

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF THE STAFF'S ENVIRONMENTAL ANALYSIS OF THE PROPOSED ACTION AND ALTERNATIVES

We conclude that construction and operation of the proposed Project would result in limited adverse environmental impacts based on information provided by Gulf South and data developed from information requests; field investigations; literature research; alternatives analysis; comments from federal, state, and local agencies; input from public groups and individual citizens; and the mitigation measures recommended below.

As part of our review, we developed specific mitigation measures that we believe would appropriately and reasonably reduce the environmental impacts resulting from construction and operation of the proposed Project. We believe that environmental impacts would be minimized if the proposed Project is constructed and operated in accordance with applicable laws and regulations, Gulf South's proposed mitigation and implementation of a third-party environmental inspection and monitoring program, and our additional recommended mitigation measures. We are therefore recommending that our mitigation measures be attached as conditions to any authorization issued by the Commission. A summary of the anticipated Project impacts and our conclusions are provided below by resource area.

5.1.1 Geology

Construction and operation of the proposed Project would have minimal impact on geological resources. The primary effect of Project construction would be temporary disturbances to the existing topography along the proposed pipeline construction right-of-way, but all areas disturbed during pipeline construction would be finish-graded and restored as closely as possible to preconstruction contours during cleanup and restoration. Additionally, no bedrock blasting is anticipated for the proposed Project. The proposed Project would be located in a region with a low risk of seismic activity, soil liquefaction, landslide susceptibility, and subsidence. No known paleontological resources would be affected by the proposed Project, although Gulf South has developed an unanticipated discovery plan in the event that paleontological resources are found during construction, which we find acceptable.

Given the level of impacts and impact avoidance, minimization, and mitigation measures proposed by Gulf South, we believe that the proposed Project would not have significant impacts on geological resources.

5.1.2 Soils

The proposed Project would traverse a variety of soil types and conditions, and about 58 percent of the soils that would be affected by the proposed pipeline are classified as prime farmland; however, most of this is currently occupied by either upland forest or pine plantation. Construction activities associated with the proposed Project, such as clearing, grading, trenching, and backfilling, would adversely affect soil resources by resulting in erosion, compaction, and the loss of soil productivity and fertility by mixing of topsoil and subsoil horizons and changing drainage patterns. Such effects would be of particular concern in agricultural areas. Gulf South would implement the mitigation measures contained in its plans to control erosion, ensure successful revegetation, and minimize any potential adverse impacts to soil resources. Specifically, potential soil impacts to agricultural areas would be mitigated through measures such as erosion control, topsoil stripping, compaction testing and treatment, and monitoring of crop yields to ensure that those yields in areas affected by construction were similar to those in adjacent, undisturbed areas. Gulf South would further limit potential impacts to soil

resources by implementing its project-specific SPCC Plan and its *Plan for the Unanticipated Discovery of Contaminated Environmental Media*, which we find acceptable.

Given the impact minimization and mitigation measures proposed by Gulf South, we believe that construction and operation of the proposed Project would not result in long-term impacts to soils.

5.1.3 Water Resources

Construction and operation of the proposed Project would be conducted in accordance with Gulf South's Procedures. Gulf South would avoid significant impacts to sole-source aquifers, wellhead protection areas, public potable water intakes, drinking water wells, and springs by implementing the measures described in its Procedures, SPCC Plan, and our recommendation that Gulf South offer testing and, if applicable, mitigation for private or domestic water wells damaged by construction.

The proposed Project would cross 103 perennial streams, 196 intermittent streams, and 9 ponds. Most minor and intermediate waterbodies and 7 ponds would be crossed using open-cut methods. Potential effects to major and sensitive waterbodies would be largely avoided through implementation of HDD installation techniques, which would be used to accomplish pipeline installation across 29 waterbodies. Waterbodies that would be crossed using HDDs include each of the navigable rivers (including the Leaf and Chickasawhay Rivers, and Bucatunna and Okatuppa Creeks), two NRI-listed streams (the Chickasawhay and Strong Rivers), the rivers most likely to contain habitat for federally-listed species (including Dabbs Creek, Leaf River, West Tallahala River, Chickasawhay River, Bucatunna Creek, and Strong River), and all three of the impaired waterbodies (Tallahala, Campbell, and Dabbs Creeks) that occur along the proposed Project route. To ensure that impacts related to the crossing of the NRI-listed streams would be sufficiently minimized, we are recommending that Gulf South consult further with the NPS and file a report summarizing these consultations and identifying any mitigation measures Gulf South would implement. Several ponds are located in the immediate vicinity of the proposed pipeline, including some that are fed by waterbodies proposed to be crossed and could be adversely affected by construction activities. We are recommending that Gulf South prevent sediment and heavily silt-laden water from entering these specifically identified ponds.

