



2020 Annual Site Environmental Summary

*U.S. Department of Energy
National Nuclear Security Administration
Kansas City National Security Campus*

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U.S. Department of Energy National Nuclear Security Administration
Annual Site Environmental Summary Report CY2020
Kansas City - National Security Campus

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Acronyms & Abbreviations

AEI	Adaptive Ecosystems, Inc.
AQD	Air Quality Division (of the Albuquerque Environmental Health Department)
CAA	Clean Air Act
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response Compensation And Liability Act
CERCLIS	Comprehensive Environmental Response Compensation And Liability Information System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CPZ	CenterPoint Zimmer
CSR	Code of State Regulations
CSS	Combined Sanitary Sewer
CTS	Cyanide Treatment System
CWA	Clean Water Act
DHSEM	Department of Homeland Security & Emergency Management
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
EIQ	Emissions Inventory Questionnaire
EMS	Environmental Management System
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-know Act
ESA	Environmental Site Assessment
HS&E	Health, Safety, and Environment
F	Fahrenheit
FFCA	Federal Facility Compliance Act
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FM&T	Honeywell Federal Manufacturing and Technologies
FR	Federal Register
FY	Fiscal Year (October 1 through September 30)
GHG	Green House Gas
gpm	gallons per minute
GSA	General Services Administration
HAP	Hazardous Air Pollutant
HS&E	Health Safety & Environment
HVAC	Heating, Ventilation, and Air Conditioning
ISO	International Organization for Standardization
IWPF	Industrial Wastewater Pretreatment Facility

KAFB	Kirtland Air Force Base
LEED	Leadership in Energy and Environmental Design
l.f.	linear feet
JD	Jurisdictional Determination
LLC	Limited Liability Corporation
KAFB	Kirtland Air Force Base
KC	Kansas City
KCFO	Kansas City Field Office
KCMO	Kansas City, Missouri
KCNSC	Kansas City National Security Campus
KCNSC NM	Kansas City National Security Campus New Mexico Operations
KCP	Kansas City Plant
LTS	Long Term Stewardship
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
NEPA	National Environmental Policy Act
NESHAP	National Emission Standard For Hazardous Air Pollutant
NM	New Mexico
NMED	New Mexico Environment Department
NNSA	National Nuclear Security Administration
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
ODS	Ozone Depleting Substance
OSHA	Occupational Safety And Health Administration
%	percent
P2	Pollution Prevention
PCBs	Polychlorinated biphenyls
PID	Photoionization detector
PM	Particulate Matter
POTW	Publicly Owned Treatment Works
PPA	Pollution Prevention Act
ppb	parts per billion
QA	Quality Assurance
RCRA	Resource Conservation And Recovery Act
RGAFB	Richards Gebaur Air Force Base
RHA	Rivers and Harbors Act of 1899
SARA	Superfund Amendments and Reauthorization Act
SHPO	Missouri State Historic Preservation Office
SMAL	Screening Model Action Level
SO _x	Sulfur Oxides
SPCC	Spill Prevention Control and Countermeasures

SWPPP	Storm Water Pollution Prevention Plan
tpy	Tons Per Year
TSCA	Toxic Substances Control Act
µg/l	Micrograms Per Liter
USACE	U.S. Army Corps of Engineers
USGS	United States Geologic Survey
VOC	Volatile Organic Compound

1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to present a summary of the Department of Energy's (DOE) National Nuclear Security Administration's (NNSA) Kansas City - National Security Campus (KCNSC) environmental programs, activities, and compliance status for calendar year (CY) 2020. The annual Performance Evaluation Plan provides the basis for Kansas City Field Office (KCFO) customer expectations regarding Health, Safety and Environment (HS&E) performance including conformance to the HS&E Management System Description and Worker Safety and Health Program approved annually by KCFO. As described in that management system description document, this Annual Site Environmental Summary (ASES) is provided in lieu of an Annual Site Environmental Report.

The ASES is prepared annually as information for the general public and other stakeholders to:

- summarize the results of environmental compliance and monitoring programs;
- characterize site environmental management performance;
- provide compliance status with applicable environmental standards and requirements;
- highlight significant achievements, programs, and efforts which go beyond regulatory requirements; and
- provide an overview of quality assurance.

1.2 Facility Overview

The U.S. Department of Energy (DOE) National Nuclear Security Administration's (NNSA) Kansas City - National Security Campus (KCNSC) was constructed beginning September 2010 and completed December 2012. Occupancy of the new facility was initiated November 2012 and completed June 2014.

The KCNSC is owned by a development company (Center Point Zimmer (CPZ)). The General Services Administration (GSA) leases the facility on behalf of the NNSA. The facility was designed and built to NNSA specifications in support of the manufacture of non-nuclear components for the nuclear weapon stockpile. The building and associated infrastructure (e.g., HVAC systems, cooling tower operations, boilers) is owned by CPZ and the manufacturing equipment and associated support equipment is owned by the NNSA. The NNSA contracts manufacturing operations under a Management and Operating (M&O) contract. Currently, the NNSA's M&O contractor for the KCNSC is Honeywell Federal Manufacturing & Technologies (FM&T), LLC.

The KCNSC was constructed to achieve a Leadership in Energy and Environmental Design (LEED), Version 2.2, Gold certification, as defined by the US Green Building Council. In addition, the facility meets all executive orders on energy conservation.

The KCNSC covers approximately 1.4 million rentable square feet with over 3,300 surface parking spaces. During construction, soils and topography were disturbed by construction activity. These impacts were mitigated by conforming to local building codes and land disturbance permits which included erosion and sediment control provisions. Approximately 45 acres of the facility are occupied by buildings and parking lots. In order to accommodate an increase in the number of personnel, additional parking lots were added to the KCNSC and off-site office and production space have been leased.

In 2020, an additional 20,000 square feet of office space was leased to accommodate 100 seats and a training facility.

In 2020, 17,000 square feet of manufacturing space was added in New Mexico.

1.3 Environmental Regulatory Overview

Detailed discussions related to each environmental program can be found within the referenced resource documents and reports identified within this summary.

Environmental and effluent monitoring are on-going activities at the KCNSC, which ensure the safety of employees, the public, and the environment; and demonstrate compliance with permits and regulatory requirements. A list of environmental regulatory requirements applicable to the KCNSC is contained in Table 1.1. A summary of federal, state, or local agency issued environmental permits for the KCNSC is provided in Table 1.2.

Environmental monitoring, including analysis and data management, is the responsibility of the FM&T HS&E organization. Administration of the KCNSC environmental monitoring program is the responsibility of program managers within the HS&E organization. The KCFO provides programmatic oversight. Local, state, and federal authorities, including the city of Kansas City, Missouri; the Missouri Department of Natural Resources (MDNR), and the EPA, enforce applicable permit and regulatory requirements and provide guidance and direction to the KCNSC regarding monitoring standards and reportable actions. Environmental monitoring programs for the KCNSC are identified in Table 1.3.

Table 1.1 Environmental Regulations and Requirements

Environmental Regulation	Requirements Summary
Clean Air Act (CAA)	The CAA provides air quality standards for criteria pollutants, control technology standards for hazardous air pollutants and new sources, a construction permit program, regulations on ozone depleting substances, greenhouse gas emission reporting, 112 emergency release regulations, and operating permit requirements. Under the CAA, states may administer and enforce CAA provisions by obtaining Environmental Protection Agency (EPA) approval of a State Implementation Plan.
Clean Water Act (CWA)	The CWA established the National Pollutant Discharge Elimination System (NPDES), which is designed to control pollutants discharged to U.S. surface waters. The EPA sets effluent limitations, and permits are required for discharges from point sources.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) /Superfund Amendments and Reauthorization Act (SARA)	CERCLA contains provisions for liability, compensation, and cleanup for past hazardous waste activities and emergency response for hazardous substances released to the environment. SARA Title III Emergency Planning and Community Right to Know (EPCRA) requires reports on Hazardous Chemical usage and release reporting.
Toxic Substances Control Act (TSCA)	TSCA contains requirements for the reporting, use and manufacture of new and existing chemicals. TSCA also establishes prohibitions of, and requirements for the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of Polychlorinated Biphenyls (PCBs) and PCB items.
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)	FIFRA restricts the application of pesticides and herbicides through a state-administered certification program.
Resource Conservation and Recovery Act (RCRA)	RCRA governs the generation, storage, handling, treatment, and disposal of hazardous waste.
Federal Facilities Compliance Act (FFCA)	The FFCA mandates compliance with RCRA by Federally owned facilities.
Pollution Prevention Act (PPA)	The PPA of 1990 establishes the federal government’s priority for source reduction followed by recycling rather than treatment or disposal of waste or pollutants.
National Environmental Policy Act (NEPA)	NEPA is a Federal policy, which requires the consideration of environmental impact prior to decision making.

