

**Office of
Energy Projects**

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Texas Eastern Transmission, LP

**Docket Nos. CP18-485-000
CP18-486-000
CP18-505-000**

Cameron System Abandonment Project

Environmental Assessment

Washington, DC 20426

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TECHNICAL ABBREVIATIONS AND ACRONYMS

| | |
|-------------------|---|
| BSEE | Bureau of Safety and Environmental Enforcement |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| CO ₂ | carbon dioxide |
| CO _{2e} | carbon dioxide equivalents |
| Commission | Federal Energy Regulatory Commission |
| CPRA | Louisiana Office of Coastal Protection and Restoration Authority |
| EA | environmental assessment |
| EFH | essential fish habitat |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| E&SCP | Erosion and Sedimentation Control Plan |
| FERC | Federal Energy Regulatory Commission |
| GHG | greenhouse gases |
| GWP | global warming potential |
| HAP | hazardous air pollutants |
| LA-82 | State Highway 82 |
| LDNR | Louisiana Department of Natural Resources |
| LDWF | Louisiana Department of Wildlife and Fisheries |
| NAAQS | National Ambient Air Quality Standards |
| NEPA | National Environmental Policy Act |
| NGA | Natural Gas Act |
| NMFS | National Marine Fisheries Service |
| NPDES | National Pollutant Discharge Elimination System |
| OCM | LDNR Office of Coastal Management |
| OCSLA | Outer Continental Shelf Lands Act |
| OEP | Office of Energy Projects |
| PCB | polychlorinated biphenyls |
| Plan | FERC's <i>Upland Erosion Control, Revegetation, and Maintenance Plan</i> |
| PM _{2.5} | particulate matter with an aerodynamic diameter less than or equal to 2.5 microns |
| PM ₁₀ | particulate matter with an aerodynamic diameter less than or equal to 10 microns |
| Procedures | FERC's <i>Wetland and Waterbody Construction and Mitigation Procedures</i> |
| Project | Cameron System Abandonment Project |
| SHPO | State Historic Preservation Office |
| SO ₂ | sulfur dioxide |
| Spill Plan | Spill Prevention Control and Countermeasure Plan and Preparedness, Prevention, and Contingency Plan for Construction Projects |
| Texas Eastern | Texas Eastern Transmission, LP |

USACE
USFWS
USGS
VOC
%g

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Geological Survey
volatile organic compounds
percentage of the acceleration of gravity

A. PROPOSED ACTION

1.0 Introduction

The Federal Energy Regulatory Commission (Commission or FERC) is the lead federal agency responsible for evaluating applications filed for authorization to construct, operate, or abandon interstate natural gas pipeline facilities. The FERC staff has prepared this environmental assessment (EA) to analyze the environmental effects of the natural gas pipeline facilities proposed for abandonment by Texas Eastern Transmission, LP (Texas Eastern). We¹ prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA) (Title 40 of the Code of Federal Regulations, Parts 1500-1508 [40 CFR 1500-1508]), and with the Commission's implementing regulations under 18 CFR 380.

The EA is an important and integral part of the Commission's decision on whether to issue Texas Eastern an authorization to abandon the proposed facilities. Our principal purposes in preparing this EA are to:

- identify and assess potential impacts on the natural and human environment that could result from implementation of the proposed action;
- assess reasonable alternatives to the proposed action that would avoid or minimize adverse effects to the environment; and
- identify and recommend specific mitigation measures, as necessary, to minimize environmental impacts.

On May 17, May 18, and June 18, 2018, Texas Eastern filed three applications under Docket Nos. CP18-485-000, CP18-486-000, and CP18-505-000, respectively, to abandon its Cameron System in Cameron Parish, Louisiana, and federal offshore waters in the Gulf of Mexico.

In Docket No. CP18-485-000, Texas Eastern proposes to abandon non-jurisdictional gathering facilities in federal offshore waters in the Gulf of Mexico near Louisiana. Specifically, Texas Eastern proposes to abandon in place approximately 20.5 miles of 12-inch-diameter offshore gathering lateral (Line 41-A-5-B); abandon metering and regulating station number 72135, receipt point 73646, and delivery point 73702; and abandon by removal all related appurtenant facilities. These facilities were initially certificated by the Commission as jurisdictional under Docket No. CP81-512; however, the Commission later determined these facilities were non-jurisdictional gathering facilities.² The Bureau of Safety and Environmental Enforcement (BSEE) is the agency that administers offshore federal properties. Texas Eastern filed its application requesting BSEE's approval to decommission Line 41-A-5-B on May 11, 2018; BSEE approved the project effective May 14, 2018.

