21, 2020 - 9:41pm



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Refer to the Legend page at the beginning of the Figures section for icon, acronym, and/or analytical result qualifier definitions.

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FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

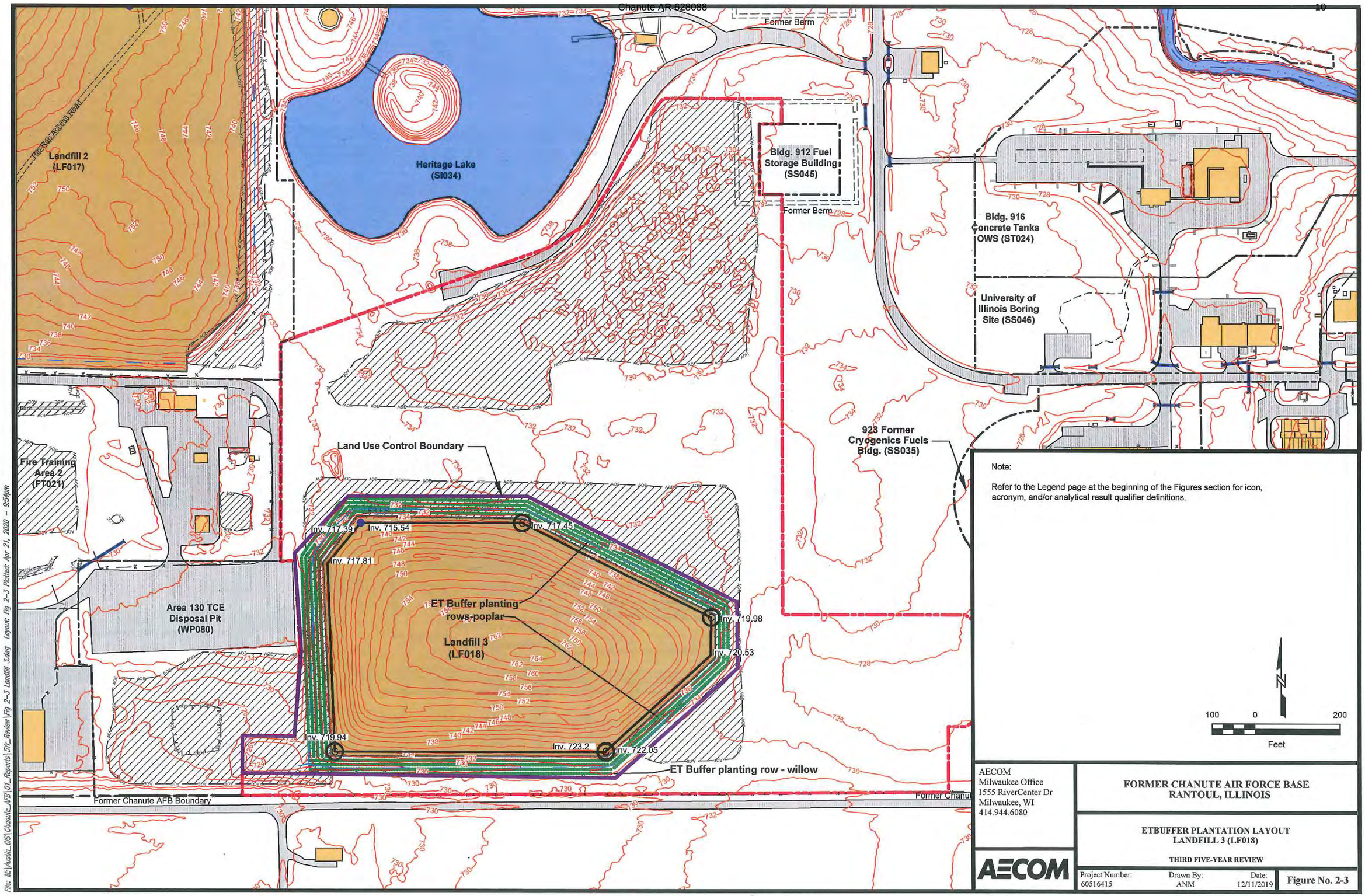
LANDFILL 2 (LF017) SITE LAYOUT

THIRD FIVE-YEAR REVIEW

AECOM

Project Number:	Drawn By:	Date:	
60516415	ANM	12/13/2019	**Figure No. 2-2**

File: \\nacdlc1vfp172\Data\Austin_GIS\Chanute_AFB\01_Reports\5Yr_Review\Fig 2-2 Landfill 2.dwg Layout: 2018 Fig 2-2_05-14-20 Plotted: May 14, 2020 - 4:35pm



Note:

Refer to the Legend page at the beginning of the Figures section for icon, acronym, and/or analytical result qualifier definitions.