All waterbody crossings would be conducted in accordance with Gulf South's Procedures and the terms of any applicable federal or state permits that may be issued. Gulf South's Procedures are consistent with our Wetland and Waterbody Construction and Mitigation Procedures with one exception; therefore, we are recommending that Gulf South file copies of approvals or concurrences from the State of Alabama indicating that construction through waterbodies between December 1 and May 31 is acceptable. Gulf South would use numerous access roads during construction, several of which may affect surface waterbodies. However, Gulf South has not indicated how these access roads would be constructed; therefore, we are recommending that Gulf South file additional information on the impacts of the access roads on surface waterbodies. Several waterbodies were identified by Gulf South as being potentially affected at the proposed aboveground facilities. We are recommending that Gulf South file site-specific construction plans to further identify and describe waterbodies at aboveground facilities and the potential impacts and mitigation measures for these waterbodies.

Gulf South's HDD Plan describes the measures that would be implemented to monitor for, contain, and clean up any inadvertent releases of drilling fluids during HDD operations. Gulf South's HDD Plan also describes measures that would be followed in the event of an HDD failure. To further minimize the impacts of HDD failures, we are recommending that Gulf South prepare site-specific construction plans prior to open-cutting any surface waters previously designated as HDD crossings.

Gulf South has proposed to use surface waters for hydrostatic testing of the proposed pipeline, though municipal water supplies may be used as test water sources for some prefabricated aboveground facility sites. Gulf South would also avoid or adequately minimize potential effects to waterbodies resulting from hydrostatic testing by implementing Gulf South's Procedures and adhering to local, state, and federal water withdrawal and discharge permits.

Given the minimization measures proposed by Gulf South and our recommendations, we believe that short-term impacts resulting from construction and operation of the proposed Project would not significantly affect groundwater or surface water resources.

5.1.4 Wetlands

Construction of the proposed Project pipeline would affect 145 wetland areas, resulting in a total of approximately 68.9 acres of wetland disturbance, including approximately 38.6 acres of forested wetlands, 2.2 acres of mixed-type wetlands that include a forested wetland component, and an additional 28.07 acres of shrub-scrub, emergent, and open water wetlands. No wetlands would be affected by the construction or operation of the aboveground facilities. During operations, approximately 16.4 acres of forested wetlands and 0.9 acre of mixed-type wetlands containing a forested component would be contained within the maintained portion of the proposed permanent pipeline right-of-way.

Construction and operation of the proposed Project would result in short-term and long-term impacts to wetlands. Gulf South would minimize effects to wetlands by completing all wetland crossings in accordance with its Procedures, and by complying with the terms and conditions of other state and federal permits, including the provisions of any required wetland compensatory mitigation. Gulf South would also minimize effects to wetlands by reducing the construction right-of-way width in wetlands to 75 feet. To reduce impacts to sensitive, high-quality, forested wetlands, Gulf South proposes to reduce its construction right-of-way width and attempt to avoid large tupelo and cypress trees that it encounters. Following construction, affected wetlands located outside the maintained portion of the permanent pipeline right-of-way would be allowed to revert to preconstruction conditions.

5.1.5 Vegetation

In addition to wetlands, construction and operation of the proposed Project would affect three upland vegetative communities: upland forest, pine plantation, and open lands (scrub-shrub habitats, pasture, herbaceous, and agricultural lands). Approximately 74 percent of the upland vegetation resources affected during construction would consist of pine plantation and upland forest, with open lands, agriculture, and pasture making up the remainder. Vegetative communities of special concern include NRCS-administered CRP lands.

Gulf South would restore all disturbed vegetated areas in accordance with its Plan and Procedures and the specific recommendations of local agencies and soil conservation services. Affected agricultural and open lands typically would be revegetated within one or two growing seasons, but impacts to pine plantations and upland forest would be long-term, taking up to 30 years or more to recover. Impacts to forested areas contained within the permanent pipeline right-of-way would also represent a more substantial change in vegetative strata. Impacts to forested areas, including large forested tracts, would be minimized by routing the proposed Project along existing rights-of-way and through other previously disturbed areas, such as agricultural and open lands, where possible. Additionally, many of the large forested tracts crossed by the proposed Project are subject to some disturbance associated with timber management programs. To minimize construction-related impacts to vegetative resources, we are recommending that, prior to construction, Gulf South complete consultation with several agencies regarding impacts to vegetation communities of special concern, seeding and

vegetation restoration practices, and develop plans to control the spread of exotic and/or invasive plant species in areas affected by construction.

