

5.0 CONCLUSION AND RECOMMENDATIONS

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

We have determined that construction and operation of the proposed Carthage to Perryville Project would result in limited adverse environmental impacts based on information provided by CEGT and data developed from information requests; field investigations; literature research; alternatives analysis; comments from federal, state, and local agencies; and input from public groups and individual citizens.

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, CEGT's proposed mitigation, and our additional 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 is 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 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 we have recommended that CEGT develop an unanticipated discovery plan in the event that paleontological resources were found during construction. Oil and natural gas extraction is common in Panola County, Texas, and DeSoto Parish, Louisiana, but construction and operation of the proposed Project is not expected to have a negative impact on exploitable oil or natural gas resources. Though the proposed Project pipeline would conflict with current and future extraction of mineral resources at a sand pit and gravel pit, compensation for any losses or limitations on future expansion of mining operations there would be addressed during easement negotiations with the affected landowners.

5.1.2 Soils

The proposed Project would traverse a variety of soil types and conditions, and about 50 percent of the soils that would be affected by the proposed pipeline are classified as prime farmland. 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. CEGT would implement the mitigation measures contained in our Plan 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 topsoil stripping, compaction testing and treatment, and monitoring of crop yields to ensure that those yields in areas affected by construction were similar to that in adjacent, undisturbed areas. Additionally, we have recommended that CEGT further limit potential impacts to soil resources by developing site-specific SPCC Plans and contaminated materials management plans.

5.1.3 Water Resources

Construction and operation of the proposed Project would be conducted in accordance with our Procedures, including the relatively minor modifications approved in this EIS. The proposed Project would avoid impacts to sole-source aquifers, wellhead protection areas, drinking water wells, and springs. Other potential impacts to groundwater resources would be avoided or minimized by implementing the requirements in our Procedures, site-specific SPCC Plans, and our recommendation that CEGT file information concerning any private or domestic water wells damaged and repaired as a result of construction activities.

The proposed Project would cross 104 perennial streams, 136 intermittent streams, and 6 ponds. As proposed, most minor and intermediate waterbody crossings and two crossings of ponds classified as major waterbodies would be accomplished 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 22 waterbodies. Waterbodies that would be crossed using HDD include each of the eight major and/or navigable streams crossed by the proposed Project route; two designated Louisiana Natural and Scenic Rivers (Black Lake Bayou and Saline Bayou); one Nationwide Rivers Inventory (NRI)-listed stream (the Sabine River); the river most likely to contain habitat for federally-listed species (the Red River); and three of the four impaired waterbodies that occur along the proposed Project route. All waterbody crossings would be accomplished in accordance with our Procedures and the terms of any applicable federal or state permits that may be granted.

No surface water intakes are located within three miles downstream of the proposed Project waterbody crossings, and there are no records of contaminated sediments in any of the waterbodies that would be crossed by the proposed Project. Accidental spills during construction and operations would be prevented or adequately minimized through implementation of our Procedures, CEGT's general SPCC Plans, and our recommendation for development of site-specific SPCC Plans. Additionally, CEGT's DDCP (Appendix D) describes the procedures that would be implemented to monitor for, contain, and clean up any inadvertent releases of drilling fluids during HDD operations.

CEGT 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 at aboveground facility sites. CEGT would also avoid or adequately minimize potential effects to waterbodies resulting from hydrostatic testing by implementing our Procedures, limiting contact of test waters to new pipe, and avoiding the use of potentially toxic test water additives. Additionally, hydrostatic test waters would be sampled and treated, if needed, prior to discharge.

5.1.4 Wetlands

Construction of the proposed Project pipeline would affect 154 wetland areas resulting in a total of approximately 127.7 acres of wetland disturbance, including approximately 86.5 acres of forested wetlands and approximately 41.2 acres of scrub-shrub or emergent wetlands. No wetlands would be affected by the proposed aboveground facilities. During operations, approximately 50.9 acres of wetlands, including approximately 34.8 acres of currently forested wetlands, would be contained within the maintained portion of the permanent pipeline right-of-way. Special-status wetlands potentially affected by the proposed Project include lands included in the NRCS-administered WRP and a TPWD-designated Water Oak-Willow Oak Series associated with the Sabine River in Panola County, Texas.

