

**FINAL
ENVIRONMENTAL ASSESSMENT

FOR THE

KANSAS CITY NATIONAL SECURITY CAMPUS
ASSESSMENT OF KCNExT
DOE/EA-2225**

**U.S. Department of Energy
National Nuclear Security Administration**



October 31, 2023

ACRONYMS AND ABBREVIATIONS

AHS	All Hazards Assessment
APCP	Air Pollution Control Program
Botts Campus	KCNSC facility at 14520 Botts Road, Kansas City, Missouri
Building 23	KCNSC facility 14901 Andrews Road, Kansas City, Missouri
CAA	Clean Air Act
ccf	hundreds of cubic feet
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1976
CFR	Code of Federal Regulations
CO	Carbon monoxide
CUP	Central Utility Plant
CWA	Clean Water Act
DOE	United States Department of Energy
DOE/EA-1947	U.S. Department of Energy's 2013 Environmental Assessment for the <i>Transfer of the Kansas City Plant, Kansas City, Missouri</i>
DOE/EA-1592	U.S. Department of Energy's 2008 Environmental Assessment for the <i>Modernization of Facilities and Infrastructure for the Non-Nuclear Production Activities Conducted at the Kansas City Plant</i>
DOE/EA-1592-S1	U.S. Department of Energy's 2019 Supplemental Environmental Analysis for the <i>Relocation and Performance of KCNSC Operations in Building 23</i>
DOE/EA 2167	U.S. Department of Energy's 2021 <i>KCNSC Sitewide Assessment of Botts and Building 23 Operations</i>
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPHA	Emergency Planning Hazard Assessment
ESTART	Environmental Site Tracking and Research Tool (MDNR)
FEMA	Federal Emergency Management Administration
FONSI	Finding of No Significant Impact
HAP	Hazardous air pollutant
Honeywell FM&T	Honeywell Federal Manufacturing and Technologies
HUC	Hydrologic Unit Code
HS&E	health, safety, and environment
IWPF	Industrial Wastewater Pretreatment Facility
KCMO	Kansas City, Missouri
KCNExT	Kansas City Non-Nuclear Component Expansion Transformation
KCNSC	Kansas City National Security Campus
KCS	Kansas City Southern Railroad
kV	kilovolt
LQG	large quantity generator
MDNR	Missouri Department of Natural Resources
MWh	Megawatt-hours
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act, as amended

NNSA	National Nuclear Security Administration
NPDES	National Pollutant Discharge Elimination System
NO _x	nitrogen dioxide
NWI	National Wetland Inventory
O ₃	Ozone
OSHA	Occupational Health and Safety Administration
Pb	Lead
PCBs	polychlorinated biphenyls
PHA	Preliminary Hazard Assessment
PM	particulate matter
RCRA	Resource Conservation and Recovery Act of 1976
SDS	Safety Data Sheet
SF	square feet
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SPCC	Spill Prevention Control and Countermeasures
SQG	small quantity generator
SSMP	Stockpile Stewardship Management Plan
SWPPP	Stormwater Pollution Prevent Plan
THIRA	Threat and Hazard Identification and Risk Assessment
TPQ	threshold planning quantity
TSDF	Treatment, Storage, and Disposal Facility
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USC	United States Code
UST	underground storage tank
VOC	volatile organic compounds
VSQG	very small quantity generator

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1.0 INTRODUCTION, BACKGROUND, AND PURPOSE AND NEED FOR ACTION

The U.S. Department of Energy (DOE), National Nuclear Security Administration (NNSA) as lead agency has prepared this Environmental Assessment (EA) to evaluate the acquisition and operation of a new facility/campus east of the existing Kansas City National Security Campus (KCNSC) Botts Campus in Kansas City, Jackson County, Missouri. The NNSA, a semi-autonomous agency within the DOE, conducts operations at the KCNSC Botts Campus, at a nearby facility, KCNSC Building 23, and at several leased office building locations in the South Kansas City, Missouri and Overland Park, Kansas areas to support the ongoing development and manufacture of non-nuclear components of nuclear weapons.

In order to support continued growth and operational capacity, the NNSA has prepared this EA to assess the effects on the human and natural environment of the acquisition and operation of a new campus on the 245-acre property immediately east of the existing KCNSC Botts Campus, referred to as the Kansas City Non-Nuclear Component Expansion Transformation (KCNEXT). The DOE's *National Environmental Policy Act Implementing Procedures* (10 Code of Federal Regulations [CFR] Part 1021) require preparation of a Site-Wide or Programmatic EA, a broad-scope document, to support programmatic decisions or to assess the impacts of all or selected functions at sites such as the KCNSC (10 CFR 1021.330(a)).

1.1 Background

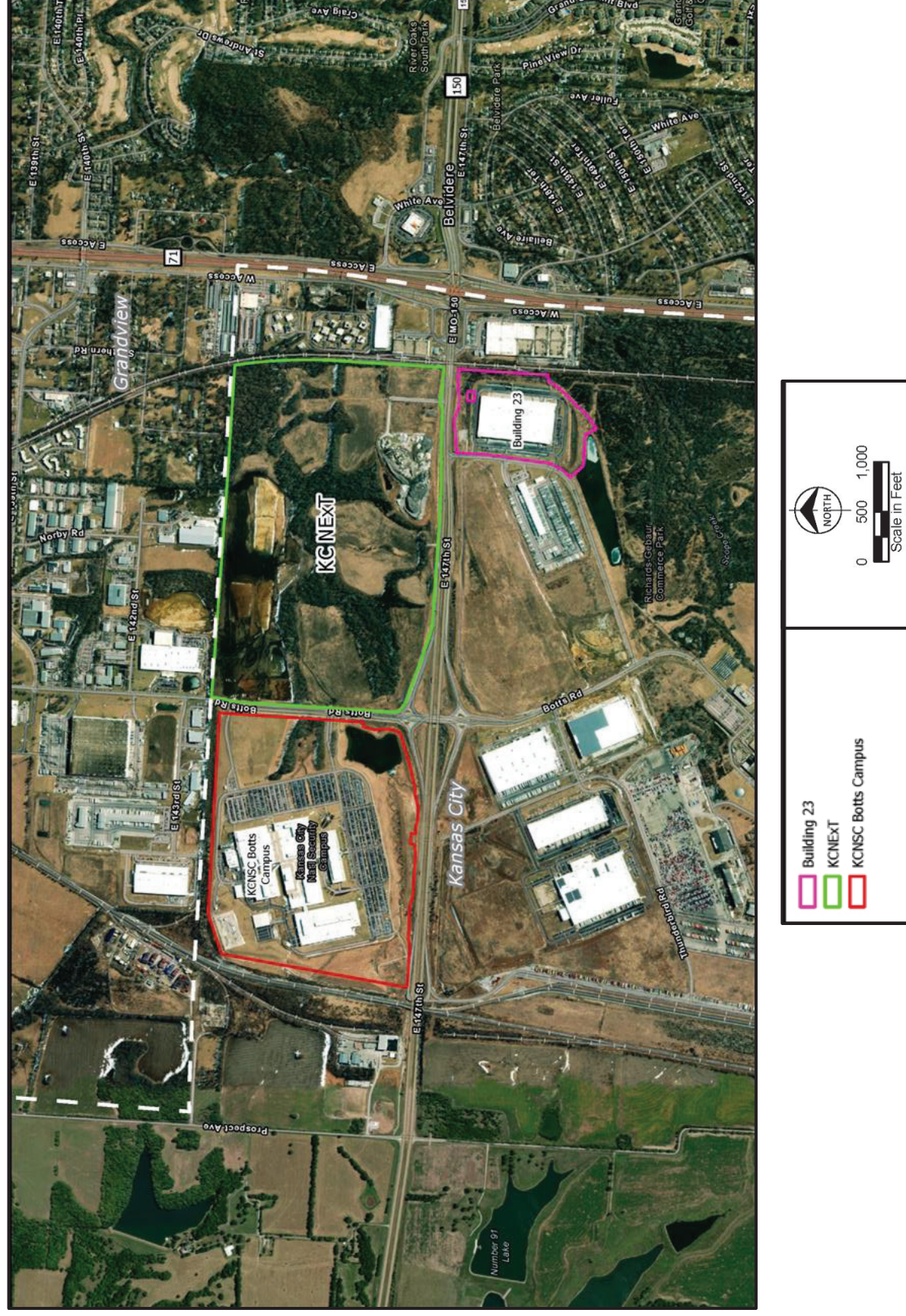
In the Fall of 2021, KCNSC was tasked with developing a conceptual area layout for a proposed new campus on the 245-acre property east of the existing KCNSC Botts Campus to support NNSA's national security mission and provide more space for the expanding workforce and long-term operational needs. The KCNSC Botts Campus, Building 23, and other Kansas City area locations are managed and operated by Honeywell Federal Manufacturing & Technologies (Honeywell FM&T) LLC under DOE Contract DE-NA0002839, and together are one of eight primary operating sites under the NNSA. The KCNSC is responsible for the procurement and manufacturing of nonnuclear mechanical, electronic, and engineered material components for nuclear weapons. Figure 1-1 illustrates the proximity of the KCNSC Botts Campus, Building 23, and proposed KCNEXT.

In response to the KCNSC's growing workload and in support of NNSA's mission to maintain a safe, secure, and effective nuclear stockpile, NNSA is pursuing a plan to incrementally expand its manufacturing capacity and office space necessary to sustain continued production growth required by the current Program Of Record (POR). As proposed, KCNEXT is a multi-year, multi-phase project, to create a series of independent projects to accommodate expected long-term growth beyond Fiscal Year (FY) 2028.

NNSA has a unique opportunity for non-traditional acquisition and development of the land adjacent to the existing KCNSC Botts Campus to support expanded mission objectives and future enterprise resilience. NNSA seeks to secure this property through an innovative lease-purchase acquisition with construction completed by the current landowner/developer. Pre-development studies were completed by the landowner/developer and are described later in the introduction and in Chapter 3 of this EA.

NNSA began to address its capacity needs in 2019 by maximizing office space leases, expanding shift operations, and acquiring additional manufacturing space, including Building 23. These efforts provide sufficient capacity to meet program requirements through FY 2028, but NNSA anticipates continued increases in workload and production needs requiring additional personnel, as well as research and manufacturing space within the KCNSC beyond FY 2028.

Figure 1-1: Location of the KCNSC Botts Campus, Building 23, and KCNEXT



To address the unanticipated expanding workload and subsequent lack of adequate space at the KCNSC Botts Campus, between 2016 and 2019, the NNSA leased additional office space at three locations in Kansas City as described in Table 4-1. In 2019, the NNSA leased 275,000 SF of production space within Building 23 and in 2023 purchased Building 23 with the intention of using all available 425,000 SF for manufacturing starting in 2024. Table 1-1 summarizes additional leased office space and the number of personnel associated with each lease facility.

Table 1-1: KCNSC Additional Leased Office Space; 2016-2019

Year	Number of Personnel Relocated	Office Space Lease Location	NEPA ID; Applicable Categorical Exclusions
2016	96	KCNSC Building 20 South: 15431 Andrews Rd., Kansas City MO 64147	NSC 16-02 B1.24 Property Transfers
2017	423	KCNSC Building 21 West: 6700 W. 115th St. Overland Park KS 66211	KCNSC 17-03 B1.24 Property Transfers
2019	400	KCNSC Building 22 North: 9221 Ward Parkway, Kansas City, MO 64114	KCNSC 18-02 B1.24 Property Transfer

Source: NNSA, August 2019

This EA (1) updates the operations and activities conducted at the existing KCNSC Botts Campus and Building 23, as described in the Environmental Assessment for the Kansas City National Security Campus Sitewide Assessment of Botts and Building 23 Operations (DOE/EA 2167) completed in July 2021¹, (2) accounts for the private development of the subject property (KCNEXT), (3) discloses the operations that would be extended to KCNEXT, and (4) assesses the associated effects of these actions on the human and natural environment. With and during implementation of this proposed action, KCNSC operations would continue at both the existing KCNSC Botts Campus and Building 23 locations.

1.2 Purpose and Need for Agency Action

The purpose of the proposed action is to support expanded mission objectives and future enterprise resilience for the continued success of NNSA's Stockpile Stewardship Program. The proposed action would satisfy the following needs:

Current and forecasted production increases - Since completing the move to the KCNSC Botts Campus location in 2013, the NNSA and their onsite operations and management contractor, Honeywell FM&T, have experienced significant growth in workload and personnel to support the modernization of the nuclear stockpile, and supporting mission assignments for new or modernized weapons. Together the existing KCNSC Botts Campus, Building 23, and three major office space leases currently support more than 7,800 employees (across multiple shifts), with approximately 1,000 employees to be added by 2032 to support forecasted operational levels. The NNSA has redistributed staff and operations within the KCNSC Botts Campus, leased additional administrative office space across the Kansas City metropolitan area; and in 2023 purchased Building 23, a warehouse at 14901 Andrews Road in Kansas City, Missouri to provide additional production space near the KCNSC Botts Campus. Updated forecasts and workload projections beyond 2028 indicate the need for additional manufacturing space and the flexibility to rotate operational needs across KCNSC facilities.

Expansion of activities to support the NNSA's national security mission –KCNSC facilities are charged with manufacturing and sourcing more than 85 percent of the non-nuclear components in the United States (US) military's weapon systems. Support of the Nation's Defense Programs requires large expanses of manufacturing space dedicated to NNSA's mission of keeping our nation's nuclear stockpile safe, secure, and reliable by delivering mission-critical mechanical, electrical, and engineered material

¹ <https://www.energy.gov/sites/default/files/2021-08/final-ea-2167-nsc-botts-bldg-2021-07-26.pdf>

components. The continued flexibility to update, share, and relocate manufacturing, warehouse, and administrative operations is needed to address NNSA's mission while relieving existing space pressures within the KCNSC Botts Campus, Building 23, and additional leased office space.

1.3 Scope of this Environmental Analysis

This EA:

- Describes the purpose and need for agency action and provides background information on the KCNSC (Chapter 1);
- Describes the proposed action, actions considered but removed from further consideration, and the no-action alternatives considered to meet the applicable facility needs (Chapter 2);
- Analyzes the potential direct and indirect effects of the proposed action and no-action alternative on the human and natural environment (Chapter 3);
- Identifies and characterizes cumulative effects that could result from the proposed action in relation to past, present, and other reasonably foreseeable future actions described in this EA (Chapter 4); and
- Discusses applicable regulatory requirements related to the proposed action (Chapter 5).

1.4 Public Involvement

NNSA has notified the City of Kansas City, Missouri; the City of Grandview, Missouri; the Missouri Department of Natural Resources (MDNR); and the United States Environmental Protection Agency (EPA) of the proposed action and solicited input and issues from each regarding the scope of the action and any approvals or permits those entities may require. NNSA will not conduct a public hearing, but the EA will be made available online for public review and comment. NNSA will continue to coordinate with Federal, State, and local agencies to maintain the required clearances and permits to support ongoing operations. A listing of current State and local environmental permits, certifications, and registrations maintained by NNSA for the KCNSC is provided in Table 3-1 of this EA.

The NNSA did not conduct a public hearing, but made the draft EA available online for public review at: <https://www.energy.gov/nnsa/national-nuclear-security-administrations-environmental-assessments-and-environmental-impact> or <https://www.energy.gov/nepa/doe-environmental-assessments>. Comments on the draft EA were to be submitted to the NNSA between August 15, 2023 and September 14, 2023. Copies of the Public Notice and agency notification letters are included in Attachment F. No comments were received on the draft EA.

2.0 DESCRIPTION OF ALTERNATIVES

This chapter describes the proposed action and no-action alternatives that NNSA analyzed to support operational needs at KCNSC.

2.1 Proposed Action – Acquire and Operate a New Facility/Campus and Extend Operations Across the Existing KCNSC Botts Campus and Building 23

To continue to meet the NNSA's nuclear security mission and maintain manufacturing and process requirements to support national security as set forth in the Administration's Nuclear Posture Review and captured in NNSA's Stockpile Stewardship and Management Plan, the NNSA developed a plan to acquire and operate a new facility/campus (KCNEXT) near the existing KCNSC Botts Campus and Building 23 to provide flexibility to expand, reconfigure, and/or move any or all operations conducted across the KCNSC Kansas City metropolitan area facilities. Development of this property will be conducted by the property development company that owns the neighboring parcel of land. Phased development is proposed over several years to construct individually necessary portions of the property to meet expanding requirements. In addition to acquiring and operating the KCNEXT campus, KCNSC may move operations and employees from other leased facilities in the Kansas City metropolitan area to KCNEXT, terminating leases at those locations as warranted.