Based on Gulf South's proposed measures to avoid and minimize impacts to forested areas; the relatively minor impacts to forested areas, pastures, and open lands; the implementation of Gulf South's plan; and the implementation of our recommendation, we believe that impacts to vegetative communities would be minor.

5.1.6 Wildlife and Aquatic Resources

The wetlands and upland vegetation communities crossed by the proposed Project route support habitats that provide cover and forage for a variety of wildlife species, including birds, mammals, reptiles, and amphibians. Physical disturbance, displacement, and clearing of herbaceous upland and wetland habitats would affect wildlife at or near the time of construction, but such effects would be largely temporary and many habitats would generally recover quickly following construction. Upland and wetland forested habitats would be affected, with a long-term conversion of wooded areas to successional stages in the temporary construction right-of-way and a permanent conversion to scrub-shrub or herbaceous levels within the permanent pipeline right-of-way. The proposed Project route would be collocated with or parallel to existing utility rights-of-way where possible to minimize impacts to previously undisturbed vegetation and wildlife habitat, and Gulf South would further minimize impacts to wildlife habitat through implementation of its Plan and Procedures.

The waterbodies that would be traversed by the proposed Project provide habitat for a variety of aquatic species, including warmwater fishes and mussels. Potential impacts to fisheries and aquatic habitats would include sedimentation and turbidity, loss of cover, introduction of pollutants into the aquatic environment, potential blockage of fish migrations and interruptions of spawning, and entrainment or loss of stream flow during hydrostatic testing. As described above, all waterbody crossings would be accomplished in accordance with Gulf South's Procedures and the terms of any applicable federal or state permits that may be granted. Direct impacts would be avoided by the use of HDD installation at 29 waterbody crossings, and aquatic habitat impacts at other crossing locations would be largely temporary, as crossings would be completed in less than 48 hours in most instances. Additionally, intake screening to limit entrainment of fishes and maintenance of adequate stream flow rates to protect aquatic life during hydrostatic test water withdrawals would further ensure that any Project-related impacts to aquatic habitat would be minor and temporary.

Given the minor and largely temporary impacts and the minimization measures proposed by Gulf South, we believe that the proposed Project would not significantly affect aquatic habitat and wildlife species.

5.1.7 Threatened, Endangered, and Special Status Species

Based on consultations with the FWS, 10 federally listed endangered or threatened species potentially occur in the vicinity of the proposed Project. In addition, the proposed Project would also traverse Gulf sturgeon critical habitat. Based on our review of these species and the potential impacts to them resulting from construction and operation of the proposed Project, we have determined that the proposed Project would result in no effect to the red-cockaded woodpecker and the inflated heelsplitter; and may affect but is not likely to adversely affect the Louisiana black bear, eastern indigo snake, yellow-blotched map turtle, ringed map turtle, gulf sturgeon (including its critical habitat), bald eagle, and the wood stork; and may affect the gopher tortoise. As required by the ESA, our determination of may affect required us to enter into formal consultation with the FWS. As a result of this formal consultation, the FWS issued a BO for the proposed Project concurring with our determinations, and determined that the

proposed Project is not likely to jeopardize the continued existence of the gopher tortoise and is not likely to adversely modify designated critical habitat and issued an incidental take statement. In its BO, the FWS identified several non-discretionary terms and conditions that must be adhered to, and three discretionary conservation recommendations to further protect the gopher tortoise and its habitat. In order to ensure that the gopher tortoise is sufficiently protected and to ensure compliance with FWS terms and conditions, we are recommending that Gulf South file a revised Conservation Strategy for the Gopher Tortoise and the Eastern Indigo Snake consistent with the FWS terms and conditions as well as two of its three conservation recommendations.

Since the issuance of the BO, Gulf South has modified its proposed route, identified new access roads and ATWSs, and has identified a new location for the proposed Destin Compressor Station. For these modifications, Gulf South has compiled additional information on species occurrence and habitat that has not been reviewed by the FWS; therefore, to ensure that the modified work areas are properly reviewed for the presence or absence of federally listed species and their habitats, and that any associated mitigation or construction-related activities are in accordance with applicable FWS requirements, we are recommending that Gulf South not begin construction in those areas until all Section 7 consultations are completed.

