5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Based on our analysis of the proposed action and alternatives, the Companies' adherence to their proposed construction, restoration, mitigation, and operations measures, the inclusion of our recommendations as conditions to a Certificate, and the Companies' implementation of a third-party environmental inspection and monitoring program, we conclude that construction and operation of the proposed Project would result in limited adverse environmental impacts. To support this conclusion, we are providing the following summary of our environmental analysis.

5.1.1 Geology

Construction and operation of the proposed Project would not significantly affect geological resources. Existing topography would be temporarily impacted by construction of the proposed pipeline; however, these impacts would be mitigated by the Companies' restoration efforts. The proposed Project would be located in a region with a low risk of seismic activity, soil liquefaction, and subsidence. Some portions of the proposed Project would traverse areas with a high risk of landslides along stream banks (MP 66.3 – 94.5, and near the Paris Compressor Station, in Texas); however, due to the limited extent of these areas and the proposed construction methods, no significant hazard to the pipeline is anticipated.

5.1.2 Soils

Construction and operation of the proposed Project would affect a variety of soils and soil associations including sensitive agricultural soils. Several soil characteristics including susceptibility to erosion and compaction, drainage capability, and revegetation potential would be temporarily affected by construction of the proposed Project. In order to minimize general construction-related affects to soils, the Companies would implement the measures described in their Plan, Procedures, and SPCC Plan. These measures would control erosion, and increase the potential success of revegetation efforts. Furthermore, the Companies propose to strip and segregate topsoil, restore contours, conduct compaction testing and treatment, and monitor revegetation efforts and crop yields.

5.1.3 Water Resources

Construction and operation of the proposed Project would not significantly affect groundwater resources including aquifers, sole-source aquifers, wellhead protection areas, areas of groundwater concern, wells and springs. The Companies would avoid or minimize impacts to groundwater resources by implementing measures described in their Procedures, SPCC Plan, and Plan for the Unanticipated Discovery of Contaminated Environmental Media. Additionally, the Companies have prepared a Well Monitoring and Mitigation Plan which would provide evaluation and remediation for any impacts to private and/or domestic water wells resulting from construction.

Construction and operation of the proposed Project would not significantly affect surface water resources. All significant waterbodies are proposed to be crossed using the HDD method, including: major/navigable waterbodies; designated Louisiana Natural and Scenic Rivers; nationwide Rivers Inventory listed streams; ecologically sensitive resource waters; fisheries of special concern; the rivers most likely to contain habitat for federally-listed fish species; and the majority of the impaired waterbody crossings that would be crossed by the proposed pipeline.

All waterbody crossings would be conducted in accordance with the Companies' Procedures and the terms of any applicable federal or state permits. The Companies' Procedures are consistent with our Wetland and Waterbody Construction and Mitigation Procedures with the exception of several ATWS which are located within 50 feet of certain waterbodies to accommodate special construction activities such as road crossings, HDD workspaces, and side slope construction. However, based on our review of proposed ATWS and access roads including their size, location, and purpose, we find their placement acceptable. For construction activities that would occur outside of the window specified in the FERC Procedures, we are recommending Gulf Crossing complete consultations with state agencies regarding prior to the end of the Draft EIS comment period.

Accidental spills occurring during construction and operation of the proposed Project would be prevented or adequately minimized through implementation of the Companies' Procedures, and SPCC Plan. Any contaminated sediment in waterways discovered during open-cut waterbody crossings would be contained according to the Companies' Plan for the Unanticipated Discovery of Contaminated Environmental Media. Additionally, the Companies' HDD Contingency Plan describes the measures that would be implemented to monitor for, contain, and clean up any inadvertent releases of drilling fluids during HDD operations. The Companies' HDD Contingency Plan also describes measures that would be followed in the event of an HDD failure.

The Companies propose to use surface waters and municipal water supplies for hydrostatic testing of the proposed pipeline, and in doing so would implement their Procedures and adhere to local, state, and federal water withdrawal and discharge permits.

5.1.4 Wetlands

Construction and operation of the proposed Project would not significantly affect wetlands. Specifically, construction of the proposed Project would impact approximately 164 acres of wetlands including 126.5 acres of forested wetlands and 37.5 acres of scrub-shrub, emergent, and open-water wetlands. No wetlands would be affected by the construction and operation of proposed aboveground facilities, pipe storage and contractor yards. Operation of the proposed pipeline would affect approximately 45.1 acres of wetlands, including 43.0 acres of forested wetlands. Sensitive, high quality and special-status wetlands affected by the proposed Project include several high quality forested water tupelo or bald cypress stand wetland areas, bottomland forest, and NRCS-administered WRP wetlands.

