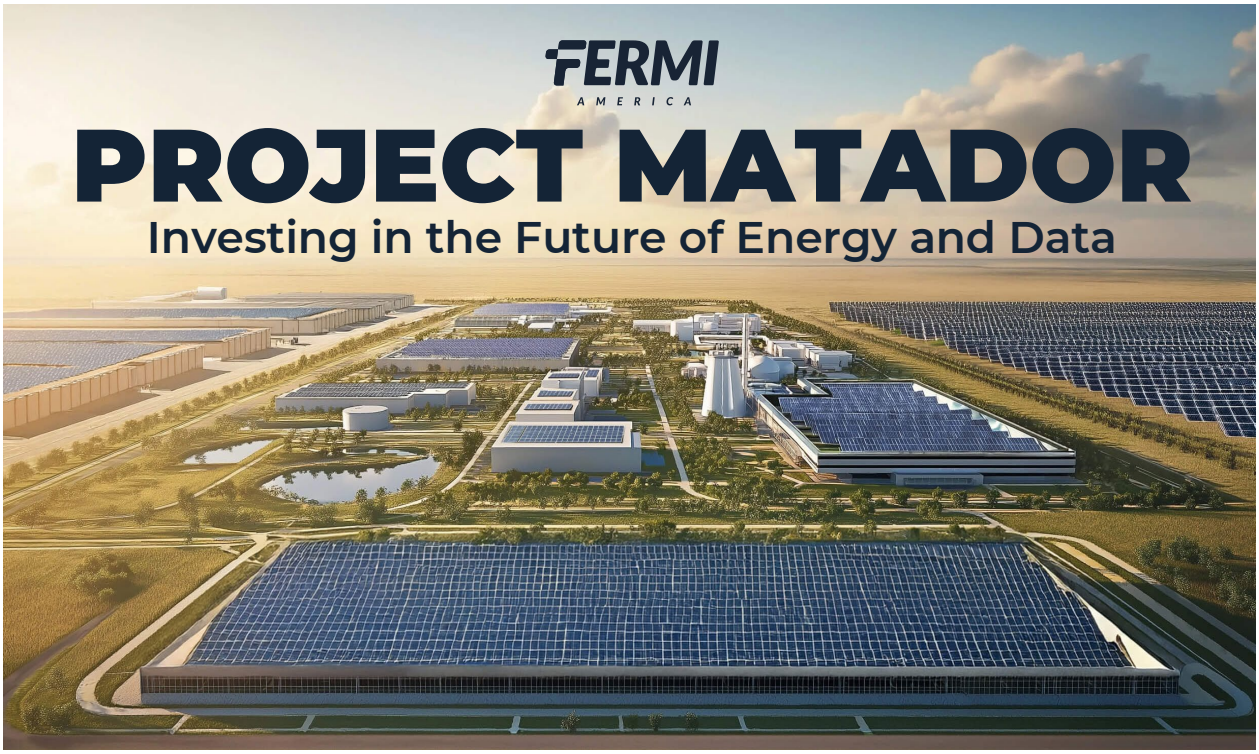

Donald J. Trump Generating Plant – Units 1 - 4

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PART 1

General and Financial Information

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List of Acronyms

ACC	Air-Cooled Condenser
ALARA	As Low As Reasonably Achievable
AV	Assessed Value
BTM	Behind-the-Meter
CFO	Chief Financial Officer
CNO	Chief Nuclear Officer
COLA	Combined Operating License Application
COO	Chief Operating Officer
DCD	Design Control Document
DOE	Department of Energy
EIN	Employer Identification Number
EPC	Engineering, Procurement, and Construction
ERO	Emergency Response Organization
FSAR	Final Safety Analysis Report
FOCD	Foreign Ownership, Control, or Domination
LLC	Limited Liability Company
NRC	Nuclear Regulatory Commission
PWR	Pressurized Water Reactor
QA	Quality Assurance
REIT	Real Estate Investment Trust
RPM	Radiation Protection Manager
SPE	Special Purpose Entity
SUNSI	Sensitive Unclassified Nuclear Security Information
TIN	Taxpayer Identification Number

1.0 General and Financial Information

This Chapter of the Fermi America Combined Operating License Application (COLA) provides an overview of Fermi Americas general and financial qualifications, and includes the following sections:

- Applicant Information (see Section 1.1)
- Financial Qualifications (see Section 1.2)
- Foreign Ownership, Control, or Domination (FOCD) (see Section 1.3)
- Antitrust Considerations (see Section 1.4)
- Safety Review Information (see Section 1.5)
- Applicant Information (see Section 1.6)

1.1. Applicant Information

Applicant Name: Fermi America, LLC
Mailing Address:
c/o Fermi America LLC
3401 Armstrong Ave.,
Dallas TX, 75205

1.1.1. Applicant and Owners

Fermi America LLC (dba Fermi America) is a Texas-based limited liability company (LLC) legally registered with the Texas Secretary of State on January 10th, 2025 under registration number 805852499. The company's principal business address is 3401 Armstrong Ave., Dallas, TX, 75205 and its Taxpayer Identification Number (TIN)/ Employer Identification Number (EIN) is 33-3560468.

Fermi America is wholly U.S.-owned and operated

Fermi America LLC is the sole applicant for this Combined License Application (COLA) and will serve as both the **constructor and operator** of the proposed AP1000 nuclear generating units located at the Project Matador site in Carson County, Texas. No other entity will hold or share in the construction permit or operating license.

Fermi America holds a 99-year sovereign lease with Texas Tech University covering approximately 5,855 acres, granting exclusive use rights for the development and operation of nuclear, solar, and natural gas energy infrastructure, as well as water access and pore space. The site is pre-qualified for nuclear deployment under DOE and NRC precedent studies and is governed by sovereign institutional control held by Texas Tech as lessor.

An updated and final equity ownership percentage table, including any distribution to strategic investors or project sponsors, will be included in **Appendix 1D** of this application upon financial close. Until that time, ownership interests remain consolidated under Fermi America's managing members as registered with the Texas Secretary of State.

Legal Status and Jurisdiction:

Fermi America, LLC is a limited liability company organized under the laws of the State of Texas. The company was formed exclusively to develop, construct, own, and operate advanced energy generation infrastructure and high-performance data center capacity as a vertically integrated solution.

Nature of Business:

Fermi America LLC is a Texas-based limited liability company established to develop, own, and operate the world's largest hybrid energy and data infrastructure campus, known as **Project Matador – The President Donald J. Trump Advanced Energy and Intelligence Campus**. The company holds a 99-year sovereign leasehold interest in approximately 5,855 acres in Carson County, Texas, granted by Texas Tech University, a sovereign public university entity within the State of Texas.

The sovereign lease conveys exclusive and irrevocable rights to Fermi America to utilize the site for:

- The siting and operation of nuclear reactors, natural gas, and solar-powered generation assets
- The construction and leasing of advanced cooling and computing facilities
- Rights to extract and utilize ground and surface water
- Non-exclusive rights to subsurface pore space, pipelines, and carbon sequestration infrastructure
- Development of grid-connected and behind-the-meter (BTM) [1] energy delivery systems
- The long-term build-out of up to 18 million square feet of hyperscale data infrastructure

The property lies adjacent to the DOE-operated Pantex Plant, offering unique proximity to a federally hardened and environmentally characterized site. The lease enables project staging within zones already subjected to environmental review, reducing permitting timeframes.

License Intent:

Fermi America is the sole applicant for a combined construction and operating license under 10 CFR Part 52 for the proposed development. The company will oversee both the construction permit and operating license of the nuclear facility upon NRC approval.

Project Scope and Reactor Designation:

The proposed nuclear facility will employ Westinghouse AP1000 pressurized water reactor (PWR) technology, based on Revision 19 of the Design Control Document (DCD)[2]. This strategy will significantly reduce nuclear deployment uncertainty and allow for Fermi America to prioritize integrating novel campus features.

Corporate Governance and Legal Authority:

Fermi America, LLC is governed by a Board of Managers operating under a formal Operating Agreement on file with the Texas Secretary of State. The Board of Managers has ultimate fiduciary and operational control of the applicant entity, including decisions related to nuclear licensing, construction milestones, and project financing. The company maintains all standard

[1] While the Project Matador on-site generation (including the nuclear units) are designated and sized to serve the onsite data center loads, grid connections and controls will be established to enable effective balancing and ensure on-site and grid power stability. Offsite and onsite ac power systems will conform to Regulatory Guides and IEEE Standards identified by DCD Table 8.1-1 as site-specific and to other applicable Regulatory Guides is as indicated in Table 8.1-201

[2] Fermi America is not seeking any changes to the design of the AP1000; however, Fermi America will incorporate lessons learned and best practices from industry to ensure a safe and effective deployment process.

corporate instruments necessary to operate in the State of Texas and is in good standing. A summary of its legal formation documents, organizational chart, and Operating Agreement excerpts is included in the enclosures to this application (Part 11).

Land Control and Site Rights:

Fermi America's sovereign leasehold interest was executed in April 2025 through a Ground Lease Development Agreement with Texas Tech University. The lease grants exclusive development rights for nuclear and energy generation and developmental sovereignty over zoning, permitting, and municipal oversight.

Under the lease:

- Fermi controls access, development, and improvement rights to all 5,855 acres.
- Texas Tech maintains a non-interfering oversight role, limited to revenue participation and covenant enforcement.
- Fermi has the authority to construct, sublease, and operate all facilities located within the boundary, including power plants, data centers, cooling facilities, and utility corridors.

A certified copy of the executed lease and associated legal opinions verifying exclusive control of the site are appended as Exhibits in Part 11 of this application.

1.1.2. Description of Business or Occupation

Fermi America LLC is a vertically integrated advanced energy and infrastructure development company established for the design, licensing, financing, construction, and operation of nuclear, natural gas, and solar generation assets. The company serves as the master developer of **Project Matador – The President Donald J. Trump Advanced Energy and Intelligence Campus**, located in Carson County, Texas.

The company's core business model is centered on the deployment the AP1000 nuclear generation units integrated with natural gas and renewable generation sources under a sovereign-controlled leasehold. Fermi America specializes in:

- Behind-the-meter (BTM) energy provisioning to hyperscale tenants;
- Deployment of advanced cooling technologies, including air-cooled condensers;
- Turnkey digital and energy platform development for defense-aligned and AI-intensive data center operations;
- Full lifecycle nuclear facility management, from licensing through decommissioning.

Fermi America is structured to oversee site licensing, regulatory compliance, infrastructure construction, tenant power delivery, and operational integrity. Its leadership team includes nuclear energy veterans, infrastructure developers, financial architects, and digital systems engineers.

Future affiliates or subsidiaries—such as **Fermi Nuclear Operations LLC** or **Fermi Energy Partners LLC**—may be formed to execute specialized operations (e.g., operator services, tenant interfacing, or REIT structuring) under the governance of the parent LLC. All such entities will

remain under the direct oversight of Fermi America and fully accountable to NRC requirements and license conditions.

Fermi America's purpose under this Combined License Application is to secure all necessary federal and state approvals to construct and operate two Westinghouse AP1000 reactors within its integrated energy platform. This role includes all responsibilities defined under 10 CFR Part 52 as the licensee, constructor, and operator of a commercial nuclear power plant.

1.1.3. Organization and Management

Fermi America operates under a centralized governance structure with clearly defined lines of authority and accountability across technical, regulatory, financial, and operational domains. The organization is led by a Board of Managers that delegates day-to-day decision-making to the executive leadership team. The structure is designed to support full lifecycle nuclear development, regulatory compliance, and operational integrity.

Executive Leadership Structure:

- **Chief Executive Officer (CEO):** Provides strategic oversight, manages regulatory interface, and serves as the primary point of contact for NRC and DOE correspondence.
- **Chief Nuclear Officer (CNO):** Responsible for reactor licensing, nuclear safety culture, and technical compliance with 10 CFR Part 50 and Part 52 obligations.
- **Chief Operating Officer (COO):** Oversees construction phasing, contractor performance, and coordination with energy platform tenants.
- **General Counsel and Compliance Officer:** Provides legal oversight, manages licensing commitments, and chairs the Export Control Review Panel.
- **Chief Financial Officer (CFO):** Manages financial structures, SPE formation, cost tracking, and interaction with public-private investors and REIT administrators.

Technical Program Oversight:

- **Licensing Director:** Responsible for coordinating the preparation and submission of all NRC applications, amendments, and Part 52-related documentation.
- **QA Program Manager:** Oversees the Quality Assurance Program under 10 CFR Part 50, Appendix B, including independent audits, supplier quality, and corrective actions.
- **Radiation Protection Manager (RPM):** Maintains operational radiological safety, personal dose tracking, and ALARA implementation.
- **Emergency Preparedness Director:** Implements and maintains the Emergency Plan and Emergency Response Organization (ERO), in coordination with local, state, and federal stakeholders.

Construction and Engineering Management:

- Project execution is structured around a pro forma EPC delivery model, reflective of qualified nuclear construction and engineering firms, and incorporates embedded technical liaison roles consistent with Westinghouse AP1000 project support.
- Each major construction phase—site prep, foundation, nuclear plant erection, grid interconnect, and commercial testing—is managed by a cross-functional team reporting through the COO and CNO.

Fermi America's organizational structure is documented in FSAR Chapter 13 and reflected in the QA Program Manual. All key positions are either currently staffed or under formal recruitment with qualification standards set per ANSI/ANS-3.1 and NRC NUREG-0800 Section 13.1 guidance. The company's core business model is centered on the deployment of AP1000 nuclear generation units, with natural gas and renewable generation sources under a sovereign-controlled leasehold supplying additional power to hyperscale tenants. Fermi America specializes in:

- Behind-the-meter (BTM) energy provisioning to hyperscale tenants;
- Deployment of advanced cooling technologies, including air-cooled condensers;
- Turnkey digital and energy platform development for defense-aligned and AI-intensive data center operations;
- Full lifecycle nuclear facility management, from licensing through decommissioning.

Fermi America is structured to oversee site licensing, regulatory compliance, infrastructure construction, tenant power delivery, and operational integrity. Its leadership team includes nuclear energy veterans, infrastructure developers, financial architects, and digital systems engineers.

Fermi America's purpose under this Combined License Application is to secure all necessary federal and state approvals to construct and operate two Westinghouse AP1000 reactors within its integrated energy platform. This role includes all responsibilities defined under 10 CFR Part 52 as the licensee, constructor, and operator of a commercial nuclear power plant.

1.2. Financial Qualifications

In accordance with 10 CFR 52.77(b), the applicant, Fermi America LLC, provides assurance that it possesses, or will possess, the financial capacity necessary to construct and operate the proposed nuclear facility as described in this application. Fermi America is a development-stage company, formed exclusively to build and operate **Project Matador – The President Donald J. Trump Advanced Energy and Intelligence Campus**, a first-of-its-kind integrated infrastructure platform combining sovereign real estate control, hyperscale computing environments, and behind-the-meter clean energy generation.

At the time of this submission, Fermi America does not generate revenue through current operations, and thus relies on a structured financing strategy that supports long-term development, risk mitigation, and eventual profitability. The applicant's financing approach includes a multi-layered capital stack anchored by equity, debt, and committed long-term tenant revenues, each aligned to the physical and regulatory phasing of the project.

Primary Financing Mechanisms

Fermi America will finance the construction and operation of the proposed nuclear facility through the following strategies:

- **Equity Capital Contributions**: Sourced from institutional infrastructure and real estate investors, development sponsors, and project-aligned limited partners, these contributions provide the initial capital for entitlement, permitting, and preconstruction activities.
- **Project-Specific Special Purpose Entities (SPEs)**: Each energy-generating component—nuclear, natural gas, solar, and battery—is structured within project-level SPEs to allow for discrete financing, ring-fenced risk, and optimized accounting under ASC 810. These entities may be consolidated or unconsolidated depending on Fermi America's controlling interest and contractual arrangements.
- **Asset-Backed Debt Instruments**: Structured bond offerings and project finance facilities will be issued against fixed infrastructure assets (e.g., data centers, turbines, nuclear facilities), supported by long-term, creditworthy tenant lease agreements.
- **Take-or-Pay Lease Agreements**: Fermi America's core revenue model is underpinned by long-term hyperscaler lease commitments with AI datacenter tenants. These leases include take-or-pay provisions tied to service-level guarantees for power, cooling, security, and uptime.
- **REIT Capital Structure**: The real estate component of Project Matador is organized for potential qualification under IRS REIT guidelines, providing a tax-efficient mechanism to raise capital through public or private equity offerings.
- **Federal and State Funding Incentives**:
    - Participation in the Federal and State funding as needed and available
    - Eligibility for DOE Loan Programs Office credit support (Title XVII)
    - Utilization of IRS 45J, 45Q, and 48C clean energy tax credits
    - Potential future monetization of carbon sequestration credits

Fermi America maintains full control of all subleased facilities, improvements, and energy delivery infrastructure under its sovereign lease with Texas Tech University. This lease includes provisions for performance-based revenue sharing, indexed to the assessed value (AV) of capital improvements.

While Fermi America does not yet have audited financial statements, it will submit financial guarantees, credit support instruments, and audited reports as required prior to license issuance. A letter of financial assurance will be included in Part 11.

Sovereign Lease Revenue Assurance

Fermi America maintains full control of all subleased facilities, improvements, and energy delivery infrastructure under its sovereign 99-year lease with Texas Tech University. The lease includes provisions for performance-based revenue sharing, indexed to the assessed value (AV) of capital improvements, which creates alignment between the university and the project's economic success.

Tenant improvement value is subject to annual AV-based rent tiers:

- 1.0% of the first $1 billion in AV
- 0.5% of AV exceeding $1 billion
  Caps and carve-outs are embedded for new construction staging.

Additional Support and Risk Mitigation

- **Third-Party Investment and EPC Participation**: The applicant is in active discussions with Westinghouse and other engineering, procurement, and construction (EPC) firms to structure cost-sharing, deferred milestone, or equity-linked arrangements for the construction of the AP1000 nuclear reactors.
- **Credit Support Instruments**: While Fermi America is not currently in possession of audited financial statements (given its development-stage status), it anticipates submitting audited financials, letters of credit, or third-party financial guarantees prior to the issuance of the combined license. These documents will be provided as part of Part 11 – Enclosures as they become available.
- **Letter of Financial Assurance**: Fermi America will supplement this section with a formal Letter of Financial Assurance from a capital guarantor or sponsor entity, confirming its obligation to provide the financial resources necessary to meet NRC licensing conditions.

1.3. Foreign Ownership, Control, or Domination (FOCD)

Pursuant to the requirements of 10 CFR 50.38, Fermi America LLC affirms that it is not owned, controlled, or dominated by any foreign individual, government, or entity. Fermi America LLC is a private, for-profit entity organized and registered in the State of Texas. It operates as a wholly U.S.-owned and U.S.-managed limited liability company whose direct and indirect owners, managing members, and officers are exclusively citizens of the United States or domestic corporate entities.

1.4. Antitrust Considerations

In accordance with 10 CFR 52.41, no antitrust review is required for this Combined License Application (COLA), as it was submitted after the statutory antitrust review cutoff date of August 8, 2005. Therefore, the U.S. Nuclear Regulatory Commission (NRC) is not required to conduct a separate antitrust review of this application.

Fermi America affirms that it is not and has never been the subject of any pending, current, or past antitrust investigations, complaints, or litigation involving the U.S. Department of Justice, the Federal Trade Commission, the NRC, or any other federal or state agency concerning energy markets, electric utility monopolization, nuclear licensing, or related anti-competitive practices.

Furthermore, no part of Fermi America's organizational structure, ownership interest, or energy market strategy includes provisions or terms that would restrict competition or control access to utility markets in violation of federal or state antitrust law.

1.5. Safety Review Information

The safety analysis for the proposed Fermi America nuclear facility is based on the AP1000 Design Control Document (DCD), Revision 19, which has been certified by the U.S. Nuclear Regulatory Commission (NRC). Fermi America does not propose any deviations from this certified design that would alter the underlying safety basis established in the DCD.

This Combined License Application (COLA) includes all applicable standard design content and incorporates all Standard Plant Items by Reference (IBR), as permitted under NRC regulations for certified designs. Where applicable, the application provides supplemental information to address site-specific variations without affecting the fundamental safety design envelope.

The Amarillo site selected for this facility offers unique and well-characterized geotechnical and environmental attributes that reinforce the safety case presented. Specifically, the site is:

- Located adjacent to the DOE's Pantex Plant, a hardened federal installation with over 70 years of nuclear infrastructure and environmental monitoring history;
- Situated atop the Southern Great Plains, an area known for geologic stability and minimal seismic activity;
- Designed for operation with air-cooled condenser (ACC) systems to significantly reduce water withdrawal and thermal discharge needs;
- Optimized for safety by leveraging a certified AP1000 design.

This innovative strategy allows for parallel development timelines while preserving all regulatory obligations within the safety-critical scope of the license. The delineation between regulated and unregulated components simplifies compliance and risk containment, reducing the cost and complexity of deployment without compromising NRC safety standards.

Fermi America intends to partner with Westinghouse Electric Company to confirm that all site-specific analyses conform with the most recent AP1000 safety margins and design guidance. In parallel, the company plans to coordinate with a qualified nuclear construction and engineering firm and other nuclear-qualified engineering firms to conduct the Amarillo-specific geotechnical, meteorological, and seismic assessments that will underpin the Final Safety Analysis Report (FSAR).

The applicant affirms that a complete FSAR is being prepared in accordance with 10 CFR 52.79, including integration of the DCD and detailed site-specific assessments. The FSAR, Emergency Plan, and Quality Assurance Program will be provided in Parts 2, 5, and 17 of this application, respectively.

Through this structured and risk-informed approach, Fermi America seeks to demonstrate that the proposed facility will meet or exceed all applicable NRC safety and operational standards while advancing innovative, secure, and scalable nuclear development at Project Matador.

1.6. Restricted Data / National Security Information

As the Combined License Application (COLA) submitted by Fermi America matures, Fermi America will handle this information safely per the laws and regulations as it pertains to Restricted Data, Formerly Restricted Data, or classified National Security Information as defined in 10 CFR Part 25 or Part 95. Should any aspect of the project, licensing, or operational activities in the future require the handling, generation, or transfer of Restricted Data or classified information, Fermi America will fully comply with the safeguards, access authorization, and physical protection requirements outlined in 10 CFR Parts 25 and 95. This includes any work related to controlled nuclear information, sensitive unclassified nuclear security information (SUNSI), or national defense applications.

Fermi America affirms its commitment to fully secure and classify any future documentation or activity as required by NRC, DOE, or other national security authorities. Fermi America affirms that it is not and has never been the subject of any pending, current, or past antitrust investigations, complaints, or litigation involving the U.S. Department of Justice, the Federal Trade Commission, the NRC, or any other federal or state agency concerning energy markets, electric utility monopolization, nuclear licensing, or related anti-competitive practices.

Furthermore, no part of Fermi America's organizational structure, ownership interest, or energy market strategy includes provisions or terms that would restrict competition or control access to utility markets in violation of federal or state antitrust law.

Fermi America's organizational structure is documented in FSAR Chapter 13. All key positions are either currently staffed or under formal recruitment with qualification standards set per ANSI/ANS-3.1 and NRC NUREG-0800 Section 13.1 guidance. The company's core business model is centered on the deployment of AP1000 nuclear generation units integrated with natural gas and renewable generation sources under a sovereign-controlled leasehold. Fermi America specializes in:

- Behind-the-meter (BTM) energy provisioning to hyperscale tenants;
- Deployment of advanced cooling technologies including air-cooled condensers;
- Turnkey digital and energy platform development for defense-aligned and AI-intensive data center operations;
- Full lifecycle nuclear facility management, from licensing through decommissioning.

Fermi America is structured to oversee site licensing, regulatory compliance, infrastructure construction, tenant power delivery, and operational integrity. Its leadership team includes nuclear energy veterans, infrastructure developers, financial architects, and digital systems engineers.

Future affiliates or subsidiaries—such as **Fermi Nuclear Operations LLC** or **Fermi Energy Partners LLC**—may be formed to execute specialized operations (e.g., operator services, tenant interfacing, or REIT structuring) under the governance of the parent LLC. All such entities will remain under the direct oversight of Fermi America and fully accountable to NRC requirements and license conditions.

Fermi America's purpose under this Combined License Application is to secure all necessary federal and state approvals to construct and operate two Westinghouse AP1000 reactors within its integrated energy platform. This role includes all responsibilities defined under 10 CFR Part 52 as the licensee, constructor, and operator of a commercial nuclear power.

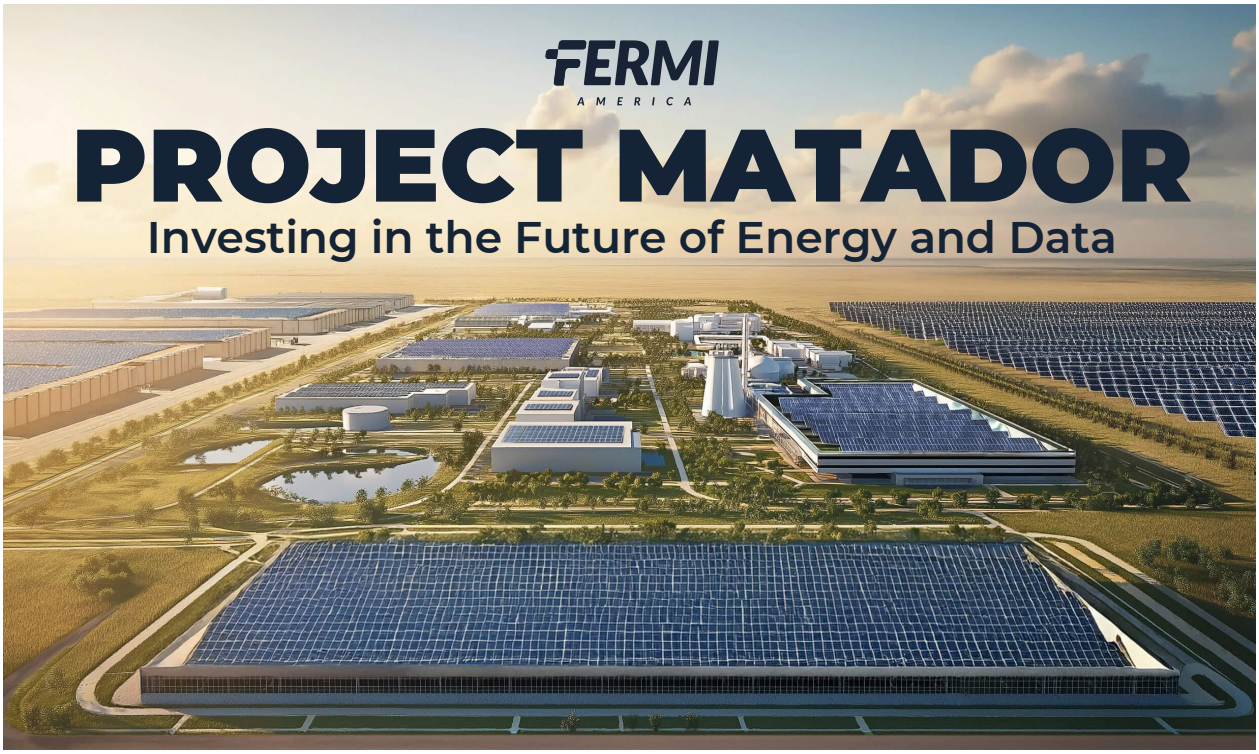
References

1-1. American National Standards Institute. (2014). *ANSI/ANS-3.1-2014: Selection, Qualification, and Training of Personnel for Nuclear Power Plants*. ANSI.

1-2. Department of Energy. (2023). *Pantex Plant Environmental Monitoring Report*. U.S. Department of Energy.

1-3. Nuclear Regulatory Commission. (2007). *NUREG-0800: Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants*. U.S. Nuclear Regulatory Commission.

1-4. Nuclear Regulatory Commission. (2020). *10 CFR Part 50, Part 52, Part 25, Part 95: Domestic Licensing of Production and Utilization Facilities*. U.S. Nuclear Regulatory Commission.



Donald J. Trump Generating Plant – Units 1 - 4

COL Application

PART 2

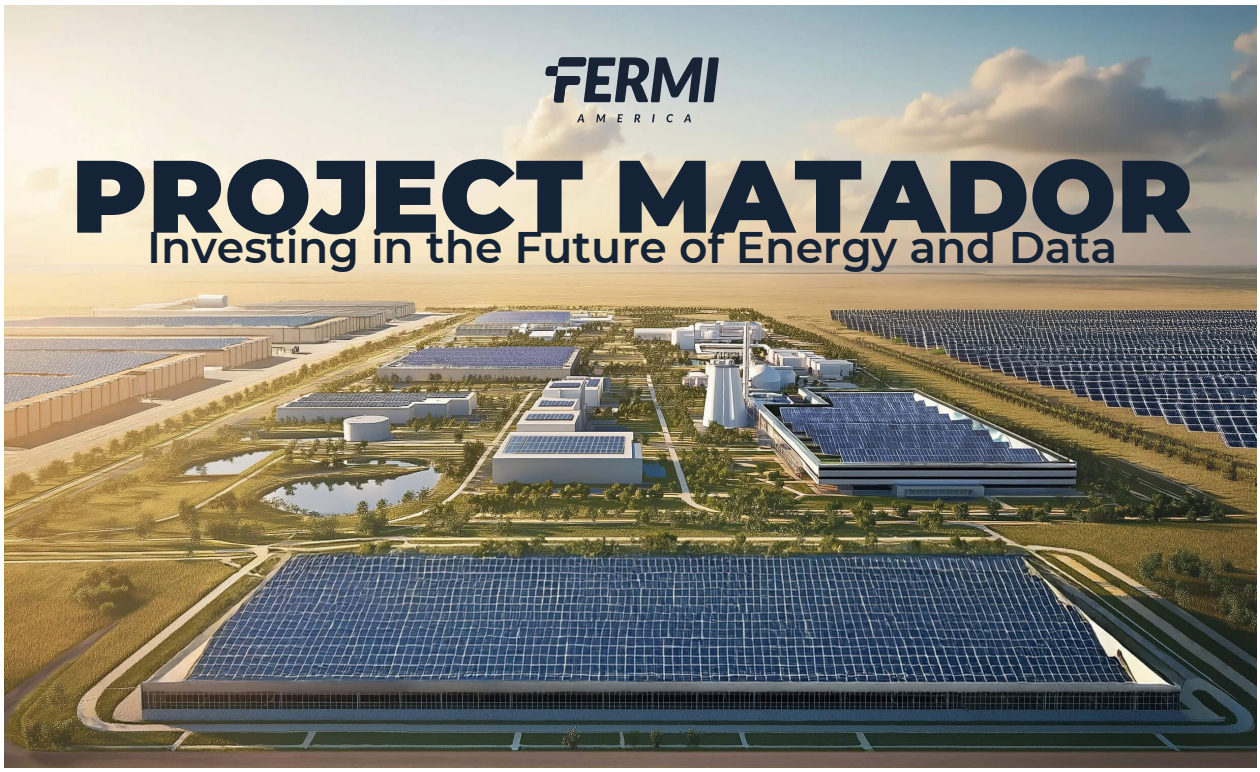
Final Safety Analysis Report

Revision 0

1.0 Final Safety Analysis Report

This section outlines Fermi America's approach for the Final Safety Analysis Report (FSAR). A future Revision of this Combined Operating License Application (COLA) will incorporate by reference the Appendix D to 10 CFR Part 52, the AP1000 certified design, as well as applicable departures either reviewed as license amendments or processed according to the non-license amendment departure process in 10 CFR Part 52 Appendix D on the Vogtle Unit 4 docket, docket 52-026.

Fermi America's assumption is that the Project Matador site is enveloped by the AP1000 certified design in 10 CFR Part 52 Appendix D. In an effort to support standardization, Fermi America will incorporate by reference the DCD and standard COLA content to be consistent with Vogtle Unit 4. NRC guidance clearly states that NRC will not re-review content already reviewed. Upon verification of enveloping the certified AP1000 site for the Project Matador site, and given the combination of Part 52 Appendix D, the safety evaluation reports associated with the license amendments on the Vogtle Unit 4 docket, and processes available under NRC regulations that allow applicants to depart from certain standardized content, there is no expectation of any additional safety evaluation being necessary for these sections of the COLA.



Donald J. Trump Generating Plant – Units 1 - 4

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PART 3

Environmental Report

Revision 0

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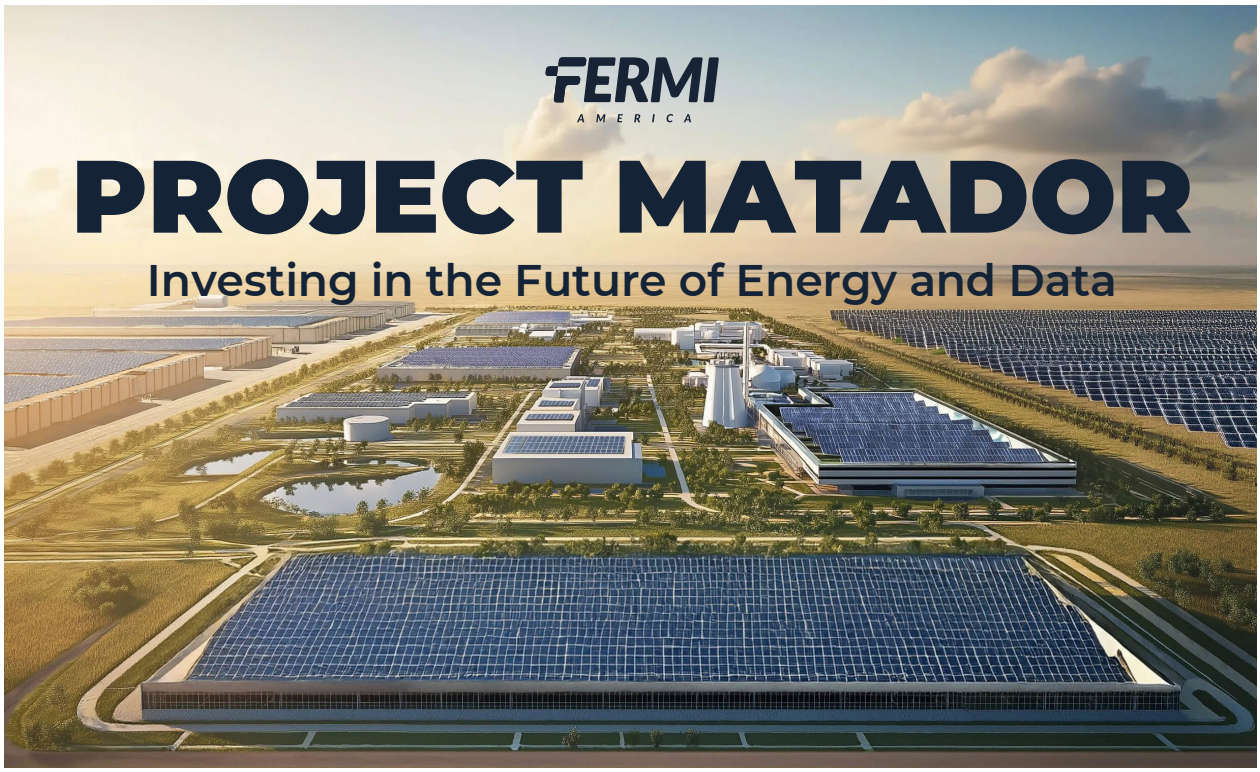
List of Acronyms

ACHP	Advisory Council on Historic Preservation
AI	Artificial Intelligence
ALARA	As Low As Reasonably Achievable
AMWS	Amarillo Municipal Water System
APE	Area of Potential Effect
ARD	Aquatic Resource Delineation
BACT	Best Available Control Technology
B&W	Babcock and Wilcox
BMP	Best Management Practice
BTM	Behind-the-Meter
CCGT	Combined-Cycle Gas Turbine
CEAO	Community Environmental Assurance Office
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COL	Combined License
COLA	Combined License Application
CRM	Cultural Resource Management
CRMWA	Canadian River Municipal Water Authority
CWA	Clean Water Act
DOE	Department of Energy
EIA	Energy Information Administration
EMS	Emergency Medical Services
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
FSAR	Final Safety Analysis Report
GHG	Greenhouse Gas
IPaC	Information, Planning, and Conservation
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NHD	National Hydrography Dataset
NEPA	National Environmental Policy Act
NLCD	National Landcover Database
NNSA	National Nuclear Security Administration
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PA/CRMP	Programmatic Agreement/Cultural Resource Management Plan
PSD	Prevention of Significant Deterioration
PUCT	Public Utility Commission of Texas
RHA	Rivers and Harbors Act
SARA	Seasonal Assessment of Resource Adequacy
SH	State Highway
SHPO	State Historic Preservation Officer
SMR	Small Modular Reactor
SPP	Southwest Power Pool
SWPPP	Stormwater Pollution Prevention Plan
T&E	Threatened and Endangered
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TIP	Transportation Improvement Plan
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOE	United States Department of Energy
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States



Donald J. Trump Generating Plant – Units 1 - 4

Environmental Report

Chapter 1 - Introduction

Revision 0

1.0 Introduction

1.1. Plant Ownership and Reactor Type

Fermi America LLC is a Texas-based limited liability company that holds a 99-year sovereign lease for 5,855 acres of land in Carson County, Texas, granted by Texas Tech University, a state sovereign entity. The company is the sole applicant for a Combined License under 10 CFR Part 52 to construct and operate a nuclear facility employing the Westinghouse AP1000 reactor technology. Project Matador, which encompasses the proposed nuclear facility, represents a nationally significant fusion of clean energy generation and high-performance computing infrastructure. The project location is in the Texas Panhandle region, approximately 17 miles northeast of Amarillo Texas, as seen in Figure 1-1 and Figure 1-2.