In addition to federally listed species, 46 species are listed as either endangered, threatened, imperiled, or rare by the states of Mississippi, Louisiana, and Alabama. To ensure the protection of these species, we are recommending that, prior to construction, Gulf South conduct additional consultations with MDWF, LDWF, and ADCNR, complete any required additional surveys, and implement agency-recommended mitigation measures, if required, to ensure that potential Project-related effects to all special status species are adequately avoided or minimized.

5.1.8 Land Use, Recreation and Special Interest Areas, and Visual Resources

Construction of the proposed Project would affect approximately 1,726 acres of land, including 1,240 acres for the pipeline construction right-of-way, 146 acres for the aboveground facilities, and 340 acres for extra work areas (ATWSs, pipe storage and contractor yards, and access roads). Approximately 71 percent of the 1,726 acres within the Project construction right-of-way is currently characterized as pine plantation and forestland, with agriculture, pasture, and open lands accounting for an additional 18 percent of this acreage. The remaining 11 percent is comprised of residential, industrial/commercial, wetlands, and other/roads land use areas. Gulf South proposes a nominal construction right-of-way width of 100 feet and a permanent right-of-way width of 60 feet, with the pipeline placed at an offset within this permanent right-of-way. However, we have determined that these right-of-way requirements are in excess of what is necessary for normal construction and operation. Therefore, in order to reduce permanent impacts, we are recommending that Gulf South not exercise eminent domain authority granted under the NGA to acquire a permanent right-of-way greater than 50 feet in width. In order to further reduce right-of-way impacts, we are recommending that Gulf South evaluate using at least 10 feet of any adjacent paralleled natural gas pipeline rights-of-way for spoil storage.

Following construction, all affected areas outside the permanent pipeline right-of-way and aboveground facility sites would be restored and/or allowed to revert to approximate preconstruction conditions and uses. During operation of the proposed Project, the permanent pipeline right-of-way, aboveground facilities, and permanent access roads would encumber approximately 857.6 acres (based on Gulf South's proposed 60-foot-wide permanent right-of-way).

Thirteen residences would be located within 50 feet of construction work area. Gulf South has adopted general residential construction mitigation measures for these residences and has developed site-

specific construction plans for three residences that would be within 25 feet of the construction work areas in order to avoid or minimize potential impacts to these structures. We have reviewed these plans and find them acceptable.

Visual resources along the proposed Project route would be affected by the installation of some aboveground facilities and alteration of existing vegetative patterns associated with clearing and maintenance of the construction and permanent pipeline rights-of-way. The installation of the proposed aboveground facilities would not result in significant visual effects on residences; however, we are recommending that, prior to construction, Gulf South address visual resource impacts for residences in the area of the proposed Delhi Compressor Station for the potential need for visual screening.

The proposed Project would cross several CRP lands. In the instances where permits and approvals for proposed Project-related use and impacts to these resources are outstanding, we are recommending that, prior to construction, Gulf South complete consultations with the applicable agencies and file site-specific plans to avoid, minimize, or mitigate impacts to these areas.

To ensure that Gulf South takes into consideration operational and safety concerns regarding potential impacts on two nearby airport facilities posed by the Project, we are recommending Gulf South provide site-specific construction plans resulting from ongoing consultations with airport and local officials for the Delhi Municipal Airport and the Thigpen Field Airport that address any concerns identified by those authorities.

The proposed Project would result mostly in short-term impacts with some permanent long-term impacts to pine plantation and forestland in the proposed permanent right-of-way. However, based on Gulf South's proposed construction and mitigation measures, continued consultations with land resource agencies, and our recommendations, we believe that impacts to land use, recreation and special interest, and visual resources would not be significant.

5.1.9 Socioeconomics

The proposed Project would have positive impacts on local spending, employment, and tax income during construction and operation; however, these impacts would be relatively minimal. Construction of the proposed Project would not have a significant adverse impact on local populations, housing, employment, community services, or local commerce. Any adverse impacts would be highly localized and temporary due to the relatively short construction period and the rapid rate at which construction crews would pass through any one area. Construction of the proposed Project would temporarily increase demand for public services, such as medical, police, and fire protection, but these impacts would be offset by increased tax revenues to local governments. There is no evidence that the proposed Project would have a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic group. Therefore, we conclude that the proposed Project would not have negative socioeconomic impacts.

