

## 7. PERMITTING AND LICENSING REQUIREMENTS

Per 40 CFR 1502.25(b), this chapter lists and discusses federal permits and licenses that must (or might need to) be obtained to implement the proposed action. This chapter also identifies the key state regulatory permit requirements that apply (or might apply) to the proposed facilities. In some cases federal permitting responsibilities have been delegated to the state. Note that the permitting and licensing requirements presented in this chapter would apply independent of NEPA.

### 7.1 FEDERAL REQUIREMENTS

Table 7.1-1 lists the federal permits and licenses that would or might be required for the Kemper County IGCC Project and the connected facilities. The most applicable among these are discussed in greater detail, as follows. This section also discusses several other important regulatory programs that do not require specific permits but are implemented through other permits.

#### 7.1.1 CLEAN AIR ACT

- Enacted by Public Law 90-148, Air Quality Act of 1967 (42 USC 7401 *et seq.*).
- Amended by Public Law 101-549, Clean Air Act Amendments of 1990.
- Comprised of Titles I through VI.
- Applicable titles:
  - Title I—Air Pollution Prevention and Control. This title is the basis for air quality standards and emission limitations, PSD permitting program, SIPs, New Source Performance Standards (NSPS), and National Emissions Standards for Hazardous Air Pollutants (NESHAP).
  - Title IV—Acid Deposition Control. This title establishes limitations on SO<sub>2</sub> and NO<sub>x</sub> emissions, permitting requirements, monitoring programs, reporting and record keeping requirements, and compliance plans for emission sources. This title requires that emissions of SO<sub>2</sub> from utility sources be limited to the amounts of allowances held by the sources.
  - Title V—Permitting. This title provides the basis for the operating permit program and establishes permit conditions, including monitoring and analysis, inspections, certification, and reporting. Authority for implementation of the permitting program is delegated to authorized states, including Mississippi.
  
- On March 10, 2005, the EPA issued the final CAIR, also referred to as the Rule to Reduce the Interstate Transport of Fine Particulate Matter and Ozone (40 CFR 51, 72, 73, 77, 78, and 96). This rule was remanded without vacatur by the United States Court of Appeals for the District of Columbia on December 23, 2008. EPA will modify CAIR consistent with the Court's July 11, 2008, opinion. The objective of CAIR is to assist states with PM<sub>2.5</sub> and 8-hour ozone nonattainment areas to achieve attainment by reducing precursor emissions at sources located in 28 states (including Mississippi) situated upwind of these nonattainment areas. Based on regional dispersion modeling, EPA determined that these 28 upwind states significantly contribute to PM<sub>2.5</sub> and 8-hour ozone

**Table 7.1-1. Summary of Federal Permits and Licenses Required for the Kemper County IGCC Project, Lignite Surface Mine, or Linear Facilities**

Permit/License/Approval	Principal Regulatory Citation(s)	Lead Agency	When Required	Required for		Applicable/ Potentially Appl.			Comments
				Construction	Operation	IGCC Power Plant	Lignite Surface Mine	Pipelines/Electric Transmission Line	
<b>Clean Air Act</b>									
PSD Permit	40 CFR 52.21; MCEQ APC-S-5	MDEQ	Construction of a new major source of air pollutant emissions.	✓		✓			
Title IV Acid Rain Permit	40 CFR 72; MCEQ APC-S-7	MDEQ	Applicable to new generation units greater than 25 MW.		✓	✓			Application required to be submitted 2 years prior to start of operations.
Title V Operating Permit	40 CFR 70; MCEQ APC-S-6	MDEQ	Applicable to operation of emission sources.		✓	✓			Application required to be submitted within 180 days after start of operations. Would also cover CAIR requirements.
<b>Clean Water Act</b>									
NPDES Industrial Wastewater Discharge Permit	40 CFR 122, 434; MCEQ WPC-1	MDEQ	Discharges into surface waters of the state or to an area where surface waters may be affected.		✓		✓		Power plant would not discharge any process wastewaters offsite.
NPDES General Permit NOI for construction sites	40 CFR 122; MCEQ WPC-1	MDEQ	Discharges of stormwater from construction sites greater than 5 acres in size. Must include pollution prevention plan.	✓		✓	✓	✓	
NPDES Stormwater Permit NOI associated with industrial activity	40 CFR 122; MCEQ WPC-1	MDEQ	Discharges of stormwater associated with industrial activity. Must include pollution prevention plan.		✓	✓	✓		
CWA Section 404 Dredge-and-Fill Permit	33 CFR 320	USACE	Impacts of construction on wetlands and/or navigable waters.	✓		✓	✓	✓	
CWA Section 10 Permit	33 CFR 322	USACE	Construction of structures in navigable waters.	✓			✓	✓	A Section 10 permit would be required for the lignite mine. A permit might be required for one or more of the linear facilities.

