SITE-WIDE ENVIRONMENTAL ASSESSMENT

FOR THE

KANSAS CITY NATIONAL SECURITY CAMPUS
NEW MEXICO OPERATIONS
DOE/EA-2231

U.S. Department of Energy
National Nuclear Security Administration

October 2023

ACRONYMS AND ABBREVIATIONS

ABCWUA	Albuquerque Bernalillo County Water Utility Authority
AFRL	Air Force Research Laboratory
AQI	Air Quality Index
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	City of Albuquerque
CWA	Clean Water Act
dBA	A-weighted decibel(s)
DOD	Department of Defense
DOE	U.S. Department of Energy
EA	Environmental Assessment
EAP	Emergency Action Plan
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas
HAP	hazardous air pollutant
Honeywell FM&T	Honeywell Federal Manufacturing and Technologies, Inc.
HUC	Hydrologic Unit Code
KAFB	Kirtland Air Force Base
KCNSC NMO	Kansas City National Security Campus, New Mexico Operations
Mt	megatonnes
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NEST	Nuclear Emergency Support Team
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NNSA	National Nuclear Security Administration

NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRGROC	Nuclear Response Group Readiness Operations Center
NWI	National Wetlands Inventory
O_3	ozone
OWC	Old Western Command
Pb	lead
PM	particulate matter
RCRA	Resource Conservation and Recovery Act of 1976
SNL/NM	Sandia National Laboratories, New Mexico
SO_2	sulfur dioxide
Sunport	City of Albuquerque International Sunport
SWEA	Site-Wide Environmental Assessment
SWEIS	Site-Wide Environmental Impact Statement
SWPPP	Stormwater Pollution Prevention Plan
USAF	U.S. Air Force
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank

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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 Site-Wide Environmental Assessment (SWEA) to evaluate the proposed continued operation and potential expansion of operations at the Kansas City National Security Campus New Mexico Operations (KCNSC NMO). The NNSA, a semi-autonomous agency within the DOE, awarded Contract DE-NA 00002839 to Honeywell Federal Manufacturing and Technologies, Inc. (Honeywell FM&T) to operate and manage the NNSA's KCNSC NMO. This contract includes certain assigned tasks to conduct operations at KCNSC NMO. This work is conducted at several locations in the Albuquerque, New Mexico area, including specific properties within Kirtland Air Force Base (KAFB), to support the security, development, and manufacture of the non-nuclear components of nuclear weapons. KCNSC NMO has historically been included in the 1999 Final Site-Wide Environmental Impact Statement (SWEIS) for Sandia National Laboratories, New Mexico (SNL/NM) (DOE/EIS-0281). However, the new SNL/NM SWEIS that is in process does not include KCNSC NMO in that update. Therefore, KCNSC NMO is initiating the development of this stand-alone SWEA, which complies with all National Environmental Policy Act (NEPA) requirements, as well as the applicable DOE regulations in 10 Code of Federal Regulations (CFR) §1021 and includes all current and anticipated facilities used in its mission.

To support continued growth and operational capacity, the NNSA has prepared this SWEA to assess the effects on the human and natural environments from its current and expanding operations at KCNSC NMO, to assess the effects of the demolition and construction of facilities on KAFB, and to provide the flexibility to expand, reconfigure, and/or move all or select operations within KCNSC NMO. This would include the potential expansion to other leased buildings in the immediate vicinity of existing off-base and on-base buildings. The DOE's NEPA Implementing Procedures (10 CFR Part 1021) require preparation of an SWEA, a broad-scope document, to assess the impacts of all or selected functions at sites such as KCNSC NMO (10 CFR §1021.330(c)).

1.1 Background

KCNSC NMO is an applied-science and engineering organization engaged in technical, operational, mechanical, and logistical support through research, analysis, testing, and field operations that support the NNSA's Secure Transportation, Non-Proliferation, Treaty Related Issues and Verification and Emergency Response missions, as well as the national laboratories, other DOE contractors, the Department of Defense (DOD), and other federal and non-federal agencies.

KCNSC NMO also provides a wide range of technical support activities in multidisciplinary 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. At the current time, 350 individuals are employed at KCNSC NMO.

Specific Processes, Activities, and Capabilities. KCNSC NMO consists of facilities at the following sites in the city of Albuquerque and within KAFB, Bernalillo County, New Mexico, as depicted in Figures 1-1 and 1-2:

1. Alamo facility at 2445 Alamo Ave. SE: 2.1 acres.
2. Craddock facilities that include A, B, C, and D facilities at 2540, 2460, 2450, and 2400 Alamo SE, respectively: 13.9 acres, future growth to 18.4 acres.
3. Air Park facility at 2100 Air Park SE: 2.5 acres.
4. Nuclear Emergency Support Team (NEST) facility at 2301 Buena Vista Drive, and on KAFB: 10.3 acres.
5. Old Western Command (OWC) facility, which is composed of the Mobile Electronic Maintenance Facility (Building 854) and the Depots (portable buildings T-68 and T-78). This is on DOE/NNSA-owned land in Technical Area I within KAFB and operated under Kansas City Field Office

jurisdiction under a land use permit (NNSA 2012): 2.13 acres currently, future growth to 4 acres to the south across storm drain bridge/gate.

6. Nuclear Response Group Readiness Operations Center (NRGROC) located within KAFB, as well as several site-built and portable buildings (see Figure 1-2) owned by the DOE Emergency Response groups that are located off of Short Drive on the DOE's permitted land of 4.34 acres of the former NC-135 site: 4.34 acres currently, future growth to 10 acres to flight line.
7. NRGROC site located on KAFB-permitted land occupying Buildings 20397 and 20401 and northwest parking lot off of Pennsylvania St. and Griffin Ave: 4.41 acres.

KCNSC NMO administrative operations are located at the leased 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, and D facilities are composed of three leased facilities used for trailer refurbishment, motor vehicle modification, spray painting operations, machining operations, and metal fabrication work. Related "Strategic Partnership Program" work (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, as well as parts distribution. The NEST facility is used for administrative operations. NEST is the umbrella designation that encompasses all DOE/NNSA radiological and nuclear emergency response functions.

All operations and processes conducted at KCNSC NMO 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. U.S. Department of Transportation Hazard Class 1.3 and 1.4 explosives are stored at the Craddock A facility. In the future, it is planned that Class 1.1 explosives will also be stored in a facility appropriate to their hazard. Air emissions are managed under a single Source Registration for the painting and chemical use operations primarily at the Craddock facilities.

Additionally, KCNSC NMO is now planning to lease 2.77 acres of the City of Albuquerque (COA) International Sunport (Sunport)–owned vacant lot adjacent to the east side of Craddock A. This lot will be used to site a future new non-waste hazardous materials operations and storage in portable Connex buildings.

Beyond the Sunport lot, the NNSA might lease additional buildings within the on- and off-base areas outlined by Figure 1-1, as KCNSC NMO expands. Each individual building inclusion into KCNSC NMO will necessitate NEPA analysis; however, functions performed will be consistent with current missions. For this reason, the Proposed Action of this SWEA includes all current and anticipated construction, demolition, operation, and maintenance activities, and environmental consequences generated by the current and future mission of the NNSA set within the geographical limits outlined in Figures 1-1 and 1-2 (i.e., the project area).

1.2 Purpose and Need for Agency Action

In compliance with the requirements of the DOE's NEPA Implementing Procedures, this section of the SWEA states the purpose of the proposed federal action to be analyzed under NEPA and national need that causes the action.

Purpose. For the reasons outlined in Section 1.1, the purpose of the Proposed Action is to provide capability for KCNSC NMO to continue the current level of performance of the mission of the NNSA in support of the agency's non-nuclear operations and maintenance, and to anticipate all reasonably foreseeable expansions or alterations of those support activities.

Need. In support of the need for an effective and safe national defense capability, KCNSC is responsible for the procurement and manufacturing of non-nuclear mechanical, electronic, and engineered material components for nuclear weapons and for the response to radiological and nuclear emergencies. While some of these components are produced at Los Alamos National Laboratories, about 85% are produced

at KCNSC. KCNSC is also responsible for evaluating and testing non-nuclear weapon components. Certain additional missions in support of the Office of Secure Transportation, Emergency Response and Counter Nuclear Proliferation are also assigned to KCNSC. Most of this mission is performed at KCNSC; however, some of these missions are performed at KCNSC NMO. KCNSC, including KCNSC NMO, is managed and operated by Honeywell FM&T. The contract was most recently awarded in 2015 for a 5-year term and five additional 1-year extension periods. It is this national need that the Proposed Action addresses.

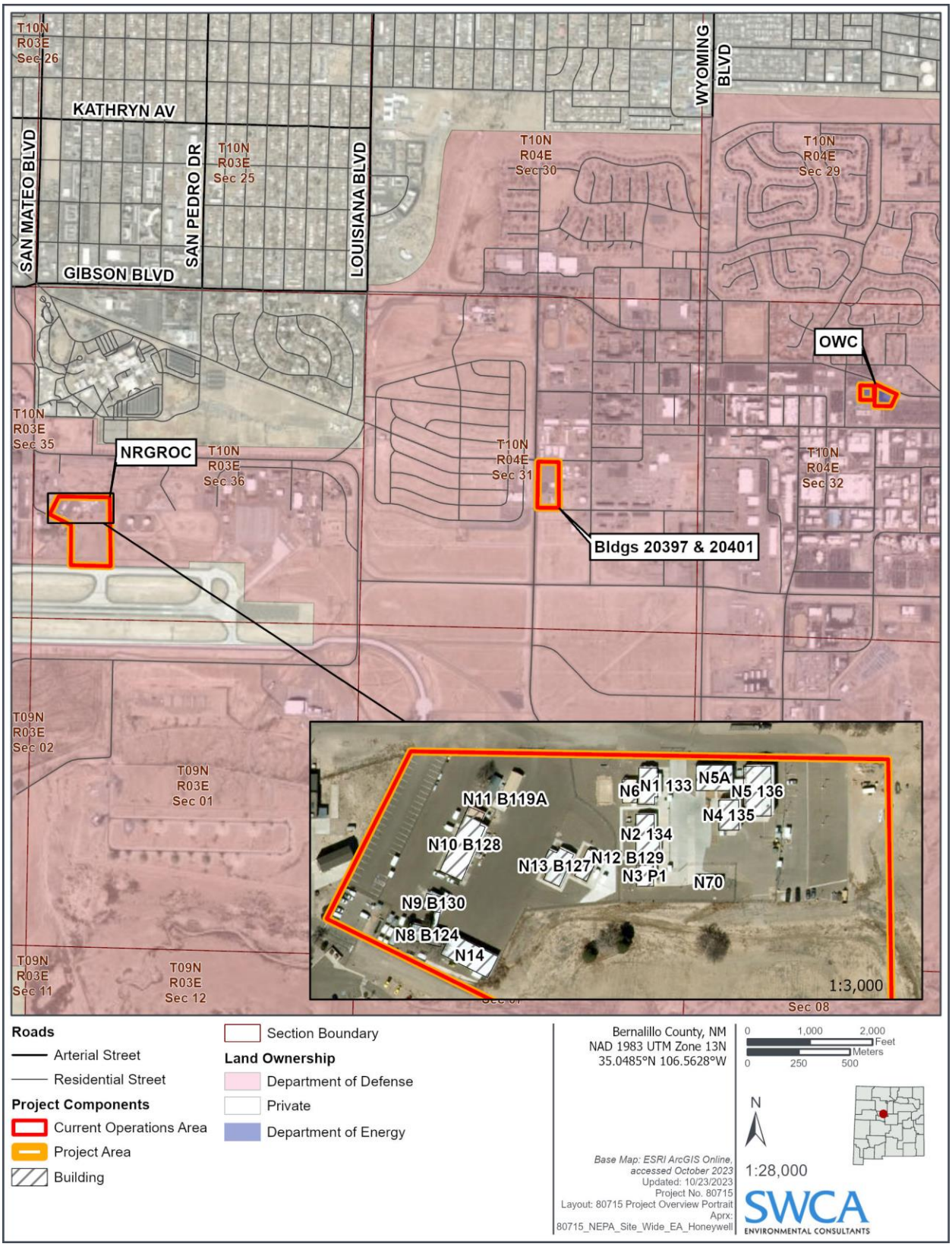

Figure 1-1. KCNSC NMO SWEA project area (map 1 of 2).

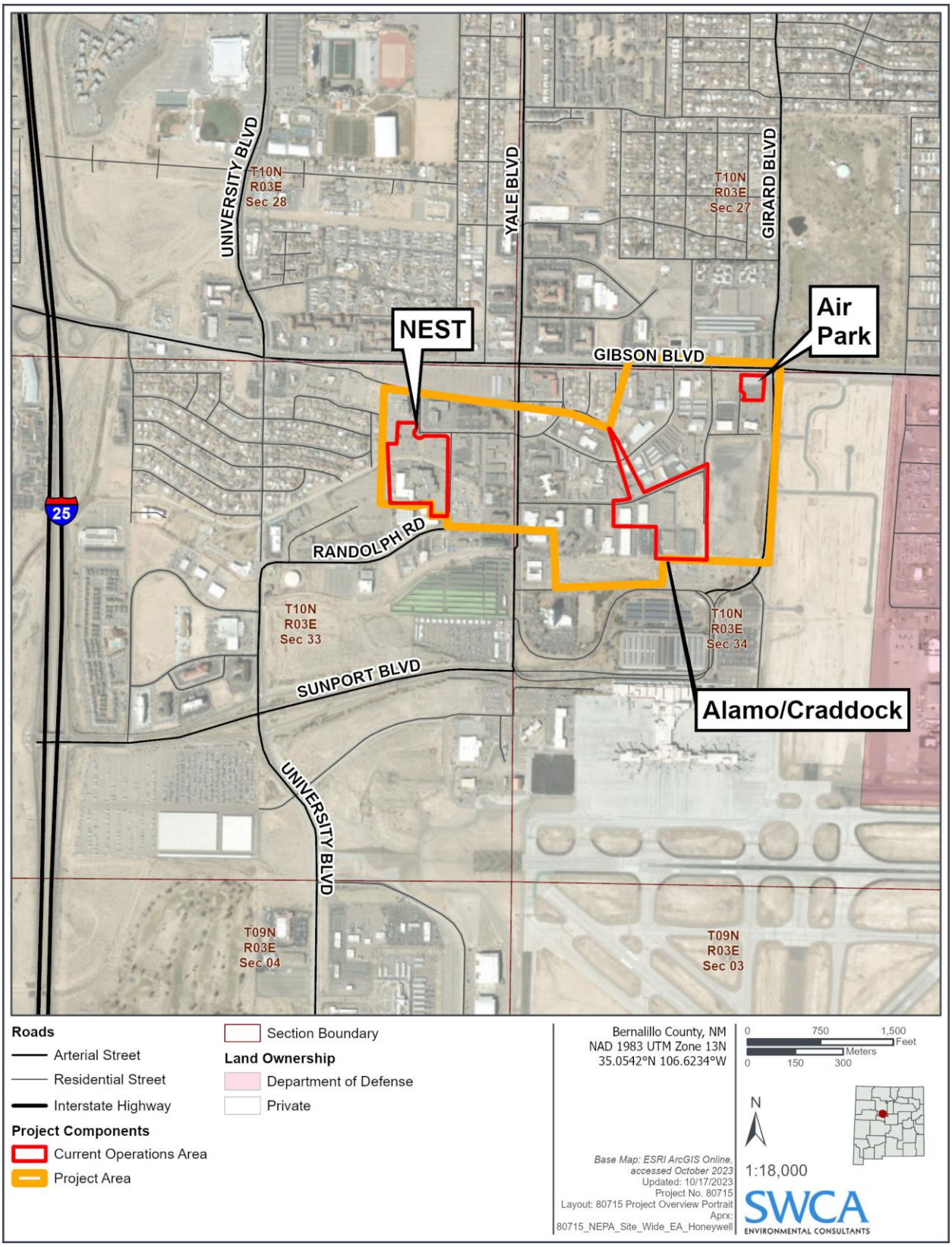

Figure 1-2. KCNSC NMO SWEA project area (map 2 of 2).

