APPENDIX C
FEDERAL AND STATE REGULATORY AND PERMITTING REQUIREMENTS

This section identifies and summarizes statutes, regulations, Executive Orders, and permitting requirements potentially applicable to construction and operation of the proposed FutureGen Project.

C.1 FEDERAL ENVIRONMENTAL STATUTES AND REGULATIONS

C.1.1 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

DOE prepared this EIS according to Council on Environmental Quality regulations (40 CFR Parts 1500 through 1508) which implement the procedural requirements of the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 *et seq.*). NEPA requires agencies of the federal government to study the environmental impacts of major federal actions significantly affecting the quality of the human environment.

NEPA establishes an environmental policy for the nation, provides an interdisciplinary framework for environmental planning by federal agencies, and contains procedures to ensure that federal agency decision-makers take environmental factors into account. Under NEPA, Congress authorizes and directs federal agencies to carry out their regulations, policies, and programs as fully as possible in accordance with the statute's policies on environmental protection.

C.1.2 CLEAN AIR ACT (CAA)

The Clean Air Act (CAA), as amended (42 USC 7401 *et seq.*) establishes National Ambient Air Quality Standards (NAAQS) set by EPA for certain pervasive pollutants: SO_2, CO, O_3, NO_2, Pb, and PM (i.e., both PM_{10} and $PM_{2.5}$). NAAQS are expressed as concentrations of the criteria pollutants in the ambient air, which is the outdoor air to which the general public has access [40 CFR 50.1(e)]. Primary standards are set to protect the public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, including protection against decreased visibility plus damage to animals, crops, vegetation, and buildings. Table C.1-1 lists the NAAQS.

The CAA contains emission limiting programs and permit programs to protect the nation's air quality. Regulations implementing the CAA are found in 40 CFR Parts 50 through 95 and are summarized in Table C.1-2. The CAA also establishes New Source Performance Standards, 40 CFR Part 60, that establish requirements for new or modified sources such as design standards, equipment standards, work practices, or operational standards. The New Source Performance Standards are technology-based standards applicable to new and modified stationary sources of regulated air emissions. Where the NAAQS emphasize air quality in general, the New Source Performance Standards focus on particular sources of approximately 70 industrial source categories or sub-categories of sources (e.g., fossil fuel-fired generators, grain elevators, steam generating units) that are designated by size and type of process.

Under the CAA, a new major source is required to obtain a Prevention of Significant Deterioration (PSD) Construction Permit and a Title V Operating Permit. The States of Texas and Illinois have been delegated the authority to issue these permits to assure compliance with all CAA requirements.

Table C.1-1. National Ambient Air Quality Standards

Pollutant	Averaging Times	Primary Standards	Secondary Standards
SO_x	Annual (Arithmetic Mean)	0.03 ppm	None
	24-hour [1]	0.14 ppm	None
	3-hour [1]	None	0.5 ppm (1300 µg/m^3)
NO_2	Annual (Arithmetic Mean)	0.053 ppm (100 µg/m^3)	Same as Primary
PM_{10}	Annual [2] (Arithmetic Mean)	Revoked	None
	24-hour [3]	150 µg/m^3	None
$PM_{2.5}$	Annual [4] (Arithmetic Mean)	15.0 µg/m^3	Same as Primary
	24-hour [5]	35 µg/m^3	None
CO	8-hour [1]	9 ppm (10 mg/m^3)	None
	1-hour [1]	35 ppm (40 mg/m^3)	None
O_3	8-hour [6]	0.08 ppm (235 µg/m^3)	Same as Primary
Pb	Quarterly Average	1.5 µg/m^3	Same as Primary

[1] Not to be exceeded more than once per year.
[2] Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM_{10} standard in 2006 (effective December 17, 2006).
[3] Not to be exceeded more than once per year on average over 3 years.
[4] To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3.
[5] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3 (effective December 17, 2006).
[6] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
Source: EPA, 2006

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
Prevention of Significant Deterioration (PSD)	40 CFR Part 52.21 35 IAC Part 201 ***35 IAC Part 270*** 30 TAC Chapter 116	The PSD ***program involves*** a pre-construction review and permit process for construction and operation of a new or modified major stationary source in attainment areas. A major source is a source for which the amount of any one regulated pollutant emitted equal to or greater than thresholds of 100 tons per year (tpy) for sources which are part of the 28 categories defined by the PSD rule. The required PSD review consists of the following elements: • An ambient air quality impact analysis to demonstrate that the potential emissions from the proposed project will not cause or contribute to a violation of the applicable PSD increments and NAAQS. • An assessment of the direct and indirect effects of the proposed project on general growth, soil, vegetation, and visibility. Additionally, a source that might impact a Class I federal area must undergo additional review. • A case-by-case Best Available Control Technology (BACT) demonstration, which takes into account energy, environmental, and economic impacts as well as technical feasibility. • An ambient air quality monitoring program for up to one year may be required if no other representative data are available and if the project impacts are greater than a monitoring *de minimis* level. • Public comment, including an opportunity for a public hearing. The proposed Mattoon, Tuscola, Jewett, and Odessa Power Plant Sites and the sequestration sites would be subject to the PSD ***federal and state*** regulations. ***Each source*** would be defined as a major source because **t**he proposed power plant would have the potential to emit more than 100 tons (91 metric tons) annually of more than one criteria pollutant. ***Fossil-fuel-fired steam-electric generating plants are among the 28 PSD source categories subject to the 100 ton major source threshold.***