**Table 7.1-1. Summary of Federal Permits and Licenses Required for the Kemper County IGCC Project, Lignite Surface Mine, or Linear Facilities (Continued, Page 2 of 2)**

Permit/License/Approval	Principal Regulatory Citation(s)	Lead Agency	When Required	Required for		Applicable/ Potentially Appl.			Comments
				Construction	Operation	IGCC Power Plant	Lignite Surface Mine	Pipelines/Electric Transmission Line	
Section 401 water quality certification		MDEQ	State certification that water quality standards will be met is required when obtaining a dredge-and-fill (Section 404) permit.	✓			✓	✓	
Oil Pollution Prevention Plan	40 CFR 112	EPA	SPCC plan needed when aboveground oil storage has potential for discharge to state waters.		✓	✓	✓		
<b>Other</b>									
RCRA	40 CFR 261	EPA/MDEQ	Waste generation	✓	✓	✓	✓		
Notice of Proposed Construction or Alteration	14 CFR 77	Federal Aviation Administration (FAA)	Construction of tall structures, including exhaust stacks.	✓		✓	✓		IGCC stacks and structures would require FAA clearance. Dragline booms associated with mining might also require notice.
SMCRA	30 CFR 700	MDEQ	Prior to the commencement of any surface mining activity or disturbance.	✓	✓		✓		
Ground Control Plan	30 CFR 77.1000	MSHA	Before beginning mining operations		✓		✓		
Mine ID Registration	30 CFR 41	MSHA		✓	✓		✓		

Sources: SCS, 2009.  
NACC, 2009.  
ECT, 2009.

nonattainment in downwind areas. To achieve these goals, CAIR provides for reductions in precursor emissions of SO<sub>2</sub> and NO<sub>x</sub>. EPA has approved Mississippi's SIP incorporating the CAIR regulations, and the SIP became effective on November 2, 2007.

- Under the CAA, EPA must regulate large or *major* industrial facilities that emit one or more of 188 listed HAPs. EPA has developed standards for listed industrial categories of major sources (those that have the potential to emit 10 tpy or more of a listed pollutant or 25 tpy or more of a combination of pollutants). These standards require application of maximum achievable control technology (MACT). The Kemper County IGCC Project's HAP emissions including mercury are below major HAP thresholds. Therefore, the facility is not subject to a 112(g) case-by-case MACT determination.
- The risk management program (40 CFR 68) requirements apply to owners and operators of stationary sources that have more than a threshold quantity of a regulated substance contained in a process. A risk management plan (RMP): (1) describes the planned regulated substance management systems for the new facilities, (2) presents the results of a hazard assessment/offsite consequences analysis, (3) describes the process safety management program, and (4) describes emergency response plans.
- **On October 30, 2009, the Mandatory Reporting of Greenhouse Gases rule was published in the *Federal Register* (74 FR 56260). As an electrical generating unit subject to the acid rain provisions, the Kemper County IGCC Project would be required to report emissions of CO<sub>2</sub>, methane, and nitrous oxide. And as a supplier of CO<sub>2</sub>, the amount of CO<sub>2</sub> captured in the process would need to be reported on a quarterly basis, and the end use (in this case, EOR), would be reported annually under the rule.**
- Regulations implementing the CAA are found in 40 CFR 50 to 95.

CAA standards and permitting requirements would apply to the IGCC facility. The key construction permit would be the PSD permit, through which emission controls and limitations would be determined, and compliance with NAAQS evaluated and enforced. In December 2007 Mississippi Power applied to MDEQ, which operates in accordance with an approved SIP, for a PSD permit to construct the facility. The final permit (Air Pollution Control Permit No. 1380-00017) was issued in October 2008 by MDEQ. In September 2009 Mississippi Power revised its PSD permit application to reflect changes in the plant's equipment and design (Mississippi Power, 2009a). **The final permit incorporating those changes was approved on March 9, 2010.** Air permitting required for the mine operation or lignite handling associated with the mining operation would be addressed through the mine's overall state permitting process through MDEQ.