The Companies would minimize affects to wetlands by completing all wetland crossings in accordance with their Procedures, Wetland Mitigation Plan, and by complying with the terms and conditions of other state and federal permits. We are recommending that the Companies complete their consultation with the agencies and file the field-delineated locations and the resulting construction and operational impacts for all affected wetlands. The Companies would also minimize affects to wetlands by reducing the construction right-of-way width through wetlands to 75 feet, except for those areas with requested alternative measures (Table 3.4.2-1).

The Companies identified six WRP lands that are proposed to be crossed by the Project. One of these 6 WRP lands would be avoided by HDD. Route variations have been evaluated to avoid or reduce impacts to WRP lands, with the exception of four WRP lands. We are recommending that Gulf Crossing determine impacts to high quality cypress-tupelo forest associated with the route variation to avoid WRP lands located between MP 295.5 and MP 297.0.

To minimize affects to large forested and high quality tupelo and bald cypress wetlands, we are recommending that the Companies avoid these areas of forested wetlands (Table 3.1.1-2) through the use of HDD crossing methods and HDD extensions... For those wetlands that can not be avoided through

HDD or HDD extensions, the Companies should evaluate route variations that would either avoid these large, forested wetland areas or that would minimize the wetland crossing lengths

Following construction, affected wetlands located outside the 30-foot-wide maintained portion of the permanent pipeline right-of-way would be allowed to revert to preconstruction conditions.

5.1.5 Vegetation

Construction and operation of the proposed Project would affect agricultural land, pasture, shrub/scrub land, prairie, pine-hardwood forest, hardwood slope forest, pine plantation, northern post oak savannah, hardwood forest, and pine forest vegetative communities. Several extensive forested and unsegmented forest tracts would be susceptible to exotic and/or invasive plant species once construction commences for the proposed Project. Vegetative communities of special concern include the FSA-administered CRP lands, the Caddo Black Bayou Preserve, Texas Water Oak/Willow Oak community, bald cypress/water tupelo forested wetlands, and the Silveanus Dropseed prairie community.

The Companies would restore all disturbed vegetated areas in accordance with their Plan and Procedures. The Companies have initiated consultations with state and federal agencies regarding seed mixtures and final restoration measures, but the consultations are not complete. Therefore, to ensure that the comments of the TPWD, MDWFP, ODWC, LDWF, the Nature Conservancy, and NRCS are adequately addressed, we are recommending that the Companies finalize consultations prior to construction.

Construction and operation of the proposed Project could contribute to the spread of exotic and invasive species; therefore, the Companies' developed their Exotic and Invasive Species Control Plan that would monitor and prevent the spread of exotic and invasive species. We have reviewed the plan and believe it adequately addresses the issues.

5.1.6 Wildlife and Aquatic Resources

Construction and operation of the proposed Project would not significantly affect wildlife and aquatic habitats. The clearing of herbaceous upland and wetland habitats within the construction right-of-way and other work areas would affect wildlife at or near the time of construction, but such impacts would be temporary and many habitats would generally recover quickly following construction. Forested habitats would be affected by the long-term conversion of wooded areas to earlier successional stages within the temporary construction right-of-way and a permanent conversion to scrub-shrub or herbaceous levels within the permanent pipeline right-of-way. The Companies propose to collocate and/or parallel existing utility rights-of-way to the extent possible to minimize impacts to previously undisturbed vegetation and wildlife habitat. The Companies would further minimize impacts to wildlife habitats through the implementation of measures described in their Plan and Procedures. The Project will cross sensitive and managed wildlife habitats. To protect these habitats, we are recommending that the Companies complete their ongoing consultation with regulatory agencies regarding Bodcau WMA and with the Nature Conservancy regarding the Caddo Black Bayou Preserve to develop additional methods to minimize impacts to those areas prior to the end of the Draft EIS comment period. We are also recommending that Gulf Crossing conduct pre-construction surveys to determine if the rookeries are occupied and that Gulf Crossing avoid colonial nesting waterbirds rookeries during the nesting period. Furthermore, we are recommending that Gulf Crossing develop a Migratory Bird Plan to minimize impacts to migratory birds prior to construction.

Impacts on fisheries and aquatic habitats would result from increased sedimentation and turbidity, loss of cover, introduction of pollutants into the aquatic environment, and disruptions of fish movements.