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Feet

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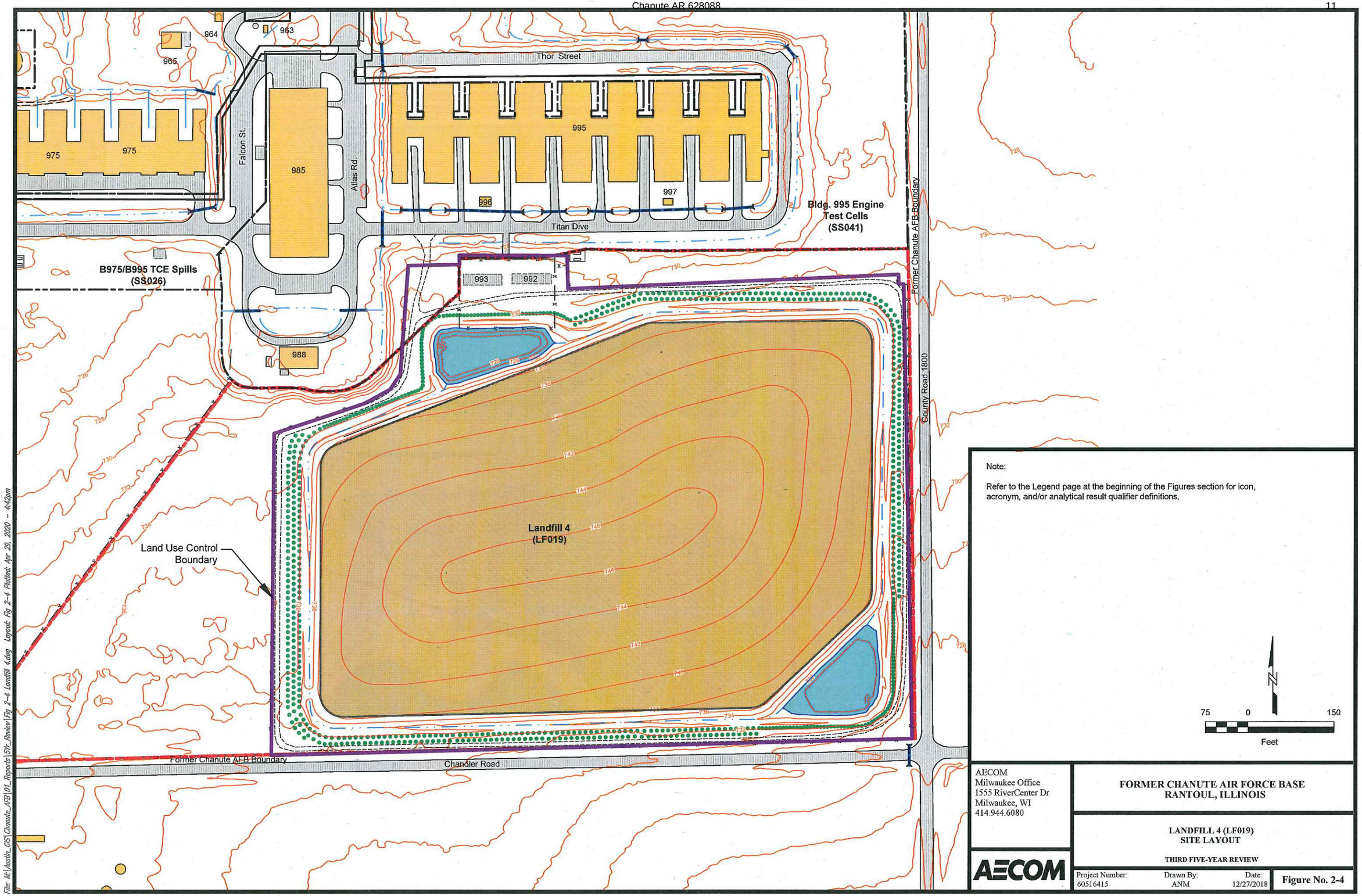
Milwaukee, WI
414.944.6080

FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

ETBUFFER PLANTATION LAYOUT
LANDFILL 3 (LF018)

THIRD FIVE-YEAR REVIEW

Project Number:	Drawn By:	Date:	
60516415	ANM	12/11/2019	**Figure No. 2-3**



Note:

Refer to the Legend page at the beginning of the Figures section for icon, acronym, and/or analytical result qualifier definitions.

N

75 0 150

Feet

AECOM
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Milwaukee, WI
414.944.6080

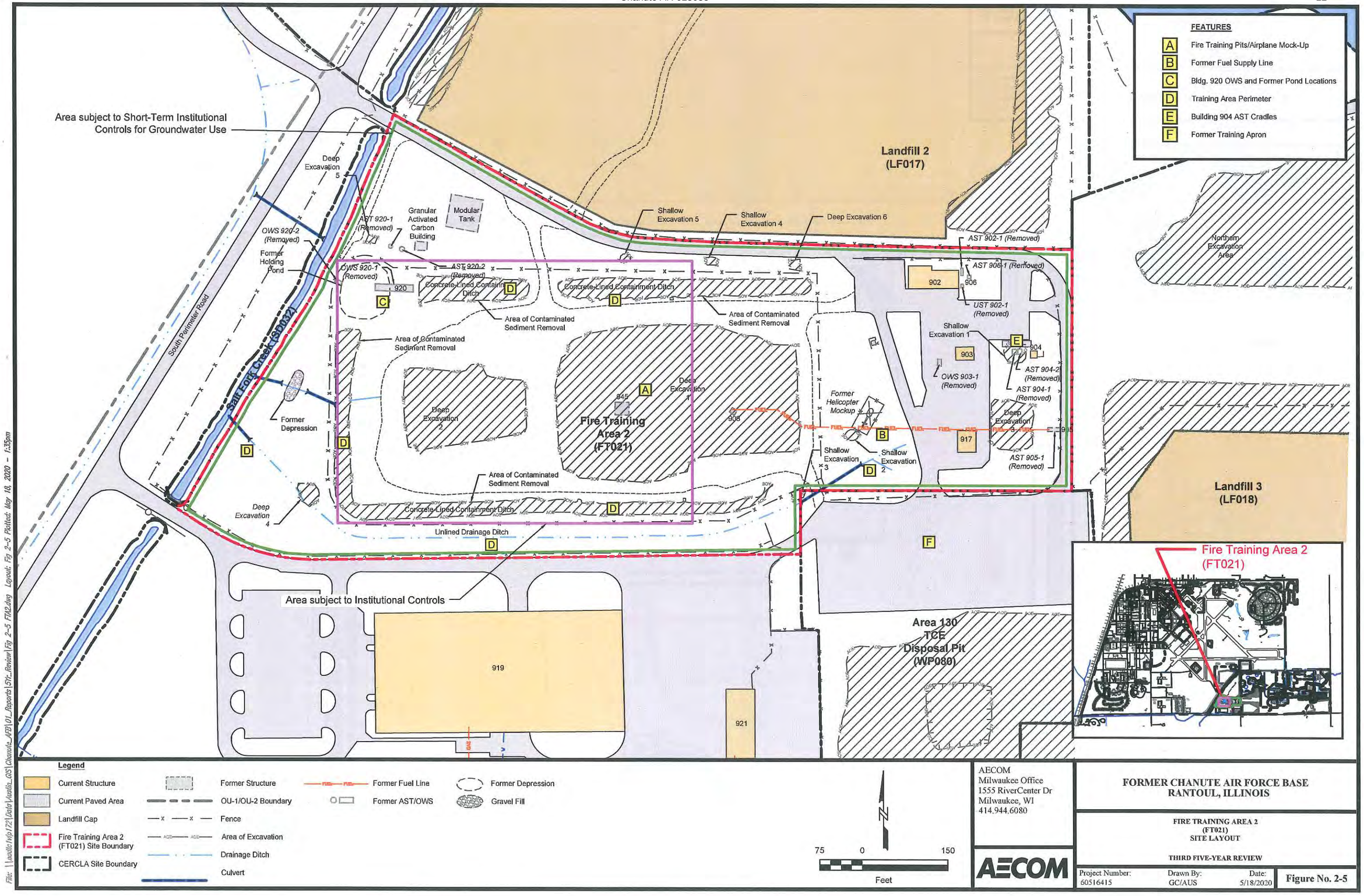
FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