The licensed activity proposed under this application is the construction and operation of four Westinghouse AP1000 pressurized water reactors, each designed to deliver 1,100 MWe of gross electrical output.

Figure 1-1. Regional Location Map

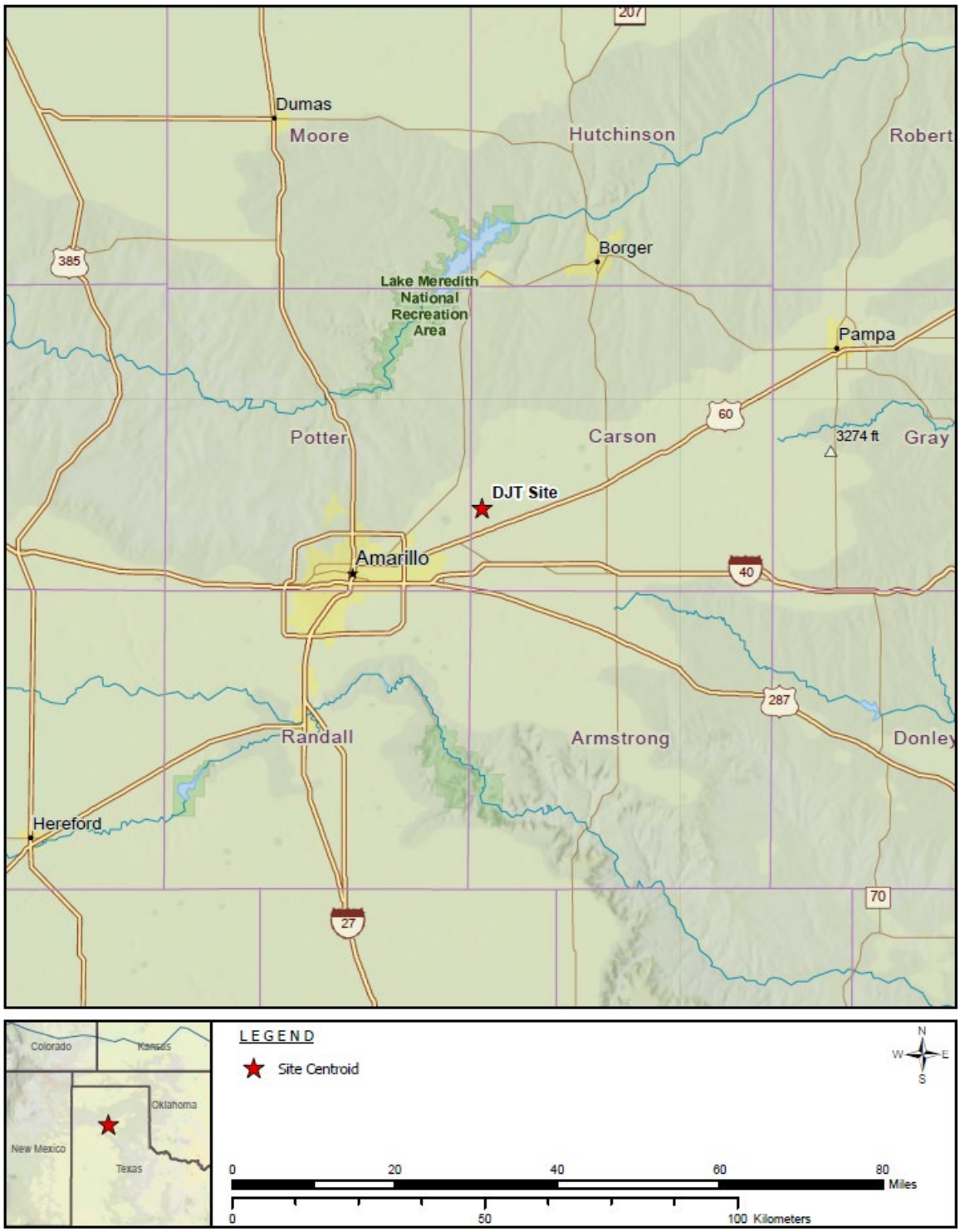
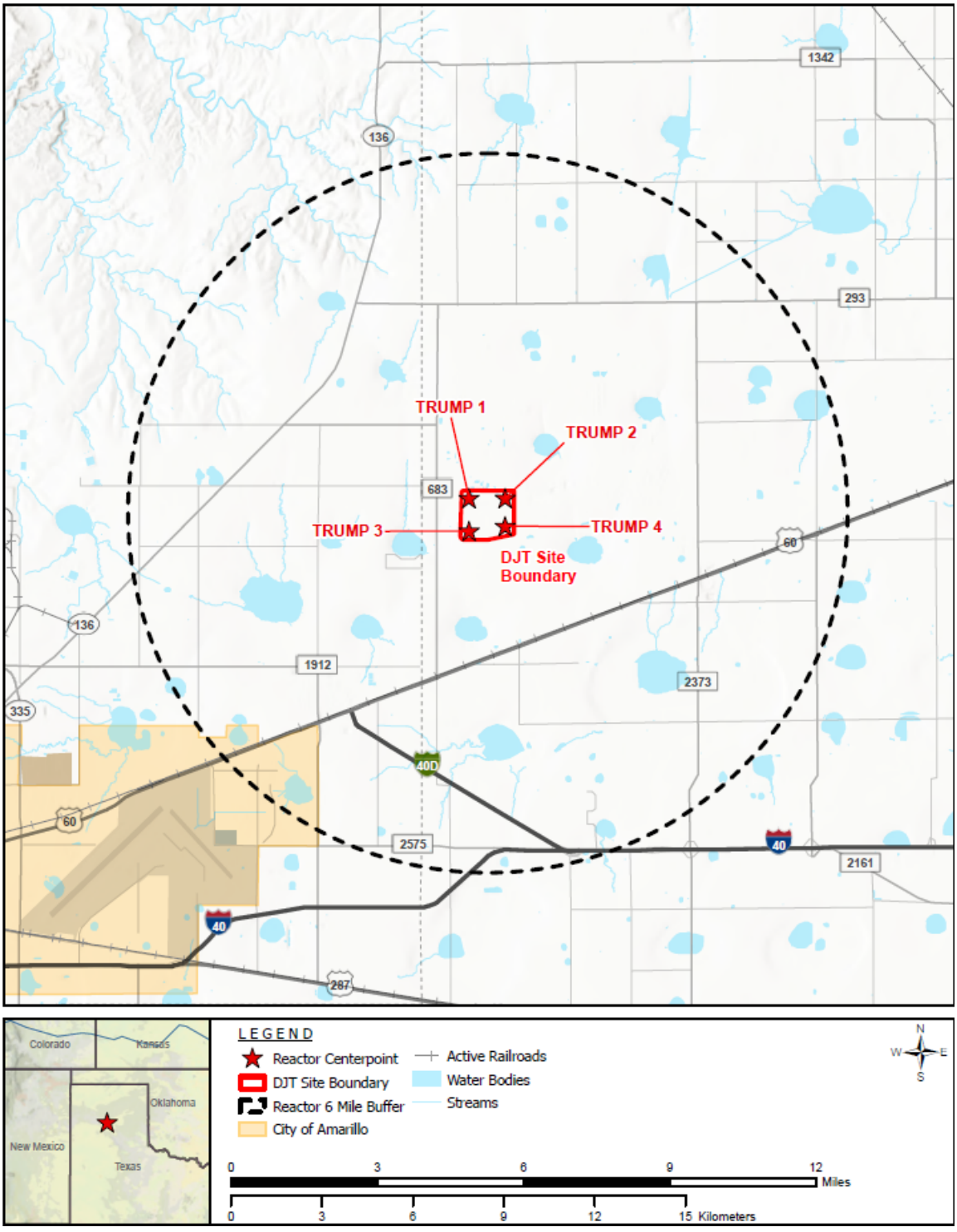


Figure 1-2. Site Vicinity Map



1.2. Description of the Proposed Action and Purpose and Need

The proposed action is the NRC's issuance of a combined license to Fermi America LLC for the construction and operation of a multi-unit nuclear facility in Carson County, Texas. The facility is designed to provide a reliable, secure, and carbon-free baseload power source directly integrated into Project Matador's behind-the-meter data infrastructure, which includes up to 18 million square feet of hyperscale computing space and approximately 11 GW of energy generation.

This action supports state and national policy goals for grid decarbonization, Artificial Intelligence (AI) infrastructure expansion, and energy security. The purpose of the proposed action is to enable the deployment of highly reliable, passive safety-based nuclear energy in a region with favorable geotechnical, environmental, and logistical attributes, while also fulfilling regional economic development and job creation imperatives. The facility directly addresses the need for hyperscale data center-aligned, non-interruptible, and scalable power in the United States.

1.3. Planned Activities and Schedule

Site characterization, pre-construction surveying, and environmental baseline assessments have been initiated based on publicly available data from DOE's PANTEX Plant and site-specific surveys conducted under Terracon's Environmental Site Assessments (Stage 1 and Final ESA Reports, 2025, see Exhibit 1). Construction of the first AP1000 reactor is projected to begin in 2026, with a five-year build timeline. The initial unit is targeted to be operational by April 2031. Major construction milestones beyond site preparation and subsequent in-service dates for the remaining three reactors will lag the first unit by six months to one year in order to optimize workflow and labor resources. Site-wide development will proceed in parallel with data infrastructure build-out.

Table 1-1 provides a list of key Project Matador milestones for the purposes of the ER review. Notional dates will be established following the USNRC readiness review

Table 1-1. Notional Fermi America Planned Milestones and Dates

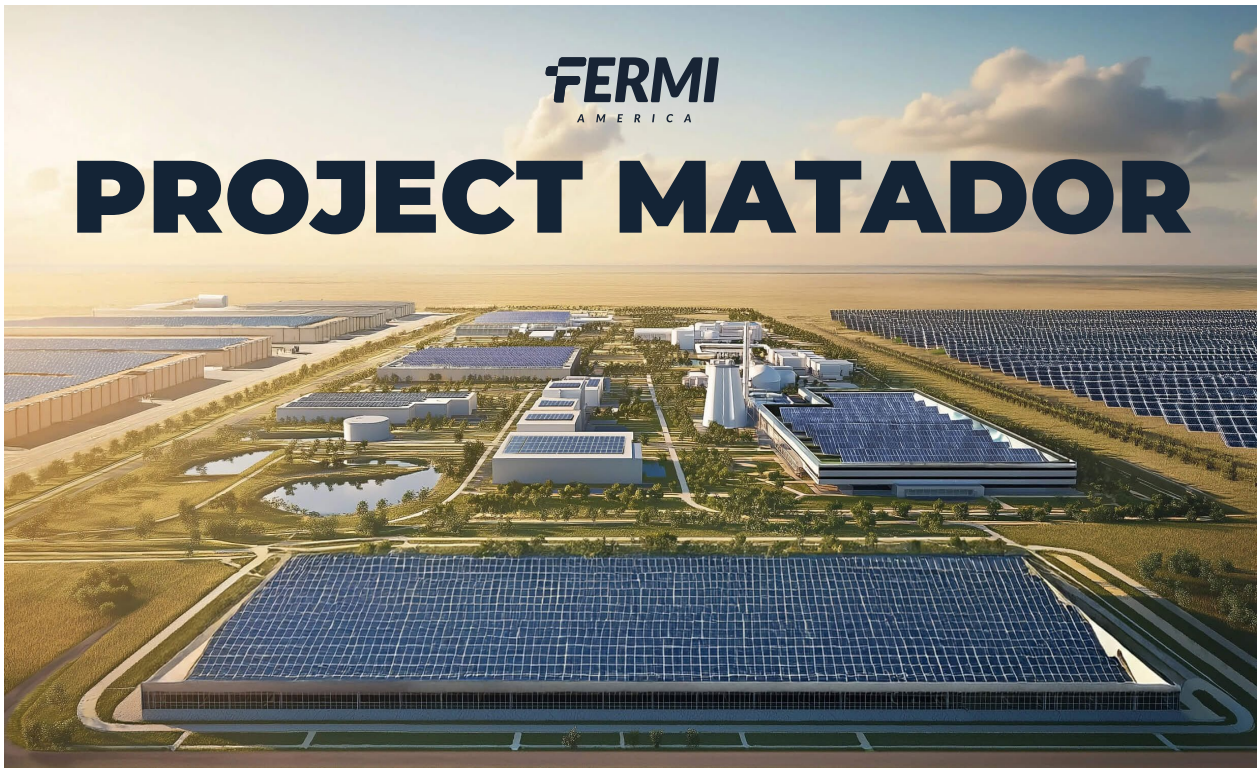
Activity	Notional Date
Revision 0 of COLA Submittal	TBD
NRC COLA Approval	TBD
Donald J Trump Generating Plant – Unit 1 Construction Start	TBD
Donald J Trump Generating Plant – Unit 2 Construction Start	TBD
Donald J Trump Generating Plant – Unit 3 Construction Start	TBD
Donald J Trump Generating Plant – Unit 4 Construction Start	TBD
Donald J Trump Generating Plant – Unit 1 Operations Begin	TBD
Donald J Trump Generating Plant – Unit 2 Operations Begin	TBD
Donald J Trump Generating Plant – Unit 3 Operations Begin	TBD
Donald J Trump Generating Plant – Unit 4 Operations Begin	TBD

1.4. Status of Compliance with Environmental Regulations

Fermi America's proposed project aligns with applicable federal, state, and local environmental statutes and executive orders, including NEPA (National Environmental Policy Act), the Clean Air Act, Clean Water Act, Endangered Species Act, and Texas-specific environmental planning frameworks.

Coordination with the U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, and the Texas Commission on Environmental Quality, and other relevant regulatory bodies is ongoing. Fermi America affirms its intent to comply fully with NRC's environmental review requirements, including the provisions outlined in 10 CFR Part 51 and the guidance provided by NRC Regulatory Guide 4.2, Rev. 3, and will provide a list of environmental compliance agencies and status prior to formal submission of the COLA.

The Environmental Report reflects comprehensive integration of data from the 2023 PANTEX Environmental Report, updated hydrological modeling, cultural resource surveys, air dispersion analyses, and the findings of Terracon's environmental geotechnical investigations (2025). These documents support a robust baseline characterization of the site and are included as Enclosure 1 of the COLA.



Donald J. Trump Generating Plant – Units 1 - 4

Environmental Report

Chapter 2 – Site and Environmental Description

Revision 0

2.0 Site and Environmental Description

2.1. Land Use (Site, Vicinity, Region)

The approximately 5,800-acre project site is immediately south and west of the main PANTEX Nuclear Facility and is located approximately 17 miles northeast of the City of Amarillo, in Carson County, Texas (See Figure 2-1 through Figure 2-3). The nuclear site boundary constitutes approximately 500 acres (herein referred to as the "Site") within the greater 5,800 acre project site. The site is leased by Texas Tech University and is located in a region known as the Llano Estacado (staked plains) portion of the Southern Great Plains and sits at an elevation of approximately 3,500 feet (ft). The site is characterized by rolling terrain with grasslands and scattered ephemeral, shallow lakes known as playas. The southern boundary of the site is bound by U.S. Highway 60, the western border runs parallel to FM 683, and the eastern boundary run along FM 2373. The northern boundary of the site is within the PANTEX Plant following Pershing Dr and S 15th St.[3] The project site is leased by Texas Tech University as an agricultural research facility.

The adjacent PANTEX facility is an active federal facility owned by the U.S. Department of Energy/National Nuclear Security Administration (USDOE/NNSA) and managed and operated by Babcock and Wilcox Technical Services PANTEX, LLC (B&W PANTEX).[4] The current condition of the land can be seen as open grassland areas with playas and several unpaved roads that traverse the property. In the northwestern portion of the site, there appears to be an inactive section of the plant with four open water impoundments. In the south-central portion of the site, an abandoned artillery area can be seen laid out in several rows. In the southwestern corner of the site, a large open impoundment can be observed while the remainder of the site is open grassland and agricultural land. No records of prior zoning were found on associated Carson County websites.

Within the 6-mile vicinity of the site, land use is predominately utilized for agricultural purposes, farming winter wheat, sorghum, and cotton (See Figure 2-5). Ranching in the region consists primarily of grazing cattle and operating cattle feed lots. Over many years the region has experienced industrialization to include manufacturing, distribution, food processing, and medical services. Some of the businesses that employ people in the greater Amarillo area include Bell Helicopter, Tyson Foods, PANTEX, Xcel Energy, Owens-Corning Fiberglass, American Smelting and Refinement Company, and Cactus Feeders. The oil and gas industry is also present with Conoco-Phillips Petroleum as one of the larger operations in the area. Within the region, the majority of land is owned by non-federal entities, with relatively small portions owned by the Bureau of Land Management, National Park Service, and U.S. Fish and Wildlife Service (see Figure 2-6).

The Rick Husband Amarillo International Airport, approximately ten miles from the site, is owned by the city and consists of two runways occupied by four major airlines. The airport also accommodates military aircraft and private use aircraft.

[3] GoogleEarthPro, accessed May 19, 2025.

[4] https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0604060

The U.S. Census Bureau indicates there are approximately 332,688 people within a 50-mile radius of the project site (project region). The majority of the surrounding population is located west of the project site in the Amarillo metropolitan area, accounting for approximately 60% of the population within the project region. The cities and surrounding communities of Dumas, Borger, Hereford Pampa, Bushland, and Canyon represent the remaining population within the project region.

Some major roadways are located in proximity to the project site. State Highway (SH) 136 is near the northwestern portion of the property. Interstate Highway (IH)-40 East traverses east to west and located south of the project site, while U.S. Highway (Hwy) 60 is adjacent and parallel to the southern boundary of the project site.

The Farmland Protection Policy Act (FPPA) of 1981 (final rule June 17, 1994) is intended to "minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses." The FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Land subject to FPPA requirements includes land conversion completed by a federal agency or with assistance from a federal agency. FPPA jurisdiction does not include Federal permitting and licensing. The FPPA definition of farmland includes all land defined as follows:

1. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage.
2. Unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables.
3. Farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies, and that the Secretary determines should be considered as farmland for the purposes of this subtitle.

According to a review of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey data, there were three soil map units identified within the site footprint that had hydric components associated with the playas (see Figure 2-7). The soils located within the project area are a diverse mixture of prime farmland, farmland of statewide importance, and areas that are not prime farmland. The proposed project will result in the conversion of prime farmland to non-agricultural use.

The project site soils report, hydric rating map, and soil survey map are included (Exhibit B in Part 11) as contains a summary of the mapped soil units within the proposed project site and relevant physical characteristics. Project site soils are shown in Figure 2-8 and Table 2-1 below.

Table 2-1. Mapped Soil Types Within the Proposed Project Site

Map Unit Symbol	Map Unit Name	Landform	Natural Drainage Class	Prime Farmland	Hydric Soil Rating
EcB	Estacado clay loam, 1 to 3 percent slopes	Playa slopes, plains	Well drained	All areas are prime farmland	No
LoA	Lofton clay loam, 0 to 1 percent slopes, rarely ponded	Depressions, playa steps	Moderately well drained	All areas are prime farmland	No
McA	McLean clay, 0 to 1 percent slopes, occasionally ponded	Playa floors	Somewhat poorly drained	Not prime farmland	Yes
PcC	Pep clay loam, 3 to 5 percent slopes	Playa slopes, plains	Well drained	Farmland of statewide importance	No
PuA	Pullman clay loam, 0 to 1 percent slopes	Plains	Well drained	All areas are prime farmland	No
PuB	Pullman clay loam, 1 to 3 percent slopes	Playa slopes, plains	Well drained	All areas are prime farmland	No
RaA	Randall clay, 0 to 1 percent slopes, frequently ponded	Playa floors	Poorly drained	Not prime farmland	Yes

Figure 2-1. Site Aerial Photograph

Figure 2-2. Site Layout

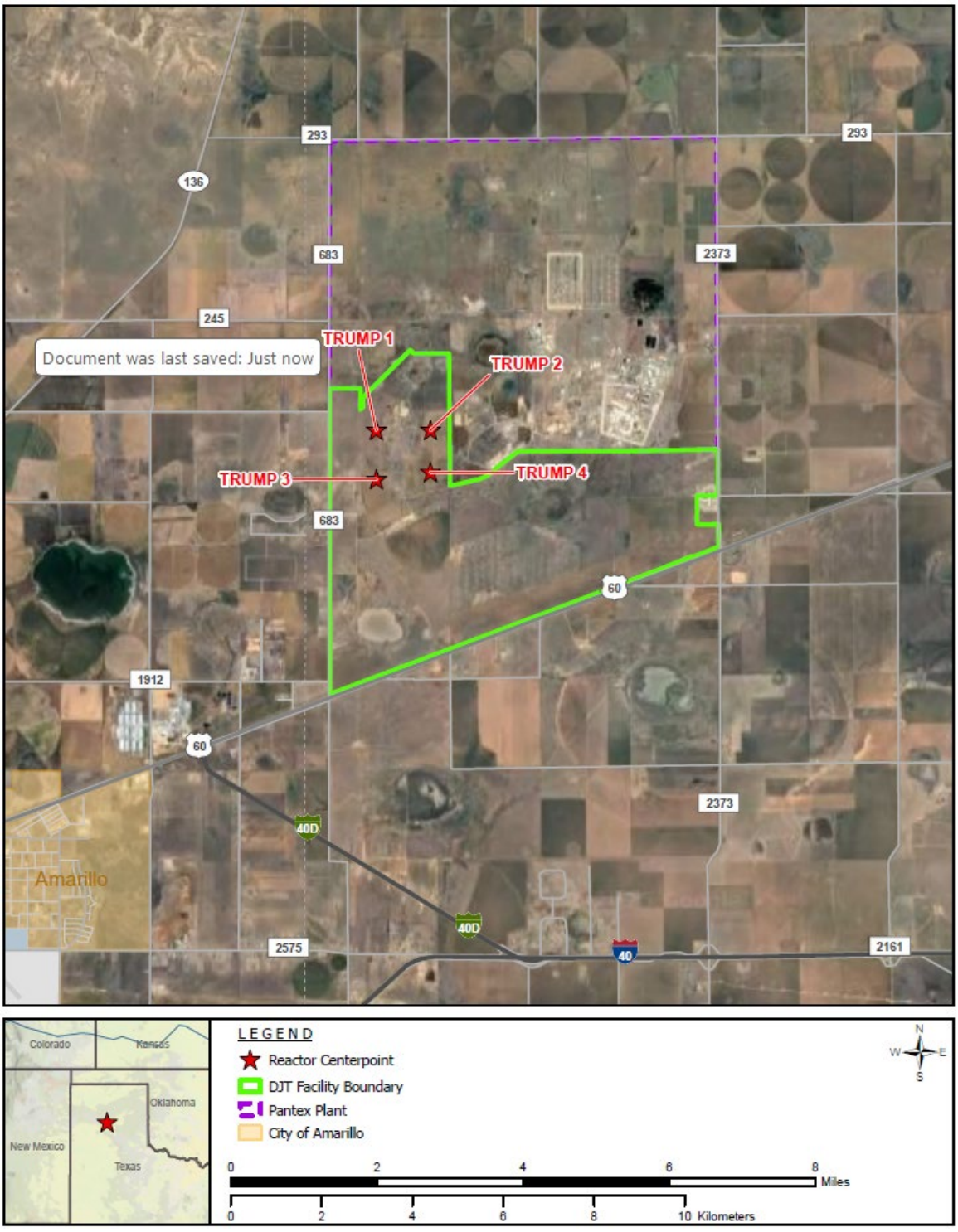


Figure 2-3. Project Location within 50 Mile Region

Figure 2-4. Project Vicinity Topography

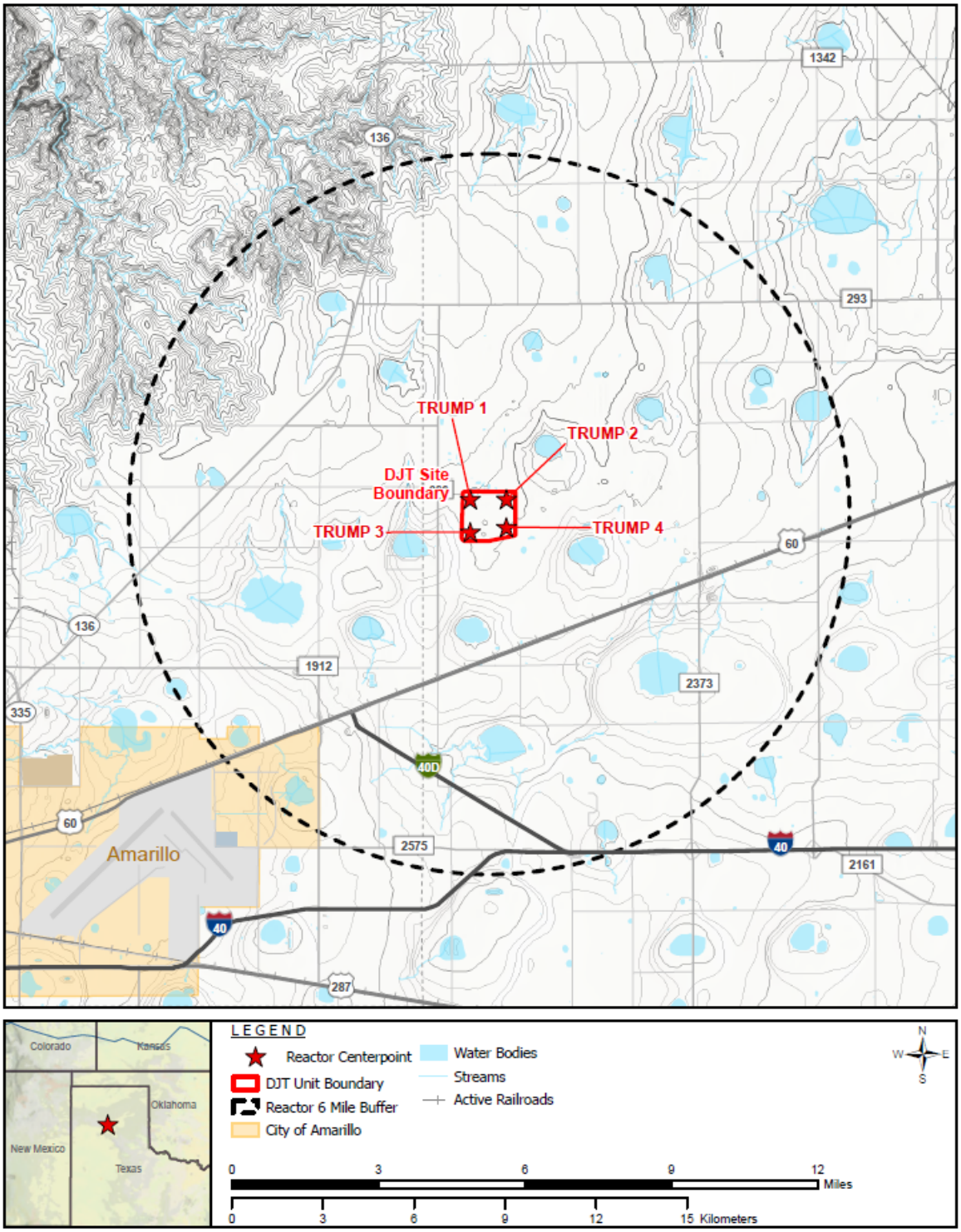


Figure 2-5. Regional Land Use

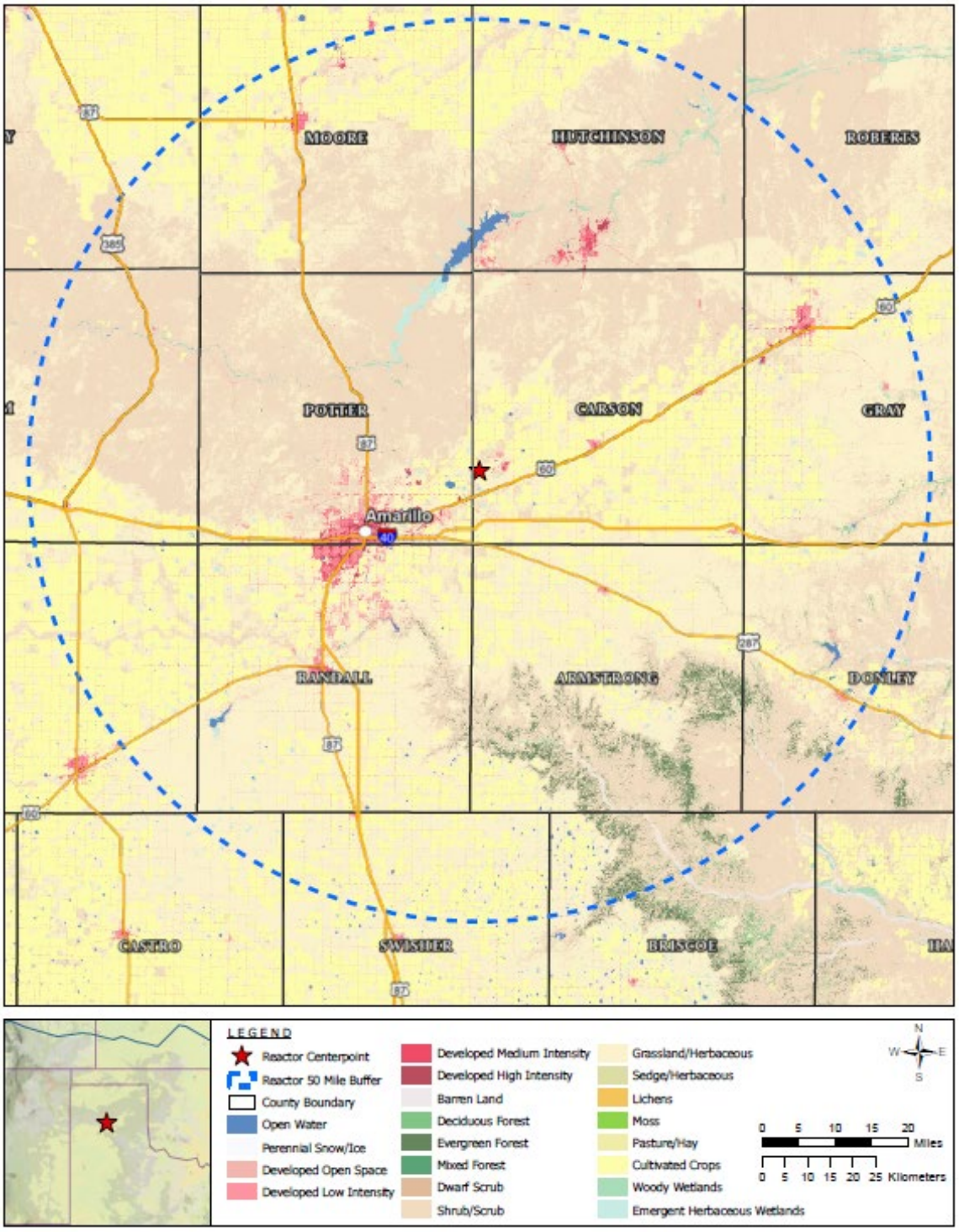


Figure 2-6. Regional Federal Land Ownership

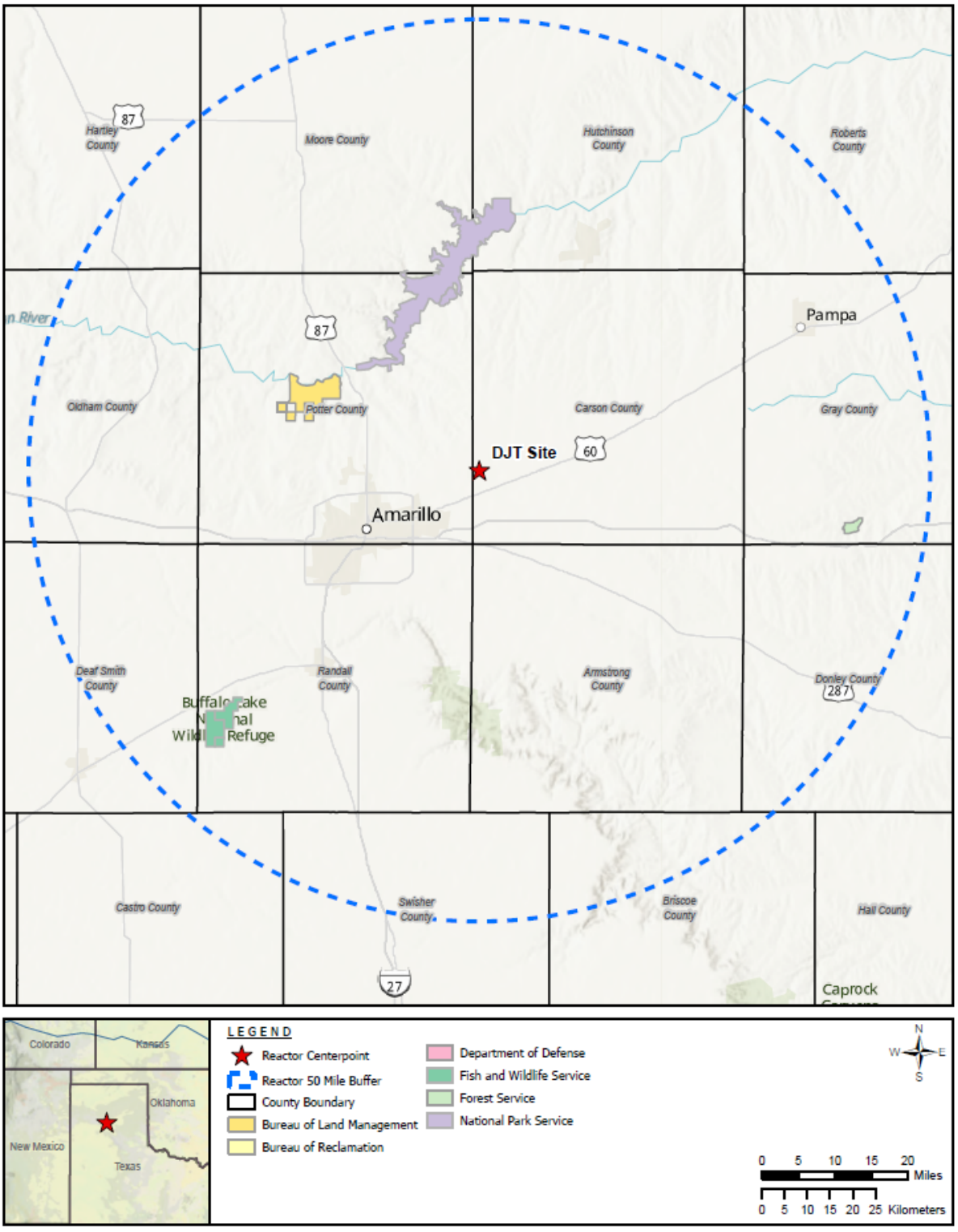


Figure 2-7. Surface Geologic Features within Vicinity

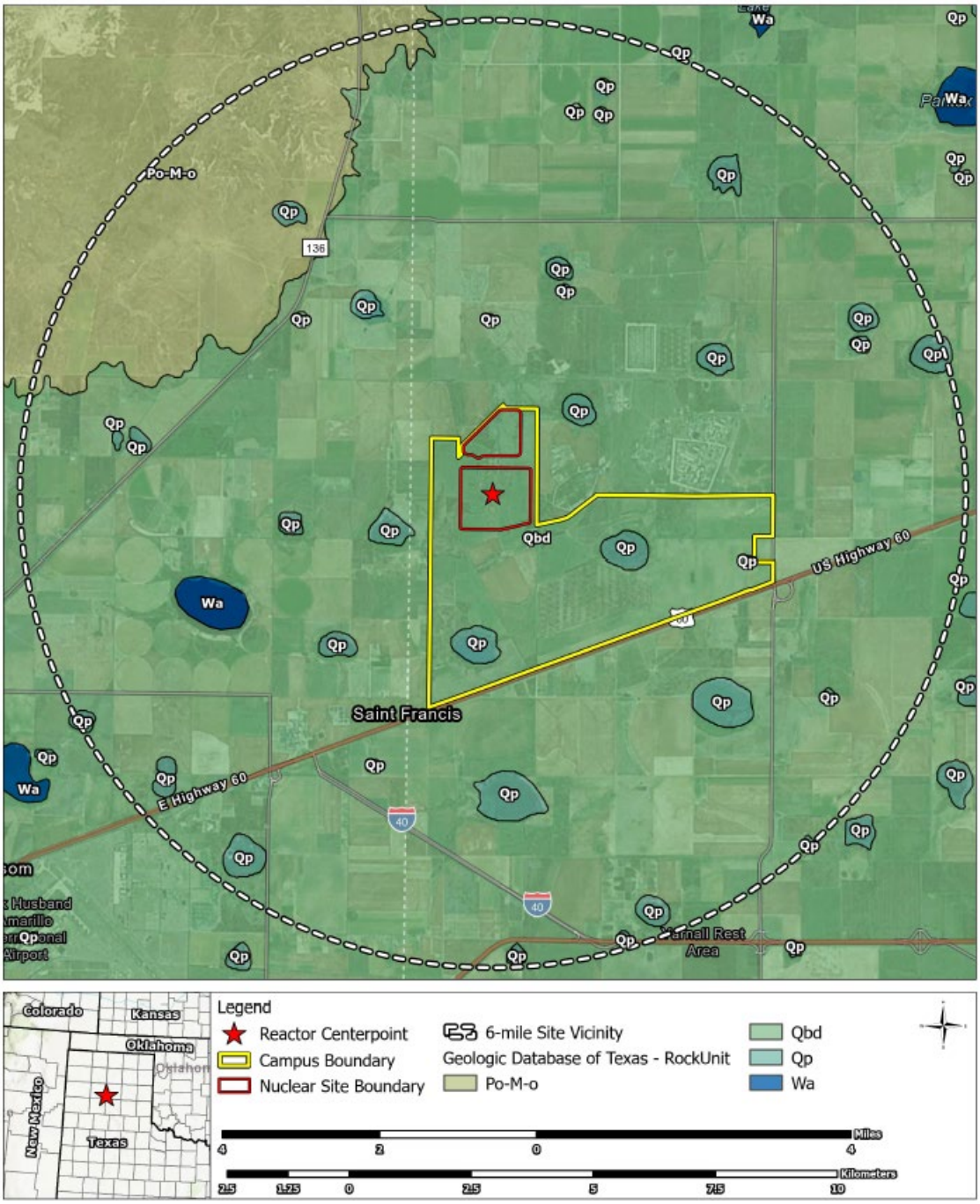
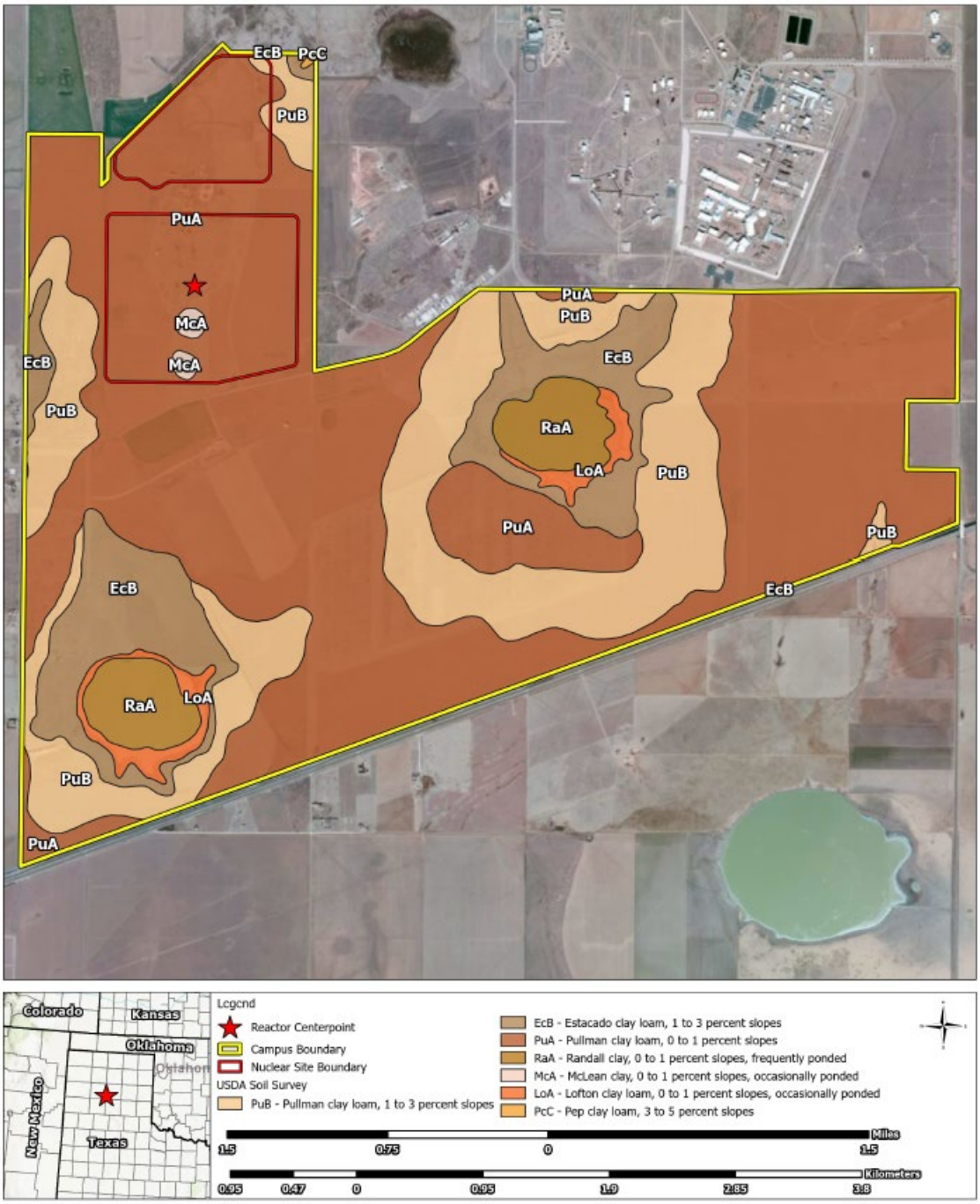