Table 1.2 Permits

Permit	Expiration Date	Permit #	Regulating Agency
CAA			
Special Case De Minimis Permit (NNSA)	March 2, 2028	032018-001B	MDNR
Special Case De minimis Permit (CPZ)	February 22, 2028	022018-007	MDNR
CWA			
Stormwater Permit (Botts) No Exposure Certification	July 26, 2025	MO-NX00441	MDNR
Stormwater Permit (KCNSC East) No Exposure Certification	December 4, 2024	MO-NX00745	MDNR
Wastewater Discharge Permit	January 12, 2023	n/a	KCMO

Table 1.3 Environmental Monitoring Programs

Monitoring Program	Purpose
Stormwater Outfalls	In lieu of a stormwater permit, the KCNSC operates under two (2) No Exposure Certifications. Facilities that qualify for a No Exposure Certification are not required to seek coverage under a permit. In order to ensure ongoing routine compliance with the No Exposure Certification, the KCNSC has developed and implemented a Storm Water Pollution Prevention Plan (SWPPP).
Industrial Wastewater	Provides data relating to compliance with metal finishing standards and discharge of industrial wastewater to the combined sanitary sewer system. Compliance monitoring of the effluent from the Industrial Wastewater Pretreatment Facility (IWPF) is performed.
Combined Sanitary	To ensure that effluent, which includes discharge from IWPF, meets Kansas City ordinance for sanitary and pretreatment standards for industrial wastes and to comply with the sanitary discharge permit.
Air Emissions	Emissions are calculated under a process approved by MDNR. Emissions are based on emission factors associated with manufacturing processes and material disbursements to the various manufacturing operations.

This report summarizes the significant information resulting from the environmental compliance and effluent monitoring programs at the KCNSC during 2020. In addition to complying with all applicable environmental regulations, the KCNSC strives to improve performance by reducing the environmental impact of operations through several voluntary programs. Honeywell FM&T/KC and NM are both certified under ISO 14001.

ISO 14001 is an internationally recognized standard which serves as the foundation of an Environmental Management System (EMS).

2.0 SITE DESCRIPTION

2.1 Site Location / Description

The KCNSC is located approximately 16 miles south of the center of Kansas City, Missouri within the incorporated city limits (see Figure 2-1). It consists of approximately 185 acres of land that was previously zoned for agriculture and is located on the northwest corner of the intersection of Missouri Highway 150 and Botts Road. The site is bordered on the west by an active railroad line owned by the Kansas City Southern Railroad Company and on the north by property owned by CenterPoint Development Company (Figure 2-2). Prior to development of the site as the KCNSC, the property was utilized for agricultural purposes.

2.2 Climate

The climate in the region is characterized as humid and continental, with warm summers, moderately cold winters, and moderate annual precipitation. From 1981 to 2010, the annual mean temperature in Kansas City was 54.5° F. The coldest month is January, with a mean temperature of 28.8° F and the warmest month is July, with a mean temperature of 78.3° F. The coldest recorded temperature was -19° F in December 1989 and the highest recorded temperature was 110° F in July 1984. The annual mean precipitation is 38.83 inches and the annual mean snowfall is 18.6 inches (NCCI 2010).

Figure 2.1 Kansas City Area Map – Location of the KCNSC

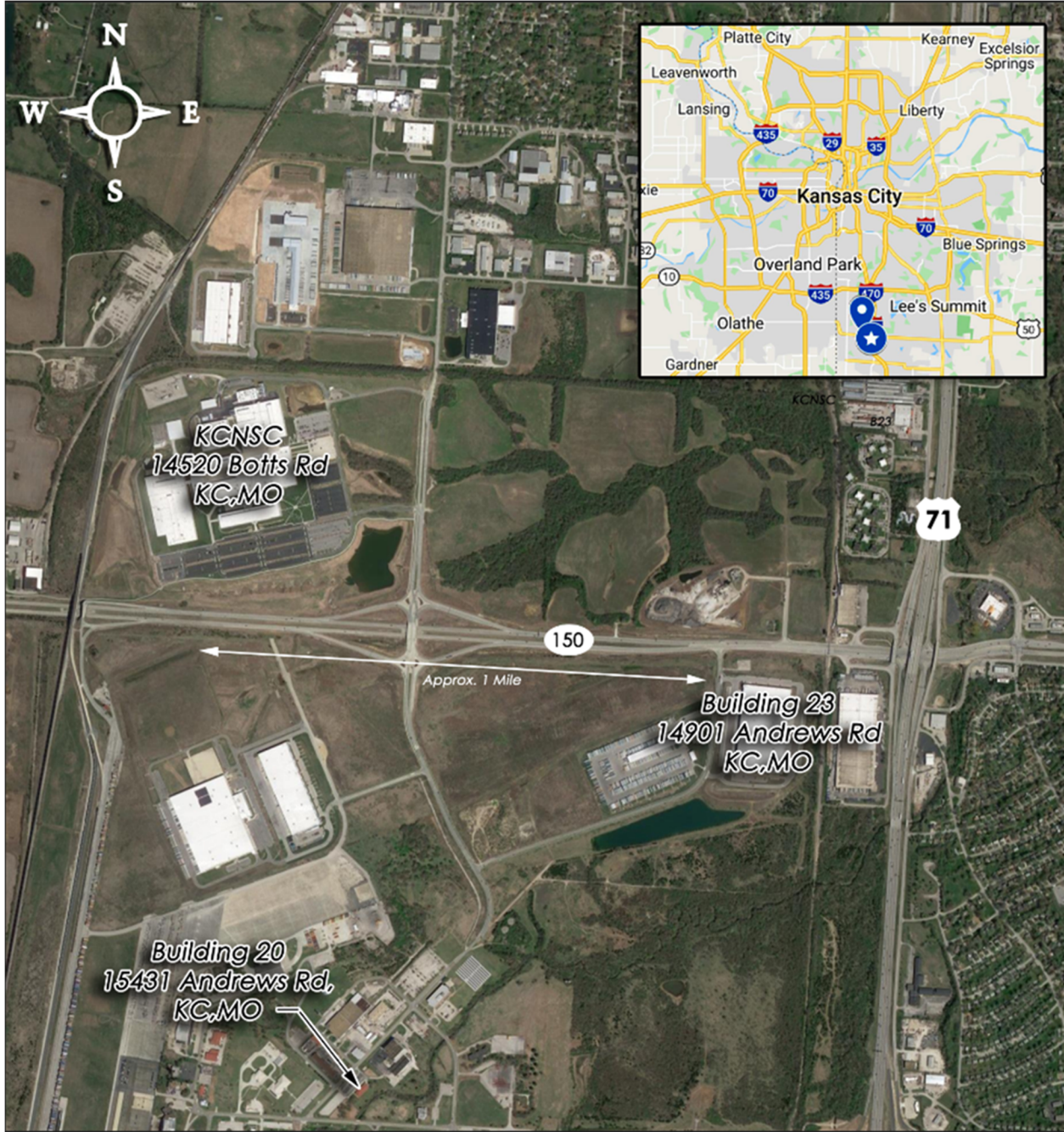
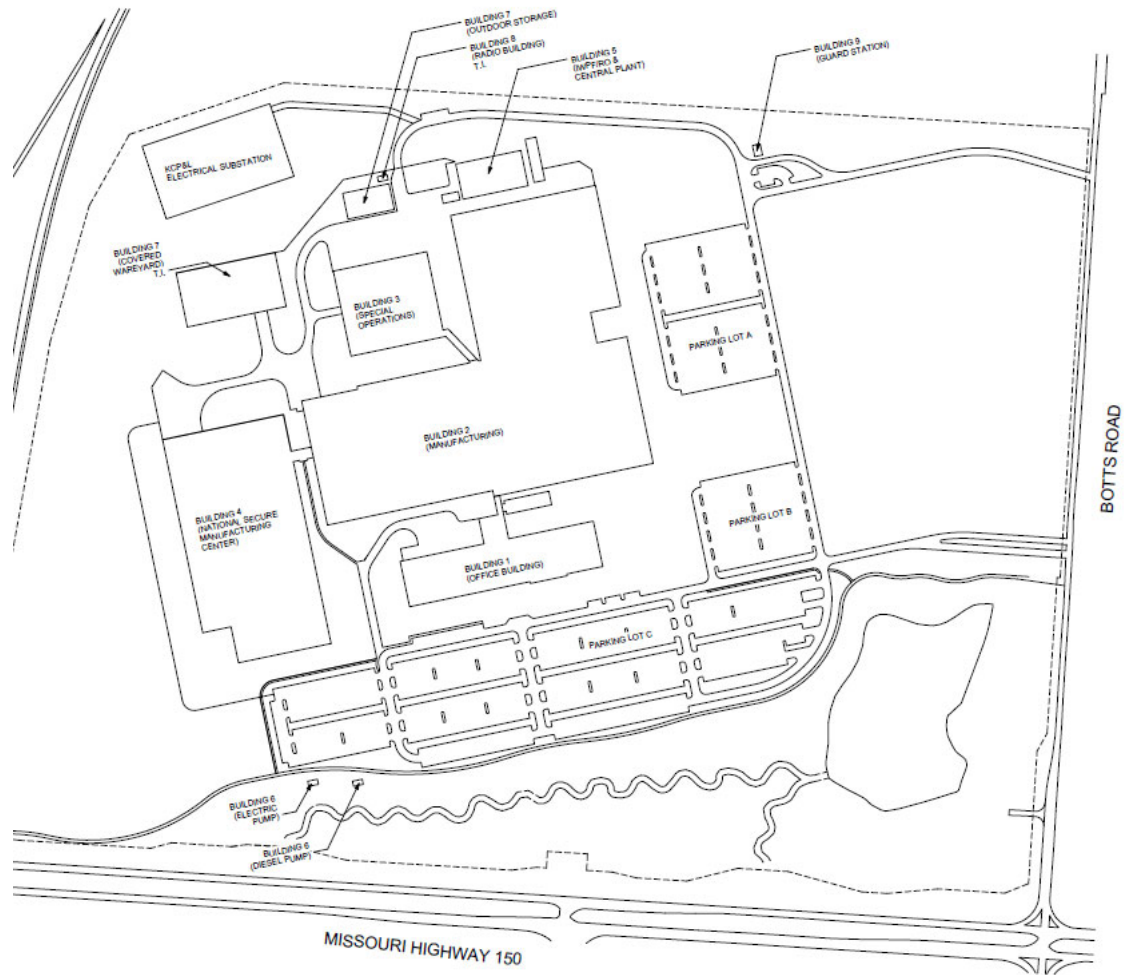