¹ "We," "us," and "our" refers to environmental staff of the Commission's Office of Energy Projects.

² *Natural Gas Pipeline Company of America*, 94 FERC ¶ 61,186 (2001).

In Docket No. CP18-486-000, Texas Eastern proposes to abandon a non-jurisdictional natural gas supply lateral and related facilities in federal offshore waters in the Gulf of Mexico near Louisiana. Specifically, Texas Eastern proposes to abandon in place approximately 12.0 miles of 16-inch-diameter offshore supply lateral (Line 41-A-8); and abandon by removal receipt point number 73674, meter number 71710, and all related appurtenant facilities. Texas Eastern filed its application requesting BSEE's approval to decommission Line 41-A-8 on May 11, 2018; BSEE approved the project effective May 14, 2018.

In Docket No. CP18-505-000, Texas Eastern proposes to abandon 212 miles of jurisdictional 30-inch-diameter pipeline, between the Grand Chenier Compressor Station in Cameron Parish, Louisiana to state and federal waters in the Gulf of Mexico. Texas Eastern's proposed project is referred to as the Cameron System Abandonment Project (Project).

The abandonment activities proposed in Docket Nos. CP18-485-000 and CP18-486-000 are entirely within federal offshore waters; therefore, the abandonments proposed in those applications qualify for a categorical exclusion from the requirement to prepare an environmental assessment or environmental impact statement pursuant to sections 380.4(a)(33)-(34) of the Commission's regulations. Therefore, these facilities will only be addressed in our Cumulative Impacts analysis below in section B.10.

2.0 Project Purpose and Need

Texas Eastern states the only gas flowing on the Cameron System is a very small quantity of casinghead gas that is incidental to crude oil production in the Gulf of Mexico and not from actual gas well production. Due to these extremely low flows, Texas Eastern can no longer adequately maintain this system using conventional maintenance techniques, namely, use of cleaning pigs with corrosion inhibitor. The burden of the increased operation and maintenance costs for the Cameron System falls on Texas Eastern's firm shippers who pay the cost of service for Texas Eastern's system. Further, the crude oil producers currently flowing on the Cameron System have readily available transportation alternatives.

Texas Eastern has previously abandoned parts of the Cameron System, including all or portions of Lines 41-A-7, 41-A-6, 41-A-11, and 41-A-5-B-2; Lines 41-B, 41-B-1, and 41-B-1-A; and Lines 53, 51-A, and 41-G, among others. Texas Eastern's proposed activities in Docket Nos. CP18-485-000, CP18-486-000, and CP18-505-000 would abandon the remaining facilities on the Cameron System.

Section 7(b) of the Natural Gas Act (NGA) specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission's jurisdiction without the Commission first finding that the abandonment will not negatively affect the present or future public convenience and necessity. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact (as described here), long-term feasibility, and other issues concerning a proposed project.

3.0 Proposed Facilities to Abandon

Texas Eastern proposes to abandon Line 41 from the Grand Chenier Compressor Station south to Platform WC 272, along with the six offshore lateral pipelines, Line 41-A (includes Line 41-A-EST), Line 41-A-2, Line 41-A-4, Line 41-A-5, Line 41-A-6 (includes Line 41-A-6-EXT), and Line 41-E. The Cameron System would be abandoned in place with the exception of an approximately 700-foot-long section of Line 41 from the Oak Grove shore area into state waters south of Lower Mud Lake. This section would be abandoned by removal due to the pipeline being partially exposed from erosional activity near the shore and lack of minimum required depth of cover. A summary of the pipelines to be abandoned in place is included in table 1. All the associated metering facilities and appurtenances would be abandoned in place or by removal, as summarized in table 2. Figures 1 and 2 depict the Project location and the pipeline to be abandoned by removal.

Texas Eastern proposes to abandon by removal two Cameron System offshore platforms, Platform WC 272 and Platform EC 245, in compliance with the Outer Continental Shelf Lands Act (OCSLA) regulations related to facilities deemed no longer useful for operations. Texas Eastern would remove and transport the platforms onshore to be salvaged upon receipt of approval from the BSEE and other applicable regulatory agencies.