Figure 2-8. Soil Types on Project Site



2.2. Water Resources (Hydrology, Use, Quality)

Section 402 of the CWA authorizes discharges of stormwater under the National Pollutant Discharge Elimination System (NPDES) issued by the Texas Commission on Environmental Quality (TCEQ). Additionally, Section 404 of the CWA authorizes the Secretary of the U.S. Army Corps of Engineers (USACE) to issue permits for the discharge of dredged or fill material into jurisdictional waters/wetlands.

A review of readily available aerial imagery and topographic maps identified two large playas, a few wetlands and tributaries within the project site. A playa lake is generally a circular basin formed in the Southern High Plains region. Playa lakes are ephemeral, meaning they temporarily fill with water during certain times of the year. During the dry season, the water evaporates, occasionally leaving behind a salt crust. These small lakes are fed by seasonal rains and underground aquifers, and some of them are saline in nature.

The existing project site is primarily undeveloped with some leftover industrial appurtenance from the PANTEX Plant. The site is relatively flat, with elevation ranging between approximately 3,495 to 3,565 feet above mean sea level. Storm water in the area is anticipated to drain in a generally northwest to southeast direction. Review of existing topography indicates runoff from the project site ultimately drains to offsite playas. The closest riverine aquatic feature is the Canadian River, approximately 17 miles north of the project site. There is no evidence surface water drains into this system.

The project site falls within the Panhandle region of the Texas Water Development Board, which encompasses Carson County.[5] Groundwater in the vicinity of the project site is anticipated to follow the surface topographic gradient from the northwest to southeast with an estimated depth to groundwater approximately 280 to 600 feet below ground surface, based on the depths of wells currently onsite. A review of the Panhandle Interactive Groundwater Map indicates there are several registered wells identified with a number of unused water wells and plugged water wells within the project site.[6] The Ogallala and Dockum Group Aquifers exist beneath the project site. A perched aquifer is in the unsaturated zone (vadose zone) for 200 feet beneath the surface and above the primary Ogallala Aquifer, followed by the Dockum Group Aquifer. Large consumptions of water by the surrounding area comes from a combination of Lake Meredith Reservoir and the Ogallala Aquifer.

The majority of eastern Amarillo derives its drinking water from underground sources including groundwater from the Ogallala Aquifer. The Amarillo Municipal Water System (AMWS) provides surface and ground water from the Ogalla Aquifer, the Canadian River Municipal Water Authority (CRMWA), and well fields located in Carson, Potter, Deaf Smith and Roberts Counties.[7] Amarillo's municipal drinking water sources are located mostly in farming and ranching areas; therefore, the susceptibility for contamination comes mainly from agricultural practices. Based on the City of Amarillo 2023 Water Quality Report, drinking water in the city meets or exceeds U.S. Environmental Policy Agency (EPA) standards. The proposed project is

[5] Panhandle Groundwater Conservation District https://www.pgcd.us/history

[6] Panhandle GCD Interactive Groundwater Map https://www.pgcd.us/interactive-map

[7] City of Amarillo (2023 Water Quality Report) https://www.amarillo.gov/wp-content/uploads/2024/09/2023-CCR-Community-Water-Q.pdf

not anticipated to result in a significant consumption of the community's water supply or result in a significant deterioration of the city's water quality.

A floodplain is relatively low land located near a waterbody that is subject to periodic flooding. Floodplains typically help moderate flood flow, recharge groundwater, spread silt to replenish soils, and provide habitat for a number of plant and animal species. The 100-year floodplain is defined as the area subject to a one-percent chance of flooding in any given year. A 500-year floodplain refers to areas subjected to a 0.2-percent chance of flooding in any given year. Executive Order (EO) 11988, Floodplain Management, requires federal agencies to ensure their actions minimize the impacts of floods on human health and safety and restore the natural and beneficial values of floodplains.

The EO requires Federal agencies to avoid the 100-year floodplain unless there is no practicable alternative. According to the EO 11988, the objective for Floodplain Management is "…to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative." The purpose of the EO is to create a consistent government policy against floodplain development in all cases.

The Federal Emergency Management Agency (FEMA) has developed floodplain maps that illustrate flood zones, which are areas that FEMA has defined according to levels of flood risk and flood type. A desktop review of FEMA Flood Insurance Rate Map (FIRM) Panel identified the project site lies within an unmapped firm panel (Unmapped_480725).

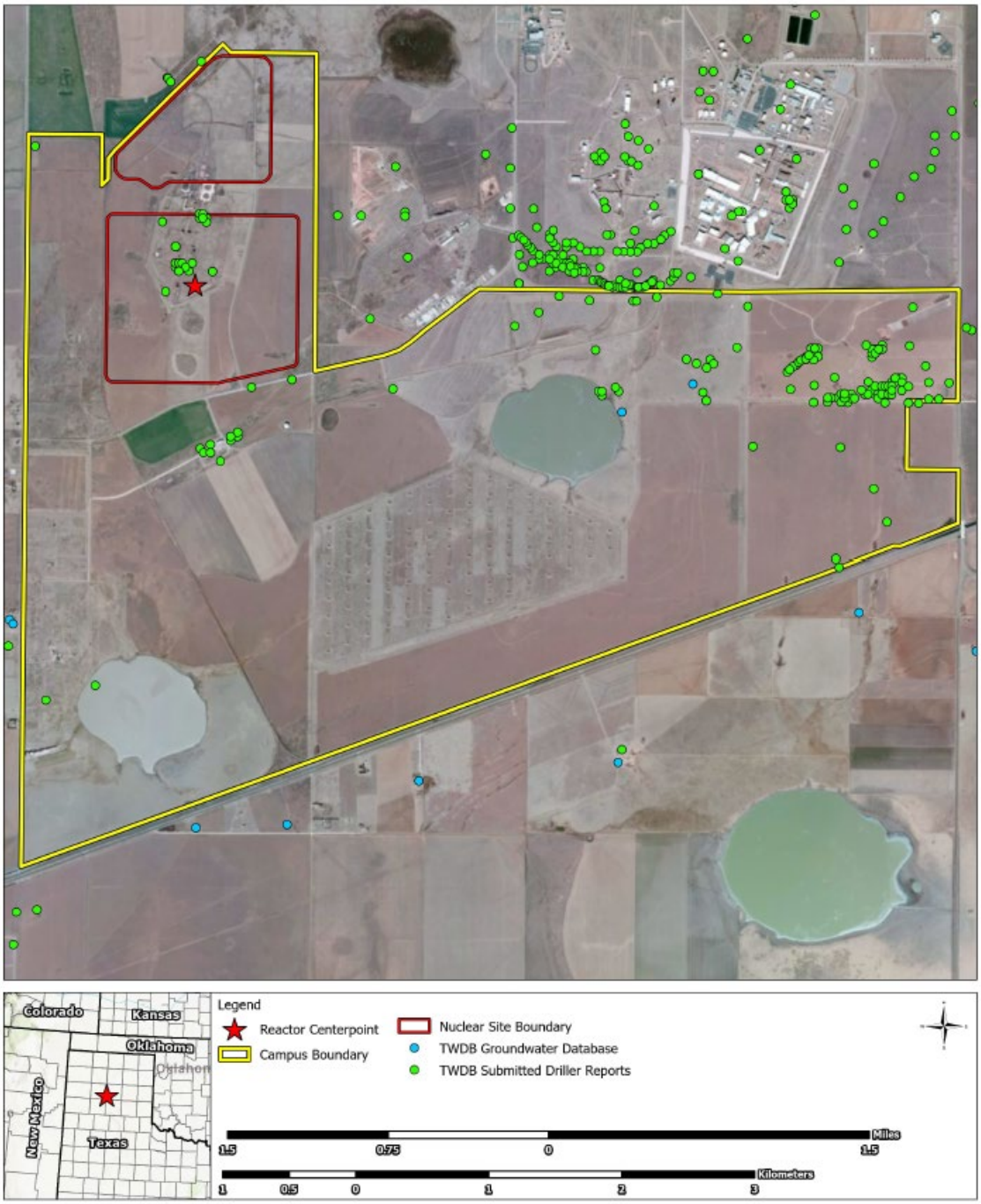
A flood study will be performed to identify and delineate flood prone areas and define specific requirements involved in any floodplain development areas.

2.2.1. Hydrology (Hydrological Alterations)

Based on desktop resources, there are several surface water features on the site. These features appear to be ephemeral drainages and playa lakes. For the drainages, there may be some excavated channels along with channels with natural geomorphology. Given the flat terrain of the site, the majority of these linear drainages likely drain towards isolated basins or playa lakes. The flow for the linear drainages are likely to be ephemeral with water only present in response to precipitation events, but some drainages may carry a less ephemeral flow if influenced by anthropogenic water sources such as irrigation runoff or wastewater discharges.

The applicant understands that the proposed project area will be fully impacted, and further field reconnaissance will be required to identify modifications to site drainage patterns, change in floodplain capacity, alternations on the quantity and availability of water impacts and the effects of effluent discharge on water quality from potential waterbodies onsite. An Aquatic Resource Delineation (ARD) consisting of in-depth desktop research and field investigations will be conducted to document aquatic resources and hydrological features onsite. This would assist in identifying aquatic features potentially regulated by federal and state agencies.

Figure 2-9. Groundwater Monitoring Well Locations Operated by PANTEX



2.3. Ecological Resources (Terrestrial and Aquatic)

2.3.1. Terrestrial Ecology

Terrestrial Habitats

The project site is located within the Southern High Plains region. Vegetation is characterized as shortgrass prairie. However, over time, the land has been predominately changed in three different ways: cultivated ground for agricultural reasons, rangeland conversion and encroachment of non-native grasses. Major vegetation cover types within the project site were identified and areas were estimated utilizing the National Landcover Database (NLCD). Table 2-2 through Table 2-4 summarize the different types of landcover and the estimated footprint of each type within the site boundary, project vicinity, and region, respectively. The cover types are mapped in Exhibits A and C in Part 11.

Table 2-2. Estimated Area and Relative Proportion of Landcover Types Within the Proposed Project Area

Vegetation Type	Acreage (ac)	Relative Proportion (%)
Grassland or herbaceous	4,251.9	72.9
Shrub or scrub	1,026.8	17.6
Cultivated crops	305.1	5.2
Emergent herbaceous wetlands	150.4	2.6
Developed open space	43.1	0.7
Developed low intensity	18.4	0.3
Open water	12.5	0.2
Developed medium intensity	3.5	<0.1
Developed high intensity	0.22	<0.1
Total	**5,811.7**	**100**

Table 2-3. Estimated Area and Relative Proportion of Landcover Types Within the Proposed Project Vicinity (the Area Within a 6-Mile Radius from the Center Point of the Site)

Vegetation Type	**Acreage (ac)**	**Relative Proportion (%)**
Shrub or scrub	1,129,106.0	88.6
Cultivated crops	70,654.6	5.5
Grassland or herbaceous	65,773.8	5.2
Developed open space	3,496.4	0.3
Developed low intensity	2,011.0	0.2
Emergent herbaceous wetlands	1.160.1	0.1
Developed medium intensity	822.8	0.1
Open water	723.1	0.1
Developed high intensity	365.5	<0.1
Pasture or hay	83.9	<0.1
Deciduous forest	20.5	<0.1
Mixed forest	1.8	<0.1
Barren land	1.3	<0.1
Evergreen forest	1.1	<0.1
Woody wetlands	1.1	<0.1
Total	**1,274,223.8**	**100**

Table 2-4. Estimated Area and Relative Proportion of Landcover Types Within the Proposed Project Region (the Area Within a 50-Mile Radius from the Center of the Site)

Vegetation Type	Acreage (ac)	Relative Proportion (%)
Grassland or herbaceous	2,106,826.2	38.5
Shrub or scrub	1,864,053.0	34.1
Cultivated crops	1,160,867	21.2
Developed open space	98,775.0	1.8
Evergreen forest	61,272.9	1.1
Developed low intensity	52,124.3	1.0
Emergent herbaceous wetlands	35,522.2	0.7
Developed medium intensity	20,074.6	0.4
Open water	18,503.5	0.3
Deciduous forest	13,424.6	0.3
Barren land	10,546.5	0.2
Woody wetlands	10,487.1	0.2
Developed high intensity	8,727.7	0.2
Pasture or hay	4,516.8	0.1
Mixed forest	324.0	<0.1
Total	**7,466,049.4**	**100**

The applicant understands that the terrestrial habitat within the project boundary will be fully disturbed during construction and the entire footprint of the site will be permanently impacted. Construction methods of land clearing and grubbing vegetation, BMPs, and site preparation activities related to the disruption of aquatic or terrestrial habitats will be provided at a later date.

Wetlands

Under the Clean Water Act (CWA), both wetlands and waterbodies may be considered Waters of the U.S. (WOTUS). Activities in WOTUS are regulated by the United States Army Corps of Engineers (USACE) under Section 10 of the Rivers and Harbors Act (RHA) and Section 404 of the Clean Water Act (CWA). Section 10 of the RHA applies to federally navigable waters. Section 404 of the CWA applies to all federally navigable waters, as well as to traditional navigable waters, perennial tributaries, intermittent tributaries, and adjacent wetlands to such tributaries. In order for a wetland to be considered adjacent, it must have a continuous surface connection to the aforementioned waters. The project area lies within the Tulsa District of the USACE.

Executive Order 11990, dated May 24, 1977, requires federal agencies to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. The USACE 1987 Wetland Delineation Manual defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally have three essential characteristics: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology during the growing season.

Fermi America contracted Terracon to review USGS topographic maps, aerial photographs, the National Wetlands Inventory (NWI) database, the National Hydrography Dataset (NHD), and USDA NRCS soil survey resources to assist with identifying suspect wetlands in the vicinity of the project area (see Table 2-5).

Table 2-5. Mapped Aquatic Features

Feature Name	Feature Type	Feature Area (Acres)
L2EM2F	Lake	27.894
L2EM2F	Lake	51.215
L2EM2F	Lake	67.586
L2USC	Lake	95.041
PEM1Ah	Freshwater Emergent Wetland	0.675
PEM1Ch	Freshwater Emergent Wetland	1.328
PEM1Ch	Freshwater Emergent Wetland	4.638
PEM1Cx	Freshwater Emergent Wetland	1.101
PEM1J	Freshwater Emergent Wetland	1.122
PEM1J	Freshwater Emergent Wetland	2.965
PEM1J	Freshwater Emergent Wetland	4.085
PEM1J	Freshwater Emergent Wetland	5.233
PEM1J	Freshwater Emergent Wetland	0.703
R4SBC	Riverine	0.590
R4SBC	Riverine	0.306
R4SBC	Riverine	0.130
R4SBC	Riverine	0.128
R4SBC	Riverine	0.128
R4SBC	Riverine	0.039

Nine wetlands, four lakes, and six riverine features were mapped within the project site (USFWS, n.d.). Additionally, several hydric soils, a key component to the formation of wetlands, were identified within the project area (*Exhibit B in Part 11*), including the NWI map.

The applicant understands that the proposed development will impact the entire proposed site, and further investigation will be required to identify the potential affected wetland features within the site boundary. At a later date, BMPs will be developed and implemented to assure water quality and hydrological alterations to the site. Field verification of wetland features will be investigated at a later date with an ARD to understand the impacts from construction.

Wildlife

The uplands associated with the proposed project site support a variety of invertebrates, reptiles, amphibians, birds, and mammals. The following taxa have been observed within the PANTEX Plant, located immediately north of the proposed project site. The insect class is well-represented, including grasshoppers, beetles, true bugs, flies, bees, wasps, ants, moths, butterflies, and dragonflies[8]. The most frequently occurring species of reptiles and amphibians include the following: the Great Plains toad (*Bufo cognatus*), Woodhouse's toad (*Bufo woodhousei*), Plains spadefoot toad (*Scaphiopus bombifrons*), Great Plains skink (*Eumeces obsoletus*), Western coachwhip snake (*Masticophis flagellum testaceus*), bullsnake (*Pituophis melanoleucus sayi*), checkered garter snake (*Thamnophis marcianus marcianus*) and prairie rattlesnake (*Crotalus viridis viridis*)[9].

Some of the more common species of birds that have been historically observed at PANTEX Plant include the Western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), mourning dove (*Zenaida macroura*), Bewick's wren (*Thryomanes bewickii*), mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), common nighthawk (*Chordeiles minor*), greater roadrunner (*Geococcyx californianus*), killdeer (*Charadrius vociferus*), Swainsons hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*)[10]. Bald eagle (*Haliaeetus leucocephalus*) and western burrowing owl (*Athene cunicularia hypugea*) were identified on or near the PANTEX site in 2023. The presence of western burrowing owl within the proposed project site boundaries was confirmed most recently in April of 2025.

Representative mammals that have been observed within the immediate project vicinity are the deer mouse (*Peromyscus maniculatus*), plains harvest mouse (*Reithrodontomys montanus*), white-footed mouse (*Peromyscus leucopus*), hispid cotton rat (*Sigmodon hispidus*), Southern Plains wood rat (*Neotoma micropus*), thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*), desert cottontail (*Sylvilagus audoboni*), black-tailed prairie dog (*Cynomys ludovicianus*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*)[11]. The presence of black-tailed prairie dog within the proposed project site boundaries was confirmed most recently in April of 2025.

[8] DOE 1994k:6
[9] DOE 1994e:8; DOE 1994k
[10] DOE 1994g:2-6; DOE 1993c: A.1, A.2; DOE 1994k:7-10
[11] DOE 1993c:10, B-1; DOE 1994k:11

Important Species and Habitats

Section 7 of the Endangered Species Act (ESA) directs all Federal agencies to use their existing authorities to conserve threatened and endangered (T&E) species and, in consultation with the USFWS, ensure that their actions (funded or carried out) do not jeopardize listed species or destroy or adversely modify critical habitat. Lists of T&E species are published by the USFWS. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the USFWS further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the USFWS, to make "no effect" determinations. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in Information, Planning, and Conservation (IPaC) system, or from the local field office directly. A list of Federally listed species identified as having the potential to occur within the project site was sourced from the USFWS IPaC system May 7, 2025 (Table 2-6). No critical habitat was identified in the IPaC system as being mapped within or near the site.

At the state level, current species' status information was obtained primarily from the "Rare, Threatened, and Endangered Species of Texas by County" database maintained by the Texas Parks and Wildlife Department (TPWD;Table 2-6). This state database also lists the status of species listed or considered species of concern by the Federal government.

Table 2-6. Federally Listed Species Identified as Having the Potential to Occur Within the Proposed Project Site by the USFWS IPaC System, Including a Description of Potentially Suitable Habitat for Each Species

Species	USFWS Status	Habitat Description
Piping plover (*Charadrius melodus*)	Threatened	Wintering migrant along the Texas Gulf Coast; beaches, sandflats, and dunes and adjacent offshore islands. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance. This species only needs to be considered for wind energy projects.
Rufa red knot (*Calidris canutus rufa*)	Threatened	Migrate northward through the U.S. Apr -Jun, southward Jul - Oct. Prefers shoreline of coast and bays, uses mudflats during rare inland encounters; Primarily inhabits seacoasts on tidal flats and beaches, herbaceous wetlands, and tidal flat/shore. This species only needs to be considered for wind energy projects.

Monarch butterfly (*Danaus plexippus*)	Proposed Threatened	Habitat is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high-altitude Mexican conifer forests or coastal California conifer, or Eucalyptus groves as identified in literature.

Table 2-7. Federally Listed Species Identified as Having the Potential to Occur Within Carson County by TPWD, Including a Description of Potentially Suitable Habitat for Each Species

Species	**Federal Status**	**State Status**	**Habitat Description**
Black rail (*Laterallus jamaicensis*)	T	T	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia.
Lesser prairie-chicken (*Tympanuchus pallidicinctus*)	E	E	This species requires a mixed-grass community with a high percentage of forbs and scattered low shrub. Lesser prairie-chickens inhabit tall, dense, mixed grass-dwarf shrub communities that occur on sandy soils; principally the sand sagebrush, (*Artemisia filifoilia*), bluestem (Andropogon spp.), and shinnery oak (*Quercus havardii*). Leks typically occur on knolls or ridges with relatively short and/or sparse vegetation. Nests are often constructed on north- or northeast-facing slopes, and nesting sites are in sand sagebrush or shinnery oak grasslands with high canopy cover and moderate vertical and horizontal cover, primarily residual vegetation. Nests often are under sand sagebrush or shinnery oak shrub or amid tall bunchgrasses.
White-faced Ibis (*Plegadis chichi*)	-	T	Prefers freshwater mashes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Table 2-7. Federally Listed Species Identified as Having the Potential to Occur Within Carson County by TPWD, Including a Description of Potentially Suitable Habitat for Each Species

Species	Federal Status	State Status	Habitat Description
Whooping crane (*Grus americana*)	E	E	Potential migrant via plains throughout most of Texas to the coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties. Breeds, migrates, winters, and forages in a variety of wetland and other habitats; During migration, a variety of habitats are used; however, wetland mosaics appear to be the most suitable.
Yellow-billed cuckoo (*Coccyzus americanus*)	T	-	Open woodland (especially where undergrowth is thick), parks, deciduous riparian woodland; in the West, nests in tall cottonwood and willow riparian woodland. Nests in deciduous woodlands, moist thickets, orchards, overgrown pastures; in tree, shrub, or vine, an average of 1-3 meters above ground; forest, woodland, and scrub.
Migratory monarch butterfly (*Danaus plexippus)*	C	-	Habitat is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high-altitude Mexican conifer forests or coastal California conifer, or Eucalyptus groves as identified in literature.
Black bear (*Ursus americanus*)	-	T	Generalist: In Chisos, prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos and Edwards Plateau in juniper-oak habitat. For ssp. luteolus, bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine; marsh. Bottomland hardwoods and large tracts of inaccessible forested areas.

Table 2-7. Federally Listed Species Identified as Having the Potential to Occur Within Carson County by TPWD, Including a Description of Potentially Suitable Habitat for Each Species

Species	Federal Status	State Status	Habitat Description
Palo Duro mouse (*Peromyscus truei comanche*)	-	T	Rocky, juniper-mesquite-covered slopes of steep-walled canyons on the eastern edge of the Llano Estacado. Also described as - escarpment of the Llano Estacado; rocky slopes with juniper, brush, and shortgrasses; primarily nocturnal.
Tricolored bat (*Perimyotis subflavus*)	PE	-	During the winter, often found in caves and abandoned mines; where caves are sparse, often found in road-associated culverts. During spring, summer, and fall, found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures. Forage along forest edges and over ponds and waterways.
Texas horned lizard (*Phrynosoma cornutum*)	-	T	Terrestrial: open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive.

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White-faced Ibis (*Plegadis chichi*)	-	T	Prefers freshwater mashes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.
Whooping crane (*Grus americana*)	E	E	Potential migrant via plains throughout most of Texas to the coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties. Breeds, migrates, winters, and forages in a variety of wetland and other habitats; During migration, a variety of habitats are used; however, wetland mosaics appear to be the most suitable.

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Texas horned lizard (*Phrynosoma cornutum*)	-	T	Terrestrial: open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive.

The applicant understands that the proposed project area will be entirely disturbed during construction, and all potential species habitats would be permanently impacted. Further field investigations will be required to identify the potential effects on potential habitat for federal and state species within the site boundary.

Figure 2-10. Observed Terrestrial Ecology Habitats within Vicinity

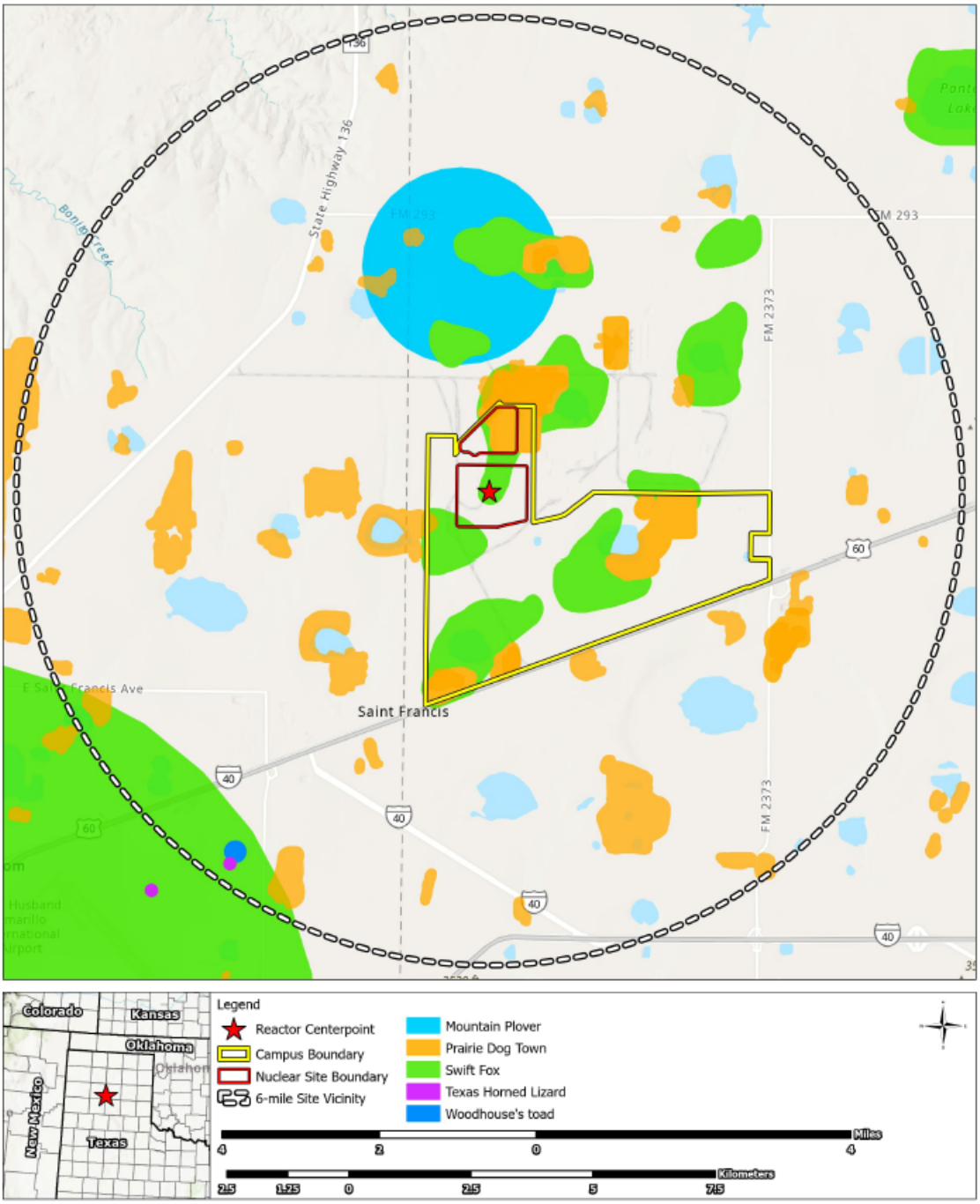
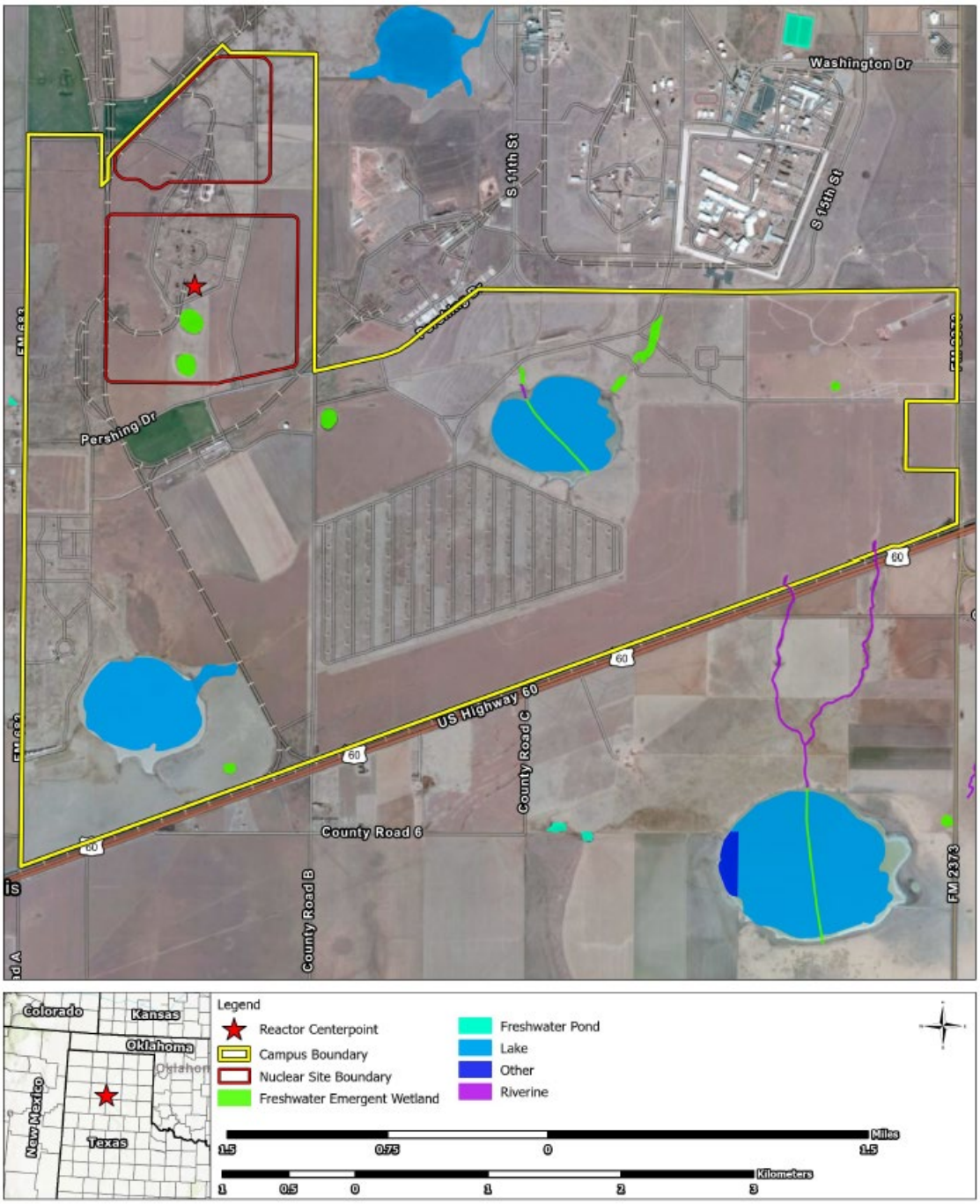


Figure 2-11. Observed Wetlands on Project Site



2.3.2. Aquatic Ecology

The aquatic ecology of the project site is predominately tied to the ephemeral drainage and playa features that briefly retain water in response to precipitation events. The playas on the site would be presumed to retain standing water and saturation for longer periods of time. As such, the aquatic flora and fauna are presumed to be more adapted to ephemeral hydrological conditions.

The applicant understands that the proposed project site will be fully disturbed during construction, and all aquatic habitats would be permanently impacted. Further field investigations will be required to identify the potential effects on habitat for federal and state species within the site boundary and aquatic habitats in general.

2.4. Socioeconomics (Demographics, Employment, Housing)

Carson County, with a population of approximately 6,800 (2023), is characterized by low population density, agricultural employment, and aging infrastructure. The regional economic area includes the Amarillo MSA (~265,000 people), with workforce readiness in trades, engineering, and logistics sectors.

Economic modeling will be provided in the Form S-11 filing which is expected to forecast over 9,000 peak construction-phase jobs and more than 600 permanent operating-phase jobs associated with the nuclear project alone. Job creation is concentrated in skilled trades, nuclear operations, and IT/data system support. The region has experienced similar expansive employment opportunities associated with gas and oil field development and Fermi America anticipate opportunities to redeploy this work force.

Indirect benefits to the local economy include supply chain growth, hospitality expansion, and tax base diversification. No large-scale public housing developments or school district displacements are anticipated. Fermi America is coordinating with Amarillo College and Texas Tech to support long-term workforce development.