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
New Source Performance Standards (NSPS)	40 CFR Part 60 30 TAC Chapter ***116***	The ***F***ederal NSPS are technology-based standards applicable to new and modified stationary sources of regulated air emissions. The NSPS program sets uniform emission limitations for approximately 70 industrial source categories or sub-categories of sources**,** ***including*** fossil fuel-fired steam generating units**,** that are designated by size as well as type of process. The standards that would potentially apply to the proposed Mattoon, Tuscola, Jewett, and Odessa Power Plant Sites are as follows: • Subpart A – General Provisions, which provides for general notification, record keeping, and monitoring requirements. • Subpart Da – Standards of Performance for Electric Utility Steam Generating Units For Which Construction is Commenced After September 18, 1978**:** applies to any electric utility combined cycle gas turbine that combusts more than 250 MMBtu/hour (73 MW) heat input of fossil fuel***, including synthetic gas derived from coal,*** in the steam generator. As amended in ***June 2007***, this provision is applicable to combined cycle units that burn ***50*** percent or more (by heat input) ***solid-derived fuel not meeting the definition of natural*** gas. ***Subpart Da includes emission limits for particulate matter, NO_x, SO_2, and mercury.*** • Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units**:** covers the supplementary fired heat recovery steam generator (HRSG) and natural gas-fired auxiliary boiler because its heat input will be greater than 100 MMBtu/hr (29.2 MW). ***Subpart Db includes emission limits for particulate matter, NO_X, and SO_2.*** • Subpart Y – Standards of Performance for Coal Preparation Plants: Coal handling capacity at the IGCC power station will exceed 200 tons (181 metric tons) per day, and is therefore subject to this NSPS. ***Further, the FutureGen Project would be subject to the mercury cap established for the respective State under the Clean Air Mercury Rule (May 18, 2005; 70 FR 28606). The unit would have to comply with the mercury requirements of the respective State in addition to meeting the mercury emission limits under Subpart Da.*** Additionally, the provisions of ***these*** subpart**s** require the installation of a continuous emission monitoring system (CEMS) to monitor fuel consumption***; opacity; and emissions of NO_X, SO_2, and mercury***. A determination of the applicability will not be made until more detailed plant design parameters have been established.
National Emissions Standards for Hazardous Air Pollutants (NESHAP)	40 CFR Parts 61 and 63 35 IAC Part 201 ***35 IAC Part 232*** 30 TAC Chapter 11***6***	Non-criteria pollutants that can cause serious health and environmental hazards are termed hazardous air pollutants (HAP) or air toxics. ***The NESHAP apply to new and existing sources in source categories defined to be major (i.e., emitting a single HAP in excess of 10 tons [9.1 metric tons] per year or an aggregate emission rate of over 25 tons [22.7 metric tons] per year of any combination of regulated HAP). The combustion turbine portion of the FutureGen Project would be required to comply with 40 CFR 63, Subpart YYYY.***

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
Clean Air Interstate Rule (CAIR)	Section 110 of the CAA Amendments 35 IAC Part 225 30 TAC Chapter 101, Subchapter H, Division 7. 30 TAC Chapter 122.	On ***May 12***, 2005, ***(70 FR 25162)*** EPA issued CAIR, a rule that will permanently cap emissions of SO_2 and NO_X from electric generating units (EGU) in the eastern United States so as to address $PM_{2.5}$ and ground-level O_3 transport. CAIR ***builds on the Acid Rain Program (discussed below) and*** would achieve large reductions of SO_2 and NO_X emissions across 28 **S**tates (including Illinois and Texas) and the District of Columbia. ***CAIR creates a market-based cap-and-trade program that reduces nationwide SO_2 and NO_X emissions in two distinct phases*** ***The States of Illinois and Texas are working to develop their plans to implement CAIR.*** ***CAIR remains in effect, although it is under litigation.***
Clean Air Mercury Rule (CAMR)	Section 111 of the CAA Amendments 35 IAC Part 225 30 TAC Chapter 101, Subchapter H, Division 8. 30 TAC Chapter 122	On ***May 18***, 2005, ***(70 FR 28606)*** EPA issued CAMR, which ***establishes "standards of performance" limiting mercury emissions from new and existing coal-fired power plants and creates a market-based cap-and-trade program that reduces nationwide utility emissions of mercury in two distinct phases. As noted above, n***ew coal-fired power plants will have to meet ***NSPS*** in addition to being subject to the caps. ***The States of Illinois and Texas are working to develop their plans to implement CAMR.*** CAMR remains in effect***, although it is under litigation***. CAMR ***builds on, and*** is a closely related action to**,** CAIR, which is discussed above.

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
Acid Rain Program	40 CFR Parts 72 through 78	EPA established a program to control emissions ***of SO_2 and NO_X*** that contribute to the formation of acid rain. The acid rain regulations are applicable to "affected units" as defined in the regulations. The objectives of the program are achieved through a system of marketable ***SO_2*** allowances, which are used by utility units to cover their SO_2 emissions***, and through imposing an emission limitation on a unit's NO_X emissions***. One allowance means that an affected utility unit may emit up to 1 ton of SO_2 during a given year. ***Affected sources*** cannot emit more tons of SO_2 than they hold in allowances. Allowances may be bought, sold, or traded, and any allowances that are not used in a given year may be banked and used in the future. Owners or operators of an affected unit are subject to the following Acid Rain Program requirements: • Acid Rain Permit Application, which must be submitted at least 24 months prior to the date of initial operation of the unit. • SO_2 emission allowances, which are to be secured on an annual basis. • NO_X emission ***rate*** limitations. • Continuous emissions monitoring requirements***, and other monitoring, reporting, and recordkeeping requirements,*** for NO_X, SO_2, opacity***, and carbon dioxide***. The proposed FutureGen Project would be subject to the Acid Rain Program requirements because it meets the definition of an affected unit under 40 CFR 72.6(3)(i).
Compliance Assurance Monitoring (CAM) Rule	40 CFR Part 64 35 IAC Part 201 30 TAC Chapter 122	The CAM Rule applies to facilities that have emission units located at major sources subject to Title V air quality permitting and that use control devices to achieve compliance with emission limits. It requires that these facilities monitor the operation and maintenance of their control equipment to evaluate the performance of their control devices and report if they meet established emission standards. If these facilities find that their control equipment is not working properly, the CAM rule requires them to take action to correct any malfunctions and to report such instances to the appropriate enforcement agency (i.e., State and local environmental agencies). ***Six exemptions also apply. The CAM Rule does not apply to emission limitations and standards that: (1) are contained in post 1990 rules, (2) specify a continuous compliance determination method, (3) are related to stratospheric ozone requirements, (4) are included in the Acid Rain program, (5) apply solely under an emissions trading program, or (6) are included in an emissions cap that meets the requirements of 40 CFR 70.4(b)(13).*** The FutureGen Project would be a major source that would require an operating permit and would need to demonstrate compliance with the CAM Rule.