1.3 Scope of this Environmental Analysis

This EA:

- Describes the purpose and need for agency action and provides background information on KCNSC NMO (Chapter 1);
- Describes the Proposed Action and the No Action Alternative 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 environments (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 SWEA (Chapter 4); and
- Discusses applicable regulatory requirements related to the Proposed Action (Chapter 5).

1.4 Cooperating Agencies

The NNSA is the lead federal agency for this SWEA. The U.S. Air Force (USAF) at KAFB is serving as a cooperating agency. KCNSC NMO includes permitted land from KAFB for NRGROC and emergency response in Buildings 20397 and 20401 along with the parking lot.

Based on KAFB's expertise role as a landlord to and part of KCNSC NMO, the USAF at KAFB has requested to act as a cooperating agency in the preparation of this SWEA as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR 1501.8, Cooperating Agencies.

1.5 Public Involvement

The NNSA notified the Pueblo of Isleta, the COA, KAFB, Bernalillo County, and the New Mexico Environment Department (NMED) 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. The NNSA will not conduct a public hearing, but the SWEA has been made available online for public review and comment. A notice of availability for the public draft of the SWEA was also sent to New Mexico tribes and pueblos listed in Section 5.3.

The NNSA will continue to coordinate with federal, State, and local agencies to maintain the required clearances and permits to support ongoing operations. A list of current State and local environmental permits, certifications, and registrations maintained by the NNSA for KCNSC NMO is provided in Table 3-1 of this SWEA.

2.0 DESCRIPTION OF ALTERNATIVES

The DOE's NEPA Implementing Procedures require preparation of an SWEA, a broad-scope document, to assess the impacts of all or selected functions at sites such as KCNSC NMO (10 CFR 1021.330c). Under this implementation procedure, individual major federal actions would be compared to this SWEA and evaluated under NEPA as to their appropriate documentation as either concluded with a Finding of No Significant Impact (FONSI) or requiring completion of an Environmental Impact Statement. Tiering is a concept defined in 10 CFR § 1021.200 Subpart B (3), as stated, "When DOE uses a broad decision (such as one on a policy or program) as a basis for a subsequent narrower decision (such as one on a project or other site-specific proposal), DOE may use tiering (40 CFR 1502.20) and incorporation of material by reference (40 CFR 1502.21) in the NEPA review for the subsequent narrower proposal." In this way, future federal actions will be analyzed for coverage under this SWEA, if applicable.

2.1 Proposed Action – Continue Operations at KCNSC NMO Current and Future Facilities, as Required by the Expansion of the NNSA Mission.

The Proposed Action and Preferred Alternative is to continue current operations of KCNSC NMO, accommodating expansions in the operation by the lease of new locations located within the limits of Figures 1-1 and 1-2 and to demolish, remodel, construct, maintain, and/or operate buildings and exterior areas on KAFB, as required. New activities would be proposed as actions covered by this SWEA, as required by future changes in the mission and scope of the NNSA assigned to KCNSC NMO. The USAF requires that permittees follow the Environmental Impact Analysis Process prior to modifications of permitted property, including ground disturbance, construction, and/or demolition, via the submission of USAF Form 813.

The scope of operations that would be conducted at KCNSC NMO, and any additional facility, may include but would not be limited to the following:

- 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, and thermal processing
- 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 – application of dry film, spray paint, aerosol, parylene, liquid, and powder coatings
- 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, and testing of electronics, explosives, kinematics, pressure, and thermal
- Welding, Brazing, and Soldering – electric beam, laser, pulse 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, and similar support activities

KCNSC NMO is planning to lease 2.77 additional acres of a Sunport–owned vacant lot adjacent to the east side of the Craddock A facility. This lot will be used to site future hazardous materials operations and storage in portable Connex buildings. In addition, Class 1.1 and 1.2 explosives will be located on-site in an appropriate storage facility. This addition is included as part of the Proposed Action.

2.2 No Action Alternative

The No Action Alternative would be to maintain the current operation and maintenance of KCNSC NMO and for the NNSA to find alternative locations for the expansion of its mission.

2.3 Actions Removed from Further Consideration

The discontinuation of all NNSA activities at KCNSC NMO was not considered by this SWEA since this option would not meet the needs of the NNSA and its congressionally mandated, national security mission. Similarly, the relocation of the current NNSA support offered by KCNSC NMO to either the existing Kansas City NNSA site or a new location was not considered herein. Such an action would generate a new, additional set of environmental consequences equal to, or worse than, operation of the current site.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter describes the existing conditions associated with KCNSC NMO, the surrounding area, and the potential effects of the Proposed Action and No Action Alternative on the human and natural environments. All KCNSC NMO facilities, both off-base and on-base at KAFB, are included in the operating area of this SWEA. Under DOE, NNSA, and CEQ NEPA guidance for environmental justice (EJ), cumulative actions, and some resources, the analysis area is somewhat larger than the project area. For this SWEA, it is possible that the operations area might increase, as new facilities are added to KCNSC NMO; thus, the analysis area is slightly larger than the current operations area. In these cases, the actions would be evaluated under NEPA as a separate document or tiered off the SWEA, as appropriate.

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 section of the SWEA. Table 3-1 presents the list of existing environmental permits, certifications, and registrations held by the NNSA for KCNSC NMO. These permits, certifications, and registrations are also referenced in the applicable resource categories described in this section of the SWEA.

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

Environmental Resource, Media, or Equipment	Certification, Registration, or ID #	Issuing Agency	Conditions/Requirements
Ambient Air Quality	*Source Registration* 2068-RV-1	City of Albuquerque, Environmental Health Department	Pay annual fees (voluntarily review emissions annually)
Stormwater	*Certification of No Exposure* NMNOE3438	U.S. Environmental Protection Agency (EPA), Region 6	No industrial activities outdoors impacting SW
Wastewater	**None** (KCNSC NMO does not use enough potable water to trigger permit requirements.)	N/A	N/A (voluntarily test any significant industrial WW before discharge)
Fuel/Oil Tanks (UST/AST)	**None** (e.g., Spill Prevention Control and Countermeasures Plan)	N/A	N/A (no ASTs or USTs on-site)
Drinking Water	**None** (e.g., CCR, since buying Albuquerque Bernalillo County Water Utility Authority municipal water)	N/A	N/A
Hazardous Wastes	*Small Quantity Generator*, ID #NMDO49986896	EPA and NMED	Proper handling, storage, and disposal of less than 2,200 lbs. of HW per month.

3.1 Land Use

3.1.1 Affected Environment

3.1.1.1 General Land Use

The existing land uses within the project area are described above in Section 1.1. The predominant land use for the general area is commercial and industrial, with several facilities associated with the nearby Sunport and/or KAFB. Within the 2.77-acre vacant lot adjacent to the east side of Craddock A, there are currently no roads, buildings, or other structures on the project site. The entire site is currently undeveloped, although some historic grading and stockpiling has apparently been performed on the site. It also appears that the site may have occasionally been occupied by homeless encampments.

Beyond the COA lot, the NNSA might lease additional buildings within the on- and off-base areas outlined by Figure 1-1, as KCNSC NMO operations expand. Existing uses for these four buildings include the Craddock Business Park (Craddock facilities), the leased Alamo Building along Alamo Avenue SE (just north of the Sunport), and the off-campus Air Park Facility at the southwest corner of Girard and Gibson Boulevards.

Within KAFB, the existing uses within the project area include Mobile Electronic Maintenance Facility Building 851, two portable buildings (T-68 and T-78) at 8240 G Avenue in Technical Area I on DOE-owned land, the NNSA's NRGROC locations inside KAFB Buildings 1123 and NA-80 at 2651 Short Drive, and Buildings 20397 and 20401 at the northwest corner of Pennsylvania Street and Griffin Avenue, New Mexico 87117. Adjacent property is used by KAFB for a variety of purposes.

3.1.1.2 Properties of Potential Environmental Concern

The U.S. Environmental Protection Agency's (EPA's) Resource Conservation and Recovery Act of 1976 (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. KCNSC NMO is a hazardous waste–generating facility. There are three hazardous waste–generating facilities listed within 1 mile of the project area, as defined by Figures 1-1 and Figure 1-2. Of these, two are small-quantity generators and one is a very small–quantity generator. The federal Emergency Response Notification System is a national database used to collect information on reported releases of oil or hazardous substances. The project area does not contain any Emergency Response Notification System sites.

The NMED maintains a database of solid waste/landfill facilities, which are sites at which non-hazardous waste has been disposed. The project area does not contain any solid waste/landfill facilities, and none are listed within 1 mile of the project area. The NMED also compiles lists of all leaks of hazardous substances, including petroleum products, from underground storage tanks (USTs). Four sites within 1 mile of the project area are listed as having leaking USTs. There are several UST sites within 1 mile of the project area, most of which are associated with Sunport, rental car agencies, and other industrial facilities in the area.

3.1.2 Environmental Impacts

3.1.2.1 Proposed Action

The Proposed Action is to continue current operations of KCNSC NMO, accommodating expansions in operations by the lease of new locations located within the project area and to demolish, remodel, construct, maintain, and/or operate buildings and exterior areas on KAFB, as required. These improvements would not change the overall land use of each property, except for the addition and development of the 2.77-acre parcel of vacant land. The areas surrounding KCNSC NMO facilities would continue to be zoned as they are today. The use and operation of the existing KCNSC NMO facilities would require review of environmental impacts to remain consistent with published comprehensive plans of the governing jurisdictions. No surface activities of environmental concerns are immediately adjacent to the existing KCNSC NMO facilities.

If the NNSA seeks to expand operations to a new location outside of the project area it would require review of the particular property selected and the environmental impact of construction/building upgrades/improvements required for occupancy and use. The NNSA would conduct a site-specific analysis of the proposed site, complete the appropriate level of environmental review, and obtain the required permits to use the site. The use and operation of the proposed site would remain consistent with the published comprehensive plans of the governing jurisdictions. At this time, no specific sites for expanded operations have been identified.

3.1.2.2 No Action Alternative

No construction or property acquisition would occur under the No Action Alternative, resulting in no change to land use in the area. The areas surrounding KCNSC NMO facilities would continue to be used and zoned as they are today. The use and operation of KCNSC NMO facilities would continue to be consistent with the published comprehensive plans of the governing jurisdictions.

3.2 Noise

3.2.1 Affected Environment

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and that interferes with or disrupts normal activities (EPA 1978). Prolonged exposure to high noise levels has been demonstrated to cause hearing loss (Center for Hearing and Communication 2020). The response of individuals to similar noise events is diverse and influenced by the type of noise; the perceived importance of the noise and its appropriateness in the setting; the time of day and the type of activity during which the noise occurs; and the sensitivity of the individual.

Community sound levels are generally presented in terms of A-weighted decibels (dBA). The A-weighting network measures sound in a similar fashion to how a person perceives or hears sound, thus achieving a strong correlation with how people perceive acceptable and unacceptable sound levels. Table 3-2 presents A-weighted sound levels and the general subjective responses associated with common sources of noise in the physical environment.

Table 3-2. Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance	Sound Level in A-weighted Decibels (dBA)	Qualitative Description
Carrier deck jet operation	140	–
Jet takeoff (200 feet)	120	Deafening
Auto horn (3 feet) Rock music concert environment	110	Maximum vocal effort
Jet takeoff (2,000 feet) Shout (0.5 foot)	100	–
Heavy truck (50 feet)	90	Very loud/Annoying; Hearing damage (8-hour, continuous exposure)
Pneumatic drill (50 feet)	80	Very loud
Freight train (50 feet) Freeway traffic (50 feet)	70	Intrusive; telephone use difficult
Air conditioning unit (20 feet)	60	–
Light auto traffic (50 feet)	50	Quiet

Noise Source at a Given Distance	Sound Level in A-weighted Decibels (dBA)	Qualitative Description
Living room/bedroom	40	–
Library Soft whisper (15 feet)	30	Very quiet
Broadcasting studio	20	–
-	10	Just audible
-	0	Threshold of human audibility

Sources: Adapted from Table E, "Assessing and Mitigating Noise Impacts" (New York Department of Environmental Conservation 2001).

The seven sites within the project area are in a densely developed residential and industrial area with heavy traffic volumes. The acoustical setting has high ambient noise levels from many existing sources of noise, to include Sunport and KAFB, as well as Gibson Boulevard (classified as a principal arterial road by the New Mexico Department of Transportation) and several other major collector roads near the project area.

Sensitive noise receptors generally are defined as locations where people reside or where the presence of unwanted sound may adversely affect the existing land use. Typically, noise-sensitive land uses include residences, hospitals, places of worship, libraries, performance spaces, offices, and schools, as well as nature and wildlife preserves, recreational areas, and parks. Two of the sites within the project area do not have any sensitive noise receptors within 500 feet. The nearest sensitive noise receptor to the NRGROC sites is a park 905 feet away. The nearest sensitive noise receptor to Buildings 20397 and 20401 is a skate park located 1,106 feet away. The remaining four sites (Alamo/Craddock, NEST, Air Park, and OWC) have sensitive noise receptors within 100 and 500 feet from the site boundaries (see Table 3-3, Figures 3-1 and 3-2 below).