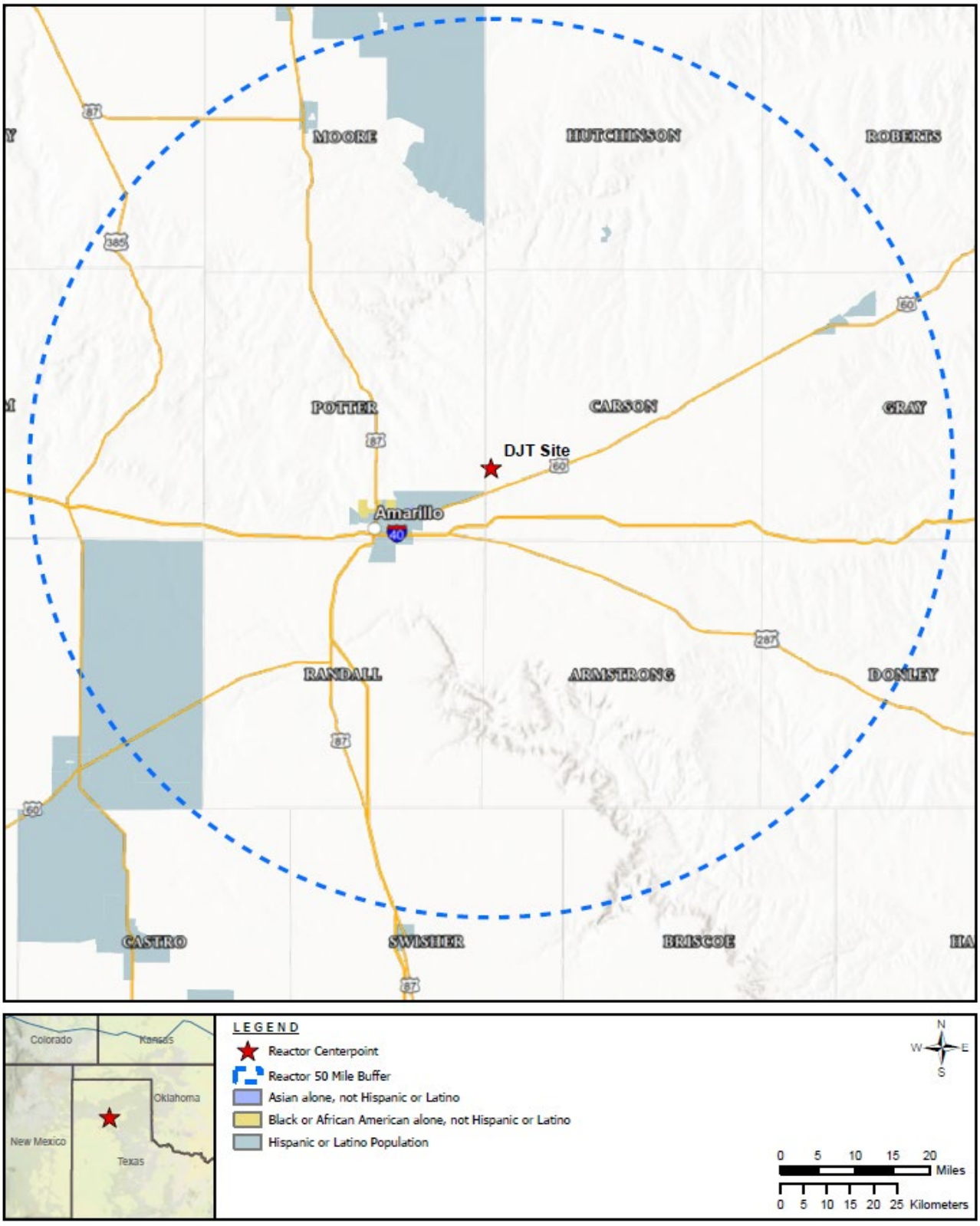
The applicant understands that the proposed project will likely have significant, primarily positive, socioeconomic impact on the region. Further socioeconomic modelling will be required to determine these likely impacts (including population, employment, housing, schools, etc.) and identify any mitigations that may be required to mitigate undesirable impacts.

2.5. Environmental Justice

Based on U.S. Census tract data and guidance under Executive Order 12898, the site does not lie in a region with elevated populations of minority or low-income residents that would be disproportionately affected by the proposed action. The nearest vulnerable community lies more than 10 miles away and is not located downwind, downstream, or downgradient of the project footprint.

Community outreach events will be conducted to share information, collect feedback, and ensure meaningful engagement. All communications will be tailored to reach all populations in the affected area.

Figure 2-12 Census Bureau Tracts with Elevated Minority Populations



2.6. Historic and Cultural Resources

Past survey efforts at the PANTEX Plant site have identified resources including archeological sites dating to the precontact period; standing structures that were once part of the WWII-era PANTEX Ordnance Plant (1942-1945); and buildings, structures, and equipment associated with the Plant's Cold War operations (1951-1991). In addition, many artifacts and historical documents have been preserved by PANTEX which provide interpretative value for understanding precontact and historic human activities at PANTEX.

The PANTEX Plant's Cultural Resource Management (CRM) program ensures compliance with all applicable state and Federal requirements [12]. The goal of the CRM program is to manage the Plant's cultural resources efficiently and systematically, considering both the Plant's continuing mission and historic preservation concerns. This goal is achieved through coordination with the Plant's project review process for compliance with the NEPA, and through consultation with the Texas Historical Commission (THC), which serves as the State Historic Preservation Officer (SHPO) for the state, and the President's Advisory Council on Historic Preservation (Advisory Council).

In October 2004, the Department of Energy, PANTEX, Texas Historical Commission (THC), and the Advisory Council on Historic Preservation (ACHP) completed execution of a Programmatic Agreement/Cultural Resource Management Plan (PA/CRMP). This PA/CRMP ensures compliance with Section 106 of the National Historic Preservation Act (NHPA), providing more efficient and effective review of PANTEX projects having the potential to impact precontact, WWII era, and Cold War era properties, objects, artifacts, and records. In addition, the PA/CRMP outlines a range of preservation activities planned for the Plant's compliance program and provides for the systematic management of all archeological and historic resources at PANTEX under a single document[11]. Two Supplemental Analysis (SA) reports were prepared in compliance with the PA/CRMP, one in 2013 and another in 2018.

The applicant will commit to perform any additional historic and cultural resource investigations that may be required to complement the existing record.

2.6.1. Historic and Cultural Resources at the Site and in the Vicinity

Archeological Resources

PANTEX lies within the Panhandle archeological region. Approximately half of PANTEX lands that are owned or leased by the DOE have been systematically surveyed for archeological resources and based upon those surveys, a site-location model was developed. In 1995, a 2,400-acre survey, that covered the entirety of the current project's direct APE, confirmed that precontact archeological sites at PANTEX are situated within approximately 0.25 miles of playas or their major drainage locations. A total of 16 archeological sites have been identified within the direct APE (Exhibit B in Part 11). In consultation with the THC, the DOE determined that the 16 sites within the direct APE are Not Eligible for inclusion in the NRHP.

[12] CNS 2016c

Table 2-8 Previously recorded archeological sites within the direct APE

Site Trinomial	Site Description	Cultural Materials	NRHP Eligibility
41CZ52	1930-1940s Historic Farmstead	House foundation, windmill, and barn foundation. Ceramics, glass, and metal fragments.	Ineligible
41CZ53	Precontact Lithic Scatter, Unknown Period	Seven (7) non-diagnostic lithics (5 Alibates flakes and 2 tested quartzite cobbles).	Ineligible
41CZ54	Precontact Camp, Potentially Archaic	48 Alibates flakes, 1 tested quartzite cobble, 6 fire cracked rocks (FCR), 4 Alibates side scraper fragments, 1 possible Alibates gouge, 1 projectile point midsection, 1 flaked Alibates chunk. The possible Alibates gouge and projectile point midsection indicate a potential Archaic occupation.	Ineligible
41CZ55	Precontact Camp, Unknown Period	47 Alibates flakes and 1 FCR fragment. No diagnostic artifacts.	Ineligible
41CZ56	Precontact Camp, Probably Archaic	23 lithic flakes (Alibates and chert), 3 FCR, 1 Archaic point (potentially Shumla or Large [Typo on form probably Lange]), and 1 Alibates reduction flake.	Ineligible
41CZ57	Precontact Camp, Unknown Period	5 Alibates flakes, 1 Alibates shatter fragment, 1 quartzite FCR, 1 Alibates side scraper, and 1 Alibates end scraper.	Ineligible
41CZ58	Precontact Lithic Scatter, Unknown Period	22 Alibates flakes, 2 Alibates biface fragments (point tips), 1 chert end scraper, 3 Alibates side scrapers, 1 quartzite flake, 1 tested quartzite cobble, 3 Alibates shatter fragments.	Ineligible
41CZ59	Precontact Lithic Scatter, Unknown, with Historic Component	10 Alibates flakes, 1 retouched Alibates flake, 3 Alibates shatter fragments, 2 historic whiteware sherds.	Ineligible

Table 2-8 Previously recorded archeological sites within the direct APE

Site Trinomial	Site Description	Cultural Materials	NRHP Eligibility
41CZ60	Early mid Twentieth Century Farmstead with Precontact Component	Depression glass, manganese glass, milk glass, aqua glass, amber glass, Bristol stoneware, natural clay stoneware, salt-glaze stoneware, whiteware, glass marbles, shell button, machine-made brick, concrete, sewage tile, clear glass, metal strapping, Model A Ford spark plug, wire nails, Alibates core and dart point basal fragment.	Ineligible
41CZ61	Precontact Lithic Scatter, Unknown Period	10 Alibates flakes, 1 brown quartzite flake.	Ineligible
41CZ62	Precontact Lithic Scatter, Unknown Period	6 Alibates flakes.	Ineligible
41CZ63	Precontact Lithic Scatter, Unknown Period	8 Alibates flakes, 1 quartzite FCR.	Ineligible
41CZ64	Precontact Lithic Scatter, Unknown Period	6 Alibates flakes, 1 Alibates chunk, 1 way brown chert flake (potential Knife River flint), 1 Alibates biface.	Ineligible
41CZ65	Mid-20th Century Historic Occupation, Possible Military	4 concrete building foundations, windmill parts, an associated windmill foundation, 2 small concrete pads, and 2 brick and mortar cisterns.	Ineligible
41CZ67	Precontact Lithic Scatter, Unknown Period, and Historic Ditch and Posts	Unknown number of Alibates flakes, 1 Alibates knife/projectile point tip, 1 Alibates biface fragment, petrified wood hammerstone, 2 FCR, 2 Quartzite fragments, 1 petrified wood fragment, 1 sandstone fragment, 1 end scraper.	Ineligible

Table 2-8 Previously recorded archeological sites within the direct APE

Site Trinomial	Site Description	Cultural Materials	NRHP Eligibility
41CZ68	20th Century Historic Homestead	House foundation of "Amarillo Brick," concrete box, 6 concrete foundation piers, scattered lumber fragments, unknown number of wire nails, an earthen berm/dam, stoneware, bottle glass (clear, brown, aqua), tin fragments, a 1936 penny.	Ineligible

Historic Resources

The WWII-era historical resources of PANTEX consist of 118 standing buildings and structures, all of which have been surveyed and recorded. In consultation with the SHPO, PANTEX has determined that these properties are not eligible for inclusion in the National Register within a WWII context. The WWII-era buildings and structures have been preserved to some extent through survey documentation, photographs, individual site forms, and oral histories.

The NHPA typically applies only to historic properties that are at least 50 years old unless they are of "exceptional importance" (National Park Service Bulletin 15, 1997). However, 69 buildings that were constructed during WWII and used during the Cold War are eligible for inclusion in the National Register under the Cold War context. Many properties at PANTEX are associated with the Cold War arms race and are of exceptional importance. As a final assembly, maintenance, surveillance, and disassembly facility for the nation's nuclear weapons arsenal, PANTEX lies at the very heart of Cold War history. The Cold War-era historical resources of PANTEX consist of approximately 650 buildings and structures and a large inventory of process-related equipment and documents. The historical resources of this period are among the Plant's most significant and offer a valuable contribution to the nation's cultural heritage. Ten buildings designated for in-situ preservation were specifically listed in the Twenty-Five Year Site Plan FY2013-FY2037 [13]. A full list of these resources can be found within the PA/CRMP.

In June 2015, DOE/NNSA approved the donation of excess hardware and tools from the historic PANTEX railcars to the Amarillo Railroad Museum to be used in their display. The excess material donated in 2015 consisted of cans of nuts, bolts, spikes, railcar wheels, and an assortment of miscellaneous items. No Native American mortuary remains, or funerary artifacts have been found at PANTEX to date.

[13] PANTEX 2012; CNS 2016c

2.6.2. Cultural Background

The APE is located within the Panhandle archeological region and neighbors the Caprock Canyonlands and Southern High Plains. All three regions heavily influenced one another due to their proximity, and form part of the larger Southern Great Plains region [14]. The Southern Great Plains region consists of an extensive plateau covering approximately 120,000 km2 and is bounded by escarpments on the east, north, and west [15]. Some of the best-known Paleoindian sites in North America are located throughout the Southern High Plains [16].

Following Perttula (2004) the regional prehistory of the Southern Great Plains is typically divided into five general periods: Paleoindian (unknown to 8500 BP); Archaic (8500 to 2000 BP); Ceramic (2000 BP to ca. AD 1450); Protohistoric (ca. AD 1450 to 1650); and Historic (ca. AD 1650 to 1950). Hypothesized shifts are related to climatic and environmental changes (Table 2-10) although these, like cultural transformations, are difficult to precisely date in the study area.

Table 2-9. Generalized Culture History for the Southern Great Plains, with Corresponding Environmental Periods

Time Period	Years Before Present	Environmental Period
Historic	350 BP to ~50 BP	Modern Era, sometimes referred to as Anthropocene
Protohistoric	500 BP to 350 BP	Modern Era, sometimes referred to as Anthropocene
Ceramic	2000 to 500 BP	Late Holocene
Archaic	8500 to 2000 BP	Early to Late Holocene
Paleoindian	unknown to 8500 BP	Late Pleistocene and Early Holocene

Paleoindian Period: unknown to 8500 BP (pre-Clovis, Clovis, Folsom, and Cody Complexes)

The Paleoindian period begins with the earliest known evidence of human presence and occupation within the project area, as well as North America. Historically, many archeologists have advocated a Clovis-first model that described the earliest inhabitants as arriving only around 13,200 years ago; however, an abundance of evidence has indicated the existence of pre-Clovis cultures well before this period. Potential starting dates in the Great Plains can be up to 17,000 BP taken from the Selby site of Yuma County [17], Colorado, or ca. 23,000 BP from the human footprints identified in White Sands, New Mexico [18]. Evidence suggests that during this

[14] Griffith et al. 2007
[15] Perttula 2004
[16] Johnson and Holliday 2004
[17] Wood 1998
[18] Bennett et al. 2021

time, human groups were highly nomadic, relied heavily on hunting and gathering strategies for food and other important resources, and maintained cultural territories covering enormous expanses of terrain. Exploitation of now-extinct Pleistocene fauna and megafauna (including antique bison, mammoth, mastodon, and other taxa) was common.

Evidence of pre-Clovis Culture is minimal in the Texas Panhandle and the rest of the Great Plains. The Selby and Dutton sites are two candidates for pre-Clovis sites within the Great Plains. Both sites indicate hunting and butchering of horse, camel, deer, bison, and mammoth[16]. Radiocarbon dates from Selby indicate a potential date between 17,000 and 13,000 BP, while dates taken from Dutton indicate an occupation range between 17,000 and 11,500 BP[16]. Cultural materials identified alongside the pre-Clovis deposits included a bifacial lithic scraper and seven lithic flakes.

The Clovis Horizon began sometime around 13,500 years ago and rapidly spread throughout much of North America. Clovis technology is defined by large points with sophisticated fluting techniques. Clovis sites are often identified as surface sites or scatters, and sometimes as kill sites of Pleistocene fauna. Environmental evidence suggests that the region was cooler and moister than the current climate patterns during the Clovis Horizon, and the region was characterized by pinyon-juniper parkland with more water sources than those present today [19]. The Lubbock Lake (41LU1) and Miami (41RB1) sites are two examples of Clovis Horizon sites within the Southern Great Plains. Archeological investigations at Miami have identified the remains of five mammoths alongside Clovis points that were resharpened and used as butchering tools[15]. The Lubbock Lake site is a multi-component site with occupations ranging from the early Paleoindian Period through the Historic. The Clovis Horizon component at Lubbock Lake is a kill site indicating the processing of at least six species of megafauna. Mammoth limb elements were recovered in association with boulders that were used to fracture the humerus[19]. Additionally, a single Clovis point resharpened to use as a butchering tool was also recovered.

The Folsom Complex overlaps and follows the Clovis Complex. The defining features of the Folsom Complex are Folsom fluted projectile points and the gradual decline in Pleistocene megafauna including a lack of mammoth remains [20]. The Clovis-Folsom transition was a period of significant environmental change and widespread extinctions of megafauna[19]. Folsom sites are numerous in the region and include occupations at Blackwater Draw (the Clovis type-site) and Lubbock Lake. Both sites indicate that Folsom Complex focused on the exploitation of bison with large scale kill events and subsequent butchering activities[19].

Around 11,000 years ago, Pleistocene climates underwent rapid warming marking the beginning of the Holocene and leading to adaptations that characterize the Late/Transitional Paleoindian period. Technology shifted from fluted points (i.e., Clovis and Folsom) to lanceolate, unfluted points (i.e., Firstview) and stemmed points (i.e., Scottsbluff). The peoples of the Late Paleoindian period focused on the exploitation of bison as other forms of megafauna dwindled. The Late Paleoindian period includes a wide variety of complexes including Hell Gap, Agate Basin, Plainview, and Cody.

[19] Simmons et al. 1989
[20] Kornfeld et al. 2010

The Plainview Complex was first identified near Plainview, Texas (located between Lubbock and Amarillo) and can be identified by Plainview projectile points, often resharpened into butchering tools. At least four Plainview Complex sites have been located within the Southern Great Plains of Texas: the Plainview site, Lake Theo, Ryan's site, and an occupation at Lubbock Lake[19]. These sites indicate a continuation of the exploitation of bison with large scale kill events and subsequent butchering activities.

The Cody Complex can be identified by a wide variety of projectile points including, but not limited to, Eden, Scottsbluff, Firstview, Alberta, and Kersey points alongside Cody knives[21]. Most Cody Complex bifaces have

> *a straight-sided (sometimes slightly expanding or contracting) squared base that may range from slightly convex to flat to slightly concave, squared to rounded shoulders that are occasionally subtle when ground or absent (e.g., Firstview), a lanceolate parallel-sided blade (that may range from convex to triangular) often with well-executed parallel collateral flaking (sometimes irregular), and a cross section ranging from biconvex (sometimes flattened) to median ridged (sometimes diamond shaped)*[21].

The Olsen-Chubbuck site is a Cody Complex bison kill site located at an arroyo channel near Firstview, Cheyenne County, Colorado. Approximately 190 bison were hunted and systematically butchered during the event[16]. Firstview projectile points recovered in context with bison kills at Blackwater Draw and Lubbock Lake indicate Cody Complex occupations during the late Paleoindian Period[15].

Archaic Period: 8500 BP to 2000 BP

The beginning of the Archaic Period can be distinguished from the Paleoindian Period by the transition from the exploitation of megafauna and bison to an expanded subsistence strategy that relied on a variety of resources including both large and small game and plant resources. Further distinctions from the Late Paleoindian period are demonstrated by the continued evolution of projectile point technology from lanceolate points to early side and corner notched points[19].

The transition from the Paleoindian to the Archaic was marked by a larger population demonstrated by an increasing number of sites observed in the region and reliance on plant resources both for tools and for subsistence[19]. Tools like manos (handstones) and metates (grinding slabs) became more common and reflected an increased inclusion of vegetal materials in the diet, especially in later time periods[15].

While bison continued to be an important resource on the plains throughout the Archaic Period, an important archeological indication of the shift from the Paleoindian Period is the appearance of plant cooking technology consisting of heat-treated rocks used to convert carbohydrates into ingestible sugars (i.e., caloric energy)[22]. This technique immediately converted several root-based plants into reliable sources of food. The Archaic period in the Southern High Plains appears to have had trade links with other groups, especially in the Late Archaic, when it was part of an extensive exchange system that shared technology and goods and was heavily

[21] Knell and Muñiz 2013:4
[22] Thoms 2009

influenced by the Caprock Canyon Lands. For prehistoric people, the Caprock Canyonlands was essential in providing abundant (quality and quantity) resources than anywhere else in the Southern Plains: natural shelter, firewood, raw lithic materials, plant, and animal foods, and, most importantly, water[23].

Ceramic/Late Prehistoric Period: 2000 BP to 500 BP

The Ceramic Period, also called the Late Prehistoric Period, began when then bow and arrow and ceramics appeared within the Great Plains around 2000 years ago. Within the Southern Great Plains of the Texas Panhandle, the Ceramic Period is defined by the spread of ideas from the Mississippian cultures to the east and the Puebloan peoples to the south and west which led to innovation in new tool, pottery, and food technologies[24]. The general lifeways of the period indicate a continued hunter-gather lifestyle centered around the exploitation of bison; however, increased contact from surrounding peoples is indicated during this period. The Ceramic period in the Caprock Canyonlands is often subdivided into the earlier Late Prehistoric I and later Late Prehistoric II.

The Palo Duro Complex was a Late Prehistoric I cultural complex, though it may have extended into the transitional Archaic period. Located in and around the Caprock Canyonlands between AD 500 to AD 1100/1200[22], the Palo Duro Complex was contemporaneous with the Plains Woodland occupations of Oklahoma and the Texas Panhandle and the pithouse phases of the Jornada Mogollon and Middle Pecos[25]. Three primary types of Palo Duro Complex sites are residential, camp site, and rock shelters. Scallorn and Deadman's arrow points are the two most common projectile point varieties identified at Palo Duro Complex sites (Boyd 2004). Ceramics are often absent or rare in Palo Duro sites, and the small number that are found can be classified as part of the Jornada Mogollon tradition[24].

Bedrock mortars, metates, and groundstone tools are common in the Caprock Canyonlands, indicating a focus on the extensive exploitation of plant materials, particularly mesquite beans[24]. These bedrock mortars, often called boat-shaped mortars, are elliptical mortar holes cut or ground into bedrock and that are found from Central Texas to California. Groundstone pestles, often sandstone, have a larger end that was used to grind the plant materials and a smaller side, often shaped by flaking/pecking, to create a suitable handle[26]. Being made into bedrock, these food production facilities were not portable, and meant that social groups who used them are likely to have defined their settlement-subsistence practices around areas where such features were present.

The Late Prehistoric II is characterized by a drying trend and significant increase in bison populations around AD 1000-1200. According to Boyd (1997) five major concurrent changes are evident in Late Prehistoric II sites:

> *(1) the appearance and widespread adoption of small side-notched arrow points, beveled knives, and Plains-style end scrapers; (2) a shift from Plains Woodland to Plains Village*

[23] Boyd 2004
[24] Cassells 1983
[25] Boyd 1997
[26] Forrester 1991

lifestyles that occurred among some local Southern Plains populations; (3) the appearance of immigrant populations of mobile bison hunters in the Panhandle-Plains; (4) the transition from pithouse to pueblo throughout the Southwest; and (5) the development of reciprocal exchange systems between Southern Plains bison hunters (both Plains Village and nomadic groups) and Southwestern agriculturalists.

The expansion of the sedentary lifestyle focused on intensive bison exploitation and horticultural activities led to the Plains Village cultures, which includes the Antelope Creek phase and Buried City complexes in the Texas Panhandle[24]. Ceramics were abundant in the later stages of the Late Prehistoric, unlike the Late Prehistoric I where they generally made up a small percentage of the overall assemblage[24].

Protohistoric Period: 500 BP to 350 BP

The Protohistoric Period in the Great Plains is a period defined by the first impacts of the arrival of Europeans with sporadic contact. The peoples of the plains continued a nomadic lifestyle that would be recognizable to their Paleoindian ancestors; they continued to hunt bison and other game while supplementing their diets with other nearby resources. Two main features that can be used to differentiate between Protohistoric and Late Prehistoric sites are the presence of horses and European trade goods[23].

Historic Period

During the Historic Period, nomadic Plains Indian tribes like the Comanche, Kiowa, and Cheyenne hunted buffalo in the area and utilized the canyons as winter campgrounds. Francisco Vazquez de Coronado explored the area in 1514 and most likely set up a short camp in the Palo Duro Canyon. Other Spanish explorers like Pedro Vial and American explorers like Capt. Randolph B. Marcy and Capt. George B. McClellan also journeyed through the area. With the mass slaughter of buffalo in the 1870s and the Battle of Palo Duro Canyon, the Plains Indians were driven out of the area, opening it up for Euro-American settlement [27].

Almost immediately, ranching became Carson County's major industry for decades and ultimately led to the development of homesteads, large ranches, and farming [28]. This quickly led to the founding of the city of Amarillo on J.T. Berry's townsite in nearby Potter County, with the support of cowhands from the LX Ranch [29]. The economy began to diversify in the early 1900s with the gradual growth of Amarillo (the population grew from 1442 in 1900 to 9957 in 1910) and because of pressures applied by the Santa Fe Railroad. The Santa Fe Railroad encouraged the subdivision of ranchlands into diversified agricultural fields that soon began producing wheat and sorghum. Natural gas and petroleum were discovered in the region in 1918, and large oil fields, helium production facilities, and zinc smelters soon were operating in the region. The economy was disrupted in the 1930s by the Great Depression and subsequent Dust Bowl, which brought economic ruin to many, particularly the farmers who were severely impacted by droughts and dust storms.

[27] Anderson and Odintz 2010
[28] Abbe 2020
[29] Anderson and Leffler 2021

The PANTEX Ordnance Plant was founded in 1942 by the United States Army Air Force as a bomb loading facility for World War II and was closed in 1945 with the end of the war. After six years of inactivity, the PANTEX Plant was acquired by the Atomic Energy Commission as a high explosives and nuclear weapons facility. From 1951 to 1991 nuclear weapons were manufactured at the facility, but it was converted to a disassembly facility in 1991 [30].

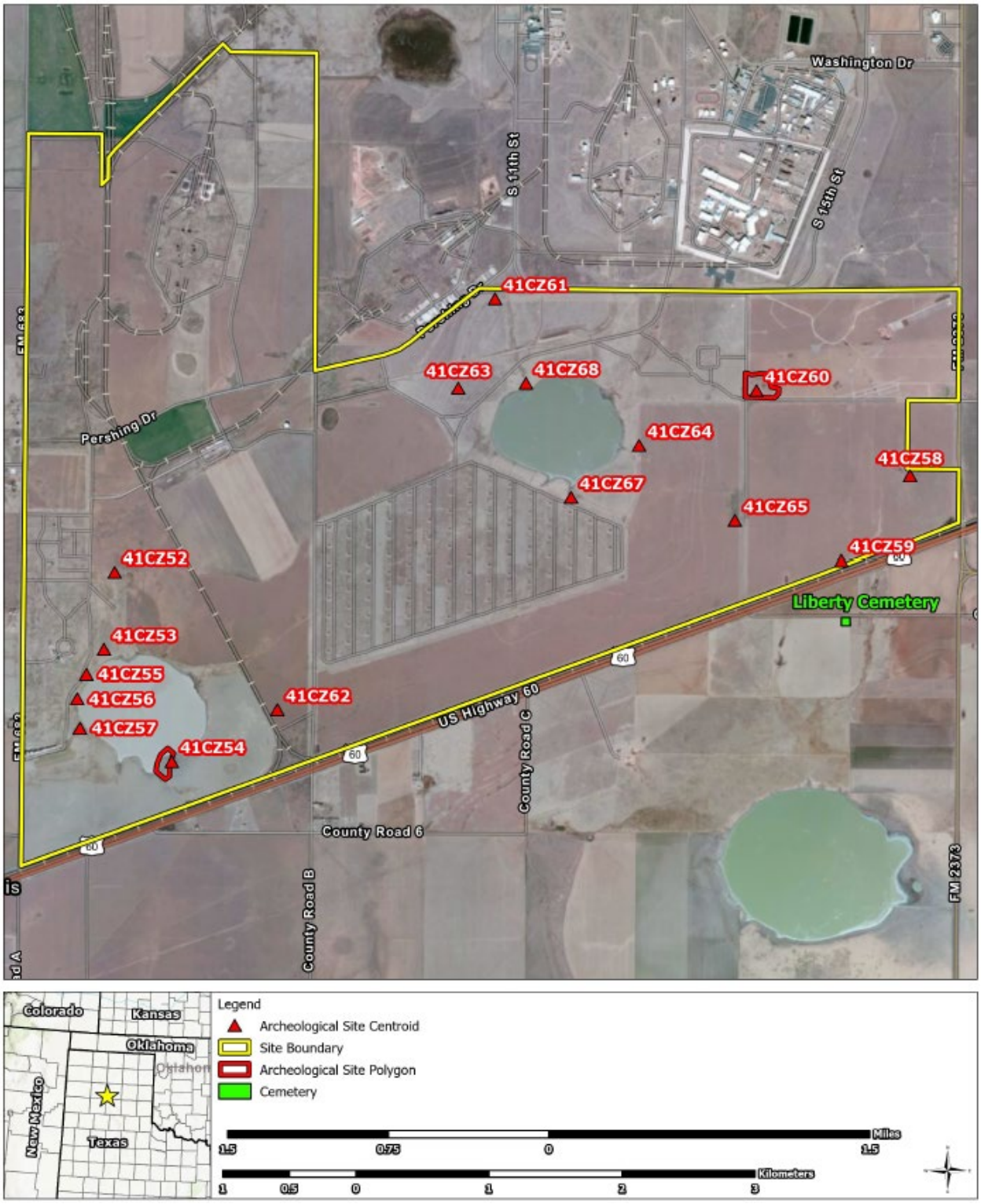
2.6.3. Consultation

Consultation was not undertaken as part of this report. Consultation is the responsibility of the Federal agency, and the NRC is required to take the lead on consulting with the THC, THPO, American Indian Tribes (on a government-to-government basis), and interested parties as outlined in 36 CFR 800; consultation is not the responsibility of the applicant. The applicant should engage with these parties to gather sufficient information pertinent to the NHPA Section 106 review process to assist the NRC in the timely completion of its NHPA Section 106 compliance requirements.

In addition, since the property is owned by Texas Tech University, the project must comply with Chapter 26 of the Texas Administrative Code, Rule §26.7 (d)(1)(A)(ii). Chapter 26 states “State agencies must send advance notification at least 30 days prior to any groundbreaking per §191.0525, or at least 60 days prior to altering, renovating, or demolishing a building that is 50 years old or older per §191.098 of the Texas Natural Resources Code.” Due to the presence of historic-age structures within the project area, Texas Tech is required to notify the THC of their plans for development in accordance with the timeline outlined above.

[30] PANTEX 2025

Figure 2-13. Archeological Sites on the Project Site

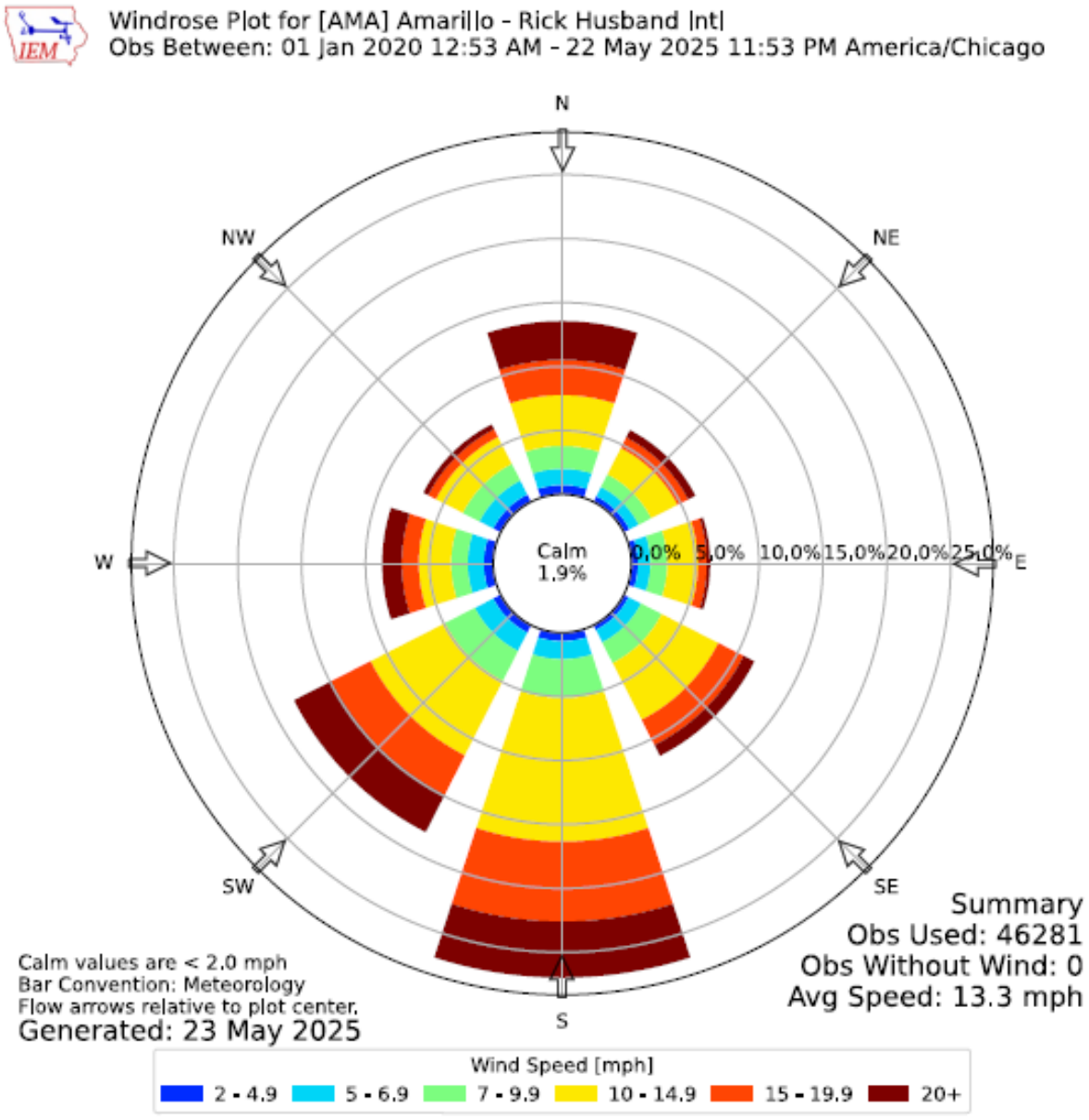


2.7. Air Resources

Ambient air quality in Carson County is currently in attainment for all criteria pollutants under the National Ambient Air Quality Standards (NAAQS). Baseline measurements and dispersion modeling (AECOM, 2025) confirm that the proposed project, which employs no wet cooling towers and minimal combustion operations within the NRC-licensed Nuclear Island, will not introduce emissions above de minimis thresholds.

Construction equipment and delivery vehicles will comply with Texas Low Emissions Diesel (TxLED) and Tier IV standards. Fugitive dust will be controlled through surfactant application, haul road wetting, and staging limitations. No air permits are required for NRC-licensed facilities. Fermi's power systems that fall outside NRC jurisdiction (gas turbines, diesel backup) will be permitted separately under the Texas Commission on Environmental Quality (TCEQ).