5.1.10 Cultural Resources

Gulf South identified 43 cultural resource sites along the proposed Project route. Twelve sites are considered potentially eligible for listing on the NRHP. Gulf South has adopted route variations that avoid impacts to the cultural resource sites identified as potentially eligible for listing on the NRHP during the cultural resource surveys. In the event that sites eligible for listing in the NRHP are identified in future survey efforts and those sites cannot be avoided, Gulf South would continue to consult with the Commission staff and SHPO to develop appropriate treatment plans to avoid or mitigate any adverse effects to cultural resource sites. We are recommending that Gulf South defer construction until surveys

and evaluations of areas not previously accessed are completed, all survey reports and any necessary treatment plans have been reviewed by appropriate parties, and the Director of OEP provides written notification to proceed.

5.1.11 Air Quality and Noise

Air quality impacts associated with construction of the proposed Project would include emissions from fossil-fueled construction equipment and fugitive dust. However, such air quality impacts would generally be temporary and localized and are not expected to cause or contribute to a violation of applicable air quality standards. The proposed Delhi, Harrisville, and Destin Compressor Stations would emit air pollutants as a result of combustion of natural gas to drive the compressor units and in association with the periodic operation of auxiliary generators. However, the air emissions associated with operation of these facilities would meet federal and state ambient air quality standards and permitting requirements.

Impacts to noise quality associated with construction of the proposed Project would generally be temporary, minor, and limited to daylight hours, except at HDD sites where drilling and related construction equipment would likely operate on a continuous basis. At the HDD locations, impacts on NSAs are projected to be temporary and minor. The proposed compressor stations would also generate noise on a continuous basis during operations. However, the predicted noise levels attributable to operations of the new compressor stations would not result in significant effects on the NSAs nearest to those facilities. To ensure that noise levels are within acceptable limits, we are recommending that Gulf South file noise survey reports within 60 days after placing the compressor stations in service to confirm that noise levels would be below 55 dBA.

5.1.12 Reliability and Safety

The proposed Project would be designed, constructed, operated, and maintained to meet or exceed all DOT safety standards for natural gas pipelines. Following construction, Gulf South would also initiate a pipeline integrity management plan to ensure public safety during operation. The proposed Project would result in only a slight increase in risk to the nearby public.

5.1.13 Cumulative Impacts

Three types of projects—past, present, and reasonably foreseeable future projects—could potentially contribute to a cumulative impact when considered with the proposed Project. These projects include other natural gas transmission pipelines in the area and non-jurisdictional facilities associated with the proposed Project. We identified five interstate natural gas pipeline projects planned or proposed in Mississippi and/or Alabama that would potentially result in a cumulative impact when considered with the proposed Project. One of these has been constructed (Carthage to Perryville Project, CP06-85), one is under construction (East Texas to Mississippi Project, CP06-446), and two projects are currently filed at the Commission (Spectra Energy's Southeast Supply Header Project [CP07-44], and Boardwalk Pipeline's Gulf Crossing Project [CP07-398]). One additional project is being planned and is undergoing the Commission's Pre-filing, Kinder Morgan's MidContinent Express Project (PF07-004). Construction of the pending projects is projected to occur between the years 2007 and 2009. The potential impacts associated with these projects that are most likely to be cumulatively significant are related to wetlands and waterbodies, vegetation and wildlife (including federally and state-listed endangered and threatened species), land use, air quality, and noise. Cumulative impacts will be addressed during the review process for each of the pending projects.

Based on the proposed construction, minimization, mitigation, and operations procedures and measures, we believe that impacts associated with the proposed Project would be relatively minor.

Similarly, each of the projects considered in our analysis has been or would be designed to avoid or minimize impacts to sensitive environmental resources. We are including recommendations that Gulf South reduce the permanent right-of-way width, to evaluate whether it can use about 10 feet of other existing utility rights-of-way for spoil storage, and to justify the currently proposed size of ATWSs in order to minimize construction requirements. Additionally, it is anticipated that any significant unavoidable impacts to sensitive resources resulting from these projects would be mitigated. Mitigation generally leads to the avoidance or minimization of cumulative impacts. Any proposed projects under the Commission's jurisdiction would also be the subject of our NEPA review to avoid or minimize impacts. Consequently, only a small cumulative effect is anticipated when the impacts of the proposed Project are added to past, present, or reasonably foreseeable future projects in the area.

5.1.14 Alternatives

We evaluated the No Action or Postponed Action alternatives, system alternatives, major route alternatives, route variations, and aboveground facility site alternatives. While the No Action or Postponed Action alternative would eliminate the short- and long-term environmental impacts identified in this EIS, the objectives of the proposed Project would not be met, and Gulf South would not be able to provide a new source of natural gas to markets that can be accessed through the proposed pipeline interconnects.