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
Regional Haze Rule	40 CFR Part 55, §§ 51.300 through 51.309 30 TAC Chapter 101, Subchapter H, Division 7. 30 TAC Chapter 122. Proposed TX BART Rules	In July 1999, EPA published the Regional Haze Rule to address visibility impairment in our nation's largest national parks and wilderness ("Class I") areas. By December 2007, states must submit to U.S. EPA a Regional Haze State Implementation Plan (SIP) that identifies sources that cause or contribute to visibility impairment in these areas. The Regional Haze SIP must also include a demonstration of reasonable progress toward reaching the 2018 visibility goal for each of the state's Class I areas. The Regional Haze Rule singles out certain older emission sources that have not been regulated under other provisions of the CAA. Those older sources that could contribute to visibility impairment in Class I areas may be required to install emissions controls. The regional haze rule requires each state's SIP to require emission controls known as best available retrofit technology (BART), for certain industrial facilities emitting air pollutants that reduce visibility by causing or contributing to regional haze. Because both the proposed Mattoon and Tuscola power plants would be new facilities, they would not have to meet the BART requirement. However, under the PSD requirements, a new source of criteria and air toxics emissions has to be analyzed to determine its impacts on Class I area visibility. The proposed plant sites would be located more than 186 miles (300 km) from the nearest Class I area subject to the regional haze rule. Therefore, both sites would not be required to conduct a Class I area impact analysis under the Regional Haze Rule. Currently, the TCEQ is developing **S**tate versions of the BART rule to comply with Federal Clean Air Act requirements. Because both the proposed Jewett and Odessa power plants would be a new facility, they would not have to meet the BART requirement. However, under the PSD requirements, a new source of criteria and air toxics emissions has to be analyzed to determine its impacts on Class I area visibility. The proposed plant sites would be located more than 186 miles (300 km) from the nearest Class I area subject to the regional haze rule. Therefore, both sites would not be required to conduct a Class I area impact analysis under the Regional Haze Rule.

Table C.1-2. Air Quality Regulations

Regulation	Citation	Description
Chemical Accident Provisions	40 CFR Part 68 and Section 112(r) of the CAA Amendments 35 IAC Part 201 30 TAC Chapter 122	This regulation applies to stationary sources having more than a threshold quantity of the specific regulated toxic and flammable chemicals. It is intended to prevent accidental releases to the air and to mitigate the consequences of any such releases by focusing prevention measures on chemicals that pose the greatest risk to the public and the environment. Stationary sources covered by this regulation must develop and implement a risk management program that includes a hazard assessment, a prevention program, and an emergency response program. These elements are to be described in a risk management plan that must be submitted to EPA as well as state and local emergency planning authorities. The plan must also be made available to the public by the date that a regulated substance is first present in a process above a threshold quantity. Under the Illinois Accidental Release Prevention Program, the FutureGen Project, if sited in Illinois, would be required to comply with the Chemical Accident Provisions if there were a potential to emit hydrogen sulfide above the accidental release threshold quantities. Because the Alliance has indicated that a 19 percent aqueous ammonia solution would be used (which is below the 20 percent applicability threshold), the ammonia stored on site would not be subject to the accidental release provisions. Under the Texas Accidental Release Prevention Program, the FutureGen Project, if sited in Texas, would be required to comply with the Chemical Accident Provisions if there were a potential to store either hydrogen sulfide or ammonia above the accidental release threshold quantities. Because the Alliance has indicated that a 19% aqueous ammonia solution would be used, which is below the 20% applicability threshold, the ammonia stored on site would not be subject to the accidental release provisions.
General Conformity Rule	40 CFR, Parts 6, 51 and 93 30 TAC Chapter 101.30 ***35 IAC Part 255***	An area that does not meet (or contributes to ambient air quality in a nearby area that does not meet) the primary or secondary NAAQS for a pollutant is referred to as a nonattainment area. The CAA requires states to submit to the EPA a State Implementation Plan (SIP) for attainment of the NAAQS in nonattainment areas. The 1977 and 1990 amendments to the CAA require comprehensive ***SIP*** revisions for areas where one or more of the ***NAAQS*** have yet to be attained. The 1990 Amendments to the CAA required ***F***ederal actions to show conformance with the SIP. Federal actions ***include, but are not limited to,*** those projects that are funded by ***F***ederal agencies and the review and approval of a proposed action through ***a Federal agency's*** NEPA process. Conformance with the SIP means ***that the Federal action will not interfere with*** the approved SIP's purpose***s*** of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. The need to demonstrate conformity is applicable only to ***Federal actions that occur in*** areas that are not in compliance with the NAAQS or areas that were previously in nonattainment for one or more pollutants and are currently designated as maintenance areas. The proposed FutureGen Project is a federal action under the jurisdiction of the General Conformity Rule. However, all four proposed plant sites and sequestration sites are located ***in*** regions that are in attainment for all criteria pollutants. Therefore, ***the General Conformity Rule is not applicable to the proposed FutureGen Project.***

C.1.3 CLEAN WATER ACT (CWA)

The Clean Water Act (CWA) of 1977, as amended (33 USC 1251 *et seq.*) focuses on improving the quality of water resources by providing a comprehensive framework of standards, technical tools, and financial assistance to address the many causes of pollution and poor water quality, including municipal and industrial wastewater discharges and polluted runoff from urban and rural areas. Under provisions of the CWA, an applicant for a federal license or permit to conduct any activity that may result in a discharge to navigable waters must provide the federal agency with a Section 401 certification. The certification, made by the state in which the discharge originates, declares that the discharge will comply with applicable provisions of the CWA, including water quality standards. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States that are regulated under this program include fills for development, water resource projects, infrastructure development, and conversion of wetlands to uplands for farming and forestry. A federal permit is required to discharge dredged or fill material into wetlands and other waters.