LANDFILL 4 (LF019)
SITE LAYOUT

THIRD FIVE-YEAR REVIEW

Project Number:	Drawn By:	Date:	
60516415	ANM	12/27/2018	**Figure No. 2-4**

File: W:\Austin_GIS\Chanute_AFB\01_Reports\5Yr_Review\Fig 2-4 Landfill 4.dwg Layout: Fig 2-4 Plotted: Apr 29, 2020 - 4:42pm



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414.944.6080

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FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

FIRE TRAINING AREA 2
(FT021)
SITE LAYOUT

THIRD FIVE-YEAR REVIEW

Project Number:	Drawn By:	Date:
60516415	GC/AUS	5/18/2020

Figure No. 2-5

File: \\aodfs1vfp172\Data1\Austin_GIS\Chanute_AFB\01_Reports\5Yr_Review\Fig 2-5 FT02.dwg Layout: Fig 2-5 Plotted: May 18, 2020 - 1:35pm

Salt Fork Creek Dredge Spoils (WM077)

Salt Fork Creek (SD032)

CH1006

CH1003

SW1053

Former (900 Area) Wastewater Treatment Plant (SS042)

Sewage Lagoons

Test Cell Fuel Line (LUST) (ST015)

961

962

964

963

966

965

Area subject to Short-Term Institutional Controls for Groundwater Use and Vapor Risk

998

999

Bldg. 995 Engine Test Cells (SS041)

Thor Street

Test Cell Fuel Line (LUST) (ST015)

995

Bomarc St

C.R. 1800

975

Falcon St

985

Atlas Rd

996

997

AST 995-1

Titan Dr.

AST 995-2

993

992

UST 988-1

UST 988-2

988

AST 988-1

AST 988-2

Landfill 4 (LF019)

Legend

- Current Structure
- Current Paved Area
- Former Structure
- Site Boundary
- Adjacent IRP Site Boundary
- Former Chanute AFB Boundary
- Fence Line
- Drainage Ditch
- Culvert
- Unpaved Road
- Fuel Storage Tank
- Drains Directly to Creek or Ground Surface
- Drains to Wastewater Treatment Plant
- Water Supply Line
- Clay Farm Tile
- Former Fuel Line
- Gas Line
- Sanitary Sewer Line
- Outfall Sample Location (SFC RI)

N

60 0 120

Feet

Bldg. 995 Engine Test Cells (SS041) and Test Cell Fuel Line (LUST) (ST015)

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FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS

BUILDING 995 ENGINE TEST CELLS (SS041) SITE LAYOUT

THIRD FIVE-YEAR REVIEW

Project Number:	Drawn By:	Date:	Figure No. 2-6
60516415	GC/AUS	5/14/2020	

File: \\mcdc1vfp172\Data\austin_GIS\Chanute_AFB\01_Reports\5Yr_Review\Fig 2-7 BB95.mxd Layout: Fig 2-7 Plotted: May 14, 2020 - 2:56pm

Attachment 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

(217) 785-7728

December 2, 2020

Joan Tanaka, Chief
Remedial Response Branch 1
Superfund Division
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd., SR-6J
Chicago, IL 60604

Re: National Priority List De-proposal for The Former Chanute Air Force Base

0918170001 – Champaign County
Chanute Air Force Base
Superfund/Technical Reports

Dear Ms.Tanaka:

The Illinois Environmental Protection Agency (Illinois EPA) provides this letter in support of the United States Environmental Protection Agency (U.S. EPA) Region 5's de-proposal of the former Chanute Air Force Base (AFB), Rantoul, Illinois, from the Superfund National Priorities List (NPL).

The former Chanute AFB was closed in September 1993 under the initial Base Realignment and Closure Program (BRAC). For purposes of conducting environmental investigations, remediation, and transfer of property for reuse, Chanute AFB was divided into two operable units (OUs) – OU-1 and OU-2. Since the completion of the second Five Year Review (FYR, 2015), eleven sites have been remediated to Unlimited Use/Unlimited Exposure (UU/UE) standards. An additional two sites met remedial goals under their Records of Decision (ROD), but emerging contaminants are present above screening levels.