Figure 2.1 KCNSC Site Map



2.3 Soils

The soil on the western portion of the KCNSC is Sharpsburg silt loam, with 2% to 5% slopes. This loam is characterized by deep, gently sloping, moderately well drained soil on convex ridge tops. Permeability is moderately slow and surface runoff is medium. Natural fertility and available water capacity are high. Organic matter content is high and the shrink-swell potential is moderate.

The soil on the southwestern portion of the site is also Sharpsburg silt loam with 5% to 9% slopes. This moderately sloping, moderately well drained soil occurs on convex side slopes and narrow, convex ridge tops. Permeability is moderately slow and surface runoff from cultivated areas is medium. Natural fertility is medium and available water capacity is high. The organic matter content and the shrink-swell potential are moderate.

The Greenton silty clay loam, with 5% to 9% slopes, is located on the eastern portion of the property. This deep, moderately sloping, somewhat poorly drained soil occurs on upland side slopes. Permeability is low and surface runoff from cultivated areas is medium. The available water capacity and natural fertility are high. Organic matter content is moderate. The shrink-swell potential is high in the subsurface.

2.4 Groundwater Hydrology

The Western Interior Plains aquifer system underlies most of Kansas, the eastern and southern parts of Nebraska, and a small area in west-central Missouri. The aquifer system consists of lower units in rocks of Ordovician and Cambrian age, a shale confining unit of Mississippian and Devonian age, and an upper aquifer unit comprised of Mississippian limestone. The thickness of the aquifer (including the confining unit) ranges from less than 500 feet to more than 3,000 feet. The aquifer system is thin or absent on structural uplifts and is thickest in downwarps.

Regional groundwater in the aquifer system flows towards the east-southeast. Much of the water discharges from the aquifer system in the transition zone between the Western Interior Plains and the Ozark Plateaus aquifer systems. The aquifer system is considered to have a low permeability.

Dissolved-solids concentrations of water in the Western Interior Plains aquifer system are typically greater than 1,000 milligrams per liter. In thick, deeply buried parts of the aquifer system, dissolved-solids concentrations of more than 200,000 milligrams per liter have been reported. The elevated concentrations are due in part to the slow movement of groundwater in the aquifer system.

The Western Interior Plains aquifer system is not generally developed for potable use because it is deeply buried and contains highly mineralized water. Locally, deeply buried parts of the aquifer system contain oil and gas; some brine (that is a by-product of hydrocarbon production) is injected into disposal wells, which are completed in permeable parts of the system (USGS 1997).

Previous site assessment indicated the sporadic presence of shallow groundwater at depths ranging from approximately 5 to 11 feet below ground surface at the site. Groundwater is not utilized at the facility. Background groundwater samples collected onsite did not indicate the presence of hydrocarbon, pesticide, or herbicide contamination.

2.5 Surface Water Hydrology

The KCNSC is located within the Little Blue River Watershed. Site runoff flows into unnamed tributaries that flow generally to the east into the Little Blue River. The Little Blue River then drains into the Missouri River. The KCNSC does not lie within the 100-or 500-year floodplains.

2.6 Flora and Fauna

There are no records of species or habitats of federal or state conservation concern within one mile of the site (MDC 2007).

2.7 Historical or Cultural Resources

Prior to initiating construction activities, the Missouri State Historic Preservation Office (SHPO) reviewed the Cultural Resource Assessment and determined that a Phase One Archeological Survey was not required and historic properties would not be affected at the KCNSC. No items of archeological significance were found during construction excavation.

2.8 Socioeconomic Environment

Environmental Justice

Executive Order No. 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, directs federal agencies to identify disproportionately high and adverse human health or environmental effects of their actions on minority or low-income populations. Pursuant to this Order, the federal agencies conducted an evaluation of the effects of construction of the KCNSC on the socioeconomic environment and environmental justice. Based upon 2000 census data, 33,406 people live within a three mile radius of the KCNSC. Within a three mile radius 21.3% of the population identified itself as minority and 9.7% of people live below the poverty level. For comparison, 441,545 people lived in the City of Kansas City, with a minority population of 39%, and 14% of the population live below the poverty level (KCMO 2007a & 2007b). Based on the analysis of impacts for resource areas, no significant adverse impacts from construction and operation activities at the KCNSC were identified.