The existing and anticipated operations conducted at the KCNSC Botts Campus, Building 23, and KCNEXT may include but would not be limited to:

- Electrical and Mechanical Assembly – silicone, epoxy, and other adhesive bonding; non-foam encapsulation; lamination; and fiber optics
- Fabrication and Manufacturing (chemical, mechanical, material preparation) – autoclave operation, ceramic forming and processing, chemical manufacturing, molding, foam processing, furnace and heat-treating oven bake and curing, sieving powders, stereolithography, thermal processing, and actively manufactured materials
- Surface Preparation (chemical and mechanical) – Alodine chemical film, aqueous strip, blasting, cleaning (aqueous, plasma, solvent, and ultrasonic), deburring, vapor degreasing, depotting, chemical etching, and mold-release applications
- Coating and Plating – application of dry film, aerosol, parylene, liquid, and powder coatings; electroplating, chrome, and gold plating
- Machining – cutting (acetylene, plasma, wet/dry), drilling, grinding, wet and dry milling, roll milling, sheet metal work, laser cutting and marking
- Testing and Analysis – calibration; inspection; leak-detection; x-ray; testing of electronics, explosives, kinematics, pressure, and thermal; and chemical and mechanical analytical laboratory processes
- Welding, Brazing, and Soldering – electron beam, laser, gas tungsten arc, resistance, and manual
- Support and Miscellaneous – facility maintenance, assembly and disassembly, diesel and gasoline combustion, recycling, janitorial services, packaging, shipping, and personal care
- Administrative and Logistics Support – security, transportation, storage, waste management, medical laboratory, food preparation and cafeteria, and similar support activities

The following new technologies may be introduced during the next 5-10 years and would be applied across all three locations:

- Optical Initiation – Clean room electric space
- Titanium carbon fiber housing and mounts

As proposed, KCNExT (illustrated in Figure 2-1) is a multi-year, multi-phased project to create an additional office space for 2,700 employees and an additional approximately 1.1M square feet (SF) of manufacturing space to accommodate expected long-term growth. Construction of the South Development Stage (south of the stream depicted in Figure 2-1) is planned to begin in October 2023 and will likely continue through 2030. The South Development Stage is envisioned to include new office space, approximately 700,000 SF of manufacturing space, a separate central utility plant (CUP) along with other manufacturing support facilities; intermodal loading/unloading; truck inspection station; and employee parking for approximately 4,000 vehicles. The North Development Stage (north of the stream) would begin at a later date, adding another 400,000 SF of manufacturing and office space along with support services, and approximately 1,200 additional employee parking spaces. As facilities come online, development of an Evergy Substation may occur along the western edge of the subject property to support the electrical demands of all three KCNSC facilities.

Figure 2-1: KCNExT Development Plan



2.2 No-Action Alternative

Under the no-action alternative, operations currently conducted at the KCNSC Botts Campus and Building 23 would continue with no modification of operating space. At the end of 2023, NNSA/KCNSC would gain an additional 200,000 SF of manufacturing space within Building 23 as addressed in the July 2021 Sitewide Environmental Assessment (DOE/EA 2167) when the current tenant's lease expires. The KCNSC Botts Campus facilities were designed with the goal of maximum flexibility in arranging production work to accommodate surges and changes in workload requirements. Under the no-action alternative, the NNSA would continue to adjust operations and attempt to support required workloads. By FY 2028 and beyond, schedule delays would occur because of projected shortfalls in manufacturing space and capabilities required to meet forecasted workloads and NNSA mission requirements.

Since 2015, the NNSA has taken steps to optimize operations and expand capacity within the Kansas City metropolitan area and at the KCNSC Botts Campus including:

- Added second and third work shifts.
- Purchased new and additional manufacturing equipment.
- Hired 2,000 additional employees to accomplish additional workload.
- From 2016 through 2019, leased buildings to provide approximately 900 additional office spaces.
- In 2020, expanded operations to Building 23.
- In 2024, maximize operational space within Building 23.

The no-action alternative would not satisfy NNSA's operational needs nor its ongoing mission, and therefore is not considered a reasonable alternative. The no-action alternative is only carried forward as a baseline for comparison to the proposed action.

2.3 Actions Removed from Further Consideration

Expansion of the KCNSC Botts Campus footprint including construction of additional facilities on campus is not feasible because of the amount of additional manufacturing space needed. It would not address the forecasted production needs and would not assist with NNSA's ability to meet critical deadlines.

Relocation of operations to other existing NNSA facilities, located outside of the Kansas City metropolitan area, would be prohibitively expensive, time consuming, and infringe on the operations underway at those facilities, potentially affecting their current capacity and the NNSA's ability to meet its client needs.

Expansion of the Building 23 facility is not feasible as the adjacent properties are developed or planned for development as part of the I-49 Industrial Park. Although the NNSA will gain an additional 200,000 SF of manufacturing space within Building 23 at the end of 2023 when the current tenant leaves, that additional manufacturing space is already programmed for use to meet current operational goals.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter describes existing physical and operational conditions at the KCNSC Botts Campus and Building 23, those operations to be extended to KCNExT, and describes the potential effects of the proposed action and no-action alternatives on the human and natural environment. This section also provides an overview of the pre-development conditions on the KCNExT site including the studies and permits obtained by the landowner/developer to construct the improvements the NNSA intends to lease.

The KCNSC Botts Campus, Building 23, and KCNExT sites are within the city limits of Kansas City, Jackson County, Missouri, approximately 16 miles south of downtown Kansas City, Missouri. The KCNSC Botts Campus, at 14520 Botts Road, occupies approximately 192 acres of land at the northwest corner of the intersection of Missouri Highway 150 (MO-150) and Botts Road. The campus is comprised of multiple buildings, parking areas, and general open space. Building 23, at 14901 Andrew's Road, south of MO-150 and approximately one mile east of the KCNSC Botts Campus, consists of approximately 37 acres, the majority of which is developed and occupied by a large industrial building, paved roads, and parking areas. KCNSC currently occupies approximately 275,000 SF of this 450,000 SF building. The remaining 175,000 SF of Building 23 is occupied by another tenant whose lease expires at the end of 2023. Figure 1-1 provides an overview of the proximity and layout of the KCNSC Botts Campus, Building 23, and the KCNExT site.

KCNExT Subject Property

As noted in Chapter 1, the NNSA seeks to secure the use of the property east of the KCNSC Botts Campus and Botts Road for KCNExT through an innovative lease-purchase acquisition from the landowner/developer who will complete construction of the planned improvements. The subject 245-acre property east of the existing KCNSC Botts Campus is largely undeveloped, supporting a mixture of land cover types ranging from old field, open meadow, and prairie remnants to riparian woodlands and wetlands along stream channels that generally flow across the site from west to east. Grass species common on the property include: Indian grass (*Sorghastrum nutans*), sideoats grama (*Bouteloua curtipendula*), switchgrass (*Panicum virgatum*), tall fescue (*Schedonorus arundinaceus*), smooth brome (*Bromus inermis*), sunflowers (*Helianthus spp.*), clover (*Trifolium sp.*), goldenrod (*Solidago spp.*), and foxtails (various species). Wooded areas were dominated by deciduous trees and shrubs including common hackberry (*Celtis occidentalis*), American elm (*Ulmus americana*), black walnut (*Juglans nigra*), silver maple (*Acer saccharinum*), bush honeysuckle (*Lonicera maackii*), and coralberry (*Symphoricarpos orbiculatus*). Water features on the property consist of unnamed intermittent and ephemeral channels, considered upper watershed tributaries to the Little Blue River; and several small wetlands in low-lying areas dominated by sedges (*Carex spp.*), broadleaf cattail (*Typha latifolia*), rough barnyard grass (*Echinochloa muricata*), dotted smartweed (*Persicaria punctatum*), ash-leaf maple (*Acer negundo*), and green ash (*Fraxinus pennsylvanica*). The southeast corner of the subject property contained an abandoned asphalt plant (Former Ideker Site) which included a diesel fueling station with above-ground fuel storage tanks and areas where large piles of aggregate and asphalt-making components (e.g., bitumen) were stored exposed to the elements. This portion of the subject property also contains several capped and closed petroleum wells from previous exploration efforts.

The landowner/developer conducted the following studies prior to initiating development of the subject property:

- **Wetland Delineation and Stream Assessments (September and October 2020)** – Field delineations were conducted according to U.S. Army Corps of Engineers (USACE) guidance for the eastern two-thirds of the subject property (approximately 146 acres) in September 2020, and the western one-third of the subject property (approximately 73 acres) in October 2020. Several small emergent wetlands and one forested/scrub-shrub wetland were identified on the property associated with shallow depressions and low-lying areas along ephemeral channels. Three of the

emergent wetlands were considered to be jurisdictional under Section 404 of the Clean Water Act rules in place in late 2020. The USACE issued separate Approved Jurisdictional Determinations (AJDs) in November 2020 and January 2021 based on the two delineation reports submitted. Each AJD is valid for five years from issuance, allowing the developer to proceed with construction activities that may place fill materials within the limits of water features considered jurisdictional under Section 404. The Wetland Delineation Report and AJDs are provided in Appendix B.

- **Acoustic Survey and Analysis (June 2021)** – An acoustic survey was conducted to determine the presence or absence of three federally listed bat species –Indiana bat (*Myotis sodalis*) listed as endangered, gray bat (*Myotis grisescens*) listed as endangered, and northern long-eared bat (*Myotis septentrionalis*) proposed for listing as endangered. Potential bat habitat in the form of wooded areas along streams where bats may forage or roost was identified within the boundaries of the subject property. The acoustic survey indicated there is a low probability that Indiana bats, gray bats, or northern long-eared bat are present within or use the subject property. The tricolored bat (*Perimyotis subflavus*), proposed for listing as endangered, was detected during the survey, but would also have a low probability of presence within or use of the subject property. The Acoustic Survey and Analysis Report is provided in Appendix C.
- **Phase 1 Investigations (February 2020, March 2020, February 2022, and May 2023)** – The landowner/developer conducted three Phase 1 Environmental Site Assessments (Phase I ESA) to assist in identifying Recognized Environmental Concerns (RECs) in February 2020, March 2020, and February 2022, to cover the extent of the subject property. Each Phase I ESA was conducted in accordance with ASTM E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. In May 2023, NNSA conducted a Phase I ESA to support the potential lease of the subject property. No RECs were identified on any of the Phase 1 ESAs conducted. An existing petroleum pipeline and remnants of previous oil exploration, including several capped wells within the far eastern portion of the subject property were identified, however, based on the plugging status and the relatively short time the wells were operated, these oil wells do not represent a REC to the site. The NNSA's Phase 1 and each of the landowner/developer's Phase 1 ESAs are provided in Appendix D.
- **Phase 2 Investigation (January 2023)** – The landowner/developer collected soil samples to determine if contaminated soils were present on the subject property based on historic land uses. None of the samples indicated the presence of volatile organic compounds (VOCs) or total petroleum hydrocarbons (TPH) that exceeded the maximum reporting limits defined by the MDNR, such as diesel fuel, fuel oil, kerosene, or mineral spirits. The sampling indicated the soils from the former Ideker site are unacceptable for re-use as fill on-site. The landowner/developer's Phase 2 ESA is provided in Appendix D.

In June 2023, the NNSA conducted a Cultural Resources Background Review to identify if archaeological surveys were previously conducted on or near the subject property and if those surveys indicated the potential for buried cultural sites. Several surveys have been conducted across the property and on adjacent properties as part of utility routing, site development, and transportation improvements sponsored by other agencies. A 2020 archaeological survey identified a prehistoric lithic scatter in the southeastern portion of the property. Artifacts were collected but the site was not evaluated for its eligibility for listing on the National Register of Historic Places (NRHP). Based on the information reviewed, the site would not be affected by the planned development of the subject property. The NNSA Cultural Resources Background Review Memorandum is provided in Appendix E.

The landowner/developer also conducted a Traffic Impact Study to determine the roadway and access needs to support use of the site. The preliminary results of the Traffic Impact Study recommend a number of ingress/egress points, new turn lanes into and out of the site, and the installation of a traffic signal at

one intersection to manage traffic particularly during peak travel periods and shift changes. The improvements recommended by the preliminary Traffic Impact Study are described in Section 3.8.2.1.

The landowner/developer has obtained the necessary state and Federal permits and approvals to begin construction on the subject property based on the studies conducted to date. As illustrated in Figure 2-1, overall development of the subject property will occur over two development stages, with construction of facilities within the southern half of the site (south of the stream) first, followed at a later date by construction of additional facilities within the northern portion of the subject property, north of the stream. Individual buildings and site improvements will be phased to respond to tenant needs. The stream corridor and much of the native vegetation associated with it would remain to not only enhance the setting of the development, but to potentially support recreational/open space uses such as walking trails, picnic areas, and outdoor fitness stations for occupants, and to augment onsite stormwater management.

The landowner/developer is responsible for obtaining all applicable Federal, State, and local permits to construct the planned improvements including but not limited to: zoning approval; grading; stormwater management (National Pollution Discharge Elimination System [NPDES]) and development and implementation of a Stormwater Pollution Prevention Plan (SWPPP); utility relocations and connections; solid and hazardous waste disposal during construction; and temporary traffic control.

Existing KCNSC Facilities – Botts Campus and Building 23

For the KCNSC Botts Campus and Building 23, the NNSA holds a series of environmental permits, certifications, and registrations ensuring compliance with applicable Federal, State, and local regulations that apply to various environmental resource categories addressed in this chapter of this EA. Table 3-1 lists the existing environmental permits, certifications, and registrations held by the NNSA for these existing facilities. Some permits provide combined coverage of both the KCNSC Botts Campus and Building 23 and may also provide coverage for KCNExT. Some permits provide individual coverage for either the KCNSC Botts Campus or Building 23, and some individual permits may be needed for KCNExT as facilities come online. In addition to the listings in Table 3-1, these permits, certifications, and registrations are also referenced under the applicable resource category described in this chapter of the EA. The permits, certifications, and registrations anticipated for KCNExT are described within the applicable resource discussions. Others may be identified and obtained by the NNSA as facilities come online or as operations adapt to forecasted workloads.

For the purpose of discussing the potential effects of the proposed action, the KCNSC Botts Campus, Building 23, and KCNExT will be collectively referred to as 'KCNSC facilities' unless separate descriptions are warranted.