CEGT would avoid and minimize wetland impacts by reducing the construction right-of-way width through wetlands to 75 feet and reducing the maintained portion of the permanent pipeline right-of-way in wetlands to 30 feet. Following construction, affected wetlands located outside the maintained

portion of the permanent pipeline right-of-way would be allowed to revert to preconstruction conditions. Impacts to emergent and scrub-shrub wetlands would be minor overall as regeneration to preconstruction condition would occur rapidly in these areas, and maintenance of the permanent pipeline right-of-way would not result in a permanent conversion of emergent wetlands. Impacts to forested wetlands would be either permanent or long-term due to the slow regeneration time of forested areas.

CEGT would minimize unavoidable wetland impacts by completing all wetland crossings in accordance with our Procedures with several approved variances and by complying with the terms and conditions of any Section 404 authorizations issued by the COE, including the provisions of any required wetland compensatory mitigation. We have also included multiple recommendations that would sufficiently minimize overall impacts to several high quality, forested wetlands identified by the resource agencies, including further consultations with NRCS regarding impacts to WRP lands, development of site-specific wetland crossing plans, implementation of an HDD, and adoption of a route variation. Additionally, CEGT would compensate for all unavoidable wetland impacts through purchase of wetland mitigation bank credits in the area of the proposed Project.

5.1.5 Vegetation

In addition to the wetland vegetation resources described above, construction and operation of the proposed Project would affect four primary types of upland, vegetative communities: upland forest, pine plantation, agricultural land, and open lands. Approximately 64 percent of the upland vegetation resources affected during construction would consist of pine plantation and upland forest, with agricultural and open lands making up the remainder. Several extensive forested tracts and areas containing exotic and/or invasive plant species would also be crossed by the proposed pipeline route, as well as vegetative communities of special concern, including NRCS-administered CRP lands, an FWS-administered conservation easement, and a forested portion of the Ouachita WMA.

CEGT would restore all disturbed vegetated areas in accordance with our Plan and Procedures, and the specific recommendations of local agencies and soil conservation services. Affected agricultural and open lands would typically 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. Given these measures, and our recommendations for CEGT to consult with appropriate agencies regarding impacts to vegetation communities of special concern and develop a plan to control the spread of invasive plant species in areas affected by construction, effects to upland vegetation would be effectively minimized.

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 most substantially, 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 existing utility rights-of-way where possible to minimize impacts to previously undisturbed vegetation and wildlife habitats, and CEGT would further minimize impacts to wildlife habitats through implementation of our Plan and Procedures.

The waterbodies that would be traversed by the proposed Project provide habitat for a variety of aquatic species, including warm water 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 our 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 many 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 habitats would be minor and temporary.

5.1.7 Threatened, Endangered, and Special Status Species

Based on consultations with FWS, TPWD, and LDWF and review of existing records, six federally listed endangered, threatened, or candidate species were identified that would potentially occur in the vicinity of the proposed Project. Based on our review of these species and the survey reports prepared by CEGT, we have determined that these species and their preferred habitats either do not occur along the proposed Project route or their potential habitats would be avoided through special construction procedures. With implementation of CEGT's proposed construction and mitigation plans and our recommendations, we believe that construction and operation of the proposed Project would have no effect on the Louisiana pine snake and no adverse effect the red-cockaded woodpecker, interior least tern, bald eagle, Louisiana black bear, and pallid sturgeon. The FWS has provided a letter of concurrence with regards to potential Project impacts to federally listed threatened and endangered species.

In addition to federally listed species, other special status species, including migratory bird species, colonial nesting water birds, and an additional 25 species listed as either endangered, threatened, imperiled, or rare by the states of Texas and Louisiana, were also identified through consultations with TPWD, LDWF, and FWS. As a result of further consultations with TPWD, that agency indicated that no additional field surveys or mitigation measures would be required in association with Texas-listed special status species. We have recommended that CEGT conduct additional consultations with LDWF, to determine the need for additional surveys or mitigation to substantially minimize or avoid potential impacts to special status species in Louisiana.