Our analysis of system alternatives included an evaluation of whether existing and proposed natural gas pipeline systems would meet the proposed Project objectives while offering an environmental advantage over the proposed Project. Gulf South's existing system in the central Mississippi area is mostly low-pressure or medium-pressure pipeline and is mostly dedicated to a type of service that requires unpredictable contractual commitments. In addition, Gulf South has no available high-pressure take-away capacity from the central Mississippi area. Gulf South's high-pressure north-south Index 130 pipeline is operating at full capacity at its MAOP. Because of these existing pipeline capacity constraints, the use of Gulf South's existing facilities to make the level of deliveries currently requested by the market is not a viable alternative. New pipeline and compression, such as that proposed for the Southeast Expansion Project, would have to be constructed to alleviate the capacity constraints developing in the Perryville-Harrisville area and to provide additional outlets for new supplies. Our engineering staff evaluated this and other potential system alternatives to Gulf South's proposed expansion, including the proposed Southeast Supply Header and East Texas to Mississippi Expansion projects and the newly-constructed Carthage to Perryville Expansion Project. We found that no other interstate pipeline systems in the region could serve Gulf South's customers without having to construct additional facilities, which would result in environmental impacts similar in nature to those of the proposal, or could have greater impacts than Gulf South's proposal. Consequently, no system alternatives are considered to be environmentally preferable to the proposed Project.

We also evaluated one major route alternative to the proposed Project route. However, as described in the EIS, that alternative would not offer significant environmental advantages over the proposed Project route, and we eliminated it from further consideration.

The draft EIS included 11 minor route changes that were developed during the pre-filing process. Gulf South adopted 16 additional route changes following the issuance of the draft EIS. We have evaluated these route changes and considered their associated environmental consequences as part of our environmental analysis of the proposed Project. We concur with the use of all of these route changes, as they were developed to lessen environmental impacts to streams, residences, farms, and other sensitive environmental resources. No other route changes were identified.

We also evaluated the proposed locations of the Project aboveground facilities to determine whether environmental impacts would be reduced or mitigated by use of alternative facility sites. Because the locations of the aboveground facilities would be linked to the location of the pipeline, the search for alternatives was constrained to sites located adjacent to the proposed Project route. We approved an alternative site proposed by Gulf South for its Destin Compressor Station. There were no environmental concerns with any of the aboveground facility locations. Therefore, we did not identify any other alternative sites for the proposed compressor station or M/R or MLV facilities.

In summary, we have determined that Gulf South's proposed project, as modified by our recommended mitigation measures, is the preferred alternative.

5.2 STAFF'S RECOMMENDATIONS

If the Commission issues a Certificate for the proposed Project, we recommend that the Commission's Order include the following specific conditions. We believe that these measures would further minimize and mitigate the environmental impacts associated with the construction and operation of the proposed Project.

1. Gulf South shall follow the construction procedures and mitigation measures described in its application, supplemental filings (including responses to staff information requests), and as identified in the EIS, unless modified by the Order. Gulf South must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. justify each modification relative to site-specific conditions;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of OEP **before using that modification.**
2. The Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and the environment during construction and operation of the Project. This authority shall include:
 - a. the modification of conditions of the Commission's Order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from Project construction and operation.
3. **Prior to any construction**, Gulf South shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EIs authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.
4. The authorized facility location(s) shall be as shown in the EIS, as supplemented by filed alignment sheets, and shall include all of the staff's recommended facility locations. **As soon as they are available, and prior to the start of construction**, Gulf South shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental

conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Gulf South's exercise of eminent domain authority granted under NGA Section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Gulf South's right of eminent domain granted under NGA Section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Gulf South shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally-sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **prior to construction** in or near that area.

This requirement does not apply to route variations required herein or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas, such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
 - b. implementation of endangered, threatened, or special concern species mitigation measures;
 - c. recommendations by state regulatory authorities; and
 - d. agreements with individual landowners that affect other landowners or would affect sensitive environmental areas.
6. **Within 60 days of the acceptance of this certificate and prior to construction**, Gulf South shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Gulf South will implement the mitigation measures required by the Order. Gulf South must file revisions to the plan as schedules change. The plan shall identify:
 - a. how Gulf South will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
 - b. the number of EIs assigned per spread and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
 - d. the training and instructions Gulf South will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel changes), with the opportunity for OEP staff to participate in the training session;

- e. the company personnel (if known) and specific portion of Gulf South's organization having responsibility for compliance;
 - f. the procedures (including use of contract penalties) Gulf South will follow if non-compliance occurs; and
 - g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - (1) the completion of all required surveys and reports;
 - (2) the mitigation training of on-site personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.
7. Gulf South shall employ one or more EIs per construction spread. The environmental inspectors shall be:
- a. responsible for monitoring and ensuring compliance with all mitigative measures required by the Order and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
8. Gulf South shall file updated status reports with the Secretary on a **weekly basis until all construction-related activities, including restoration, are complete for each phase of the Project**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. the current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
 - b. a listing of all problems encountered and each instance of non-compliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - c. a description of corrective actions implemented in response to all instances of non-compliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;
 - e. a description of any landowner/resident complaints that may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - f. copies of any correspondence received by Gulf South from other federal, state, or local permitting agencies concerning instances of non-compliance, and Gulf South's response.