Population

Kansas City, Missouri, the largest of approximately 100 incorporated cities in the greater Kansas City area, is situated on the western border of Missouri at the confluence of the Missouri and Kansas Rivers. The population of Kansas City, Missouri (from the 2020 census), was 501,957. The Kansas City Metropolitan Statistical Area (#3760), which consists of ten counties in Missouri (Bates, Caldwell, Cass, Clay, Clinton, Jackson, Johnson, Lafayette, Platte, and Ray) and seven counties in Kansas (Atchison, Franklin, Johnson, Leavenworth, Linn, Miami, and Wyandotte) reflected a 2020 estimated population of 2,185,120. Kansas City, Missouri/KS, is the 38th largest metropolitan area in the nation.

2.9 Kansas City National Security Campus - New Mexico

KCNSC NM is an applied-science and engineering organization engaged in technical, operational, mechanical and logistical support through research, analysis, testing, and field operations that support NNSA's Secure Transportation and Emergency Response missions, as well as the national laboratories, other DOE contractors, the Department of Defense, and other Federal and non-Federal agencies.

KCNSC NM also provides a wide range of technical support activities in multi-disciplined fields. Activities include technical support in electronic, optical, and mechanical design and fabrication; drafting; videography; calibration; software development; experimental physics; information management; computer-based training; security system development and installation; and security force training. These activities routinely involve field operations within the United States and occasionally involve worldwide field operations. KCNSC NM often uses the significant engineering, analytical, and manufacturing capabilities of the KCNSC to provide support to their customers.

Specific Processes, Activities, and Capabilities:

KCNSC NM consists of facilities at the following sites in the City of Albuquerque, Bernalillo County, New Mexico: Alamo facility at 2445 Alamo Ave, SE; Craddock A, B, C facilities at 2540, 2460, 2450 Alamo Ave. SE, respectively; Old Western Command Facility on Kirtland Air Force Base comprised of the Mobile Electronic Maintenance Facility (B854) and the Depot (T-78) and the Air Park Facility at 2100 Air Park SE. KCNSC NM also conducts activities within other NNSA facilities such as KAFB; Los Alamos National Laboratories, and Sandia National Laboratories.

KCNSC NM administrative operations are located at a leased facility called the Alamo facility, 2445 Alamo Ave., which includes engineering functions; various electronic equipment testing, repair, and fabrication areas; and a small machine shop. The Craddock A, B, C facilities are comprised of three leased facilities used for trailer refurbishment, motor vehicle modification, spray painting operations, machining operations, and metal fabrication work. Related “work for others”, e.g., DOD Blast Valve reconditioning, also occurs in the Craddock facilities. The Air Park Facility is a leased facility used for classroom training and general office space. The Mobile Electronic Maintenance Facility and Depot Facility are used for electronics testing and repair and parts distribution.

All operations and processes conducted at KCNSC NM are of a type and nature routinely encountered by the public in general industry. Small quantities of chemicals typical of machining operations, electronics repair, and spray painting are used. DOT Hazard Class 1.3 and 1.4 explosives are stored at the Craddock A Facility. Air emissions are managed under a single Source Registration for the painting and chemical use operations primarily at the Craddock Facilities.

KCNSC NM typically is a Small Quantity Generator of hazardous waste for the calendar year and often meets the EPA definition of a Very Small Quantity Generator. There are no continuous industrial wastewater flows and the few small batch industrial wastewater discharges that occur typically meet the publicly-owned-treatment-works discharge limits directly or they are shipped offsite as regulated waste. Stormwater at the Craddock A, B, C facilities is managed under an Environmental Protection Agency “*No Exposure Certification for Exclusion from National Pollutant Discharge Elimination System Storm Water Permitting.*”

In summary, KCNSC NM operations have a negligible environmental “foot print.”

3.0 ENVIRONMENTAL PROGRAM SUMMARIES

3.1 Clean Air Act (CAA)

The Clean Air Act (CAA) provides for ambient air quality standards for criteria pollutants, control technology standards for hazardous air pollutants and new sources, construction permitting rules, stratospheric ozone protection regulations, 112(r) emergency release rules and Title V operating permit requirements. Under the CAA, states or local governments may administer and enforce CAA provisions by obtaining EPA approval of a State Implementation Plan. The MDNR has CAA enforcement authority and as such issues and enforces permits and associated terms and conditions.

The combined installation consists of production emission units owned by DOE NNSA, operated by Honeywell FM&T and support emission units constructed by the General Service Administration (GSA), transferred to CenterPoint Zimmer (CPZ). The combined installation is known as the Kansas City National Security Campus (KCNSC). The production and support activities have separate installation IDs, 095-2442 (DOE) and 095-2450 (CPZ), respectively. However, the installations are considered as one for permit applicability. NNSA manufactures non-nuclear components of nuclear weapons whereas CPZ provides HVAC, hot water, and emergency power to NNSA. Emissions of volatile organic compounds (VOCs) associated with cleaning and painting operations comprise the majority of air emissions associated with NNSA manufacturing operations.

The combined installation is a conditioned de minimis source and is not required to have an operating permit. The combined installation relocated from the Bannister Federal Complex in 2014. The following New Source Review permits have been issued to the combined installation.

Permit History NNSA, ID 095-2442

PERMIT NUMBER	DESCRIPTION
1227	New Installation/relocation, issued by
1227a	Amendment to Update Recordkeeping
1227B	Amendment to true-up as built
032014-010	Surface Coating
032014-010A	Replace PM _{2.5} with PM ₁₀ limit
042017-004	Surface Coating
032018-001	Special Case De Minimis
032018-001A	Amendment to add gasoline/diesel combustion
032018-001B	Amendment to adjust NO _x limit portions

The DOE and CPZ permits have always contained emission limits for PM₁₀ or PM_{2.5}, VOC, NO_x, and HAPs. The limits are portioned such that the combined KCNSC installation is de minimis (see Table 3.1). NNSA and CPZ most commonly install emission units with moderate potential emissions and low actual emissions. Historically, permits or amendments

were required prior to beginning construction in order to keep the evolving installation de minimis. These permits and amendments were considered resource and time consuming, thus DOE requested the issuance of a special case de minimis permit to reduce the burden. A special case de minimis permit is described in Missouri regulations found at 10 CSR 10-6.060 Construction Permits Required (5)(C),

"In order to eliminate the necessity for a large number of de minimis permit applications from a single installation, a special case de minimis permit may be developed for those batch-type production processes which frequently change products and component source operations. Operating in violation of the conditions of a special case de minimis permit shall be a violation of this rule."

The regulation does not detail what a special case de minimis permit should contain. Therefore, KCFO, in coordination with DNR, designed the Permit to include features from typical de minimis permits and Plantwide Applicability Limit (PAL) permits. This permit (032018-001) issued March 2, 2018 contains portioned de minimis limits for PM₁₀, NO_x, VOC, and HAPs. HAPs are also limited to respective Screening Model Action Levels (SMALs). The permit limits do not expire, but do require reevaluation at the end of the permit effective period. This permit preapproves the addition of many types of future emission units without the application for and issuance of a construction permit specific to that project. The de minimis emission limits can remain in effect for the changing installation, something that a typical de minimis permit does not accomplish. This permit requires annual reporting. A similarly formatted special case de minimis permit was prepared for CPZ.

The following table summarizes the combined installation permit limits.

Table 3.1 Combined Installation Permit Limits
(Tons per year)

Pollutant	De-minimis Level	NNSA ACP 032018-001 Permit Limit	CenterPoint 022018-007 Permit limit
PM ₁₀	15.0	<5.0	<10.0
NO _x	40.0	<10.0	<30.0
VOC	40.0	<39.0	<1.0
Combined HAPS	25.0	25.0 ¹	25.0 ¹
Individual HAP	<10.0/SMAL	1,2	1,2

¹GSA and NNSA shall share the installation-wide individual HAP / SMAL (screening model action level) limit and combined HAP 25.0 tpy limit

²Emission of individual HAPs are limited to the respective SMAL as established by 10 CSR 10-6.060(12(J)).