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

Construction of the proposed Project would affect approximately 2,497.9 acres of land, including 1,956.7 acres for the pipeline construction right-of-way; 34.6 acres for the aboveground facilities; and 506.6 acres for extra work areas (extra workspaces, pipe storage and contractor yards, and access roads). Approximately 63 percent of the approximately 2,226.2 acres that would be contained within the pipeline construction right-of-way and extra workspace areas is currently characterized as pine plantation and forestland, with agricultural and open lands accounting for an additional 34 percent of this acreage. Following construction, all affected areas outside the permanent pipeline right-of-way and aboveground facility sites would be restored and allowed to revert to approximately 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 1,248.0 acres.

A single structure, a shed, would be located within the proposed pipeline construction right-of-way, but no residences would be located within 50 feet of any construction work area. CEGT would mitigate any unavoidable impacts to structures located within the construction work area per the terms of the agreements negotiated during the easement acquisition process.

The proposed Project would potentially affect several recreation and special interest areas, including CRP and WRP lands administered by the NRCS; an FWS-administered conservation easement; two wildlife management areas owned and operated by LDWF, the Ouachita and Bayou Pierre WMAs; the NRI-listed Sabine River; and two Louisiana Natural and Scenic Rivers, Black Lake Bayou and Saline Bayou. In those instances where permits and approvals for Project-related use and effects to these resources are outstanding, we have included recommendations that CEGT consult with the applicable agencies and file documentation of any agency recommended measures to avoid, minimize, or otherwise mitigate those effects.

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. However, the impact is not expected to be significant in most areas. We have included recommendations for CEGT to develop site-screening plans for several aboveground facilities, including the ANR M/R Station and three of the proposed mainline valve sites, to visually screen those facilities from nearby residences.

5.1.9 Socioeconomics

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 do 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 effects would be offset by increased tax revenues to local governments. The proposed Project would have positive impacts on local spending, employment, and tax income during construction and operation, but such contributions would likely be minimal. 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.

5.1.10 Cultural Resources

CEGT conducted cultural resource surveys at the proposed compressor station sites, associated aboveground ancillary facilities, and access roads and along the majority of the proposed pipeline route and extra work areas. Within the Texas portion of the proposed Project, CEGT identified eight prehistoric sites, including six considered potentially eligible for listing in the NRHP. Each of the potentially eligible sites would be completely avoided by the proposed pipeline route, and the remaining two sites are not considered eligible for listing in the NRHP. CEGT identified nine prehistoric sites within the Louisiana portion of the proposed Project, but all are considered ineligible for listing on the NRHP. Eight previously recorded sites also occur within the Louisiana portion of the proposed Project. Of these, six sites would not be relocated. CEGT recommended that archaeological clearance be granted for the remaining two sites as intact cultural deposits would not be affected by pipeline construction activities within the proposed construction corridor. Three historic cemeteries are also located near the proposed Project, but all would be entirely avoided by the proposed pipeline route and no impacts to those resources are anticipated.

CEGT also contacted nine Native American groups regarding the proposed Project, and although some requested additional consultation or information, none have expressed opposition to the proposed Project. We have recommended that CEGT 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 Panola and Vernon 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 the compressor stations would meet Federal or state ambient air quality standards.

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. We have recommended that CEGT file a residential HDD noise analysis, mitigation, and compliance plan to ensure that NSAs are not exposed to excessive noise during nighttime HDD operations. 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. Additionally, we have included recommendations for completion of post-construction noise surveys and implementation of additional mitigation measures, if required, to ensure that actual noise levels resulting from Project operations would not exceed significant or existing levels.

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, CEGT 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

We identified three types of past, present, and reasonably foreseeable future projects that would potentially result in a cumulative impact when considered with the proposed Project. These include other natural gas transmission pipelines in the area, nonjurisdictional facilities associated with the proposed Project, and transportation projects in the vicinity of the proposed pipeline route. 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.

We believe that impacts associated with the proposed Project would be relatively minor overall, and we have included recommendations in this EIS to further reduce the environmental impacts associated with the Project. 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. 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

As an alternative to the proposed action, 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 CEGT 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. While two existing pipeline systems are located in the general vicinity of the proposed Project, none of these have sufficient available capacity to carry the volumes of the proposed Carthage to Perryville Project without substantial system upgrades, such as new or increased compression and new pipeline looping. Similarly, it is anticipated that construction and operational impacts associated with new pipeline system alternatives would be similar to that of the proposed Project. Consequently, no system alternatives are considered to provide environmental benefits superior to the proposed Project. We also examined the feasibility of replacing the two proposed pipeline projects currently under our review in northern Louisiana with a single pipeline system that would transport the combined volumes of both projects. However, we do not consider the single pipeline system to represent a reasonable alternative, and we eliminated it from further consideration.