### 7.1.2 CLEAN WATER ACT

- Enacted by Public Law 92-500, Federal Water Pollution Control Act Amendments of 1972 (33 USC 1251 *et seq.*).
- Amended by Public Law 95-217, CWA, and Public Law 100-4, Water Quality Act of 1987.
- Comprised of Titles I through IV.
- Applicable titles:

- Title III—Standards and Enforcement:
  - Section 301, Effluent Limitations, is the basis for establishing a set of technology-based effluent standards for specific industries.
  - Section 302, Water Quality Related Effluent Limitations, addresses the development and application of effluent standards based on water quality goals for the waters receiving the effluent.
- Title IV—Permits and Licenses:
  - Section 402, NPDES, regulates the discharge of pollutants to surface waters. Regulations implementing the NPDES program are found in 40 CFR 122. Authority for implementation of the NPDES permit program is delegated to authorized states, including Mississippi.
  - 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. USACE has been delegated the responsibility for authorizing these actions.
- Regulations implementing the CWA that affect the permitting of this project include:
  - **33 CFR 320—General Regulatory Policies.**
  - **33 CFR 323—Permits for Discharges of Dredged or Fill Material in Waters of the United States.**
  - **33 CFR 325—Processing of Department of the Army Permits.**
  - **33 CFR 328—Definition of Waters of the United States.**
  - **33 CFR 332—Compensatory Mitigation for Losses of Aquatic Resources.**
  - 40 CFR 112—Oil Pollution Prevention. This regulation requires the preparation of an SPCC.
  - 40 CFR 122—NPDES. This regulation requires the permitting and monitoring of any discharges to waters of the United States.
  - **40 CFR 230—Guidelines for Specification of Disposal Sites for Dredged or Fill Material (404[b][1]Guidelines).**

A number of permits under the CWA would be required, as shown in Table 7.1-1. Construction of the proposed facilities would require NPDES permits associated with stormwater management, for example. One of the most significant CWA-related permits for the proposed project would be those required to impact wetlands and navigable waters (Section 404). USACE also is responsible for discharging its responsibilities under Executive Orders 11998 and 11990 when implementing its dredge-and-fill regulatory program under Section 404 of the federal CWA. In addition, EPA has adopted guidelines for the specifications of disposal sites for dredged or fill material regulated by Section 404 permits. The proposed IGCC facility and the connected actions (i.e., the linear facilities and the lignite mine), are subject to these regulations. USACE is a cooperating agency in the Kemper County IGCC Project EIS, in part for the purpose of fulfilling its regulatory responsibilities under Section 404 of the CWA.

**In addition to these regulations,** USACE and EPA have executed a Memorandum of Agreement (MOA) under Section 404(q) of the CWA to implement Executive Order **11990**. The MOA specifies how Section 404 permit applications will be evaluated and establishes a sequence of avoidance, minimization, and mitigation evaluations that must be conducted before a permit to impact Waters of the United States can be issued.

USACE is considering whether to issue Department of the Army permits pursuant to Section 404 of the CWA for proposed wetland and stream impacts resulting from construction and operation of the Kemper County IGCC Project, including the connected actions. USACE is a cooperating agency in the preparation of this EIS. When processing the pending Section 404 CWA applications, USACE will determine the least environmentally damaging practicable alternative to both avoid impacts to waters of the United States and allow the applicants (Mississippi Power and NACC) to meet their overall project purpose.

The wetland acreages currently proposed to be impacted by the Kemper County IGCC Project described in Chapter 4 represent the maximum potential impacts, as determined based on current IGCC plant and linear facilities site plans and engineering designs. During the USACE permit application evaluation and Mississippi Power IGCC plant and linear facilities final design processes, additional wetlands avoidance and minimization actions are expected. If issued, Mississippi Power's permit would reflect USACE decisionmaking on actions required by Mississippi Power to avoid and minimize impacts to wetlands.

As currently proposed, the wetland impacts associated with construction and operation of the lignite mine permanent facilities would be minimal. Wetland impacts due to land clearing prior to lignite extraction would constitute nearly all of the proposed direct impacts. Because lignite extraction is projected to occur for up to 40 years, NACC cannot currently project with permit-level detail and accuracy the areas and acreages that would ultimately be mined or disturbed, including wetlands. Factors affecting mineability include geology, property ownership rights, and regulatory constraints.

Due to these uncertainties, EPA has recommended and USACE has concluded a phased permit approach would be applied, whereby the initial permit would cover construction and operation during the project demonstration period. Therefore, NACC would prepare and submit detailed mining plans and supporting wetland and hydrologic analyses needed by USACE to evaluate whether to issue approval to construct the mine facilities and conduct mining operations during only the 4.5-year DOE demonstration period. Under this approach, USACE would evaluate alternative plans and actions to avoid and minimize impacts during mining in mine block A. Once USACE determined the wetland impacts were minimized, it would evaluate mitigation proposals from NACC as one element of its decisionmaking on the pending application. A similar review process would be conducted by USACE in the event NACC proposes to conduct lignite extraction beyond the DOE demonstration period in portions of the mine study area not approved by USACE (i.e. the subsequent permit phases); future review by USACE of proposals by NACC to mine in other portions of the study area following the DOE demonstration period would be subject to the USACE Section 404 CWA regulations applicable at that time.