| Table 1 Proposed Pipeline Facilities to be Abandoned in Place | | | |
|---|-----------------|------------|---------------------------------|
| Pipeline/Location | Milepost | | Total Length (miles) |
| | Begin | End | |
| Line 41 | | | |
| Cameron Parish Onshore to WC 272 | 46.91 | 108.64 | 61.73 |
| Line 41-A and Line 41-A-EXT | | | |
| EC 245 to WC 272 | 0.00 | 25.97 | 25.97 |
| EC 286 to EC 245 | 26.07 | 45.14 | 19.07 |
| Line 41-A-2 | | | |
| VR 265 to EC 245 | 0.00 | 32.20 | 32.20 |
| Line 41-A-4 | | | |
| EC 270 to EC 286 | 0.00 | 6.61 | 6.61 |
| Line 41-A-5 | | | |
| EC 321 to EC 286 | 0.00 | 10.98 | 10.98 |
| Line 41-A-6 and Line 41-A-6-EXT | | | |
| WC 513 to EC 245 | 0.00 | 15.43 | 15.43 |
| WC 548 to WC 513 | 5.66 | 20.05 | 14.39 |
| Line 41-E | | | |
| EC 245 to WC 272 | 0.00 | 25.97 | 25.97 |
| Project Total | | | 212.35 |
| EC = East Cameron VR = Vermilion WC = West Cameron EXT = extension | | | |

**Table 2
Proposed Aboveground Facilities to be Abandoned**

| Aboveground Facility | Pipeline | Milepost | Abandonment Method |
|--|-----------------|-----------------|---------------------------------|
| Mainline Valve Facilities | | | |
| 41-108 | Line 41 | 46.91 | Abandon by Removal ^a |
| 41-117 | Line 41 | 47.13 | Abandon by Removal ^a |
| 41-42 | Line 41 | 49.64 | Abandon by Removal ^a |
| Meter and Regulation Facilities | | | |
| 72897 (Desco Tap) | Line 41 | 50.40 | Abandon by Removal ^a |
| 73632 | Line 41 | 62.73 | Abandon by Removal ^a |
| 71777 | Line 41 | 74.69 | Point Abandonment ^b |
| 73396 | Line 41 | 83.36 | Point Abandonment ^b |
| 71778 | Line 41 | 93.56 | Point Abandonment ^b |
| 73292 | Line 41 | 99.12 | Abandon by Removal ^a |
| 71779 | Line 41 | 104.13 | Point Abandonment ^b |
| 71969 | Line 41-A | 22.56 | Point Abandonment ^b |
| 71735 | Line 41-A | 45.89 | Point Abandonment ^b |
| 73905 | Line 41-A-2 | 14.71 | Point Abandonment ^b |
| 73392 | Line 41-A-2 | 28.27 | Point Abandonment ^b |
| 73072 | Line 41-A-2 | 28.27 | Abandon by Removal ^a |
| 71579 | Line 41-A-2 | 32.15 | Abandon by Removal ^a |
| 73696 | Line 41-A-4 | 6.61 | Abandon by Removal ^a |
| 74696 | Line 41-A-4 | 6.61 | Abandon by Removal ^a |
| 73035 | Line 41-A-5 | 1.70 | Point Abandonment ^b |
| Offshore Platforms | | | |
| EC 245 | NA | NA ^d | Abandon by Removal ^c |
| WC 272 | NA | NA ^d | Abandon by Removal ^c |

EC = East Cameron
NA = Not Applicable
VR = Vermilion
WC = West Cameron

a/ "Abandonment by Removal" includes the removal of valves, pig launchers, aboveground piping, fences, and electronic gas measurement equipment as applicable. With the exception of Mainline Valves 41-108, 41-117, and 41-42, and the Desco Tap, abandonment by removal of the meter and regulation facilities would involve removal of equipment from third party platforms.

b/ "Point Abandonment" includes no physical work or removal of equipment. The receipt/delivery point is being abandoned with FERC.

c/ All platform piping, the heliport, equipment, and deck would be removed from the offshore platforms prior to cutting the piles and removing the platform pursuant to BSEE approval.

d/ The milepost for offshore platforms varies depending on the lateral reference point.