However, these impacts would be minimized because all waterbody crossings would be conducted in accordance with the Companies' Procedures and the terms of any applicable federal or state permits. Impacts would also be avoided by the use of HDDs at many waterbody crossings. Aquatic habitat impacts at other crossing locations would be temporary, as crossings would be generally completed in less than 48 hours. 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 ensure that any Project-related impacts to aquatic habitats would be minor and temporary. We are recommending that the Companies prepare and submit a detailed plan for completing a horizontal bore or HDD crossing of Sanders Creek to minimize potential impacts to mussel resources prior to the end of the Draft EIS comment period.

5.1.7 Threatened, Endangered, and Special Status Species

Based on consultations with the FWS and state wildlife management agencies, we identified 15 federally-listed threatened, endangered, or candidate species that could potentially be affected by the proposed Project. Twelve of these species and their preferred habitats either do not occur in the Project area or will be avoided by special construction methods such as HDD. We are recommending that the Companies not begin construction until FERC completes consultation with FWS. We are also recommending the Companies consult with the FWS regarding the Louisiana black bear to develop appropriate mitigation measures prior to construction. Furthermore, we are recommending that the Companies provide additional information to determine whether the red-cockaded woodpecker or American burying beetle are in the area and could be affected by the proposed Project prior to the end of the Draft EIS comment period.

Comments were provided by the FWS during our review of the proposed Project concerning the presence of interior least terns in the Project area and changes in ranges that are common for this species. The Companies would use qualified biologists to survey appropriate nesting habitat of interior least terns found within 650 feet of any proposed work areas, if construction activity would occur during the nesting season of May 15 to August 31. If any nesting sites are observed, the Companies would immediately notify FERC and reinitiate consultation with the FWS. In addition, based on FWS's comments, the Companies conducted a survey for the American burying beetle during the summer of 2007; although the survey report is pending, Gulf Crossing indicated that no American burying beetles were encountered during the field survey. We have recommended that Gulf Crossing file the completed survey report prior to the end of the Draft EIS comment period.

Other special status species, including an additional 23 species listed as endangered, threatened, imperiled, or rare by the states of Oklahoma, Texas, Louisiana, and Mississippi were identified through consultations with the ODWC, TPWD, LDWF and the MDWFP. We are recommending that all outstanding species-specific surveys be finalized and we complete all consultations with FWS, and the Companies receive approval to prior to construction.

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

Approximately 5,746.6 acres of land would be used during construction of the proposed Project, including 4,952.9 acres of land for the nominal 100-foot-wide pipeline construction right-of-way and additional temporary work spaces; 256.5 acres to construct the Mississippi Loop; 83.3 acres for the aboveground facilities; and 462 acres for pipe storage and contractor yards and access roads. Following construction, all affected areas outside the permanent pipeline right-of-way and aboveground facility sites would be restored and allowed to revert to preconstruction conditions and uses. During operation of the proposed Project, the proposed 60-foot-wide permanent pipeline right-of-way, aboveground facilities, and permanent access roads would require the use of approximately 2,568.7 acres of land. However, we

believe that a 60-foot-wide permanent right-of-way is not absolutely necessary for operation and maintenance of the proposed Project; therefore, in an effort to reduce permanent impacts, we are recommending that the Companies not exercise eminent domain authority granted under the NGA to acquire a permanent right-of-way greater than 50 feet in width. In addition, we are also recommending that the Companies utilize 10 feet of adjacent pipeline right-of-way in areas of rights-of-way collocation, where feasible. Fifteen residential structures would be located within 50 feet of construction work areas. The Companies have developed general construction procedures for the residential structures within 50 feet in order to avoid or minimize potential impacts to these structures. We are recommending Gulf Crossing provide information regarding crossing methods for Richard Adcock and W.W. Farm tracts.

The proposed Project would cross and be located in the vicinity of several recreation and special interest areas, including CRP and WRP lands administered by the FSA and the NRCS, respectively; the NRI-listed Blue River, Pearl River, and Bayou D'Arbonne; two Louisiana Natural and Scenic Rivers, Bayou Dorcheat and Bayou D'Arbonne; The Nature Conservancy's Caddo Black Bayou Preserve; Red River NWR; Louisiana Wetland Management District easements; and Bodcau State NWR; and various levees. To minimize impacts to these resources, Gulf Crossing would use special construction techniques such as HDD. We are recommending that Gulf Crossing evaluate the crossing of the WRP special project area (MP 340 to 343) and finalize consultations with NRCS regarding the WRP lands crossed between MP 352.6 and MP 353.1. In the instances where permits and approvals for proposed Project-related use and/or approved mitigation for potential impacts to these resources are incomplete, we are recommending that Gulf Crossing complete consultations with the applicable agencies and file site-specific permits, and plans to minimize, or mitigate impacts to these areas.