The following CAA regulations are applicable to KCNSC manufacturing operations:

City of Kansas City Air Quality Ordinances (KCAQO)
Section 8-8(c) Control of emissions of VOC from industrial surface coating.
Section 8-8(a) Restriction of emission of VOC from solvent metal cleaning
MDNR Division 10 Air Conservation Commission Regulations
10 CSR 10-2.205 Control of Emissions From Aerospace Manufacture and Rework Facilities
10 CSR 10-2.210 Control of Emissions from Solvent Metal Cleaning
10 CSR 10-2.215 Control of Emissions from Solvent Cleanup Operations
10 CSR 10-6.045 Open Burning Requirements
10 CSR 10-6.050 Start -up, Shutdown and Malfunction Conditions
10 CSR 10-6.060 Construction Permits Required
10 CSR 10-6.065 Operating Permits
10 CSR 10-6.110 Submission of Data, Emission Fees and Process Information
10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential
10 CSR 10-6.165 Restriction of Emissions of Odors
10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin
10 CSR 10-6.220 Restriction of Emissions of Visible Air Contaminants
Federal Rules
<i>40 CFR 60 Subpart VVV—Standards of Performance for Polymeric Coating of Supporting Substrates Facilities</i>
<i>40 CFR 61 Subpart H-National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities</i>
<i>40 CFR 63 Subpart OOOOOO National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources</i>
<i>40 CFR 63 Subpart WWWWWW National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations</i>
40 CFR 82 Protection of Stratospheric Ozone

Table 3.2 identifies the reports that were completed in calendar year 2020.

Table 3.2 Clean Air Act Reports

Report	Submittal due date(s)	Submittal Agency	Next Submittal	Frequency
NESHAP Compliance Report (40 CFR 60, OOOOOO, WWWWWW)	January 2020	Internal files	January 2021	Annual
NESHAP Compliance Report (40 CFR 60 VVV),	January 31/July 31	Internal files	January 31, 2021	Semi-Annual
NESHAP Compliance Report CFR 61 H	June 30, 2020	EPA Region VII. EPA Headquarters	June 30, 2021	Annual
Emission Inventory Questionnaire	May 1, 2020	KCMO Air Quality Section MDNR Air Pollution Control Program	May 1, 2021	Annual

Ground level ozone levels can be increased due to emissions of NO_x, CO, and VOCs. These chemicals are considered “ozone precursors”. The Kansas City area (Clay, Jackson and Platte Counties in Missouri and Johnson and Wyandotte Counties in Kansas) was designated nonattainment with respect to the 1-hour ozone standard in 1978. Ground level ozone is problematic because of its health effects and as a significant factor in the formation of smog. The MDNR established more stringent VOC emission regulations in 1987 for solvent metal cleaning and surface coating operations. This was part of the state implementation plan designed to reduce ozone levels in the Kansas City area. In 1991 the area was able to demonstrate that it had attained the standard and EPA redesignated the area to attainment in 1992. This plan demonstrated how the area would maintain the ozone standard for the next ten years, i.e., through 2002. During 2001, MDNR implemented additional rules to control VOC emissions from Aerospace Manufacturing and other miscellaneous solvent usage. A Kansas City Ozone Maintenance Plan is currently implemented by MDNR to ensure ongoing compliance with the 1-hour ozone standard. The KCNSC reviews incoming equipment to ensure conformance with design features required by MDNR regulations and record keeping requirements.

KCNSC NM

Air pollution emissions are mainly the result of small quantity chemical use (SQC) and Large and Small Paint Booth operations. Emissions are primarily Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs). KCNSC NM CY2020 VOC and HAP emissions were estimated to be 0.98 tons-per-year (tpy) and 0.27 tons-per-year, respectively.

Table 3.3 NM Source Registrations (SRs)

Source Registration	Expiration Date	SR #	Regulating Agency
Craddock Facility: Truck & Trailer Paint and Body/Van Conversion Plant	None	2068-RV1	Albuquerque Environmental Health Dept. Air Quality Program

No regulatory inspections regarding air quality occurred in CY20. KCNSC NM pays an annual emissions fee for this Source Registration to the City of Albuquerque.

3.2 Clean Water Act (CWA)

3.2.1 Stormwater

Surface water was not used during facility construction and is not used during routine site operations. Site construction activities were regulated under Missouri State Operating Permit, Land Disturbance General Permit # MO-R10A000. This permit required development of a Storm Water Pollution Prevention Plan (SWPPP) to control runoff and erosion associated with site construction activities.

The KCNSC is required to comply with Section 438 of the Energy Independence and Security Act of 2007, Pub. L. No. 110-140, which was enacted on December 19, 2007. Section 438 of the Act requires that the developer of the proposed facility use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. The KCNSC includes stormwater mitigation and control features such as detention basins, extended detention basins, and constructed wetlands that satisfy the above criteria.

Stormwater flows generally run from west to east across the KCNSC. There are two stormwater discharge points from the KCNSC. Stormwater discharges from the KCNSC are regulated in the form of a stormwater No Exposure Certification. State regulations at 10 CSR 20-6.200 (1)(B)16 exclude industrial facilities that meet the requirements of 10 CSR 20-6.200 (1)(B)16.A.(I) through B.(III) from requirements that would otherwise require the facility to obtain a NPDES permit. The KCNSC has been designed and built to comply with the above MDNR requirements which parallel associated EPA No Exposure Certification requirements. All manufacturing related activities are housed in buildings. Support activities located in yard (outdoor) areas of the facility pose the greatest potential for exposure of materials that could become entrained in stormwater discharges. Material storage areas are provided with appropriate control features to prevent inadvertent discharges and spills to the storm sewer system. The KCNSC’s Storm Water Pollution Prevention Plan (SWPPP) provides additional information on material storage and spill prevention measures that have been incorporated into the facility (DOE 2020).

In order to ensure activities at the KCNSC are in continuous compliance with the above requirements a SWPPP has been developed to ensure activities at the KCNSC do not impact

storm water discharges associated with KCNSC operations. The objectives of the SWPPP Plan are:

- Document requirements that will ensure ongoing compliance with a No Exposure operating envelope.
- Facilitate planning and organization in support of the SWPPP.
- Identify routine actions to prevent the release of pollutants to receiving streams.
- Periodically evaluate and facilitate revision of operating practices to prevent the release of pollutants to receiving streams.

Site operations that pose the greatest potential for spills or leaks are addressed within the SWPPP. The greatest potential for possibly impacting the storm sewer is associated with movement of materials that are not properly protected or an accident that involves damage to a container.

In addition, Spill Prevention Control and Countermeasures (SPCC) Plans have been developed to satisfy requirements associated with 40 CFR 112 by both the NNSA (DOE 2016a) and CPZ (Terracon 2012). The NNSA Spill Control Plan (DOE 2016a) satisfies SPCC requirements and also addresses other related regulatory requirements to develop spill response plans. These plans provide a comprehensive description of prevention systems and response actions that can be taken to protect personnel and minimize impact to the environment.

Locations within the facility where quantities of oil greater than or equal to 55 gallons are used or stored are addressed in each respective plan. The NNSA plan addresses, in large part, the use of hydraulic oil in reservoirs and oil based machine coolant reservoirs in manufacturing equipment and limited storage of drums containing 55 gallons of oil or greater. All equipment is located inside the building. Manufacturing areas of the building have been constructed without floor drains. Drums containing 55 gallons of oil are stored at the Ware Yard (secondary containment provided) or transported inside the building and located near the point of use.