Figure 2-14. Composite 5-Year Windrose

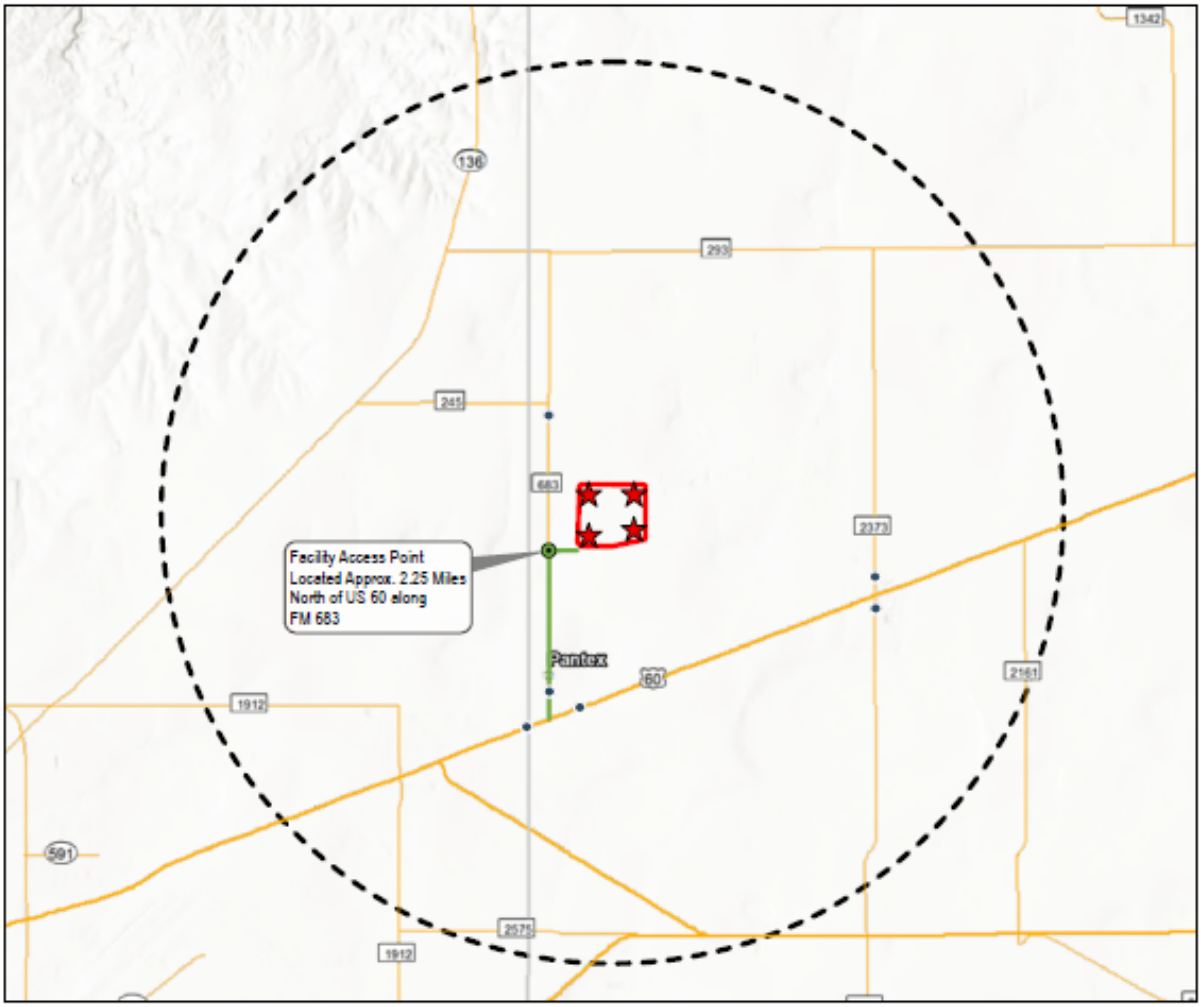


2.8. Nonradiological Health (Noise, Transportation)

Noise levels during construction are expected to be temporary and within OSHA and local ordinance limits. Primary noise sources include earth-moving equipment, pile drivers, and delivery vehicles. Mitigation includes noise barriers, daylight-only operations, and site buffer zones. No known sensitive receptors (hospitals, schools) lie within the affected noise contour.

Traffic studies indicate that the existing farm-to-market and U.S. Route 60 corridors are sufficient to support phased equipment delivery and workforce access. Construction of a private on-site rail spur is under evaluation for bulk reactor module transport. Traffic control measures will be coordinated with TxDOT and local sheriff's departments.

Figure 2-15. Vicinity Transportation Infrastructure



ROAD NAME	TRAFFIC ID	AADT 2023	AADT 2022	AADT 2021	AADT 2020	AADT 2019
US0060	188E5A	8990	9847	10712	9913	7847
FM2373	33H55	3416	2858	2146	1618	2856
FM2373	33H56	5050	4512	3932	2402	4861
US0060	33H57	8666	9836	10266	9784	7875
FM0683	33H58	356	350	368	440	459
FM0683	33H59	247	243	255	177	353

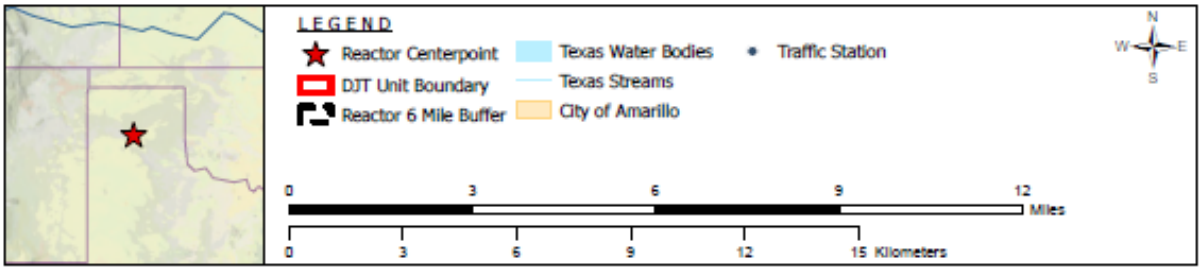
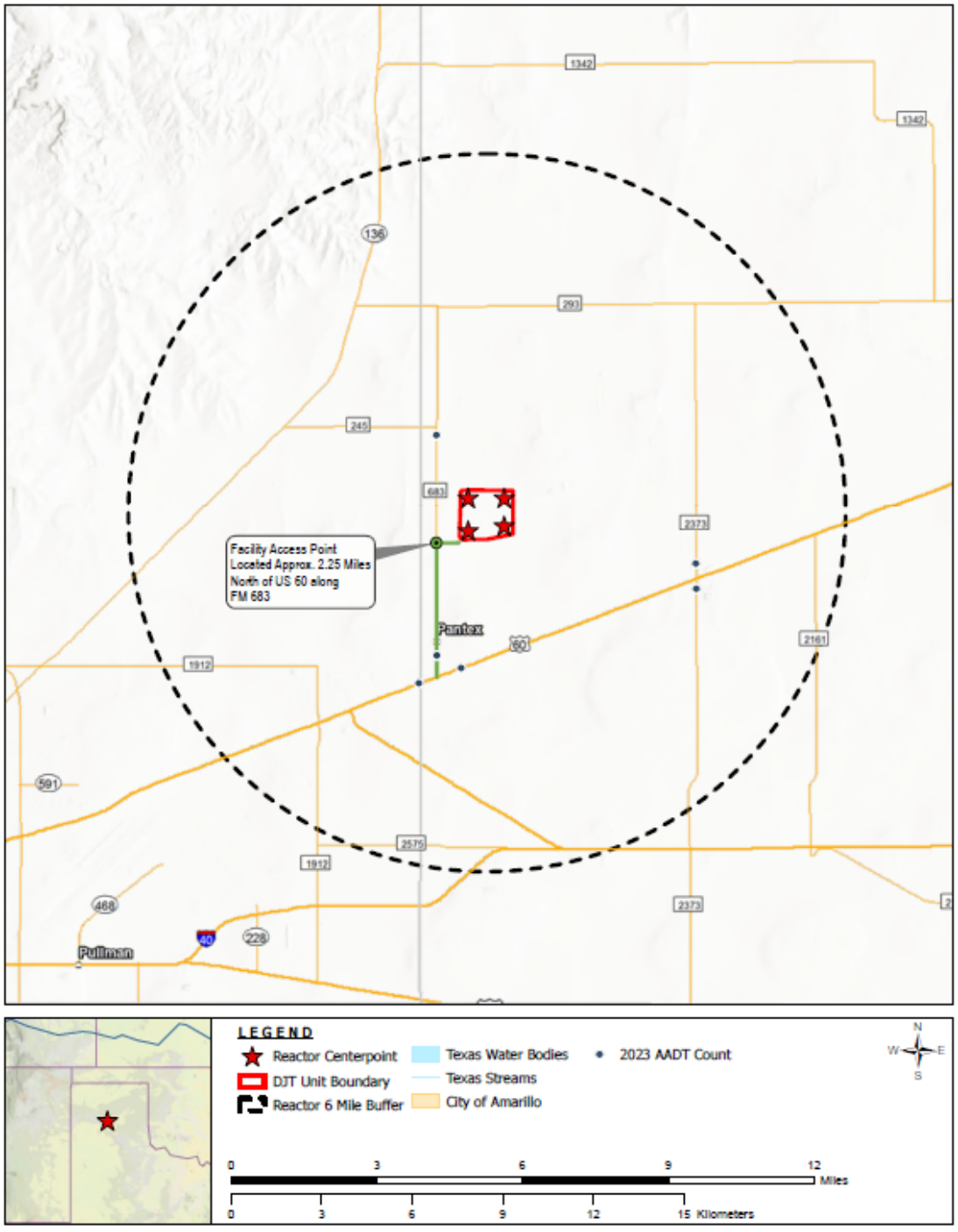


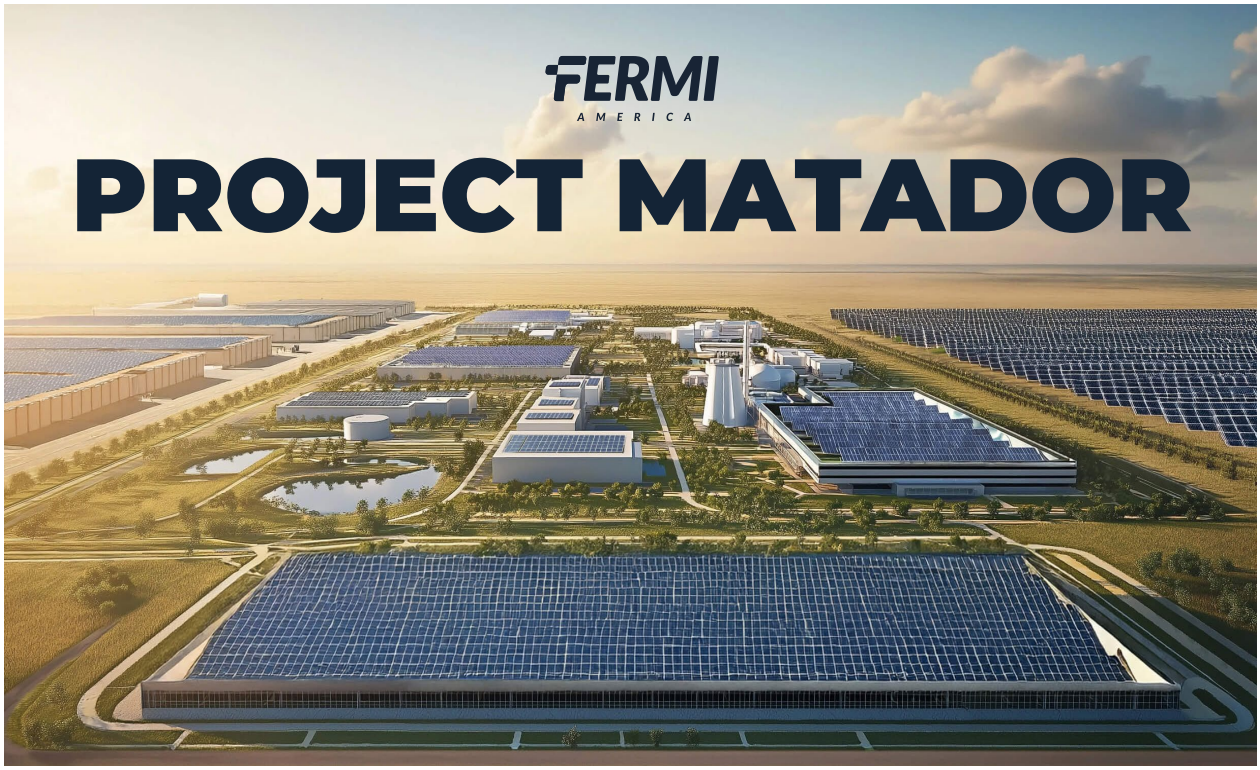
Figure 2-16. Vicinity Transpiration Network



2.9. Radiological Environment

Baseline radiation surveys confirm no pre-existing radiological contamination in soil, groundwater, or ambient air at the Fermi America site. The project does not involve brownfield redevelopment or remediation of legacy contamination. The site lies outside known plume boundaries associated with PANTEX operations.

Fermi America will establish a pre-operational radiological monitoring program to gather long-term baseline data on air particulates, direct gamma exposure, groundwater isotopes, and off-site transport pathways. Monitoring will be conducted in accordance with NUREG-1301 and in alignment with 10 CFR 20 Appendix I and 40 CFR 190 requirements. Results will be publicly available and submitted to NRC on an annual basis.



Donald J. Trump Generating Plant – Units 1 - 4

Environmental Report

Chapter 3 – Site Layout and Project Description

Revision 0

3.0 Site Layout and Project Description

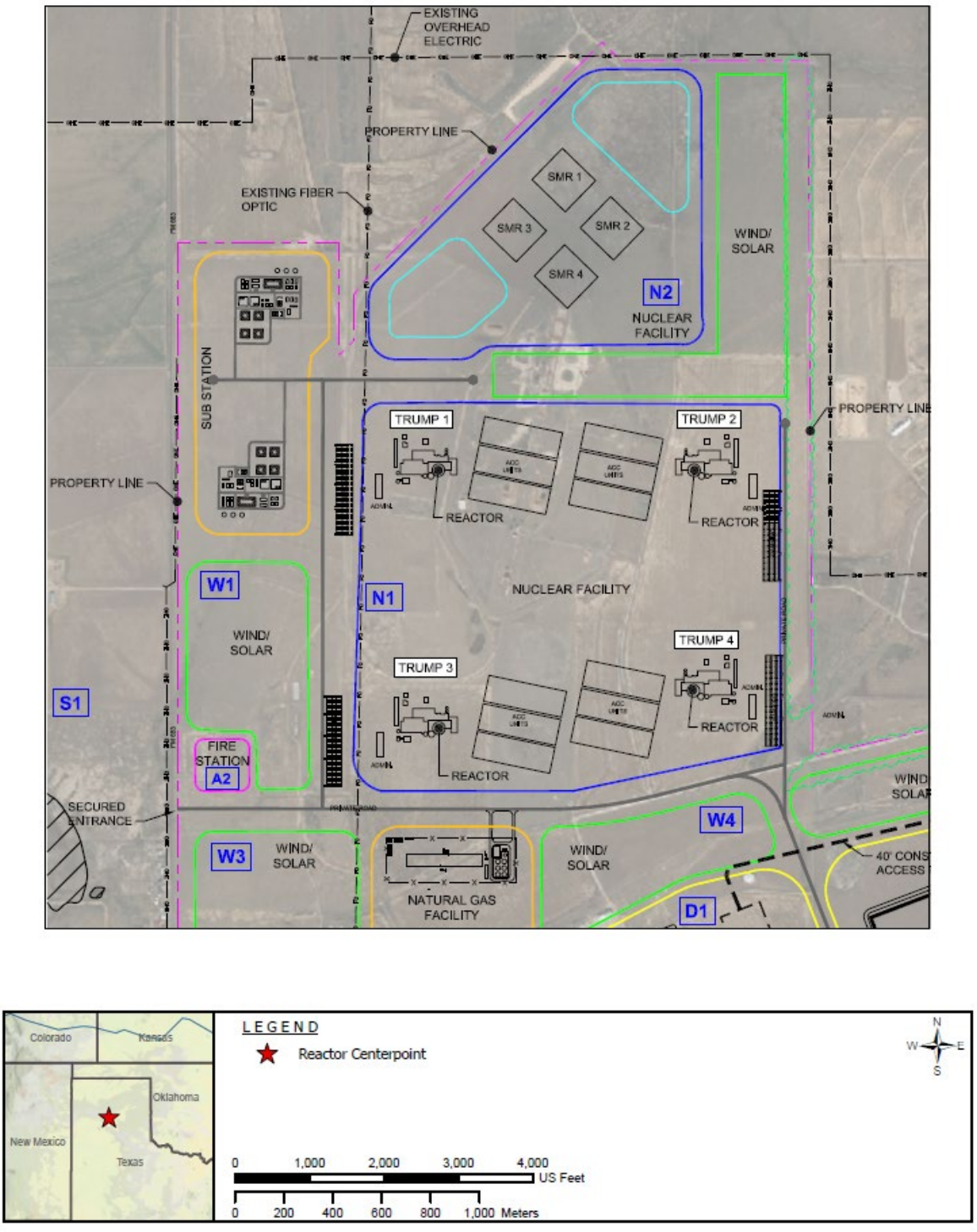
3.1. External Appearance and Plant Layout

The Project Matador site plan is structured into multiple specialized zones, including the NRC-licensed reactor, turbine and power delivery systems, air-cooled condenser infrastructure, all to support broader site data center modules, substation corridors, and operational support buildings. The 5,855-acre leasehold, secured under a sovereign agreement with Texas Tech University, provides full spatial flexibility to optimize safety, security, energy integration, and modular expansion.

The Nuclear Island occupies a hardened central zone with controlled access, seismic isolation, and radiological shielding consistent with AP1000 regulatory design envelopes. and hyperscale computing structures.

Supporting infrastructure, including transformers, battery storage fields, and perimeter substations, are distributed in concentric service layers surrounding the core facility, connected by redundant power and data corridors. Site aesthetics conform to federal high-security energy facility standards, integrating terraced berms, setback fencing, and advanced lighting for security and environmental control.

Figure 3-1. Donald J. Trump Generating Plant Site Layout



3.2. Structures, Systems, and Components

Fermi America's Project Matador project site consists of two categories:

1. NRC-regulated Structures, Systems, and Components (SSCs), comprising the reactor containment structure, AP1000 passive core cooling and safety systems, instrumentation and control systems, seismic monitoring, spent fuel pool, and radiological waste processing.
2. Unregulated power conversion, energy storage, and data facility systems managed independently through the project's REIT-financed delivery platform.

The AP1000 DCD Rev. 19 serves as the foundation for all licensed SSC design elements, and the constructor will confirm this design conforms to site features using seismic and hydrological inputs from the Terracon ESA and DOE/PANTEX archives. All nuclear, safety significant systems will be constructed and maintained to meet applicable quality assurance standards, such as 10 CFR Part 50, Appendix B, and ASME NQA-1.

Non-NRC systems, while excluded from COLA safety scope, are integrated through physical and process interfaces designed to maintain regulatory isolation under normal and off-normal operating conditions. Control room logic enforces boundary checks to prevent backflow, voltage irregularities, or shared systems contamination.

3.3. Construction Activities

Site construction will proceed in phased segments. Early works include site grading, access road expansion, water and wastewater handling systems, and underground utilities. The Nuclear Island excavation and mat slab will begin upon receipt of the NRC construction authorization.

Milestones include:

- Year 1: Site prep, earthwork, roadways, environmental barriers, and excavation.
- Year 2–3: Nuclear Island containment construction, installation of steel modules, and reactor building infrastructure.
- Year 4–5: System integration, grid testing, hot functional testing (HFT), and operational readiness inspections.

Construction labor will peak at over 3,000 workers, supported by modular staging zones across the campus and prefabrication partnerships in the Amarillo industrial district. Supply chain logistics leverage proximity to U.S. Route 60, Union Pacific rail corridors, and regional airlift capacity.

Environmental controls during construction include erosion and sedimentation barriers, noise attenuation berms, air particulate monitoring, and ecological field perimeter fencing to minimize disturbance to local flora and fauna.

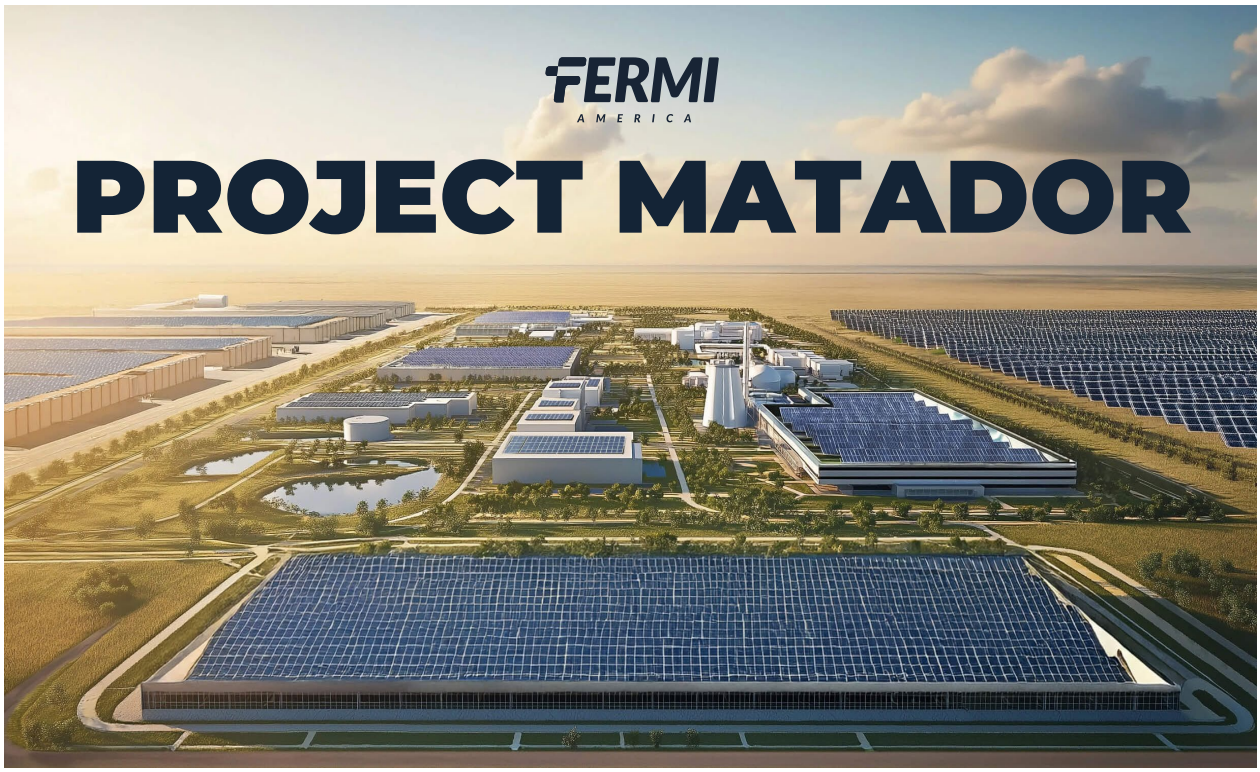
3.4. Operational Activities and Interfaces

Operations will be managed through a vertically integrated framework combining Fermi America's licensed nuclear operator with sovereign REIT-aligned subsidiaries responsible for non-regulated power and data infrastructure.

The plant will be staffed 24/7 with licensed operators, health physicists, maintenance technicians, cybersecurity personnel, and QA inspectors. All safety and emergency response protocols are governed under NRC-mandated programs described in Parts 5 and 17 of this COLA.

Interfaces between systems include:

- Steam transfer points exiting containment.
- Heat exchanger platforms feeding ACC systems.
- Isolated electrical interface cabinets at the Nuclear Island boundary.
- Physical communication protocols between control room staff overseeing reactor and energy delivery functions.



Donald J. Trump Generating Plant – Units 1 - 4

Environmental Report

Chapter 4 - Environmental Impacts from Construction

Revision 0

4.0 Environmental Impacts from Construction

4.1. Land Use

Construction of the proposed Fermi America facility at Project Matador will occur across phased stages, beginning with land grading, access development, utility installation, and excavation for the Nuclear Island. Site preparation will affect approximately 800 acres within the 5,855-acre leasehold to host four AP1000 reactors. Land use change, including both permanently and temporarily disturbed land is limited to previously disturbed agricultural land and open grasslands with no protected natural features.

4.2. Water Resources

Stormwater controls will be installed before major excavation activities. Erosion and sedimentation measures—including silt fencing, vegetated buffers, and stormwater retention basins—will comply with TCEQ general permit standards. All stormwater discharges will be managed under a Stormwater Pollution Prevention Plan (SWPPP) filed with the EPA.

Groundwater extraction during construction will be minimal and localized, primarily supporting dust suppression, foundation stabilization, and utility trenching. Temporary dewatering will be routed through sedimentation tanks and monitored for total suspended solids prior to discharge or reinfiltrating.

4.3. Ecological Resources

Construction impacts on ecological systems are expected to be negligible. Biological surveys confirmed no federally listed species within the disturbance zone. Vegetation removal will occur outside the nesting season of migratory birds, and a biological monitor will oversee compliance during sensitive windows.

Dust, vibration, and noise during grading and concrete pouring will be mitigated through phased work, equipment staging away from perimeters, and real-time monitoring. There are no delineated wetlands or Waters of the U.S. within or adjacent to the construction footprint. No Section 404 permitting is anticipated.

4.3.1. Terrestrial and Wetland Impacts

Terrestrial Impacts

Fermi intends to undertake land-clearing, grading, excavating, road work, and construction of new energy facilities across the site. Further field investigations will be required to identify the potential effects on potential habitat for federal and state species within the site boundary. Construction methods including ground disturbance, BMPs, and site preparation activities related to the disruption of terrestrial habitats will be provided at a later date.

Wetland Impacts

At this time, it is unknown if wetland features are present on the site. If wetland features are on the site, it is presumed that they will be severely impacted or removed by fill and grading activities. If wetlands are present, it may be necessary to coordinate with the USACE to determine if a Section 404 Clean Water Act (Section 404) permit is required, or to document compliance with Section 404. Accordingly, it is recommended that an Aquatic Resource Delineation (ARD) consisting of in-depth desktop research and field investigations be conducted to document aquatic resources and hydrological features onsite. This would assist in identifying aquatic features potentially regulated by federal and state agencies.

4.3.2. Aquatic Impacts

Ground-Disturbing Activities

Fermi intends to undertake land-clearing, grading, excavating, road work, and construction of new energy facilities across the site. At this time, it is unknown if there are aquatic features, including wetlands, are present on the site. If aquatic features are on the site, it is presumed that they will be severely impacted or removed by fill and grading activities.

If aquatic resources are present, it may be necessary to coordinate with the USACE to determine if a Section 404 Clean Water Act (Section 404) permit is required, or to document compliance with Section 404. Accordingly, it is recommended that an Aquatic Resource Delineation (ARD) consisting of in-depth desktop research and field investigations be conducted to document

aquatic resources and hydrological features onsite. This would assist in identifying aquatic features potentially regulated by federal and state agencies.

4.4. Socioeconomic Impacts

Construction-phase employment will peak above 9,000 workers and create significant direct and indirect economic benefits to Carson County and the Amarillo metropolitan region. The influx of skilled labor will increase demand for temporary housing, food services, transportation, and consumer goods. Fermi America will partner with local trade schools and community colleges to pre-train workers for the multiyear buildout.

Displacement of existing residents is not expected. Surrounding municipalities have sufficient housing capacity to accommodate incoming workers. Traffic volumes along FM-683 and Route 60 will temporarily increase, but phased shift schedules and alternate ingress routing will distribute load.

4.5. Environmental Justice Impacts

No environmental justice communities have been identified within the construction zone. Outreach will be conducted through distributed materials through local churches, schools, and agricultural cooperatives. Fermi America does not anticipate complaints or access concerns during the project's pre-construction notification period.

Construction impacts—such as noise, dust, and vibration—will be mitigated at the source. Truck traffic will avoid low-income residential corridors, and all deliveries will be scheduled outside school commuting hours.

4.6. Historic and Cultural Resources

Ground-Disturbing Activities

Fermi intends to undertake land-clearing, grading, excavating, road work, and construction of new energy facilities across the site. The proposed project will increase traffic into and through the site. It will also create visual intrusions on a largely flat, vacant landscape that could affect onsite historic resources.

Historic Properties within Direct and Indirect APEs

There are no known historic properties within the direct or indirect APEs that are listed in the NRHP. The PA/CRMP executed by NPO, B&W PANTEX, the THC, and the Advisory Council in October 2004, identified numerous precontact, WWII-era, and Cold War-era properties that are eligible for the NRHP.

Cultural resources identified at PANTEX include archeological sites from prehistoric Native American use of what is now Plant land; standing structures that were once part of the WWII-era PANTEX Ordnance Plant (1942-1945); and buildings, structures, and equipment associated with the Plant's Cold War operations (1951- 1991). In addition, many artifacts and historical documents have been preserved which are valuable sources for interpreting prehistoric and historic human activities at PANTEX. A list of historic properties within the direct and indirect APEs can be found in the PA/CRMP.

Historic and cultural resources that are not determined to be historic properties, but may be considered important in the context of National Environmental Policy Act of 1969, as amended.

Offsite historic resources within a one-mile radius include the PANTEX plant (determined eligible for the NRHP), St. Francis Catholic Church (potentially eligible for the NRHP), and Liberty Cemetery (potentially eligible for the NRHP).

Direct and Indirect Effects

Building construction activities have the potential for significant, direct effects to cultural resources from the construction of four Westinghouse AP 1000 reactors and associated support buildings and infrastructure. Site improvement activities, such as site grading, excavating, road work, and construction of the nuclear reactors and associated buildings would create the following direct adverse effects:

- Physical destruction to eligible historic and cultural resources.
- Removal of eligible historic and cultural resources from their historic location; and
- Alteration of the character of the property's use and physical features within the property's setting that contribute to its significance.
- Building construction activities and future use of the site will also have indirect effects on eligible historic properties within the indirect APE. Indirect effects include:

- Visual impacts to historic settings and viewsheds from new construction and power transmission lines.
- Auditory impacts from sources not currently present due to construction and related traffic, as well as from increased usage of the site once construction is complete; and
- Atmospheric elements (light, traffic, dust) that could affect the integrity and significance of eligible historic resources.

These effects can also be considered cumulative, as they are collectively significant actions taking place over a period.

Conclusions and Recommendations

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C. 300101 et seq.), requires that Federal agencies consider the effects of the agency's undertaking on historic properties included in, or eligible for, the NRHP and, before approval of an undertaking, give the Advisory Council on Historic Preservation (ACHP), a reasonable opportunity to comment on the undertaking. The NHPA defines "undertakings" as any project or activity that is funded or under the direct jurisdiction of a federal agency, or any project or activity that requires a "Federal permit, license, or approval." The ACHP's regulations at 36 CFR Part 800, "Protection of Historic Properties," set forth the procedures that define how Federal agencies meet Section 106 responsibilities.

The undertaking as proposed will harm one or more historic resources on the property, and potentially eligible resources within the Indirect APE. Given the potential for adverse effects, Fermi America recommends the following actions:

1. That the NRC, as a Federal agency, initiate consultation with the SHPO, THPO, American Indian tribes, and interested parties as part of the Section 106 compliance process.
    a. If the NRC determines an adverse effect may occur, it will, in accordance with 36 CFR Part 800, develop proposed measures in consultation with identified consulting parties that might avoid, minimize, or mitigate such effects. Such measures, as appropriate, would be discussed in the NRC staff's environmental impact statement.
    b. If the NRC staff determines that adverse effects would occur, it can develop a Memorandum of Agreement or Programmatic Agreement (see 36 CFR Part 800.6), as appropriate.
2. That the NRC, as part of the Section 106 compliance process, ensure that the Programmatic Agreement and Cultural Resource Management Plan (PA/CRMP) executed in October 2004 by NPO, PANTEX, THC, and the ACHP is included as part of the consultation process.

3. That Texas Tech University notify the Texas Historical Commission at least 30 days prior to any groundbreaking per §191.0525, or at least 60 days prior to altering, renovating, or demolishing a building that is 50 years old or older per §191.098 of the Texas Natural Resources Code due to the presence of historic-age structures within the project area that are 50 years old or older.

4.7. Air Resources

Air emissions during construction will be temporary and include fugitive dust, diesel exhaust, and vaporized materials during welding and concrete curing. Controls include wetting of haul roads, limiting engine idling, and Tier IV diesel requirements. Real-time air quality sensors will monitor PM10 and PM2.5 against NAAQS.

Noise barriers will be erected along perimeters closest to occupied offsite properties, and heavy equipment staging will be set back over 1,000 feet from the project boundary.

4.8. Radiological and Non-Radiological Health

Aside from radioactive sources used for nondestructive testing of materials, no radiological materials will be stored, transported, or utilized during the construction phase. Radiological and non-radiological health hazards will be addressed through OSHA-compliant training, PPE requirements, heat exhaustion protocols, and accident reporting systems. Medical first response capabilities will be staged on site, with mutual aid agreements in place with local hospitals and clinics.

All site workers will be required to complete construction site safety orientation and adhere to safety zones and exclusion markings. The construction health and safety plan will be reviewed quarterly by a multidisciplinary oversight team.

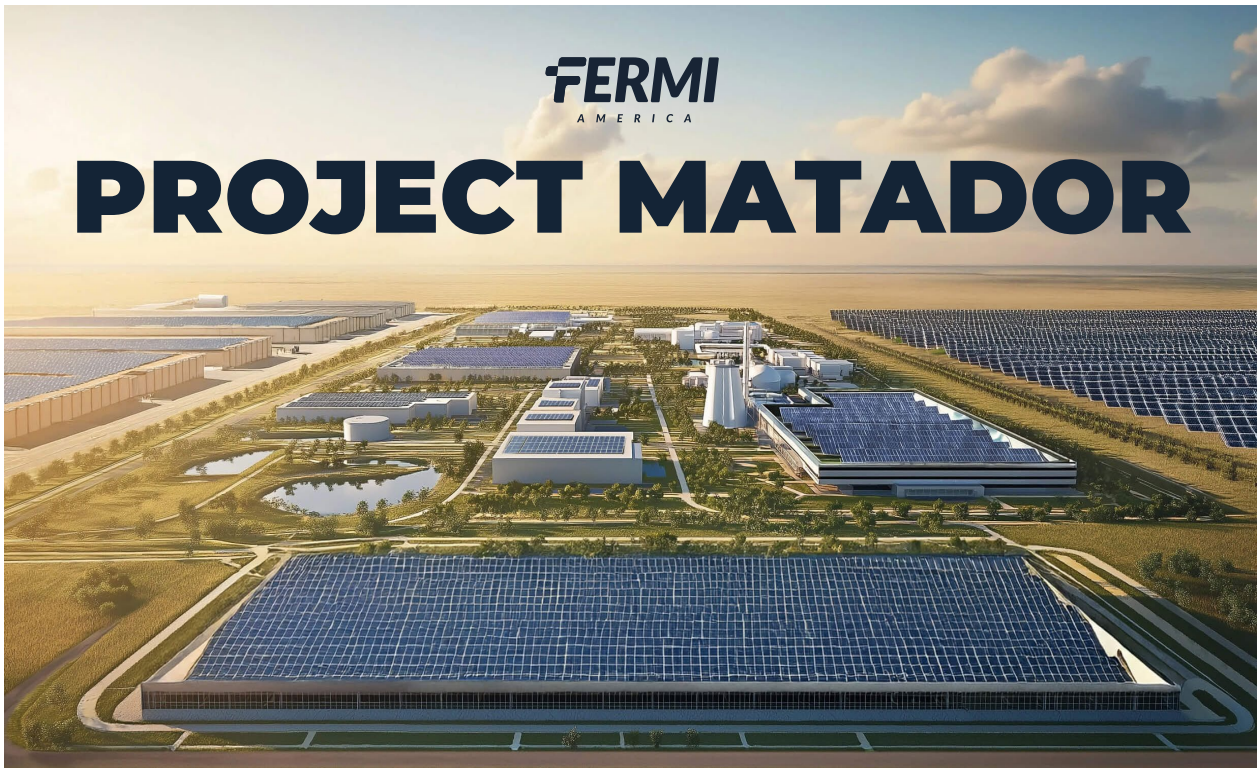
4.9. Waste Management and Controls

Construction waste streams will include concrete formwork, scrap steel, packaging, general trash, and limited volumes of petroleum-impacted absorbent materials. All waste will be segregated and containerized at the point of generation. Any adverse impacts of the expected large quantities of waste generated at the site on regional waste disposal facilities will be identified and mitigated prior to start of construction.

Solid waste will be transported to licensed Class II industrial landfills under TCEQ authorization. Any hazardous materials (e.g., spent solvents, paint waste, or welding chemicals) will be stored in secure, labeled containers and managed under RCRA small-quantity generator standards.

Site-wide recycling protocols will be implemented to minimize landfill disposal and promote material reuse. Dust suppression water and dewatering discharge will be tracked for turbidity and managed in accordance with discharge permits or reinjection permits as applicable.

Environmental inspections will be conducted weekly by qualified environmental monitors. Any spills, stormwater exceedances, or material deviations from planned waste handling will be recorded, reported, and mitigated in compliance with NRC expectations and TCEQ requirements.



Donald J. Trump Generating Plant – Units 1 - 4

Environmental Report

Chapter 5 - Operational Impacts

Revision 0

5.0 Operational Impacts

5.1. Land Use and Aesthetic Impacts

Operational activities at the Project Matador facility will remain confined within the 5,855-acre leased boundary and fully within pre-permitted, staged-use zones. The site's as-built environment will be dominated by the nuclear plant including air-cooled condenser (ACC) platform; substation and power delivery infrastructure; non-nuclear generation; security buffer corridors; and hyperscale data center campuses. Visual impacts from the completed facility will be mitigated by topographic buffering, perimeter fencing, and setbacks exceeding 1,000 feet from public rights-of-way.

5.2. Water Use and Discharge

The operational phase of the AP1000 units at Fermi America will not rely on wet cooling towers. Instead, air-cooled condenser (ACC) systems significantly reduce consumptive water use, limiting demand to system makeup, domestic supply, and incidental process needs. Total annual water withdrawal is projected to remain below 50 acre-feet, drawn under sovereign water rights granted in the Texas Tech lease agreement.

The project does not require a National Pollutant Discharge Elimination System (NPDES) permit for effluent discharge from the Nuclear Island. All process water will be managed on-site via closed-loop systems or reinjection into approved infiltration areas. Sanitary wastewater will be treated through a modular onsite treatment plant compliant with TCEQ standards.

5.3. Ecological and Wildlife Impacts

With the transition to operations, ecological impacts are expected to be negligible. Landscaping will utilize native drought-resistant species to support pollinator and small mammal habitat. Perimeter fencing design includes wildlife crossings at drainage swales. Operational noise is below thresholds affecting local fauna, and no migratory pathways intersect the site.