Table 3-3. Sensitive Noise Receptors within Survey Buffers

Building	Schools		Churches		Residences		Parks and Other Recreation Areas	
	100 Feet	500 Feet	100 Feet	500 Feet	100 Feet	500 Feet	100 Feet	500 Feet
Alamo/Craddock	-	-	1	1	1	30	-	-
NEST	1	1	-	-	4	40	-	-
Air Park	-	-	-	-	-	7	-	1
OWC	-	-	-	-	-	10	-	-

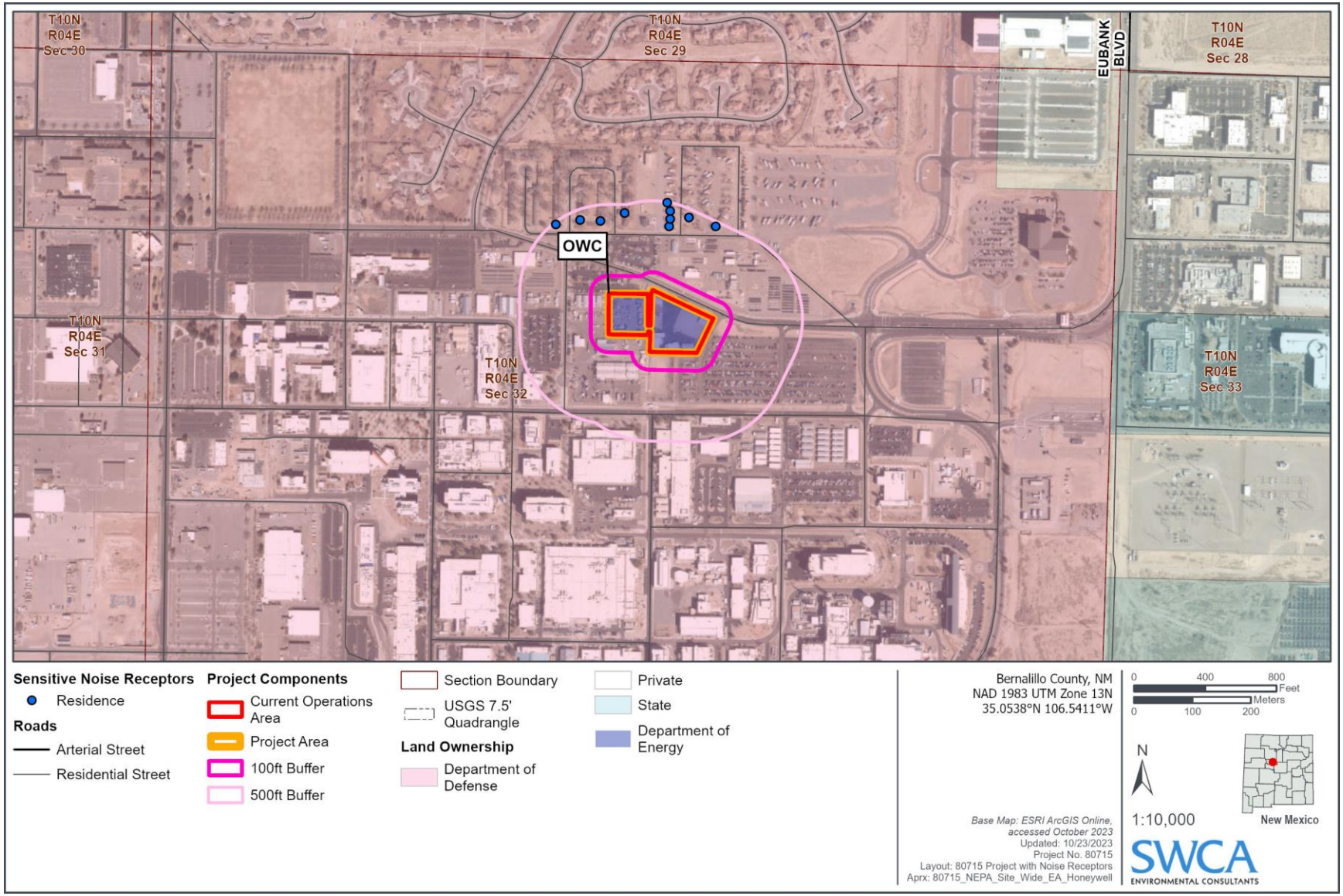

Figure 3-1. Sensitive noise receptors in proximity to project area (map 1 of 2).

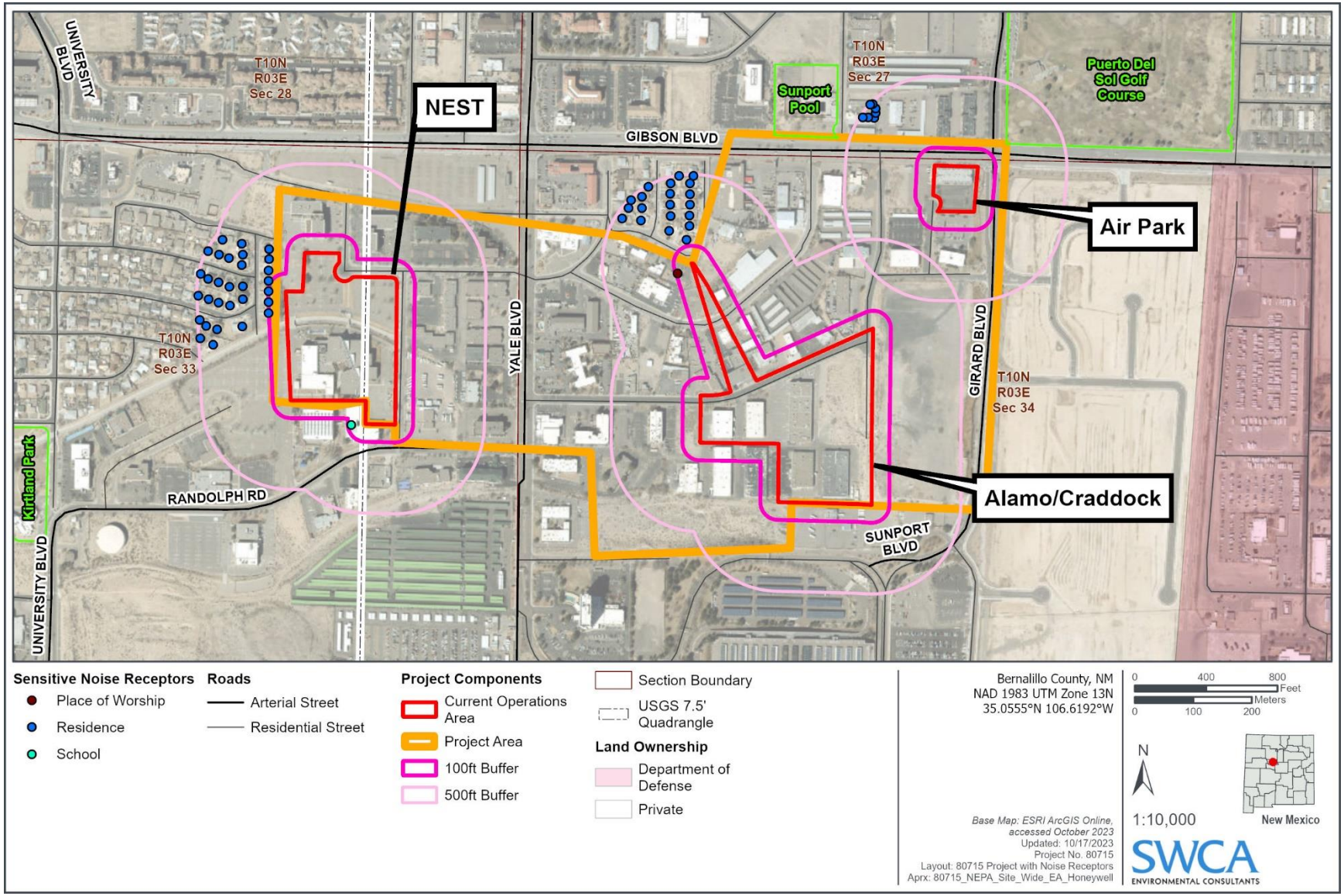

Figure 3-2. Sensitive noise receptors in proximity to project area (map 2 of 2).

3.2.2 Environmental Impacts

3.2.2.1 Proposed Action

The Proposed Action, which includes continuation of current operations, as well as future expansions (construction and demolition) within the project area, would likely contribute to temporary increases in ambient noise in the immediate vicinity. The use of heavy equipment such as excavators, dozers, and backhoes during construction would elevate ambient noise levels. In outdoor settings, the rate at which noise decreases is influenced by the distance separating noise sources and noise receptors, as well as local conditions such as traffic, topography, and weather. Generally, when noise is emitted from a point source, the noise is decreased an average of 6 dBA each time the separating distance is doubled (Berger et al. 2003).

Based on noise attenuation and these assumptions and estimated equipment noise levels (Federal Highway Administration 2006), noise generation from equipment operating in the ranges of 68 dBA (light trucks), 85 dBA (backhoe, excavator), and 90 dBA (heavy truck, concrete saw) at increasing distances is captured in Table 3-4 below, which shows where the noise attenuates nearly to background levels from the source.

Table 3-4. Summary of Predicted Noise Generation from the Proposed Construction Equipment by Distance

Equipment Operating at 68 dBA		Equipment Operating at 85 dBA		Equipment Operating at 90 dBA	
Distance (radius) in Feet from the Source (miles [approximate])	Noise Level (dBA)	Distance (radius) in Feet from the Source (miles [approximate])	Noise Level (dBA)	Distance (radius) in Feet from the Source (miles [approximate])	Noise Level (dBA)
0	68	0	85	0	90
50 (0.01)	62	50 (0.01)	79	50 (0.01)	84
100 (0.02)	56	100 (0.02)	73	100 (0.02)	78
200 (0.04)	50	200 (0.04)	67	200 (0.04)	72
400 (0.08)	44	400 (0.08)	61	400 (0.08)	66
800 (0.15)	38	800 (0.15)	55	800 (0.15)	60
-	-	1600 (0.30)	49	1,600 (0.30)	54
-	-	3,200 (0.60)	43	3,200 (0.60)	48
-	-	6,400 (1.20)	37	6,400 (1.20)	42
-	-	-	-	12,800 (2.40)	36

Source: Federal Highway Administration (2006)

The Proposed Action could disrupt wildlife cycle activities and result in the local displacement of wildlife; Wildlife already existing in proximity to human development may be habituated to noise from current land use and human disturbance. Changes to these baseline activities may still result in wildlife disruption.

The COA has a noise ordinance (Ordinance 2023 S-93 § 9-9-4, General Noise) in place, limiting outdoor noise produced by industrial or manufacturing activities during daytime hours to 60 dBA for residential receptors and 65 dBA for commercial and arts and entertainment areas. However, based on Table 3-2 above, background noise levels are assumed to be between 50 and 70 dBA during daytime hours in communities surrounding the project area. Due to noise attenuation, construction equipment noise levels

would be expected to dissipate to below background levels between 200 and 1,600 feet away from the sites. The sensitive noise receptors closest to the sites may experience temporary increases in ambient outdoor noise levels during active construction and demolition periods; however, given the distances, the increases would remain at low levels. Worker commutes and material delivery vehicles are components of current operations and are expected to have little effect on the average noise level.

During periods of construction and demolition, protection measures would be implemented to minimize noise impacts, including limiting construction activities to the least noise-sensitive times of day (i.e., daytime between 6 a.m. and 8 p.m.) and operating equipment manufacturers' standard noise control devices or better (e.g., mufflers, engine enclosures). Once construction and demolition activities are complete, noises associated with these activities would return to baseline ambient noise levels that are currently present in the project area.

3.2.2.2 No Action Alternative

The No Action Alternative would include continuation of operations at current levels and baseline background noise levels. Noise associated with the No Action Alternative is primarily anticipated to be limited to traffic noise from workers and delivery vehicles visiting the project area. This noise will dissipate to levels at or below ambient existing daytime sound levels in the vicinity (Berger et al. 2003). It is unlikely that continued daily operations would be loud enough to be heard beyond the site boundaries and would therefore be unnoticed in communities bounding the sites.

3.3 Air Resources

3.3.1 Affected Environment

3.3.1.1 Air Quality

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 (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). The EPA has delegated the responsibility of regulation and enforcement of the NAAQS to the state level and has approved the New Mexico State Implementation Plan, which allows the State to enforce both the New Mexico Ambient Air Quality Standards and the NAAQS on all public and private lands except for tribal lands and lands within Bernalillo County.[1]

Air quality in each region can also be measured by its Air Quality Index (AQI) value (EPA 2021a). The AQI is used to report daily air quality information in an easy-to-understand way by explaining how local air quality relates to human health. The AQI summary report (EPA 2021b) provides annual summary information, including maximum AQI values and count of days in each AQI category. Along with criteria pollutant concentrations as measured by air monitors, the EPA provides data on criteria pollutant and hazardous air pollutant (HAP) emissions. The EPA's National Air Toxics Assessment is the EPA's ongoing review of air toxics in the United States and is intended to be a screening tool for state, local, and tribal air agencies to help determine which pollutants, emission sources, or places may need further study to better understand risks to public health from air toxics. National Air Toxics Assessment results are published every 4 years and provide estimates of long-term cancer risks and non-cancer health effects of air pollution (EPA 2018).

Recent AQI monitoring data show that the air quality in Bernalillo County and the vicinity of KCNSC NMO is generally classified as good to moderate in terms of AQI values (COA 2023). Bernalillo County is in attainment/unclassifiable for all criteria pollutants, meaning that the air quality meets the NAAQS and

[1] Under the CAA and the Tribal Authority Rule, tribes have express authority to manage air quality on tribal lands. Air quality in Bernalillo County is regulated by the City of Albuquerque/Bernalillo Air Quality Division.

Bernalillo County is also in compliance with the more stringent New Mexico Ambient Air Quality Standards (EPA 2021c). The primary sources of human-caused air pollution in Bernalillo County are dust from blowing wind on disturbed or exposed soil, exhaust emissions from fuel combustion and motorized equipment, agriculture, and industrial sources (EPA 2017).

KCNSC NMO facilities evaluated in this SWEA consist of the seven facilities listed in Section 1.1. KCNSC NMO facilities emit PMs, volatile organic compounds, and HAPs, resulting from the activities described in Section 2.1, and operates under Air Quality Source Registration Certificate # 2068-RV1 / National Pollutant Discharge Elimination System (NPDES) permit NMNOE3438. Table 3-5 provides the emissions data for combined operations at KCNSC NMO based on the 2022 Annual Report (Honeywell FM&T 2023).

Table 3-5. KCNSC NMO Air Pollutant Emissions Data

Pollutants	Maximum Annual Emissions (lb/yr)[1]	Large Painting Booth (lb/yr)	Small Painting Booth (lb/yr)	Small Quantity Chemical Users	Total (lb/yr)	Total (tons/yr)
Volatile organic compounds	1,759.00	194.04	32.32	1,216.94	1,443.30	0.72
Methanol	-	0.84	-	-	0.84	<0.01
Nickel	-	31.64	-	-	31.64	0.02
Chromium	-	50.62	-	-	50.62	0.03
Diphenylmethane	-	50.62	-	-	50.62	0.03
Toluene	-	8.78	18.89	-	27.67	0.01
Xylene	-	128.23	3.98	-	132.21	0.07
Methyl isobutyl ketone	-	-	1.49	-	1.49	<0.01
Ethyl benzene	-	-	0.50	-	0.50	<0.01
HAP	50,000.00	270.73	24.86	72.46	368.05	0.18
PM	278.00	50.62	-	-	50.62	0.03

Source: Honeywell FM&T (2023)

[1] As presented in Title V Permit calculations used for KCNSC NMO for SNL/NM under operating Permit # 515, later modified to relocated Large Painting Booth under Certificated of Registration NM/011/2068-RV1 and amended to include Small Painting Booth.

3.3.1.2 Climate Change and Greenhouse Gases

Climate change is a global process that is affected by the total of greenhouse gases (GHGs) in the Earth's atmosphere. The incremental contribution to global GHGs from a single proposed land management action cannot be accurately translated into its potential effect on global climate change or any localized effects in the area specific to the action. Currently, global climate models are unable to forecast local or regional effects on resources because of specific emissions. However, there are general projections regarding potential impacts to natural resources and plant and animal species that may be attributed to climate change resulting from the accumulation of GHG emissions over time. GHGs influence the global climate by increasing the amount of solar energy retained by land, water bodies, and the atmosphere. GHGs can have long atmospheric lifetimes, which allow them to become well mixed and uniformly distributed over the entirety of the Earth's surface no matter their point of origin. Therefore, potential emissions resulting from the Proposed Action can be compared with state, national, and global GHG emissions totals to provide context of their significance and potential contribution to climate change impacts.

Table 3-6 shows the total estimated GHG emissions from fossil fuels at the global, national, and state scales over the previous 5 years. Emissions are shown in megatonnes (Mt) per year of carbon dioxide equivalent (CO_2e). State and national energy-related CO_2 emissions include emissions from fossil fuel use across all sectors (residential, commercial, industrial, transportation, and electricity generation) and are released at the location where the fossil fuels are consumed. The continued increase of anthropogenic GHG emissions over the past 60 years has contributed to global climate change impacts.