Table 3-1: KCNSC Existing Permits, Certifications, Registrations, and Plans

Permit/Certification/ Registration/Plan	Applicable Regulation	Applicable KCNSC Facility	Identification #	Regulating Authority	Effective Date	Expiration Date
AIR						
Air Special Case De Minimis Permit	Clean Air Act	Botts Campus (NNSA operation); Building 23	Installation ID: 095-2442; Permit No.: 032018-001B	MDNR	3/2/2018	3/2/2028
Air Special Case De Minimis Permit	Clean Air Act	Botts Campus (CenterPoint operation)	Installation ID: 095-2450; Permit No.: 022018-007B	MDNR	2/22/2018	2/22/2028
Air Permit	Clean Air Act	Botts Campus; Building 23	21/22-AQ-OP-84	KCMO	7/31/2023	7/31/2024
SOLID WASTE						
Solid Waste Management Plan	<i>Resources Conservation and Recovery Act (RCRA)</i>	Botts Campus	Contingency Plan	EPA	1/21/2021	Not Applicable
Solid Waste Management Plan	RCRA	Building 23	Contingency Plan	EPA	12/1/2020	Not Applicable
Facility Identification Number for registration as a Large Quantity Generator (LQG)	<i>Under RCRA (1976), the KCNSC Botts Campus is registered with EPA as a LQG of hazardous waste; permit not required</i>	Botts Campus	EPA ID MOR000545376	MDNR	10/16/2012	Not Applicable
Facility Identification Number for registration as a Large Quantity Generator (LQG)	<i>Under RCRA (1976), Building 23 is registered with EPA as a LQG of hazardous waste; permit not required</i>	Building 23	EPA ID MOR000564674	MDNR	9/25/2020	Not Applicable
STORMWATER						
No Exposure Certification for exclusion from NPDES Stormwater Permitting	Clean Water Act, Section 402, NPDES	Building 23	MONX00745	MDNR	12/5/2019	12/4/2024
No Exposure Certification for exclusion from NPDES Stormwater Permitting	Clean Water Act, Section 402, NPDES	Botts Campus	MONX00441	MDNR	7/27/2020	7/26/2025
Stormwater Pollution Prevention Plan (SWPPP)	Clean Water Act, Section 402, NPDES	Botts Campus	--	Internal	3/1/2020	3/1/2025
Stormwater Pollution Prevention Plan (SWPPP)	Clean Water Act, Section 402, NPDES	Building 23	--	Internal	In Progress	In Progress

Table 3-1 continued: KCNSC Existing Permits, Certifications, Registrations, and Plans

Permit/Certification/ Registration/Plan	Applicable Regulation	Applicable KCNSC Facility	Identification #	Regulating Authority	Effective Date	Expiration Date
WASTEWATER						
Industrial Wastewater Discharge Permit	Clean Water Act, Section 402, NPDES	Botts Campus	--	KCMO	3/23/2023	12/31/2027
Toxic Organic Pollutant Management (TOPM) Plan	Clean Water Act, Section 307 (b) & (c)	Botts Campus	--	KCMO	6/18/2021	6/18/2026
Sludge Discharge Plan	Clean Water Act, Section 402, NPDES	Botts Campus	--	KCMO	6/18/2021	6/18/2026
WATER RESOURCES						
Spill Prevention Control and Countermeasure (SPCC) Plan	Clean Water Act, Section 331, Oil Pollution Prevention	Botts Campus	--	EPA	10/1/2022	10/1/2027
Spill Prevention Control and Countermeasure (SPCC) Plan	Clean Water Act, Section 331, Oil Pollution Prevention	Building 23	--	EPA	In Progress	In Progress
EMERGENCY MANAGEMENT						
Emergency Management Plan [UPDATE IN PROGRESS]	DOE Order 151.1D	Botts Campus; Building 23	--	USDOE	8/20/2020	8/20/2023
TRANSPORTATION						
Hazardous Material Transportation Security Plan	49 CFR Part 172, Subpart I	Botts Campus; Building 23	--	USDOT	1/18/2021	Not Applicable

3.1 Land Use

3.1.1 Affected Environment

3.1.1.1 General Land Use

Development of the KCNSC Botts Campus site was initiated in 2010 with facility construction completed in 2013. Construction of the Building 23 facility was completed in 2016 by CenterPoint Properties for use as an industrial warehouse. Prior to construction of these facilities the area was part of the Richards-Gebaur Air Force Base. Richards-Gebaur opened in 1941 as the Grandview Airport on land owned by the city of Kansas City, Missouri. The U.S. Army Air Forces and the U.S. Navy used the base during World War II as an overflow training airfield. With the onset of the Cold War, the airport was leased by the U.S. Air Force (USAF) and upgraded to accommodate support units and fighter squadrons. In 1994, all active military operations ceased at the facility and the city of Kansas City, Missouri re-acquired most of the land. In 2003, the Port Authority of Kansas City (PortKC) took over the property to commence the intense property clean-up and to attract private development. The KCNSC Botts Campus and Building 23 sites were both open areas being used to cultivate crops and as hay pasture before they were developed. Currently, the KCNSC Botts Campus is zoned for Urban Redevelopment and Building 23 is zoned for Manufacturing use by the city of Kansas City, Missouri (KCMO, 2021). Current land use designations are illustrated in Figure 3-1.

Future land use plans indicate the areas immediately surrounding the KCNSC facilities will continue to be used for industrial purposes, with the area immediately south of MO-150 developed since 2021 as part of the Kansas City Intermodal Facility and I-49 Industrial Park. A mix of residential and commercial development would likely continue east of I-49 and north of E. 139th Street, approximately one-half mile to the north of KCNEXT. (KCMO, 2020 and Grandview, 2020).

3.1.1.2 Properties of Potential Environmental Concern

Several properties of potential environmental concern, primarily current or past hazardous waste generators, are adjacent to the KCNSC facilities. Hazardous wastes are wastes with properties that make them dangerous or potentially harmful to human health or the environment and can be liquids, solids, contained gases, or sludges. The inventory of such properties shown in Figure 3-2 includes two non-National Priorities List (NPL) Superfund sites associated with activities conducted at the former Richards-Gebaur Air Force Base. As a follow-up to closure of the base in 1994 under the Defense Base Closure and Realignment Act of 1990, the EPA issued a Record of Decision (ROD) (Document ID 40287548) designating the area as a Superfund site with two operable units (soil and groundwater) requiring remediation. The Air Force Real Property Agency has been responsible for the environmental cleanup and property disposal at these locations since 1994.

Figure 3-1: Land Uses in the Proximity of the KCNSC Facilities

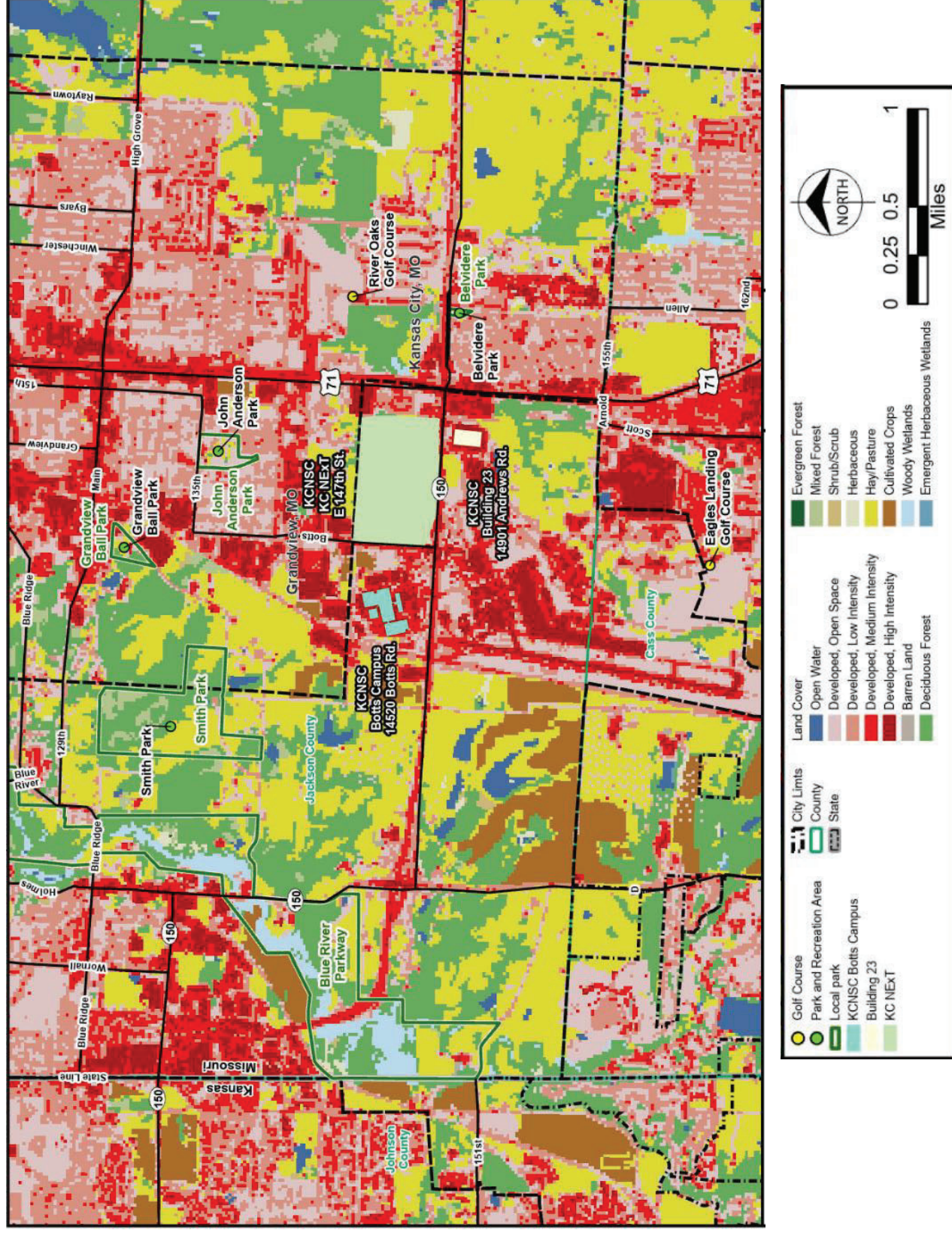
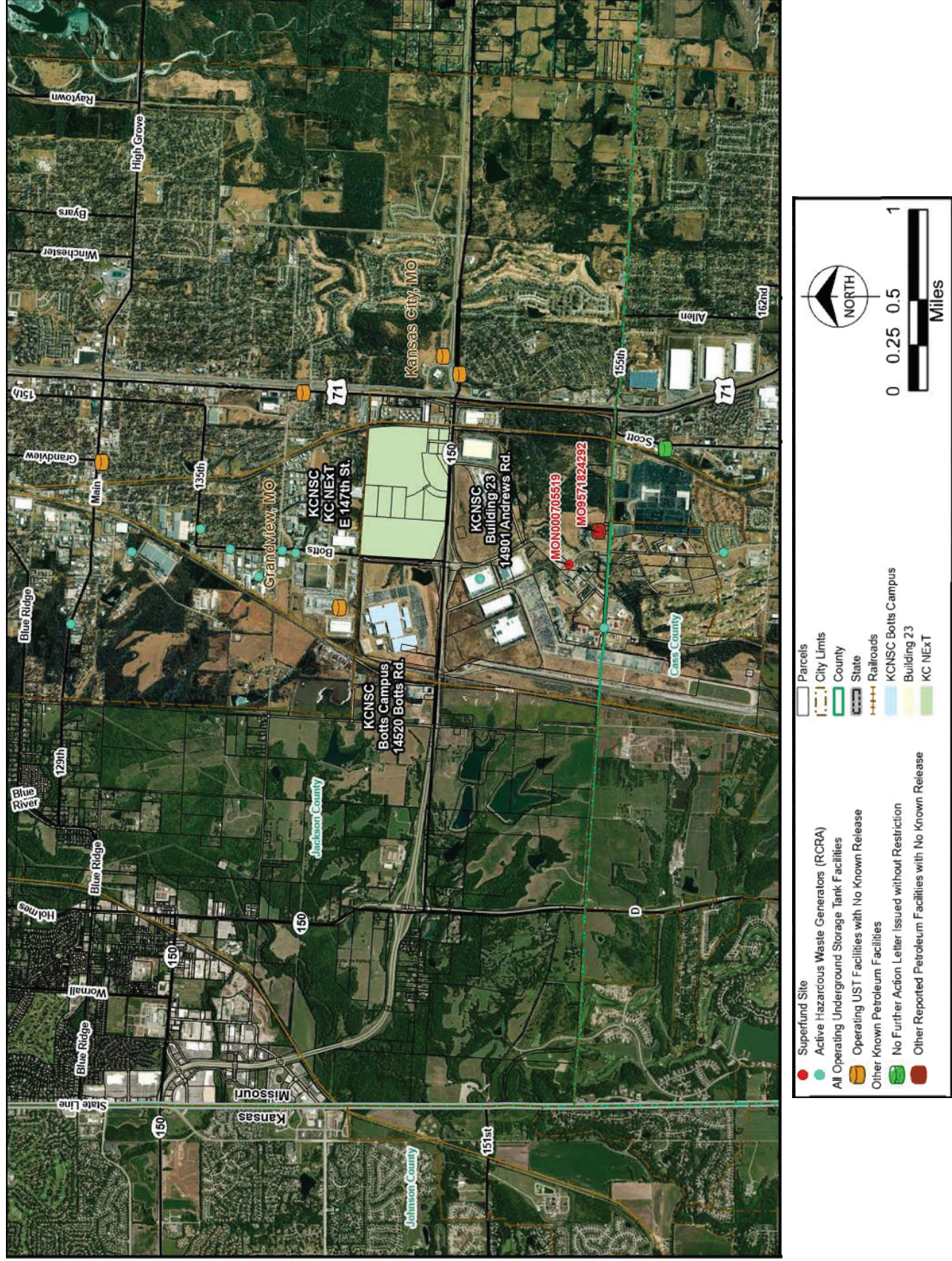


Figure 3-2: Properties of Potential Environmental Concern



With the continuation of remediation and monitoring activities as required under the 2004 ROD, in 2013 the USAF issued a Five-Year Review report noting the property is not on the NPL list, and although not required under the Comprehensive Environmental Response, Compensation, and Liability Act of 1976 (CERCLA), certain remedial actions continue to be performed in accordance with CERCLA guidance. The two identified sites include: MO9571824292 and MON000705519 - adjacent to and south of MO-150 and south of the KCNSC Botts Campus. Soil and groundwater samples continue to be analyzed on a yearly basis.

The RCRA of 1976 regulates the generation, storage, handling, treatment, and disposal of hazardous wastes. Generators of hazardous wastes, as defined in 40 CFR 261, are required to be registered with the EPA based on annual quantities of hazardous materials generated. The EPA defines the categories of Hazardous Waste Generators as very small quantity generators (VSQGs), small quantity generators (SQGs), and large quantity generators (LQGs). Twelve registered active hazardous waste generators were identified within a two-mile radius of the KCNSC Botts Campus (EPA 2021a; EPA 2021b).

A review of MDNR's Environmental Site Tracking and Research Tool (ESTART) database was conducted to identify underground storage tanks (USTs) and petroleum storage facilities within two miles of the subject property. Five properties are currently operating USTs and two additional active petroleum storage facilities were identified (MDNR 2021).

The KCNExT subject property was historically used for agriculture with the operation of an asphalt batch plant occurring in the southeast portion of the property. The eastern portion of the property contains capped petroleum wells once used for exploration. NNSA completed a Phase I ESA and included the current landowner/developer's Phase 1 ESAs and Phase 2 ESA as reference for the subject property. No RECs are present but the Phase 2 ESA indicated the soils within the southeastern portion of the property would not be suitable for use as fill material.

3.1.2 Environmental Impacts

3.1.2.1 Proposed Action

Operation of KCNExT as part of the larger KCNSC facilities would be compatible with existing and proposed land uses and published plans for the surrounding area. The land area bounded by E. 139th Street on the north, I-49/US 71 on the east, Arnold Avenue/E. 155th Street on the south and the Kansas City Southern (KCS) rail line on the west is currently used and planned for industrial uses. Since 2021, additional development associated with the Kansas City Intermodal Facility on the former Richards-Gebaur Air Force Base and the I-49 Industrial Park has occurred south of MO-150 and west of I-49/US 71. As further described under Section 3.8.2.1, improvements including the creation of turn lanes along Botts Road and the addition of a traffic signal, would be made to manage increased traffic volumes during peak travel periods and shift changes associated with KCNExT. KCNExT and the planned roadway improvements would not change the use of adjacent properties. No RECs would be affected by the development or operation of KCNExT nor the continued operation of the KCNSC Botts Campus and Building 23. The KCNExT subject property is zoned as Manufacturing² and its development and use would be compatible with the existing and planned uses in its vicinity.

3.1.2.2 No-Action Alternative

The NNSA would not lease portions of the KCNExT subject property over time, while the property would most likely be developed to suit another industrial user. By FY 2028, NNSA would need to determine how to modify its current operational environment to support the forecasted workloads and continue to support its mission, possibly by leasing another facility farther away from the KCNSC Botts Campus and Building 23, or could be forced to move its Kansas City operations to another location, substantially changing the business environment along the MO-150 corridor and within this part of Kansas City. Most likely the area

² <https://maps.kcmo.org/apps/parcelviewer/> 2023

would continue to be zoned for industrial uses due to the prevalence of such uses in the area and regional transportation access provided by MO-150 and US 71/I-49.

3.2 Air Quality

3.2.1 Affected Environment

The Clean Air Act (CAA), enacted in 1977 and amended in 1990, requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. Ambient air is defined as “that proportion of the atmosphere, external to buildings, to which the general public has access” (40 CFR 50.1(e)). The EPA has set NAAQS for six criteria air pollutants - carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), and sulfur dioxide (SO₂).

States and federally recognized tribes are required to regularly report ambient air quality data to the EPA, which the EPA uses to determine whether the state or tribe meets the NAAQS for each criteria pollutant (attainment) or does not meet the NAAQS for each criteria pollutant (nonattainment). Nonattainment areas are required to prepare a State Implementation Plan (SIP) defining how the state or local government will bring the area into attainment status (EPA, 2017a).