The radiological environmental monitoring program (REMP) initiated during pre-operational testing will continue during operations and include biological sampling to detect potential bioaccumulation.

5.4. Socioeconomic and Infrastructure Impacts

During the operational phase, the facility will support over 600 direct full-time jobs and thousands of indirect jobs in maintenance, security, logistics, and technical services. Local governments are expected to benefit from increased property tax revenues, franchise fees, and infrastructure partnerships under the Fermi America public-private financing framework.

Emergency response services, including fire and EMS, have been augmented under agreements with local agencies and training funded by Fermi America.

5.5. Environmental Justice and Community Health

Environmental justice reviews under NEPA and Executive Order 12898 affirm no disproportionate or adverse impacts to low-income or minority communities from ongoing operations. Annual community briefings, open public tours, and NRC-required environmental data reporting will ensure transparency and engagement.

Fermi America has established a Community Environmental Assurance Office (CEAO) to act as a liaison between site operations and surrounding counties, with multilingual staff and a 24-hour public inquiry line.

5.5.1. Historical and Cultural Resources

Description of Operational Activities

Operational activities include operation of four nuclear power plants

Description of Historic Properties that may be affected by Operational Activities

Given the nature of construction activities and the potential for physical destruction of or damage to historic properties across the site, it is anticipated that there will not be any remaining historic or cultural resources that could be affected by operational activities.

Description of effects associated with Operation

The proposed undertaking includes land-clearing, grading, excavating, road work, and construction of new energy facilities across the site. Given the scale of proposed construction activities, most or all extant historic resources on the site will be physically destroyed during construction. It is anticipated that there will be no remaining historic properties on-site once construction is completed and the energy plant begins operation. Thus, there will be no direct or indirect effects associated with operation activities within the Direct APE (project site). However, operational activities will likely have indirect effects on adjacent historic properties within the Indirect APE outside property boundaries. These effects are considered visual, auditory, and atmospheric due to the introduction of new buildings, traffic, and power plant operations.

Direct and Indirect Effects

It is anticipated that there will be no remaining historic properties on site once construction is completed and the energy plant begins operation. Thus, there will be no direct or indirect effects associated with operational activities within the Direct APE.

There are several historic properties within a one-mile radius of the Direct APE. While there will be no direct effect from operation activities on these resources, it is anticipated that there will be indirect effects (visual, auditory, and atmospheric) from operational activities once the power plants are constructed.

Conclusions and Recommendations

Assuming that extant historic properties within the project site will be physically destroyed during site remediation and construction, it is anticipated that there will be no historic properties present within the Direct APE from operational activities.

It is anticipated that the undertaking will harm one or more historic properties within the Indirect APE outside the project boundaries. The NRC and the applicant should engage with the SHPO, THPO, American Indian Tribes and interested parties and document this determination in the ER. The ER should describe any procedures and cultural resource management plans developed by the applicant to protect historic and cultural resources during operations, as well as any measures to avoid, minimize, or mitigate adverse effects. These procedures should also include steps to take in the event of inadvertent discoveries, including the discovery of human remains.

5.6. Air Quality and Emissions

The Nuclear Island will not produce any criteria pollutant emissions during normal operation. Emergency diesel generators will only operate under test conditions or emergency events and will be permitted under TCEQ rules with cumulative run-time limitations.

5.7. Radiological Health and Exposure Control

Routine operation of the AP1000 reactors at Fermi America will comply with the radiological dose constraints of 10 CFR 20 and 40 CFR 190. Expected maximum annual public dose is less than 0.1 mSv (10 mrem), well below NRC regulatory limits.

Radiological effluents will be managed using filtration, delay tanks, and decay systems prior to any discharge. Airborne emissions will be filtered and monitored through high-efficiency particulate air (HEPA) and charcoal systems. Offsite environmental sampling locations will be calibrated to prevailing wind direction and hydrologic flow, as modeled in baseline environmental assessments.

5.8. Waste Management (Radiological and Non-Radiological)

Low-level radioactive waste (LLRW) generated during operations will include resins, filters, and contaminated PPE. All waste will be classified, packaged, and shipped to a licensed disposal facility in compliance with 10 CFR 61 and Texas Low-Level Radioactive Waste Disposal Compact Commission regulations.

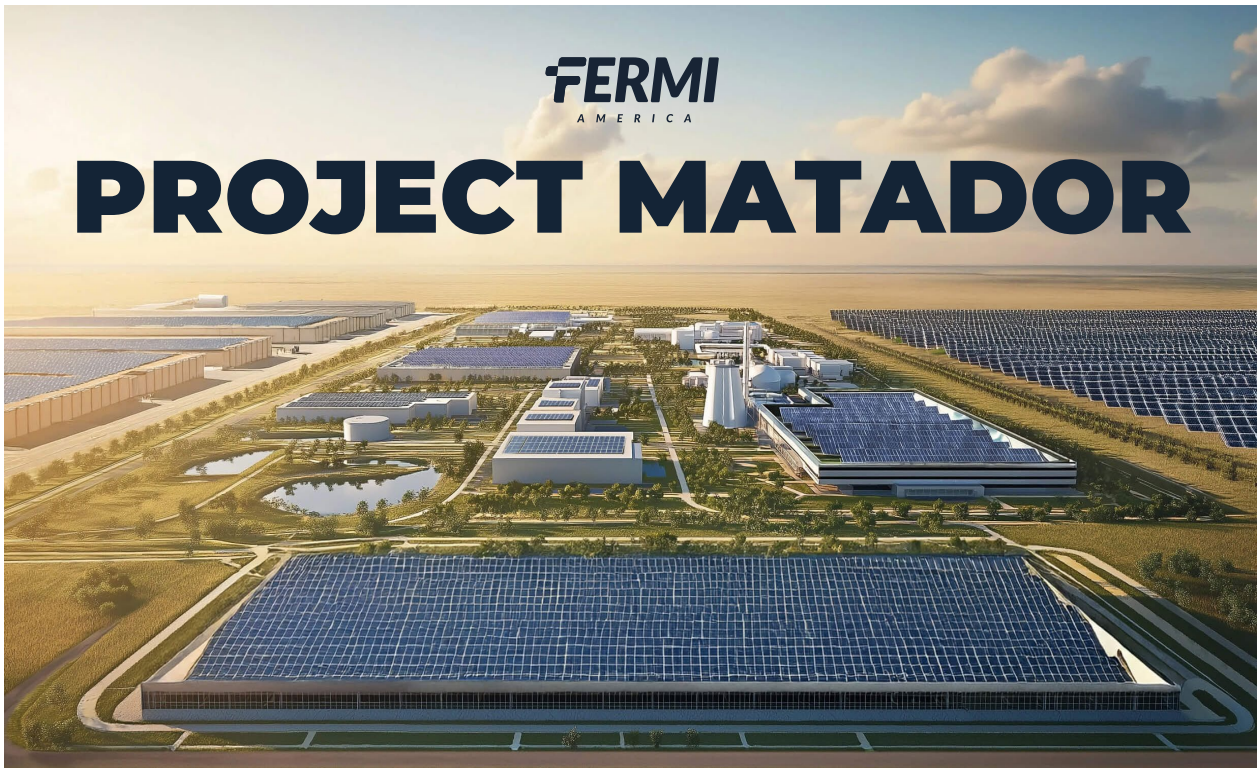
Non-radiological waste streams include maintenance waste, spent lubricants, and facility trash. Solid waste will be recycled where feasible or disposed at approved regional Class II landfills. Fermi America will maintain SQG status under RCRA and submit annual waste generation reports to the TCEQ.

5.9. Transportation and Security Impacts

Operational traffic will be minimal and limited to staff ingress, vendor delivery, and maintenance crews. A secured access route has been established for NRC vehicles, and badge-controlled entry systems will screen all personnel and visitors.

Fermi America's nuclear security program will follow 10 CFR 73 and NUREG-0800 guidelines and include intrusion detection systems, armed response units, and cybersecurity protection of all safety-critical digital control systems. Site perimeter security will be augmented through motion detection, video surveillance, and remote alarm verification tied to a hardened central command node.

All NRC-mandated access control, background checks, and Fitness for Duty programs will be maintained through Fermi America's integrated compliance and operations team.



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Environmental Report

Chapter 6 - Fuel Cycle, Transportation, and Decommissioning

Revision 0

6.0 Fuel Cycle, Transportation, and Decommissioning

6.1. Uranium Fuel Cycle Impacts

The uranium fuel cycle supporting the operation of Fermi America's AP1000 reactors encompasses several stages: uranium mining and milling, conversion, enrichment, fuel fabrication, reactor use, interim storage of spent fuel, and potential future transport to a long-term repository. Although Fermi America will not directly engage in fuel cycle operations upstream of receiving fabricated fuel assemblies, the environmental impacts of these activities are acknowledged in accordance with 10 CFR 51 and NRC environmental impact review policies.

Fermi America adopts by reference the bounding analysis provided in NUREG-1437, Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants, which the NRC has confirmed remains applicable to new reactor licensing under Part 52. The GEIS concludes that environmental impacts from the uranium fuel cycle, when spread across the national fleet, are small for most stages of the cycle and do not pose a significant environmental burden.

Mining and milling operations are regulated under NRC's authority and applicable EPA standards for source material management. Fuel conversion and enrichment, typically conducted at licensed facilities such as the Honeywell Metropolis Works and the URENCO USA plant in Eunice, NM, fall under NRC licenses and are subject to full environmental and security compliance programs. No fuel cycle infrastructure is located within 200 miles of the Project Matador site.

The environmental impacts associated with these upstream processes—including air emissions, water use, land disturbance, and waste generation—are managed under separate regulatory frameworks. Fermi America has no contractual relationship with any single supplier and reserves the right to procure enriched fuel from any NRC-licensed fuel fabricator meeting AP1000 design specifications.

The Westinghouse AP1000 reactor is designed for a 3-cycle core management strategy with standard 17x17 fuel assemblies, enriched up to 5% U-235. The use of standard LEU (low enriched uranium) fuel ensures compatibility with established transportation, handling, and waste classification systems already assessed by NRC in prior licensing actions.

Cumulative dose impacts from the fuel cycle, including offsite dose to the public from enrichment and fabrication, are expected to remain well below the regulatory thresholds specified in 10 CFR 20 and 40 CFR 190. The NRC has determined that fuel cycle impacts are “small” under NEPA, and Fermi America affirms that no unique aspects of its site or operation would alter this conclusion.

In alignment with national energy policy, Fermi America supports the DOE's long-term fuel cycle sustainability goals and acknowledges potential participation in a federal spent fuel repository program or advanced fuel take-back programs when available.

6.2. Transportation of Nuclear Fuel and Waste

The transportation of new fuel assemblies to the Fermi America site and the eventual shipment of low-level radioactive waste (LLRW) and spent fuel from the facility are subject to strict federal regulations and oversight. These activities are governed by the U.S. Nuclear Regulatory Commission (NRC), U.S. Department of Transportation (DOT), and, where applicable, the U.S. Department of Energy (DOE).

Fresh nuclear fuel will be delivered to the site in sealed containers approved under 10 CFR Part 71. These containers are designed to withstand extreme impact, fire, and submersion scenarios and have been demonstrated to provide effective shielding under all licensed transport conditions. Fuel deliveries are expected to occur on a periodic basis, coordinated with reactor reload schedules every 18 to 24 months.

Transportation will occur by rail and/or highway using routes approved by the DOT and coordinated with Texas state authorities. A designated fuel transport corridor has been included in the site development plan, allowing direct access from national rail lines into Fermi America's secured perimeter. All shipments will be escorted, tracked in real time, and subject to security plans in accordance with NRC Order EA-02-104 and NUREG-0561.

Low-level radioactive waste generated from plant operation (e.g., filters, resins, PPE) will be packaged in accordance with NRC guidelines in 10 CFR Part 61 and shipped to licensed disposal facilities under manifest and custody controls. Texas is a member of the Texas Low-Level Radioactive Waste Disposal Compact, and all LLRW will be sent to the Compact's disposal facility in Andrews County, Texas, unless otherwise authorized.

Spent fuel will be stored on site in a spent fuel pool designed to meet all regulatory criteria for shielding, cooling, and criticality prevention. After spent fuel pool storage, Fermi America will transition spent fuel to spent fuel to dry cask storage under a licensed Independent Spent Fuel Storage Installation (ISFSI) within the protected area.

Should a national repository become available, spent fuel would be transported from the ISFSI using NRC-certified transportation casks and escorted via secure highway or rail corridors. These transports would follow DOE/NRC-approved routing, shielding, and notification protocols.

The environmental impacts associated with transport of fuel and radioactive waste are well documented and have been found to be minimal in the NRC's generic environmental impact analyses. Radiological doses to the public and transport workers from these activities are expected to remain well below the limits of 10 CFR 20 and ALARA principles will be followed.

There are no unique environmental features at the Fermi America site that would increase the risk or impact of transportation activities. There are no sensitive ecological habitats, urban corridors, or population centers along the planned transport routes that would be disproportionately affected.

6.3. Spent Fuel Storage and Management

Fermi America's spent nuclear fuel (SNF) management strategy is structured to ensure the secure, monitored, and regulation-compliant handling of irradiated fuel from removal from the reactor core through long-term onsite storage. The facility's spent fuel pool (SFP), located within the safety-related Nuclear Island, is designed according to the specifications of the AP1000 DCD and licensed to support full-core offloads and staged dry storage transitions.

The SFP will be constructed with stainless steel liners, reinforced concrete shielding, and active cooling systems capable of maintaining subcriticality and thermal limits under both normal and design-basis accident conditions. The pool is designed to accommodate spent fuel from multiple operating cycles, with full containment under seismic, flooding, and loss-of-power scenarios modeled in FSAR Chapter 9.

Fermi America will implement administrative and physical controls to maintain geometry for criticality safety and shielding for dose minimization. Fuel handling equipment includes redundant cranes and robotic positioning arms, with digital surveillance integrated into the operations control room.

Once SFP capacity nears its design limits—projected after 10 to 12 years of full-power operation—spent fuel will be transitioned into dry cask storage under a standalone or co-located Independent Spent Fuel Storage Installation (ISFSI). The ISFSI will be sited within the protected area and constructed to comply with 10 CFR Part 72.

Dry storage systems will utilize NRC-certified casks (e.g., HI-STORM or TN-32) constructed to resist seismic events, impact, thermal excursions, and sabotage attempts. Casks will be monitored for temperature and radiation levels, with results reviewed regularly under the site's Radiation Protection Program.

Environmental impacts of spent fuel storage are expected to remain small for the duration of the licensed operational period and the extended storage timeline. The NRC's Continued Storage Rule (10 CFR 51.23) affirms that spent fuel can be stored safely onsite for at least 60 years beyond licensed operations without significant environmental impact.

Fermi America's spent fuel management plan incorporates:

- Compliance with FSAR Chapter 9.1 and 9.2 design and procedural controls.
- Material accountability and inventory tracking per 10 CFR Part 74.
- Annual NRC inspection readiness.
- Site security integration consistent with 10 CFR Part 73.

- Public transparency and regular reporting of spent fuel inventories as part of the environmental monitoring program.

The project does not anticipate any deviation from the regulatory framework governing SNF storage, and all storage activities will conform to ALARA principles and the long-term integrity assumptions validated by NRC technical reports.

6.4. Decommissioning Planning and Environmental Impacts

Fermi America will develop a comprehensive decommissioning plan aligned with NRC regulatory guidance (NUREG-0586, Rev. 1) and the requirements of 10 CFR 50.75 and 10 CFR 51.53. The decommissioning plan will provide a phased, safe, and environmentally responsible approach for the dismantling, decontamination, and site restoration of the AP1000 Nuclear Island and supporting NRC-regulated infrastructure upon permanent cessation of operations.

The AP1000 reactors will operate under a 50-year license with potential renewal extensions. At the conclusion of the operational period, Fermi America will pursue the DECON decommissioning method, which enables prompt dismantlement and radiological remediation within decades of final shutdown. This approach is consistent with U.S. fleet trends and allows the site to return to a non-licensed industrial use state.

Decommissioning activities will include:

- Defueling of reactors and transfer of all spent fuel to the on-site ISFSI.
- Drainage, segmentation, and packaging of reactor internals and radiologically contaminated piping systems.
- Demolition of structures housing radiologically contaminated systems, including the reactor building and auxiliary systems.
- Radiological surveys and soil sampling to confirm compliance with site release criteria.
- Site regrading and environmental remediation as required by NRC and Texas Commission on Environmental Quality (TCEQ).

A site-specific decommissioning cost estimate (DCE) will be prepared based on DOE inflationary models and AP1000 component volume estimates. The financial assurance mechanism for decommissioning will include a dedicated external sinking fund established under 10 CFR 50.75, with quarterly reports submitted to the NRC. All cost projections assume independent audit review and are structured to be fully funded by year 30 of plant operation.

The environmental impacts of decommissioning are expected to be small and short-term in nature. Impacts may include:

- Temporary increase in waste generation during segmentation and demolition.
- Localized air emissions from heavy equipment and material transport.
- Radiological exposure to workers, managed through ALARA principles and NRC occupational dose limits.
- Noise and traffic consistent with industrial construction activity.

No long-term ecological or hydrological degradation is anticipated. Decommissioning will not involve the use of permanent burial or deep well injection of radiological materials. All waste streams will be characterized, packaged, and shipped to licensed LLRW disposal facilities.

Fermi America will update its decommissioning plan and DCE every three years as required by NRC regulations and will provide a Post-Shutdown Decommissioning Activities Report (PSDAR) within two years of final reactor shutdown. A license termination plan (LTP) will be submitted prior to unrestricted site release in accordance with 10 CFR 50.82.

6.5. Summary of Fuel Cycle and Decommissioning Impacts

The environmental impacts associated with the uranium fuel cycle, transportation of nuclear material, spent fuel management, and decommissioning activities for Fermi America's proposed will be assessed using NRC-endorsed regulatory guidance and site-specific considerations. These activities are subject to comprehensive federal oversight and well-established best practices across the nuclear energy sector.

The uranium fuel cycle, while comprising multiple upstream industrial steps, contributes a very small fraction of the overall environmental footprint when normalized across the national commercial reactor fleet. The NRC's Generic Environmental Impact Statement (NUREG-1437) has determined these impacts to be "small" in all categories evaluated—including land use, air and water emissions, and radiological dose—when operations are conducted in accordance with current regulatory requirements. Fermi America's use of standard LEU fuel sourced from existing licensed facilities introduces no new variables that would increase this baseline.

Similarly, the transportation of nuclear fuel and low-level radioactive waste is governed by extensive regulations under 10 CFR Parts 71 and 73 and further informed by DOT safety protocols. Fermi America's use of certified transport casks, secure rail and roadway access corridors, and NRC-mandated physical protection systems ensures that all transport-related risks remain within the low-impact bounds modeled in NUREG-2125 and historical NRC reviews. There are no site-specific sensitivities—such as high-density populations, complex terrain, or ecologically critical corridors—that would elevate transportation-related risks.

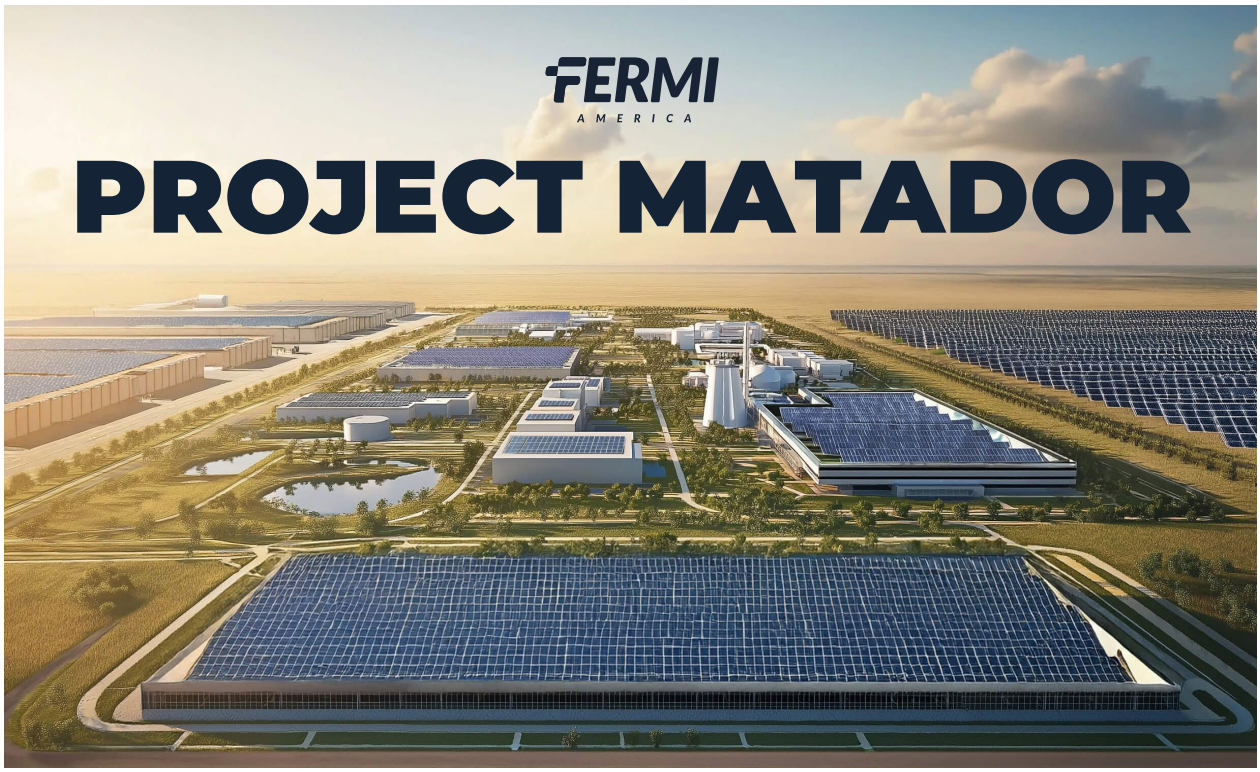
Spent fuel storage at Fermi America will occur in state-of-the-art wet pools followed by dry cask storage within a licensed ISFSI. These systems have demonstrated long-term safety across the U.S. fleet and are designed to maintain structural integrity and shielding performance for decades. Monitoring and inspection programs will remain in effect until a national repository becomes available. There are no radiological or environmental factors at the Amarillo site that are expected to challenge the performance or safety of this standard approach.

Decommissioning impacts, while localized and concentrated in time, are well understood and have been mitigated successfully at multiple U.S. facilities. With the selection of the DECON method, Fermi America will return the site to safe and non-licensed use within several decades of shutdown. Decommissioning activities will be planned to minimize noise, dust, worker exposure, and offsite impact, and will be supported by a fully funded decommissioning trust.

Taken together, the impacts of fuel cycle and post-operational management activities will be demonstrated to be small, bounded by prior NRC analyses, and mitigated through the application of ALARA principles and strict regulatory oversight. No unique site characteristics at Fermi

America materially alter the conclusions presented in the NRC's generically applicable environmental impact evaluations.

This summary reaffirms the suitability of the Fermi America site and licensing model for long-term nuclear energy deployment in accordance with national energy goals and environmental protection commitments.



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Chapter 7 - Cumulative Impacts

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7.0 Cumulative Impacts

The following sections describe the approach Fermi America intends to use to conduct the cumulative impacts analysis. Fermi America firmly believes that the associated environmental, economic, and community benefits from this project will be an overwhelming net benefit to the vicinity and region.

7.1. Methodology and Scope of Analysis

The assessment of cumulative impacts in this Environmental Report follows the procedural guidance of the National Environmental Policy Act (NEPA), as codified in 10 CFR Part 51 and elaborated in NUREG-1555 and Regulatory Guide 4.2, Rev. 3. Cumulative impacts are defined as the incremental environmental effects of the proposed action when added to the impacts of other past, present, and reasonably foreseeable future actions regardless of the agency or entity responsible. This analysis encompasses both NRC-licensed activities and non-NRC-regulated developments that may collectively influence the affected environment of the Fermi America project.

The cumulative impact analysis is organized by environmental resource areas previously described in Chapters 2 through 6 and considers the geographic and temporal boundaries most relevant to each resource. Spatially, the cumulative impact zone encompasses Carson County, the Amarillo metropolitan statistical area (MSA), and the Ogallala aquifer system. Temporally, the analysis begins with baseline conditions from the 2023 PANTEX Environmental Report and extends through the 50-year operating life of the reactors and an additional 60-year period for spent fuel storage, consistent with the NRC's Continued Storage Rule.

Past and ongoing actions considered include:

- Historic agricultural land use conversion and well withdrawals within Carson and Armstrong counties
- DOE/NNSA operations and legacy environmental management programs at the adjacent PANTEX Plant
- Existing and permitted energy infrastructure, including regional gas processing plants, electric transmission corridors, and wind farms
- Regional transportation and industrial development linked to Amarillo's role as a freight and logistics hub

Reasonably foreseeable future actions include:

- Expansion of data center infrastructure within Project Matador's lease boundary

- Deployment of natural gas and solar hybrid energy systems supporting non-regulated demand
- Federal expansion of PANTEX security or cleanup operations
- Urban sprawl and residential development north of Interstate 40

This cumulative analysis applies the Council on Environmental Quality's (CEQ) tiered approach to assess the significance of potential additive or synergistic effects, including:

- Whether the proposed action exacerbates or mitigates known environmental trends
- Whether combined impacts may exceed threshold levels of regulatory concern (e.g., water drawdown, emissions caps)
- Whether vulnerable populations or sensitive habitats are likely to experience compound stressors

Primary data sources include:

- Terracon ESA and geotechnical reports (2025)
- 2023 PANTEX Environmental Report
- U.S. Census and U.S. Geological Survey datasets
- Interagency consultations and stakeholder input recorded during Fermi America's public engagement process

By clearly delineating the affected environment, identifying relevant past and future projects, and quantifying where possible the scale and intensity of their impacts, Fermi America's cumulative impact assessment provides a complete environmental context for NRC review and public transparency.

7.2. Cumulative Land Use Impacts

[To be Completed]

7.3. Cumulative Water Resources Impacts

[To be Completed]

7.4. Cumulative Ecological Impacts

[To be Completed]

7.5. Cumulative Socioeconomic Impacts

[To be Completed]

7.6. Cumulative Radiological and Non-Radiological Health Impacts

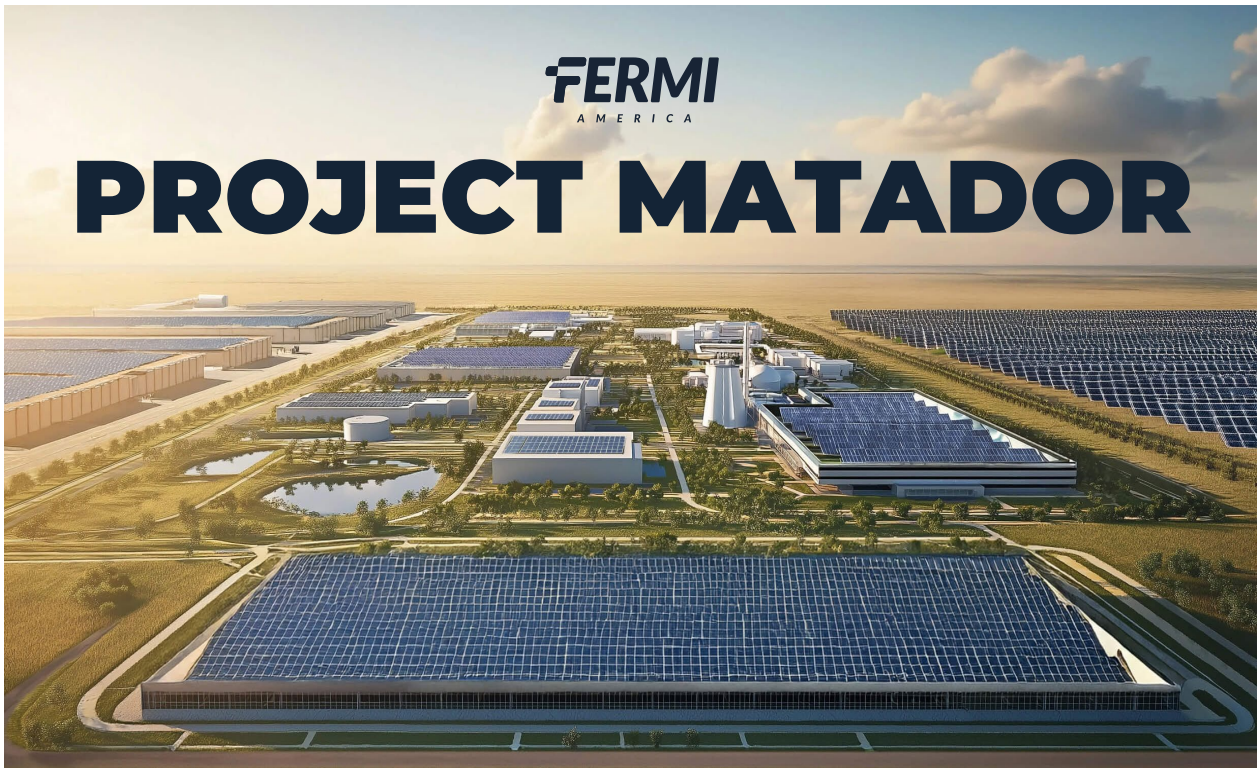
[To be Completed]

7.7. Cumulative Air Quality and Climate Impacts

[To be Completed]

7.8. Summary of Cumulative Impacts

[To be Completed]



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Environmental Report

Chapter 8 - Need for Power

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8.0 Need for Power (including Market Demand Justification)

8.1. Regulatory Framework and Basis for Analysis

The evaluation of need for power within this Environmental Report is conducted in accordance with the requirements set forth under the National Environmental Policy Act (NEPA), specifically as implemented by the Nuclear Regulatory Commission (NRC) through 10 CFR Part 51. Although the NRC does not determine the commercial viability or market allocation of electricity generation facilities, it must evaluate the reasonableness of the need for power as part of its environmental review of Combined License (COL) applications.

The guidance for this analysis is provided in NRC's NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," and Regulatory Guide 4.2, Rev. 3, "Preparation of Environmental Reports for Nuclear Power Stations." The intent of the need-for-power assessment is to provide a clear, documented justification for the proposed nuclear capacity, grounded in state, regional, and national energy forecasts and supported by project-specific use cases.

In the case of Fermi America's Project Matador, the evaluation of power need does not rely on forecasted residential, commercial, or industrial grid demand but is instead framed by a multi-tiered need that combines:

- Hyperscale digital infrastructure power demands projected to grow at unprecedented rates across Texas and globally.
- A sovereign, behind-the-meter (BTM)[31] development structure that necessitates highly reliable on-site energy sources insulated from grid constraints.
- State of Texas legislative and regulatory encouragement of advanced nuclear generation under House Bill 14 (2023), which provides development funding for projects that strengthen grid resilience and long-term energy independence.

The NRC recognizes that while market-based decisions drive the majority of power infrastructure investment, it has a responsibility under NEPA to verify that construction and operation of a major energy facility is not speculative, redundant, or environmentally unjustified. In this case, Fermi America provides a unique and timely solution to the confluence of energy

[31] While the Project Matador on-site generation (including the nuclear units) are designated and sized to serve the onsite data center loads, grid connections and controls will be established to enable effective balancing and ensure on-site and grid power stability. Offsite and onsite ac power systems will conform to Regulatory Guides and IEEE Standards identified by DCD Table 8.1-1 as site-specific and to other applicable Regulatory Guides is as indicated in Table 8.1-201

scarcity, AI-driven data infrastructure growth, and national goals for carbon-free baseload capacity.

The applicant's submission is further supported by:

- DOE and U.S. Energy Information Administration (EIA) projections indicating rising electricity demand across industrial and computing sectors, especially in high-density data nodes such as Texas.
- Independent economic analysis included in Fermi America’s drafted Form S-11 (to be submitted at a later date), which outlines revenue models tied to long-term data center tenant agreements and power lease arrangements.

This regulatory basis affirms that the project is justified under NRC NEPA standards, that the power will serve an identified and verifiable demand, and that the proposed AP1000 deployment aligns with both national energy security interests and climate policy objectives.

8.2. Regional and National Energy Demand Forecasts

Because energy generated for Project Matador will be solely used by hyperscaler tenants on the broader project matador campus, regional and national energy demand forecasts do not influence the need for power for this project. The need for power for this specific project is described in Section 8.3.

8.3. Fermi America-Specific Need for Power

The Fermi America project meets an urgent and well-defined need for dedicated, high-reliability, zero-carbon energy in support of a transformational shift in the U.S. digital and industrial economy. As confirmed in regional and national grid planning reports and customer commitment agreements, Project Matador is not a speculative venture but a tightly structured response to a confluence of market, infrastructure, and policy drivers that converge in Amarillo, Texas.

Unlike traditional utility-scale generation projects that rely on market-clearing or merchant grid sales, Fermi America is structured as a sovereign, behind-the-meter (BTM) advanced energy and data campus. The project integrates 5,855 acres under a 99-year sovereign lease with Texas Tech University and delivers power directly to hyperscaler AI data center tenants through take-or-pay energy and infrastructure contracts.

Power need is defined across three tiers:

- **Tier 1: Immediate operational load requirements** for hyperscaler data center modules, projected to exceed 1 GW by April 2026.
- **Tier 2: Scheduled buildout of multi-unit AP1000 generation** to support long-term campus growth to 18 million square feet and over 11 GW in total integrated energy use.
- **Tier 3: System resilience and autonomy**, allowing the site to operate independent of regional grid instability, pricing volatility, and interconnection delays.

The energy demands of hyperscaler tenants—many of whom are actively engaging in letter of intent and term sheet negotiations—cannot be met through current grid supply or planned future generation additions alone. These tenants require clean, dispatchable, and scalable power that complies with corporate decarbonization goals and supports chip-cooling infrastructure. Furthermore, Fermi America's role in enabling advanced data modeling, AI learning platforms, and national security-related compute capabilities aligns with federal executive orders calling for AI ecosystem reliability, clean infrastructure buildout, and strategic grid modernization (e.g., EO 14017 and EO 14110).

The sovereign lease structure with Texas Tech University ensures site control, land entitlement, and a 99-year operational horizon—an institutional backbone that eliminates permitting uncertainty and reinforces Fermi America's unique readiness compared to peer projects.

The demand profile for this project is thus embedded in its operational model, not contingent on speculative offtake agreements or grid futures pricing. The need for power is immediate, growing, and irrevocably tied to one of the most significant industrial shifts in U.S. history: the rise of high-density, AI-optimized digital infrastructure.

8.4. Alternatives Considered to Meet Power Demand

In evaluating alternatives to address the forecasted and site-specific power needs identified in Sections 8.2 and 8.3, Fermi America has considered multiple technology pathways, siting strategies, and structural delivery models. This section presents a comparative analysis of potential alternatives and explains why the proposed deployment of advanced nuclear capacity at Project Matador the most feasible and least environmentally disruptive means of meeting is those demands.

Generation Technologies Planned by Fermi America:

Fermi America's energy platform is intentionally designed as a hybrid system that integrates advanced nuclear generation with natural gas, solar, and battery storage. This integrated model is not only environmentally preferable but also optimized to meet the unique power requirements of hyperscale AI data centers, which demand 24/7 reliability, scalability, resilience, and a high-quality power envelope that intermittent or singular technologies cannot provide on their own.

1. **Integrated Hybrid Approach (Nuclear + Gas + Solar + Storage):**
   The foundation of the energy system is the deployment of AP1000 nuclear units that provide stable, zero-carbon baseload power. This is augmented by natural gas-fired generation for startup, peaking, rapid ramping, load following, and backup; solar generation for daytime load displacement; and battery storage for frequency support and operational smoothing. This integrated portfolio ensures cost-effective scalability, short- and long-term reliability and resilience, and compliance with decarbonization and environmental stewardship goals.

2. **Natural Gas-Fired Generation (as Complementary):**
   Gas-fired plants offer valuable dispatchable power to balance renewables and provide ramping capacity. However, they are not positioned as the primary generation source due to their emissions profile and fuel price volatility. In Fermi America's model, gas turbines support reliability but do not replace the high-capacity-factor baseline provided by nuclear.

3. **Solar + Battery Storage (as Supplemental):**
   Solar energy, particularly in the Texas Panhandle, can provide meaningful energy contributions during peak sunlight hours, but lacks the dispatchability needed for mission-critical data centers. Paired with battery storage, solar helps reduce marginal energy costs and environmental impacts. However, even multi-gigawatt storage arrays cannot support the continuous uptime needed by Tier 1 tenants. Thus, solar and storage are strategic supplements—not standalone solutions.

4. **Nuclear Generation (Essential Backbone):**
   Advanced nuclear, specifically the AP1000 units, forms the essential backbone of the Fermi America platform. No other technology can match its combination of dispatchability, capacity factor (>92%), zero-emission profile, and regulatory-grade safety performance. Without nuclear, the system could not meet the deterministic reliability, sovereign control, or environmental goals of the project.

5. **Grid-Only Solutions (Inadequate):**
   Full reliance on grid interconnection would introduce unacceptable risks due to price volatility, congestion, and unpredictable outage exposure—especially during weather or market stress events. Grid-only approaches fail to satisfy tenant power quality requirements and undermine the core value proposition of energy sovereignty.