Table 3-6. Global and U.S. GHG Emissions, 2015–2020 (Mt CO_2/year)

Scale	Emissions (Mt CO_2/year)				
	2016	2017	2018	2019	2020
Global	36,465.6	36,935.6	37,716.2	37,911.4	35,962.9
U.S.	5,077.0	5,005.5	5,159.3	5,036.0	4,535.3
State (New Mexico)	48.7	49.3	45.1	48.3	NA

Sources: Annual GHG Report (Bureau of Land Management 2022), Chapter 6, Table 6-1 (Global and U.S.) and Table 6-3 (State).
Mt (megatonne) = 1 million metric tons
NA = not available

3.3.2 Environmental Impact

3.3.2.1 Proposed Action

Under the Proposed Action, KCNSC NMO would continue current operations of KCNSC NMO, accommodating expansions in the operation by the lease of new locations and the expected demolition and construction of new facilities on KAFB. The expansion of operations would continue to operate within the thresholds of COA Air Quality Source Registration Certificate # 2068-RV1 / NPDES EPA certificate NMNOE3438.

KCNSC NMO facilities would generate emissions levels anticipated to fall below the limits defined in the existing COA Source Registration and EPA NPDES certificate in the near term and would be covered under those existing documented environmental limits. Construction associated with any operational expansion may result in temporary increased emissions from construction equipment; however, these emissions would be temporary and would not exceed any of the limits defined in the existing documented environmental limits. The expansion of operations may require installation of new/updated emission control units at these 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 the facilities to maintain compliance and watch for any changes in the regulations. If future growth in operations would result in emissions exceeding the current limits, the NNSA would seek to amend the existing documented limits or request that a new permit be issued in accordance with applicable federal and State regulations. The upgrade and expansion of operations would not affect the overall attainment status of the area, would not exceed the NAAQS, and would maintain compliance with the State Implementation Plan.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the NNSA would continue to operate and monitor air emissions from KCNSC NMO facilities 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 exceed the current permitted limits, the NNSA would apply for an amendment to the existing permit or request a new permit in accordance with applicable federal and State regulations. Continued operations of KCNSC NMO facilities would not affect the overall attainment status of the area, would not exceed the NAAQS, and would maintain compliance with the NMED and Bernalillo County.

3.4 Geology and Soils

3.4.1 Affected Environment

3.4.1.1 Geology

The existing KCNSC NMO facilities are located within the Belen-Albuquerque-Santo Domingo Basin, between the Sandia and Manzano Mountains to the east and the Colorado Plateau to the west. It is the largest in a series of north-trending basins in the Rio Grande trough (JCB Engineering 2023a). The Air Park, Alamo/Craddock, Buildings 20397 and 20401, NEST, and the NRGROC are underlain by the Upper Santa Fe Group (map symbol QTs), which includes the Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Arroyo Ojito, Ancha, Puye, and Alamosa Formations. The Santa Fe Group undivided includes basin fill and associated volcanic rocks of the Rio Grande rift. Locally, the Santa Fe Group represents Pliocene and upper Miocene formations of the upper Santa Fe Group within the Albuquerque Basin and piedmont alluvial deposits. The geology underlying the OWC is mapped as Piedmont alluvial deposits (map symbol Qp) and includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. The 2.77-acre vacant lot adjacent to Alamo/Craddock is mapped as alluvium (map symbol QTsp) of the Santa Fe Group (Hawley et al. 1996; Williams and Cole 2007). This includes the upper Ceja (Sierra Ladrones) and lower Zia Formations of Pliocene and late Miocene age.

3.4.1.2 Seismicity

Although the site is in the seismically active Rio Grande rift, the seismic hazard in the region is only minor compared to the western U.S. in general. A probabilistic hazard assessment demonstrates a threat significantly lower than in California and even in areas in the Basin and Range province such as the Salt Lake valley, Utah. (Wong et al. 2004).

The U.S. Geological Survey conducted a 66-month-long study of earthquake activity near Albuquerque, New Mexico, during 1976–1981 (Jaksha and Sanford 1986). Analysis of over 1,000 events with magnitudes as large as 3.2 revealed that most of the seismicity fell into three regions: (1) the Socorro and Albuquerque areas of the Rio Grande rift, (2) the Mount Taylor area, and (3) the Estancia Basin. Most of the young faults of the rift are seemingly inactive, and the rift cannot be delineated based on seismicity.

In the Albuquerque area, the largest magnitude earthquake of the century, a recorded magnitude 4.7 on the Richter scale, occurred on January 4, 1971. Six earthquakes with a magnitude of four or greater have occurred in the vicinity of Albuquerque in the past 10 years, with none above a magnitude of 5 (Earthquake List 2023).

3.4.1.3 Soils

Table 3-7 lists the soil units mapped and key soil characteristics underlying the existing KCNSC NMO facilities. The underlying soils are considered highly disturbed due to previous construction and development activities (Natural Resources Conservation Service 2013). The 2.77-acre vacant lot adjacent to Alamo/Craddock contains three soil map units (represented below in Table 3-7): cut and fill in the northern portion, Wink fine sandy loam in the central portion, and Bluepoint-Kikan association in the southern portion (Honeywell FM&T 2023).

Table 3-7. Soil Units Mapped under KCNSC NMO Facilities

Mapped Soil Type	Applicable Facility	Drainage Class	Runoff Class	Hydric	Farmland Classification	K-Factor*
Bluepoint-Kikan association, hilly	Alamo/Craddock, NEST	Somewhat excessively drained	Very low	No	Not prime farmland	0.17

Mapped Soil Type	Applicable Facility	Drainage Class	Runoff Class	Hydric	Farmland Classification	K-Factor*
Bluepoint loamy fine sand, 1 to 9 percent slopes	NEST	Somewhat excessively drained	Low	No	Not prime farmland	0.2
Cut and fill land	Air Park, Alamo and Craddock	N/A†	N/A	N/A	Not prime farmland	N/A
Latene sandy loam, 1 to 5 percent slopes	NRGROC	Well drained	Low	No	Not prime farmland	0.24
Madurez-Wink association, gently sloping	OWC	--†	--	No	Not prime farmland	--
Tijeras gravelly fine sandy loam, 1 to 5 percent slopes	OWC	--	--	No	Not prime farmland	--
Wink fine sandy loam, 0 to 5 percent slopes	Air Park, Alamo and Craddock, Buildings 20397 and 20401, NEST, NRGROC	Well drained	Very low	No	Not prime farmland	0.28

Source: Natural Resources Conservation Service (2013)

* 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.

† not applicable

† data missing

3.4.2 Environmental Impacts

3.4.2.1 Proposed Action

The continuation and expansion at all or select operations at the existing KCNSC NMO facilities could involve the minor disturbance of previously modified land areas within the project area. Construction on the vacant lot adjacent to Alamo/Craddock could disturb up to 2.77 acres of soil. The NNSA would ensure the appropriate permits and implement sedimentation and erosion control measures, including development of a Stormwater Pollution Prevention Plan (SWPPP) to avoid stormwater runoff were obtained. Subsurface geotechnical engineering investigations will be performed for any new construction that will identify and mitigate any hazards due to soil condition (liquefaction, collapse, etc.).

3.4.2.2 No Action Alternative

Under the No Action Alternative, no construction or soil disturbance is anticipated to occur, and operations would continue as they do today.

3.5 Water Resources

3.5.1 Affected Environment

3.5.1.1 Surface Water

The existing KCNSC NMO facilities and project area are within the Rio Grande-Albuquerque watershed (Hydrologic Unit Code (HUC)-8 13020203), which is split between the City of Albuquerque Subwatershed (HUC-12 130202030304) and the Lower Tijeras Arroyo Subwatershed (HUC-12 130202030203) (U.S. Geological Survey 2023) (Figure 3-3). The Alamo building, Air Park facility, NEST, and Craddock facilities

are within the City of Albuquerque Subwatershed, and the on-base facilities (NRGROC, Buildings 20397 and 20401, and the OWC) are all within the Lower Tijeras Arroyo Subwatershed.

Surface water runoff in the City of Albuquerque Subwatershed is generally captured by the COA storm sewer system (COA 2023). Near the Alamo building, Air Park facility, NEST, and Craddock facilities, surface runoff flows generally west across Yale Boulevard and into unnamed tributaries to the Kirtland Channel approximately 0.3 mile west of the Alamo Building. The Kirtland Channel runs 0.8 mile west to the South Diversion Channel, which enters the Rio Grande approximately 4 miles south of the project area.

Surface water runoff from on-base is directed towards retention/detention ponds. Pond overflows follow natural and constructed channels southward to Tijeras Arroyo and travel east-southeast approximately 7 miles to the Rio Grande.

Floodplains. The Alamo building, Air Park facility, NEST, and Craddock facilities are covered by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels 35001C0361G and 35001C0342G. The NRGROC is in FIRM Panel 35001C0362H. Buildings 20397 and 20401 and the OWC site are covered by FIRM Panel 35001C0366H (Bernalillo County 2023). All these areas are mostly rated as Flood Hazard D by FEMA, meaning that no estimation of flood hazard has been conducted (see Figures 3-3 and 3-4).

Two small areas within the off-base properties in the project area are rated as Flood Hazard Zone A by FEMA. This includes a 0.57-acre area 280 feet south-southwest of Craddock D (Figure 3-3). An approximately 70-foot corridor centered on the Kirtland Channel and located 130 feet north of the buildings to be part of NEST is also rated as Flood Hazard A (Bernalillo County 2023). Flood Hazard A is used by the FEMA FIRM program to designate areas with a 1% risk of flooding, or a 100-year recurrence interval. The Kirtland Channel is owned by the COA as a stormwater conveyance structure with freeboard designed to accommodate the FEMA 1% risk floodplain.

Wetlands and Waters of the United States. The project area is primarily made up of intensely developed urban public, private, and military property. The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2023) does not list any wetlands within the project area (see Figures 3-3 and 3-4). Drainages within the project area, as defined by the National Hydrography Dataset (NHD), are also depicted on Figures 3-3 and 3-4).

At the time of analysis, the definition of Waters of the United States is under Court-ordered review by the EPA and the U.S. Army Corps of Engineers. The expected result of the review is that the 100-year floodplains, ephemeral arroyos, and constructed channels that occur within the project area will not fall under the revised definition of Waters of the United States.

Stormwater. Because the State of New Mexico has not acquired primacy under the Clean Water Act (CWA), the EPA administers compliance with NPDES stormwater permitting requirements for the KCNSC NMO facilities and operations. Under that authority, the EPA has issued a No Exposure Certification (NMNOE3438) and excluded the facility from permitting under the Stormwater Multi-Sector General Permit for stormwater discharges associated with industrial activity. The facility was issued the Certificate in December 2021, and the Certificate will expire in December 2026.

In 2017, KCNSC NMO was inspected by the COA under the Industrial and High-Risk Stormwater Management Program. There were no major or minor findings of the inspection.

KAFB has a Stormwater Management Plan that covers runoff from its own facilities. Like other base tenants, KCNSC NMO is responsible for adhering to all environmental laws and obtaining all their own applicable permits (city, local, state, federal). This would include permits related to wastewater and stormwater.

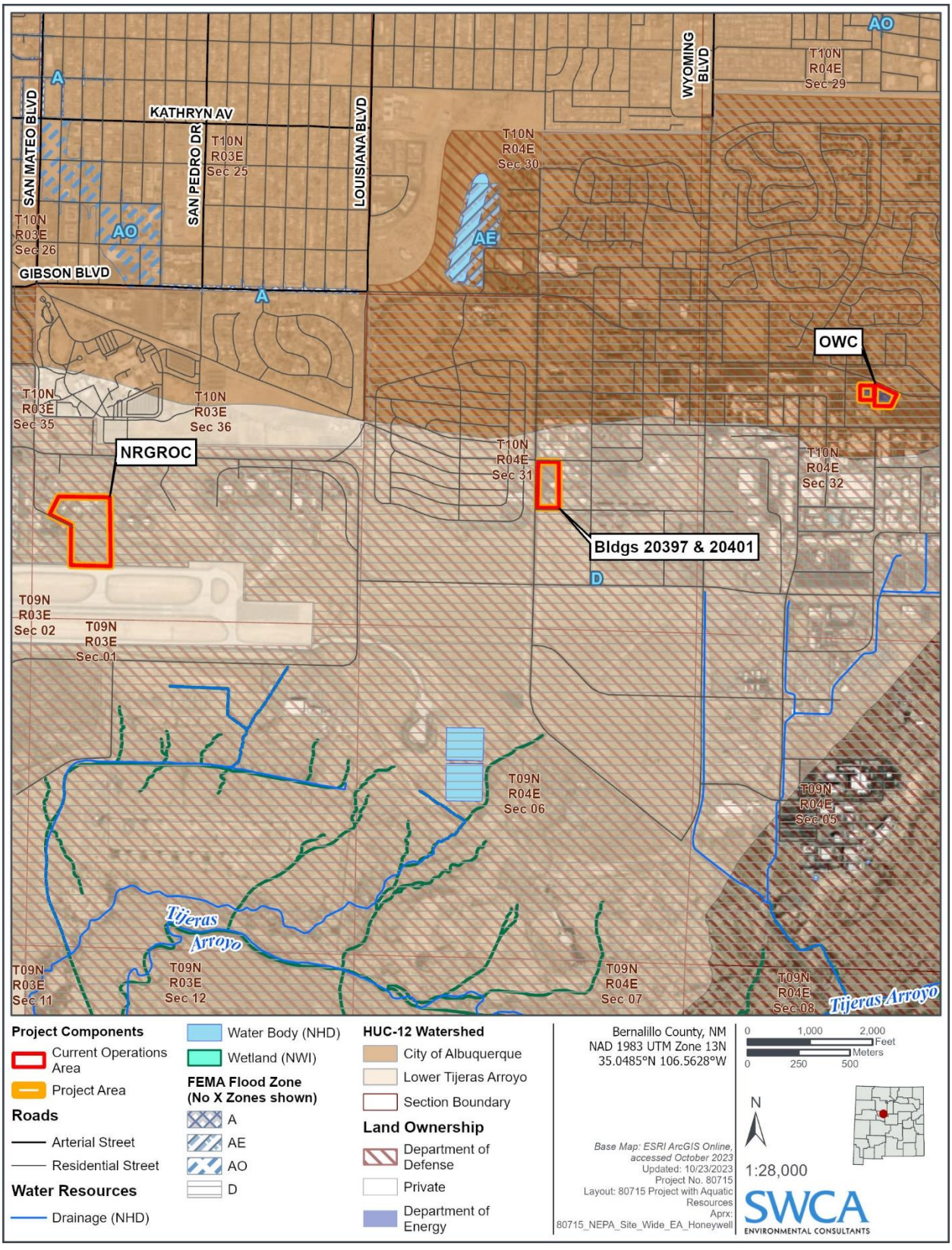

Figure 3-3. Water resources in the project area (wetlands, watersheds, and FEMA Flood Hazard Zones).