Section 176(c) of the CAA establishes the requirement for general conformity to ensure that Federal actions support a state or area’s compliance with the SIP in nonattainment areas. General conformity requirements must be demonstrated for a given project or action to ensure that the action will not cause or contribute to violations of the NAAQS or delay attainment of the NAAQS in nonattainment areas. General conformity is determined by whether an applicable project complies with the *de minimis* levels for annual criteria pollutant emissions, as established in 40 CFR Part 93.153, and listed in Table 3-2.

Table 3-2: General Conformity *De Minimis* Thresholds

Pollutant	<i>De Minimis</i> Threshold (tons/year)
O₃ (VOC's or NO_x)	
Serious nonattainment area	50
Severe nonattainment area	25
Extreme nonattainment area	10
Other O ₃ nonattainment areas outside an O ₃ transport region:	100
Other O₃ nonattainment areas inside an O₃ transport region:	
VOC	50
NO _x	100
Carbon Monoxide: All maintenance areas	100
SO ₂ or NO ₂ : All nonattainment areas	100
PM₁₀:	
Moderate nonattainment areas	100
Serious nonattainment areas	70
PM_{2.5} (direct emissions, SO₂, NO_x, VOC, and Ammonia)	
Moderate nonattainment areas	100
Serious Nonattainment areas	70
Lead: All nonattainment areas	25

Source: 40 CFR Part 93.153

De minimis thresholds are applicable to total emissions from construction and operation phases of a project. A project for which emissions would exceed annual *de minimis* thresholds would require further conformity analysis prior to receiving support from a Federal agency. A project for which emissions would not exceed *de minimis* thresholds would be exempt from further conformity analyses. The MDNR implements the Missouri SIP, which is approved by the EPA, and issues permits through its Air Pollution Control Program (APCP).

As described in Section 1.0 of this EA, the KCNSC consists of two separate operations. The production operation is owned by NNSA and operated by Honeywell FM&T which manufactures non-nuclear components of nuclear weapons. The support operation owned by CenterPoint includes equipment for providing HVAC, hot water, and emergency power to the KCNSC. The production and support activities have separate installation identification numbers (IDs) and are permitted separately by MDNR's APCP but are considered part of the same installation. The NNSA and CenterPoint operations at the KCNSC Botts Campus and Building 23 were issued special case *de minimis* permits which allow for combined operations that maintain total emissions of PM₁₀, NO_x, volatile organic compounds (VOCs), and hazardous air pollutants (HAPs) that do not exceed *de minimis* thresholds. The NNSA production facility emits PMs, NO_x, VOC, and HAPs emissions, resulting from the activities described in Section 2.1, and operates under Installation Number 095-2442 and Permit No. 032018-001. The CenterPoint support operation operates under Installation Number 095-2450 and Permit No. 022018-007. KCNSC operations at Building 23 are covered under the NNSA production facility permit. Table 3-3 provides the emission limits for combined operations at the KCNSC Botts Campus and Building 23.

Table 3-3: KCNSC Permitted Air Pollutant Emission Limits (tons/year)

Pollutants	<i>De Minimis</i> Level	Limits in NNSA Permit 032018-001	Limits in CenterPoint Permit 022018-007
PM ₁₀	15.0	<5.0	<10.0
NO _x	40.0	<10.0	<30.0
VOC	40.0	<39.0	<1.0
Individual HAP	Varies	<SMALL	
Combined HAPs	25.0	<25.0	

Source: KCNSC, 2021; NNSA Permit No. 032018-001 and CenterPoint Permit No. 022018-007

NNSA also maintains an air quality permit number from the Kansas City air quality program, renewed annually. No city air quality requirements are enforced beyond MDNR requirements. NNSA also monitors operations and emissions to demonstrate that the existing KCNSC facilities maintain exemptions from additional Federal and State air regulations.

3.2.2 Environmental Impacts

3.2.2.1 Proposed Action

Operation of KCNExT would generate emission levels anticipated to fall below the limits defined in the existing NNSA and CenterPoint special case *de minimis* permits during the early stages of development south of the stream, but may require a separate permit as additional manufacturing areas come online during the continuation of operations as the site is built out. Expansion of operations to KCNExT would require installation of new/updated emission control units at all KCNSC facilities, depending on the workload to be supported, to maintain levels under the special case *de minimis* thresholds. The NNSA would continue to monitor air emissions from all facilities to maintain compliance with the permits and any changes in the regulations. If future growth in operations would result in emissions exceeding the current permitted limits, the NNSA would seek to amend existing permits or request that a new permit be issued by MDNR in accordance with applicable Federal and State regulations. Operation of KCNExT would not

affect the overall attainment status of the area, would not exceed the NAAQS, and would maintain compliance with the SIP.

3.2.2.2 No-Action Alternative

The NNSA would continue to operate under the special case *de minimis* permits (see Table 3-1) and continue to monitor air emissions from the KCNSC Botts Campus and Building 23 to ensure compliance with permitted limits. The NNSA would forecast any corresponding increase in emissions resulting from any growth or expansion of operations planned in the future. If projected emissions would exceed the current permitted limits, the NNSA would apply for an amendment to the existing permit or request a new permit from MDNR in accordance with applicable Federal and State regulations prior to expanding operations and/or increasing emissions. Continued operations of the KCNSC Botts Campus and Building 23 would not affect the overall attainment status of the area, would not exceed the NAAQS, and would maintain compliance with the SIP.

3.3 Aesthetics

3.3.1 Affected Environment

3.3.1.1 Visual

The KCNSC facilities are along MO-150, an open, relatively flat, mixed-use corridor. MO-150 is a six-lane divided highway with a grade-separated interchanges at Botts Road at the southeast corner of the KCNSC Botts Campus, at the KCS rail crossing at the southwest corner of the KCNSC Botts Campus, and at the intersection of MO-150 and I-49/US-71 just east of Building 23 (see Figure 1-1). As described in Section 3.1, the surrounding landscape includes commercial and industrial development, agricultural areas, and open and forested spaces characteristic of suburban to rural transitional areas around the Kansas City metropolitan area. No designated or recognized scenic areas, overlooks, or byways are within the vicinity of the KCNSC facilities.

3.3.1.2 Noise

The major sources of noise in the vicinity of the KCNSC facilities include activities associated with the numerous industrial, manufacturing, and warehousing uses along the MO-150 and I-49/US 71 corridors, primarily related to heavy truck traffic and other vehicles entering and leaving the facilities, and rail traffic along the KCS rail line to the west. Noise on the KCNSC Botts Campus and Building 23 sites is the result of the manufacturing processes conducted inside of the buildings, vehicle/traffic noise from employee and delivery vehicles entering and existing the sites, and ancillary operational and maintenance noises from exhaust systems and grounds maintenance activities. Facility operations occur within buildings or occur far enough from site boundaries that noise from these sources would not be distinguishable from background noise originating from beyond the site boundary. Noise sensitive receptors (e.g., residences, schools, churches, etc.) are more than one half-mile away from the KCNSC facilities.

3.3.2 Environmental Impacts

3.3.2.1 Proposed Action

KCNExT would generate the same types of noise generated at the KCNSC Bott Campus and Building 23 as the result of manufacturing practices, material and product shipping and receiving activities, operational noises associated with the CUP, employee and vendor vehicles traveling across the site and along MO-150, I-49/US 71, and the surrounding road system. Because the KCNSC facilities are in an industrial area and away from sensitive noise receptors, increases in operational noise should have a minimal effect on the overall sound levels within the immediate area. The building type and design of KCNExT would be similar to that of the buildings on the KCNSC Botts Campus. Vehicle parking at KCNExT would be accommodated on surface lots with the possibility of a second parking deck being added in the future in some areas to address demand. KCNExT would be landscaped in a similar manner

to the KCNSC Botts Campus. The stream corridor and its associated vegetation would provide a visual buffer through the center of KCNExT and would add to the visual diversity of the property.

3.3.2.2 No-Action Alternative

Operational noise would continue to be confined to within the buildings or within the interior of the KCNSC Botts Campus and Building 23. No appreciable change in exterior noise levels generated by vehicle traffic, ongoing operations, and maintenance activities would occur.

3.4 Geology and Soils

3.4.1 Affected Environment

3.4.1.1 Geology

The KCNSC facilities and surrounding area are underlain by the Bonner Springs Formation consisting of the Bonner Springs Shale – layers of silty, gray, micaceous shale, including lenticular sandstone and locally, silty limestone in the upper part. An extremely thin, irregular coal bed has been reported to occur in the uppermost part of the formation at some localities in northern Missouri. The lower and middle parts of the formation in some locations contain scattered clay-ironstone concretions. The thickness of the formation ranges from less than 20 feet to as much as 40 feet. The Bonner Springs Formation is underlain by the Wyandotte Formation consisting of interbedded shale and limestone (NNSA, 2008).

3.4.1.2 Seismicity

Earthquake activity in Missouri has been concentrated in the southeastern portion of the state, which includes a portion of the New Madrid Seismic Zone. This zone is the most active seismic area in the United States east of the Rocky Mountains and has a long history of seismic activity. The northwest portion of Missouri, including the Kansas City area, is seismically stable. In the past 50 years, there have been nine recorded earthquakes within a 100-mile radius of the KCNSC facilities. The closest of these was a magnitude 3.0 earthquake on May 13, 1999, in Wyandotte County, Kansas, approximately 18 miles northwest of the KCNSC facilities.

3.4.1.3 Soils

The Osage Plains-Flint Hills region encompasses nearly 31,000 square miles in west-central Missouri, northeastern Oklahoma, and eastern Kansas. The KCNSC facilities and surrounding area lie near the northern-most extent of the Osage Plains region, which historically contained expansive accumulations of carbon-rich organic soils and lush tallgrass prairies. Over 90 percent of the original prairie landscape in the region has been tilled and is now used for row crops or hay production (Nature Conservancy, 2000).

Table 3-4 lists the soil units mapped and key soil characteristics underlying the KCNSC facilities. The underlying soils are considered highly disturbed due to previous construction, development, and agricultural activities (Natural Resources Conservation Service [NRCS], 2021).

Table 3-4: Soil Units Mapped Underlying the KCNSC Facilities

Mapped Soil Type	Applicable KCNSC Facility	Drainage Class	Runoff Class	Hydric	Farmland Classification	K-Factor
10000 - Arisburg silt loam, 1 to 5 percent slopes	Building 23, KCNExT	Somewhat poorly drained	Not Available	No	All areas are prime farmland	0.41
10024 - Greenton-Urban land complex, 5 to 9 percent slopes	KCNExT	Somewhat poorly drained	Very high	No	Prime farmland if drained	0.32
10082 - Arisburg-Urban land complex, 1 to 5 percent slopes	Botts Campus	Somewhat poorly drained	Not Available	No	All areas are prime farmland	0.41
10116 - Sampsel silty clay loam, 2 to 5 percent slopes	KCNExT	Poorly drained	Very high	No	Prime farmland if drained	0.31
10117 - Sampsel silty clay loam, 5 to 9 percent slopes	Botts Campus, Building 23, KCNExT	Somewhat poorly drained	Very high	No	Prime farmland if drained	0.31
10120 - Sharpsburg silt loam, 2 to 5 percent slopes	Botts Campus, KCNExT	Moderately well drained	Medium	No	All areas are prime farmland	0.42
10122 - Sharpsburg silt loam, 5 to 9 percent slopes, eroded	Botts Campus, KCNExT	Moderately well drained	High	No	Farmland of statewide importance	0.42
10128 - Sharpsburg-Urban land complex, 2 to 5 percent slopes	Botts Campus	Moderately well drained	High	No	All areas are prime farmland	0.36
10141 - Snead-Rock outcrop complex, 14 to 30 percent slopes	KCNExT	Moderately well drained	Very high	No	Not prime farmland	0.27
10181 - Udaents-Urban land-Sampsel complex, 5 to 9 percent slopes	Building 23, KCNExT	Somewhat poorly drained	Very high	No	Farmland of statewide importance	0.44
30080 - Greenton silty clay loam, 5 to 9 percent slopes	Botts Campus, Building 23, KCNExT	Somewhat poorly drained	Very high	No	Prime farmland if drained	0.29
36083 - Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded	Botts Campus, KCNExT	Moderately well drained	Medium	No	All areas are prime farmland	0.37
99017 - Urban land, bottomland, 0 to 3 percent slopes, rarely flooded	KCNExT	Not Available	Very high	Unranked	Not prime farmland	0

Source : Natural Resources Conservation Service, 2023

- a. Sheet and Rill Erosion - Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

3.4.2 Environmental Impacts

3.4.2.1 Proposed Action

KCNExT would operate in an area where soils have previously been disturbed. The NNSA would obtain the appropriate permits and implement sedimentation and erosion control measures, including development of an operational SWPPP to avoid stormwater runoff onto adjacent properties and minimize facility operational effects on the stream corridor and associated features. The KCNSC facilities are outside of the New Madrid Seismic Zone.

3.4.2.2 No Action Alternative

No construction or soil disturbance is anticipated to occur within the KCNSC Botts Campus or Building 23 site, and operations would continue as they do today.

3.5 Water Resources

3.5.1 Affected Environment

3.5.1.1 Surface Water

The KCNSC facilities are within the western portion of the Headwaters Little Blue River watershed (hydrologic unit code 12 [HUC-12] 103001010201) (United States Geological Survey [USGS], 2021). Surface water runoff from the KCNSC Botts Campus flows generally east into unnamed tributaries that flow across the KCNExT subject property and continue approximately 1.4 miles east to the Little Blue River. Surface water runoff from the Building 23 site flows into Scope Creek south of the site, which flows approximately 0.4 mile east-northeast to the Little Blue River (see Figure 3-2). The Little Blue River ultimately discharges into the Missouri River near Buckner, Missouri, approximately 40 miles downstream of Kansas City, Missouri. The Missouri River is the source of drinking water for the majority of the Kansas City metropolitan area.

3.5.1.2 Floodplains

Neither existing KCNSC facility is in a 100- or 500-year floodplain (Federal Emergency Management Agency [FEMA], 2021) but a 100-year floodplain extends along the stream corridor across the KCNExT subject property, as shown in Figure 3-2. Mapped floodplains in the vicinity of the KCNSC facilities are primarily associated with the main tributaries and main stems of the Blue River to the west and the Little Blue River to the east.

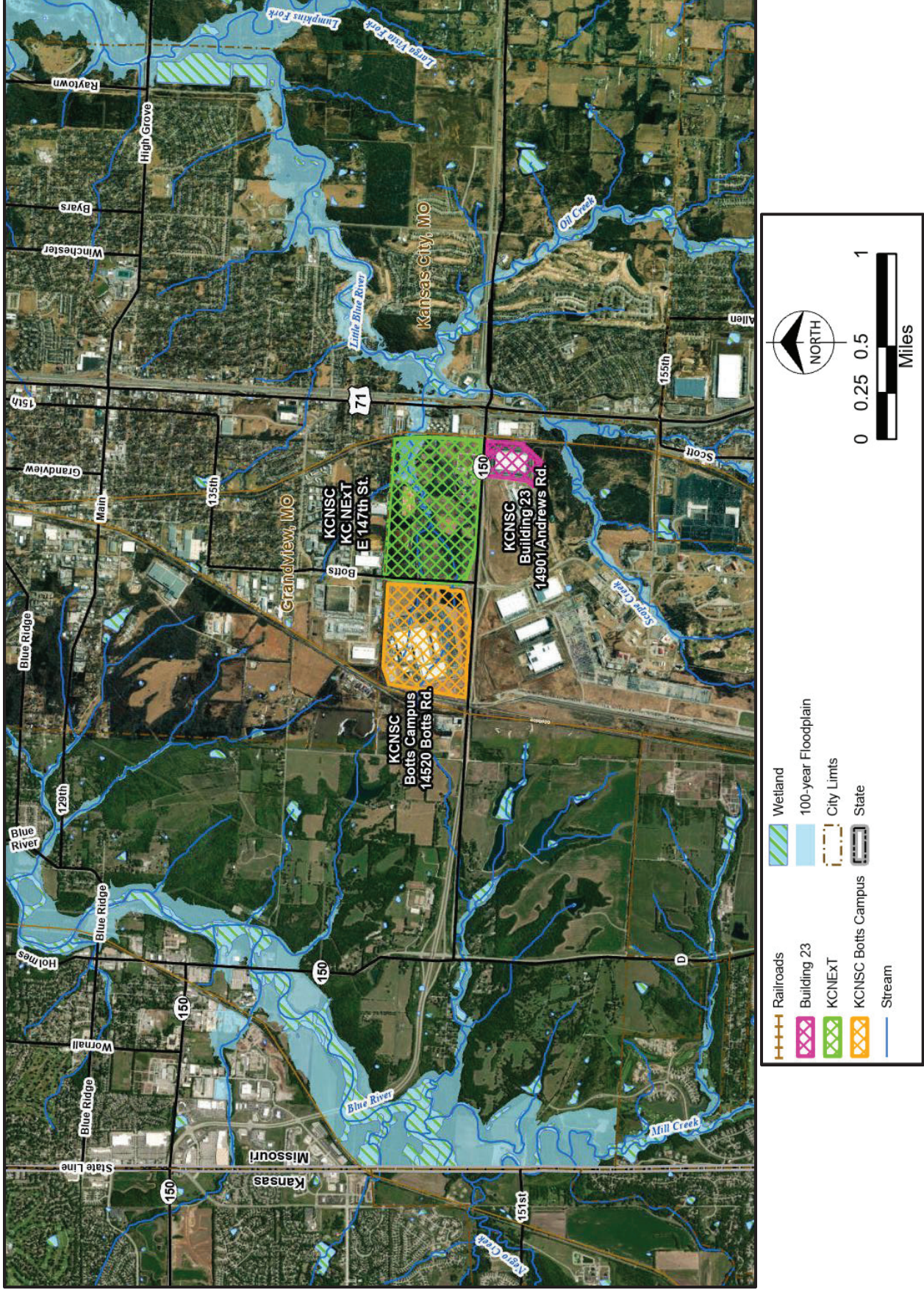
3.5.1.3 Wetlands and Waters of the United States

As previously described, the landowner/developer conducted wetland delineations for the KCNExT subject property in 2020 identifying several small wetland features within shallow depressions and areas along the unnamed tributary flowing through the center of the subject property.