Six sites are included in this year's third FYR: the four landfills (LF016, LF017, LF018, and LF019), Fire Training Area 2 (FT021), and Building 995 Test Engine Cells(SS041). Illinois EPA recently approved a Remedial Action Completion Report for Site FT021 that achieved industrial/commercial goals and relies on institutional controls for long-term protectiveness. Groundwater monitoring continues at Site SS041 where the lateral extent of the groundwater plume above Illinois' Class II Groundwater Quality Standards has been reduced by ninety (90) percent compared to its baseline plume.

Illinois EPA partners with the United States Air Force in its remediation and monitoring efforts to facilitate the productive reuse of the former base. To that end, the comprehensive oversight

performed by Illinois EPA to date will continue through closeout of all remaining Air Force environmental issues at the former Chanute AFB. Based upon the project team's record of successful site remediation, Illinois EPA supports efforts to de-propose the former Chanute Air Force Base from the NPL and remains available to assist U.S. EPA accomplish this goal.

To request more information, you may contact me or the Remedial Project Manager for the Site, Mr. Jhein Siclon, at (217) 557-2476 or by email at Jhein.Siclon@illinois.gov.

Sincerely,

Paul Lake Digitally signed by Paul Lake
Date: 2020.12.02 11:30:33 -06'00'

Paul T. Lake, Manager
Federal Site Remediation Section
Bureau of Land
Illinois Environmental Protection Agency

Bcc: Bureau File
Paul T. Lake, Section Manager, BOL/FSRS (e-copy)
Christopher Hill, P.E., Unit Manager, BOL/FSRS (e-copy)
Scott Hansen (USEPA Region 5)

Attachment 2

937988

Chanute BRAC Cleanup Team (BCT)
Consensus Statement
Between
United States Environmental Protection Agency, Illinois Environmental Protection Agency, and United States Air Force
Concerning
Establishing Clear Objectives to Complete the Cleanup Progress at Chanute AFB - Operable Unit #2
April 7, 2003

Chanute Master Schedule

The BCT agrees that the Chanute Master Integrated Environmental Schedule[1] represents the best estimate of project milestones necessary to achieve construction completion by the end of Federal Fiscal Year (FY) 2005. This baseline schedule will be used for periodic reporting to OMB.

Short-term Milestones

The Chanute Environmental Progress Milestones[2] suggested by the Air Force to track progress for the next six months are consistent with:

a) the Chanute Master Integrated Environmental Schedule discussed above, and
b) the Chanute Environmental Strategy[3].

W. Owen Thompson	Christopher A. Hill	Timothy D. Breeberg
USEPA Region 5 — Date 7 Apr 03	Illinois EPA — Date	AFRPA — Date 7 Apr 03

[1] Draft Chanute Master Integrated Environmental Schedule, March 28, 2003, completed in Microsoft Project
[2] Chanute Environmental Progress Milestones for April-October 2003, dated March 31, 2003
[3] Chanute Environmental Strategy (Site Plan), dated April 9, 2003

Note: The previous title of this document (Memorandum of Agreement) has been changed to the one listed above.

Attachment 3

Attachment 3

Cleanup History and Status of Implementation

Cleanup History

Interim Remedy for Landfills 1, 2, 3, and 4 (Sites LF016, LF017, LF018, and LF019)

The interim remedy selected in the Interim Record of Decision (IROD) (i.e., excavation and consolidation of each landfill into a smaller footprint and the installation of a leachate collection system (LCS) at Landfills 1, 2, and 3 and multi-layer soil and geosynthetic cover at all landfills, was considered necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances, pollutants, or contaminants that may present an imminent and substantial endangerment to public health or welfare. The scope of the interim action was limited to waste, contaminated soil above industrial remedial objectives (ROs), and leachate within the landfill caps. The interim remedy provided for immediate reduction of risks and closure of the landfills through containment.

Final Remedy for Landfills 1, 2, 3, and 4 (Sites LF016, LF017, LF018, and LF019)

Additional remedial action for soil outside of the landfill cap was necessary at Landfill 1 to protect potential hypothetical future residents from exposure to lead in surface soil and mixed soil that would result in a blood lead level greater than 10 micrograms per deciliter (µg/dL) in 5 percent (%) of the exposed population. No significant risk to ecological receptors was identified. The response actions selected in the Final ROD were necessary to protect human health and the environment from actual or threatened releases of hazardous substances into the environment in areas outside of the landfill cap at Landfill 1 and consisted of land use controls (LUCs) for lead-contaminated soil (concentrations above 400 milligrams per kilogram) outside the landfill cap at Landfill 1.

In addition, as part of the final remedy for all landfill sites, implementation of LUCs (to prohibit groundwater use; to prevent residential use, 24-hour occupancy, and the housing of sensitive subpopulations; and to maintain landfill cap integrity) and post-closure care as per federal/state landfill regulations (continued operations, maintenance, and monitoring [OM&M]) are necessary to protect the remedy implemented as part of the IROD.

No residual contamination that threatens human health or the environment was identified outside of the Landfill 2, 3, or 4 caps, other than the leachate-impacted groundwater that is being addressed by operation of the LCS and the evapotranspiration buffer (ET Buffer) at Landfill 2. Therefore, no remedial alternatives to address media outside of the Landfill 2, 3, and 4 caps were considered in the Final ROD.