9. Gulf South must receive written authorization from the Director of OEP **before commencing service from** the Project. Such authorization will only be granted following a determination that rehabilitation and restoration of areas affected by the Project are proceeding satisfactorily.
10. **Within 30 days of placing the certificated facilities in service**, Gulf South shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; and
 - b. identifying which of the certificate conditions Gulf South has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for non-compliance.
11. Gulf South shall develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the Project and restoration of the right-of-way. **Prior to construction**, Gulf South shall mail the complaint procedures to each landowner whose property would be crossed by the Project.
 - a. In its letter to affected landowners, Gulf South shall:
 - (1) provide a local contact that the landowners should call first with their concerns; the letter should indicate how soon a landowner should expect a response;
 - (2) instruct the landowners that if they are not satisfied with the response, they should call Gulf South's Hotline; the letter should indicate how soon to expect a response; and
 - (3) instruct the landowners that if they are still not satisfied with the response from Gulf South's Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030, or at hotline@ferc.gov.
 - b. In addition, Gulf South shall include in its weekly status a table that contains the following information for each problem/concern:
 - (1) the date of the call;
 - (2) the identification number from the certificated alignment sheets of the affected property and approximate location by MP;
 - (3) the description of the problem/concern; and
 - (4) an explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.
12. Gulf South shall not exercise eminent domain authority granted under Section 7(h) of the NGA to acquire a permanent right-of-way greater than 50 feet in width. (**Section 2.2.1**)
13. **Prior to construction**, Gulf South shall file with the Secretary for review and written approval by the Director of OEP:
 - a. revised alignment sheets and cross-section diagrams showing the use of at least 10 feet of Transco's and Crosstex's maintained permanent right-of-way for at least spoil storage, as part of its 100-foot-wide construction right-of-way; and

- b. site-specific justification by milepost for areas where Gulf South believes use of the existing maintained permanent right-of-way to be infeasible for spoil storage. (*Section 2.2.1*)
14. Gulf South shall conduct, with the well-owner's permission, pre- and post-construction well monitoring of well yield and water quality for wells identified in Table 3.3.1.1-1. **Prior to construction**, Gulf South shall file with the Secretary, for review and written approval by the Director of OEP, a well monitoring and mitigation plan that describes standard testing procedures, and the measures that would be taken should a well be impacted such that it is no longer operable or that it becomes impaired. Gulf South shall offer this plan to the landowners before construction. Gulf South shall also file a report with the Secretary, **within 30 days of placing its pipeline facilities in service**, identifying all private or domestic water wells or systems damaged by construction and describing how they were repaired. The report shall include a discussion of any complaints concerning well yield or quality and how each problem was resolved. (*Section 3.3.1.2*)
15. **Prior to construction**, Gulf South shall file along with its site-specific construction plans for the Delhi, Harrisville, and Destin Compressor Stations a description of the measures that it would take to avoid impacts to waterbodies affected by these facilities. (*Section 3.3.2.1*)
16. **Prior to construction**, Gulf South shall complete consultation with the NPS regarding its proposed HDD crossings of, and hydrostatic test water withdrawals from, the NRI-listed Strong and Chickasawhay Rivers, and file copies of those consultations with the Secretary. If applicable, Gulf South shall also file plans to address any additional mitigation measures recommended by the NPS. (*Section 3.3.2.1*)
17. **Prior to construction**, Gulf South shall file with the Secretary copies of approvals or concurrences from the ADCNR indicating that in-stream construction between December 1 and May 31 is acceptable. (*Section 3.3.2.2*)
18. Gulf South shall prevent sediment and heavily silt-laden water from entering ponds adjacent to areas disturbed by construction activities. Gulf South shall conduct the open-cut crossing of the waterbodies feeding these ponds (at the following mileposts: 6.8, 12.5, 15.0, 25.0, 40.9, 41.6, 51.2, 53.4, 59.5, 60.0, 63.5, 65.1, 75.1, 77.1, 86.9, 87.1, 98.6, and 110.0) in a manner that prevents sediment and heavily silt-laden water from entering the ponds. (*Section 3.3.2.2*)
19. Gulf South shall not begin an open-cut crossing of any of the waterbodies proposed to be crossed using HDD until it files an amended crossing plan with the Secretary for review and written approval by the Director of OEP. The amended crossing plan shall include site-specific drawings identifying all areas that would be disturbed using the proposed alternate crossing method. Gulf South shall file the amended crossing plan concurrent with the appropriate state and federal applications required for implementation of the plan. (*Section 3.3.2.3*)
20. **Prior to construction**, Gulf South shall consult further with the MDWFP, the LDWF, the ADCNR, the NRCS, and other appropriate agencies, regarding seeding and vegetation restoration practices for the proposed Project. Gulf South shall file a report with the Secretary for review and written approval by the Director of OEP that describes the outcome of these consultations and identifies the agency-recommended seeding and vegetation restoration practices that Gulf South plans to implement. (*Section 3.5.2*)
21. **Prior to construction**, Gulf South shall file with the Secretary, for review and written approval by the Director of OEP, an Exotic and Invasive Species Control Plan developed in consultation with the FWS, the LDWF, the MDWFP, the ADCNR, and the NRCS. This plan shall identify the specific