C.1.4 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

The Resource Conservation and Recovery Act (RCRA), as amended (42 USC 6901 *et seq.*) regulates the treatment, storage, and disposal of hazardous wastes. The plant is expected to generate small volumes of hazardous maintenance-related waste, and would be a conditionally exempt small quantity generator under federal and state hazardous waste regulations. The proposed power plant would obtain a generator identification number and would temporarily store small volumes of wastes onsite in secure containers prior to transport offsite to an authorized treatment, storage, recycling, or disposal facility.

C.1.5 NATIONAL HISTORIC PRESERVATION ACT (NHPA)

The National Historic Preservation Act of 1966 (NHPA), as amended (16 USC 470 *et seq.)* and its implementing regulations, 36 CFR 800, requires DOE to consult with the State Historic Preservation officer (SHPO) prior to construction to ensure that no historical properties would be affected by the proposed project. DOE must also afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the proposed project.

C.1.6 ARCHAEOLOGICAL RESOURCES PROTECTION ACT

The Archaeological Resources Protection Act, as amended (16 USC 470aa *et seq.*) requires a permit for excavation or removal of archaeological resources from publicly held or Native American lands. The Act requires that excavations further archaeological knowledge in the public interest, and that the resources removed remain the property of the United States.

C.1.7 AMERICAN INDIAN RELIGIOUS FREEDOM ACT

The American Indian Religious Freedom Act of 1978 (42 USC 1996) reaffirms Native American religious freedom under the First Amendment of the U.S. Constitution, and establishes policy to protect and preserve the inherent and Constitutional right of Native Americans to believe, express, and exercise their traditional religions. This law ensures the protection of sacred locations and access of Native Americans to those sacred locations and traditional resources that are integral to the practice of their religions. It also establishes requirements that would apply to Native American sacred locations, traditional resources, or traditional religious practices potentially affected by construction and operation of the proposed facilities.

C.1.8 NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) directs the Secretary of the Interior to guide the repatriation of Federal archaeological collections and collections that are culturally affiliated with Native American tribes and held by museums that receive Federal funding. Actions required by this law include establishing a review committee with monitoring and policy-making responsibilities, developing regulations for repatriation including procedures for identifying lineal descent or cultural affiliation needed for claims, overseeing museum programs designed to meet the inventory requirements and deadlines of this law, and developing procedures for handling unexpected discoveries of graves or grave artifacts during activities on Federal or tribal land. DOE would follow the provisions of this Act if any excavations associated with the proposed construction led to unexpected discoveries of Native American graves or grave artifacts.

C.1.9 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973 (ESA), as amended (16 USC 1531 *et seq.*) establishes a national program for the conservation of threatened and endangered species of fish, wildlife, and plants; and the preservation of the ecosystems on which they depend. Section 7, "Interagency Cooperation," requires any federal agency authorizing, funding, or carrying out any action to ensure that the action is not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of critical habitat of such species. Regulations implementing the applicable interagency consultation process of the Endangered Species Act are codified at 50 CFR Part 402.

C.1.10 FISH AND WILDLIFE CONSERVATION ACT

The Fish and Wildlife Conservation Act of 1980 (16 USC 2901 *et seq.*) encourages federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. In addition, the Fish and Wildlife Coordination Act (16 USC 661 *et seq.*) requires federal agencies undertaking projects affecting water resources to consult with the U.S. Fish and Wildlife Service (FWS) and the state agency responsible for fish and wildlife resources. These agencies are to be sent copies of this EIS and their comments will be considered.

C.1.11 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

The National Pollutant Discharge Elimination System (33 USC 1342 *et seq.*), authorized under the CWA, requires sources to obtain permits to discharge effluents and stormwaters to surface waters. Regulations implementing the NPDES program are found in 40 CFR 122. Under this program, permit modifications are required if discharge effluents are altered. The CWA authorizes EPA to delegate permitting, administrative and enforcement duties to state governments, while EPA retains oversight responsibilities. The States of Texas and Illinois have been delegated NPDES authority and therefore would issue the NPDES permit. The proposed project involves discharge to surface waters and would be subject to NPDES requirements.

C.1.12 NOISE CONTROL ACT

Section 4 of the Noise Control Act of 1972, as amended (42 USC 4901 *et seq.*) directs Federal agencies to carry out programs in their jurisdictions "to the fullest extent within their authority" and in a manner that furthers a national policy of promoting an environment free from noise that jeopardizes health and welfare.

C.1.13 FARMLAND PROTECTION POLICY ACT

The Farmland Protection Policy Act (7 USC 4201 *et seq.*) directs federal agencies to identify and quantify adverse impacts of federal programs on farmlands. The Act's purpose is to minimize the number of federal programs that contribute to the unnecessary and irreversible conversion of agricultural land to non-agricultural uses.