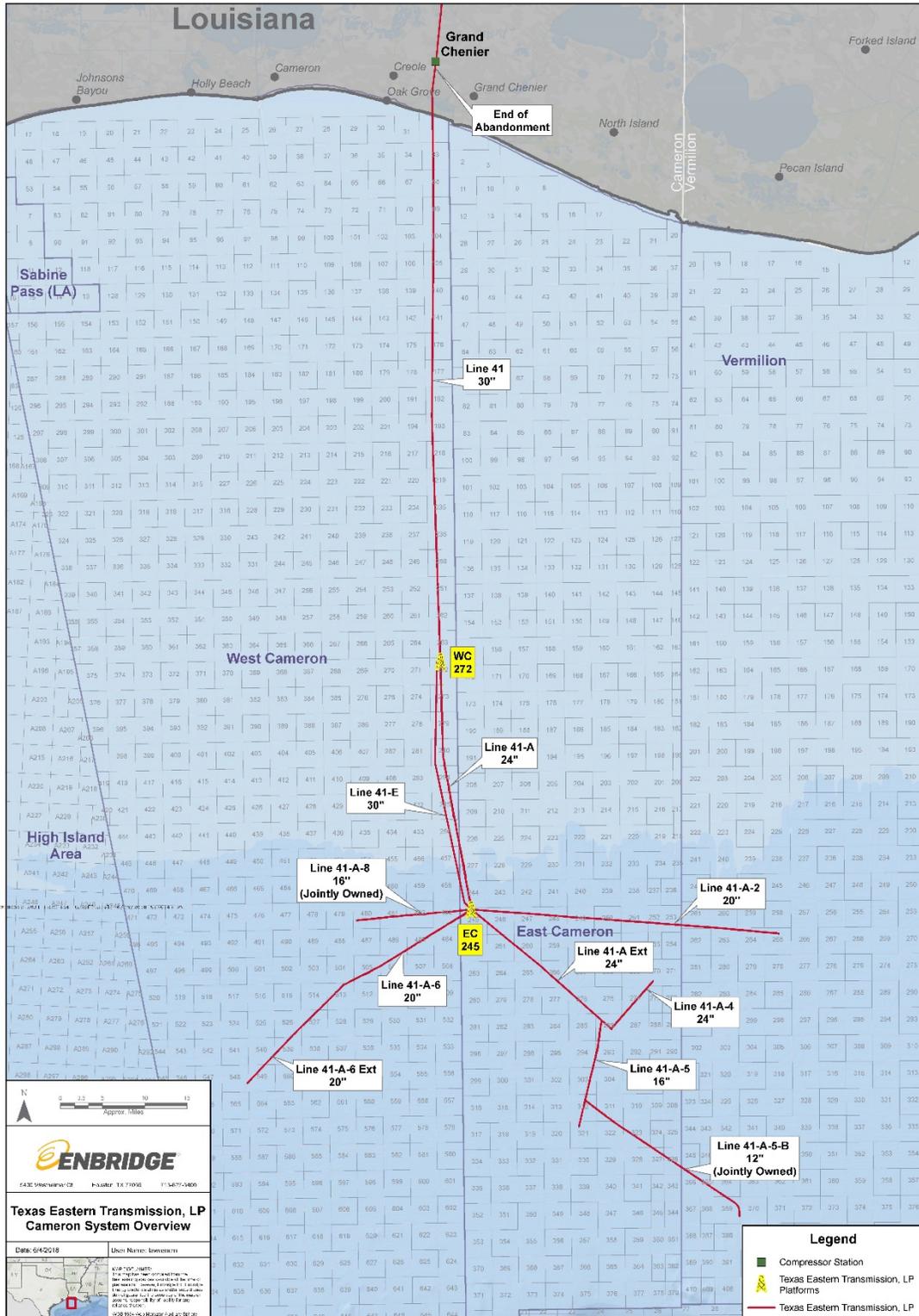


Figure 1: Project General Location Map

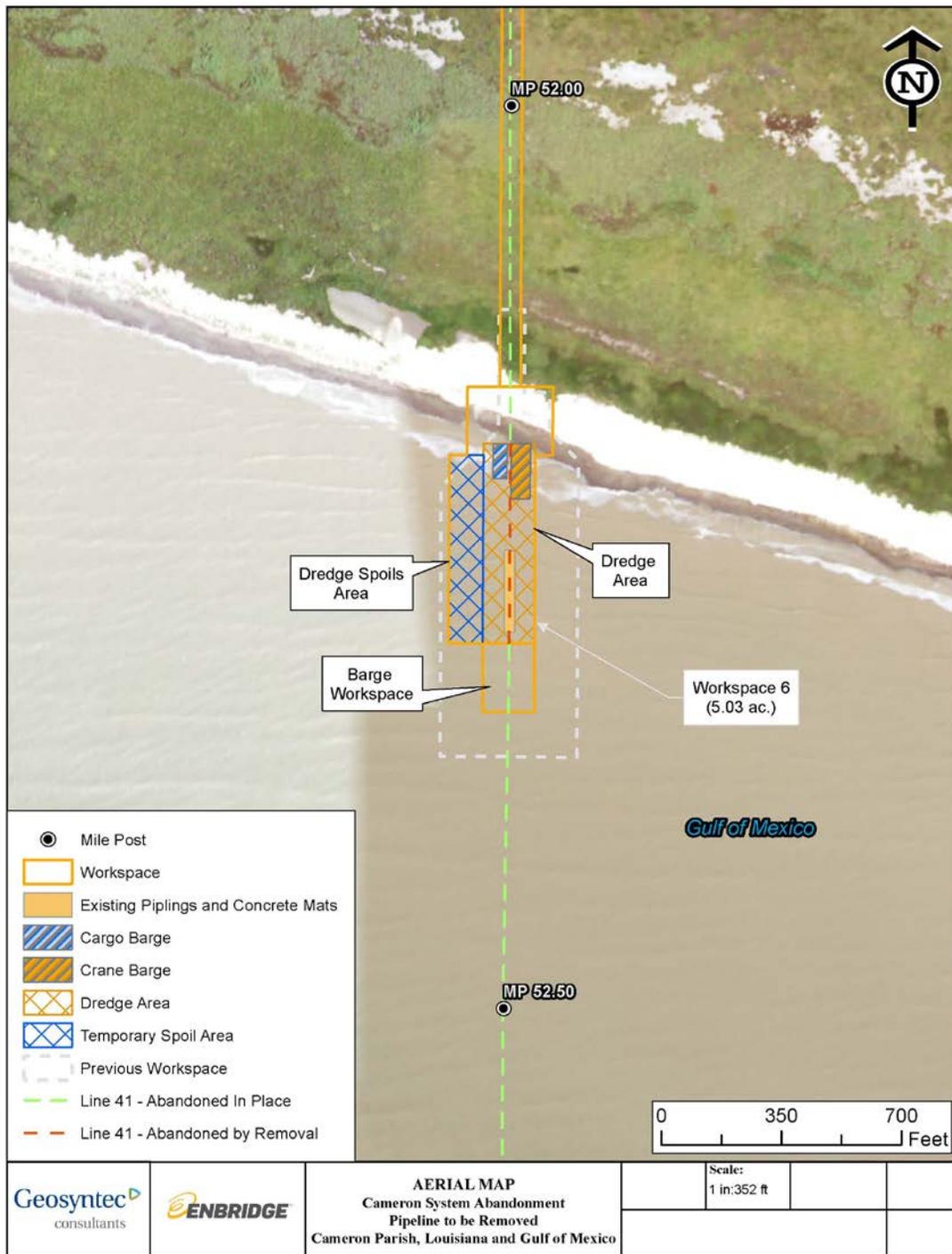


Figure 2: Pipeline to be Abandoned by Removal

4.0 Non-jurisdictional Facilities

Under section 7 of the NGA, the FERC is required to consider, as part of its decision to approve facilities under Commission jurisdiction, all factors bearing on the public convenience and necessity. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the Commission. These “non-jurisdictional” facilities may be integral to the need for the proposed facilities. As stated previously, the proposed facilities to be abandoned in Docket Nos. CP18-485-000 and CP18-486-000 are non-jurisdictional facilities and will be addressed in the Cumulative Impacts analysis. No other non-jurisdictional facilities are proposed as part of this Project.

5.0 Abandonment Procedures

Abandonment activities for the Project would take approximately 8 months to complete but would not occur consecutively. The proposed offshore activities at the platforms would take approximately 6 months to complete, including 2 months for platform removal. Offshore work would take place in two separate mobilizations, and would not be consecutive. Offshore activities related to platform removal may take place at night. The onshore and nearshore activities associated with pipeline removal at the beach would require approximately 2 months to complete. No work is proposed at night for the beach area. Additional onshore work would include 1 month at the Grand Chenier Compressor Station and 1 month at onshore road crossings and valve sites. Abandonment activities, excluding platform removal, are anticipated to occur June 2019 through October 2019. Platform removal is anticipated to occur May 2020 through July 2020.

Pipeline Facilities Abandonment Procedures

The pipeline alignment to be removed would be surveyed and identified prior to commencement of abandonment activities. Alignment identification includes staking the centerline of the pipeline, foreign line crossings, and the limits of the Project work area. Wetland boundaries and other environmentally sensitive areas would also be marked at this time.

Texas Eastern would run cleaning pigs through the six laterals in sequence, then Line 41 from Platform WC 272 to the Grand Chenier Compressor Station to remove residual fluids using seawater. Approximately 27 million gallons would be needed to completely fill Line 41 from Platform WC 272 to the Grand Chenier Compressor Station and the six offshore laterals. The residual fluids would be passed through an oil/water separator and stored in frac tanks at the compressor station until transferred offsite for commercial use (hydrocarbons) or disposed offsite (water). At this point, the pipelines would be filled with seawater and the residual fluids removed from the pipelines.