Fire Training Area 2 (FT021)

The Air Force determined remedial actions for soil were needed to protect potential future residents, industrial workers, and construction workers from exposure to benzene, naphthalene, and dioxins in surface and mixed soil having 1 × 10-6 to 1 × 10-4 or greater excess cancer risk or a non-cancer hazard index (HI) greater than 1, and to prevent the future degradation of groundwater as a potential potable water resource from the migration of volatile organic compounds (VOCs) in soil. Remedial actions for groundwater were needed to protect future receptors from exposure to contaminants of concern (COCs) in groundwater at concentrations greater than federal maximum contaminant levels (MCLs) and/or Illinois Groundwater Quality Standards (IGWQS) and to restore groundwater concentrations to federal MCLs and/or IGWQS. No significant risk to ecological receptors was identified. The response actions selected were necessary to protect human health and the environment from actual or threatened releases of hazardous substances into the environment and consisted of LUCs to restrict the use of the site, enhanced in-situ bioremediation for groundwater remediation, and in-situ chemical oxidation for groundwater remediation.

An Explanation of Significant Differences (ESD) to revise the Applicable or Relevant, and Appropriate Requirements (ARARs) described in the ROD to reflect the change in groundwater classification from Class I (Potable Resource Groundwater) to Class II (General Resource Groundwater) and subsequent change in Remedial Action Objectives (RAOs) and cleanup levels was finalized in June 2020.

Building 995 Engine Test Cells (SS041)

The Air Force determined remedial actions for soil were needed at site SS041 to protect potential future residents and industrial workers from exposure to polycyclic aromatic hydrocarbons (PAHs) in surface soil and subsurface soil having 1 × 10-6 to 1 × 10-4 or greater excess cancer risk and to protect construction workers from exposure to TCE in subsurface soil having 1 × 10-6 to 1 × 10-4 or greater excess cancer risk and a non-cancer target organ HI greater than 1.

Styrene and TCE were selected as soil-to-groundwater migration COCs based on the basewide decision criteria (DC) exceedances. However, when site-specific cleanup levels were calculated using site-specific data, no impacted soil for protection of groundwater was identified because the maximum concentrations of styrene and TCE above the water table in soil were less than the site-specific soil-to-groundwater migration cleanup levels. Therefore, remedial actions for soil-to-groundwater migration were not needed. In accordance with the ROD, the soil COCs in the capillary fringe zone are addressed during groundwater remediation.

Although concentrations of TCE were below the direct-contact cleanup level, the ROD recommended that saturated deep subsurface soil (8 to 10 feet bgs) be excavated due to an elevated detection of TCE to expedite groundwater remediation. The area for excavation was located on the south side of Building 995, between two wings of the building.

Remedial actions for groundwater were needed to protect future receptors from exposure to VOCs in groundwater at concentrations greater than federal MCLs and/or IGWQS and to restore groundwater concentrations to the federal MCLs and/or IGWQS. These remedial actions

consisted of risk-based excavation using 10-4 preliminary remediation goals (PRGs) for unrestricted land use, off-site disposal, enhanced reductive dechlorination (ERD), groundwater monitoring, and LUCs until site achieves UU/UE.

An ESD was issued in August 2017 that imposed a LUC at SS041 prohibiting the use of Building 995 or constructing new buildings without installing a VI mitigation system overlying the groundwater plume for residential or industrial/office use until the VI RAO is achieved.

A second ESD to revise the ARARs described in the ROD to reflect the change in groundwater classification from Class I (Potable Resource Groundwater) to Class II (General Resource Groundwater) and subsequent change in RAOs and cleanup levels was finalized in June 2020.

Remedy Implementation Status

Landfill 1 (LF016)

All portions of the remedy have been implemented. The following bullets note the status of the remedy implementation for each component.

Interim Remedy

- *Consolidating the landfill into a smaller footprint.* Completed in September 2001.

- *Capping the waste with a multilayer soil and geosynthetic cover.* Completed in December 2002.

- *Installing leachate collection system (LCS), collecting the leachate, and treating the leachate (as required).* The installation of the LCS was completed in September 2001. A preliminary start-up session of the LCS pumps was conducted in December 2002 and all systems were operable; however, at that time, approvals to discharge leachate to the Village of Rantoul publicly owned treatment works (POTW) or alternate treatment facility had not been obtained. A treatability study was performed in 2006 which included pumping water from the Landfill 1 LCS, providing on-site treatment with an air stripper and granular activated carbon (GAC), and discharging the treated effluent to Salt Fork Creek (SFC). Groundwater monitoring results from Landfill 1 point of compliance monitoring wells have not detected hazardous constituents migrating from the landfill; therefore, the Landfill 1 leachate pumping system is not currently activated.

- *Installing surface water controls to handle run-on and runoff.* Completed in December 2002 at the same time the cover was completed. After full vegetation growth on the landfill cap and after eight years of monitoring, the sedimentation basins were converted to storm water detection basins in the fall of 2013.

- *Passive venting of landfill gas (LFG).* Completed in December 2002 at the same time the cover was completed.

- *Backfilling excavated areas with borrow soil.* Completed in September 2001.

- *Implementing interim controls consisting of access restrictions, site inspection and maintenance, and media monitoring.* The Final Interim Operation, Maintenance, and Monitoring Plan was completed in August 2004. This plan detailed requirements related to access restrictions, periodic inspection and maintenance requirements, and media monitoring (storm water and LFG). Interim OM&M activities were initiated on 1 August 2004. Groundwater monitoring was initially conducted as part of the RI and transitioned to being performed under the Final Interim Landfill Groundwater Monitoring Plan, Operable Unit 2 (OU-2) Landfill 1 (LF016), Landfill 2 (LF017), and Landfill 3 (LF018). Interim OM&M activities continued until the finalization of the OM&M Plan developed in support of the final remedy.