Visual resources along the proposed Project route would be affected by the installation of certain aboveground facilities and through the alteration of existing vegetative patterns associated with the clearing and maintenance of the construction and permanent pipeline rights-of-way. Gulf Crossing has committed to, and we are recommending that it finalize a screening plan for the Sherman Compressor Station. We are recommending that a similar site-specific screening plan also be developed for the Paris Compressor Station to minimize visual impacts to nearby residences.

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 small. 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 should be offset by increased tax revenues to local governments.

5.1.10 Cultural Resources

The Companies have initiated cultural resource surveys and prepared reports covering 327.5 miles of the proposed Project. The survey within the Texas portion of the proposed Project identified 10 new and 34 previously recorded prehistoric sites. One of the sites that would be affected by the proposed project is considered eligible for listing in the NRHP. Avoidance or further testing is recommended. Gulf Crossing identified 14 new and 12 previously recorded historic sites in the Texas portion of the proposed Project. None of the sites are considered eligible for listing in the NRHP, and we are not recommending any additional work.

The survey within the Oklahoma portion of the proposed Project identified two previously unrecorded prehistoric sites. The sites are not considered eligible for listing in the NRHP, and we are not recommending any additional work. Gulf Crossing identified four new and four previously recorded historic sites in the Oklahoma portion of the proposed Project. None of the sites are eligible for listing in the NRHP, and we are not recommending any additional work.

The survey within the Louisiana portion of the proposed Project identified four potentially eligible prehistoric sites for listing in the NRHP. Two of the sites would not be affected by the proposed Project, and two would be avoided. Gulf Crossing identified 36 new and one previously recorded historic sites in the Louisiana portion of the proposed Project. None of the sites are eligible for listing in the NRHP, and we are not recommending any additional work.

The survey within the Mississippi portion of the proposed Project identified one previously recorded prehistoric site. The site was not assessed for listing in the NRHP, but would not be affected by the proposed Project. No previously unrecorded historic sites or previously recorded historic sites were located within the Mississippi portion of the proposed Project.

Phase I Survey reports have been submitted to the SHPOs for review. Comments are still pending from the Oklahoma, Texas, Louisiana, and Mississippi SHPOs. The Companies have indicated that they will complete and file all of their outstanding survey reports. To ensure that all our responsibilities under Section 106 of the NHPA are met, we are recommending that the Companies defer construction until all surveys and evaluations 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

Increased equipment emissions associated with construction of the proposed Project would be temporary and localized, and these emissions are not expected to cause or contribute to a violation of applicable air quality standards. The proposed Sherman, Paris, Mira, and Sterlington Compressor Stations and the expansion of the Gulf South Harrisville Compressor Station 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 the Sherman, Mira, and Sterlington facilities would meet federal and state ambient air quality standards and permitting requirements based on screening level air dispersion modeling. Air emissions from operation of the Paris Compressor Station and the Gulf South Harrisville Compressor Station would meet federal and state ambient air quality standards based on refined air dispersion modeling.

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 for up to several days. However, we are recommending the Companies file with the Secretary emission values for the construction of the proposed compressor stations. As a result of continuous 24-hour operation, noise levels at 10 of the 33 HDD sites with nearby NSAs could be significantly increased. Six additional HDD sites have estimated impacts near 55 dBA L_{dn} and actual impacts may exceed this level during operation. To minimize this potential increase in noise levels and the resulting impacts to NSAs, we are recommending that the Companies file noise control plans for the 10 sites at which estimated noise levels exceed 55 dBA L_{dn}.

The proposed new compressor stations and the expanded Gulf South Harrisville Compressor Station would generate noise on a continuous basis during operations. However, the predicted noise

levels attributable to operations of the new compressor stations and the authorized units at the Gulf South Harrisville Compressor Station are not likely to result in significant effects on the NSAs nearest to those facilities. To ensure that noise levels are within acceptable limits, we are recommending that the Companies file noise survey reports within 60 days after placing the compressor stations in service to confirm the noise levels would be below 55 dBA L_{dn}.