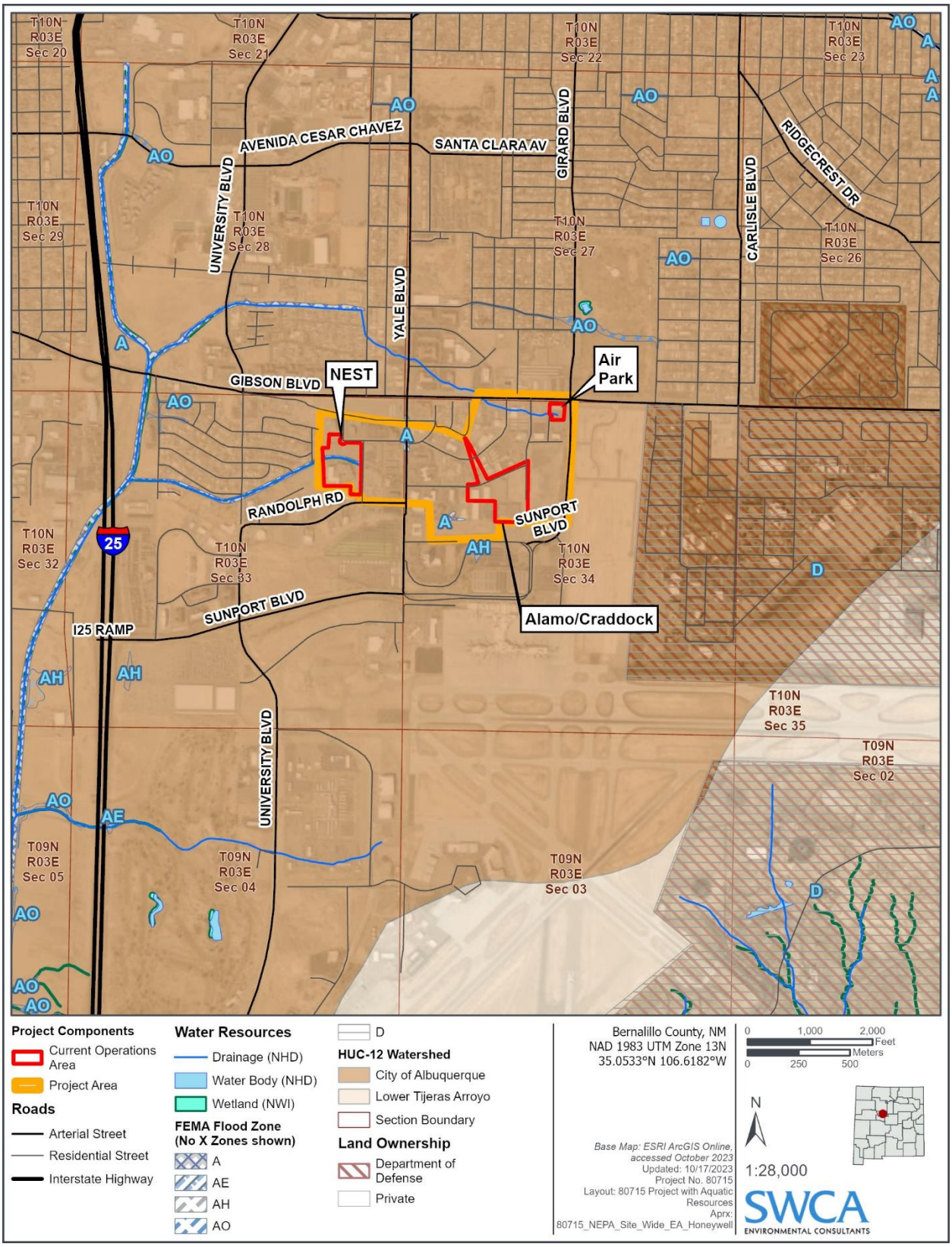

Figure 3-4. Water resources in the project area (wetlands, watersheds, and FEMA Flood Hazard Zones).

3.5.1.2 Groundwater

The subsurface stratigraphy of the analysis area is divided between the axial-fluvial member (QTsa) and the piedmont member (QTsp) of the Sierra Ladron Formation of the Santa Fe Group, a series of basin-filling sedimentary units of Pliocene to early Pleistocene age (Travis et al. 2021). Most water-supply wells in the project area have screened intervals that range from approximately 318 to 1,200 feet below the land surface.

Stable isotopic data suggest a distinct north-south boundary between recharge from the eastern mountain front and that from the Rio Grande. Water beneath approximately two-thirds of the COA is predominantly of Rio Grande origin infiltrated from areas north of the city (Plummer et al. 2012).

Groundwater quality in the project area has been documented as part of the 1999 KAFB Bulk Fuels Facility. The plume is moving to the northeast with the local groundwater flow, which is away from the project area (see Figure 3-5, from Galanter and Curry 2019). In general, the quality of groundwater under the project area is good. Water-supply wells contain calcium-type water, with sodium- or potassium-type water from the shallow wells (Plummer et al. 2012).

3.5.1.3 Water Use

Water is supplied by Albuquerque Bernalillo County Water Utility Authority (ABCWUA). There are several water wells used by the ABCWUA near the project area (see Figure 3-5). Water on KAFB is supplied to KCNSC NMO under the Base Service Agreement (USAF 2020).

3.5.2 Environmental Impacts

3.5.2.1 Proposed Action

All operations would continue to occur within building envelopes, preventing the potential introduction of materials and wastes into surface water and groundwater resources. The upgrade and expansion of operations at the existing KCNSC NMO facilities could involve minor soil disturbances to accommodate construction and/or installation of parking lots or other minor facility renovations. The NNSA would obtain the appropriate permits and implement sedimentation and erosion control measures, including development of a SWPPP to manage stormwater runoff during those activities. If construction would be proposed within areas that fall under a new definition of Waters of the United States, a jurisdictional determination would be obtained by the NNSA and, if triggered, a Section 404 permit (nationwide or individual) would be requested, depending on the amount of fill to be placed within the site's jurisdictional boundaries. Mitigation could be required depending on the level of impact. No impacts to groundwater sources would occur.

Future on- and off-base locations would be assessed for surface water features such as wetlands, stream channels, and floodplains. Field studies would be conducted to support coordination with permitting agencies if minor improvements are proposed at the identified site (e.g., parking or access expansion, utilities, minor facility renovation). The NNSA would ensure the appropriate permits are obtained and implement sedimentation and erosion control measures, including development of a SWPPP to manage stormwater runoff during those activities. At this time, no specific sites have been identified.

3.5.2.2 No Action Alternative

Under the No Action Alternative, no construction or soil disturbance would occur, so no changes in surface water conditions on or near either facility would occur. Operations at all facility locations would continue as they do today.

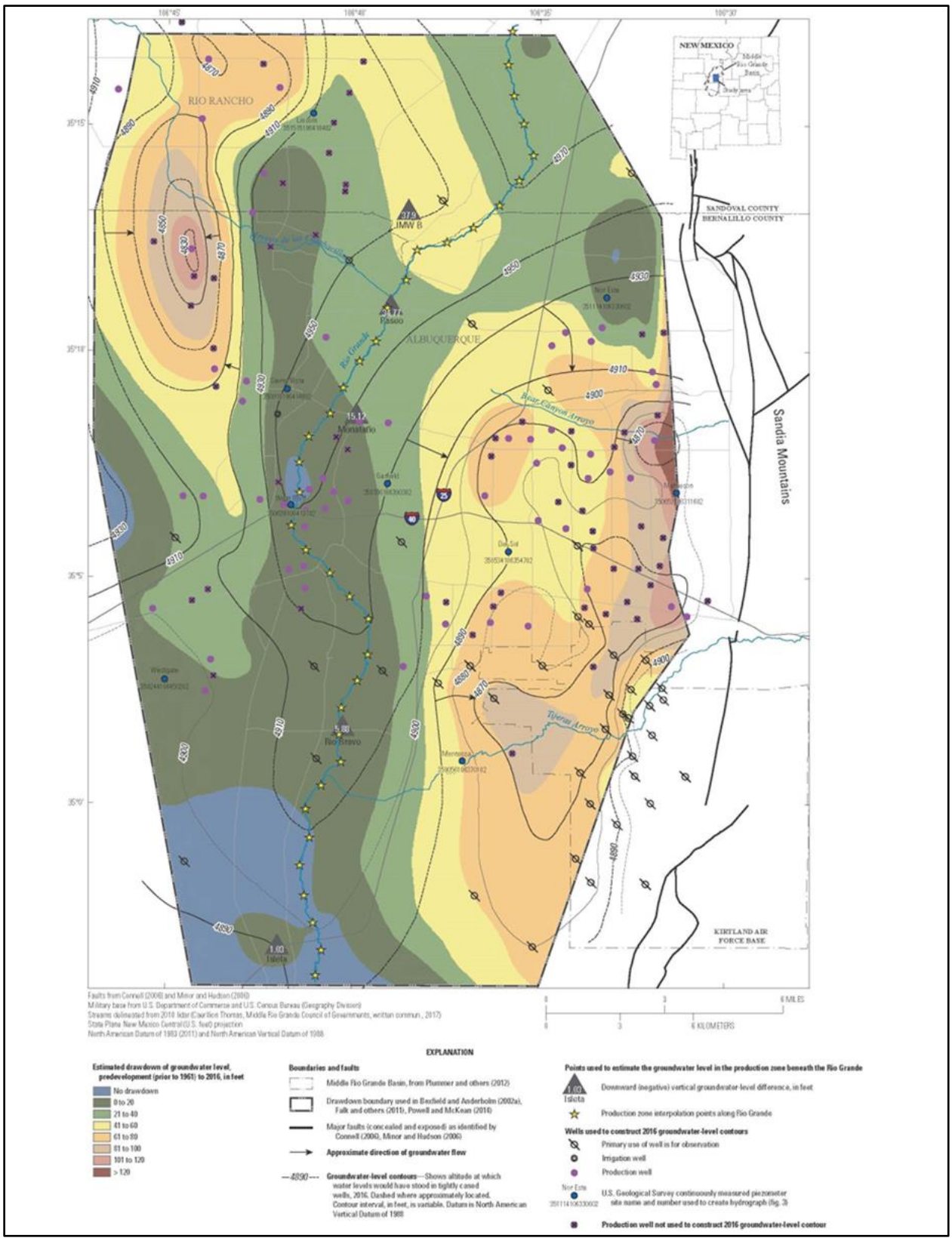

Figure 3-5. Groundwater wells and estimated 2016 groundwater levels: Albuquerque area, central New Mexico (from Galanter and Curry 2019).

3.6 Biological Resources – Vegetation and Wildlife

3.6.1 Affected Environment

3.6.1.1 Vegetation

The existing KCNSC NMO facilities and project area are within the Albuquerque Basin Level IV ecoregion, characterized by sand sage (*Artemisia filifolia*) and desert grassland including black grama (*Bromus eriopoda*), sand dropseed (*Sporobolus cryptandrus*), mesa dropseed (*S. flexuosus*), blue grama (*B. gracilis*), galleta (*Pleuraphis jamesii*), alkali sacaton (*S. airoides*), and threeawns (*Aristida* sp.) (EPA 2017). However, establishment of KCNSC NMO and prior commercial activity resulted in the removal of any native habitats that may have been present. The areas surrounding all facilities have also been cleared over time to accommodate development. Remnants of these native habitats may be present along drainages and on undeveloped parcels primarily in the eastern portion of the Alamo/Craddock site and in the southern portion of the NRGROC site. Open areas of the other 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 NMO facilities removed much of the native habitats across the project area that supported wildlife species. Remnants of such habitats are now limited to undeveloped areas along drainages. Non-native, human-created landscapes now provide much of the habitat for wildlife species. These areas include residential neighborhoods that likely support wildlife species that have adapted to human development, including a variety of bird and small rodent species, as well as racoon (*Procyon lotor*), skunk (*Mephitis mephitis*), and opossum (*Didelphidae* sp). Raptor species including turkey vulture (*Cathartes aura*) and several hawk (*Buteo* sp.) species may also forage along roadsides. While wildlife could access the sites, the project vicinity is highly disturbed and there is a lack of connectivity to natural habitat.

Five federally listed species and one candidate species are listed for Bernalillo County, New Mexico, by the USFWS. Table 3-8 lists their habitat requirements within the project area; no species have been identified as having the potential to occur within the project area. No critical habitats have been identified within the project area.

The Migratory Bird Treaty Act (16 United States Code [USC] §§ 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 KCNSC NMO facilities, the migratory bird species present are those highly adaptable to human activity and are most likely to use nearby undeveloped habitats.

Table 3-8. Federally Listed Species in Bernalillo County, New Mexico

Species (Scientific Name)	Status	Habitat Requirements	Potential for Occurrence in the Project Area
Mexican spotted owl (*Strix occidentalis lucida*)	T	Predominantly associated with closed-canopy forests such as old-growth mixed conifer forests. Spotted owls roost and nest in large trees associated with chaparral and pinyon (*Pinus* spp.) woodlands, including deep, steep-walled canyons. Designated critical habitat is present in Bernalillo County.	Unlikely to occur in the analysis area due to the lack of closed-canopy forests associated with deep, steep-walled canyons. Additionally, the nearest designated critical habitat is in the Sandia Mountains, approximately 10 miles east of the analysis area.
Monarch butterfly (*Danaus plexippus*)	C	In New Mexico, the migration peaks in April and subsides by mid-May. Breeding occurs within the state, and a new generation matures in New Mexico by July. As breeding continues, peak in-state population numbers are reached in August and September. The southward migration back to Mexico begins in late August and September. During the breeding season in New Mexico, the monarch requires milkweed species (*Asclepias* sp.) as a food source for the young caterpillars (Cary and DeLay 2016). Overall, monarchs seem to be most abundant in southeast New Mexico. There is currently no evidence that monarchs overwinter in New Mexico.	Unlikely to occur in the proposed project area due to the lack of abundant flowering plants or riparian habitat that could be utilized for foraging habitat and milkweed vegetation that could be utilized as breeding habitat.
New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	E	The New Mexico meadow jumping mouse is endemic to New Mexico, Arizona, and a small area of southern Colorado. The mouse appears to only use two riparian community types: 1) persistent emergent herbaceous wetlands (i.e., beaked sedge [*Carex utriculata*] and reed canary grass [*Phalaris arundinacea*] alliances) and 2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willows (*Salix* spp.) and alders [*Alnus* sp.]). No designated critical habitats occur in Bernalillo County.	Unlikely to occur in the analysis area due to a lack of wetland or riparian habitat.

Species (Scientific Name)	Status	Habitat Requirements	Potential for Occurrence in the Project Area
Rio Grande silvery minnow (*Hybognathus amarus*)	E	Historically, the Rio Grande silvery minnow was one of the most abundant and widespread fishes in the Rio Grande basin (from Espanola, New Mexico, to the Gulf of Mexico) (Bestgen and Platania 1991). It was also found in the Pecos River, a major tributary of the Rio Grande, from Santa Rosa, New Mexico, downstream to its confluence with the Rio Grande (Pflieger 1980). The last known collections of this species from the Pecos River took place in 1968 near Roswell, New Mexico (53 Fed. Reg. 11821-11828). The Rio Grande silvery minnow occupies a variety of habitats in low-gradient, large streams with shifting sand or silty bottoms (Propst and Hatch 1985). Designated critical habitat occurs in Bernalillo County.	Unlikely to occur within the analysis area due to the lack of perennial riparian habitat connected to the Rio Grande, which is approximately 1.5 miles away.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	E	Breeds and migrates through relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes and reservoirs. Historically nested in native vegetation including willow, seepwillow (*Baccharis salicifolia*), boxelder (*Acer negundo*), buttonbush (*Cephalanthus* spp.), and cottonwood (*Populus* spp.). This subspecies nests in native vegetation but also uses thickets dominated by non-native tamarisk (*Tamarix* spp.) and Russian olive (*Elaeagnus angustifolia*) or in mixed native and non-native stands of vegetation. In New Mexico, it is known to breed along the Gila River and the Rio Grande.	Unlikely to occur due to a lack of riparian habitat.
Yellow-billed cuckoo (*Coccyzus americanus*)	T	Only the western population beyond the Pecos River drainage has been listed as threatened under the Endangered Species Act. Breeds and migrates through riparian habitat and associated drainages; springs, developed wells, and earthen ponds supporting mesic vegetation; and deciduous woodlands with cottonwoods and willows. Dense understory foliage is important for nest site selection. Nests in willow, mesquite (*Prosopis* spp.), cottonwood, and hackberry (*Celtis occidentalis*); forages in similar riparian woodlands. Requires patches of at least 25 acres for breeding-nesting.	Unlikely to occur in the analysis area due to a lack of riparian habitat along large aquatic sources, such as a river or large riparian habitat with associated ponds. In addition, there are no known occurrences of yellow-billed cuckoo within the vicinity of the analysis area.