C.1.14 EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT

Under Subtitle A of the Emergency Planning and Community Right-to-Know Act of 1986 (42 USC 1001 *et seq.*), which is also known as Superfund Amendments and Reauthorization Act, Title III; and Executive Order 13148, "Greening the Government through Leadership in Environmental Management," Federal agencies must provide information on hazardous and toxic chemicals to state emergency response commissions, local emergency planning committees, and the U.S. Environmental Protection Agency. The goal of providing this information about inventories of specific chemicals used or stored, and descriptions of releases that could occur at work sites is to ensure that emergency plans are sufficient to respond to unplanned releases of hazardous substances. This act, implemented at 40 CFR Parts 302 through 372, requires agencies to provide reports on material safety data sheets, emergency and hazardous chemical inventory, and toxic chemical releases to appropriate local, state, and federal agencies. These regulations also require facilities that store, dispense, use, or handle extremely hazardous materials in excess of specified thresholds to report quantity data to specific agencies and organizations. The plant would manufacture, process, or otherwise use a number of substances subject to the Act's reporting requirements, such as some trace amounts of metals and mercury.

C.1.15 OCCUPATIONAL SAFETY AND HEALTH ACT

Compliance with the Occupational Safety and Health Act of 1970, as amended (29 USC 651 *et seq.*) would be required. Specifically, the construction and general industry rules in 29 CFR Parts 1910 and 1926 apply. Plant employees would be instructed in worker protection and safety procedures, and would be provided appropriate personal protective equipment pursuant to the plant's safety program.

C.1.16 SAFE DRINKING WATER ACT

The Safe Drinking Water Act (42 USC 300 *et seq.*) gives the U.S. Environmental Protection Agency the responsibility and authority to regulate public drinking water supplies by establishing drinking water standards, delegating authority for enforcement of drinking water standards to the states, and protecting aquifers from hazards such as injection of wastes and other materials into wells. The State agencies responsible for enforcement are the Illinois Environmental Protection Agency and the Texas Commission on Environmental Quality. Drinking water regulations for this program are codified at 40 CFR 141, Title 35 of the Illinois Administrative Code, and 30 TAC Chapter 290.

C.1.17 POLLUTION PREVENTION ACT

The Pollution Prevention Act of 1990 (42 USC 13101 *et seq.*) establishes a national policy for waste management and pollution control that focuses first on source reduction, and then on environmentally safe waste recycling, treatment, and disposal. Two executive orders provide guidance to agencies to implement the Pollution Prevention Act. Executive Order 13101, "Greening the Government through Waste Prevention, Recycling, and Federal Acquisition," directs Federal agencies to incorporate waste prevention and recycling in each agency's daily operations and work to increase and expand markets for recovered materials through preference and demand for environmentally preferable products and services. Executive Order 13148, "Greening the Government through Leadership in Environmental Management,"

makes the head of each Federal agency responsible for ensuring that all necessary actions are taken to integrate environmental accountability into agency day-to-day decision-making and long-term planning across all agency missions, activities, and functions.

DOE requires specific goals to reduce the generation of waste. DOE would implement a pollution prevention plan by incorporating such waste-reducing activities as ordering construction materials in correct sizes and number, resulting in very small amounts of waste; and implementing best management practices to reduce the volume of waste generated and reuse waste wherever possible.

C.1.18 NOTICE TO THE FEDERAL AVIATION ADMINISTRATION

The Federal Aviation Administration must be notified if any structures more than 200 feet high would be constructed at the proposed site pursuant to 14 CFR Part 77. The FAA would then determine if the structures would or would not be an obstruction to air navigation. It is anticipated that the proposed power plant would include a 250-foot stack.

C.2 EXECUTIVE ORDERS

Executive Order 11514, "Protection and Enhancement of Environmental Quality," directs federal agencies to continuously monitor and control activities to protect and enhance the quality of the environment. The Order also requires agencies to develop procedures to ensure the fullest practical provision of timely public information and the understanding of Federal plans and programs with potential environmental impacts, and to obtain the views of interested parties. DOE promulgated regulations (10 CFR Part 1021) and issued DOE Order 451.1B, *National Environmental Policy Act Compliance Program*, to ensure compliance with this Executive Order. Because the Proposed Action is a Federal action that requires NEPA analysis, DOE must comply with Order 451.1B.

Executive Order 11988, "Floodplain Management," directs federal agencies to establish procedures to ensure that they consider potential effects of flood hazards and floodplain management for any action undertaken. Agencies are to avoid impacts to floodplains to the extent practical. Executive Order 11990, "Protection of Wetlands," requires federal agencies to avoid short and long term impacts to wetlands if a practical alternative exists. Compliance with Floodplain and Wetland Environmental Review Requirements at 10 CFR Part 1022 establishes DOE procedures for compliance with these two Executive Orders.

For a proposed floodplain or wetland action, DOE shall prepare a floodplain or wetland assessment. If DOE finds that no practicable alternative to locating or conducting the action in the floodplain or wetland is available, then before taking the action DOE shall design or modify its action in order to minimize potential harm to or within the floodplain or wetland, consistent with the policies set forth in Executive Order 11988 and Executive Order 11990. DOE is also required to provide opportunity for public review after issuance of a notice of a proposed floodplain action or a notice of proposed wetland action.

Executive Order 12856, "Right to Know Laws and Pollution Prevention Requirements," directs federal agencies to establish programs to provide the public with important information on the hazardous and toxic chemicals in their communities, and establish emergency planning and notification requirements to protect the public in the event of a release of extremely hazardous substances.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs federal agencies to identify disproportionately high and adverse

human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

Executive Order 13112, "Invasive Species," directs federal agencies to prevent the introduction of or to monitor and control invasive (non-native) species, to provide for restoration of native species, to conduct research, to promote educational activities, and to exercise care in taking actions that could promote the introduction or spread of invasive species.

Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," requires federal agencies to avoid or minimize the negative impacts of their action on migratory birds, and to take active steps to protect birds and their habitats. For actions having or likely to have a negative impact on migratory bird populations, work with the FWS to develop an agreement to conserve migratory birds. Federal agencies must avoid or minimize impacts to migratory bird populations, take reasonable steps that include restoring and enhancing habitat, prevent or abate pollution affecting birds, and incorporate migratory bird conservation into agency planning processes whenever possible. The Executive Order also requires environmental analyses of federal actions to evaluate effects of those actions on migratory birds, to control the spread and establishment in the wild of exotic animals and plants that could harm migratory birds and their habitats, and either to provide advance notice of actions that could result in the take of migratory birds or to report annually to the FWS on the numbers of each species taken during the conduct of agency actions.

Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," directs Federal agencies to "…conduct their environmental, transportation, and energy-related activities…in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner."

C.3 STATE ENVIRONMENTAL STATUTES AND REGULATIONS

C.3.1 ILLINOIS REGULATORY REQUIREMENTS

C.3.1.1 State Endangered Species and Natural Areas Review

State agencies and local governments which authorize, fund or perform actions altering environmental conditions must consult with the Illinois Department of Natural Resources pursuant to 520 ILCS 10 and 525 ILCS 30, in order to avoid or minimize adverse impacts.

C.3.1.2 Farmland Conversion Impact

Because both the Mattoon and Tuscola, IL proposed sites are on agricultural land, DOE would be required to follow the procedures in the Farmland Conversion Impact, 7 CFR 658, to (a) identify and take into account the adverse effects of its program on the preservation of farmland; (b) consider alternative actions, as appropriate, that could lessen adverse effects; and (c) ensure that its program, to the extent practicable, is compatible with State and units of local government, as well as private programs and policies to protect farmland.

C.3.1.3 State Wetland Review

A state wetland review conducted by the Illinois Department of Natural Resources pursuant to 20 ILCS 830 would be required if it is determined that wetlands are present on either the proposed site or on transmission or pipeline corridors.

C.3.1.4 Consultation under the National Historic Preservation Act

The National Historic Preservation Act, 16 USC 470 *et seq.,* would require DOE to consult with the Illinois Historic Preservation Agency in order to fulfill the requirements under Section 106 of the Act.

C.3.1.5 Notice to the Illinois Department of Transportation, Aeronautics Division

The Illinois Department of Transportation, Aeronautics Division must be notified if any structures more than 200 feet high would be constructed at the proposed site pursuant to 92 IAC Part 16. It is anticipated that the proposed power plant would include a 250-foot stack.

C.3.2 TEXAS REGULATORY REQUIREMENTS

C.3.2.1 State Endangered Species

Endangered Species are regulated under Chapter 68 of the Texas Parks and Wildlife Code and 31 TAC Chapter 65, Subchapter G. Texas Parks and Wildlife Department regulations prohibit the taking, possession, transportation, or sale of any of the animal species designated by state law as endangered or threatened without the issuance of a permit. State laws and regulations prohibit commerce in threatened and endangered plants, and the collection of listed plant species from public land without a permit issued by the Texas Parks and Wildlife Department. Although it is unlikely that construction and operations of the proposed facilities would disturb an endangered species, DOE would comply with all applicable requirements.

C.3.2.2 Consultation under the National Historic Preservation Act

The National Historic Preservation Act, 16 USC 470 *et seq.,* would require DOE to consult with the Texas Historical Commission in order to fulfill the requirements under Section 106 of the Act.

C.3.2.3 Solid Waste Management, On-Site Disposal of Nonhazardous Industrial Solid Waste

The Texas Commission on Environmental Quality would regulate any solid, non-product waste generated. The regulations would include proper waste classification, notification and reporting under 30 TAC Ch. 335. Any hazardous waste generated and disposed or treated on site would be subject to permitting. Texas does not require a permit for nonhazardous industrial solid waste that is disposed of within the site boundaries of the industrial plant generating the waste unless the disposal site is greater than 50 miles (80 kilometers) from the point of generation.

C.3.2.4 Registration with the Public Utility Commission of Texas

Power generation plants operating within the State of Texas must register with the Public Utility Commission of Texas pursuant to Public Utility Commission Substantive Rule Section 25.109.

C.3.2.5 Surface Casing Letters

The Texas Water Code Sections 27.015 and 27.033 requires a letter from the Texas Railroad Commission addressed to the Texas Commission on Environmental Quality concluding that drilling or using the underground injection control, disposal well and injection of industrial wastes will not endanger or injure any known oil or gas reservoir. Likewise, the regulation requires a letter from the Texas

Commission on Environmental Quality addressed to the Texas Railroad Commission concluding that drilling and injecting oil and gas waste into the subsurface stratum will not endanger the freshwater strata in the area, and that the formation or stratum to be used for the disposal is not freshwater sand.