Final Remedy

- *Post-closure care (OM&M).* The Final Operation, Maintenance, and Monitoring Plan (Revision 1) was updated in July 2014 (Revision 2) to be in compliance with the Final ROD. This updated plan consolidated OM&M and groundwater monitoring requirements into a single document and includes procedures for landfill operations and maintenance addressing general site operations and maintenance, engineered cover, surface drainage control system, landfill gas (LFG)-venting system, leachate management system (LMS), and the groundwater monitoring system. Landfill monitoring requirements address storm water, LFG, leachate discharge, and groundwater. The OM&M Plan is periodically updated with the current plan (Revision 3) having been completed in February 2017. Post-closure care continues under the requirements of this plan as modified by IEPA approval of Air Force requested modifications documented in the Annual OM&M Reports.

- *Implementation of LUCs.* The Final Operation, Maintenance, and Monitoring Plan (Revision 2) was updated in February 2017 (Revision 3) to be in compliance with the Final ROD and added LUC management to the OM&M plan. The LUCs at Landfill 1 also includes an area outside the cap impacted by lead from the former ranges that exceeded levels that would allow for UU/UE. The status of the LUC management has been documented in the Annual OM&M Reports since 2014.

Landfill 2 (LF017)

All portions of this remedy have been implemented. The following bullets note the status of the remedy components:

Interim Remedy

- *Consolidating the landfill into a smaller footprint.* Completed in May 2001.

- *Capping the waste with a multilayer soil and geosynthetic cover.* Completed by July 2004.

- *Installing LCS, collecting the leachate, and treating the leachate (as required).* The installation of the LCS was completed in August 2001. A treatability study was performed in 2006 which included pumping water from the Landfill 2 LCS, providing on-site treatment with an air stripper and GAC, and discharging the treated effluent to SFC. Modifications to the LCS were made in 2010 to Landfill 2 to allow direct pumping of leachate from Landfill 2 to the Village of Rantoul POTW. The LCS began operation in July 2010 following installation of a force main to connect to the Village of Rantoul sanitary sewer system. In 2013, an ET Buffer LMS using hybrid poplar and willow trees was installed at Landfill 2.
  Groundwater monitoring results from Landfill 2 point of compliance monitoring wells have detected VOCs above landfill groundwater compliance limits (GCLs) since 2011; therefore, the Landfill 2 leachate pumping system continues to operate.

- *Installing surface water controls to handle run-on and runoff.* Completed in November 2003. Two sedimentation basins (north and southwest) were constructed to collect surface water runoff, allowing sediments contained in the run-off to settle out, before discharging to SFC. After full vegetation growth on the landfill cap and after eight years of monitoring, the southwest and northern sedimentation basins were converted to storm water detention basins in the fall of 2013 and fall of 2014, respectively.

- *Passive venting of LFG.* Completed in August 2003.

- *Backfilling excavated areas with borrow soil.* Completed in October 2002.

- *Implementing interim controls consisting of access restrictions, site inspection and maintenance, and media monitoring.* Status of implementation for Landfill 2 is the same as for Landfill 1.

Final Remedy

- *Post-closure care (OM&M).* Status of implementation for Landfill 2 is the same as for Landfill 1, except that Landfill 2 includes the management of the ET Buffer and leachate treatment system (LTS). An LTS was installed in 2016 to reduce levels of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in Landfill 2 leachate prior to discharge to the Village of Rantoul POTW.

- *Implementation of LUCs.* Status of implementation for Landfill 2 is the same as for Landfill 1.

Landfill 3 (LF018)

All portions of this remedy have been implemented. The following bullets note the status of the remedy components:

Interim Remedy

- *Consolidating the landfill into a smaller footprint.* Completed in October 2002.

- *Capping the waste with a multilayer soil and geosynthetic cover.* Completed by September 2002.

- *Installing LCS, collecting the leachate, and treating the leachate (as required).* The installation of the LCS was completed in September 2002. A treatability study was performed in 2006 which included pumping water from the Landfill 3 LCS, providing on-site treatment with an air stripper and GAC, and discharging the treated effluent to SFC. In April 2009, an ET Buffer treatability study was implemented at Landfill 3. The ET Buffer study included the planting of approximately 1,930 hybrid poplar and willow trees to evapotranspire groundwater surrounding the landfill in order to create an inward groundwater hydraulic gradient. The Landfill 3 ET Buffer installation was completed in May 2009. The LCS for Landfill 3 is not currently in operation because the ET Buffer LMS is currently controlling the leachate from this landfill.

- *Installing surface water controls to handle run-on and runoff.* Completed in November 2002. The sedimentation basin serves to collect surface water runoff, allowing sediments contained in the run-off to settle out, before discharging to an existing ditch that directs storm water flow westward to SFC. After full vegetation growth on the landfill cap and after eight years of monitoring, the sedimentation basin was converted to a storm water detention basin in the fall of 2013.

- *Passive venting of LFG.* Completed in August 2002.

- *Backfilling excavated areas with borrow soil.* Completed in October 2002.

- *Implementing interim controls consisting of access restrictions, site inspection and maintenance, and media monitoring.* Status of implementation for Landfill 3 is the same as for Landfill 1.

Final Remedy

- *Post-closure care (OM&M).* Status of implementation for Landfill 3 is the same as for Landfill 1, except that Landfill 3 includes management of the ET Buffer.

- *Implementation of LUCs.* Status of implementation for Landfill 3 is the same as for Landfill 1.

Landfill 4 (LF019)

All portions of this remedy have been implemented. The following bullets note the status of the remedy components:

Interim Remedy

- *Consolidating the landfill into a smaller footprint.* Completed in June 2011.

- *Capping the waste with a multilayer soil and geosynthetic cover*. Completed by October 2011.

- *Installing surface water controls to handle run-on and runoff*. Completed in 2011. Two detention basins (northwest and southeast) were constructed to collect surface water runoff, allowing sediments contained in the run-off to settle out, before discharge to surrounding drainage ditches.

- *Passive venting of LFG.* Completed in August 2011.