USACE will evaluate mitigation plans proposed by Mississippi Power and NACC once it has determined that Mississippi Power and NACC have avoided and minimized wetland stream impacts to the extent practicable as required by 40 CFR 230. USACE will evaluate the submitted mitigation plans against the criteria established in 33 CFR 332 and will ensure the final revisions meet or exceed these criteria. If USACE proposes to issue the requested Section 404 permits, successful completion of the approved mitigation plans would become legally enforceable conditions of the permits. In the event NACC submits requests to conduct lignite extraction beyond the DOE demonstration period in portions of the mine study area not approved by USACE, separate mitigation plans proposed by NACC would be evaluated against then appli-

cable USACE Section 404 CWA mitigation regulations as part of USACE's evaluation of whether to permit lignite extraction in subsequent phases.

To meet USACE requirements, the proposed compensatory mitigation plans must provide compensation that offsets unavoidable impacts to forested, herbaceous, and scrub-shrub wetlands and perennial and intermittent streams that would occur as a result of the approved construction, operation, mining, and maintenance plans. In accordance with the requirements set forth in 33 CFR 332, Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, the final mitigation plans must describe in more detail the following mitigation elements:

- Objectives.
- Long-term protection of mitigation sites.
- Specific mitigation work plans.
- Success criteria/performance standards.
- Monitoring plan.
- Long-term management plan.
- Site(s) selection.
- Baseline information.
- Calculation of mitigation credits.
- Maintenance plan.
- Adaptive mitigation plans.
- Financial assurances.

### 7.1.3 RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

- Enacted by Public Law 94-580, RCRA (42 USC 6901 *et seq.*).
- Amended by legislation including Public Law 98-616, Hazardous and Solid Waste Amendments of 1984, Public Law 99-499, Superfund Amendments and Reauthorization Act of 1986, and Public Law 104-119, Land Disposal Flexibility Act of 1996.
- Applicable title is Title II—Solid Waste Disposal (known as the Solid Waste Disposal Act). This title 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. The state of Mississippi has the authority to administer the RCRA Subtitle C program within the state through MDEQ's Office of Pollution Control. Title II, Subtitle D—State or Regional Solid Waste Plans, allows states to plan for managing and permitting the disposal of solid wastes and requires each state to develop and implement a regulatory program to ensure that municipal solid waste landfills and other facilities that receive household hazardous waste or conditionally exempt small-quantity generator hazardous waste meet federal minimum standards (40 CFR 258) for the location, design, operation, closure, and postclosure care of municipal solid waste landfills.

Project participants would be required to identify any residues that require management as hazardous waste under RCRA (40 CFR 261). For some waste streams, this includes testing waste samples using the toxic characteristic leaching procedure or other procedures that measure hazardous waste characteristics.

### 7.1.4 FEDERAL AVIATION ACT OF 1958

- Enacted by Public Law 85-726, Federal Aviation Act of 1958 (49 USC 1101 *et seq.*, as amended).
- Regulations implementing this Act are found in 14 CFR 77 and are enforced by DOT, Federal Aviation Administration (FAA).

- These regulations require submittal of a notice identifying any structures that, because of construction or alteration, may be a hazard to air transportation. A project located within 3.8 miles of a public airport and/or which contains elements with an elevation of 200 ft above the ground level must receive a clearance from FAA.

Because the IGCC plant's HRSG stacks would be 325 ft tall, a Notice of Proposed Construction or Alteration would be filed with FAA. Because of the stack heights, lighting would be required. Similarly, due to the height of the dragline boom at the proposed mine, FAA approval might be required.

### 7.1.5 SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977

SMCRA (30 CFR 700, *et seq.*) provides for the federal regulation of surface coal mining operations and the acquisition and reclamation of abandoned mines. Title IV of SMCRA is designed to help reclaim and restore abandoned coal mine areas throughout the country. Title V of SMCRA controls the environmental impacts of surface coal mining. MDEQ is authorized to administer the requirements of the act and has regulations promulgated under the Mississippi Code Annotated §53-9-11.