CPZ operates and maintains certain functions at the facility which are also regulated under 40 CFR 112. Due to the separate nature of CPZ and NNSA operations, separate SPCC Plans have been developed that address the requirements of 40 CFR 112 for the KCNSC. A separate standalone SPCC Plan has been developed and implemented by CPZ that addresses equipment under their control (Terracon 2012). CPZ's SPCC Plan addresses the two 8,000 gallon fuel oil storage tanks located at the Central Utility Plant (CUP), a fuel cell associated with the emergency generator, a fuel cell associated with the backup diesel fire pump, elevator hydraulic systems, oil filled electrical transformers and other locations / equipment where oil is stored in quantities greater than or equal to 55 gallons.

In the event of a significant spill associated with CPZ operations, incident command is facilitated through the KCNSC's Emergency Plan (DOE 2020). FM&T's on-site spill response team will serve as the first responders for any spill event at the KCNSC. If the spill is associated with a CPZ activity, once the spill is stabilized, CPZ's spill response contractor will assume responsibility for spill response, reporting and cleanup activities.

The NNSA Spill Control Plan (DOE 2016a) has been prepared as a comprehensive spill prevention and response plan that addresses regulatory requirements related to spill prevention and response related to NNSA operations at the KCNSC. The Spill Control Plan addresses the following regulations / permits:

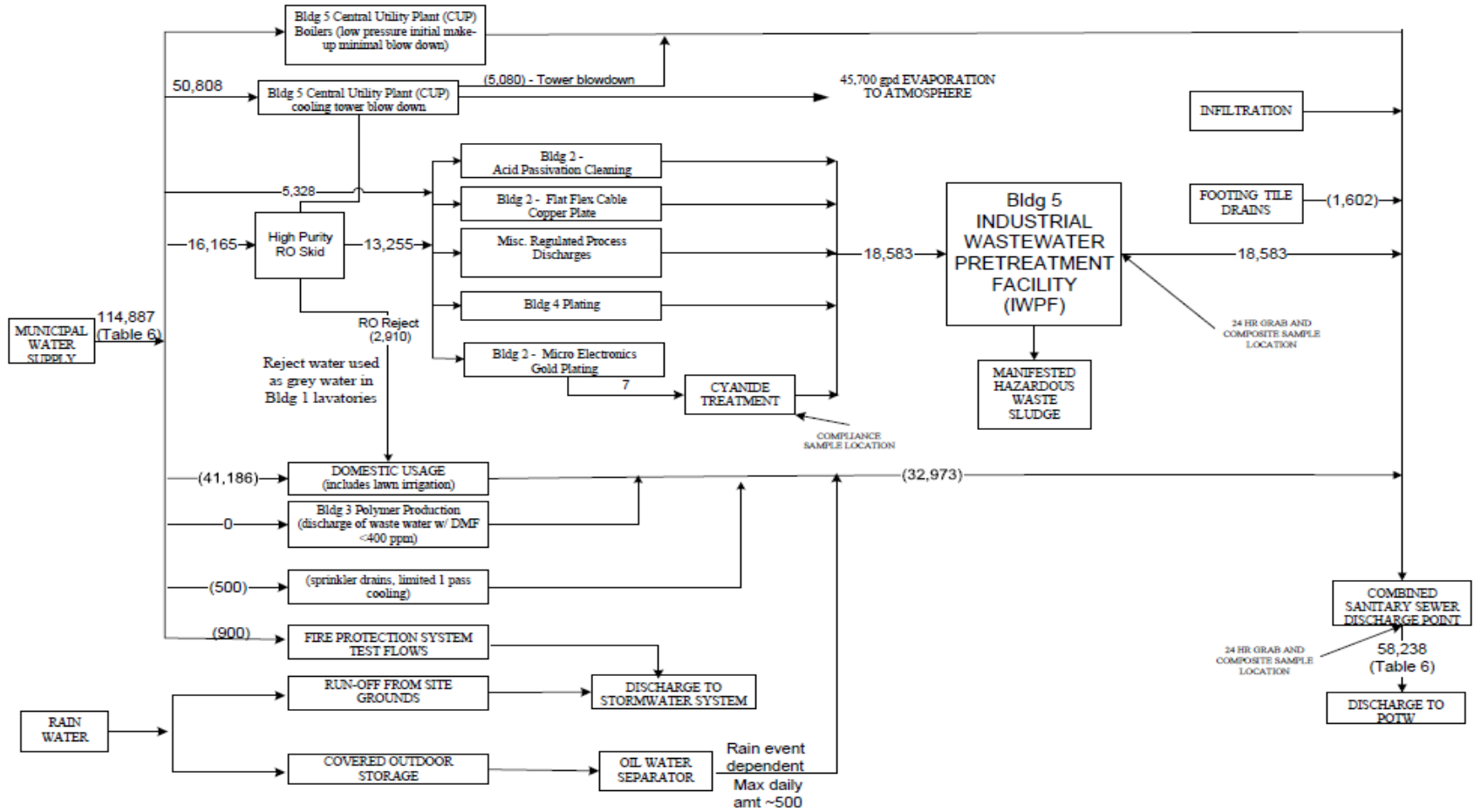
- ✓ 40 CFR 112 – Oil Pollution Prevention (separate standalone SPCC Plans are maintained for landlord and tenant operations)
- ✓ 40 CFR 403.8(f)(2)(vi) – Slug Discharge Control Plan required for categorically regulated facilities
- ✓ 40 CFR 264 Subpart C and D requirements that require prevention and contingency / emergency response planning at RCRA regulated facilities
- ✓ CERCLA, SARA, and EPCRA
- ✓ Stormwater Discharge Permit – No Exposure Certification in lieu of a Missouri State Operating Permit (MSOP)

3.2.2 Sanitary Wastewater

Sanitary wastewater discharges from the KCNSC are regulated under a permit issued by the city of Kansas City, Missouri, Industrial Waste Control Division. A permit application was submitted by the NNSA in February 2012. The corresponding permit was issued November 7, 2012. This permit was modified effective September 20, 2018, to revise and incorporate minor changes. Sanitary wastewater discharges from the KCNSC are comprised of treated industrial wastewater, domestic discharges, cooling tower and boiler blowdown, fire protection system test flows, and limited discharges associated with storage areas. Figures 3-1a and 3.1b provide the latest water balance for the KCNSC included in semi-annual reports submitted to the city of Kansas City.