We also evaluated three major route alternatives to the proposed Project route. However, none of these would offer significant environmental advantages over the proposed Project route, and we eliminated them from further consideration. Lastly, we considered route variations to resolve or reduce construction impacts to localized, specific resources. CEGT identified a total of 34 miscellaneous minor route variations to the initially planned route that have been incorporated into the proposed Project route, as filed with the FERC. We have evaluated each of these minor route variations and considered their associated environmental consequences as part of our environmental analysis of the proposed Project. Additionally, we identified and evaluated seven route variations in response to public comments received during the pre-filing, scoping, and Draft EIS comment periods for the proposed Project. Of these, we recommended two route variations, which would reduce waterbody and wetland impacts and were therefore considered to offer significant environmental advantages to the proposed Project route. Additionally, it is anticipated that minor alignment shifts would be made prior to and during construction to accommodate such site-specific circumstances as landowner concerns.

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 location 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 did not identify any alternative sites for the proposed meter/regulator or mainline valve facilities that would offer a significant environmental advantage to the proposed sites. Though no significant environmental consequences were identified in association with either of the proposed compressor station sites, we did evaluate two alternative sites for the Panola Compressor Station in response to a public comment received during the scoping period. Neither of the sites evaluated were considered to be environmentally preferable to the proposed site, and further, both would be less desirable from an engineering and constructability perspective.

In conclusion, we have determined that the proposed Carthage to Perryville Project, as modified by our recommended mitigation and minor route variation, is the preferred alternative.

5.2 FERC STAFF'S RECOMMENDED MITIGATION

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 mitigate the environmental impacts associated with the construction and operation of the proposed Project.

1. CenterPoint Energy Gas Transmission Company (CEGT) 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 Environmental Impact Statement (EIS), unless modified by the Order. CEGT must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (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 the Office of Energy Projects (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**, CEGT shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (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 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**, CEGT 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.

CEGT'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. CEGT'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. CEGT 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**, CEGT shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how CEGT will implement the mitigation measures required by the Order. CEGT must file revisions to the plan as schedules change. The plan shall identify:
 - a. how CEGT 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 CEGT 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 CEGT's organization having responsibility for compliance;
 - f. the procedures (including use of contract penalties) CEGT 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. CEGT 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. CEGT shall file updated status reports with the Secretary on a **biweekly** 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 CEGT from other federal, state or local permitting agencies concerning instances of noncompliance, and CEGT's response.
9. CEGT must receive written authorization from the Director of OEP **before commencing service** for each phase of 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**, CEGT 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 CEGT 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 noncompliance.
11. CEGT 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**, CEGT shall mail the complaint procedures to each landowner whose property would be crossed by the Project.
 - a. In its letter to affected landowners, CEGT 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 CEGT'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 CEGT's Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030, or at hotline@ferc.gov.
 - b. In addition, CEGT shall include in its 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.
12. **Prior to construction**, CEGT shall file with the Secretary, for review and written approval by the Director or OEP, a complete environmental training and monitoring plan that is developed and finalized in consultation with appropriate resource agencies. (*Section 2.5*)
13. CEGT shall develop, in consultation with the appropriate agencies, a plan that outlines procedures for documenting unanticipated discoveries of paleontological resources, including