Once the residual fluids have been received at the Grand Chenier Compressor Station, a temporary pig launcher would be installed at the compressor station and a pig train would be pushed south from the compressor station to a point approximately 2,000 feet offshore using nitrogen gas. The pig train would displace approximately 2 million gallons of seawater offshore to the WC 272 platform where a dive service vessel equipped with water treatment and filtering equipment would treat the water for discharge offshore. In accordance with the National

Pollutant Discharge Elimination System (NPDES) General Permit for New and Existing Sources and New Discharges in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (Permit No. GMG290000), Texas Eastern would discharge the treated wastewater overboard in accordance with all applicable regulatory requirements. This would purge seawater from the onshore portion of the pipeline, allow for the removal of the approximately 700-foot-long section of pipe at the beach transition, allow for removal of onshore mainline valve assemblies, and permit proper sealing and burial of all designated onshore pipeline sections.

Once the line has been purged, Texas Eastern would remove the approximately 700-foot-long section of pipe from the shoreline into the Gulf of Mexico. This pipeline segment would be excavated, then cut, and capped. Additionally, the existing timber pilings and concrete mats covering an approximately 240-foot long segment of pipeline (included in the 700-foot segment to be removed in the Gulf of Mexico) would be removed during abandonment, as well as existing pipeline warning signs. The nearshore disturbed area would be approximately 20 feet wide where the concrete mats and pilings would be removed, and approximately 5 feet wide along the remainder of the pipeline, as Texas Eastern would lift the shallow and partially exposed pipeline from the seafloor with minimal trenching required to cut and cap the pipeline approximately 700 feet south of the shoreline. The removed section of pipe would be cut into manageable sections and loaded onto a barge and transported for disposal.

Texas Eastern would dredge an approximately 150-foot by 700-foot area to a depth of 6 feet to facilitate access for the cargo barge and crane barge to the shore. Spoils would be side casted along the west side of the dredged area and contained in accordance with permits received from the Louisiana Department of Natural Resources (LDNR) Office of Coastal Management (OCM) and U.S. Army Corps of Engineers (USACE). Following abandonment activities, the dredge spoils would be redeposited into the excavation as practicable.

Following abandonment activities, it is expected the areas within water where abandonment activities would take place will restore naturally through deposition of sediments by wave action. The excavated area at the shoreline would be restored as close to pre-construction contours and conditions as practicable. The LDNR OCM and USACE permits would require monitoring of the area until restoration is complete. Texas Eastern would plug the remaining portion of Line 41 offshore and the associated offshore laterals, and would cut, cap, and bury any pipeline risers below the seafloor.

Line 41 from the beach north to the Grand Chenier Compressor Station would be abandoned in place. Texas Eastern would excavate and remove a 4-foot-long section on either side of State Highway 82 (LA-82), grout the pipeline with flowable cement under LA-82, and cap it. The highway would remain open during construction, as there would be no surface impacts. Texas Eastern would take appropriate measures, such as posting warning signs, to maintain safe travel conditions at these work areas. The excavated areas would be backfilled once grouting is complete.

The offshore laterals would be abandoned in place and seafloor disturbances limited to areas previously affected by construction of the laterals. Dive crews would locate platform riser

transitions at the sea floor, cut out the tube turn, and install a plumbers plug on both ends of the abandoned pipeline. The plugged ends would be jetted down to a minimum of three feet below natural bottom and covered with 3:1 sand/cement bags.

The disturbed seafloor from nearshore and offshore abandonment activities would be allowed to return to natural contours by wave action and natural sediment redeposition. Onshore restoration and cleanup would begin after abandonment activities are complete and as soon as weather and site conditions permit. Following construction, the disturbed areas onshore would be restored to pre-existing contours as practicable; temporary construction mats or timber riprap would be removed; and wetlands would be allowed to revegetate naturally unless otherwise required by applicable permits. During cleanup, trash that remains on the right-of-way would be removed and disposed in accordance with applicable regulations. Organic refuse unsuitable for spreading over the right-of-way would be disposed of at an authorized facility. Texas Eastern would restore disturbed areas, fences, and roads to their original condition, as practicable; install permanent erosion controls; and implement revegetation measures in accordance with its Erosion and Sedimentation Control Plan (E&SCP), which incorporates the FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan (Plan)* and *Wetland and Waterbody Construction and Mitigation Procedures (Procedures)*.

Any pipe removed as part of abandonment would be salvaged by the general contractor. The onshore segment of Line 41 has asphalt coating, which may contain asbestos. Pipe coating samples would be collected and analyzed for asbestos-containing materials. Asbestos-containing materials would be handled and disposed of in accordance with Texas Eastern's Environmental Standard Operating Procedure 6-B-26, which contains special provisions to protect workers and the environment.