6. **Alternative Sites or Nuclear Designs:**
   While SMRs and alternative nuclear configurations were reviewed, none are licensed or deployable on the timeline required. The Amarillo site uniquely offers sovereign control, institutional oversight via Texas Tech, completed environmental and geotechnical evaluations, and federal infrastructure adjacency—all of which support regulatory and project certainty.

In conclusion, after careful evaluation of alternative technologies, siting, and system architectures, Fermi America has determined that no other option offers the combination of scalability, environmental compatibility, regulatory readiness, and market-aligned delivery provided by the proposed project.

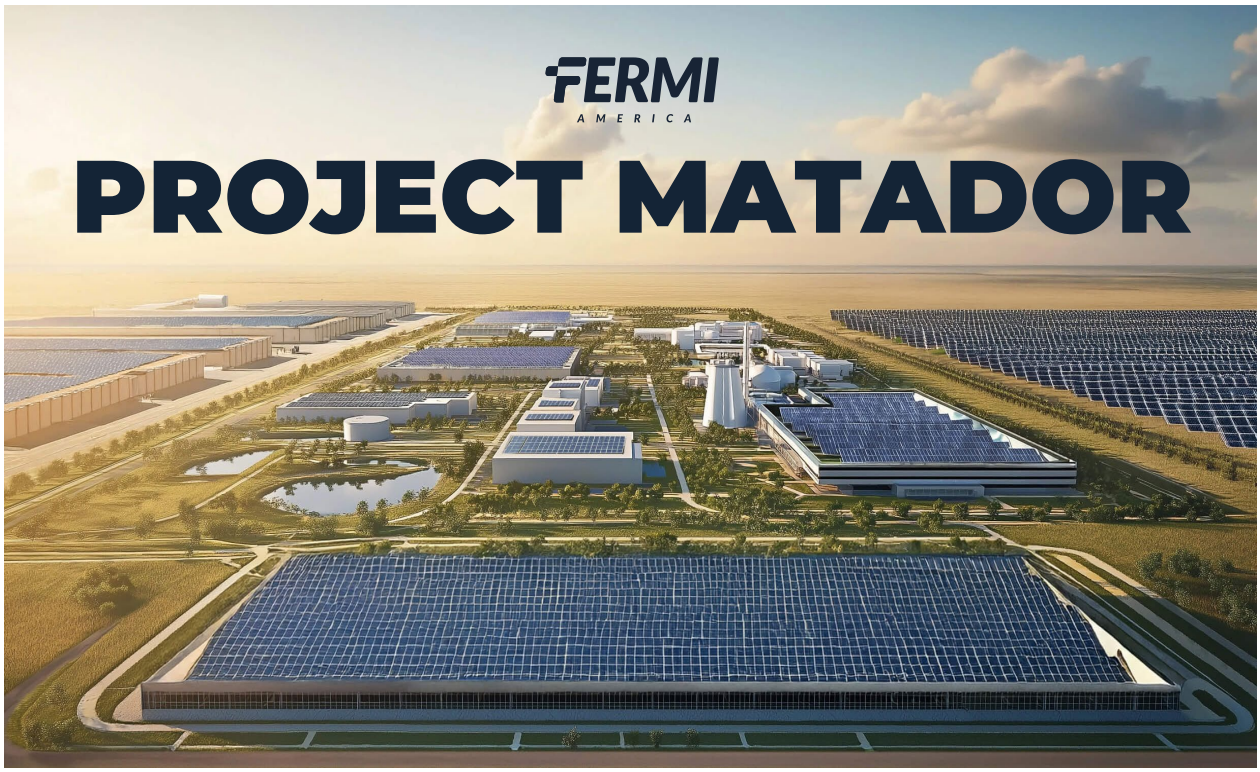
8.5. Summary and Conclusions

The collective evaluation presented throughout Chapter 8 demonstrates that the Fermi America project is both responsive to a demonstrable and immediate need for new baseload power and uniquely suited to deliver it through a technologically advanced, environmentally aligned, and operationally reliable nuclear generation model. Unlike conventional generation projects that depend on volatile power markets or broad consumer rate bases, Fermi America's demand profile is internally structured, tied to sovereign site control, and driven by direct tenant-level offtake needs in one of the most energy-intense industrial sectors: hyperscale computing and AI infrastructure.

Across the region, utilities and ISOs have publicly acknowledged shortfalls in firm, dispatchable generation. Nationwide, the electrification of AI, defense, transportation, and cloud computing sectors has outpaced new capacity additions. Fermi America's 4,500 MWe nuclear buildout is not only responsive—it is one of the few NRC-ready solutions that aligns clean energy goals with physical site availability, workforce accessibility, and regulatory licensing maturity.

Alternative power delivery models and technologies were rigorously considered. None offered the scalability, reliability, or emissions profile of the proposed AP1000 design, nor could they satisfy the sovereign, behind-the-meter operational structure demanded by this project's client base and institutional backers.

The conclusion is therefore unambiguous: Fermi America's project is justified under NEPA as a necessary and strategic addition to the nation's clean energy portfolio and critical infrastructure base. The need for power—locally, regionally, and nationally—is not only established but escalates annually.



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Chapter 9 - Environmental Alternatives

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9.0 Environmental Alternatives

9.1. No-Action Alternative

Under the no-action alternative, the NRC would not issue a Combined License (COL) for the construction and operation of the Fermi America AP1000 units at the Project Matador site. As a result, no nuclear generation infrastructure would be developed within the 5,855-acre sovereign leasehold in Carson County, Texas, and the baseline environmental conditions detailed in Chapters 2 through 7 of this Environmental Report would remain unchanged.

While the no-action alternative would avoid localized short-term impacts associated with construction—such as land disturbance, temporary emissions, and radiological monitoring protocols—it would also eliminate the possibility of deploying a secure, emissions-free baseload energy source to support the Fermi America data and digital infrastructure campus. Unlike traditional generation models, Fermi America's primary objective is **not** to deliver power to the grid. The project is designed as a self-contained, **behind-the-meter energy campus**, and without the proposed AP1000 deployment, there is no viable mechanism to deliver the scale, reliability, or environmental performance required for its AI data center tenants.

In the absence of the proposed nuclear project, two less favorable outcomes emerge:

1. **The data center campus is not built at or even remotely approaching the proposed scale**—due to an inability to secure reliable, sovereign-controlled, 24/7 power supply.
2. **The data center campus is built using natural gas as the primary generation source**, resulting in significantly greater long-term environmental impacts, including higher carbon intensity and criteria air pollutants, in direct contradiction with data center tenant decarbonization targets and national climate goals.

Without nuclear, power needs would be partially met through grid imports or merchant-supplied gas generation—both of which carry exposure to pricing volatility, congestion, and system instability. Grid supplied power for the Site currently lacks sufficient surplus dispatchable capacity to support new hyperscale developments without increasing system-wide carbon emissions and stressing reliability.

Environmentally, the loss of the AP1000's near-zero carbon profile (~20 g CO_2-eq/kWh) would be replaced with fossil generation emitting 400–1,000+ g CO_2-eq/kWh, depending on the fuel mix. This shift would degrade Texas's emissions profile and accelerate air quality deterioration in already strained load zones. Operational flexibility, black start capability, and grid-isolated resilience—all core features of the nuclear-powered model—would be compromised or lost.

Additionally, the no-action scenario eliminates billions in projected capital investment, thousands of constructions and operations jobs, regional economic development, and strategic public-private partnerships with Texas Tech University. The sovereign lease, DOE-PANTEX adjacency, and an optimal site for power and data center development would remain underutilized. Future energy projects would face increased barriers, including re-initiation of NRC licensing and NEPA review processes.

In summary, the no-action alternative avoids limited and temporary impacts but fails to enable the core energy, economic, national security, and environmental objectives of Project Matador. It would result in higher greenhouse gas emissions, lower system resilience, reduced institutional benefits, and ultimately preclude the delivery of secure, sovereign energy to America's next-generation digital infrastructure.

9.2. Energy Alternatives

The demand for high-density, AI-optimized data centers continues to escalate, placing extraordinary and immediate pressure on energy infrastructure across the United States. However, existing power grids do not possess the reserve capacity, operational flexibility, or reliability profile necessary to meet these needs at the required scale, speed, or security level. In this context, nuclear generation—specifically, the AP1000 deployment at Project Matador—is not just advantageous, it is essential.

Grid Import or Merchant Supply: Procuring power solely through grid interconnection would expose Fermi America to unacceptable volatility in pricing, curtailment risks, and long-term reliability constraints. Neither system currently offers a firm, dispatchable, zero-carbon baseload supply suitable for mission-critical AI workloads. Moreover, the timing of hyperscaler energy demands frequently diverges from regional peak generation curves, resulting in misalignment that undermines reliability guarantees.

Without nuclear, two outcomes dominate:

1. **The data centers cannot be built at the scale envisioned**, due to power inadequacy, unpredictability, or security risks; or
2. **They are built using natural gas-dominant architecture**, which carries significantly greater carbon emissions, and environmental footprint than the proposed nuclear-centric solution.

Only the integrated Fermi America model, anchored by AP1000 units and supplemented with natural gas, solar, and battery storage—provides the required level of performance. It is the only configuration that ensures high-capacity factor, secure, scalable, and environmentally responsible power delivery for sovereign digital infrastructure.

Conclusion: The proposed nuclear project is the only path that meets the technical, economic, and environmental thresholds required. All other configurations—gas alone, grid alone, renewables alone, or alternative combinations—result in inferior reliability, higher emissions, and failure to deliver the mission-aligned energy independence required by Fermi America and its tenants.

9.3. Alternative Sites

The selection of the Project Matador site in Carson County, Texas, was based on its unique and optimal site development characteristics that are alignment with project objectives.

The Amarillo site was ultimately selected because it satisfies a unique and high-value confluence of attributes that are unmatched by any alternative evaluated. These attributes include:

- **Sovereign Site Control:** The 99-year lease from Texas Tech University provides uninterrupted land access, water rights, and institutional partnership free from zoning challenges or private ownership constraints.
- **Permitting and Regulatory Readiness:** The site has already undergone extensive geotechnical, environmental, and ecological assessment through the Terracon ESA and PANTEX Environmental Report, substantially de-risking the NRC licensing process.
- **Proximity to Federal Industrial Infrastructure:** Located adjacent to the DOE/NNSA PANTEX Plant, the site benefits from existing security buffers, radiological monitoring infrastructure, and regional experience in nuclear facility oversight.
- **Geologic and Hydrologic Suitability:** The site is located atop stable substrata of the Southern High Plains and outside known seismic risk zones. There are no wetlands or floodplains on-site, and water demands are met sustainably from existing non-potable groundwater reserves.
- **Energy Infrastructure and Load Alignment:** Unlike greenfield sites lacking access to transmission and logistics corridors, the site is co-located with intrastate and interstate gas pipelines, freight rail, and major highways and is situated directly within a growing AI and industrial corridor served by hyperscale data centers and research institutions.
- **Fiber Optic Infrastructure:** The Amarillo area has an optimal foundation for growth in hyperscale data center development without some of the regional constraints that are occurring in the current high demand areas around Dallas -Fort Worth, and San Antonio

Alternative sites considered included:

- Locations near existing nuclear plants (e.g., Comanche Peak in Texas, Palo Verde in Arizona) — eliminated due to congestion, licensing complications, or lack of sovereign control.
- Federal sites in Nevada and New Mexico — excluded due to absence of local hyperscaler demand, limited infrastructure, and lack of institutional land use partnerships.

- Other Texas locations — evaluated but ultimately rejected due to permitting timelines, incompatible environmental constraints, or insufficient proximity to core tenant use cases.

No alternative site evaluated offered the environmental neutrality, institutional readiness, and strategic regional fit found at Project Matador. Moreover, relocation to another site would result in a full restart of the licensing process, loss of current environmental data validity, and significant delay in fulfilling urgent near-term power demand for data and industrial tenants.

Therefore, based on screening criteria, environmental assessment, land control, and strategic imperatives, the Project Matador site is the environmentally preferred and only viable site for implementation of the proposed action.

9.4. Summary and Conclusions

The environmental alternatives evaluated in Chapter 9—including the no-action alternative, alternative generation technologies, and alternative sites—confirm that the proposed action offers the most environmentally balanced, operationally viable, and strategically aligned solution for meeting the identified need for power.

The no-action alternative would result in the continued growth of hyperscale and AI-driven electricity demand without a viable path to meet that demand using clean, dispatchable generation. It would also forgo the environmental, economic, and community benefits documented in this Environmental Report, and perpetuate the reliance on fossil-based merchant supply that exacerbates grid instability and regional emissions.

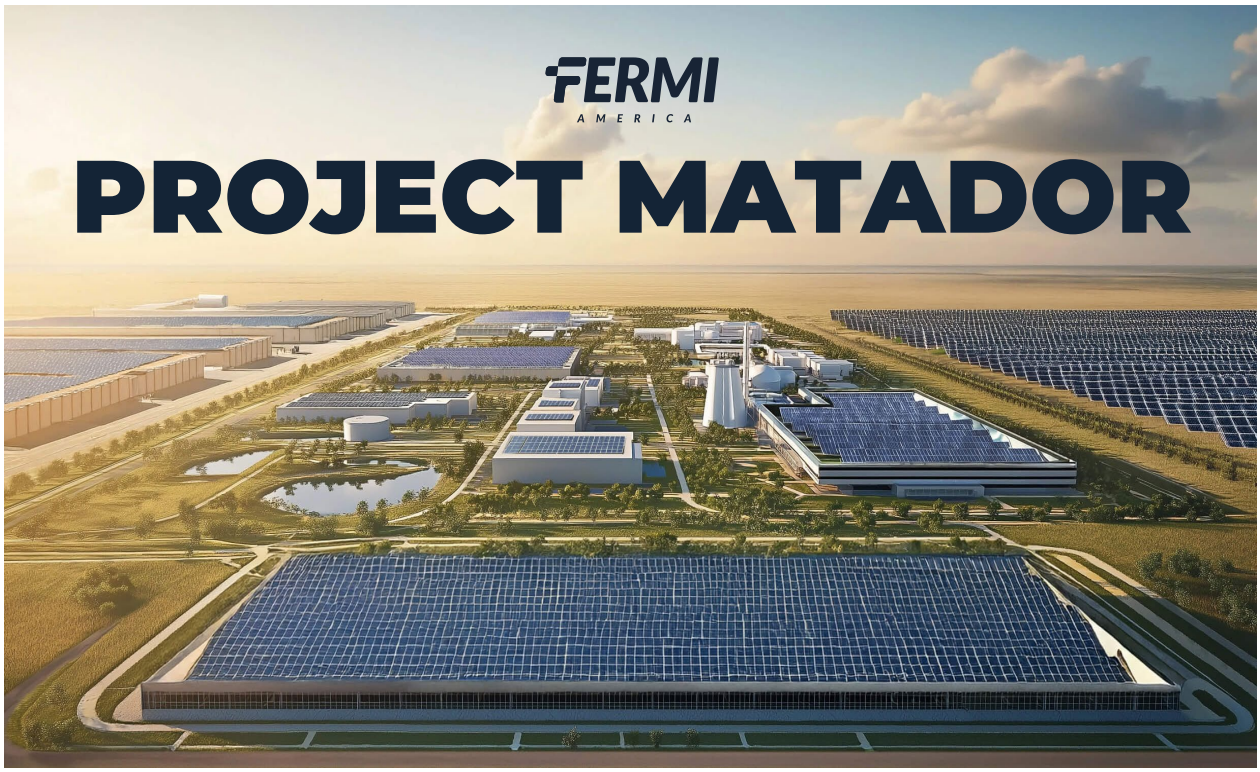
The evaluation of alternative energy technologies revealed that while natural gas, wind, solar, storage, and less mature and unlicensed small modular reactor technologies may offer partial solutions, none could independently or feasibly deliver the continuous, emissions-free, high-reliability baseload power demanded by Fermi America's tenants within the required timeframe. Each alternative would either increase long-term environmental impacts, introduce greater siting challenges, or lack the regulatory and financial maturity necessary to deliver timely service.

Similarly, the review of alternative sites identified no location that offered the combination of:

- Sovereign land tenure through a 99-year institutional lease.
- Advanced geotechnical and ecological evaluation (Terracon and PANTEX).
- Proximity to hyperscale computing demand and high-volume natural gas.
- Institutional alignment with public university and federal security infrastructure.
- NRC licensing readiness supported by the AP1000 design.

The proposed site and technology deliver lower land disturbance, lower GHG emissions, and more secure, scalable energy integration than any alternative assessed. The combination of direct tenant offtake, minimal emissions, robust site data, and sovereign governance structures render the Fermi America project both justified and environmentally preferred under NEPA review standards.

This conclusion is supported by the analyses in Chapters 2–8 and grounded in state, regional, and national energy policy. Therefore, the NRC's issuance of a COL for this project would constitute the most environmentally responsible and strategically effective option among the reasonable alternatives reviewed.



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Chapter 10 - Conclusions

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10.0 Conclusions

[To be Completed]

10.1. Impacts of the Proposed Actions

[To be Completed]

10.2. Unavoidable Adverse Environmental Effects

[To be Completed]

10.3. Relationship between Local Short-Term Use of the Environment and Long-Term Productivity

[To be Completed]

10.4. Irreversible and Irretrievable Commitments of Resources

[To be Completed]

10.5. Alternatives to the Proposed Action

[To be Completed]

10.6. Benefits and Costs

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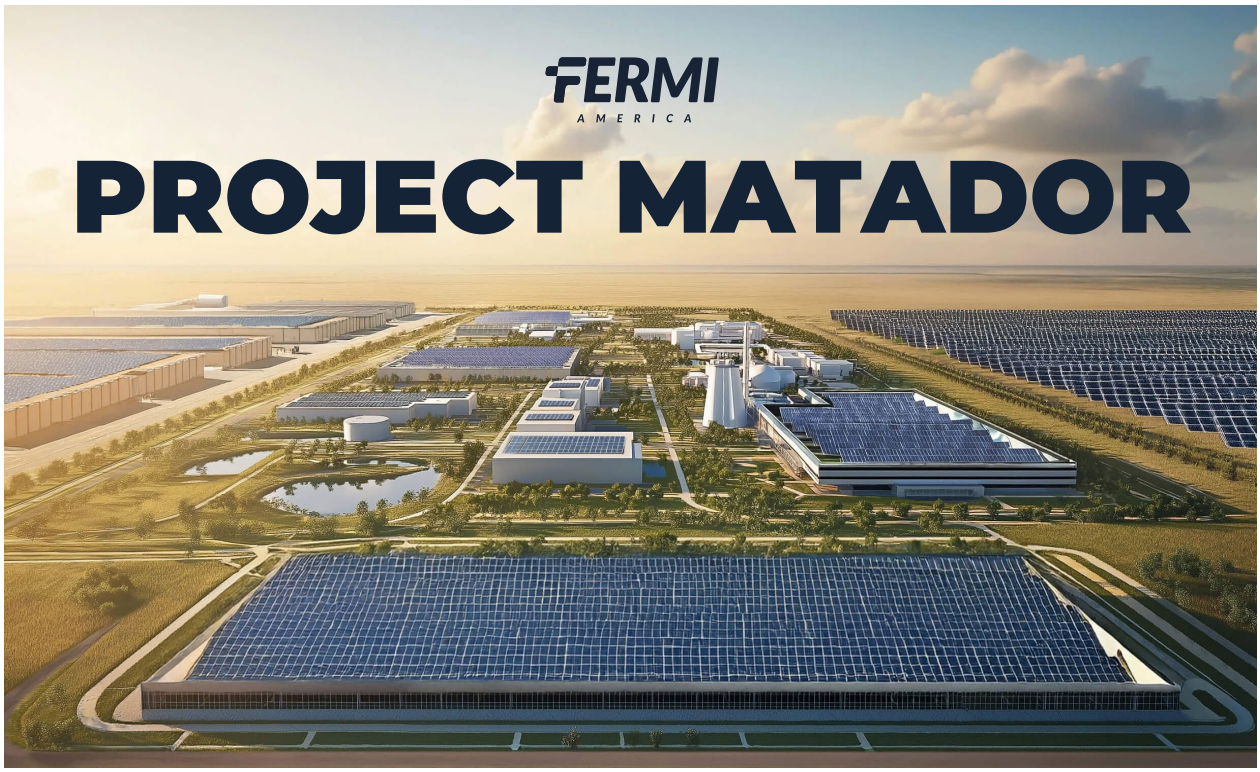

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Chapter 11 – Reference Guidance

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11.0 Reference Guidance

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Chapter 10: Conclusions

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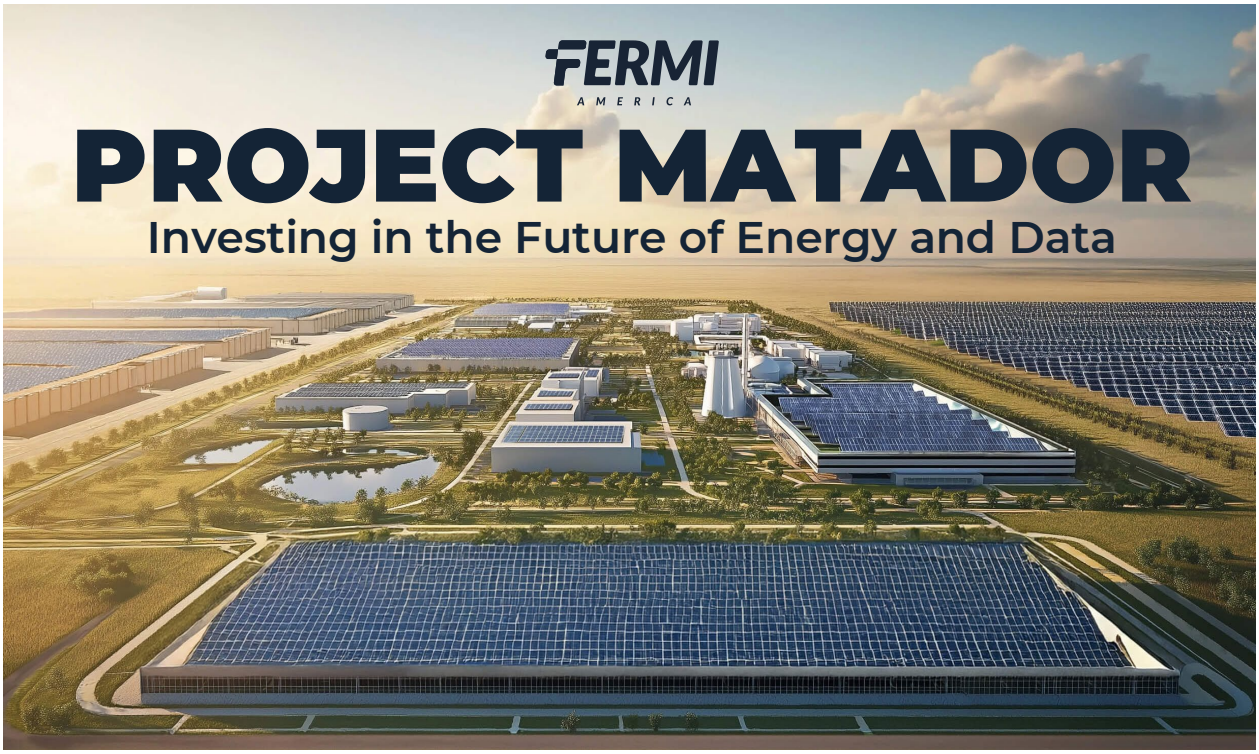

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PART 4

Technical Specifications

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List of Acronyms

AP1000	Advanced Passive 1000
COLA	Combined Operating License Application
NRC	Nuclear Regulatory Commission
STS	Standard Technical Specifications

1.0 Technical Specifications

As part of this Combined License Application (COLA) pursuant to 10 CFR Part 52, Subpart C, the proposed technical specifications for Donald J. Trump Generating Plant Units 1 through 4 are based on the Standard Technical Specifications (STS) for Westinghouse Advanced Passive 1000 (AP1000) Plants, as documented in NUREG-2194, Volume 1, Revision 0 (April 2016). The STS provide a standardized framework that incorporates the AP1000 design certification rule (10 CFR Part 52, Appendix D) and lessons learned from operational experience, ensuring compliance with 10 CFR 50.36. Fermi America intends to adopt the STS to the extent practical, tailoring them to reflect plant-specific design features, site characteristics, and operational conditions. For the purposes of this application, technical specifications, as described in NUREG-2914 Volume 1, Revision 0 (April 2016) are incorporated by reference.

Any deviations from the STS, including plant-specific adaptations to parameters such as core operating limits, pressure and temperature limits, or surveillance requirements, will be justified through safety analyses and addressed through the appropriate regulatory pathways (e.g., License Amendment Requests, etc.). All related requirements associated with adopted STS sections will be incorporated to maintain standardization and safety, and the proposed technical specifications will be submitted for NRC review and approval as part of the COLA process.

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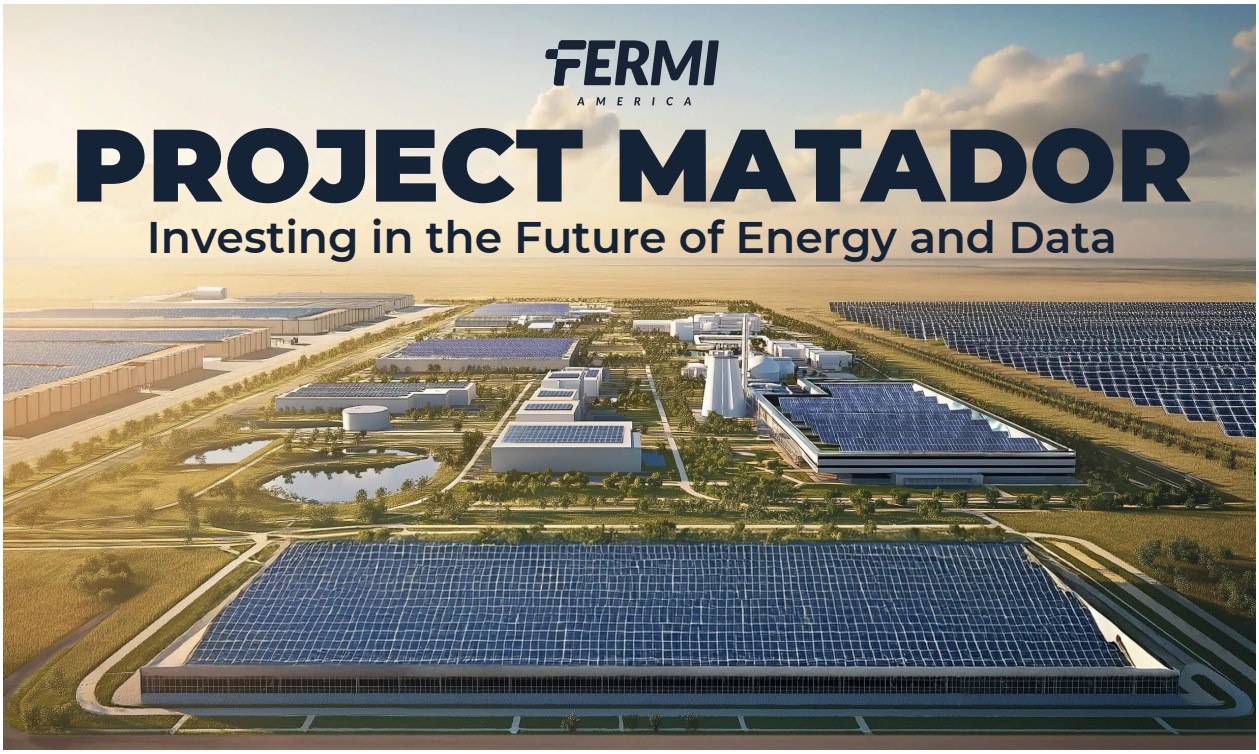

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PART 5

Emergency Plan

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List of Acronyms

ALARA	As Low As Reasonably Achievable
AP1000	Advanced Passive 1000
BSA	Baptist St. Anthony's Hospital
COLA	Combined Operating License Application
DOE	Department of Energy
DSHS	Texas Department of State Health Services
EAL	Emergency Action Level
ED	Emergency Director
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EOF	Emergency Operations Facility
EPIP	Emergency Plan Implementing Procedure
EPR	Emergency Preparedness and Response
ERDS	Emergency Response Data System
ERO	Emergency Response Organization
ERTMS	Emergency Response Training Management System
ESA	Environmental Site Assessment
FMT	Field Monitoring Team
GIS	Geographic Information System
HVAC	Heating, Ventilation, and Air Conditioning
JIC	Joint Information Center
MCR	Main Control Room
MOU	Memorandum of Understanding
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PPE	Personal Protective Equipment
RASCAL	Radiological Assessment System for Consequence Analysis
RMS	Radiation Monitoring System
RPM	Radiation Protection Manager
SAE	Site Area Emergency
SPDS	Safety Parameter Display System
STS	Standard Technical Specifications
TDEM	Texas Division of Emergency Management
TLD	Thermoluminescent Dosimeter

TSC	Technical Support Center
UE	Unusual Event
VOIP	Voice Over Internet Protocol

1.0 Emergency Plan

The following sections outline Fermi America's initial thoughts surrounding emergency planning. Information presented in this section is subject to change and further development. The proximity to the Department of Energy's (DOEs) PANTEX facility dictates that Fermi America and PANTEX coordinate their respective emergency plans. Fermi America is in active discussions with the PANTEX facility and is confident in its ability to work with PANTEX local communities, and other stakeholders to develop a robust emergency plan in accordance with applicable regulatory requirements and industry guidance.

This section of the emergency plan contains the following sections:

- Introduction and Regulatory Basis (see Section 5.1)
- Emergency Planning Zones (EPZs) (see Section 5.2)
- Emergency Classification System (see Section 5.3)
- Notification Methods and Procedures (see Section 5.4)
- Emergency Facilities and Equipment (see Section 5.5)
- Radiological Assessment and Field Monitoring (see Section 5.6)
- Medical and Public Health Support (see Section 5.7)
- Recovery and Reentry Planning (see Section 5.8)
- Training and Drills(see Section 5.9)

1.1. Introduction and Regulatory Basis

This Emergency Plan for the Fermi America Advanced Energy and Intelligence Campus is submitted as Part 5 of the Combined License Application (COLA) in accordance with the requirements of 10 CFR 52.79(b)(4), 10 CFR 50.47(b), and Appendix E to 10 CFR Part 50. Emergency plans will further develop with project stakeholders (e.g., PANTEX, local communities) and will be updated in future revisions to this application. The plan outlines the planned organizational, procedural, and technical framework by which Fermi America will ensure public health and safety in the event of a radiological emergency associated with the operation of its licensed AP1000 nuclear reactors.

The plan follows the structural guidance of NUREG-0654/FEMA-REP-1, Rev. 1, NUREG-0696, and incorporates relevant best practices as modeled in the approved Emergency Plan for Vogtle Electric Generating Plant Units 3 and 4. Fermi America will adapt these requirements, as needed, to its unique configuration as a sovereign, energy campus co-located with critical federal infrastructure and adjacent to the Department of Energy's PANTEX Plant.

Fermi America's Emergency Plan accounts for the deployment of up to four NRC-licensed Westinghouse AP1000 pressurized water reactors. The Emergency Plan encompasses the physically and regulatory isolated nuclear island and addresses the collateral emergency response impacts on the PANTEX facility as well as other proximate energy delivery, data, and non-nuclear generation facilities.

The emergency preparedness program described in this section will be designed to:

- Protect public health and safety during potential radiological emergencies.
- Coordinate with federal, state, and local emergency management agencies including the Texas Division of Emergency Management (TDEM), DOE/PANTEX emergency planners, and Carson County emergency responders.
- Provide timely and accurate notifications to the U.S. Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 50.72.
- Maintain robust training, communications, assessment, and facilities infrastructure for emergency response operations.

The Emergency Plan will be structured to comply with the fourteen (14) Planning Standards identified in 10 CFR 50.47(b), which address functional areas including notification, classification, assessment, protective action recommendations, public information, medical support, and drills/exercises.

The Fermi America site is geographically advantageous for emergency response planning. Located in a low-density rural setting with limited surrounding population, no adjacent surface water pathways, and within controlled access boundaries, the site provides a simplified and bounded emergency planning environment. The presence of the DOE PANTEX Plant nearby also enhances regional radiological emergency readiness due to pre-existing infrastructure, interagency training, and mutual aid protocols.

This section provides the foundation for detailed program elements that follow, including definition of the Emergency Planning Zones (EPZs), emergency classification levels, communication and notification methods, emergency response facilities, and supporting technical programs.

The overall objective of the Emergency Plan is to ensure that Fermi America can safely detect, classify, respond to, and recover from any radiological event at its licensed reactors, while protecting the public and ensuring compliance with all NRC emergency planning requirements.

1.2. Emergency Planning Zones (EPZs)

Fermi America's Emergency Planning Zones (EPZs) will be established in accordance with the requirements of 10 CFR 50.47(c)(2) and Appendix E to 10 CFR Part 50. Consistent with NUREG-0396, the two standard EPZs for nuclear facilities are defined as:

- The **Plume Exposure Pathway EPZ**, extending approximately 10 miles in radius from the reactor site, and
- The **Ingestion Pathway EPZ**, extending approximately 50 miles from the site boundary.

The determination of these EPZs for Fermi America will reflect a detailed site-specific analysis of population distribution, land use, topography, meteorological patterns, and infrastructure conditions, all of which should be favorable for simplified and effective emergency planning implementation. The Fermi America site lies in rural Carson County, Texas, within a sovereign-controlled 5,855-acre lease area managed by Texas Tech University. The surrounding population density is extremely low, and there are no immediate large-scale residential developments, surface water bodies, or major population centers within the 10-mile zone.

Demographic analysis based on the 2020 U.S. Census and regional planning data is expected to confirm that the plume exposure EPZ encompasses primarily agricultural and federally managed land, with only minor residential clusters. This will allow for streamlined planning assumptions, minimal evacuation complexity, and low-risk population exposure modeling in the unlikely event of a radiological release.

For the ingestion pathway EPZ, Fermi America will coordinate with the Texas Department of State Health Services and local agriculture authorities to monitor and plan for potential contamination of food and water sources under post-accident conditions. However, regional hydrological surveys are expected to confirm no reliance on surface water drinking sources within 30 miles of the facility, and food production is limited to low-intensity grazing and dryland farming.

The Rick Husband Amarillo International Airport lies just within the 10- mile EPZ. Because of this, airport operations will be considered in the Emergency Response Plan.

Fermi America's EPZs are consistent with those applied at other NRC-licensed AP1000 sites, including Vogtle Units 3 and 4. Site-specific overlays will be mapped using GIS data integrated from the Terracon ESA and the DOE PANTEX Environmental Report, with concentric and sector-based delineation adopted for real-time plume modeling and protective action recommendations. The site Emergency Operations Facility (EOF) and associated Technical Support Center (TSC) will be located outside the 10-mile EPZ and provide strategic control for coordination with local and state emergency response assets.

In summary, the Fermi America EPZ boundaries will be technically justified, conservatively established, and supported by robust site characterization data. They will enable timely protective actions and efficient coordination with external response agencies and will serve as the spatial framework upon which the remainder of the Emergency Plan will be structured.

1.3. Emergency Classification System

Fermi America will adopt a four-tier emergency classification system consistent with NRC regulatory expectations as outlined in 10 CFR 50.47(b)(4), Appendix E to 10 CFR Part 50, and industry guidance NEI 07-01, Rev. 0, "Emergency Action Levels for Advanced Passive Light Water Reactors." This classification structure will be designed to provide a graded response to abnormal conditions that could affect public health and safety, and it mirrors the emergency classification scheme approved for AP1000 facilities at Vogtle Units 3 and 4.

The four emergency classifications used by Fermi America are:

- **Unusual Event (UE):** Events that indicate a potential degradation in the level of safety of the plant but do not require any offsite response. These are the lowest-level events and typically involve abnormal conditions without radiation release.
- **Alert:** Events that involve actual or potential substantial degradation of the plant safety systems. Radiological releases, if any, are expected to be limited to small fractions of regulatory limits.
- **Site Area Emergency (SAE):** Events where actual or likely major failures of plant functions occur. These events may involve offsite releases of radioactive material, requiring limited protective action recommendations within the 10-mile EPZ.
- **General Emergency:** Events involving actual or imminent substantial core degradation or release of significant amounts of radioactive material, requiring full implementation of protective actions both onsite and offsite.

Fermi America's classification system uses Emergency Action Levels (EALs) based on initiating conditions and performance-based thresholds. These EALs are adapted from the AP1000-specific structure in NEI 07-01 Rev. 0 and are aligned with NUREG-0654/FEMA-REP-1 guidance. EALs cover radiological, system, process, and hazard-based indicators, such as:

- Reactor Coolant System pressure boundary degradation
- Containment integrity threats
- Radiation monitor setpoints
- Seismic, fire, and security event thresholds

EALs will be documented in the Fermi America Emergency Plan implementing procedures (EPIPs), and the classification process will be carried out by qualified Operations personnel using pre-approved checklists and training.

The classification of an event will trigger automatic and procedural notifications to local, state, and federal agencies, including the NRC. The Technical Support Center (TSC) will assume command and coordination responsibilities upon declaration of an Alert or higher. The EOF will be staffed to provide integrated assessment and communication.