USFWS-listed species: C = Candidate, E = Endangered, T = Threatened

3.6.2 Environmental Impacts

3.6.2.1 Proposed Action

No federally listed species have the potential to occur in the project area; therefore, no federally listed species would be impacted by the implementation of the Proposed Action. The expansion, reconfiguration, and/or relocation of all or select operations at the KCNSC NMO facilities would not remove or disturb habitat or displace resident or migratory wildlife. Minor improvements may be made in areas currently occupied by lawn or paved parking areas to accommodate operations. Any disruption to wildlife present on or adjacent to either property would be minimal and temporary, such as noise from construction equipment. Building exteriors and grounds adjacent to areas proposed for improvement would be assessed for the presence of nesting birds. If active nests are discovered, removal of the nests to facilitate the proposed activities would not occur until after the young have fledged.

Because future activities within the project area would contain existing buildings, parking lots, access drives, vacant disturbed land, and utilities, no wildlife habitat would be expected to be removed. Activities in the project area should not disrupt resident or migratory wildlife.

3.6.2.2 No Action Alternative

Under the No Action Alternative, no construction, land disturbance, or modifications to existing infrastructure and vacant areas at the existing KCNSC NMO facilities would occur that would impact vegetation or wildlife.

3.7 Cultural Resources

3.7.1 Affected Environment

Most of the project area either contains buildings or is covered with asphalt/concrete. Two potential areas within the project area are vacant pieces of property that have likely been subject to some disturbance in the past. Consultation with the New Mexico State Historic Preservation Office regarding buildings 20397 and 20401 occurred on July 7, 2016, and were found to be not historic and not eligible for inclusion in the National Register of Historic Places (Wilcher and Bupp 2015). There are no known historic properties located within the project area.

3.7.2 Environmental Impacts

3.7.2.1 Proposed Action

There are no known historic properties located within the project area. One of the parcels within the project area, adjacent to the Alamo/Craddock – NRGROC location, is within the boundaries of the installation and would likely require archaeological survey prior to any ground-disturbing activities per Section 106 of the National Historic Preservation Act. The other vacant parcel is adjacent to Alamo/Craddock and is currently owned by the COA. Prior to ground disturbance, an archaeological survey is likely to be required following the City of Albuquerque Archaeological Ordinance, as well as Section 106 of the National Historic Preservation Act.

3.7.2.2 No Action Alternative

Because there are no known historic properties, no changes would occur in the management of cultural resources in the project area. No construction, land disturbance, or modifications to existing infrastructure and vacant areas at the existing KCNSC NMO facilities would occur that would impact cultural resources.

3.8 Infrastructure

3.8.1 Affected Environment

3.8.1.1 Utilities

Utilities on KAFB are primarily supplied to KCNSC NMO under the Base Service Agreement (USAF 2020). The agreement covers water, electricity, natural gas, solid waste, and sewage collection.

Electrical Systems. On-base, KCNSC NMO purchases electrical power through the Western Area Power Administration. A separate contract is established with the Public Service Company of New Mexico for off-base locations. All electricity to the facilities comes through various switching stations on an approximately 80-million-volt-ampere capacity electrical circuit. There is adequate transmission capacity.

Natural Gas and Propane. The natural gas commodity for on-base KCNSC NMO centers is purchased through KAFB and the Defense Energy Support Center. The gas transportation contract is established through New Mexico Gas Company, which also supplies off-base KCNSC NMO buildings.
The distribution lines on the base are owned by the Federal Government, and the 6-inch main (70 pounds per square inch) north of the proposed site can accommodate present and future gas needs.

Liquid Fuel. Liquid fuels are supplied to KCNSC NMO by contractors. The primary liquid fuels supplied include JP-8 (jet fuel), diesel, gasoline, and heating oil. All these fuels are purchased in bulk, delivered to the KCNSC NMO facilities by tanker truck, and stored in storage tanks of various sizes at the NNSA facility. The primary use for liquid fuels by KCNSC NMO is to power land-based vehicles and aircraft.

Water Supply Systems. Off-base, all water is supplied by the ABCWUA. Water is supplied to on-base KCNSC NMO facilities by KAFB's seven groundwater wells and distribution systems that have a collective water-pumping maximum of 9.3 million gallons per day. KAFB has a Water Rights Agreement with the State of New Mexico that allows it to withdraw up to 6,400 acre-feet per year from the underground aquifer, which is equal to approximately 2 billion gallons of water (NNSA 2022).

Sanitary Sewer/Wastewater Systems. KAFB does not have its own sewage treatment facility. On- and off-base KCNSC NMO buildings deliver wastewater to the ABCWUA collection and treatment facilities. KAFB is permitted a fixed amount of 70,805,000 gallons of sewer discharge per month, which accommodates the sanitary sewer/wastewater needs for the KCNSC NMO facilities.

Solid Waste. Solid waste generated at KAFB, which includes generation from NNSA activities, is collected by contractors and disposed of at the Cerro Colorado Landfill. Off-base KCNSC NMO facilities are serviced by the COA, which operates the Cerro Colorado Landfill (Permit # SWM- 010221 and SWM-010221(SP)). The Cerro Colorado Landfill will not be filled until 2037 (COA 2008).

3.8.1.2 Transportation

Paved surface streets connect the KCNSC NMO facilities and are maintained by the COA, Department of Municipal Development. These streets connect to state highways and Interstates 25 and 40, which are all maintained by the New Mexico Department of Transportation. Paved surface streets within KAFB are maintained by the Mission Support Group Civil Engineer Division (377 MSG/CE).

Amtrak provides scheduled passenger transport service at the downtown rail station, along with the New Mexico Rail Runner, run by the Rio Metro Regional Transit District. The COA also provides both traditional city buses and rapid transit.

Sunport, approximately 0.5 mile south of the Craddock facilities, is operated by the COA Aviation Department. The Sunport is serviced by eight major carriers flying non-stop to 20 destinations. Annually, 5 million passengers use the Sunport. In addition, the COA also runs Double Eagle II Airport, a general aviation facility on Albuquerque’s west side.

3.8.2 Environmental Impacts

3.8.2.1 Proposed Action

The utilities serving the existing KCNSC NMO facilities have sufficient capacity to support upgraded and expanded operations, and no changes or associated impacts would occur. Similarly, there would be no significant increases in demand for transportation infrastructure.

Construction. Consequent to the kind of federal actions anticipated by this SWEA, there may be a need for remodeling of existing buildings or whole-scale construction on new facilities, both on-base and off-base. Such activity will, in every case, follow local, state, and federal building standard practices and, if on-base, the KAFB, USAF, and DOD standard practices for the construction of base facilities. All relevant and required permits will be obtained prior to the start of activities. All local, state, and federal requirements for worker safety and health will be followed for contracted and federal work. It should be noted that worker safety for the NNSA and its contractors are obligated to follow 10 CFR 851, Worker Safety and Health Program. If construction is deemed a major action, proper NEPA documentation will be provided.

Demolition. Like construction, it is assumed that the need to demolish existing structures on- and off-base will be required and covered by this SWEA. Removal of existing buildings will also follow standard practices, permitting requirements, and worker safety and NEPA documentation as relevant to the demolition activities.

3.8.2.2 No Action Alternative

Under the No Action Alternative, the existing infrastructure would continue to be used with no new additional services required.

3.9 Socioeconomics and Environmental Justice

3.9.1 Affected Environment

3.9.1.1 Population, Employment, and Income

The analysis area for socioeconomics and EJ consists of Census Tracts 12.02 and 9800 in Bernalillo County, New Mexico, which encompass the project area. Table 3-9 provides an overview of the population demographics and socioeconomic indicators in the analysis area, the Albuquerque metropolitan area, the state of New Mexico, and the United States, for comparison. The population statistics for 2010 are presented as a baseline to illustrate population growth from 2010 to 2020 (Table 3-10).

Table 3-9. Population, Median Household Income, and Poverty Percentage for the Analysis Area, Albuquerque Metropolitan Area, New Mexico, and United States

Statistic		Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Population		8,599	916,528	2,117,522	331,449,281
Gender (%)	Female	46.6	50.8	50.6	50.8
	Male	53.4	49.2	49.4	49.2

Statistic		Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Age	Under 18 years	2,723 (31.7%)	197,754 (21.6%)	276,041 (13.0%)	81,872,275 (24.7%)
	18 to 34 years	3,566	209,912	211,339	67,047,155
	35 to 64 years	1,932	348,284	376,822	125,246,065
	65 years and over	378 (4.4%)	158,530 (17.3%)	172,506 (8.15%)	54,074,028 (16.3%)
Median household income ($) (2017–2021 period average)	2017–2021 period average	51,865	60,070	53,992	69,717
	2020	--	58,512	50,822	67,521
Poverty threshold (family of four – two adults and two children)		--	--	--	26,246
Persons in poverty (%) (2017 – 2021 period average)		11.5	11.3	14.3	9.1

Sources: U.S. Census Bureau (2010, 2020, 2021)

Table 3-10. Population of Analysis Area Compared with Albuquerque Metropolitan Area, New Mexico, and United States

Location	2010	2020	Percent Change
Analysis area	--*	8,599	--
Albuquerque metropolitan area	887,077	916,528	3.3
New Mexico	2,059,179	2,117,522	2.8
United States	308,345,764	331,449,281	7.5

Source: U.S. Census Bureau (2010, 2020)

*Not available.

Table 3-11 summarizes the general racial and ethnic characteristics of the analysis area compared to the Albuquerque metropolitan area and the state of New Mexico.

Table 3-11. Race and Ethnicity for the Analysis Area, Albuquerque Metropolitan Area, New Mexico, and United States

Statistics		Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Hispanic or Latino (any race)	Total	2,932	439,138	1,032,950	60,481,746
	Percent	34.1	47.9	49.3	18.4
White alone		4,546	483,912	1,078,937	204,277,273

Statistics		Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Black or African American alone		755	25,777	45,904	41,104,200
American Indian and Alaska Native alone		415	60,151	212,241	3,727,135
Asian alone		408	23,298	37,469	19,886,049
Native Hawaiian and other Pacific Islander		37	1,128	2,093	689,966
Other race alone		946	133,032	318,632	27,915,715
Two or more races		1,492	189,230	422,246	33,848,943

Sources: U.S. Census Bureau (2010, 2020)

3.9.1.2 Environmental Justice

EJ refers to the fair treatment and meaningful involvement of people of all races, cultures, and incomes with respect to the development, implementation, and enforcement of environmental laws, regulations, programs, and policies (CEQ 1997). Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 16, 1994), requires federal agencies to determine whether proposed actions would have disproportionately high and adverse environmental impacts to minority, low-income, and American Indian populations of concern. The CEQ has developed guidance to assist federal agencies with their NEPA procedures so that EJ concerns are effectively identified and addressed. The guidance focuses on identifying minority and low-income EJ populations using census data.

Within the analysis area, census tracts are the geographic units of analysis used for gathering information about low-income and minority populations. The state of New Mexico and the Albuquerque metropolitan area are used as the reference area for determining whether minority or low-income EJ populations exist within the census tracts. Low-income populations are defined as individuals or groups of people whose income is less than or equal to twice (200% of) the federal poverty threshold, as identified by the U.S. Census Bureau. Minority populations include the following population groups: American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Black or African American, some other race (other than White), a combination of two or more races, or Hispanic (CEQ 1997). Except for White non-Hispanics, all other racial and ethnic groups are considered minorities; therefore, the total minority population of an area is calculated by subtracting the White non-Hispanic population from the total population. Members of tribal populations include all persons having origins in any of the original peoples of North America and South America (including Central America), and who maintain tribal affiliation or community attachment. Any American Indian or Alaska Native population qualifies as a tribal population, and membership in a federally recognized tribe is not required. All tribal populations qualify as EJ populations, regardless of the percentage of the analysis area population they constitute. In addition, dispersed tribal populations can also constitute EJ populations if they do not reside within the analysis area but depend on cultural resources or places located on land within the analysis area. The U.S. Census Bureau characterizes persons in poverty (low-income persons) as those whose incomes are less than a statistical poverty threshold.

Based on the data presented in Tables 3-9 and 3-11 on minority and low-income populations for the analysis area and reference areas, it was determined that there are low-income and minority EJ communities of concern present in the analysis area. Areas with greater than the state average of minority population border the analysis area to the northeast, west, and south. Areas with greater than the state average of low-income populations border the analysis area to the west and south. Nearby, areas of Hispanic population lie generally in historic settlement patterns west of Interstate 25, in areas called the North Valley and South Valley. In the North Valley, Los Ranchos de Albuquerque has a higher-than-state-

average Hispanic concentration. Old Town, the original center of Albuquerque, also has a higher-than-state-average Hispanic concentration. The Pueblo of Isleta and Isleta Pueblo Trust Lands are adjacent to the southern boundary of KAFB. In addition, the Pueblo of Isleta represents the largest landholding of a minority population adjacent to KAFB. High concentrations of low-income populations west of Albuquerque include the Pueblo of Laguna and its outlying Native American villages. Similarly, portions of the Pueblo of Isleta, south of the city, have high percentages of low-income individuals. To the southeast, the rural Hispanic villages of Tajique, Torreon, and Escobosa are also low-income. To the north, high concentrations of low-income populations are in the Pueblos of Jemez, San Felipe, Santo Domingo, and Cochiti, as well as in the rural Hispanic villages of La Cienega and Jemez Springs. High concentrations of low-income populations occur west of the analysis area along the Rio Grande, in the predominantly Hispanic South Valley neighborhoods (DOE 1999).

3.9.1.3 Community Services

The existing KCNSC NMO facilities are served by the COA Police Department, Fire Department, and Emergency Medical Services and Rescue Services. The closest medical centers providing trauma services are the Veterans Administration Medical Center within the analysis area vicinity, and Presbyterian Hospital approximately 2 miles to the northeast of the analysis area. No churches, schools, or other community facilities are located within the analysis area.

3.9.2 Environmental Impacts

3.9.2.1 Proposed Action

With the continuation of existing operations and the expansion, reconfiguration, and/or moving of all or select operations at the existing KCNSC NMO, additional employees would be hired to support the current and projected workloads. At this time, the number of additional employees needed over the next 5 to 10 years is undetermined. The KCNSC NMO facilities are located within a populated area of Albuquerque that supports industrial and commercial employers. The Proposed Action is focused on existing property/facility acquisition but may require major construction or facility demolition. However, any new construction would occur on a vacant lot and would not displace any homes or businesses or result in any changes to surrounding neighborhoods.

The expansion of operations would also provide additional jobs and indirectly support local businesses (e.g., restaurants, gas stations/convenience stores). No disproportionately high impacts to EJ populations are anticipated under the Proposed Action. No changes in travel times by emergency responders would occur. No community facilities would be affected by the expansion of operations at the existing KCNSC NMO facilities.