Aboveground Facilities Abandonment Procedures

The Project involves abandonment by removal or in place of metering facilities and related appurtenances along the abandoned portion of Line 41 and the six offshore laterals. Aboveground facilities to be abandoned by removal are included in table 2 above. Onshore aboveground facilities to be abandoned by removal include Mainline Valves 41-108, 41-117, and 41-42, and the Desco Tap. All other aboveground facilities are offshore. The aboveground facilities would be removed, along with all of the associated aboveground piping and fencing. The locations would be restored as close to pre-Project conditions as possible upon completion of abandonment activities.

Platform Abandonment Procedures

Texas Eastern would remove the platform piping, heliport, equipment, and platform deck. Then, a dive crew would sever the platform piles 15 feet below the mud line per OCSLA requirements using mechanical cutting methods.

6.0 Land Requirements

The Cameron System facilities would be abandoned in place or by removal within Texas Eastern's existing rights-of-way and Grand Chenier Compressor Station facility fenceline. Land

requirements for the Project would be limited to land used temporarily during onshore and nearshore abandonment activities. Offshore activities would be confined to existing offshore rights-of-way, and minor impacts associated with anchoring of offshore vessels used for the abandonment. No new permanent right-of-way or access roads are required for the Project.

Abandonment activities associated with the Project are anticipated to temporarily affect 6.9 acres of land onshore and nearshore. Following abandonment, Texas Eastern would revegetate onshore temporary work areas in accordance with Texas Eastern’s E&SCP. Texas Eastern would retain and continue to maintain the pipeline right-of-way from the Grand Chenier Compressor Station to the beach following abandonment. The excavations within the marsh and beach would be filled and restored following removal of the approximately 700-foot-long section of Line 41. Areas disturbed during abandonment of the offshore pipelines would be allowed to restore naturally. Texas Eastern would relinquish the right-of-way within state and federal waters. A summary of the land requirements for the proposed Project is provided in table 3.

| Table 3 Land Requirements for the Cameron System Abandonment Project | | |
|---|--|---|
| Line 41 | Land Affected During Abandonment Activities (acres) | Land Affected During Operation (acres) |
| Workspace 1 ^a | 0.6 | 0.0 |
| Workspace 2 | 0.6 | 0.0 |
| Workspace 3 | 0.1 | 0.0 |
| Workspace 4 | 0.1 | 0.0 |
| Workspace 5 ^b | 0.0 | 0.0 |
| Workspace 6 ^a | 5.0 | 0.0 |
| Staging Area | 0.5 | 0.0 |
| Project Total | 6.9 | 0.0 |
| Notes: a/ Workspaces 1 and 6 are within saturated wetlands and would require use of timber mats within the workspace and sheet pile around the trench to stabilize the area for abandonment activities. b/ Workspace 5 would be utilized for construction access to the beach area by airboat along the existing pipeline right-of-way. No impacts are anticipated from boat travel within this area. | | |

7.0 Permits and Approvals

Texas Eastern would need to obtain all necessary permits, licenses, clearances, and approvals related to abandonment of the proposed Project. Table 4 lists the federal, state, and local permits and approvals Texas Eastern would obtain for this Project. Texas Eastern would be responsible for obtaining and abiding by all permits and approvals required for abandonment of the Project regardless if they appear in this table.

**Table 4
Permits and Approvals for the Cameron System Abandonment Project**

| Administrating Agency | Permit/Approval/Review | Status |
|--|--|--|
| Federal | | |
| Federal Energy Regulatory Commission | Authorization - Section 7(b) of the NGA | Submitted in June 2018 |
| Bureau of Safety and Environmental Enforcement | OCS Platform/Structure Removal (Platforms WC 272 and EC245) | Submitted June 15, 2018 |
| Bureau of Safety and Environmental Enforcement | Right-of-Way Relinquishment and Pipeline Decommissioning | Submitted June 14, 2018 |
| National Oceanic and Atmospheric Administration, National Marine Fisheries Service | Magnuson-Stevens Act, Essential Fish Habitat Consultation | Request for concurrence submitted June 15, 2018 |
| National Oceanic and Atmospheric Administration, National Marine Fisheries Service | Section 7 of the Endangered Species Act, Threatened and Endangered Species Consultation | Request for concurrence submitted August 1, 2018 |
| U.S. Fish and Wildlife Service | Section 7 of the Endangered Species Act, Threatened and Endangered Species Consultation | Concurrence received May 18, 2018 |
| U.S. Army Corps of Engineers | Clean Water Act, Section 10 and 404 Authorization | Anticipated submittal October 2018 |
| U.S. Environmental Protection Agency | NPDES General Permit for Discharges in the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (Permit No. GMG290000) | Anticipated submittal January 2019 |
| State | | |
| Louisiana Department of Natural Resources, Office of Coastal Management | Coastal Use Permit | Anticipated submittal October 2018 |
| Louisiana Department of Natural Resources, Office of Coastal Management | Coastal Zone Management Act Consistency Determination | Anticipated submittal October 2018 |
| Louisiana Department of Environmental Quality | Clean Water Act, Section 401 Water Quality Certification | Anticipated submittal October 2018 |
| Louisiana Office of Cultural Development | Section 106 of the National Historic Preservation Act Consultation | Concurrence received June 26, 2018 |
| Louisiana Department of Wildlife and Fisheries | State Threatened and Endangered Species Consultation | Consultation received June 22, 2018 |