The emergency classification system ensures a rapid, structured, and technically grounded response to any radiological or operational incident at the Fermi America site. It reflects lessons learned from AP1000 licensing precedent and is tailored to the regional conditions at Project Matador.

1.4. Notification Methods and Procedures

Fermi America will maintain a robust notification system designed to ensure timely and accurate communication with both internal facility personnel and external emergency response authorities in the event of a declared emergency. These procedures meet the requirements of 10 CFR 50.72 and Appendix E to 10 CFR Part 50 and are adapted from the structure and best practices used in the Vogtle Units 3 and 4 Emergency Plan.

Internal Notifications

Within the facility, event classification and notification responsibilities will reside in the Main Control Room (MCR). Upon classification of an emergency event, the Shift Manager or Emergency Director will initiate notifications to:

- The **Technical Support Center (TSC)**,
- The **Operations Support Center (OSC)**,
- The **Emergency Operations Facility (EOF)**,
- Designated plant personnel involved in emergency response operations.

Communications between the MCR and support facilities will be maintained through redundant systems including direct-dial telephones, radios, dedicated emergency circuits, and wireless communications. Status boards, plant-wide paging systems, and secure intercoms provide real-time situational awareness and response coordination.

External Notifications

Fermi America will notify the following agencies immediately upon classification of any emergency at the Alert level or above, or within 15 minutes of an Unusual Event, consistent with NRC and FEMA requirements:

- **U.S. Nuclear Regulatory Commission (NRC)** via the Emergency Notification System (ENS).
- **Texas Division of Emergency Management (TDEM)** and the **State Operations Center**.
- **Carson County Emergency Management Agency**, including fire, law enforcement, and EMS dispatch.
- **Department of Energy (DOE) PANTEX Plant Emergency Operations**, due to geographic proximity and interagency mutual aid protocols.

Pre-scripted notification forms and voice messages will be used to reduce errors and ensure consistency. All notifications include:

- Plant/site name and event classification level.
- Time of declaration and initiating condition.
- Protective action recommendations (if applicable).
- Contact information and status of on-site facilities and staffing.

The EOF will be equipped with redundant communications lines, including secure voice/data links, radio interoperability with public safety agencies, and satellite backup. The center coordinates media releases and public information dissemination through the Joint Information Center (JIC) and ensures alignment with TDEM and NRC public affairs officers.

In the event of communications disruption, pre-designated mobile communication units and alternate notification protocols will be activated to maintain continuity of operations. All notification procedures are validated during quarterly drills and biennial exercises. Fermi America will also maintain a 24-hour emergency contact number accessible to off-site agencies and public safety personnel.

This notification framework ensures that all stakeholders receive timely, accurate, and actionable information during all phases of an emergency, consistent with federal requirements and site-specific emergency response strategies.

1.5. Emergency Facilities and Equipment

Fermi America will designate and equip a comprehensive set of emergency response facilities, each designed to support rapid, coordinated response activities in accordance with 10 CFR 50.47(b)(8), Appendix E to 10 CFR Part 50, NUREG-0696, and the design model implemented for the AP1000-based Vogtle Units 3 and 4. These facilities provide the infrastructure necessary to perform classification, notification, assessment, decision-making, and coordination of protective actions for the public and on-site personnel.

Technical Support Center (TSC): The TSC will be located in a hardened structure within the protected area but outside the safety-related plant and staffed with technical and operations personnel and serves as the central hub for engineering evaluation, plant systems monitoring, and coordination with the Control Room. The TSC is equipped with:

- Redundant power and HVAC systems to ensure survivability during radiological or environmental incidents.
- Radiation shielding and filtered ventilation to protect personnel in accident scenarios.
- Real-time plant parameter displays systems, including Safety Parameter Display System (SPDS) feeds and Emergency Response Data System (ERDS) interfaces.
- Multiple redundant communications links to the Main Control Room, Emergency Operations Facility, and local/state agencies.

Operations Support Center (OSC): The OSC will be located near key plant access points to provide logistical support for field response personnel. It will house maintenance, radiation protection, and emergency repair teams designed for quick deployment of emergency response assets. The OSC includes:

- Secure storage of radiation monitoring instruments, protective equipment, and response kits.
- Communications terminals for real-time task assignments and coordination with the TSC.
- Facility status boards and incident tracking software.

Emergency Operations Facility (EOF): The EOF will be located offsite in a secure area outside the 10-mile EPZ to ensure operational viability under severe event conditions. It will function as the principal coordination center for offsite response, including:

- Strategic command functions for interface with NRC, TDEM, and DOE PANTEX.
- Public information management through the Joint Information Center (JIC).

- Radiological assessment, meteorological data analysis, and protective action decision-making.
- Secure communication systems, including satellite, landline, VOIP, and encrypted data links.

Each of these facilities will be protected against external hazards, designed to remain operational during natural or manmade emergencies, and staffed by trained personnel following activation protocols detailed in the Emergency Plan Implementing Procedures (EPIPs).

Facility readiness is verified through periodic drills, preventive maintenance, and annual equipment validation checks, in accordance with NUREG-0654 Appendix 1. The EOF, TSC, and OSC configurations align with AP1000 facility layouts, adapted to the campus structure at Fermi America. These facilities collectively ensure Fermi America's ability to mount a coordinated, technically robust, and resilient emergency response in any postulated accident or radiological release scenario.

1.6. Radiological Assessment and Field Monitoring

Fermi America will maintain a comprehensive radiological assessment and environmental monitoring program to support rapid characterization of radiological conditions during and following emergency events. This capability enables accurate assessment of releases, supports protective action recommendations, and ensures compliance with NRC and FEMA guidance under 10 CFR 50.47(b)(9), Appendix E to 10 CFR Part 50, and NUREG-0654.

Radiological Assessment

The Main Control Room, Technical Support Center (TSC), and Emergency Operations Facility (EOF) will be equipped with redundant radiation monitoring data displays, real-time meteorological inputs, and automated dose projection systems. The plant uses a site-specific meteorological tower array and integrates AP1000-specific systems such as:

- Radiation Monitoring System (RMS) with continuous effluent and area monitoring
- SPDS-linked radiological trend tracking
- Real-time modeling tools based on the NRC-endorsed RASCAL code

The EOF provides centralized plume modeling capabilities, including:

- Projected offsite dose rates under prevailing wind conditions
- Isodose contour plotting
- Real-time ingestion pathway projections based on food chain and environmental persistence modeling

Field Monitoring Teams and Equipment

Fermi America will deploy pre-trained Field Monitoring Teams (FMTs) from the Operations Support Center (OSC) in coordination with the EOF. Each team will include a radiation protection specialist, and a driver/navigator trained in mapping and contamination control. Teams operate in overlapping zones within the 10-mile plume exposure EPZ and the 50-mile ingestion pathway EPZ.

Each FMT will be equipped with:

- Calibrated portable dose rate meters, air samplers, and thermoluminescent dosimeters (TLDs)
- GPS-based field reporting tablets
- Sample kits for vegetation, soil, and surface water

- Mobile communication units with backup satellite phones

Data collected from FMTs will be relayed to the EOF and assessed alongside plant effluent data and meteorological inputs. This ensures that offsite protective action decisions—such as shelter-in-place, evacuation zones, and ingestion pathway countermeasures—are data-driven and traceable.

FMT deployment patterns and response zones will be mapped in EPIP annexes, and equipment inventories are validated quarterly. Interagency field monitoring coordination will be established with DOE PANTEX, TDEM, and the Texas Department of State Health Services to integrate environmental sampling during full-scale exercises.

This program ensures that Fermi America can rapidly detect, map, and respond to any unplanned radiological release with coordinated technical response teams and agency partners.

1.7. Medical and Public Health Support

Fermi America will establish a comprehensive medical and public health response program to support the onsite workforce and surrounding community in the event of a radiological emergency. This program will include pre-established coordination with regional medical facilities, EMS protocols, and contamination control procedures that align with NUREG-0654, Appendix E to 10 CFR Part 50, and the emergency preparedness framework implemented for AP1000 facilities such as Vogtle Units 3 and 4.

Regional Hospital and Public Health Coordination

The primary offsite medical facility designated to receive potentially contaminated or injured personnel is **Baptist St. Anthony's Hospital (BSA Health System)** in Amarillo, Texas, located approximately 20 miles southwest of the Fermi America site. BSA maintains emergency response capabilities for radiologically contaminated patients, including:

- Decontamination showers and isolation areas.
- Radiation survey instrumentation.
- Medical personnel trained in radiological injury management.

Fermi America will maintain a Memorandum of Understanding (MOU) with BSA and other regional healthcare providers to ensure coordination during an emergency and to facilitate drills, joint planning, and radiological response training.

Onsite EMS and Contamination Control

An Emergency Medical Technician (EMT)-staffed First Aid Center will be located on-site and will be operational 24/7 once fuel is loaded. During declared emergencies, additional EMS personnel and contamination control staff will be deployed from the OSC and staged at the site access control point to manage:

- Field triage and transport.
- Radiological surveys for potential internal and external contamination.
- Stabilization of contaminated or injured individuals.

All response personnel will receive annual training in radiological emergency medical procedures and the use of personal protective equipment (PPE), including dosimetry and respiratory protection. Transfer protocols between the site and offsite medical facilities will include documentation of contamination status, exposure logs, and patient stabilization measures.

Coordination with **Texas Department of State Health Services (DSHS)** ensures public health agency integration into post-event monitoring, public advisories, and prophylactic distribution decisions. The EOF will maintain communication channels with DSHS and regional EMS coordination centers to enable real-time support.

Decontamination and contamination control areas will be integrated into the site Emergency Response Plan Implementing Procedures (EPIPs), and response drills involving mock injuries and radiological triage will be held semi-annually in coordination with local agencies.

This integrated medical and public health program ensures rapid, safe, and coordinated treatment of personnel and public potentially affected by a radiological emergency, with trained staff, equipped facilities, and established interagency partnerships in place.

1.8. Recovery and Reentry Planning

Fermi America will develop a structured recovery and reentry framework to guide actions following the stabilization of a radiological emergency. This framework will align with NUREG-0654, Supplement 3, modeled after the NRC-accepted planning structure used by Vogtle Units 3 and 4, with modifications to reflect Fermi America's specific plant layout, sovereign-controlled site access, and proximity to DOE/PANTEX federal facilities.

Recovery will begin after emergency conditions are stabilized and the reactor(s) are in a safe shutdown state, and when radiological conditions have been determined to permit limited reentry, damage assessment, and eventual restoration of normal operations. Reentry planning ensures that decisions are made methodically, incorporating environmental data, health and safety protocols, and interagency coordination.

Federal, State, and Local Integration

The EOF will serve as the command center for recovery operations. Recovery planning is coordinated with:

- **NRC Region IV and Headquarters Recovery Teams**.
- **Texas Division of Emergency Management (TDEM)**.
- **Carson County Emergency Management**.
- **Texas Department of State Health Services (DSHS)**.
- **Department of Energy (DOE) PANTEX Emergency Operations** for shared infrastructure and federal interface continuity.

Mutual aid agreements and memoranda of understanding will provide mechanisms for integrated response and continuity of operations across jurisdictional boundaries.

Reentry Activities and Radiological Controls

Reentry activities will be conducted under strict radiological control, guided by Health Physics staff and coordinated with the Radiation Protection Manager (RPM). These include:

- Survey and documentation of radiation and contamination levels.
- Establishment of controlled access zones.
- Personnel entry authorization based on ALARA planning.
- Use of protective clothing, respiratory protection, and continuous dosimetry.

Reentry teams will be deployed in stages based on contamination surveys and restoration priorities (e.g., reestablishing key safety systems, environmental sampling, site security). Criteria for safe reentry are documented in the EPIPs and will be reviewed with federal and state agencies before approval.

Termination of Emergency and Transition to Recovery

The Emergency Director (ED) will recommend emergency termination to the EOF Emergency Manager once:

- Plant conditions are stable.
- No further threat to public health exists.
- Radiation levels have returned to acceptable levels.
- Offsite protective actions are no longer required.

The EOF will coordinate formal notification to the NRC, TDEM, and DSHS to transition from the emergency phase to recovery.

Recovery operations may continue under site-specific corrective action and long-term monitoring plans. The full recovery plan and associated termination criteria are detailed in the Fermi America EPIP Recovery Module.

This structured, interagency-aligned recovery program will ensure safe transition from emergency response to full operational restoration, with environmental integrity and public health protections maintained throughout.

1.9. Training and Drills

Fermi America will establish a structured and continuous Emergency Preparedness Training and Drill Program in accordance with Appendix E to 10 CFR Part 50, Section IV.F, and guidance from NUREG-0654/FEMA-REP-1. This program will be modeled after the NRC-approved structure used by Vogtle Units 3 and 4 and has been adapted to align with Fermi America's sovereign site structure, site specific plant design, and proximity to DOE/PANTEX federal response assets.

The training and drill program will ensure that all individuals assigned emergency response roles are qualified, current in their assigned procedures, and capable of executing their responsibilities under high-stress emergency conditions. It will encompass initial qualification, refresher training, and performance-based assessments.

Training Program Components:

- All emergency response personnel complete general emergency planning training and site-specific qualification modules based on their assigned role (e.g., EOF, TSC, OSC, FMT, Security).
- Licensed operators and shift technical advisors receive augmented emergency classification and notification training, with drills on the Emergency Action Levels (EALs) adapted from NEI 07-01 Rev. 0.
- Radiation Protection Technicians are trained in field monitoring, decontamination, and contamination control based on NUREG-0737 and ANSI standards.
- Medical response personnel complete training in triage, radiation injury treatment, PPE use, and emergency transport protocols.

Drill and Exercise Requirements: Fermi America's drill schedule satisfies the following:

- **Quarterly tabletop exercises** involving the Operations Shift Crew, Control Room simulators, and EPIP validation.
- **Semi-annual onsite functional drills** with activation of the OSC, TSC, and EOF, and deployment of Field Monitoring Teams (FMTs).
- **Biennial full-participation emergency exercises** in coordination with:
    - NRC Region IV
    - Texas Division of Emergency Management (TDEM)
    - DOE PANTEX Emergency Management

- Carson County EMS and law enforcement
- Texas Department of State Health Services (DSHS)

Each biennial exercise will include simulated radiological releases, real-time protective action decision-making, and actual staffing of the TSC, EOF, and Joint Information Center (JIC). Evaluations will be documented, critiqued, and used to revise procedures, training content, and equipment needs.

Drill performance, training attendance, and qualifications will be maintained in the Emergency Response Training Management System (ERTMS), which generates compliance reports and interfaces with Fermi America's Human Performance and QA systems.

This training and drill program ensures that the Fermi America Emergency Response Organization (ERO) is capable, compliant, and continuously improving in alignment with NRC, FEMA, and best-practice industry expectations for an AP1000 facility.

References

5-1 Nuclear Energy Institute. (2007). *Methodology for development of emergency action levels for advanced passive light water reactors* (NEI 07-01, Rev. 0).

5-2 U.S. Nuclear Regulatory Commission. (1978). *Planning basis for the development of state and local government radiological emergency response plans in support of light water nuclear power plants* (NUREG-0396). U.S. Government Printing Office.

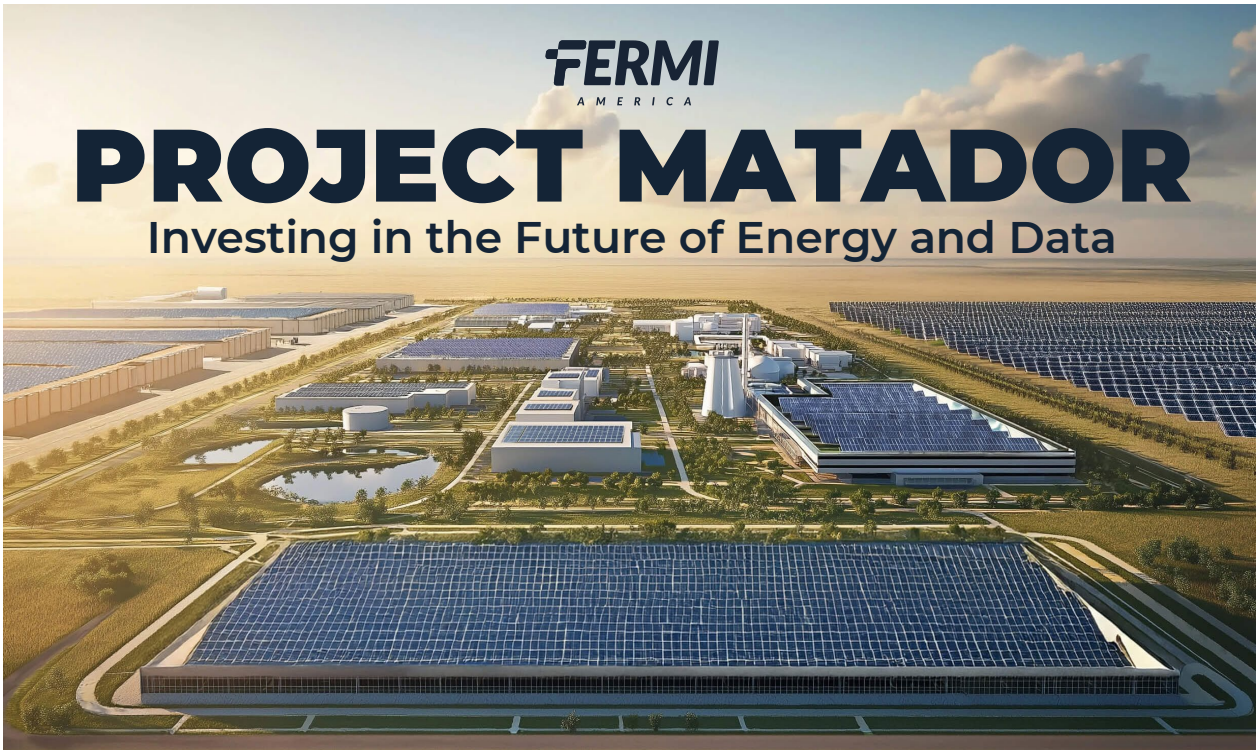
5-3 U.S. Nuclear Regulatory Commission. (1980). *Criteria for preparation and evaluation of radiological emergency response plans and preparedness in support of nuclear power plants* (NUREG-0654/FEMA-REP-1, Rev. 1). U.S. Government Printing Office.

5-4 U.S. Nuclear Regulatory Commission. (1981). *Functional criteria for emergency response facilities* (NUREG-0696). U.S. Government Printing Office.

5-5 U.S. Nuclear Regulatory Commission. (2011). *Criteria for development of evacuation time estimate studies* (NUREG-0654, Supplement 3). U.S. Government Printing Office.

5-6 U.S. Nuclear Regulatory Commission. (2016). *Standard technical specifications: Westinghouse Advanced Passive 1000 (AP1000) plants* (NUREG-2194, Volume 1, Revision 0). U.S. Government Printing Office.

5-7 U.S. Nuclear Regulatory Commission. (n.d.). *Clarification of TMI action plan requirements* (NUREG-0737). U.S. Government Printing Office.



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COL Application

PART 6

Limited Work Authorization

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List of Acronyms

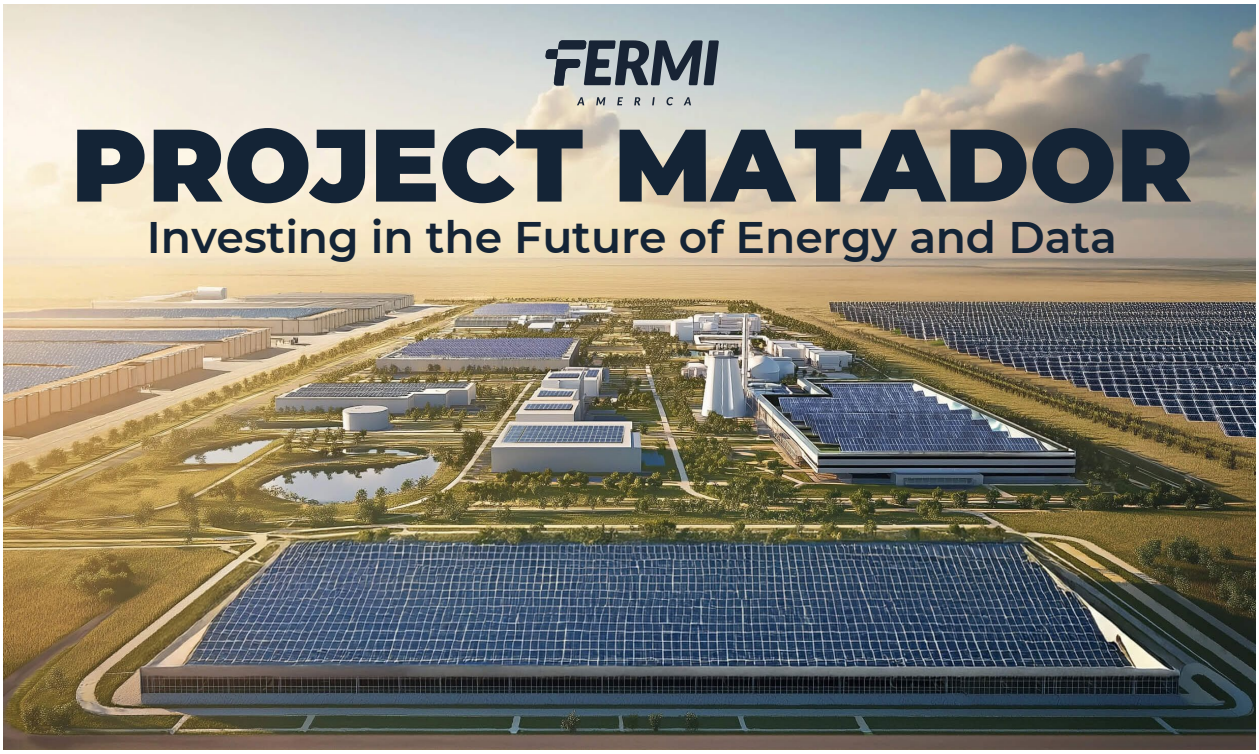
LWA	Limited Work Authorization

1.0 Limited Work Authorization

This project may exercise the option to begin early site construction and development activities through a Limited Work Authorization (LWA). If needed, the COL application will be updated accordingly.

References

6-1 [Not Used]



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COL Application

PART 7

Departures, Exemptions, and Variances

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List of Acronyms

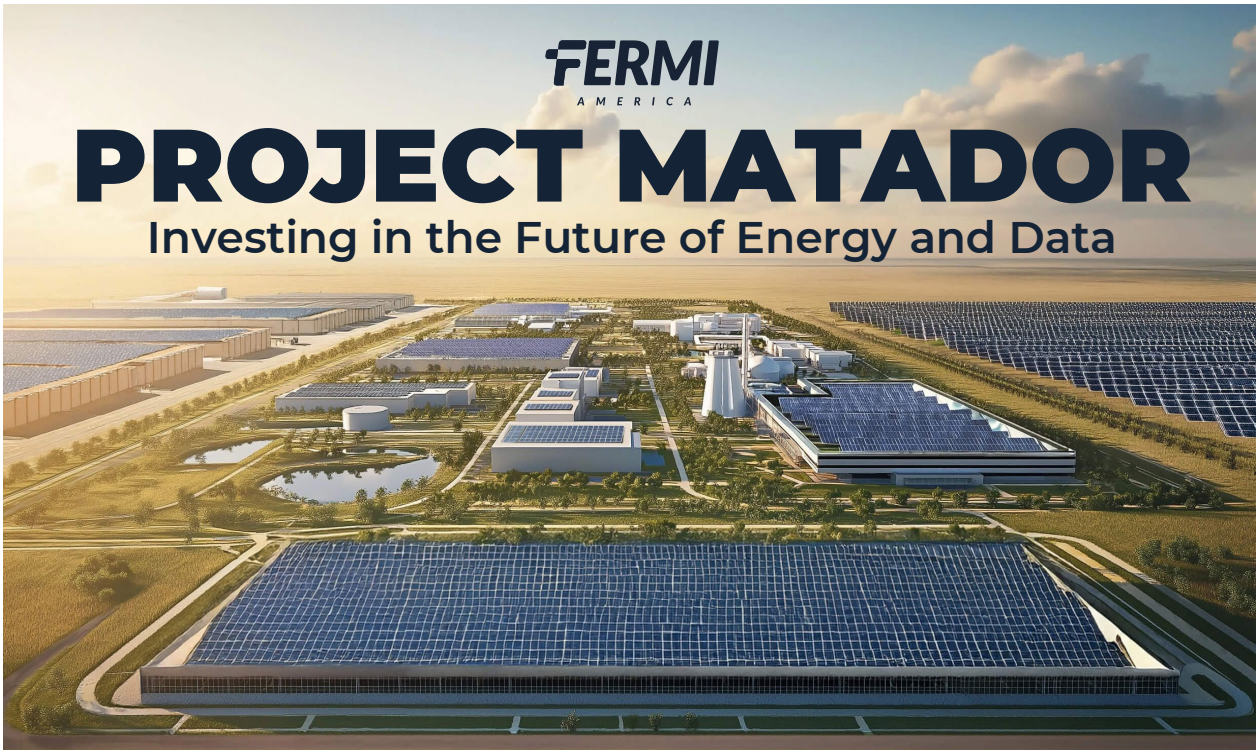
COLA	Combined Operating License Application

1.0 Departures, Exemptions, and Variances

This section addresses departures, exemptions, and variances as required by 10 CFR Part 52 for the Combined License Application (COLA). At this time, no departures, exemptions, or variances are anticipated. However, the applicant recognizes that as site-specific engineering progresses and lessons learned from recent nuclear construction projects, such as Vogtle Electric Generating Plant Units 3 and 4, departures, exemptions, and or variances may be required. Any such adjustments will be evaluated and documented in accordance with NRC regulations and guidance.

References

7-1 [Not Used]



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PART 8

Safeguards / Security Plan

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List of Acronyms

COLA	Combined Operating License Application
DOE	Department of Energy

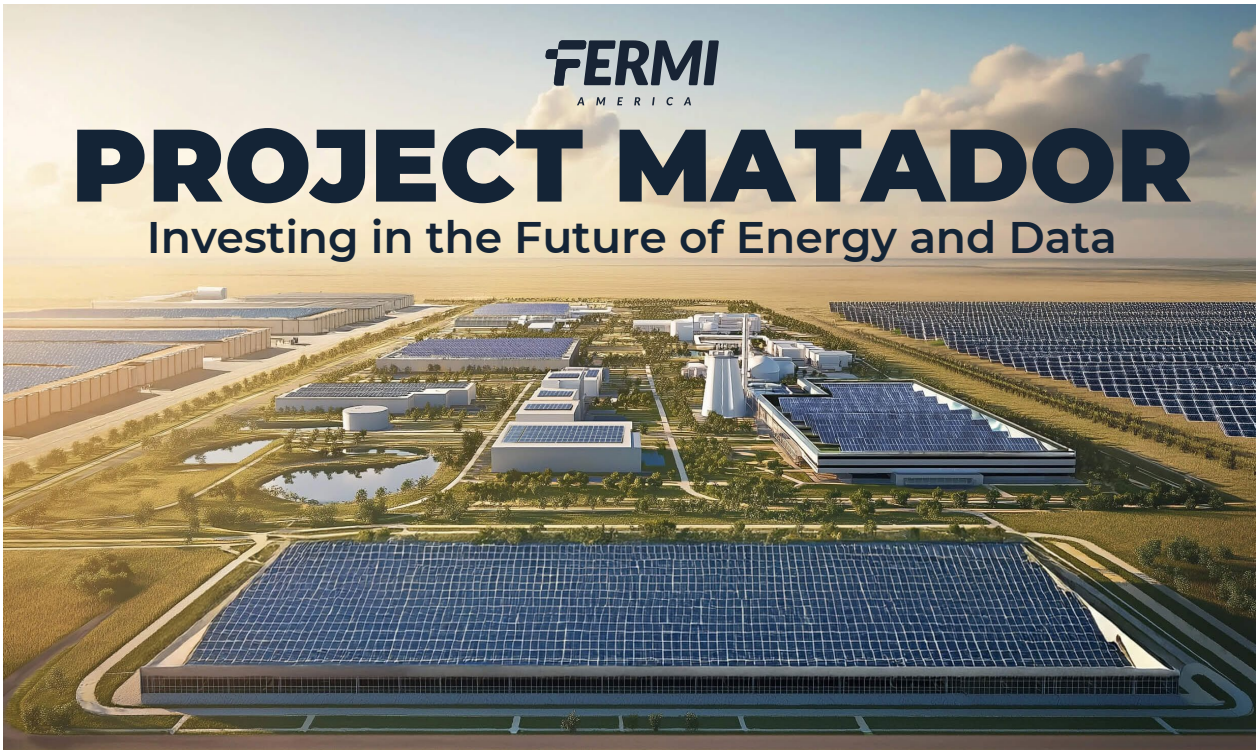
1.0 Safeguards and Security Plan

This section addresses the safeguards and security plan approach as required by 10 CFR Part 52 for the Combined License Application (COLA).

Given the proximity of the site to the Department of Energy's (DOE's) PANTEX site, coordinating security efforts will be key to developing a Fermi America specific site safeguards and security plan. Ongoing discussions between Fermi America and PANTEX will result in a comprehensive and coordinated safeguards and security plan, which will be detailed in future COLA submittals.

References

8-1 [Not Used]



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PART 9

Withheld Information

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List of Acronyms

COLA	Combined Operating License Application

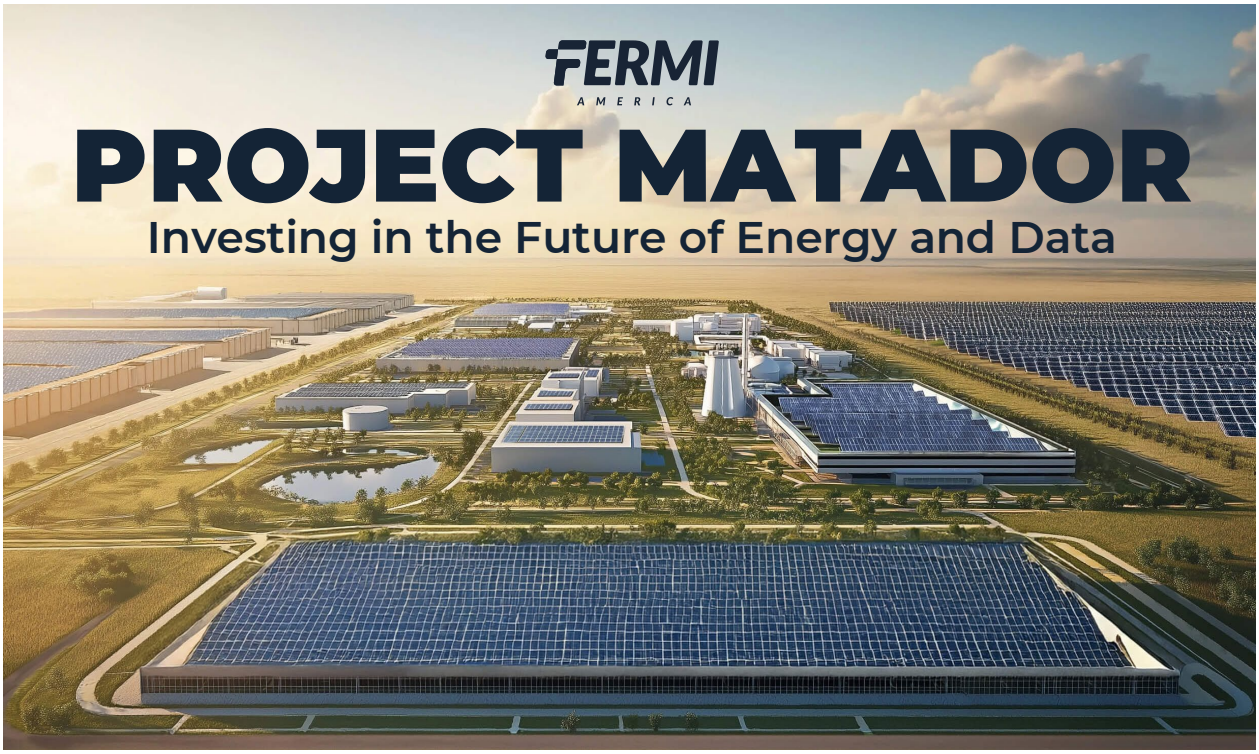
1.0 Withheld Information

This section will contain withheld information required by 10 CFR Part 52 for the Combined License Application (COLA). As of this submittal, there is no withheld information contained in this section.

As engineering matures for the project, withheld information needed to support the NRCs review of this COLA application will be placed in this section. Fermi America will also clearly identify information to be withheld in future submissions.

References

9-1 [Not Used]



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PART 10

Proposed Licensing Conditions (Including ITAAC

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List of Acronyms

COLA	Combined Operating License Application
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria

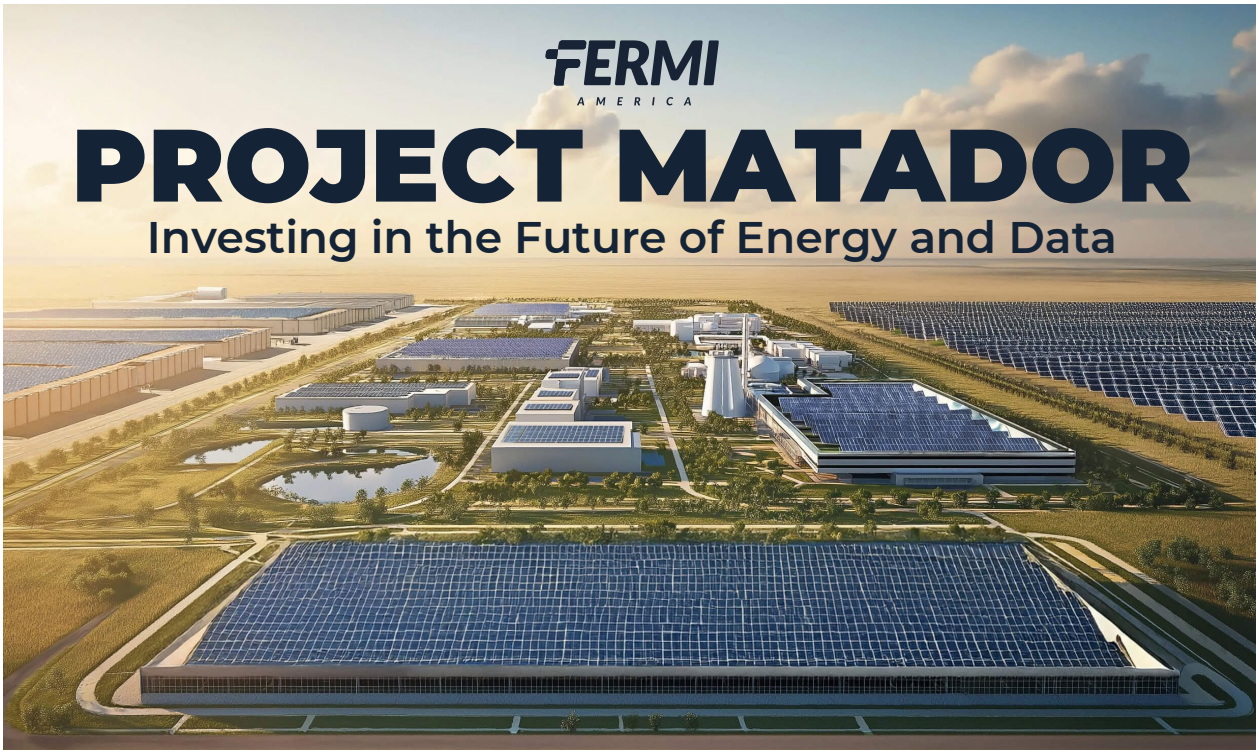
1.0 Proposed Licensing Conditions (Including ITAAC)

This section will contain proposed licensing conditions as required by 10 CFR Part 52 for the Combined License Application (COLA), including proposed Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC).

Fermi America intends to submit a comprehensive set of licensing conditions and ITAAC in support of this COLA. Fermi America intends to incorporate lessons learned from the Vogtle Electric Generating Plant Units 3 & 4 experience and licensing conditions as a starting point, with refinement to ensure proposed licensing conditions and ITAAC are appropriate for this project.

References

10-1 [Not Used]



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PART 11

Enclosures

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List of Acronyms

COLA	Combined Operating License Application
TBD	To Be Determined

1.0 Enclosures (Including ITAAC)

This appendix lists all appendices, enclosures, and exhibits cited or referenced throughout the Fermi America Combined License Application (COLA). It is intended to guide the NRC, state agencies, and public reviewers in identifying the complete body of materials necessary to evaluate the application under 10 CFR Parts 50, 51, 52 and associated regulatory guidance.

Supporting appendices, enclosures, and exhibits are summarized in Table 11.0-1. As site specific engineering matures, this list of appendices, enclosures, and exhibits will grow as documents become available.

Table 11.0-1. Fermi America COLA appendices, Enclosures, and Exhibits

Title	Description	Affected COLA Parts, Chapters, Sections
Appendix 1	TBD	TBD
Enclosure A	PANTEX 2023 Annual Site Environmental Report	Part 3, Chapter 2
Enclosure B	Phase I Environmental Site Assessment	Part 3, Chapter 2
Enclosure C	Reconnaissance Level Geotechnical Investigation Report	Part 3, Chapter 2, Section 2.1
Exhibit 1	TBD	TBD