- *Backfilling excavated areas with borrow soil.* Substantially completed by June 2011.

- *Implementing interim controls consisting of access restrictions, site inspection and maintenance, and media monitoring.* Landfill OM&M activities have been conducted to coincide with the guidance provided in the Final Interim Landfill Groundwater Monitoring Plan for Landfills 1, 2, and 3 since cap completion in 2011 and subsequent revision.

Final Remedy

- *Post-closure care (OM&M).* Status of implementation for Landfill 4 is the same as for Landfill 1, except that Landfill 4 includes management of the ET Buffer.

- *Implementation of LUCs.* Status of implementation for Landfill 4 is the same as for Landfill 1.

Fire Training Area 2 (FT021)

All portions of this remedy have been implemented. Implementation of the Selected Remedy occurred from November 2011 through October 2012, with remedial process optimization (RPO) activities and groundwater monitoring occurring past October 2012. Remedial activities were performed in accordance to the Remedial Action Workplan (RAWP). Implementation of the Selected Remedy is detailed in the Remedy-In-Place (RIP) Report. The following bullets note the status of the remedy components:

- *LUCs to restrict use of the site.* LUCs for soil and groundwater were implemented in the existing lease agreement and have been monitored using State of Illinois Joint Utility Locating Information for Excavators (JULIE) notifications and periodic field inspections since 2012.

- *Enhanced In-Situ Bioremediation and In-Situ Chemical Oxidation for groundwater*

remediation. Tasks performed as part of the Selected Remedy at Site FT021 included collection of pre-excavation and pre-injection samples, placement of an oxygen-releasing compound in the excavation to promote in-situ bioremediation of remaining fuel constituents within the underlying soil and groundwater in this area, and performance of groundwater in-situ bioremediation injections.

Pre-injection groundwater screening samples were collected in May 2012 and showed COCs exceeded groundwater cleanup levels. Monitoring wells were installed based on the pre-injection groundwater screening sample results, and baseline groundwater monitoring was conducted in September 2012, and showed COCs in groundwater exceeded the groundwater cleanup levels. Initial groundwater injection activities were conducted in September 2012. The performance groundwater monitoring results showed COCs continued to exceed groundwater cleanup levels. Based on these results, RPO activities were implemented to replenish amendments, to increase the rate of biodegradation, and to expedite the treatment process. RPO activities consisted of reinjection of TPHenhanced™ (performed in May and June 2013), ERD re-injections (implemented in July 2013), hot-spot soil excavations (occurred between July and November 2014) and hydrogen peroxide injections. After excavations were complete, TersOx™ was placed on the bottom of each excavation, and the excavations were backfilled. Groundwater injections occurred in October 2014, and air sparging occurred from July through October 2015. RPO activities to expedite the treatment process included injection of TersOx™ and powdered-activated carbon (PAC) in 2014 and 2017. In September 2018, TersOx™, diammonium phosphate, sodium bicarbonate and a benzene degrader was placed on the bottom of a trench, which was then backfilled.

Building 995 Engine Test Cells (SS041)

All portions of this remedy have been implemented. Remedial activities were performed in accordance with the RAWP. Implementation of the Selected Remedy occurred from July through October 2011, with RPO activities, groundwater monitoring, and LUCs occurring past October 2011. Implementation of the Selected Remedy is detailed in the RIP Report and Soil Remedial Action Completion Report (RACR). The following bullets note the status of the remedy components:

Final Remedy

- *Risk-Based Excavation Using 10-4 PRGs for Unrestricted Land Use.* Tasks performed to implement the Selected Remedy at Site SS041 included collection of pre-excavation soil samples to refine the soil excavation boundaries, soil excavation (occurred August 2011), site restoration, and disposal of remediation-derived waste (RDW).

- *Off-Site Disposal.* An approximate total of 8,140-square feet of PAH-impacted soil was removed to a depth of 6 inches near Buildings 985 and 988. Also, an approximate 600-square foot area of TCE-impacted soil at Building 995 was excavated to a depth of approximately 11 feet bgs. A total of 481 tons of soil from the three areas of excavation were removed and disposed off-site.

- *ERD.* Tasks performed to implement the Selected Remedy at site SS041 included performance of groundwater in-situ bioremediation injections. Baseline groundwater monitoring was conducted in July 2011 and showed COCs in groundwater exceeded the groundwater cleanup levels. The areas with COC concentrations that exceeded the groundwater cleanup levels during the baseline groundwater sampling were treated with ERD. RPO activities in 2012 included investigation of a possible dense non-aqueous phase liquid (DNAPL) source and multiple rounds of reinjections. RPO activities in 2013 included re-injections and installation of a recirculation system. Hot-spot soil excavations in the areas of the highest COC concentrations were conducted in 2014. RPO activities performed in 2015 to determine the potential source of contamination consisted of investigation around a floor drain and hot-spot investigation. RPO activities performed in 2016 to remove that source of contamination consisted of demolishing the south end of Test Cell #14 in January 2016 and hot-spot excavation between Test Cells #13 and #14, in April 2016. Prior to backfilling of the excavation area, a lactate/emulsified vegetable oil (EVO) mixture was pumped into the open excavation to promote the biodegradation of remaining COCs. Additional groundwater injections occurred in June 2016, consisting of poly-lactate, EDS-ER™, and SDC-9™ solutions. In August 2017, lactate, EVO, SDC-9™, and PAC solution mix were injected. Amendment mixture was pumped into five temporary trenches and four direct-push technology injection points in September 2018.

- *Groundwater Monitoring.* Tasks performed to implement the Selected Remedy at Site SS041 included installation of groundwater monitoring wells, collection of baseline groundwater samples, and decommissioning of select RI monitoring wells. The performance groundwater monitoring results showed COCs exceeded the groundwater cleanup levels. RPO activities were implemented to replenish amendments, to increase the rate of dichlorination, and to expedite the treatment process.