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, the Companies 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, nonjurisdictional facilities associated with the proposed Project, and unrelated projects in the vicinity of the proposed pipeline route. Interstate natural gas pipeline projects occurring or that would occur in the counties and parishes affected by the proposed Project include the Carthage to Perryville Project (CP06-85-000); Gulf South's Southeast Expansion Project (CP07-32-000); Gulf South's East Texas to Mississippi Expansion Project (CP06-446-000); Midcontinent Express Project (CP08-6-000); the Southeast Header Supply Project (CP07-44-000), and the Regency Pipeline completed in 2005. Construction of the new projects is projected to occur between the years 2006 through 2008. 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.

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. 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, although construction and operation of the proposed project along with other projects in the area would result in cumulative impacts to environmental resources, we believe that these impacts would be limited.

5.1.14 Alternatives

We evaluated the No Action and Postponed Action alternatives, which would involve not building or deferring construction of the proposed Project facilities. While the No Action or Postponed Action alternative would eliminate or delay the short- and long-term environmental impacts identified in this EIS, the objectives of the proposed Project would not be met. We also evaluated the use of alternative energy sources and the potential effects of energy conservation, but these measures would not satisfy the need for the proposed Project.

Our analysis of system alternatives included an evaluation of whether existing or proposed natural gas pipeline systems would meet the proposed Project objectives while offering an environmental advantage over the proposed Project. While three existing pipeline systems (Gulf South, CEGT,

and NGPL) traverse the same general geographic area as the proposed Project, none of these systems would meet the capacity requirements or the geographic needs of the proposed Project without substantial system upgrades, such as new or increased compression and new pipeline looping, or the construction of additional pipelines to extend existing systems to the proposed Project origin or terminus. Similarly, the proposed Midcontinent Express Project, which would be located in the vicinity of the proposed Project, would not meet the capacity requirements of the proposed Project without substantial system upgrades. A single combined project to replace both the Midcontinent Express Project and the proposed Project was evaluated. The single system alterative would entail the use of a single 48-inch-diameter pipeline capable of transporting the natural gas quantities associated with both projects. Material unavailability, the need for larger construction equipment, and increased spoil quantities associated with the installation of a larger diameter pipe would lead to unavoidable construction delays, economic costs due to delivery delays, and safety issues. Further, several operational issues such as different delivery points and rate schedules for the two projects would make the single system alternative impractical.

During the Pre-Filing review process, refinements were made to the initial proposed route and construction methods to avoid or significantly reduce the impacts on sensitive resources. We evaluated two major route alternatives to the proposed Project route which did not offer a significant environmental advantage over the proposed Project route. Therefore, we eliminated these route alternatives from further consideration.

Additionally, smaller-scale route variations were identified to resolve or reduce construction impacts to localized, specific resources and to accommodate landowner requests. Gulf Crossing identified 76 route variations to the initially planned route that have been incorporated into the proposed Project route since their application filing. We have evaluated each of these minor route variations and considered their associated environmental consequences as part of our Project environmental analysis. Further, we identified and evaluated 10 additional route variations in response to public and agency comments received during the pre-filing and scoping comment periods for the proposed Project. Of these, we are recommending the use of three route variations that we believe would reduce environmental impacts. To further minimize WRP impacts, we are recommending Gulf Crossing evaluate a route variation that crosses the WRP property located in Fannin County, Texas. We anticipate that minor alignment shifts would be made prior to and during construction to accommodate other such site-specific circumstances and landowner concerns. Neither Gulf South nor agency or landowner comments identified preferred alternatives to the Mississippi Loop which is currently collocated with the recently approved East Texas to Mississippi Expansion Project. Further, due to this collocation and no identified areas of concern, we are not recommending any route alternatives for the Mississippi Loop.

We 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. We did not identify any alternative sites for the proposed M/R or MLV facilities that would offer a significant environmental advantage to the proposed sites. Further, the new Sterlington Compressor Station and Harrisville Compressor Station addition would be constructed within the footprint of existing facilities and no alternatives were evaluated for these sites. We did evaluate alternative sites for the proposed Sherman, Mira, and Paris Compressor Stations, based in part on public comments received during the pre-filing and scoping periods and did not find that any reasonable alternative sites should be required.

5.2 STAFF'S RECOMMENDATIONS

If the Commission issues a Certificate for the proposed Project, we recommend the Commission's Order include the following measures as specific conditions. Recommendations 1 through 21 pertain to both Gulf South and Gulf Crossing (the Companies), 22 through 44 pertain to Gulf Crossing, and 45

pertains to Gulf South. We believe these measures would further minimize and mitigate the environmental impacts resulting from the construction and operation of the proposed Project.