The SMCRA regulations promulgated by MDEQ require 5-year mining permit renewals. Each mine permit must provide the following details:

- Identification of interests including applicant information and owners of property to be mined.
- Compliance information including any current or previous violations.
- Right of entry and operation information including written consent of surface owner, documents of conveyance, or documentation of legal authority.
- Relationship to areas designated unsuitable for mining.
- Permit term information including timing and number of acres to be affected.
- Certificates of liability insurance.
- Identification of other licenses and permits required by local, state, and federal agencies.
- General environmental resources information including archeological, historical, and cultural resources; identification of sites eligible for the NRHP; and results of field investigations.
- Description of hydrology and geology including details of methodology, hydrology, water quality, calculations, drafts, charts, models, cross-sections, chemical analyses, etc.
- Ground water information including quality, quantity, well locations, ownership, well specifications, and geologic logs.
- Surface water information including baseline surface water flow data, surface impoundment baseline data, histograms, and chemical analyses.
- Baseline cumulative impact area information including probable cumulative hydrologic impacts.
- Modeling including watershed data, hydrologic modeling flow runoff data, and baseline sediment yield calculations.
- Alternative water source information.
- Probable hydrologic consequence determination including baseline information, adverse impacts, contamination potential, specific impacts, sediment yield, water quality parameters, flooding or streamflow alteration, water availability, etc.



- Cumulative hydrologic impact assessment.
- Climatological information including precipitation, wind direction, wind velocity, temperature data, etc.
- Vegetation information including a description of plant communities and vegetation types and a fish and wildlife habitat evaluation.
- Soil resources information including soil surveys and topsoil evaluations.
- Land use information including historic uses of the land as well as land capability and productivity.
- Cross-sections, maps, and plans.
- Prime farmland investigation.
- Operation plan including mining procedures, facilities, dams, embankments, impoundments, non-coal storage areas, coal handling, waste handling, etc.
- Air pollution control plan.
- Fish and wildlife plan.
- Detailed reclamation plan including compliance standards, permit area information, reclamation timetable, reclamation cost estimate, plans to achieve final surface configuration, topsoil removal, revegetation schedule, species and planting rates, planting and seeding methods, irrigation and pest control, soil testing plan, etc.
- Ground water monitoring plan.
- Surface water monitoring plan.
- Postmining land use plan detailing proposed land uses.
- Construction and reclamation plans for siltation structures, impoundments, and embankments.
- Road systems plan including maps, cross-sections, design drawings for roads, bridges, low water crossings, etc.

### 7.1.6 DOE FLOODPLAIN AND WETLAND ENVIRONMENTAL REVIEW REQUIREMENTS

Executive Order 11988, Floodplain Management, directs federal agencies to establish procedures to ensure that they consider potential effects of flood hazards and floodplain management **as to actions they undertake**. Agencies **should** 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 practicable alternative exists. DOE's regulation at 10 CFR 1022 establishes procedures for complying with these Executive Orders. DOE **must** prepare **an** assessment **of potential** the effects on floodplain and wetlands and consider of alternatives. In addition, these regulations require DOE to design or modify its actions to minimize potential damage **to** floodplains or wetlands. DOE is also required to provide **an** opportunity for public review of any plans or proposals for actions in floodplains and new construction in wetlands. DOE's compliance with these regulations may be **effected** through **the** NEPA process. Specifically, **these** regulations require DOE to:

- Prepare assessments that describe the project elements **that would be** located in wetlands and floodplains.
- Assess positive and negative, direct and indirect, and long-term and short-term effects on floodplains and wetlands.

- Evaluate alternatives that avoid actions in floodplains and wetlands, including alternate sites, alternate actions, and no action.
- Evaluate measures that mitigate adverse effects of actions in floodplains and wetlands including, but not limited to, minimum grading requirements, runoff controls, design and construction constraints, and protection of ecologically sensitive areas.

The three components of **an** assessment are: (1) project description, including a map showing location with respect to the floodplain or wetland; (2) floodplain or wetland impacts; and (3) alternatives, including alternate sites, alternate actions, and no action. A description of the proposed action is provided in Section 2.1 of this EIS; descriptions of the connected actions are provided in Section 2.2; and descriptions of the floodplains and wetlands affected are provided in Section 3.10 and 3.11, respectively. Impacts to floodplains and wetlands are described in Subsections 4.2.8 and 4.2.9, respectively. Alternatives to the proposed action are described in Section 2.7, and a **discussion of mitigation that DOE may consider as a condition of the ROD is provided in the following.**