- photographing and describing specimens, recording detailed location data, and reporting the resources to the Louisiana Geological Survey, the Louisiana Museum of Natural History, and/or the Texas Bureau of Economic Geology. **Prior to construction**, this plan shall be filed with the Secretary for review and written approval by the Director of OEP. (*Section 3.1.3*)
14. **Prior to construction**, CEGT shall file with the Secretary, for review and written approval by the Director of OEP, site-specific SPCC Plans to govern handling, containment, and cleanup of hazardous materials during construction of the proposed Project. (*Section 3.2.3*)
 15. CEGT shall develop a hazardous and contaminated materials management plan that identifies the procedures that would be implemented during construction to identify, test, treat, and dispose of such materials in accordance with the appropriate state and federal regulations. This plan shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**. (*Section 3.2.3*)
 16. CEGT shall file a report with the Secretary, **within 30 days of placing its pipeline facilities in service**, identifying all private or domestic water wells/systems damaged by construction and how they were repaired. The report shall include a discussion of any complaints concerning the well yield or quality and how each problem was resolved. (*Section 3.3.1.3*)
 17. **Prior to construction**, CEGT shall file with the Secretary for review and written approval by the Director of OEP access road information specifying the locations and dimensions of all new or improved access roads that would cross waterbodies, provide a plan for crossing (including culvert sizing) and mitigation developed in consultation with the appropriate agencies, and file documentation that the necessary permits and landowner approvals have been obtained. (*Section 3.3.2.1*)
 18. CEGT shall not begin an open-cut crossing of any of the waterbodies proposed to be crossed using horizontal directional drilling (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. CEGT 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*)
 19. **Prior to construction**, CEGT shall file site-specific construction plans for all extra workspace areas that would be located within 50 feet of a wetland with the Secretary for review and written approval by the Director of OEP. (*Section 3.4.2.2*)
 20. CEGT shall consult with FWS and LDWF to develop detailed, site-specific wetland crossing plans for the Cannisnia Lake Basin (MP 42.3 to MP 42.9), Castor Creek (MP 74.8 to 74.9), and Six Mile Creek (MP 79.8 to 79.9) forested wetlands and file those plans with the Secretary for review and written approval by the Director of OEP **prior to construction at each crossing**. Each site-specific plan shall include a reduction in the width of the proposed construction right-of-way and any associated extra temporary workspace areas that considers all practicable methods to minimize the width of the cleared right-of-way, including: stove-pipe, drag-section, and push-pull flotation ditch (if sufficient water is present). Each plan shall also depict the location of any mature, specimen trees (i.e., greater than 24 inches diameter at breast height) within and adjacent to the proposed construction work areas, and identify how impacts to such trees might be avoided (*Section 3.4.3*)

21. CEGT shall implement an HDD crossing rather than the proposed construction plan between MP 112.9 and MP 113.6 to avoid impacts to the Castor Creek (MP 112.9 to MP 113.5) forested wetland, State Highway 34, and an adjacent ammonia pipeline. CEGT shall file site-specific crossing plans, details, and plan and profile drawings for the HDD crossing with the Secretary for review and written approval by the Director of OEP **prior to construction of the crossing.** (*Section 3.4.3*)
22. CEGT shall consult with TPWD to develop a compensatory mitigation plan to offset any unavoidable impacts to the TPWD-designated Water Oak-Willow Oak Series not covered by its compensatory wetland mitigation plan, and file copies of the Water Oak-Willow Oak Series compensatory mitigation plan with the Secretary **prior to construction.** (*Section 3.4.3.2*)
23. **Prior to construction,** CEGT shall consult with the COE, FWS, LDWF, TPWD, and other applicable agencies to further develop its compensatory wetland mitigation plan; and file copies of all associated permits and compensatory mitigation requirements with the Secretary. (*Section 3.4.4*)
24. CEGT shall consult with LDWF, TPWD, local soil conservation agencies, and other appropriate agencies, regarding seeding and vegetation restoration practices for the proposed Project. **Prior to construction,** CEGT 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. (*Section 3.5.2*)
25. **Prior to construction,** CEGT shall consult with LDWF and file with the Secretary copies of any agreements for Project-related use and impacts to lands held in the Louisiana Wildlife Management Area (WMA) program. In that filing, CEGT shall also document how it would implement any LDWF-recommended measures to avoid, minimize, or mitigate any unavoidable impacts to WMA lands. (*Section 3.5.3.1*)
26. CEGT shall develop a Nuisance Species Plan that incorporates the FWS recommended measures for control of Chinese tallow tree and identifies the specific measures that would be implemented during construction and operations to control that species, and file that plan with the Secretary for review and written approval by the Director of OEP **prior to the start of construction.** Following approval, CEGT shall also submit copies of the Nuisance Species Plan to FWS, TPWD, and LDWF. (*Section 3.5.3.3*)
27. CEGT shall consult with LDWF to develop measures (if required) to be implemented during Project construction that would avoid or minimize the potential for Project impacts to Louisiana black bear. Copies of all related consultation, including any recommended mitigation measures, shall be filed with the Secretary **prior to construction.** (*Section 3.7.1*)
28. **Prior to construction,** CEGT shall consult with LDWF to determine the need for additional surveys or mitigation that would substantially minimize or avoid potential impacts to state-listed species. CEGT shall file with the results of that consultation, as well as any associated survey reports, with the Secretary and receive written approval from the Director of OEP prior to implementing any agency recommended mitigation measures. (*Section 3.7.2.1*)
29. CEGT shall continue to coordinate with Delhi Municipal Airport officials and the FAA to monitor whether the runway extension would be planned and funded prior to construction of