3.5.1.4 Stormwater

The MDNR issues *No Exposure Certifications* allowing for an exclusion from National Pollutant Discharge Elimination System (NPDES) stormwater permitting requirements for facilities for which all materials and activities are indoors or protected from exposure to stormwater runoff. The KCNSC Botts Campus and Building 23 were separately issued *No Exposure Certifications* from the MDNR, excluding the facilities from stormwater permit requirements. The KCNSC Botts Campus MDNR certification number is MONX00441, issued July 2020 and expiring July 2025; and the Building 23 MDNR certification number is MONX00745 (see Table 3-1), issued December 2019 and expiring December 2024. Neither facility has onsite stormwater outfalls or stormwater management infrastructure.

Figure 3-3: Surface Water Resources and Floodplains in the Vicinity of the KCNSC Facilities



3.5.1.5 Groundwater

The KCNSC facilities are underlain by a single aquifer system. The Western Interior Plains aquifer system underlies most of Kansas, the eastern and southern portions of Nebraska, and a small area in west-central Missouri. The thickness of the aquifer (including the confining unit) ranges from less than 500 feet to more than 3,000 feet. Regional groundwater in the aquifer system flows towards the east-southeast with much of the water discharging from the aquifer system in the transition zone between the Western Interior Plains and the Ozark Plateaus aquifer systems. The Western Interior Plains aquifer system is considered to have low permeability. The Western Interior Plains aquifer system is entirely subsurface and contains slightly saline water or brine that is under confined conditions everywhere. No surficial aquifer system is present in the vicinity of the KCNSC facilities.

3.5.1.6 Water Use

The Kansas City Water Services Department (KC Water) provides domestic/potable water to the KCNSC Botts Campus and Building 23. Water use at these facilities is discussed in Section 3.8.1.1 of this EA. The Jackson County Public Water Supply District #1 provides water and sewer services for properties within the City of Grandview. Both KC Water and Jackson County Public Water Supply District #1 obtain water from the Missouri River.

3.5.2 Environmental Impacts

3.5.2.1 Proposed Action

KCNExT operations would occur within buildings, preventing the potential introduction of materials and wastes into surface water and groundwater resources. Potable water would be provided to KCNExT by KC Water. KCNExT would introduce impervious areas that increase the amount of runoff occurring during rain and snow events. NNSA would manage surface runoff at KCNExT in the same manner it is managed at the KCNSC Botts Campus and Building 23. The NNSA would obtain the appropriate permits and implement permanent sedimentation and erosion control measures, including implementation of an operational SWPPP with best management practices to address runoff from buildings, loading docks, parking areas, and site roads.

3.5.2.2 No-Action Alternative

Operations at the KCNSC Botts Campus and Building 23 would continue to rely on potable water provided by KC Water. Surface water discharges would continue to be managed as they are today, and applicable permits would be maintained by the NNSA. No construction or soil disturbance would occur at either facility.

3.6 Biological Resources – Vegetation and Wildlife

3.6.1 Affected Environment

3.6.1.1 Vegetation

KCNSC facilities are within the Wooded Osage Plains Level IV Ecoregion, characterized by little bluestem-sideoats grama prairie, big bluestem-Indiangrass prairie, cordgrass wet prairie, and oak woodlands (EPA, 2017). Existing development along the MO-150 corridor, including the KCNSC Botts Campus and Building 23, removed many native habitats that may have been present. The areas surrounding both facilities have also been cleared over time to accommodate development, with native habitat remnants present along drainages, including the one on the KCNExT subject property, and on undeveloped parcels primarily west of the KCNSC Botts Campus. Open areas of both existing facilities are maintained in managed turf grasses and limited areas of ornamental landscaping.

3.6.1.2 Wildlife

Development completed prior to the siting of the KCNSC Botts Campus, Building 23, and other developments removed much of the native habitats across the area that supported wildlife species. Remnants of such habitats are now limited to undeveloped areas along drainages and isolated pockets associated with agricultural lands. Non-native, human created landscapes now provide much of the habitat for wildlife species. These areas including residential neighborhoods and golf courses likely support wildlife species that have adapted to human development including a variety of bird and small rodent species; racoon, skunk, and opossum; and white-tailed deer. Raptor species including turkey vultures and numerous hawk species may also forage along roadsides and across agricultural fields. The western and northern edges of the KCNSC Botts Campus are fenced, but wildlife can still access the lawn areas along MO-150 and Botts Road. The Building 23 property is not currently fenced.

Three federally protected species are listed for Jackson County, Missouri by the USFWS: the gray bat (endangered), the Indiana bat (endangered), the northern long-eared bat (proposed for listing as endangered), and the tricolored bat (proposed for listing as endangered). These bat species may roost in trees in wooded areas and forage along drainageways. No critical habitats have been identified within the study area and no hibernacula are mapped within the county.

The Migratory Bird Treaty Act (16 U.S.C. §§ 703-712) makes it unlawful to pursue, hunt, take, capture, kill, or possess any migratory bird, part, nest, egg or product without a permit. Several migratory bird species occupy the general area either as permanent residents or seasonal migrants. These species can occupy a variety of habitats from natural areas and residential landscapes to both abandoned and occupied buildings. Because of the highly developed nature of the existing KCNSC facilities and surrounding area, migratory bird species common to the area are those that are highly adaptable to human activity.

3.6.2 Environmental Impacts

3.6.2.1 Proposed Action

As previously described, the landowner/developer of the KCNExT subject property conducted an acoustic survey in 2021 to determine if protected bat species used potentially suitable habitat on the subject property as roost or foraging areas. Although bat species may forage across the subject property and other areas in the vicinity, the acoustic survey indicated a low probability that Indiana bats, gray bats, northern long-eared bats, or tricolored bats are present within or use the subject property. Vegetation along the stream corridor across the KCNExT subject property would be maintained as a visual buffer and would provide visual diversity and support stormwater management on the site. The stream corridor may be enhanced in the future to incorporate recreational trails, picnic areas, and fitness activities for use by employees. Retainage of the native vegetation including trees would also continue to support use by migratory birds and other wildlife. No changes to the landscaping areas on the KCNSC Botts Campus or Building 23 site would occur.

3.6.2.2 No-Action Alternative

No construction, land disturbance, or modification of any open areas at the existing KCNSC facilities would occur that could affect resident or migratory wildlife.

3.7 Cultural Resources

3.7.1 Affected Environment

A Cultural Resources Background Review was conducted by NNSA in June 2023 indicating that numerous archaeological surveys have been conducted across what is now the KCNSC Botts Campus, the KCNExT subject property, the Building 23 site, and the general area to support the siting of utilities, development, and transportation improvements. A 2020 archaeological survey identified a prehistoric

lithic scatter in the southeastern portion of the KCNEXT subject property. Artifacts were collected but the site was not evaluated for its eligibility for listing on the NRHP. The KCNEXT subject property contains no structures considered NRHP-eligible. The closest NRHP eligible or listed property to the KCNSC facilities is the NRHP-listed Grandview Residential Historic District, approximately one mile north-northeast of the KCNSC Botts Campus. No known tribal or cultural sites including cemeteries are recorded in proximity to the KCNSC facilities.

3.7.2 Environmental impacts

3.7.2.1 Proposed Action

KCNEXT operations would not affect any NRHP-eligible or listed properties. The recorded prehistoric lithic scatter within the southeast portion of the subject property would not be affected by facility operations.

3.7.2.2 No-Action Alternative

No construction, land disturbance, or operational activities would occur that would affect NRHP-eligible or listed archaeological and historical properties.

3.8 Infrastructure

3.8.1 Affected Environment

3.8.1.1 Utilities

Electricity - The KCNSC purchases electricity from Evergy to power its production machinery, chillers, pumps, compressors, lights, and general office equipment. Two 161-kilovolt (kV) overhead transmission lines from the Turner Road #6 and Martin City East #5 substations supply electricity to the KCNSC Botts Campus. Two onsite transformers owned by Evergy step the voltage down to 13.8 kV to deliver power to two main busses for distribution at the main switchgear and then to subsequent substations and transformers. Electricity for Building 23 is provided from a single feed directly from the Evergy grid. Electricity from Evergy has adequately met facility requirements.

Under current operational levels, the annual electrical consumption at the KCNSC Botts Campus is approximately 85,000 megawatt-hours (MWh). Annual electrical consumption is estimated to be approximately 14,000 MWh at Building 23 by the end of 2023 under full KCNSC occupancy and new systems and manufacturing processes are initiated. This electrical demand is a very small portion of the amount distributed annually by Evergy.

Fuel - KCNSC purchases natural gas, the facility's primary fuel source at the KCNSC Botts Campus, through a commodity contract held by the Defense Logistics Agency, and local pipelines deliver the natural gas to the facility. Natural gas is the primary fuel for the hot water boilers that heat the buildings at the KCNSC Botts Campus. Spire Inc., the primary provider of natural gas to the local Kansas City, Missouri area, provides natural gas to heat Building 23. The annual consumption of natural gas at the KCNSC Botts Campus is 1,800,000 hundreds of cubic feet (ccf) and is estimated to be approximately 50,000 ccf at Building 23 by the end of 2023 under full KCNSC occupancy.

No. 2 diesel fuel is used as secondary boiler fuel if the natural gas supply is limited to the KCNSC Botts Campus. KCNSC uses competitive bids from commercial suppliers to purchase diesel fuel, which is stored in two 8,000-gallon aboveground storage tanks (ASTs) adjacent to the CUP on the KCNSC Botts Campus. The annual consumption of diesel fuel at the KCNSC Botts Campus is 7,500 gallons. Diesel fuel is not currently consumed to support operations at Building 23. As would be expected, the amounts of petroleum-based fuels that are typically used at existing KCNSC facilities are very small in comparison with the amounts distributed within the state.

Water - The KC Water supplies water to existing KCNSC facilities. The facilities use domestic water as make-up for heating hot water, chilled water, condenser water, and fire protection systems, and for

sanitary applications (toilets, sinks, eyewashes, showers, drinking fountains, and in the cafeteria). An isolation cross-connection control program protects potable water from that used for industrial uses. The KCNSC Botts Campus fire suppression system consists of two water supplies that provide water through a 10-inch underground and interior fire main grid. The Building 23 fire suppression system is supplied by a 12-inch main line, and uses a pressurized fire water loop that feeds an automatic sprinkler system as well as fire hydrants.

Current operations at the KCNSC Botts Campus consume approximately 80,000 ccf of potable water annually. The consumption at Building 23 is estimated to be approximately 8,000 ccf of potable water annually at full operation. Potable water demand at the existing KCNSC facilities is a very small portion of the quantity produced and distributed by KC Water annually.³

Heating Hot Water, Compressed Air, and Chilled Water - Centralized utilities for the KCNSC Botts Campus are provided from the CUP. The CUP houses four boilers that produce hot water used to regulate temperature for personnel comfort and to meet production space conditions requirements. The compressed air system supplies clean, dry, compressed air to the KCNSC Botts Campus for production requirements and temperature and humidity climate control devices. The CUP houses seven centrifugal chillers with capacity to chill 10,510 tons of water to regulate temperature and humidity controls for personnel comfort, production requirements, and process cooling. The CUP does not provide utility service to Building 23.

Sanitary Sewer – Both existing KCNSC facilities are serviced by the local KCMO sanitary sewer system. Sewage from both existing locations is treated by the Little Blue Valley Sewer District.

Table 3-5 summarizes the average monthly volume of incoming water flows and outgoing flows to the sanitary sewer from the KCNSC Botts Campus. Because KCNSC does not control all operations at Building 23, complete data for Building 23 is not available at this time.

Table 3-5: Average Monthly Usage at the KCNSC Botts Campus – Incoming Water Flows and Outgoing to Sanitary Sewer, November 2022-April 2023

Incoming Water Flows			Outflows to Sanitary Sewer		
Source:	Metered or Estimated	Quantity in Gallons per Day (gpd)	Source:	Metered or Estimated	Quantity in Gallons per Day (gpd)
Municipal	Estimated	130,131	Cooling Tower Blowdown	Metered	6,298
Well	NA	NA	Process Effluent	Metered	23,153
Other	NA	NA	Polymer Production	Metered	0
			Sanitary and Irrigation	Metered	40,513
			Footing Tile Drains		1,602
			Total Discharged to Combined Sanitary Sewer Point	Metered	71,557

Industrial Wastewater - Dilute inorganic waste streams generated at the KCNSC Botts Campus are treated at the Industrial Wastewater Pretreatment Facility (IWPF) on the KCNSC Botts Campus pursuant to a discharge permit under Section 307(b) of the Clean Water Act (CWA) before being discharged to the sanitary sewer system. Industrial wastewater generated at Building 23 is containerized and shipped

³ In 2011, Kansas City Water Services Department produced and distributed approximately 58.8 million ccf of potable water (2013 EA).

offsite to a Treatment, Storage, and Disposal Facility (TSDF) based upon the characteristics present (i.e., heavy metals present). As workloads increase, a large storage tank (up to 20,000 gallons) may be used to store and then bulk ship larger volumes of wastewater from Building 23. Smaller holding tanks may be used to collect and take samples and would be located within secondary containment and covered under the Building 23 SPCC plan.

Wastewater will continue to be bulk shipped offsite for disposal until the installation of a wastewater pretreatment system is in place at Building 23. NNSA will work with KCMO Water Department to obtain a discharge permit for pretreated water into the sanitary sewer system.

3.8.1.2 Transportation

Two major highways provide access to the area. I-49/US-71, approximately one mile east of the KCNSC Botts Campus, is the major north-south freeway through eastern Kansas City connecting to I-70 near the Missouri River to the north and to I-44 in Joplin and through northwest Arkansas to the south. MO-150 is the major east-west highway through the area. Two driveway entrances to the KCNSC Botts Campus are provided from Botts Road, along the eastern edge of the property. Access to Building 23 is provided by two driveway entrances located on the east side of Andrews Road, approximately 300 and 1,300 feet south of MO-150, respectively. Employees, vendors, and suppliers use these roadways to transport equipment and materials to, from, and between the KCNSC Botts Campus and Building 23 and eventually KCNEXT. Both existing properties contain large, paved parking areas and narrow paved interior service roads. Both existing facilities are equipped with multiple loading docks to accommodate inbound and outbound shipments. Materials and supplies, equipment, and products are brought in and out of both facilities using large trucks and semi-trailers using the same facility entrances as employees.

The BNSF Railway line east of the KCNEXT subject property is no longer operating while an active KCS rail line runs generally north-south adjacent to the western boundary of the KCNSC Botts Campus feeding the KCS/I-49 Intermodal Center south of MO-150. The 37-acre property on which Building 23 is located is part of the larger I-49 Intermodal Center.