**Consistent with 10 CFR 1022.14, DOE has determined that no practicable alternative to conducting or locating the action in a floodplain or wetland is available. Therefore, before taking action, DOE will impose in the ROD any conditions that the Kemper County IGCC Project must comply with to minimize potential harm to or within the floodplain and wetlands.**

**With regard to floodplain impacts, the portion of the IGCC site that would be used for permanent facilities is wholly located above the base and critical action floodplain. Construction and operation of the plant would have no direct or indirect effect on floodplains. For the construction of linear facilities associated with the power plant, direct impacts to floodplains would result from clearing vegetation, particularly shrubs and trees, from the floodplain areas and stream banks. Also, depending upon final designs, electrical transmission tower supports could be constructed within the base floodplains and construction of the reclaimed effluent, natural gas, and CO<sub>2</sub> pipelines would potentially cause temporary direct impacts to the streams that would be crossed. IF DOE decides to implement its proposed action, it will require that floodplain impacts be minimized by construction methods and timing to the extent practicable.**

**In addition, during the period of DOE involvement in the project, the connected action of developing the lignite mine would divert the flow in the Chickasawhay Creek during the initial years of mining within Mine Block A, which would disconnect the existing floodplain from the flow channel. Table 4.2-12 indicates total storm-event runoff volumes would increase by up to 637 ac-ft. Okatibbee Lake, a multipurpose reservoir operated by USACE located approximately 5 miles downstream, has a summer flood storage capacity of 42,590 ac-ft and a winter flood storage capacity of 59,490 ac-ft (see Section 3.6). The projected increase of 637 ac-ft would be less than 1.2 percent of the winter flood storage capacity; in addition, peak flow rates are projected to decrease, minimizing the effect of the potential increase.**

**Between 2038 and 2055—well after DOE’s involvement—the mine developer may consider constructing levees that could further affect floodplains. Conditions for avoidance, minimization, and mitigation during the period after DOE’s involvement would be established by USACE and MDEQ. Consistent with 10 CFR 1022, DOE plans to issue a statement of findings for floodplain involvement in the ROD.**

**With regard to wetland impacts, the IGCC plant layout described in Chapter 2 would avoid and minimize wetland impacts to the extent practicable. Alternative plans were evaluated as described in Chap-**

ter 2 to avoid and minimize wetland impacts associated with the mine's development. The total acres of potential wetland impacts described in Section 4.9 of this EIS are expected to reflect the maximum potential impacts. DOE expects that, during the USACE wetland permitting process and final design of the IGCC plant and linear facilities, additional efforts to avoid and minimize wetland impacts would occur. DOE would consider as a condition of the ROD that further minimization measures be incorporated such as minimizing areas of fill through design of embankments, maintaining hydrologic connections in the design of roadways and corridors, and applying BMPs. In addition, DOE would consider a condition that compensatory mitigation of unavoidable impacts be consistent with the requirements set forth in 33 CFR 332, *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*. Final conditions of compensatory mitigation would be determined in the USACE permitting process.

### 7.1.7 ENDANGERED SPECIES ACT OF 1973

Enacted by Public Law 93-205, the ESA (16 USC 1531, *et seq.*). 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. Consequently, USFWS will conduct a consultation, in compliance with Subsection (a)(2) of Section 7 of the ESA, with regard to the impacts of the proposed project on threatened and endangered species listed by USFWS and any critical habitat of such species in the vicinity of the proposed facilities.

In accordance with Section 7 of the ESA, DOE has initiated informal consultation with USFWS. During the scoping period, DOE met with USFWS and provided a tour of the project site and mine study area. Surveys were conducted, consistent with MDEQ and USFWS guidance (see Appendices A and F), to address the presence or potential presence of threatened or endangered species (see Sections 3.8 and 3.9) and impacts to these species (see Section 4.2, specifically Subsection 4.2.6). Based on the available information, DOE has made a preliminary determination that the project “may affect, but would not likely adversely affect, threatened or endangered species.” **DOI has concurred with this determination (see DOI comment letter in Volume 3) but noted that, if, during any phase of the proposed project, it is determined that a federally listed species might be adversely impacted, USACE and/or DOE should initiate further consultation in accordance with the requirements of the ESA. Therefore, DOE and USACE will initiate further consultation, as necessary.**

### 7.1.8 NATIONAL HISTORIC PRESERVATION ACT OF 1966

- Enacted by Public Law 89-665, National Historic Preservation Act of 1966 (amended in 2006) (16 USC 470, *et seq.*).
- Under Section 106, the head of any federal agency having direct or indirect jurisdiction over a proposed federal or federally assisted undertaking in any state and the head of any federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP. The head of any such federal agency

shall afford the Advisory Council on Historic Preservation established under Title II of the NHPA a reasonable opportunity to comment with regard to such undertaking.