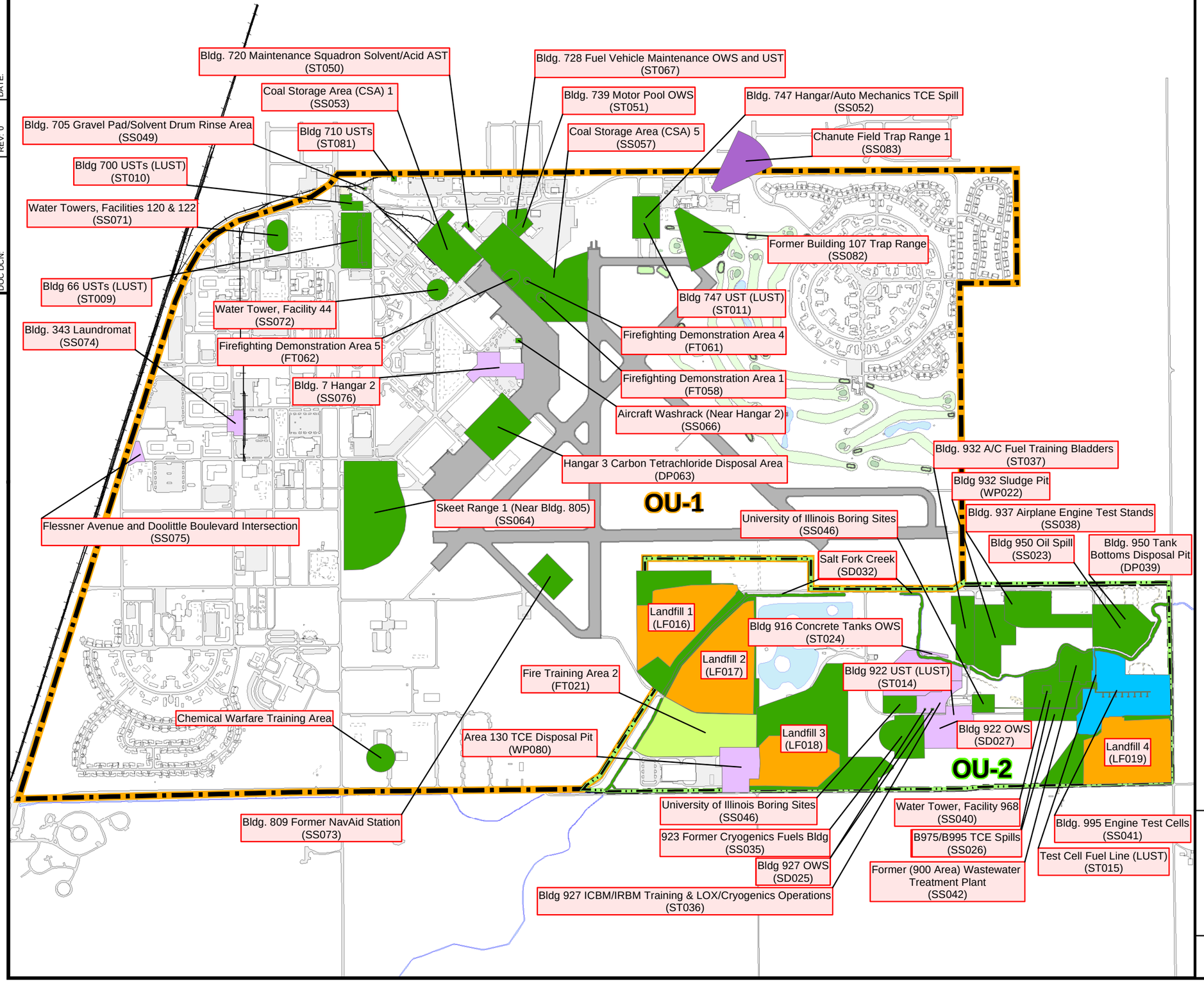
- *LUCs.* LUCs were implemented in the existing lease agreement and are monitored using State of Illinois JULIE notifications and periodic field inspections as reported in annual Remedial Action Groundwater Monitoring and Process Optimization Reports. There have been no identified issues or violations of LUCs.

Explanation of Significant Differences (ESD)

- *LUCs for VI.* LUCs were implemented in the existing lease agreement and are monitored using State of Illinois JULIE notifications and periodic field inspections to ensure buildings are not occupied due to VI concerns and no new buildings are constructed without VI mitigation. There have been no identified issues or violations of LUCs.

Attachment 4

DRAWN BY: M.Hall | CHECKED BY: H. Sparrow | APPROVED BY: A. Bumb
DOC DCN: | REV: 0 | DATE:



Legend

- OU-1 Boundary
- OU-2 Boundary
- Closed
- Rebound Monitoring
- OM&M
- Ongoing Remedial Action
- PA/SI Completed
- Site Closure Pending
- Railroad
- Golf Course Fairway
- Paved
- Unpaved
- Existing Facility
- Former Structures
- Airfield
- River/Stream
- Lake/Pond

Note:
Sites FT021 and SD027 rebound monitoring and pending site closure, respectively, pertain to groundwater contamination only excluding emerging contaminants
(e.g., per- and polyfluoroalkyl substances and 1,4-dioxane).

N

0 625 1,250
Feet

ENVIRONMENTAL RESTORATION PROGRESS
FORMER CHANUTE AFB
DECEMBER 2019

FORMER CHANUTE AIR FORCE BASE
RANTOUL, ILLINOIS
CONTRACT NO. FA4890-06-D-0010

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ADMINISTRATIVE RECORD

FINAL PAGE