3.8.2 Environmental impacts

3.8.2.1 Proposed Action

In general, the utilities serving the existing KCNSC facilities have sufficient capacity to support upgraded and expanded operations at KCNEXT. Some temporary utility services may be needed in 2024 to keep pace with forecasted manufacturing activities and facilities come on line. KCNSC and Honeywell FM&T are working on a sustainability waiver for carbon-free requirements at KCNEXT.

Electricity - KCNSC would continue to purchase electricity from Evergy. The existing substation (Honeywell substation) in the northwest corner of the KCNSC Botts Campus serves the campus and other buildings along MO-150. A new conduit under construction from the substation would extend to KCNEXT to power the initial phase manufacturing operations. A second substation would be constructed at KCNEXT (anticipated in 2027) to power and provide redundancy for manufacturing operations to meet future forecasted demand.

Fuel – KCNSC would continue to purchase natural gas, through a commodity contract held by the Defense Logistics Agency, with local pipelines delivering gas to the three KCNSC facilities. Natural gas would continue to be the primary fuel for the hot water boilers and general heating, supplied through Spire Inc. No. 2 diesel fuel would continue to be the secondary fuel for heating for buildings on the KCNSC Botts Campus, with the use of diesel fuel at KCNEXT still under consideration as a back-up.

Water – KC Water would continue to service all three KCNSC facilities, providing domestic water, fire protection system water, for sanitary applications.

Heating Hot Water, Compressed Air, and Chilled Water – Centralized utilities for the KCNSC Botts Campus would continue to be served by the CUP, with a second CUP to be constructed within KCNExT when demand is warranted.

Sanitary Sewer – KCNExT would be serviced by the local KCMO sanitary sewer system and sewage would be treated by the Little Blue Valley Sewer District.

Industrial Wastewater – As new workloads are monitored, it likely will become necessary to construct an IWPF at KCNExT and Building 23 to address industrial wastewater volumes. Each IWPF at KCNExT and Building 23 would be a similarly scaled operation to the existing IWPF serving the KCNSC Botts Campus (occupying approximately 5,000 SF). Both additional IWPFs would require a discharge permit under Section 307(b) of the CWA. Appropriate visual screening and security for both sites would be installed in conformance with development codes.

Transportation - Employee and supplier traffic would continue to flow among the KCNSC facilities using the local roadway system including Botts Road and MO-150. Botts Road is a four-lane divided urban arterial separating the KCNSC Botts Campus and KCNExT. Two existing driveways from Botts Road are used to access the KCNSC Botts Campus by both employees and suppliers. Both driveways would be extended to the east to provide access into KCNExT. Botts Road connects to MO-150 at a diverging diamond interchange. MO-150 is a six-lane highway with ample capacity to accommodate delivery traffic and shift changes. Colorado Avenue in the southeastern corner of KCNExT provides local access to the property from MO-150. The KCNExT landowner/developer conducted a Traffic Impact Study in July 2023. Based on the preliminary modeling of existing and future traffic volumes and travel demand based on forecasted employment levels around the KCNSC facilities, the following turn lane and intersection improvements are recommended to occur by the completion of the South Development Stage (2032) to keep roadway and intersection levels of service (LOS)^[1] within acceptable levels:

- Botts Road north intersection – Restripe existing pavement on northbound approach to create right-turn lane and restripe the pavement at the southbound approach to create a left-turn lane.
- Botts Road south intersection – Install a traffic signal, construct a northbound right-turn lane along Botts Road (approximately 350 feet long); construct a southbound left-turn lane along Botts Road (approximately 350 feet long); construct a two-lane westbound exit; and restripe the existing eastbound exit pavement.
- Restripe existing pavement to create a southbound left-turn lane to accommodate dual left-turns onto MO-150 at the existing MO-150/Botts Road diverging diamond interchange.
- Vacate Colorado Avenue and convert it to a private access drive providing access for employees and suppliers.

A private driveway located midway between Botts Road and Colorado Avenue and connecting to MO-150 would be used during the South Development Stage to provide construction, employee, and emergency access to KCNExT. No changes would be made to Botts Road south of MO-150 or to Andrews Road that provides access to Building 23.

3.8.2.2 No-Action Alternative

The existing utilities and roadway network would continue to adequately accommodate the current level of operations at the KCNSC Botts Campus and Building 23.

^[1] Level of Service (LOS) is a measure of vehicles on the road and speed at which traffic moves along a roadway segment. LOS is expressed using a six-level, A to F, rating system, with LOS A representing free-flow traffic with no delays to LOS F where the traffic flow is unstable, stop-and-go, and substantial delays occur.

3.9 Socioeconomic Resources

3.9.1 Affected Environment

3.9.1.1 Population, Environmental Justice, Title VI, and Limited English Proficiency

Table 3-6 provides an overview of the historic and forecasted population growth in City of Kansas City, Jackson County, and the State of Missouri. The population statistics for 2010 are presented to illustrate the baseline conditions occurring at the time the KCNSC proposed its move to the KCNSC Botts Campus. The population of Missouri increased 4.3 percent from 2010 to 2022, while the population across Jackson County and Kansas City grew at higher rates over the same time period, at 7.4 and 11.96 percent, respectively.

Table 3-6: Population and Growth Trends by Jurisdiction

Jurisdiction	2000 ^(a)	2010 ^(b)	2019 ^(c)	2022 (e)	2030 Forecast ^(d)
Kansas City	441,545	454,876	486,404	509,297	Not Available
Jackson County	654,880	666,997	696,216	716,531	714,467
State of Missouri	5,595,211	5,922,314	6,104,910	6,177,957	6,746,762

Sources:

- U.S. Census Bureau, Census 2000 Summary File, Profile of General Demographic Characteristics: 2000. Retrieved July 30, 2019 from <https://factfinder.census.gov/>
- US Census Bureau, 2010 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved February 5, 2021, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>
- US Census Bureau, 2019 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved February 5, 2021, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>
- 2030 forecast for Missouri, Missouri Office of Administration, 200-2030 Projections. Retrieved June 27, 2023 from <https://oa.mo.gov/budget-planning/demographic-information/population-projections/>
- US Census Bureau, 2022 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved June 23, 2023, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

Tables 3-7 and 3-8 summarize the general racial and ethnic characteristics of Kansas City, Jackson County, and the State of Missouri. Figure 3-4 illustrates the percent total minority population within the census block groups surrounding the KCNSC facilities.

Table 3-7: Population by Race by Jurisdiction

Jurisdiction	White Alone		Black/African American		American Indian & Alaska Native		Asian		Native Hawaiian & Other Pacific Islander		Total Minority Population	
	2010	2022	2010	2022	2010	2022	2010	2022	2010	2022	2010	2022
Kansas City	60.5%	59.7%	29.9%	26.5%	0.5%	0.4%	2.3%	2.7%	0.2%	0.3%	39.5%	44.5%
Jackson County	67.8%	70.0%	24.0%	23.4%	0.5%	0.7%	1.6%	2.0%	0.2%	0.3%	32.3%	38.6%
State of Missouri	83.4%	82.5%	11.5%	11.7%	0.4%	0.6%	1.6%	2.3%	0.1%	0.2%	16.7%	21.6%

Sources:

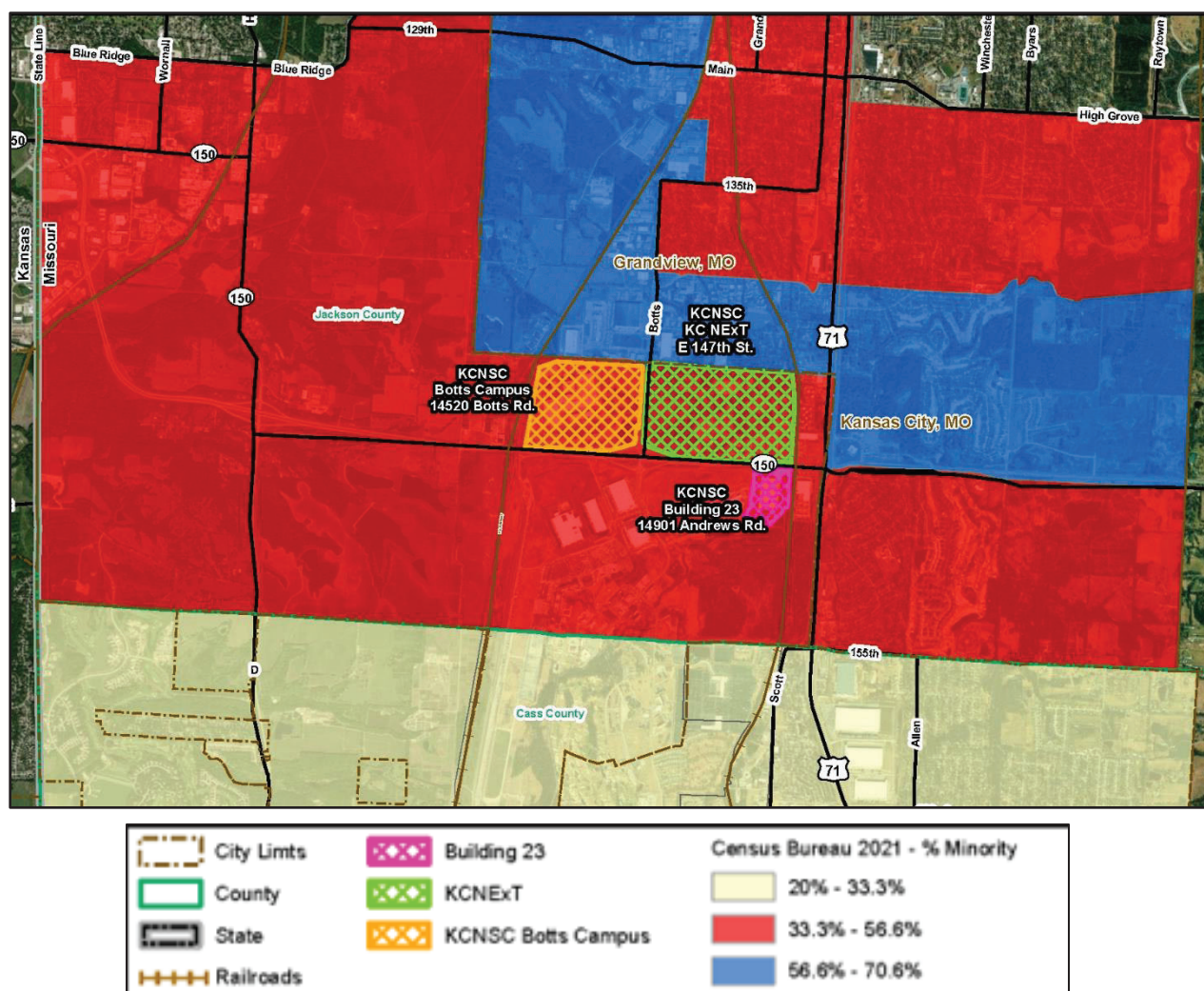
- US Census Bureau, 2010 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved February 5, 2021, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>
- US Census Bureau, 2022 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved June 23, 2023, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

Table 3-8: Hispanic and Latino Ethnicity by Jurisdiction

Jurisdiction	Hispanic or Latino (of any race)		Not Hispanic or Latino (of any race)	
	2010	2022	2010	2022
Kansas City	9.7%	10.7%	90.3%	55.5%
Jackson County	7.9%	10.1%	92.1%	61.4%
State of Missouri	3.4%	4.8%	96.6%	78.4%

Sources:

- US Census Bureau, 2010 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved February 5, 2021 from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>
- US Census Bureau, 2022 American Community Survey 5-Year Estimates Data Profiles, ACS Demographic and Housing Estimates. Retrieved June 23, 2023 from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

Figure 3-4: Minority Population Census Block Groups in the Vicinity of KCNSC Facilities

3.9.1.2 Employment and Income

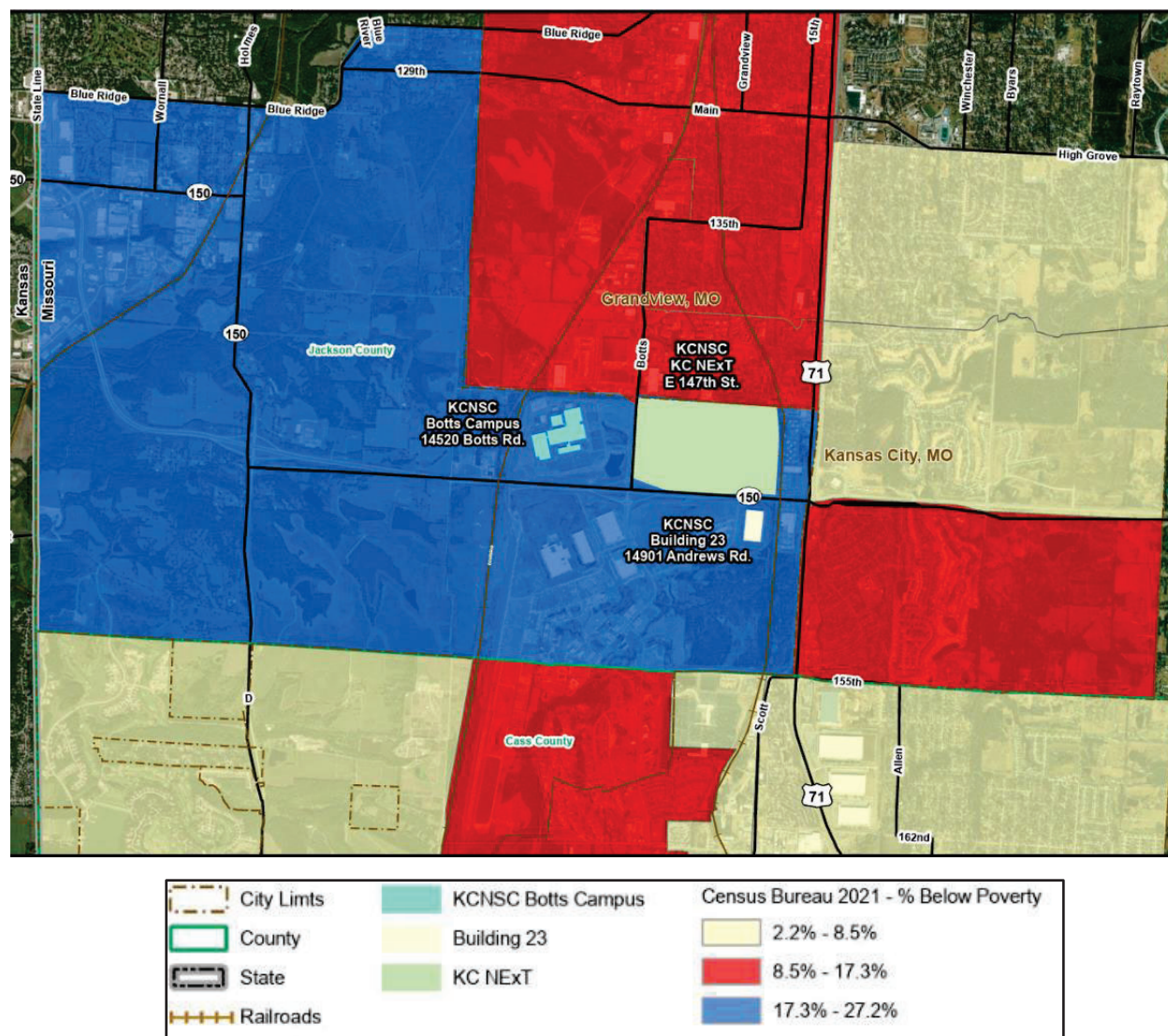
Table 3-9 summarizes the employment and income status of Jackson County in comparison to the State. Median household incomes have increased across all jurisdictions while the percentage of the population living below poverty and the unemployment rate have decreased. Figure 3-5 illustrates the percentage of the population living below poverty in the census block groups surrounding the KCNSC facilities.