1. The Companies shall follow the construction procedures and mitigation measures described in their application, supplemental filings (including responses to staff information requests), and as identified in the EIS, unless modified by the Order. The Companies 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 whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the Project. This authority shall allow:

    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**, the Companies 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 EI's 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**, the Companies 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.

    The Companies' 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. The Companies' right of eminent domain granted under NGA Section 7(h) does not authorize them to increase the size of their 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. The Companies 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, and 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, which 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**, the Companies shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how the Companies will implement the mitigation measures required by the Order. The Companies must file revisions to the plan as schedules change. The plan shall identify:

   a. how the Companies 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 onsite 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. what training and instructions the Companies will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel change), with the opportunity for OEP staff to participate in the training session;

   e. the company personnel (if known) and specific portion of the Companies' organization having responsibility for compliance;

   f. the procedures (including use of contract penalties) the Companies will follow if noncompliance 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 onsite personnel;

(3) the start of construction; and

(4) the start and completion of restoration.

7. The Companies shall employ one or more EIs per construction spread. The EIs 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. The Companies shall hire and fund a third-party compliance inspection contractor to work under the direction of the Commission Staff for the sole purpose of monitoring compliance with environmental conditions and mitigation measures. The Companies shall develop a draft monitoring program and obtain proposals from potential contractors to provide monitoring services and file the program and proposals with the Secretary for review and approval of the Director of OEP. The monitoring program shall include:

   a. the employment by the contractor of one full-time, on-site monitor per construction spread;

   b. the employment by the contractor of a full-time compliance manager to direct and coordinate with the monitors, manage the reporting system, and provide technical support to the FERC Staff;

   c. a systematic strategy for the review and approval by the contract compliance manager and monitors of variances to certain construction activities as may be required by the Companies based on site-specific conditions;

   d. maintenance of files for the daily and/or weekly inspection reports submitted by both the third-party monitors and the Companies' environmental inspector; and

   e. a discussion of how the monitoring program can incorporate and/or be coordinated with the monitoring or reporting that may be required by other federal and state agencies.

9. The Companies 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 noncompliance 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 noncompliance, 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 the Companies from other federal, state or local permitting agencies concerning instances of noncompliance, and the Companies' response.

10. The Companies 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.

11. **Within 30 days of placing the certificated facilities in service**, the Companies 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; or

    b. identifying which of the certificate conditions the Companies have 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 noncompliance.

12. The Companies 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**, the Companies shall mail the complaint procedures to each landowner whose property would be crossed by the Project.

    a. In their letter to affected landowners, the Companies shall:

        (1) provide a local contact that the landowners should call first with their concerns; the letter shall 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 the Companies' Hotline; the letter shall indicate how soon to expect a response; and

        (3) instruct the landowners that, if they are still not satisfied with the response from the Companies' Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030, or at hotline@ferc.gov.

    b. In addition, the Companies shall include in their weekly status report a copy of 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.

13. The Companies 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 2.2.2*)**

14. **Prior to construction**, the Companies shall file with the Secretary, for review and written approval by the Director of OEP, revised alignment sheets, plans, and associated agreements indicating the use of at least 10 feet of adjacent pipeline rights-of-way as part of their 100 foot-wide nominal construction right-of-way. Where this is not possible, the Companies shall identify the locations by milepost and provide site-specific justification explaining why the adjacent right-of-way cannot be used. **(*Section 2.2.2*)**

15. **Prior to construction,** the Companies shall file with the Secretary for review field-delineated locations and resulting construction and operational impacts for all affected wetlands. ***(Section 3.4.1.2)***

16. **Prior to construction,** the Companies shall finalize consultations with, MDWFP, ODWC, TPWD, LDWF, Nature Conservancy, NRCS; local soil conservation agencies; and other appropriate agencies regarding seeding and vegetation restoration practices for the proposed Project. The Companies shall file with the Secretary for review a report that describes the outcome of these consultations and identifies the agency-recommended seeding and vegetation restoration practices. ***(Section 3.5.2.1)***

17. The Companies shall develop a Migratory Bird Plan in consultation with FWS in order to determine pre-construction survey requirements, impacts, and mitigation for migratory birds, including bald eagles and any nests that may be encountered within or in close proximity to the construction right-of-way. The finalized document shall be filed with the Secretary **prior to construction**. (***Section 3.6.1.5***)

18. The Companies shall **not begin construction activities until**:

    a. The Companies complete any outstanding species-specific surveys and the FERC received comments form the FWS regarding the preconstruction survey reports;

    b. The FERC completes formal consultation with the FWS; and

    c. The Companies receive written notification from the Director of the OEP that construction and/or use of conservation measures may begin. ***(Section 3.7.1)***