C.4 FEDERAL AND STATE PERMITTING

Table C.1-3 lists all potentially applicable federal and state permitting requirements to construct and operate the proposed facilities.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Federal	
Acid Rain Permit 40 CFR Part 72	Required for utility units exceeding threshold limits specified in the regulation cited. This permit is a part of the larger Title V permit, issued pursuant to the Clean Air Act.
Airspace Obstruction Control Permit 14 CFR Part 77	An Airspace Obstruction Control Permit would be required if the proposed facilities were built in Tuscola, IL. The Tuscola airport is located less than 1 mile (1.6 kilometers) from the northern border of the proposed plant site. The Illinois Department of Transportation, Aeronautics Division has been granted the authority to issue the permit.
Clean Air Act, Title I, IV, and V 40 CFR Parts 50 – 96	Establishes NAAQS set by the EPA for certain pervasive pollutants. Applicable Titles: Title I—Air Pollution Prevention and Control. A Prevention of Significant Deterioration permit would be required if the plant would have the potential to emit 100 tons per year or more of a pollutant subject to regulation under the Clean Air Act. Regulated air pollutants include SO_2, NO_x, and CO. Title IV—Acid Deposition Control. An Acid Deposition Control permit would be required. This title establishes limitations on SO_2 and NO_x emissions. This Title requires that emissions of SO_2 from utility sources be limited to the amounts of allowances held by the sources. Title V—Permitting. An Operating Permit is required if the plant falls within 40 CFR 70.3 designations. This Title provides the basis for the Operating Permit Program and establishes permit conditions, including monitoring and analysis, inspections, certification, and reporting. A Title V permit would also cover any requirements established under the Clean Air Interstate Rule or the Clean Air Mercury Rule. Authority for implementation of the permitting program has been delegated to the states of Illinois and Texas.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Clean Water Act, Title IV 40 CFR Parts 104 – 140	Focuses on improving the quality of water resources by providing a comprehensive framework of standards, technical tools, and financial assistance to address the many causes of pollution and poor water quality, including municipal and industrial wastewater discharges, polluted runoff from urban and rural areas, and habitat destruction. Applicable Sections: Section 401—Certification. Provides states with the opportunity to review and approve, condition, or deny all Federal permits or licenses that might result in a discharge to state or tribal waters, including wetlands. The major Federal permit subject to Section 401 review is a Section 404 permit. Every applicant for a Section 404 permit must request state certification that the proposed activity will not violate state or Federal water quality standards. Section 402—NPDES Permit. Requires sources to obtain permits to discharge effluents and stormwaters to surface waters. A pollution prevention plan is required. The CWA authorizes EPA to delegate permitting, administrative, and enforcement duties to stage governments, while EPA retains oversight responsibilities. Illinois and Texas have been delegated NPDES authority and therefore would issue the NPDES permit. Section 404—Permits for Dredged or Fill Material. Regulates the discharge of dredged or fill material in the jurisdictional wetlands and waters of the United States. The USACE has been delegated the responsibility for authorizing these actions.
Notice to the Federal Aviation Administration 14 CFR Part 77	The FAA must be notified if any structures more than 200 ft. high would be constructed at the proposed site pursuant to 14 CFR Part 77. The FAA would then determine if the structures would or would not be an obstruction to air navigation.
Pretreatment Authorization for Discharge of Wastewater to Municipal Collection System 40 CFR Part 403	A permit is required if wastewater is to be discharged to a municipal water treatment facility.
Resource Conservation and Recovery Act (RCRA) of 1976 40 CFR Parts 239 through 299	Regulates the treatment, storage, and disposal of hazardous wastes. Project participants would be required to identify any residues that require management as hazardous waste under RCRA (40 CFR Part 261). For some waste streams, this includes testing waste samples using the toxic characteristic leaching procedure or other procedures that measure hazardous waste characteristics. Applicable Title: Title II—Solid Waste Disposal (known as the Solid Waste Disposal Act), regulates the disposal of solid wastes. Title II, Subtitle C—Hazardous Waste Management, provides for a regulatory system to ensure the environmentally sound management of hazardous wastes from the point of origin to the point of final disposal. Title II, Subtitle D—State or Regional Solid Waste Plans. Illinois and Texas have been delegated the authority to issue RCRA permits.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Rivers and Harbor Act Permit 33 CFR Part 322	Permit for structures or work in or affecting navigable waters of the United States.
Sales Tap Approval 18 CFR 157.211	Approval would be required to tap into or modify existing interstate gas pipelines.
Underground Injection Control Permit 40 CFR Part 144	The Safe Drinking Water Act was established to protect all underground sources of drinking water. A sequestration well would require a permit issued according to 40 CFR Part 144 requirements. The states of Texas and Illinois have been granted the authority to issue these permits.
Illinois State Permitting	
Accommodation of Utilities on Right-of-Way 92 IAC Part 530	A public entity acting in the capacity of a utility must obtain a permit issued by an officer of the elected governing body.
Air Construction Permit 35 IAC Parts 201 and 203	Applicable if a Title I Prevention of Significant Deterioration permit under the federal CAA is not required.
Air Operating Permit 35 IAC Part 201, 203 and 205	Applicable to minor sources if a Title V operating permit under the federal CAA is not required.
Certificate of Public Convenience and Necessity Section 3-105 and 8-406 of the Illinois Public Utilities Act	A certificate would be required if the plant is determined to be a public utility.
Interconnection Agreement	If an interconnection agreement is required with an owner of a transmission system, approval by the Illinois Commerce Commission may be required.
Hydrostatic Test Water Discharge Permit	***NPDES Temporary Discharge Permit (General Forms 1 and 2E and Form ILG67)***
NPDES Permit 35 IAC Part 309	Requires sources to obtain permits to discharge effluents and stormwaters to surface waters.
NPDES General Construction Stormwater Permit 35 IAC, Subtitle C, Chapter 1	Requires sources to submit a notice of intent for coverage under Permit No. ILR10, applicable to stormwater discharge from construction sites disturbing 1 acre or more of land.
NPDES General Industrial Stormwater Permit 35 IAC Subtitle C, Chapter 1	Requires sources to submit a notice of intent for coverage under Permit No. ILR00, applicable to stormwater discharges associated with industrial activity.