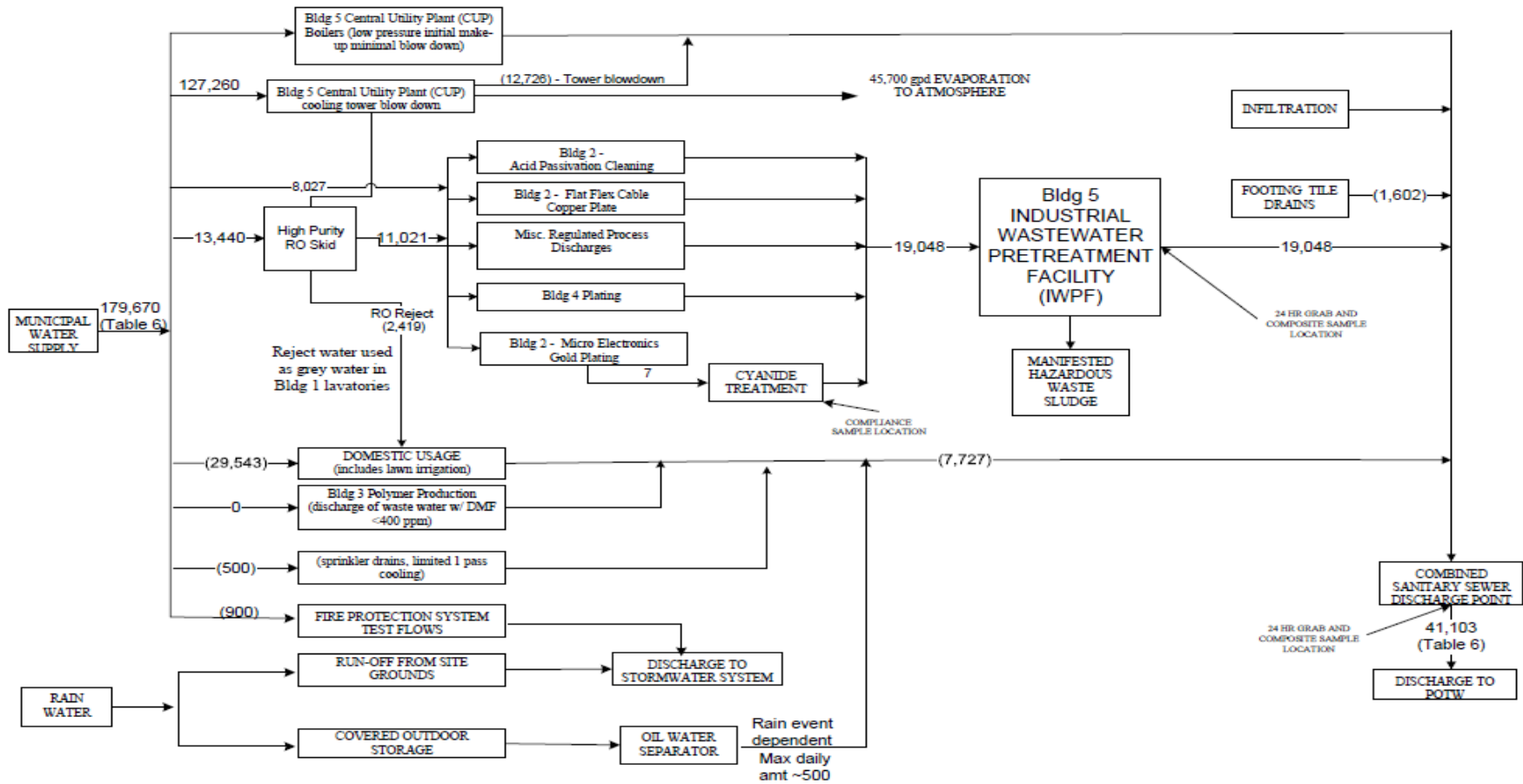
Water use at the KCNSC trended remained steady during 2020. Potable water use during 2019 averaged 147,386 gpd as compared to 147,278 gpd of use during 2020. Cooling tower operations are the biggest consumer of potable water (60% of total potable water use). Approximately 90% of potable water use in cooling tower operations is evaporated to the atmosphere with the remaining discharged to the sanitary sewer as blow down (Figures 3.1a and b). The average daily volume of wastewater discharged to the sanitary sewer system from the KCNSC during 2020 was approximately 49,670 gallons per day (gpd).

Figure 2.1a: Water Balance November 2019 – April 2020



NOTES:
 - Average daily values in gpd provided unless otherwise noted.
 - Values in parenthesis are estimated.

Figure 3.1b: Water Balance May 2020 –October 2020



NOTES:
 - Average daily values in gpd provided unless otherwise noted.
 - Values in parenthesis are estimated.

3.2.3 Industrial Wastewater

Manufacturing related process wastewater (industrial wastewater) generated by manufacturing operations at the KCNSC is regulated under 40 CFR 433 Metal Finishing Pretreatment Categorical Standards. Pretreatment discharge standards are included in the KCNSC’s sanitary sewer discharge permit. Periodic monitoring and reporting are required by the permit. Industrial wastewater is routed to an onsite skid-mounted microfiltration–based treatment unit. Prior to treatment, process wastewater is stored in onsite tanks with secondary containment to prevent accidental release to stormwater systems. The treated water is discharged to the sanitary sewer system. All sanitary and treated industrial wastewater from the facility is discharged to the Little Blue Valley Sewer District Atherton POTW. During CY2020 industrial wastewater flow rates averaged 19,021 gpd.

The KCNSC Sanitary / Industrial waste water discharge permit contains discharge limits for the IWPF, a cyanide pre-treatment system and the total facility sanitary sewer discharge. All permit discharge limits were met during 2020. Building support operations must comply with the Kansas City, Missouri sewer use ordinance limits.

Regulatory Inspections

On August 4, 2020, representatives from the Kansas City, Missouri, Industrial Waste Control Division conducted an inspection of the facility to ensure compliance with permit terms and conditions. Reports and records required by the permit were reviewed and samples were collected from the permitted discharge points. As a result of the inspection, there were no findings and analytical results for the permitted discharges were in compliance with permit limits.

Table 3.4 Clean Water Act Reports

Report	Submittal due date(s)	Submittal Agency	Frequency
Semi-Annual Significant Industrial Users Report	1/1 7/1	KCMO Pollution Control Department, Division of Industrial Waste Control	Semi-Annual

Analytical Laboratory Quality Assurance

The KCNSC utilizes the services of a subcontract laboratory to perform analysis on wastewater samples collected to demonstrate compliance with limits in the above wastewater permits. The subcontract laboratory is required to certify under the National Environmental Laboratory Accreditation Program (NELAP). NELAP auditors conduct comprehensive laboratory audits on a bi-annual basis. In addition, NELAP performance evaluation samples are submitted on a semi-annual basis and the laboratories performance is assessed to determine their ability to identify type and quantity of constituents present in the samples.

KCNSC NM

KCNSC NM has only batch discharge of industrial wastewater from any of its facilities. KCNSC NM is not required by the Albuquerque/Bernalillo County Water Utility Authority (A/BCWUA) to obtain a wastewater discharge permit. A/BCWUA is the authority having jurisdiction (AHJ) over the local Publicly Owned Treatment Works, sanitary sewer system and potable water system that serves the City of Albuquerque and urbanized areas of Bernalillo County.

A No Exposure Certification for Exclusion from NPDES Storm Water Permitting has been submitted to EPA Region VI for the Craddock A, B, and C facilities. The Air Park Facility is not subject to stormwater regulations. The Mobile Electronic Maintenance Facility and Depot Facility located at KAFB fall under KAFB's stormwater permit. There was no stormwater-related regulatory inspections performed at the Alamo, Craddock A, B, and C facilities by the City of Albuquerque in CY2020.

3.3 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) / Superfund Amendments and Reauthorization Act (SARA)

The KCNSC maintained compliance with SARA by completing the Emergency Planning and Community Right-to-Know, EPCRA Sections 311, 312 inventory reports, and the Toxic Release Inventory, Section 313 report. Also the KCNSC will maintain compliance with the spill reporting requirements of SARA through the use of the KCNSC Spill Control Plan (DOE 2016a) which is written in compliance with the requirements of 40 CFR 112 for spill prevention control and countermeasures plans and 40 CFR 264 Subpart D.

Extremely Hazardous Substance (EHS) annual Tier II and Toxic Release Inventory (TRI) reports have been submitted as indicated in Table 3.5. Monthly reviews of chemicals stored on-site assure required notifications and Tier II modifications are completed in a timely manner throughout the reporting year.

Table 3.5 CERCLA/SARA Reports

Report	Submittal due date(s)	Submittal Agency	Next Submittal	Frequency
Section 311, 312 Inventory /Storage – Tier II	3/1/2020	Missouri Emergency Response Commission, Mid-America LEPC, and KCMO Fire Department	3/1/2021	Annual
Section 313 Toxic Release Inventory	7/1/2020	EPA EPCRA Reporting Center	7/1/2021	Annual

Roles and Responsibilities:

The KCNSC has a unique owner/operator relationship where the owner is responsible for chemical procurement, storage and use requirements (including EPCRA reporting) associated with the operation and maintenance of buildings, grounds and the Central Utility Plant. The NNSA and Honeywell FM&T are responsible for chemical procurement, storage and use requirements and EPCRA reporting for operational processes in support of the DOE mission and the on-site IWPF.

KCNSC NM

KCNSC NM maintained compliance with SARA by completing Emergency Planning and Community Right-to-Know, SARA Sections 311 & 312 Tier II inventory reports for lead-acid batteries. Spills that occurred at the KCNSC NM were very minor in nature and did not trigger any reporting thresholds.