3.9.2.2 No Action Alternative

Employment at the KCNSC NMO facilities would be largely maintained at current levels in the short term and would be expected to increase over time to support the current and anticipated workloads and the facilities' needs. No displacements and no changes to surrounding neighborhoods would occur. No disproportionately high 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 NMO facilities generate and require the management of non-hazardous and hazardous wastes. Waste management operations consist mainly of hazardous and non-hazardous waste storage in preparation of off-site treatment or disposal. State of New Mexico and federal hazardous

waste statutes, including 40 CFR Parts 260, 261, 264, and 270 and the corresponding State regulations, regulate waste generated by the existing KCNSC NMO facilities.

KCNSC NMO 's management of wastewater, including sanitary sewage, is addressed in Section 3.8.1 of this SWEA. Domestic solid waste collection is discussed in Section 3.8 of this SWEA. On-base activities are administered by the USAF (2020) support agreement.

KCNSC NMO generated approximately 21,917 pounds of hazardous and non-hazardous wastes in fiscal year 2020 (Table 3-12). Approximately 57.5 pounds, or approximately 0.26%, of the total waste generated in 2020 was recycled, reclaimed, or used for energy recovery. Section 3.3.10.3 of this SWEA further addresses waste minimization and recycling activities at the KCNSC NMO facilities.

Table 3-12. Hazardous and Non-hazardous Wastes Produced by KCNSC NMO in Fiscal Year 2020

2022	Total Hazardous Waste Generation (pounds)	Total Universal Waste Generation (pounds)	Total Non-Hazardous Waste Generation (pounds)
January	124	25	92
February	140	-	320
March	410	1,104	5,705
April	78	27	429
May	149	77	238
June	30	25	537
July	104	10	4,296
August	5	27	-
September	748	24	656
October	108	-	4,149
November	53	-	297
December	674	-	1,256
Annual Total	2,623	1,319	17,975

Source: JCB Engineering (2023b)

Waste minimization is an integral part of KCNSC NMO's Environmental Management system. It is an ongoing effort to systematically reduce material releases to all environmental media, as well as to 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 recycled materials as process inputs.

Opportunities to minimize waste and pollutants, including chemical wastes, are identified through Preliminary Hazard Assessment reviews of all new projects and processes. The Preliminary Hazard Assessment process is a multidisciplinary review of health, safety, environmental, utility engineering, and waste management concerns. All construction projects managed by KCNSC NMO 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.

In 2020, approximately 1.7 million pounds, or 81%, of the total waste generated at the KCNSC NMO facilities was recycled, reclaimed, or used for energy recovery. Refer to Table 3-13 for detailed

quantification of waste generation, recycling, and disposal. Approximately 97% of all wastes generated from production activities was recycled in 2020. 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 off-site and used as waste-to-energy to power homes and cement kilns. Approximately 14% of this waste stream was used for fuel blending in cement kilns and approximately 25% was used for co-generation in the production of electric power. Additional minor amounts of industrial wastes are captured by the Industrial Wastewater Pretreatment Facility at KCNSC NMO Botts campus and disposed of in accordance with applicable regulations.

Recycling and reclamation of wastes at the existing KCNSC NMO facilities has steadily increased over the previous 5 years. This increase results from KCNSC NMO'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. One of the future actions contemplated by this SWEA is the purchase of the COA-owned, 2.7-acre vacant lot just east of the Craddock facilities located at 2445 Alamo Avenue. The design of the anticipated facility to be built on the site is expected to be an industrial-type building like that of the existing KCNSC NMO, with limited earthwork and/or excavation associated with a building foundation. It will be used as a short-term, hazardous materials storage site for the Craddock facilities.

3.10.1.2 Hazardous Waste

KCNSC NMO is regulated by federal and State hazardous waste regulations and is subject to inspections under the RCRA conducted by the EPA and NMED. KCNSC NMO is registered separately as a large-quantity generator of hazardous waste, defined as facilities that generate 1,000 kilograms per month of hazardous waste or more than 1 kilogram per month of acutely hazardous waste. Hazardous substances generated at KCNSC NMO in Fiscal Year 2020 as defined by the Emergency Planning and Community Right-to-Know Act (EPCRA) are listed in Table 3-13.

Table 3-13. Total EPCRA Section 313 Chemical Usage in Fiscal Year 2020

Compound	Form	Amount (pounds)	EPCRA Reporting Threshold) (pounds)
4,4-Diphenylmethane-diisocyanate		5	10,000
Aluminum (in aluminum oxide)		107	10,000
Cadmium		1,459	10,000
Chromium		1,632	10,000
Copper	alloy	1,949	10,000
	wire	3,957	10,000
Ethylene glycol		94	10,000
Lead	lead-acid batteries, Craddock facilities	14,014*	10,000
Methanol		93	10,000
Methyl ethyl ketone		39	10,000
Nickel	stainless steel/ni-cad batteries	763	10,000
Nitromethane		8	10,000
Pentane polyfluoroalkyl substances		171	10,000
Sulfuric acid	lead-acid batteries, Craddock facilities	38	10,000

Compound	Form	Amount (pounds)	EPCRA Reporting Threshold) (pounds)
Toluene		5,547	500
Zinc		1,799	10,000

Source: JCB Engineering (2023b).

*The lead content of lead acid batteries has a reporting threshold of 10,000 lbs, whereas the reporting threshold for lead in solder is 100 lbs, which also counts toward the 10,000-lb threshold. There were 1.23 lbs against the 100 lb threshold, 7,724 lbs against the 10,000 lb threshold in Alamo-Craddock D, and 6,289 lbs, including the 1.23 lbs of lead in solder and 31 lbs of lead in brass, against the 10,000 lb for all Craddocks A, B and C. So, neither the 100 lb lead threshold nor the 10,000 lb lead threshold was exceeded at any of the sites.

Several operations at the KCNSC NMO 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 on-site management, transport, and disposal at off-site facilities permitted in accordance with applicable federal, State, and local requirements. Additionally, Honeywell FM&T 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.

Hazardous wastes subject to the RCRA are stored on-site for a period of less than 90 days in compliance with RCRA requirements for large-quantity generators. These wastes are then transported off-site by licensed transporters or are transferred to KCNSC NMO CWA-permitted Industrial Wastewater Pretreatment Facility. Recycling, treatment, or disposal of wastes occurs at facilities currently in compliance with federal and State hazardous waste regulations, as applicable. Operations that contribute most hazardous wastes generated at the KCNSC NMO facilities include wastewater treatment, plating, and etching processes.

The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) 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 the EPCRA, the NNSA routinely reviews the lists of extremely hazardous substances in Appendices A and B of 40 CFR Part 355 for the chemicals used on-site at the KCNSC NMO facilities (JCB Engineering 2023b). Under the Tier II requirements of EPCRA, an extremely hazardous substance is any substance for which a facility must maintain a Safety Data Sheet under the Occupational Health and Safety Administration Hazard Communication Standard (29 CFR 1910). Of the hazardous wastes used at KCNSC NMO during 2020, only a few have regulatory limits. All chemicals, except sulfuric acid in batteries, are below the reporting threshold (JCB Engineering 2023b).

3.10.2 Environmental Impacts

3.10.2.1 Proposed Action

The volume of waste generation would increase at the existing KCNSC NMO facilities with the update and expansion of operations. Regardless of the characteristics of the waste stream, management of non-hazardous and hazardous 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. Wastes would be minimized through continued and expanded reuse and recycling efforts.

Operations at a future industrial/warehouse facility within the project area would also generate various waste streams, and the management and disposal of those wastes would occur in the same manner in which they are addressed for the existing KCNSC NMO facilities. At this time, no specific sites have been identified.

Handling and transportation of hazardous wastes would become safer, since the Proposed Action assumes the purchase of the vacant lot directly east of the Craddock facilities. The area would be specially designed to store these types of hazardous materials. In addition, by storing the material on-site, transportation over public roadways would be minimized versus storing it elsewhere and transporting it to the site for use.

3.10.2.2 No Action Alternative

Under the No Action Alternative, no changes would occur in the management of non-hazardous, hazardous, and 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 NMO facilities to implement and monitor its environmental protection responsibilities. These systems monitor and maintain compliance with applicable federal, State, and local regulations to ensure continued safety and health of the public. The KCNSC NMO facilities have no history of spills or releases of hazardous materials into the environment. All locations have historically been compliant with all applicable EPA regulations and have no recorded violations (JCB Engineering 2023a).

3.11.1.2 Worker Safety and Health

KCNSC NMO maintains an Emergency Action Plan (Honeywell FM&T2022) to enhance the safety of employees and minimize injuries to personnel, responders, the public, and the environment during an emergency. The EAP provides guidance, maps, and references to be used in mitigating emergencies at the KCNSC NMO facilities. The KCNSC All-Hazards Survey meets the requirements of DOE O 151.1D, Comprehensive Emergency Management System, Contractor Requirements Document, which requires that a Hazards Survey be conducted to identify the conditions to be addressed by the Comprehensive Emergency Management Program. KCNSC NMO underwent a hazardous materials screening process for the All-Hazards Survey. KCNSC NMO had no hazardous materials to warrant subsequent modeling and evaluation in an Emergency Planning Hazards Assessment.

3.11.2 Environmental Impacts

3.11.2.1 Proposed Action

Under the Proposed Action, the EAP would be revised to accommodate the anticipated new operational extent. If operations change significantly, a new hazards survey would be conducted, and a new emergency management program would be developed and implemented.

3.11.2.2 No Action Alternative

Under the No Action Alternative, worker health and safety would be ensured in the current fashion.

3.12 Intentional Destructive Acts

A fundamental principle of the DOE's safeguards and security program is a graded approach to the protection of its employees and assets. This approach is embodied in the relevant threat considerations

and designations of facilities. The DOE intends that the highest level of protection be given to security interests where loss, theft, compromise, or unauthorized use would adversely affect national security, the health and safety of employees and the public, and the environment.

This graded approach categorizes all DOE assets into one of four "Threat Levels" based on the general consequence of loss, destruction, or impact to public health and safety at a facility or the program, project, or activity conducted. Per the DOE's Design Basis Threat Policy (DOE Order 470.3A), which is Classified, the current designation for KCNSC NMO is Protection Level 7 (PL7). This is the level assigned to a facility that has the lowest risk based on the general consequence of loss, destruction, or impact to security and public health and safety. In assigning the PL7 designation, the DOE has evaluated the security, health, and safety impact of the facility and has determined the impact to be low.

A Design Basis Threat analysis for a new facility would be conducted in conjunction with the design process. It is expected to result in assignment of the Threat Level 4 designation to this facility. Intentional destructive acts at the proposed new facility (e.g., terrorism, internal sabotage) have been evaluated and determined to have a low potential to impact security and public health and safety. The impact of an intentional destructive act would have no greater environmental or public health and safety consequence than the worst-case industrial accident scenario as discussed in Section 3.11.

4.0 CUMULATIVE IMPACTS

According to CEQ regulations, the cumulative effects analysis of an EA should consider the potential environmental impacts resulting from "the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (40 CFR 1508.1(g)(3)). Cumulative effects can "result from individually minor but collectively significant actions taking place over a period of time." Cumulative effects may occur when there is a relationship between a proposed action or alternative and other actions expected to occur in a similar location or during a similar time frame. The effects may then be incremental and may result in cumulative impacts. Actions overlapping with or in proximity to the proposed action or alternatives can reasonably be expected to have more potential for cumulative effects on "shared resources" than actions that may be geographically separated. Similarly, actions that coincide in the same time frame tend to offer a higher potential for cumulative effects. This SWEA addresses cumulative impacts to assess the incremental contribution of the alternatives to impacts on affected resources from all factors. The NNSA has attempted to identify actions on or near the affected areas that are under consideration and in the planning stage at this time. These actions are included in the cumulative effects analysis, drawn from the level of detail that exists now. Although the level of detail available for those future actions varies, this approach provides the decision-maker with the most current information to evaluate the consequences of the proposed action alternatives.

4.1 Current and Reasonably Foreseeable Future Actions

In addition to this KCNSC NMO SWEA, the NNSA Sandia Field Office is currently preparing a new SWEIS for the continued operation of SNL/NM (DOE/EIS-0556). The SNL/NM SWEIS, which will be based upon a completely independent analysis, will analyze the potential environmental impacts of the reasonable alternatives for continuing operations of SNL/NM within KAFB and the COA area where SNL/NM has leased facilities for approximately the next 15 years. Currently, facilities and capabilities that support many NNSA and other DOE mission priorities are found only at SNL/NM. The NNSA needs to continue SNL/NM operations to meet its core mission requirements. A further purpose of the continued operation of SNL/NM is to provide capabilities available at the site in support of strategic partnership projects, under which SNL/NM oversees national security–related research, development, and testing programs and conducts work for other entities, including other federal and state government agencies, industry, and academic institutions. The proposed alternatives are: no-action, modernized operations, and expanded operations. The SNL/NM SWEIS preferred alternative expanded operations includes (1) construction and operation of new facilities and (2) upgrades to existing facilities that would result in changing the nature and capabilities of these facilities.

KAFB spans approximately 50,000 acres located at the foothills of the Manzano Mountains. KAFB is home to the 377th Air Base Wing of the USAF Global Strike Command. The installation is a center for research, development, and testing of nonconventional weapons, space and missile technology, and laser warfare. KAFB is an active military installation that undergoes changes in mission and training requirements in response to defense policies, current threats, and tactical and technological advances. Reasonably foreseeable future actions within KAFB are listed in Table 4-1.

Table 4-1. Reasonably Foreseeable Future Actions within KAFB

Project Name	Description
New Mexico Army National Guard (NMArmyNG) 515th Regional Training Institute	The New Mexico Army National Guard proposes to relocate their 515th Regional Training Institute from the Oñate Training Complex in Santa Fe to KAFB. Construction would include a 40-acre maneuver and driver's training course with motor pool and classrooms near the Tijeras Arroyo Golf Course.

Project Name	Description
Demolition and Construction of Military Support Facilities	The USAF proposes to demolish and construct, operate, and maintain several military personnel support facilities. The areas include the Visiting Officer Quarters, the Main Enlisted Dormitory Campus, the Noncommissioned Officer Academy, and Dormitory Campus 2. This project would include the demolition of facilities totaling approximately 498,000 square feet and construction of facilities totaling approximately 389,000 square feet, resulting in a net decrease of approximately 109,000 square feet of building space on the installation. Approximately 36 acres would be impacted by construction and demolition activities.
Building Demolitions	The USAF is in the process of demolishing 23 buildings totaling approximately 105,000 square feet to make space available for future construction and to fulfill its mission as installation host through better site utilization.
Construct Security Forces Complex	The USAF proposes to construct, operate, and maintain a 42,500-square-foot security forces complex to provide adequate space and modern facilities to house all 377th Security Forces Group administrative and support functions in a consolidated location. The 377th Security Forces Group functions that would be transferred to the new security forces complex include a base operations center with command-and-control facility, administration and office space, training rooms, auditorium or assembly room, guard mount, hardened armory for weapons and ammunition storage, confinement facilities, law enforcement, logistics warehouse, general storage, vehicle garage with maintenance area, and associated communications functions. One existing building (879 square feet) within the footprint of the proposed security forces complex would be demolished. This project would result in an increase of 41,621 square feet of building space on the installation.
Construct New Military Working Dog Facility	The USAF proposes to construct, operate, and maintain a new military working dog facility that consists of 14 indoor/outdoor kennels, four isolation kennels, storage and staff space, restrooms, a food storage room, a covered walkway, and a veterinarian examining room, totaling 8,000 square feet. A parking area with 25 spaces and new access roads would also be constructed as part of the project. Demolition of facilities totaling 2,520 square feet would also be included in this project, resulting in a net increase of 5,480 square feet of building space on the installation.
Enhanced Use Lease	KAFB has leased approximately 70 acres of USAF property along Gibson Boulevard to Thunderbird Kirtland Development Partners to develop the area into a mixed-use development that could include office, retail/commercial, corporate apartments, hotel, gasoline station, and restaurant space uses. Roadways for access and vehicular movement through the development, parking, and landscape areas would be constructed, as well as utility infrastructure to support activities. TKD would demolish the existing recreation facilities, which include a concession stand/storage building.
Renewable Energy Projects	The USAF proposes to install various renewable energy technologies installation-wide, including an up to 20-megawatt solar photovoltaic array and rooftop/carport solar photovoltaic systems.
Development, Testing, Use, and Training at the Technical Evaluation Assessment Monitor Site	The Defense Threat Reduction Agency and USAF propose to enhance the testing and training capabilities, use, and functionality of the TEAMS area. Specifically, the proposed facilities and activities include the following: a new radiological source storage facility, a mock train station, in-kind replacement of current TEAMS temporary buildings with permanent buildings, and potential increase in testing and training event personnel levels by up to 50 percent. Approximately 2.7 acres would be affected during construction activities.