the proposed Project. If such plans are confirmed, then CEGT shall file documentation of associated consultations with airport officials and the FAA and provide a site-specific construction plan that addresses any concerns identified by those entities with the Secretary **prior to construction.** (*Section 3.8.1.3*)

30. **Prior to construction,** CEGT shall file the applicable levee crossing permits and authorizations issued by the Red River Levee District and COE with the Secretary. (*Section 3.8.1.3*)
31. CEGT shall consult with the NRCS to identify the extent and location of all Conservation Reserve Program (CRP) and Wetland Reserve Program (WRP) lands that would be affected by construction and operation of the proposed Project and obtain any required Compatible-Use Permits or other approvals. CEGT shall file documentation of all NRCS recommended measures to avoid and minimize impacts to CRP and WRP lands with the Secretary **prior to construction.** (*Section 3.8.5*)
32. CEGT shall develop a site screening plan for Mainline Valve (MLV) #4 (MP 51.7), MLV #10 (MP 134.6), and MLV #11 (MP 153.3) and file the plan with the Secretary for review and written approval by the Director of OEP **prior to construction.** (*Section 3.8.6.2*)
33. CEGT shall develop a site-screening plan for the ANR Meter/Regulator (M/R) Station (MP 164.4) and file that plan with the Secretary for review and written approval by the Director of OEP **prior to construction.** (*Section 3.8.6.2*)
34. CEGT 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. CEGT files with the Secretary cultural resources survey and evaluation reports, any necessary treatment plans, and the Texas and Louisiana 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 CEGT 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*)

35. **Prior to construction,** CEGT shall file a residential HDD noise analysis, mitigation, and compliance plan with the Secretary for review and approval by the Director or OEP. This plan shall demonstrate whether noise due to nighttime drilling operations would be below a day-night sound level (L_{dn}) of 55 decibels on the A-weighted scale (dBA) at the nearest noise sensitive area (NSA) and specify all noise mitigation equipment necessary to reduce noise levels to less than 55 dBA L_{dn} . The plan shall detail how CEGT would ensure compliance and confirm that where surveys indicate that noise attributable to nighttime drilling would exceed 55 dBA L_{dn} , CEGT shall:

- a. stop drilling and mitigate the noise at the affected NSAs to reduce noise levels to 55 dBA L_{dn} or less; or
 - b. offer temporary housing to occupants of affected NSAs until L_{dn} levels at the NSAs are reduced to 55 dBA L_{dn} or less. (*Section 3.11.2.2*)
36. CEGT shall conduct noise surveys to verify that the noise attributable to operation of the compressor stations does not exceed an L_{dn} of 55 dBA at any NSA following the installation of each authorized compressor unit, and file the results of those surveys with the Secretary **no later than 60 days** after placing each authorized compressor unit in service, or prior to the start of the next phase of construction, whichever is sooner. If the noise attributable to operation of the compressor stations exceeds 55 dBA L_{dn} at any NSA, CEGT shall file a report on what additional noise controls are needed to meet that level and install any required controls **within one year** of the in-service date of the associated compressor unit or prior to the start of the next phase of construction, whichever is sooner. CEGT shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls or prior to the start of the next phase of construction, whichever is sooner. (*Section 3.11.2.2*)
37. CEGT shall adopt the Alexander Farms Route Variation, as identified in Figure 4.4.1-1 of the Final EIS, rather than following the proposed Project route between MP 12.7 and MP 14.9. (*Section 4.4.1*)
38. CEGT shall adopt the Robertson Route Variation, as identified in Figure 4.4.6-1 of the Final EIS, rather than following the proposed Project route between MP 132.5 and MP 133.8. (*Section 4.4.6*)