19. The Companies shall consult further with the ODWC, TPWD, LDWF, and MDWFP regarding state-listed and rare species to determine the need for additional surveys or mitigation that would further minimize or avoid potential impacts to such species. The Companies shall file the results of that consultation, as well as any associated survey reports, with the Secretary **prior to construction**. (***Section 3.7.2***)

20. The Companies 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. The Companies file with the Secretary cultural resources survey and evaluation reports; any necessary treatment plans; and the Texas, Oklahoma, Louisiana, and Mississippi 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 the Companies in writing that treatment plans/procedures may be implemented and/or construction may proceed.

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

21. **Prior to the end of the Draft EIS comment period**, the Companies shall file with the Secretary emission values for the construction of the proposed compressor stations. **(*Section 3.11.1.3*)**

22. **Prior to construction,** Gulf Crossing shall complete consultations with TPWD, ODWC, and LDWF regarding any proposed waterbody crossing activities that would occur outside of the window specified in the FERC Procedures. Gulf Crossing shall file with the Secretary for review and written approval by the Director of the OEP any written approvals or correspondence received from the agencies. ***(Section 3.3.2.2)***

23. **Prior to the end of the Draft EIS comment period**, Gulf Crossing shall file with the Secretary for review an evaluation of an HDD extension of the proposed drill at MP 282.9 that would minimize impacts to forested wetland WL-LA-266-B. The evaluation shall include a feasibility assessment and revised extra workspace requirements associated with the longer drill. ***(Section 3.4.1.4)***

24. **Prior to the end of the Draft EIS comment period**, Gulf Crossing shall evaluate alternative construction approaches or route variations to minimize impacts for PFO wetland crossings at MPs 176.6, 216.8, 238.3, 266.7, 295.5, 301.1, 302.4, 303.7, 310.0, 317.1, 317.5, and 321.9. The evaluations shall consider the use of HDDs, reduced construction rights-of-way, or other methods to minimize impacts. Route variations that would either avoid these large, forested wetland areas or that would minimize the wetland crossing lengths shall also be included in the evaluations. ***(Section 3.4.2)***

25. **Prior to the end of the Draft EIS comment period**, Gulf Crossing shall file with the Secretary and NRCS for review the construction and operational impacts to high quality cypress-tupelo forest associated with the route variation to avoid WRP lands located between MP 295.5 and MP 297.0. ***(Section 3.4.2.1)***

26. Gulf Crossing shall complete its consultation with the COE on construction methods through the Bodcau WMA and file documentation of the results to the Secretary **prior to construction within the WMA. (*Section 3.6.1.5*)**

27. **Prior to construction across the Caddo Black Bayou Preserve**, Gulf Crossing shall complete its consultation with the Nature Conservancy regarding impacts and mitigation

within the Preserve and file documentation of the results with the Secretary. (***Section 3.6.1.5***).

28. Gulf Crossing shall perform a pre-construction survey to determine if colonial nesting waterbird rookeries are occupied during the construction period. Gulf Crossing shall avoid construction activities within 1,000 feet of occupied rookeries during the period of September 1 through February 15. (***Section 3.6.1.5***)

29. **Prior to the end of the Draft EIS comment period**, Gulf Crossing shall prepare and submit for review a detailed plan for completing a horizontal bore or HDD crossing of Sanders Creek (MP 55.4). The plan shall include an analysis of the location and dimensions of any extra workspaces needed to complete the crossing. (***Section 3.6.2.1***)

30. Gulf Crossing shall complete the survey report for the red-cockaded woodpecker in accordance with the FWS survey protocol and file the completed survey report, documentation of its consultation with FWS, and conservation measures necessary to minimize impact to the red-cockaded woodpecker with the Secretary **prior to the end of the comment period for the Draft EIS**. (***Section 3.7.1***)

31. Gulf Crossing shall complete its consultation with FWS to develop measures to minimize impacts to Louisiana black bear habitat connectivity near the Tensas NWR and to determine if additional Louisiana black bear surveys would be necessary for the Sulphur, Tensas, and Pearl River Basins. Gulf Crossing shall file the completed survey report for the Louisiana black bear, documentation of its consultation with FWS, and the Operation and Maintenance Procedures with the Secretary, **prior to the end of the comment period for the Draft EIS**. (***Section 3.7.1***)

32. **Prior to the end of the Draft EIS comment period,** Gulf Crossing shall file with the Secretary the completed survey report for the American burying beetle and documentation of its consultation with FWS ,. (***Section 3.7.1***)