Permit for Groundwater Monitoring Wells 77 IAC 920	The Illinois Department of Pubic Health, Environmental Health Division and local health departments review water well installation plans, issue permits for new well construction, and inspect wells.
Permit for Nonhazardous Onsite Waste Disposal Facility 35 IAC Parts 812 and 813	The Illinois Environmental Protection Agency (IEPA) could require a permit under 35 IAC Parts 812 and 813 if it determines that the disposal facility is environmentally significant. If the IEPA decides that a permit is not necessary, the operator would be subject to the reporting requirements of 35 IAC Part 815.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Potable Water Supply Connection Permits ILCS, Chapter 415	A permit would be required to connect to a public potable water supply.
Prevention of Significant Deterioration (PSD) Permit 40 CFR 52.21	Required if the plant would have the potential to emit 100 tons per year or more of a pollutant subject to regulation under the CAA. Regulated pollutants include SO_2, NO_x, and CO. A PSD Permit would be issued by the state or local air pollution control agency.
RCRA Permit Program 35 IAC 702 and 703	A RCRA permit would be required for treatment and storage of hazardous waste if the waste quantities and storage durations exceed applicable thresholds. It is anticipated that hazardous waste management would occur under generator accumulation standards, subject to notification and reporting requirements but exempt from permitting.
Underground Injection Control Permit 35 IAC Parts 704 and 730	A CO_2 injection well could be either a Class I or Class V well. Expected upcoming guidance from the Environmental Protection Agency will affect this determination.
Wastewater Facility Construction Approval ILCS, Chapter 415	Construction of wastewater treatment equipment would require an approval from the Illinois Environmental Protection Agency.
City of Tuscola and Douglas County, IL Permitting (Tuscola Site)	
Construction and Building Permits Tuscola Code of Ordinances, Chapters 150 through 153	Permits would be required for new building construction, any new installation or alteration of electrical equipment, any new heating unit, and any new plumbing.
Permit required for any connection to a public sewer Tuscola Code of Ordinances, Chapter 51	A permit would be needed to connect to the City of Tuscola sewer system.
City of Mattoon and Coles County, IL Permitting (Mattoon Site)	
Construction and Building Permits Mattoon Code of Ordinances Chapters 150, 151, 152 and 156	Building permits would be required. The City of Mattoon has adopted the International Building Code, the International Fire Code, the International Mechanical Code, the International Maintenance Code, the National Electric Code, and the Illinois State Plumbing Code.
Permit required for any connection to a public sewer Mattoon Code of Ordinances § 50.046	A permit would be needed to connect to the City of Mattoon sewer system.
Permit required to take water from the City of Mattoon's water plant or distribution system Mattoon Code of Ordinances § 51.016	A permit and a meter issued by the Public Works Director of the City of Mattoon would be required to take water from the City's distribution system.
Permit Required for Building Occupancy Mattoon Code of Ordinances § 159.67	A permit must be issued by the Building/Code Official stating that the building and use comply with all of the building and health laws.
Private sewage disposal system permit Mattoon Code of Ordinances § 50.026	A permit would be required for a private sewage disposal system issued by the Superintendent of the City of Mattoon.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Texas State Permitting	
Air Construction Permit 30 TAC Ch. 1*1*6	Applicable if it is determined that a Title I Prevention of Significant Deterioration permit under the federal CAA would not be required.
Air Operating Permit 30 TAC Ch. 122	***Required for non-major sources designated by EPA, through rulemaking, and as specified by federal requirements. If EPA designated the FutureGen facility as a non-exempt, non-major source, it would be required to obtain a federal, not a state, operating permit. Texas has no State Operating Permit program.***
Hydrostatic Test Water Discharge Permit Texas Water Code, Section 26.040	If hydrostatic test water is discharged, a Texas Pollutant Discharge Elimination System General Permit No. TXG670000 would be required.
***Texas Pollution Discharge Elimination System (TPDES)* General Construction Stormwater Permit** Texas Water Code, Section 26.040	***T***PDES permit for stormwater discharge required for construction sites disturbing 1 acre or more of land.
***T*PDES General Industrial Stormwater Permit** Texas Water Code, Section 26.040	Permit for stormwater discharges associated with industrial activity.
Permit for Groundwater Withdrawal and Monitoring Wells Texas Water Code, Chapter 36	Permits would be required from the Mid-East Texas Groundwater Conservation District if it is determined that groundwater from Leon or Freestone counties is needed for the plant.
Prevention of Significant Deterioration (PSD) Permit 40 CFR 52.21	Required if the plant would have the potential to emit 100 tons per year or more of a pollutant subject to regulation under the CAA. Regulated pollutants include SO_2, NO_x, and CO. A PSD Permit would be issued by the state or local air pollution control agency.
Registration with the Public Utility Commission of Texas Public Utility Commission Substantive Rule, Section 25.109	Power generation companies must register with the Public Utility Commission of Texas.
RCRA Permit Program 30 TAC Ch. 305	A RCRA permit would be required for treatment and storage of hazardous waste if the waste quantities and storage durations exceed applicable thresholds. It is anticipated that hazardous waste management would occur under generator accumulation standards, subject to notification and reporting requirements but exempt from permitting.
Solid Waste Management, On-Site Disposal of Nonhazardous Industrial Solid Waste 30 TAC Ch. 335	Any hazardous waste generated and disposed or treated on site would be subject to ***requirements of*** this chapter.
Underground Injection Control Permit 30 TAC Ch. 331 and Railroad Commission of Texas (RRC) 16 TAC 3.9 and 3.46	A CO_2 injection well would be a Class V well in Texas. Authorization from the Texas ***Commission*** on Environmental Quality is required for injection below the base of usable quality water and that is not ***productive*** of oil, gas, or geothermal resources. Authorization from the Railroad Commission of Texas is required for injection into a reservoir that is productive of oil, gas, or geothermal resources.

Table C.1-3. Permit or Approval Requirements to Construct and Operate the Proposed Facilities

Permit or Approval	Description
Septic Permit for Onsite Sewage Facility Texas Health and Safety Code, Ch. 366 and 30 TAC Ch. 285	A permit would be required for an onsite sewage facility.

List of References:

U.S. Environmental Protection Agency (EPA). 2006a. *National Ambient Air Quality Standards (NAAQS)*. Accessed November 8, 2006 at http://www.epa.gov/air/criteria.html (last updated October 13, 2006).

INTENTIONALLY LEFT BLANK