Table 3-9: Income, Poverty, and Unemployment by Jurisdiction

Jurisdiction	Median Income ^(a, b)		Percent of Population Living Below the Poverty Level ^(a, b)		Unemployment Rate ^(a, b)		Poverty Threshold ^(c)	
	2010	2022	2010	2022	2010	2022	2010	2022
Kansas City	\$44,113	\$ 60,042	18.1%	15.0%	9.2%	5.1%	\$22,050	\$30,000
Jackson County	\$46,252	\$ 60,800	15.7%	13.1%	8.8%	5.0%		
State of Missouri	\$46,262	\$ 61,043	14.0%	12.7%	7.4%	4.5%		

Sources:

- US Census Bureau, 2010 American Community Survey 5-Year Estimates Data Profiles, ACS Selected Economic Characteristics. Retrieved February 5, 2021, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles>
- US Census Bureau, 2019 American Community Survey 5-Year Estimates Data Profiles, ACS Selected Economic Characteristics. Retrieved February 5, 2021, from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles>
- US Department of Health and Human Services (DHHS) Poverty Guidelines (family of four). Retrieved on June 16, 2023, from <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>

Figure 3-5: Low-Income Population Census Block Groups in the Vicinity of KCNSC Facilities

3.9.1.3 Community Services

KCNSC facilities are served by the Kansas City Police Department, Fire Department, and Emergency Medical Services and Rescue Services. Grandview Police and Fire Department provide secondary response to the facilities. The closest medical centers providing trauma services are Lee's Summit Medical Center, 18.8 miles to the east, and Saint Luke's South Hospital, 9.8 miles to the west in Overland Park, Kansas. No churches, schools, libraries, or other community facilities are located west of I-49/US71 and south of Main Street in Grandview within the study area. Several elementary schools and churches are east of I-49/US-71, the closest, Belvidere United Methodist Church, is approximately 0.5 mile east of Building 23.

3.9.1.4 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (issued February 11, 1994) requires Federal agencies to identify and address to the greatest extent practicable and permitted by law the disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, issued on April 21, 2023, strengthened the Federal government's commitment to environmental

justice. It requires a “Whole Government Approach” expounding on the previous definition of environmental justice so that people are fully protected from disproportionately high and adverse human health and environmental hazards, and have equitable access to a healthy, sustainable, and resilient environment.

The census data presented indicates the KCNSC facilities are in an area with a minority population ranging from 33 percent to 70.6 percent, higher than the average minority population percentage for Kansas City and Jackson County. The KCNSC facilities are also in an area where 8.5 percent to 27.2 percent of the population is considered low-income. The facilities are also in an existing and built-up industrial area that provides jobs for all populations and supports both local and regional economies. No residences, including multi-family developments, are within or adjacent to the existing KCNSC facilities or the KCNExT subject property.

3.9.2 Environmental Impacts

3.9.2.1 Proposed Action

KCNExT is in an existing industrial area with access to MO-150. No homes or businesses would be displaced nor would its operation cause any changes in surrounding residential neighborhoods. Additional employees would be hired to support forecasted operations at KCNExT and across the other KCNSC facilities. At this time, the number of additional employees needed over the next 5 to 10 years is estimated to be 8,300 employees across the KCNSC facilities.

No changes in travel times by emergency responders would occur because of KCNExT. No community facilities would be affected. Increases in vehicle traffic and associated noise and congestion, air emissions, and stormwater runoff would affect all populations equally that work in, travel through, or live in neighboring areas. The operation of KCNExT in tandem with the KCNSC Botts Campus and Building 23 would not result in disproportionately high and adverse impacts, including human health and environmental burdens, to minority and low-income communities.

3.9.2.2 No-Action Alternative

Employment at the KCNSC facilities would be largely maintained at current levels in the short-term and would be expected to increase overtime to support the current and anticipated workloads and the facility's needs. No displacements and no changes to surrounding neighborhoods would occur. No disproportionately high and adverse impacts to minority or low-income populations would occur under the no-action alternative. Travel times by emergency responders to either facility would not change, and no community facilities would be affected under the no-action alternative.

3.10 Waste Management

3.10.1 Affected Environment

3.10.1.1 Pollution Prevention and Waste Minimization

Activities at the existing KCNSC facilities generate and require the management of non-hazardous and hazardous wastes, and small quantities of low-level radioactive waste. Waste management operations consist mainly of hazardous and non-hazardous waste storage in preparation of offsite treatment or disposal. Management of waste generated by existing KCNSC facilities is regulated by State of Missouri and Federal hazardous waste statutes, including 40 CFR Parts 260, 261, 264, and 270 and the corresponding State regulations.

The KCNSC's management of wastewater, including sanitary sewage and industrial wastewater, is addressed in Section 3.8.1.1 of this EA.

As presented in Table 3-10, the existing KCNSC facilities generated approximately 2.2 million pounds of hazardous and non-hazardous wastes in fiscal year 2022. Approximately 1.8 million pounds, or

approximately 79 percent, of the total waste generated was recycled, reclaimed, or used for energy recovery. Section 3.10.1.2 further addresses waste minimization and recycling activities at the KCNSC Botts Campus and Building 23.

Table 3-10: Quantities of Hazardous and Non-Hazardous Wastes Generated, Recycled, and Disposed of at the KCNSC Botts Campus and Building 23

Total Quantity (Pounds)	FY 2020	FY 2021	FY 2022
WASTES GENERATED			
Baling Steel	465,420	520,580	359,460
Fuelblend	252,371	257,142	216,204
Water Treatment	232,284	254,157	226,293
E-Scrap	87,905	63,888	66,203
Scrap Metal	151,822	158,148	254,590
Precious Metal	70,596	78,361	101,658
Batteries	10,318	11,086	15,952
Incineration	41,227	52,306	18,787
RCRA (Hazardous)	13,721	18,511	11,497
Municipal Solid Waste	781,900	850,932	1,008,642
Total Wastes Generated	2,107,566	2,265,111	2,279,286
WASTES RECYCLED			
Baling Steel	465,420	520,580	359,460
Fuelblend	252,371	257,142	216,204
Water Treatment	232,284	254,157	226,293
E-Scrap	87,905	63,888	66,203
Scrap Metal	151,822	158,148	254,590
Precious Metal	70,596	78,361	101,658
Batteries	10,318	11,086	15,952
Waste-to-Fuel Co-Generation	441,200	469,012	570,162
Total Wastes Recycled	1,711,916	1,812,374	1,810,522
DISPOSAL METHODS			
Incineration	41,227	52,306	18,787
RCRA (Hazardous) Landfill	13,721	18,511	11,497
Municipal Solid Waste (Landfill)	340,700	381,920	438,480
Total Wastes Disposed	395,648	452,737	468,764

Source: KCNSC, Honeywell FM&T, July 2023

Waste minimization is an integral part of the KCNSC's Environmental Management system. It is an ongoing effort to systematically reduce material releases to all environmental media as well as conserve energy and water. The overall waste minimization program focuses on the reduction and eventual elimination of significant environmental impacts of waste generation. The preferred approach is source reduction or elimination of waste sources. When elimination is not feasible, options for recycling or reuse of waste materials are considered. Treatment and disposal are only considered when source reduction or recycling and reuse options are not feasible or cost effective. The waste minimization program emphasizes the procurement of environmentally preferable products containing recycle materials as process inputs.

All solid waste materials generated from KCNSC facilities are managed, transported, and disposed of offsite at facilities permitted in accordance with Federal, State, and local requirements. Industrial wastewater, as described in Section 3.8.1.1, is either contained onsite and transported offsite for disposal or released to the sanitary sewer system. Additionally, Honeywell follows established corporate standards, protocols, and requirements to ensure that all waste disposal sites and waste transporters used have been sufficiently reviewed, vetted, and approved to mitigate potential risks. Wastes are

transported directly from the generating facility, the KCNSC Botts Campus and Building 23, to the end-processor or disposer. Wastes are not transported between KCNSC facilities. Refer to Section 3.8.1.1 for additional description of industrial wastewater generation and management.

In 2022, approximately 1.8 million pounds, or 79 percent, of the total waste generated at the KCNSC Botts Campus and Building 23 was recycled, reclaimed, or used for energy recovery. Refer to Table 3-10 for detailed quantification of waste generation, recycling, and disposal. Approximately 98 percent of all wastes generated from production activities was recycled in 2022. Recycling of production-generated wastes is accomplished through metal, paper, e-scrap, batteries, water treatment, and precious metal recovery. Co-generation and fuel blending of several waste streams is also performed offsite and used as waste to energy to power homes and cement kilns. Approximately 12 percent of this waste stream was used for fuel blending in cement kilns and approximately 31 percent was used for co-generation in the production of electric power. Additional minor amounts of industrial wastes are captured by the IWPF at the KCNSC Botts Campus and disposed of in accordance with applicable regulations.

Recycling and reclamation of wastes at the KCNSC Botts Campus and Building 23 has steadily increased over the previous five years. This increase results from KCNSC's waste management program's coordination with various recyclers to re-characterize and recycle waste that was previously disposed of at landfills or by incineration.

Opportunities to minimize waste and pollutants, including chemical wastes, are identified through Management of Change and conducting Preliminary Hazard Assessment (PHA) reviews of all new projects and processes. The PHA process is a multi-disciplinary review of health, safety, environmental, utility engineering, and waste management concerns. All construction projects managed by the KCNSC also require a Waste Identification Table to be completed prior to initiation of construction activities. These processes provide an opportunity to identify product substitution, pollution prevention, and waste reduction opportunities.

3.10.1.2 Hazardous Wastes

The KCNSC is regulated by Federal and State hazardous waste regulations and is subject to inspections under the RCRA conducted by the EPA and MDNR. The KCNSC Botts Campus (EPA ID MOR000545376) and Building 23 (EPA ID MOR000564674) are registered separately as LQGs of hazardous waste, defined as facilities that generate 1,000 kilograms per month of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Several operations at the existing KCNSC facilities generate hazardous wastes, as defined by 40 CFR 261. Hazardous wastes are routinely generated by metal fabrication, cleaning, finishing, coating, and encapsulation/ potting operations. Cleaning of metal parts in acid and alkaline solutions generates acid and alkaline waste. Waste rubber, foam, and resin components are generated by encapsulation/potting operations. Waste solvents are generated by degreasing, cleaning, and circuit board printing operations. The fabrication and machining of metal parts generates waste metal grindings. Waste paints and thinners are generated by product and facility painting operations. Miscellaneous waste chemicals are generated in laboratory processes. In addition, maintenance projects may yield wastes that are hazardous.

Hazardous wastes are managed in the same general manner as other generated wastes through onsite management, transport, and disposal at offsite facilities permitted in accordance with applicable Federal, State, and local requirements. Additionally, Honeywell follows established corporate standards, protocols, and requirements to ensure that all waste disposal sites and waste transporters used have been sufficiently reviewed, vetted, and approved in order to mitigate potential risks. Hazardous wastes subject to the RCRA are containerized and stored onsite for a period of less than 90 days in compliance with RCRA requirements for LQGs. These containerized wastes are then transported offsite by licensed transporters. Dilute rinsewaters from operations are piped directly through an industrial wastewater piping system to the KCNSC Botts Campus IWPF. Spent coolants and non-hazardous waters are staged in a bulk storage tank and transported offsite via tanker truck transport. Recycling, treatment, or disposal of

wastes occurs at facilities currently in compliance with Federal and State hazardous waste regulations, as applicable. Operations that generate the largest volume of hazardous wastes at existing KCNSC facilities include wastewater treatment, plating, and etching processes.

3.10.1.3 Hazardous Substances

The *Emergency Planning and Community Right-to-Know Act* (EPCRA) of 1986 was created to help communities plan for chemical emergencies. It also requires industry to report on the storage, use, and releases of hazardous substances to Federal, State, and local governments. Under Section 312 of EPCRA, NNSA routinely reviews the lists of extremely hazardous substances (EHSs) in Appendices A and B of 40 CFR Part 355 for the chemicals used onsite at existing KCNSC facilities. Under the Tier II requirements of EPCRA, an EHS is any substance for which a facility must maintain a Safety Data Sheet (SDS) under the Occupational Health and Safety Administration (OSHA) Hazard Communication Standard (29 CFR 1910). The NNSA is required to report the amount of an EHS which equals or exceeds the threshold planning quantity (TPQ) set by the EPA.

Table 3-11 lists the EHSs used at the KCNSC Botts Campus and Building 23 that equaled or exceeded the TPQ during the 2022 reporting year.

Table 3-11: KCNSC Botts Campus and Building 23 – Tier II Reportable Chemicals That Equaled or Exceeded EPCRA Threshold Planning Quantities (TPQ) in Reporting Year 2022

Chemical (full list)	CAS ^(a) #	EHS ^(b) Listed	Used at the Botts Campus	Used at Building 23
Selenious acid	7783-00-8	Yes	Yes	No
Precipitated silica	112926-00-8	No	Yes	No
Zeolites	1318-02-1	No	Yes	No
Boron-10	14798-12-0	No	Yes	No
Isocyanic acid	9016-87-9	No	Yes	No
Iron powdered	7439-89-6	No	Yes	No
Ethene, homopolymer	9002-88-4	No	Yes	No
Urea	57-13-6	No	Yes	No
2,4 TDI (toluene 2,4-diisoyante) [benzene]	584-84-9	Yes	Yes	No
Highly refined petroleum oils	64742-54-7	No	Yes	No
Lead	7439-92-1	No	Yes	Yes
Argon	7439-37-1	No	Yes	No
Rock Salt	7647-14-5	No	Yes	No
Sulfuric acid (H ₂ SO ₄)	7664-93-9	Yes	Yes	Yes
Nitric acid	7697-37-2	Yes	Yes	No
Nitrogen	7727-37-9	No	Yes	Yes
Graphite	7782-42-5	No	Yes	No
2,6 TDI (toluene 2,6-diisocoyante) [benzene]	91-08-7	Yes	Yes	No

Source: Honeywell FM&T, June 2023

a. Chemical Abstract Service registry number

b. The EHS list was first compiled by EPA, and subsequently incorporated into EPCRA, to identify chemicals that could cause serious irreversible health effects from accidental releases. EHSs are listed in 40 CFR Part 355.

Table 3-12 lists the EHSs used at the KCNSC Botts Campus and Building 23 that did not exceed the TPQ for recording year 2022.

Table 3-12: KCNSC Botts Campus – Tier II Reportable Chemicals That Did Not Exceed EPCRA Threshold Planning Quantities (TPQ) in Reporting Year 2022

Chemical (full list)	CAS ^(a) #	EHS ^(b) Listed
Epichlorohydrin [oxirane, (chloromethyl)]	106-89-8	Yes
Chloroethanol	107-07-03	Yes
Acrylonitrile	107-13-1	Yes
Ethylenediamine	107-15-3	Yes
Vinyl acetate monomer [acetic acid ethenyl ester]	018-05-4	Yes
Phenol	108-95-2	Yes
Piperidine	110-89-4	Yes
Hydroquinone (1,4-Benzenediol)	123-31-9	Yes
Cadmium oxide	1306-19-0	Yes
Vanadium pentoxide [vanadium oxide]	1314-62-1	Yes
Gallium trichloride	13450-90-3	Yes
Sodium cyanide	143-33-9	Yes
Potassium cyanide	151-50-8	Yes
Sodium azide	26628-22-8	Yes
Isophorone diisocyanate (cyclohexane)	4098-71-9	Yes
Formaldehyde	50-00-0	Yes
4-Aminopyridine	504-24-5	Yes
Dithiobiuret	541-53-7	Yes
Benzenamine {Aniline} ^c	62-53-3	Yes
Chloroform	67-66-3	Yes
Sulfur dioxide	7446-09-5	Yes
Ethylene oxide (oxirane)	75-21-8	Yes
Propylene oxide (oxirane, methyl-)	75-56-9	Yes
Dimethyldichlorosaline	75-78-5	Yes
Lithium hydroxide	7580-67-8	Yes
Hydrochloric acid (only as a gas)	7647-01-0	Yes
Hydrogen fluoride {hydrofluoric acid}	7664-39-3	Yes
Ammonia	7664-41-7	Yes
Phosphorus	7723-14-0	Yes
Chlorine	7782-50-5	Yes
Selenious acid	7783-00-8	Yes
Acrylamide	79-06-1	Yes
Peracetic acid	79-21-0	Yes

Source: Honeywell FM&T, June 2023. This list is subject to change at any time for either site as new materials are purchased onsite to support daily operations. Monthly review of on-hand balances for EHSs is completed by health, safety & environment (HS&E) and appropriate action is taken as required under EPCRA.

- Chemical Abstract Service registry number
- The EHS list was first compiled by EPA, and subsequently incorporated into EPCRA, to identify chemicals that could cause serious irreversible health effects from accidental releases. EHSs are listed in 40 CFR Part 355.
- Only EHS listed but did not exceed a reportable threshold for Building 23 in Reporting Year 2022.