Project Name	Description
AC-130 Formal Training Unit Relocation	The Air Force is relocating the Special Operations Command AC-130J Ghostrider Formal Training Unit from Hurlburt Field, Florida, to KAFB, New Mexico and organizationally realigning the unit under the 58 Special Operations Wing. The Proposed Action also includes personnel needed to operate and maintain the AFSOC AC-130J, and construction of several new and/or modification of existing facilities on the installation to support the relocation. Students operating the AC-130J aircraft would conduct training from the installation and in existing Special Use Airspace (both military operations area and Restricted Areas) and would conduct live fire training at Melrose Air Force Range, New Mexico.
Zia Park Area Development	Development of a former housing area, called Zia Park, which encompasses approximately 300 acres of land central to the primary cantonment area of KAFB, is likely to be completed in various phases over the next 15 years. Construction would include administrative buildings, infrastructure improvements, medical facilities, community services, residential lodging, outdoor recreation space, and demolition of several facilities that would be redundant with new construction (e.g., gyms, child development center, dormitory).
DOD SATCOM GT Facility	The DOD proposes to develop and operate a satellite communications ground terminal (GT) facility on approximately 15 acres of previously disturbed land in the northwestern portion of KAFB. The GT facility would consist of three 44.3-foot-diameter dish antennas, enclosed within approximately 72-foot-high radome enclosures, an associated equipment shelter, two emergency generators, perimeter fencing, a sensor equipment tower, and utilities. The facility would include multiple concrete pads to accommodate all the structures. An additional pad would be constructed for a temporary, small, transportable antenna and emergency generator.
United States Space Force STARCOM Delta 11 and 12 Beddown	The United States Space Force proposes to locate three Space Delta units (Delta 10, Delta 11, and Delta 12) of the Strategic Training and Readiness Command (STARCOM) at USAF installations in the U.S. DAF has selected KAFB as the preferred alternative for locating Delta 11 Headquarters and an alternative location for the Delta 12 beddown. If relocated to KAFB, the proposed action would include renovation and reuse of Buildings 20362 (28,500 square feet), 20363 (29,300 square feet), and 20364 (29,500 square feet).
Air Force Research Laboratory (AFRL) Facility	AFRL proposes to consolidate high-energy laser effects and numerical simulation research and development activities into a single 67,970-square-foot building, bringing together high-power test facilities with supporting modeling/simulation capabilities. This project allows the demolition of eight 50+ year old facilities.
AFRL Archival Storage	AFRL proposes to construct a modern archival facility for the collection, storage, and preservation of documents, media, artifacts. Construction would include a 75,000-square-foot facility with loading docks, storage yards, perimeter wall, improvements to roadways, new roadway construction, and parking lots.
Space Rapid Capabilities Office Building	The Space Rapid Capabilities Office is constructing a new secure facility to accommodate 240 seats and an auditorium.
Bioenvironmental Engineering Facility	KAFB is constructing a 10,775-square-foot replacement Bioenvironmental Engineering Facility consisting of environmental, radiological, industrial hygiene, and administrative functions. One building will be demolished in association with this project.
AFRL Re-Entry Vehicle Integration Laboratory	Air Force Research Laboratory proposes to construct secure facilities totaling up to 12,000 square feet consisting of an Operating Facility, Radiographic Test Facility, and Storage Facility.

Project Name	Description
AFRL Systems and Digital Engineering Lab	AFRL proposes to construct a 16,000-square-foot Addition and Alteration Systems and Digital Engineering Lab with Alterations to Building 592. This project will construct a new systems and digital engineering lab, including a two-story steel-frame structure with reinforced concrete pier, beam, foundation, and floors; stucco-finished reinforced CMU walls, typical facility infrastructure, secure spaces, light labs, lab support spaces, and typical shared/circulation spaces. Alterations to B592 include finish upgrades to lab support areas and reconfiguration of existing office and secure spaces. Demolition includes Buildings 591, 593, 30114, 30125, 30127, 30134, and 30136 (18,001 square feet).
Joint Nuclear Weapons Center Headquarters	The USAF proposes to construct a secure office necessary for the operation of 243 military, civilian, and contractor personnel.
New Substation 10	The purpose of the project is to rebuild Substation 10 with upgrades and in a central location to better handle the electrical loads of both Substations 3 and 10. After the rebuilding of Substation 10, Substation 3 and the current Substation 10 will no longer be required and will be razed.

4.2 Potential Cumulative Impacts

The analysis area for cumulative impacts is a 1-mile radius surrounding the project area. Multiple construction, renovation, and demolition projects described above could occur within 1 mile of the project area. These actions primarily would occur in previously developed or disturbed areas, and adverse cumulative impacts to land use are not expected. Other past, present, or reasonably foreseeable actions within a 1-mile radius would require temporary and permanent soil disturbance. Most of these projects are in areas that have previously been developed, which is expected to minimize the need for excavation or site leveling. Therefore, no substantial changes to regional geology or topography are expected. Because soils across much of the cumulative impact analysis area have previously been disturbed, which is typical of developed urban areas, adverse cumulative impacts to natural soils are not expected to be significant. New and renovated facilities described above would be designed in accordance with applicable local and state building codes to mitigate seismic risk.

The Proposed Action would have short- and long-term, minor, adverse impacts on air quality from emissions of criteria pollutants from construction equipment, vehicles, and generators. Cumulative impacts to air quality could occur from the Proposed Action and other construction projects if they occur at the same time. However, emissions from the Proposed Action would be negligible compared to emissions from the other larger construction projects. GHG emissions occur locally, but GHG impacts and climate change are both global in scale and cumulative over time.

Operations at a future industrial/warehouse facility within the cumulative impact analysis area would generate various waste streams, and the management and disposal of those wastes would occur in the same manner in which they are addressed for the existing KCNSC NMO facilities. Temporary storage and handling of hazardous wastes would become safer under the Proposed Action, since the Proposed Action assumes the purchase of the vacant lot directly east of the Craddock facilities and their conversion into a hazardous waste transfer facility. Overall, cumulative impacts from hazardous materials would occur; however, control measures and best management practices would be implemented with each project to minimize impacts, and cumulative adverse impacts from hazardous materials and waste would be negligible.

Some of the projects described above would be associated with potential infrastructure expansions and upgrades and may place new demands on the overall infrastructure network, resulting in cumulative impacts to infrastructure when combined with the Proposed Action. However, these impacts are anticipated to be minor. Short-term cumulative impacts to socioeconomics could occur if the projects described above occur simultaneously with the Proposed Action. No cumulative impacts to biological or cultural resources are anticipated to occur.

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 update operations at KCNSC NMO and provide the flexibility to expand select operations within the project area.

5.1 Regulatory Agencies

Federal and State laws and local ordinances are the basis for the environmental, safety, and health requirements for KCNSC NMO and NNSA facilities and operations. In addition to DOE, the EPA, USAF, and the Department of Transportation are responsible for implementing federal environmental, safety, and health statutes. Worker health and safety is administered by DOE Worker Health and Safety, under 10 CFR Part 851 Worker Safety and Health Program, Subparts A to E and appendices.

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 NMED; 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 NMED administers environmental regulatory programs that affect NNSA facilities and operations. State law allows NMED, the Environmental Improvement Board, and/or the Water Quality Control Commission to create detailed standards of environmental protection. Rules are compiled in the New Mexico Administrative Code (NMAC) and actions contrary to them are illegal. The NMED oversees programs related to public health, the protection of air and water resources, and solid and hazardous waste.

The CAA, CWA, and the RCRA have the greatest effect on the maintenance of related permits. Other regulations that affect the KCNSC NMO facilities are those adopted under the Toxic Substances Control Act of 1976 and the U.S. Department of Transportation (49 CFR 171-180). In addition, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (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 KCNSC NMO and would maintain compliance for those applicable under the Proposed Action.

Table 5-1. Major Federal Environmental Laws

Environmental Law and Regulation	Requirements
CAA	Enacted in 1970, 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 O_3-depleting substances, Section 112(r) emergency release regulations, and operating permit requirements. The State of New Mexico has an EPA-approved program administered by the NMED.
CWA	The 1972 amendments establish the NPDES to control pollutants discharged to Waters of the United States from a point source. The EPA establishes technology-based effluent limitations and requires permits for discharges. The State of New Mexico has an approved program administered by the NMED; in addition, KCNSC NMO has a No Exposure Certification.

Environmental Law and Regulation	Requirements
CERCLA	Enacted in 1980, CERCLA establishes requirements for hazardous materials that may be subject to certain reporting requirements.
Superfund Amendments and Reauthorization Act	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 EPCRA program and requires reporting of hazardous chemical usage and release.
Toxic Substances and Control Act	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.
RCRA	Enacted in 1976, the RCRA regulates the generation, storage, handling, treatment, and disposal of hazardous wastes.
Community Environmental Response Facilitation Act of 1992	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.
Federal Facilities Compliance Act (Public Law 102-386)	This Act waives sovereign immunity for federal facilities under the RCRA, including KCNSC NMO, and requires development of plans and agreements with states for the management of specific waste streams.
Pollution Prevention Act of 1990	This Act establishes the Federal Government's preference for source reduction followed by recycling rather than treatment or disposal of waste or pollutants.
NEPA	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.
Occupational Safety and Health Act of 1970	The DOE, through 10 CFR §851, exercises its jurisdiction over worker safety and health programs at KCNSC NMO by substantially adopting *Occupational Safety and Health Act of 1970* standards to enhance safe, healthy working conditions in places of employment throughout the United States. While the DOE and EPA each have a mandate to reduce exposure to toxic substances, the Occupational Safety and Health 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.
Federal Pipeline Safety Regulations (various)	Created in 2004, the Pipeline and Hazardous Materials Safety Administration, an agency of the U.S. Department of Transportation, 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	Requirements
Air Quality (Statewide): 20.2.1-20.2.350 NMAC	Limits the quantity, rate or concentration, or combination thereof, of emissions of air contaminants on a continuous basis, including any requirements relating to the operation or maintenance of a source to ensure continuous reduction.
Ground and Surface Water Protection: 20.6.2 NMAC	To prevent or abate water pollution in the state or in any specific geographic area, aquifer, or watershed of the state or in any part thereof, or for any class of waters, and to govern the disposal of septage and sludge and the use of sludge for various beneficial purposes.
Hazardous Waste Management: 20.4.1 - 20.4.3 NMAC	To help ensure the maintenance of the quality of the state's environment; to confer optimum health, safety, comfort, and economic and social well-being on its inhabitants; and to protect the proper utilization of its lands.
Mosquito Abatement and Control: 20.8.2 NMAC	To prevent or control the occurrence of mosquitoes that are a nuisance or are capable of transmitting disease to humans or domestic animals.
Petroleum Storage Tank Regulations: 20.5.101-20.5.125 NMAC	To prevent leaks and spills through equipment, monitoring, testing, installation, removal, and other requirements, which are enforced through inspections. Require corrective action such as repairing or closing the tank system and cleaning up the spill or leak.
Standards for Interstate and Intrastate Streams: 20.6.4 NMAC	The State of New Mexico is required under the New Mexico Water Quality Act and the federal CWA, as amended (33 USC Section 1251 et seq.), to adopt water quality standards that protect the public health or welfare and enhance the quality of water and that are consistent with and serve the purposes of the New Mexico Water Quality Act and the federal CWA.
Bernalillo County Sec. 30-36. - Permits, permit appeals to the board and permit fees.	Any person intending to construct or modify any source, except as otherwise specifically provided by regulation, to obtain a construction permit from the Planning & Development Services Department prior to such construction or modification; and any person intending to operate any source for which an operating permit is required pursuant to the 1990 amendments to federal Clean Air Act, 42 USC 7401 et seq., as amended, except as otherwise specifically provided by regulation, to obtain an operating permit from the Planning & Development Services Department.
City of Albuquerque 20.11 NMAC local air quality regulations	The Albuquerque-Bernalillo County Air Quality Program, administered by the City of Albuquerque Environmental Health Department, is authorized to implement and enforce clean air regulations to protect public health within the boundaries of the City of Albuquerque and Bernalillo County. The Albuquerque-Bernalillo County Air Quality Program issues permits for stationary sources of air pollution and open burning, and oversees the regulated processes for asbestos removal, demolition, and fugitive dust. Air quality permits, notifications, and certificates of registration allow businesses to operate while protecting public health and natural resources.
Sec. 30-83. - Requirements for the placement of fill materials on and/or within private and/or public property	The purposes of this article are to protect the citizens and the environment from the adverse effects of improper placement of substances during the act of filling property.
Sec. 30-116. - Noise regulation	To prohibit unnecessary, excessive, and annoying noises from all sources subject to the County of Bernalillo police power.
Ord. 18-1995: Water Conservation Landscaping and Water Waste	To reduce water waste.

5.3 Consultations

Minimal amounts of land disturbance and minor increases in emissions and waste generation would occur as operations are expanded at the existing and proposed KCNSC NMO facilities. As workload and staffing levels demand, modifications to existing buildings and expansion of parking areas would occur. Purchase of the COA-owned vacant lot adjacent to the Craddock facilities is anticipated.

The USAF requires that permittees follow the Environmental Impact Analysis Process prior to modifications of permitted property, including ground disturbance, construction, and/or demolition, via the submission of USAF Form 813.

If required by law, consultation with the USFWS on potential impacts to federally listed species would be initiated prior to expansion of the KCNSC NMO facilities. If required by law, cultural resources surveys and Section 106 of the National Historic Preservation Act consultation would also accompany such activity.

Consistent with Section 106 of the National Historic Preservation Act and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, NNSA KCFO initiated Government-to-Government Tribal Consultation with the tribes and pueblos listed below. NNSA invited federally recognized Tribal Nations to consult and provide any comments, concerns, or suggestions relevant to the SWEA. Tribal consultation is ongoing.

- Pueblo of San Ildefonso
- Pueblo of Acoma
- Pueblo of Cochiti
- Pueblo of Isleta
- Pueblo of Jemez
- Jicarilla Apache Nation
- Pueblo of Laguna
- Mescalero Apache Tribe
- Pueblo of Nambe
- Navajo Nation
- Ohkay Owingeh
- Pueblo of Picuris
- Pueblo of Pojoaque
- Pueblo of Sandia
- Pueblo of San Felipe
- Pueblo of Santa Ana
- Pueblo of Santa Clara
- Pueblo of Santo Domingo
- Pueblo of Taos
- Pueblo of Tesuque
- Pueblo of Zia
- Pueblo of Zuni

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