33. **Prior to construction**, Gulf Crossing shall file with the Secretary the applicable levee crossing permits and authorizations issued by the Red River, Ouachita River, and Little Boeuf Bayou Levee Districts, Louisiana Levee Board, Louisiana Department of Transportation and Development, and COE. ***(Section 3.8.4)***

34. **Prior to construction**, Gulf Crossing shall file with the Secretary the applicable documentation of meetings, special considerations, and agreements reached as a result of consultation with the Louisiana Management District regarding methods used to traverse the Richard Adcock and W.W. Farms tracts. ***(Section 3.8.4)***

35. **Prior to construction**, Gulf Crossing shall evaluate the affected WRP special project area from MP 340.0 to MP 343. Gulf Crossing shall file with the Secretary for review all applicable documentation of meetings, special considerations, and agreements reached as a result of consultation with the FWS and NRCS regarding construction activities on the three WRP parcels in Madison Parish. ***(Section 3.8.4)***

36. **Prior to construction**, Gulf Crossing shall file with the Secretary the applicable documentation of meetings, special considerations, and agreements reached as a result of consultation with NRCS regarding construction activity on the WRP land located between MP 352.6 and MP 353.1. ***(Section 3.8.4)***

37. **Prior to construction**, Gulf Crossing shall file with the Secretary for review and written approval by the Director of the OEP, a final site screening plan for the Sherman Compressor Station. Include copies of any screening plan agreements and correspondence with community groups. ***(Section 3.8.6.2)***

38. **Prior to construction,** Gulf Crossing shall file with the Secretary for review and written approval by the Director of OEP, a final site screening plan for the Paris Compressor Station. ***(Section 3.8.6.2)***

39. **Prior to construction**, Gulf Crossing shall file with the Secretary a noise control plan for the HDD entry and exit locations for the 10 sites listed in Table 3.11.2-1. The plan shall list the estimated noise impact at the NSAs at each location along with all noise mitigation which Gulf Crossing would implement during drilling activity to reduce noise at the NSAs as follows: During HDD operations Gulf Crossing shall monitor noise and make all reasonable efforts to restrict noise increases from HDD operations to no more than 10 dBA L_{dn} above ambient if the resulting impact is above 55 dBA L_{dn}. **(*Section 3.11.2.3*)**

40. Gulf Crossing shall file with the Secretary **no later than 60 days after placing the Sherman, Paris, Mira, and Sterlington Compressor Stations into service** compressor station noise surveys. If the noise attributable to the operation of the Sherman, Paris, Mira, or Sterlington Compressor Stations at full load exceeds an Ldn of 55 dBA at any nearby NSAs, Gulf Crossing shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year of the in-service date**. Gulf Crossing 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 3.11.2.3*)**

41. **Prior to the end of the Draft EIS comment period,** Gulf Crossing shall file with the Secretary an evaluation of a route variation that crosses the WRP property located in Fannin County, Texas, at its minimum width along Texas Highway 79 before turning south to parallel the Fannin-Lamar County line to an intersection with the originally proposed Project route. ***(Section 4.4)***

42. Gulf Crossing shall incorporate the Johnson Route Variation as described in the Draft EIS into its proposed Project. If Gulf Crossing is unable to adopt this route variation, Gulf Crossing shall file with the Secretary a detailed description of the technical or environmental reasons why this route variation is not practical or preferable compared to the proposed Project route. **(*Section 4.4.5*)**

43. Gulf Crossing shall incorporate the Water Oak-Willow Oak Route Variation as described in the Draft EIS into its proposed Project. If Gulf Crossing is unable to adopt this route variation, Gulf Crossing shall file with the Secretary a detailed description of the technical or environmental reasons why this route variation is not practical or preferable compared to the proposed Project route. **(Section 4.4.6)**

44. Gulf Crossing shall incorporate the Alexander Route Variation as described in the Draft EIS into its proposed Project. If Gulf Crossing are unable to adopt this route variation, Gulf Crossing shall file with the Secretary a detailed description of the technical or environmental reasons why this route variation is not practical or preferable compared to the proposed Project route. **(*Section 4.4.9*)**

45. Gulf South shall file with the Secretary **no later than 60 days after placing the authorized units at the Harrisville Compressor Station into service** compressor station noise surveys. If the noise attributable to the operation of the authorized units exceeds an Ldn of 55 dBA at any nearby NSAs, Gulf South shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 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 3.11.2.3*)**