Table 3.6 KCNSC NM CERCLA/SARA Report

Report	Submittal due date(s)	Submittal Agency	Next Submittal	Frequency
Section 311 Inventory	3/1/2020	New Mexico Department of Homeland Security & Emergency Management (DHSEM) who disseminates to - Albuquerque/Bernalillo County Local Emergency Planning Committee (A/BC LEPC), and the Albuquerque Fire & Rescue Department	3/1/2021	Annual
Section 312 Storage	3/1/2020	NM DSHEM who disseminates to Albuquerque/Bernalillo County Local Emergency Planning Committee (A/BC LEPC), and the Albuquerque Fire & Rescue Department	3/1/2021	Annual

3.4 Resource Conservation and Recovery Act (RCRA)

3.4.1 Waste Management

The KCNSC is regulated by State and Federal hazardous waste regulations and is subject to RCRA inspections by the EPA and the MDNR. All reporting requirements to these agencies have been met. The varied operations of the KCNSC generate hazardous wastes as defined by 40 CFR 261 from processes such as surface coating, etching, electronic assembly, metals and plastics machining and forming, and wastewater treatment.

RCRA wastes are stored on-site less than 90 days in compliance with RCRA requirements for large quantity generators of hazardous waste. These wastes are then transported off-site by licensed transporters or are transferred to the on-site CWA-permitted IWPF. Recycling, treatment, or disposal occurs at Honeywell-reviewed

facilities currently in compliance with state and /or federal hazardous waste regulations. Operations that constitute the major contributors of hazardous waste include wastewater treatment, plating, and etching processes.

3.4.2 Waste Minimization / Pollution Prevention (Wmin/P2) Program

This program is primarily driven by the following:

- Pollution Prevention Act (PPA)
- Resource Conservation and Recovery Act (RCRA)

Pollution Prevention (P2) 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 program focus is the reduction and eventual elimination of significant environmental impacts. The first choice is the elimination of the sources of waste. When this is not feasible options for recycling or reusing the waste are considered. Treatment and disposal are only considered when source reduction or recycling options are not feasible or cost effective. The program also emphasizes the procurement of environmentally preferable products containing recycled materials.

During CY20 the KCNSC generated 365,804 pounds of hazardous waste. Non-hazardous waste associated with production operations generated by the KCNSC during CY20 totaled 774,502 pounds.

During CY20 the KCNSC recycled 1,619,048 pounds of material including recyclable wastewater sludge’s and precious metals. Table 3.7 provides other general categories and volumes of materials recycled.

Table 3.7 Recycled Material - CY2020

Material	Pounds recycled
Scrap Metal	634,359
Computers/ Electronics	74,851
Precious Metals	79,101
Wood/Plastic	136,280
Batteries	9,302
Fuel blend	238,206
Ground Electronics	666
Co-Generation	446,283

Wood and scrap metal are not captured as non-hazardous waste but are captured only under the heading of recycled material.

Current Issues

None. No inspections were conducted in 2020.

Table 3.8 RCRA Reports

Report	Submittal due date(s)	Submittal Agency	Next Submittal	Frequency
Generators Hazardous Waste Summary Report	8/15/2020	MDNR	8/15/2021	Annual
EPA Biennial Hazardous Waste Report	3/1/2020	MDNR	3/1/2022	Biennial
Hazardous Waste Fee Report	8/1/2020	New Mexico Environment Department	8/1/2021	Annual

3.5 Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

The Federal Insecticide, Fungicide, and Rodenticide Act restricts the application of pesticides and herbicides through a state-administered certification program. CPZ is responsible for application of pesticides at the facility. Application of chemicals regulated under FIFRA is subcontracted to certified pest control firms, thus maintaining compliance with FIFRA.

KCNSC NM

KCNSC NM contracts out all applications of pesticides to certified pest control firms, thus maintaining compliance with FIFRA.

3.6 Toxic Substances Control Act (TSCA)

The Toxic Substances Control Act of 1976 provides EPA with authority to require testing of chemical substances, both new and old, entering the environment and to regulate them where necessary. In the past the facility has manufactured chemicals subject to TSCA Pre-Manufacture Notification (PMN) requirements. The necessary PMNs have been filed for manufacture of the subject chemicals. In addition, the KCNSC will, from time to time, conduct research activities that are subject to the Research and Development (R&D) requirements under TSCA.

3.7 Federal Facilities Compliance Act (FFCA)

The Federal Facility Compliance Act (FFC Act) was signed into law on October 6, 1992. This Act, which amends the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act (RCRA)), made major changes to RCRA as they apply to Federal facilities and added provisions that specifically addressed waste issues

germane to the Department of Energy (DOE). The most significant and far reaching provision of the FFC Act was the statute's waiver of the Federal government's sovereign immunity. This waiver provided the Environmental Protection Agency (EPA) and the various States authorized to implement the RCRA program the authority to require "...each department, agency, and instrumentality of the United States...." to comply with all relevant substantive and procedural requirements of RCRA. This provision essentially placed all Federal facilities on the same compliance footing as private industry. In addition to the sovereign immunity waiver, other important issues addressed by the FFC Act included provisions addressing radioactive mixed wastes.

The NNSA and the state of Missouri have a contingency agreement in the event mixed waste is generated which cannot be managed within the regulatory storage limits. During 2020 manufacturing operations at the KCNSC that could potentially generate mixed waste did not occur.

3.8 National Environmental Policy Act (NEPA)

Honeywell submits requests for NEPA determination and notification to the KCFO NEPA Compliance Officer as outlined in the *HS&E Management System Description and Worker Safety & Health Program* document. To further transparency and openness in its implementation of NEPA, Records of Categorical Exclusion (CX) Determinations are posted to the Kansas City Field Office internet site. This is required as part of the *Online Posting of Certain DOE Categorical Exclusion Determination Policy Statement* effective 11/2/09.

3.9 Quality Assurance

Quality Assurance (QA) measures were incorporated into all of the monitoring activities described in this report. An independent laboratory performs water sampling and analysis. This laboratory is selected only after successful performance is achieved on standard samples prepared by another independent subcontractor. Additional QA measures include duplicate or spiked sample analysis on 10% of all samples analyzed. The laboratory must maintain an internal quality assurance program, which meets or exceeds Environmental Protection Agency guidelines set forth in "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans".

3.10 Environmental Management System (EMS)

The EMS ensures ongoing compliance with applicable environmental regulations and requires the implementation of environmental improvement initiatives such as:

- Pollution prevention efforts.
- Significant Aspects Objectives and Targets
- Implementation effectiveness
- Green efforts (procurement, building, electronics stewardship)

Honeywell FM&T/KC's EMS is certified to the ISO 1400:2015 standard and has been certified since May 1997. The certification was most recently extended in July 2021.

Maintenance of this certification involves annual audits by a third party registrar with a certification extension audit every three years. The ISO 14001-2015 standard is internationally recognized and serves as the foundation of the EMS.

The KCNSC's EMS has a sustained record of environmental compliance and is striving to make continuous improvements beyond that required by regulation. FM&T has an active media relations program that provides the community with positive environmental information and responds to public concerns. Press releases are issued, as appropriate, on both positive happenings and areas of concern. FM&T communicates to employees on environmental targets, issues and improvement actions so they are made aware.

3.11 Awards / Recognition

- The KCNSC is certified as an LEED Gold facility.
- KCNSC KC / NM ISO 14001-2015 Certification Extension - Valid until 2024
- Missouri Water Environment Association Gold Award - 2020

4.0 NATIONAL SECURITY CAMPUS POINTS OF CONTACT

Copies of Reports and/or Documents referenced in this Summary may be obtained from:

National Nuclear Security Administration Kansas City Field Office Sybil Chandler Environmental Health & Safety Manager Office of Operations 14520 Botts Road Kansas City, Missouri 64147	or	Honeywell Inc. Federal Manufacturing & Technologies Brad Gilbert Communications Manager D/008 1.3E 14520 Botts Road Kansas City, Missouri 64147
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