measures that Gulf South would implement during construction and operation to control exotic and invasive plant species. (*Section 3.5.4*)

22. **Prior to construction**, Gulf South shall file a revised Conservation Strategy for the Gopher Tortoise and Eastern Indigo Snake that incorporates all non-discretionary terms and conditions of the FWS's BO for this Project, as well as conservation recommendations 1 and 2. (*Section 3.7.1*)
23. Gulf South shall not begin construction activities on modified work areas **until**:
 - a. the staff completes Section 7 consultations with the FWS; and
 - b. Gulf South has received written notification from the Director of OEP that construction or use of mitigation may begin. (*Section 3.7.1*)
24. Gulf South shall continue to consult with the LDWF, the MDWFP, and the ADCNR to determine the need for surveys or mitigation that would substantially minimize or avoid potential impacts to state-listed species. Gulf South shall file copies of the results of these consultations, as well as any associated survey reports and mitigation plans with the Secretary, **prior to construction**. (*Section 3.7.2*)
25. **Prior to construction**, Gulf South shall consult with the Delhi Municipal Airport officials and the FAA regarding impacts of the proposed Project, specifically the proposed Delhi Compressor Station, on airport operations, and file a site-specific construction plan that addresses any concerns identified by those authorities with the Secretary. (*Section 3.8.4*)
26. **Prior to construction**, Gulf South shall consult with the Thigpen Field Airport officials and the FAA regarding impacts of the proposed Project on airport operations, and file a site-specific construction plan that addresses any concerns identified by those authorities with the Secretary. (*Section 3.8.4*)
27. Gulf South shall consult with the FSA to determine appropriate seed mixes and/or revegetation efforts that should be implemented on CRP lands to minimize and mitigate construction and operations impacts. Gulf South shall also retain and have available for inspection any records of consultation(s) with the FSA indicating specific measures agreed upon by Gulf South and the FSA that would be implemented on CRP lands. (*Section 3.8.4*)
28. **Prior to construction**, Gulf South shall file with the Secretary for review and written approval by the Director of OEP a visual screening plan to reduce the long-term adverse effects on the visual quality of residences located along Highway 17 that would result from installation of the Delhi Compressor Station. (*Section 3.8.6.1*)
29. Gulf South shall **defer** implementation of any treatment plans/measures (including archaeological data recovery), construction of facilities, and use of all staging, storage, or temporary work areas and new or to-be-improved access roads **until**:
 - a. Gulf South files with the Secretary cultural resources survey and evaluation reports, any necessary treatment plans, and the Mississippi and Alabama SHPO comments on the reports and plans; and
 - b. The Director of OEP reviews and approves all cultural resources survey reports and plans and notifies Gulf South in writing that treatment plans/procedures may be implemented and/or construction may proceed.

All material filed with the Secretary containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "**CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE.**" (*Section 3.10.4*)

30. Gulf South shall file noise surveys with the Secretary **no later than 60 days** after placing each of the Delhi, Harrisville, and Destin Compressor Stations in service. If the noise attributable to operation of all of the equipment at any compressor station at full load exceeds an L_{dn} of 55 dBA at any nearby NSA, Gulf South shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within one year of the in-service date**. Gulf South shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls. (*Section 3.11.3*)