DOE has given historic and cultural resources very detailed consideration (see Section 3.18 and Subsection 4.2.17). Under Section 106 of the NHPA, DOE has consulted with Mississippi's State Historic Preservation Officer, as well as made contact with the tribal chief or primary contact with 26 federally recognized regional tribes for the purpose of informing and determining interest in this project. As a result of this contact, two Tribal Historic Preservation Officers, one for the Oklahoma Band of Choctaw and one for the Mississippi Band of Choctaw have expressed an interest and are currently part of the consultation process for the 106 activities (Appendix L). **Such consultations have included two meetings (February 5 and December 8, 2009) and ongoing discussions and reviews of the draft programmatic agreement.**

**Historic property surveys have been completed for the power plant site, routes for linear facilities with defined rights-of-way, and the first mine block area (those land tracts with right-of-access). Based on these surveys, certain properties potentially eligible for the NRHP have been identified that could be affected by the proposed action. DOE will provide information regarding the eligibility of such properties to the State Historic Preservation Officer (SHPO) and THPO to assist in the determination of property eligibility. In consultation with the SHPO and THPO, DOE shall then apply the criteria of effect and adverse effect to those historic properties. For eligible properties that may be adversely affected, DOE will consult with the SHPO and THPO concerning appropriate mitigation measures. The programmatic agreement would establish procedures for survey of future mine block areas and the protocol to follow in the event of unanticipated discoveries. The DOE ROD would be contingent upon execution of this programmatic agreement to satisfy Section 106 of the NHPA.**

### **7.1.9 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**

- OSHA General Industry Standards (29 CFR 1910). Authority: Sections 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order Numbers 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), and 6-96 (62 FR 111), as applicable.
- OSHA Construction Industry Standards (29 CFR 1926). Authority: 44 FR 8577, February 9, 1979; 44 FR 20940, April 6, 1979.

OSHA standards would apply to both construction and operation of the various project components.

### **7.1.10 MINING SAFETY AND HEALTH ADMINISTRATION**

- MSHA guidelines and standards (30 CFR 1 through 199) address the safety standards at all mining facilities, including surface coal mines. The MSHA standards apply to both the construction and operation of all activities within an active mine boundary.
- An MSHA mine identification number would be applied for at the District II office in Birmingham, Alabama. This application would identify the location, type of mine facility, and the operator of that facility. This would also trigger the training requirements and safety measures required of the oper-

ator as well as the inspections conducted by MSHA. In addition to the mine identification number, the mine must file a ground control plan (30 CFR 77.1000), which evaluates the geotechnical stability of the pit, highwall, spoil banks, and general work area for operation constraints and additional safety measures when constructing the pit and operating in and around the pit.

- All mine-related pond dams meeting the criteria of impounding water or sediment to an elevation of 5 ft or more above the upstream toe of the structure and have a storage volume of 20 ac-ft or more (30 CFR 77.216) shall obtain MSHA approval for the design, construction, and maintenance of said structure(s).

### 7.1.11 PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

The Pipeline and Hazardous Materials Safety Administration (PHMSA), a division of DOT, regulates interstate pipelines under 49 CFR 191, 192, and 195. The Gas Pipeline Safety Division of the Mississippi PSC regulates intrastate pipelines. Under the Mississippi PSC's Rule 57.1, the applicant must give notice (either written or verbal) to the Mississippi PSC prior to beginning construction of a gas system (which would include the relocation of the existing, onsite line).

## 7.2 STATE REQUIREMENTS

In addition to permits required as a result of federal regulations, the state of Mississippi would require a number of permits, licenses, and approvals for construction and operation of the Kemper County IGCC Project and the connected facilities. The following summarizes the most significant of these state requirements:

- Mississippi Power is a public utility as defined in Section 77-3-3(d)(i) of the Mississippi Code of 1972, as amended, and is engaged in the business of providing electric service to and for the public in twenty-three (23) counties of southeastern Mississippi. The Mississippi Public Utility Act (Section 77-3-11 of Mississippi Code of 1972) requires that a utility must first obtain a Certificate of Public Convenience and Necessity (CPCN) from the Mississippi PSC before commencing construction of a new electric generating facility. On or about January 16, 2009, the Mississippi Power filed with the PSC a petition for a CPCN requesting the authority to acquire, construct, maintain, and operate the proposed Kemper County IGCC Project in Kemper County, Mississippi. **The Mississippi PSC has engaged in a public process to provide for interested parties' intervention, allow appropriate periods for discovery and submittal of both interveners' direct testimony and Mississippi Power's rebuttal testimony, and conclude with two public hearings at the PSC to determine the merits of the petition. Phase I hearings were held before the Mississippi PSC in November 2009 and concluded, with a unanimous PSC determination, that Mississippi Power does have a need for additional generating capacity in Mississippi. Phase II of the official hearings for Mississippi Power's proposed Kemper County IGCC Project was held Monday, February 1, 2010, through Friday, February 5, 2010, in Jackson, Mississippi. The Mississippi PSC issued its Phase II order on Mississippi Power's request for a CPCN on April 29, 2010 (accessible at <http://www.psc.state.ms.us/executive/pdfs/2009-UA-14%20Proposed%20Order.pdf>). The order found that Mississippi Power:**

**“has proposed a combination of physical project and economic impacts. This order finds that this combination does not satisfy the statutory requirement of “public convenience and necessity.” While the physical project itself, in concept, could benefit Mississippi Power’s ratepayers, the proposal’s many uncertainties and risks concerning technology, cost, and performance, given Mississippi Power’s insistence that these uncertainties and risks fall largely on ratepayers, are too high compared to the project’s asserted benefits.”**

**However, the PSC provided guidance, in the form of conditions, on how to make the project “consistent with the public convenience and necessity, as required by” statute. The conditions relate to: (1) risk mitigation for construction and operating costs, (2) government incentives, (3) environmental permits, and (4) Mississippi Power’s continuing obligation to ensure the project is in the public interest. The PSC gave Mississippi Power 30 days to respond to its order.**

- MDEQ requires that new power generating facilities use the lowest quality water source that is economically, environmentally, and technologically feasible; high-quality ground water may be used only for potable purposes. The state places no permitting requirements on the reuse of treated municipal sanitary wastewater, use of which would also not be considered a beneficial use of surface water and, therefore, would not require a surface water withdrawal permit. The only authorization required would be from the city of Meridian. A legislative statute is in place that would allow the Mayor and City Council of Meridian to sign long-term contracts obligating the rights of use for the subject wastewater in anticipation of Mississippi Power using this water supply. Pumping rates would be monitored to determine the amount of water being reclaimed for use by the proposed IGCC project. A sampling and monitoring program would also be initiated to document the quality of reclaimed water being released from the city of Meridian.
- MDEQ would require a ground water withdrawal permit and an NOI for individual wastewater treatment system certification.
- Hydrostatic testing conducted on each of the pipelines would require a hydrostatic test general permit for the discharge of test water and stormwater associated with construction activities as well as a surface water withdrawal permit to utilize available surface waters for the test.
- Solid waste generated by construction or operation of the proposed facilities would need to be managed in accordance with the Nonhazardous Solid Waste Management Regulations. Statutory authority for these regulations includes Sections 17-17-27, 17-17-213, 17-17-229, 17-17-231, 21-27-207, and 49-17-17, Mississippi Code Annotated. Any landfills used for disposal of such waste would require an appropriate permit issued in accordance with those regulations by MDEQ. Proposals for beneficial use of gasification ash or other solid wastes from the proposed facilities would require case-by-case review by MDEQ to verify that the proposed use of these wastes would not pose an unacceptable human health risk or cause ground water or surface water contamination in concentrations above MDEQ standards or criteria.
- MDEQ would issue a solid waste management permit and a beneficial use determination for nonhazardous solid waste transmission for the CO<sub>2</sub> pipeline.
- For the mine, NACC would potentially be required to obtain the following permits/licenses:

- State of Mississippi surface mining and reclamation permit from MDEQ.
- State coal exploration license from MDEQ.
- Mine identification number from U.S Department of Labor, MSHA.
- State of Mississippi water pollution control permit from MDEQ.
- Section 404 permit from USACE.
- Section 21 nationwide permit from USACE.
- Section 401 state water quality certification from MDEQ.
- Exclusion for rubbish disposal activities from MDEQ.
- Mississippi conditionally exempt small-quantity generator from MDEQ.
- SPCC plan submitted to EPA Region 4.
- Dragline boom height determination from DOT.
- Road closures, relocation and operations within 100 ft of outside right-of-ways from Kemper County Board of Supervisors, Lauderdale County Board of Supervisors, and Mississippi Department of Transportation.
- Water withdrawal permit for beneficial uses for public water of the state of Mississippi from MDEQ.
- Dam construction authorization for sediment pond from MDEQ and U.S. Department of Labor, MSHA.
- Beneficial use determination for ash from MDEQ.

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