3.10.2 Environmental Impacts

3.10.2.1 Proposed Action

The volume of waste generation would increase at KCNSC facilities once KCNExT comes on line. Regardless of the characteristics of the waste stream, management of non-hazardous, hazardous, and small quantities of low-level radioactive waste would continue to occur in the same manner as under current operational levels. All wastes would continue to be categorized and disposed of according to the Federal and State permits held by the NNSA and following applicable Federal, State, and local regulations. At all KCNSC facilities, industrial wastes captured by an IWPF⁴ would continue to be disposed of in accordance with applicable regulations. Wastes would be minimized through continued and expanded reuse and recycling efforts.

Table 3-13 lists the EHSs that could potentially be used at KCNExT that would be reviewed for applicability to the TPQ.

Table 3-13: KCNSC Botts Campus, Building 23, and KCNExT – Anticipated New Tier II Reportable Chemicals That will be reviewed for applicability to the EPCRA Threshold Planning Quantities (TPQ)

Chemical (full list)	CAS ^(a) #	EHS ^(b) Listed
Citric Acid	77-92-9	No
Hexavalent Coating	18540-29-9	No
Trivalent Coating	16065-83-3	No
Sulfuric Acid	7664-93-9	Yes
Copper	7440-50-8	No
Nickel	7440-02-0	Yes
Palladium	7440-05-3	Yes
Gold	7440-57-5	No
Zinc	7440-66-6	No
Tin	7440-31-5	No
Chrome	7440-47-3	No
Cadmium	7440-43-9	No
Silver	7440-22-4	No

Source: Honeywell FM&T, June 2023. This list is subject to change at any time for either site as new materials are purchased onsite to support daily operations. Monthly review of on-hand balances for EHSs is completed by health, safety & environment (HS&E) and appropriate action is taken as required under EPCRA.

- Chemical Abstract Service registry number
- The EHS list was first compiled by EPA, and subsequently incorporated into EPCRA, to identify chemicals that could cause serious irreversible health effects from accidental releases. EHSs are listed in 40 CFR Part 355.

Very low volumes of low-level radioactive wastes are generated at the KCNSC Botts Campus. With the expansion of operations to KCNExT, approximately 40 pounds per year of low-level radioactive wastes are expected to be generated at the combined KCNSC facilities. KCNExT operations would also generate various waste streams which would be managed and disposed of in the same manner they are addressed at the existing KCNSC facilities.

⁴ KCNSC Botts Campus has an operational IWPF. Once KCNSC takes full occupancy of Building 23, an IWPF may be installed as manufacturing volumes increase. An IWPF would be constructed at KCNExT during the North Development Stage.

3.10.2.2 No-Action Alternative

No changes would occur in the management of non-hazardous, hazardous, and very small quantities of low-level radioactive waste. All wastes would continue to be categorized and disposed of according to the Federal and State permits held by the NNSA and following applicable Federal, State, and local regulations.

3.11 Human Health and Safety

3.11.1 Affected Environment

3.11.1.1 Public Health and Safety

The NNSA has established management systems at the KCNSC Botts Campus and Building 23 to implement and monitor its environmental protection responsibilities. These systems monitor and maintain compliance with applicable Federal, State, and local regulations to ensure continued health and safety of the public. These facilities have no history of spills or releases of hazardous materials into the environment. Both locations have historically been in compliance with all applicable EPA regulations and have no recorded violations (EPA ECHO database).

3.11.1.2 Worker Health and Safety

The KCNSC conducts an All Hazards Survey (AHS), Threat and Hazard Identification and Risk Assessment (THIRA), and an Emergency Planning Hazard Assessment (EPHA) every three years and has also developed an annual Emergency Management Plan based on the assessment, effective August 2020 through August 2023. Potential material and chemical hazards to worker health and safety present at KCNSC facilities include cyanide salts, beryllium, mercury, chromium, acids, caustics, ammonia, and polychlorinated biphenyls (PCBs); as noted in Table 3-11 and Table 3-12. Potential physical hazards include machine operations, noise, high-voltage electrical equipment, pressurized systems, and construction activities. The existing KCNSC facilities do not contain asbestos or lead-based paint in their respective building materials.

3.11.2 Environmental Impacts

3.11.2.1 Proposed Action

Waste generation rates across the KCNSC facilities (including KCNExT) would continue to be monitored as operations are expanded to support forecasted workloads. Waste management operations would be adjusted as needed. Onsite waste management staff (employed by the KCNSC Management and Operations contractor) would continue to manage waste disposal operations. Onsite staff would also prepare shipments and contract with local permitted waste management and recycling contractors for collection and transport of waste to licensed disposal facilities. The KCNSC has an existing U.S. Department of Transportation (USDOT) Security Plan for the transport of hazardous wastes as required under 49 CFR 172.800; KCNExT would be covered under this existing KCNSC plan and the plan would be amended as needed to reflect any changed waste generation.

Nonhazardous waste would continue to be disposed of at a locally permitted sanitary landfill such as the Johnson County [Kansas] Landfill. Any hazardous waste would be handled in compliance with applicable regulatory requirements to minimize hazards for worker safety and the general public.

KCNExT operations are likely to generate the same or similar types of wastes as the existing KCNSC facilities. KCNExT may also be classified as a LQG and would be permitted in the same manner as the existing facilities. All wastes generated at KCNExT would be managed and disposed of in the same manner as wastes generated at the existing KCNSC facilities. Transport of hazardous wastes from KCNExT to licensed disposal facilities would be covered under KCNSC's existing USDOT Security Plan.

3.11.2.2 No-Action Alternative

All current operations, including operation of equipment that generates wastes, would continue at the KCNSC Botts Campus and Building 23. Increases in operational levels and therefore increases in the production of all wastes would be managed as future workloads increase. Wastes would continue to be managed and disposed of in the same manner they are today.

3.12 Intentional Destructive Acts

Section 5.3.9 of DOE/EA-1592 (2008 Environmental Assessment for the *Modernization of Facilities and Infrastructure for the Non-Nuclear Production Activities Conducted at the Kansas City Plant*) discusses the considerations and evaluation of potential intentional destructive acts prior to the construction of the KCNSC Botts Campus. This information and threat level designation is also applicable to Building 23 and KCNExT.

DOE considers intentional destructive acts (i.e., acts of sabotage or terrorism) in all of its EAs and Environmental Impact Statements. After reviewing the types of existing and proposed operations and associated potential hazards to be expanded across the KCNSC facilities (including KCNExT), the NNSA has determined that the likelihood of such acts for the proposed action would be low. It is possible that random acts of theft or vandalism could happen as at any other location. The act of relocating the functions included under the proposed action would not create a particularly attractive target or opportunity for terrorists or saboteurs to inflict adverse impacts to human life, health, or safety.

4.0 CUMULATIVE EFFECTS

4.1 Current and Reasonably Foreseeable Future Action

The Kansas City metropolitan area is a mixed-use community with industrial activities, offices, parks and recreation, and residential areas. The activities associated with these mixed uses produce impacts across all resource areas assessed in this EA. This EA accounts for these impacts under the affected environment descriptions for the proposed action. This EA also assumes that such uses would continue, producing additional but minor impacts across various resources in the region. For example, facilities would be repaired as required, jobs would be gained and lost, and community services (e.g., hospitals, education, and police) would continue to provide needed services to the area. This area of Jackson County provides some of the last undeveloped land with close access to the interstate system and would continue to develop over the next 10 years.

The area surrounding the existing and proposed KCNSC facilities is designated for continued industrial use west of I-49/US-71 and for suburban uses (e.g., residential, commercial, light industrial) east of I-49/US-71. The land south of MO-150 and west of Building 23 is part of the I-49 Intermodal Center that contains several industrial and distribution businesses, some constructed since 2021.

4.1.1 Additional Leased Spaces

Construction began on the KCNSC Botts Campus in 2010 with the NNSA relocating operations to the new facility in 2013. As described in Section 1.1, the NNSA leased additional office space at three locations in Kansas City between 2016 and 2019. Additional space was leased within Building 2023 in 2019 with NNSA purchasing Building 23 in 2023. NNSA will operate across the full 425,000 SF within Building 23 starting in 2024.

4.2 Potential Cumulative Effects

The expansion of manufacturing operations to KCNExT would result in minor cumulative effects. The expansion to satisfy larger production volumes will result in the hiring of additional employees, minor increases in surface traffic volumes resulting from increased employment and material deliveries, air emissions, industrial wastewater generation, power usage, and waste generation would occur to support the workloads forecasted over the next 5 to 10 years. Overall, the expansion of operations across KCNSC facilities would result in minimal cumulative effects.

The NNSA will continue to evaluate long-term solutions to address their ongoing mission under the multi-phased development of KCNExT to support forecasted workloads. In the event changes in the operational needs across all three KCNSC facilities or the consideration of additional facility space beyond the KCNSC Botts Campus, Building 23, and KCNExT is warranted, NNSA will evaluate the potential impacts of those actions under a re-evaluation of this EA or development of a separate environmental document.

5.0 REGULATORY REQUIREMENTS

This chapter provides a discussion of regulatory requirements associated with the proposed action. The following summarizes additional regulatory requirements and permitting that would be necessary to expand operations to KCNExT.

5.1 Regulatory Agencies

Federal and State laws and local ordinances are the basis for the environmental, safety, and health requirements for KCNSC and NNSA facilities and operations. In addition to DOE, EPA, DOT, and the U.S. Department of Labor are responsible for implementing Federal environmental, safety, and health statutes. The implementation direction can be statutory or by Executive Order. The EPA has delegated permitting and enforcement for the CAA, CWA, and RCRA to the MDNR; however, the EPA retains oversight of such State programs.

State agencies operate under their own statutory authorities to establish and enforce environmental, health, and safety laws. The MDNR administers environmental regulatory programs that affect NNSA facilities and operations and is responsible for the protection and improvement of Missouri land, air, water, and recreation resources. Most State environmental regulations are in Title 10 of the *Missouri Code of State Regulations*. In addition, the City of Kansas City administers the Industrial Wastewater Pretreatment permitting program.

The CAA, CWA, and the RCRA have the greatest effect on the maintenance of related permits. Other regulations that affect the KCNSC facilities are those adopted under the *Toxic Substances Control Act of 1976* (TSCA) and the USDOT (49CFR 171-180). In addition, CERCLA and EPCRA impose requirements on hazardous materials.

5.2 Federal, State, and Local Environmental Statutes and Regulations

Table 5-1 lists major Federal statutes, regulations, and Executive Orders applicable to the proposed action. Table 5-2 lists major State and local statutes, regulations, and orders also applicable to the proposed action. The NNSA currently complies with these and other regulations applicable to operations at the Botts Campus and Building 23 and would maintain compliance for operations extended to KCNExT.

Table 5-1: Major Federal Environmental Laws

Environmental Law and Regulation	Requirements
<i>Clean Air Act</i>	Enacted in 1970, the <i>Clean Air Act</i> provides air quality standards for criteria pollutants, control technology standards for hazardous air pollutants and new sources, a construction permit program, regulations on O ₃ -depleting substances, Section 112(r) emergency release regulations, and operating permit requirements. Missouri has an EPA-approved program administered by MDNR.
<i>Clean Water Act</i>	The 1972 amendments establish the National Pollutant Discharge Elimination System (NPDES) to control pollutants discharged to Waters of the United States from a point source. EPA establishes technology-based effluent limitations and requires permits for discharges. Missouri has an approved program administered by MDNR. The Act contains requirements for oil spill control and prevention. The City of Kansas City administers the Industrial Wastewater Pretreatment permitting program.
<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>	Enacted in 1980, CERCLA establishes requirements for hazardous materials that may be subject to certain reporting requirements.
<i>Superfund Amendments and Reauthorization Act</i>	Enacted in 1986, this Act increased State involvement in the CERCLA program and increased program focus on human health problems posed by hazardous waste sites. The 1986 Act created the Emergency Planning and Community Right-to-Know program and requires reporting of hazardous chemical usage and release.
<i>Toxic Substances and Control Act</i>	Enacted in 1976, this Act establishes procedures for reporting the use and manufacture of specific new and existing chemicals. It establishes certain prohibitions and regulates the manufacture, processing, distribution, use, disposal, storage, and marking and labeling of certain hazardous materials.
<i>Resource Conservation and Recovery Act</i>	Enacted in 1976, RCRA regulates the generation, storage, handling, treatment, and disposal of hazardous wastes.
<i>Community Environmental Response Facilitation Act of 1992</i>	This Act amends CERCLA to establish a process for the identification, before termination, of Federal activities on property that does not contain contamination. It requires prompt identification of parcels that would not require remediation to facilitate the transfer of such property for economic redevelopment.
<i>Federal Facilities Compliance Act (Public Law 102-386)</i>	This Act waives sovereign immunity for Federal facilities under RCRA, including the KCNSC, and requires development of plans and agreements with States for the management of specific waste streams.
<i>Pollution Prevention Act of 1990</i>	This Act establishes the Federal Government's preference for source reduction followed by recycling rather than treatment or disposal of waste or pollutants.
<i>National Environmental Policy Act of 1969</i>	Enacted in 1970, NEPA establishes a national policy that requires consideration of environmental impacts in Federal decision making. A Federal agency considering an action that could impact the human environment must prepare an EA. If such assessment determines that impacts could be significant, the agency must prepare a more detailed analysis in the form of an environmental impact statement.
<i>Occupational Safety and Health Act of 1970</i>	DOE, through 10 CFR Part 851, exercises its jurisdiction over worker safety and health programs at KCNSC by substantially adopting <i>Occupational Safety and Health Act of 1970</i> establishes standards to enhance safe, healthy working conditions in places of employment throughout the United States. While DOE and EPA each have a mandate to reduce exposure to toxic substances, the Administration's jurisdiction is limited to safety and health conditions in the workplace environment. In general, under the Act, each employer must furnish all employees a place of employment that is free of recognized hazards that are likely to cause death or serious physical harm. Employees have a duty to comply with the occupational safety and health standards and all related rules, regulations, and orders.

Table 5-1 continued: Major Federal Environmental Laws

Environmental Law and Regulation	Requirements
<i>Federal Pipeline Safety Regulations (various)</i>	Created in 2004, the Pipeline and Hazardous Materials Safety Administration (PHMSA), an agency of USDOT, carries out a national safety program, including security matters, to protect against the risks to life and property inherent in the transportation of hazardous materials in commerce by all transportation modes.

Table 5-2: Major State and Local Environmental Laws, Regulations, and other Potentially Applicable Requirements Environmental Law and Regulation

Environmental Law and Regulation	Requirements
Missouri Revised Statutes, Chapter 653, Air Conservation – Title 10 Code of State Regulations (CSR) Division 10, Chapters 1–6	Establishes the State program implementing the <i>Clean Air Act</i> . Requires permits to construct, modify, or operate an air contaminant source, and adopts the primary National Emission Standards for Hazardous Air Pollutants for State enforcement.
Missouri Revised Statutes, Chapters 640 and 644, Clean Water Law – Title 10 CSR Division 20, Chapters 1–15	Establishes the State Program implementing the <i>Clean Water Act</i> . Requires permits for discharges to State waters, establishes water quality standards, and regulates storage tanks.
Missouri Revised Statutes, Chapter 260 Environmental Control, Chapter 260.353-430 Missouri Hazardous Waste Management Law, Chapter 260.200-260.345 Missouri Solid Waste Management Law – Title 10 CSR Division 25, Chapters 1–19; 10 CSR Division 24 Chapters 1–5 and 10 CSR Division 10 CSR Division 100 Chapters 1–5	Establishes the Missouri program that incorporates the requirements of CERCLA, RCRA, <i>Federal Facilities Compliance Act</i> , and <i>Toxic Substances and Control Act</i> . Regulates aspects of storage tanks. Requires permits for hazardous waste storage and disposal facilities and remediation of contaminated sites.
Missouri Revised Statutes, Sections 260.1000 to 260.1039 (<i>Missouri Uniform Environmental Covenants Act</i>)	Creates a standard for the development and application of environmental covenants that increases their reliability when used as part of the cleanup of contaminated sites.
Code of Ordinances of Kansas City, Missouri; Chapter 88	Contains regulations for land development and use.
Code of Ordinances of Kansas City, Missouri; Section 60-130 to 60-147	Outlines requirements for industrial/sanitary wastewater permit.

5.3 Consultations

As workload and staffing levels demand, modifications to existing buildings, expansion of parking areas, and introduction of an IWPF (at Building 23 and KCNEXT) would occur. The NNSA will continue to consult, as appropriate, with Federal, State, and local agencies to support those changes as they occur.

6.0 REFERENCES

Burns & McDonnell, 2023. *Cultural Resources Background Review for KCNExT*. June 23, 2023.

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