B. ENVIRONMENTAL ANALYSIS

1.0 Geology

The Project area is within the West Gulf Coastal Plain physiographic unit. Regional topography generally mimics the physiographic unit, with the slope and overall elevation decreasing toward the Gulf of Mexico. The Project area is composed primarily of Holocene aged sedimentary rocks overlaid by Quaternary aged sediments of varying thickness.

The onshore component of the Project area is in Cameron Parish and traverses the Mermentau alloformation and coastal ridges of the Holocene aged (present to 11,650 years ago) portion of the Coastal Plain. The Mermentau alloformation and coastal ridges are composed of complexly interfingering and interbedded marine muds, sandy and shelly deposits, organic marsh clays, and lacustrine and bay muds.

Onshore portions of the Cameron System to be abandoned cross coastal ridges known as cheniers, which were formed by fluctuations in sea level and are defined as a beach ridge composed of clastic material resting on fine-grained material. The cheniers support diverse wildlife especially migratory birds as well as provide natural protection against storm surge and flooding. The majority of Line 41 would be abandoned in place, including the section crossing the chenier; therefore, no impacts on the chenier are anticipated.

Seaward of the shore it grades laterally into unnamed marine sediments. The pipelines offshore would be abandoned in place in federal and state waters, with the exception of approximately 700 feet of partially exposed pipeline near the beach. Proposed offshore seafloor disturbances are limited to those necessary for cutting and capping of the pipelines within a previously disturbed footprint, and the cutting of platform risers within previously disturbed footprint. No adverse impacts on federal or state offshore geology is anticipated.

Mineral Resources

Minerals produced state-wide include common clay, aggregates, gypsum, sulfur, and salt, and significant oil and gas production across the state. There are no active mining activities in the Project area. No offshore sand borrow areas or mineral resources were identified along the Project alignment. There are numerous offshore rigs, wells, and platforms within one mile of the Cameron System. The Cameron System crosses more than a dozen other pipelines and two submarine cables. Line 41 traverses one active lease onshore. However, none of these would be impacted by abandonment activities; therefore, no impacts on mineral resources would occur as a result of the Project.

Geologic Hazards

The potential for geologic hazards to significantly affect Project activities is low. This is both due to the nature of the geological hazards in the region and consequence of damage to the pipeline abandoned-in-place, given that it would be purged and cleaned of contaminants.

Karst Topography

The Coastal Plain of Louisiana is not underlain by rock types conducive for karst topography formation. Pseudokarst topography can be formed by some poorly consolidated sedimentary rocks within the coastal plain. However, based on the U.S. Geological Survey (USGS) karst and pseudokarst feature maps, neither environment is expected to be encountered in the Project area. Therefore, we conclude that there would not be impacts on the Project as a result of karst.

Seismicity

Most of Louisiana's earthquakes occur east of the Project site in the Coastal Plain where tectonic activity is still present. These earthquakes tend to be less than magnitude 4.0 on the Richter scale and cause little damage. The most significant historical earthquakes in Louisiana were a pair of earthquakes in 1694, which were estimated to have been 4.4 on the Richter scale. However, this earthquake epicenter was over 120 miles to the northwest in Sabine Parish.

Between 1843 to 1994, no earthquakes have been reported in Cameron Parish. The closest epicenter from the Project area is more than 10 miles south offshore of the Project area. The shaking during an earthquake can also be expressed in terms of the acceleration due to gravity. The regional seismic hazard map portrays seismic hazards calculated by the USGS as bands of color that represent the shaking level expressed as a percentage of the acceleration of gravity (%g), for a 50-year time interval, with a 2 percent probability of exceedance. The hazard value for the Project area is 0.02%g indicating that a structure built in the area would have a 2 percent probability of underground shaking of 0.02%g or higher in the next 50 years. Therefore, we conclude that impacts on the Project as a result of seismicity would not be significant.

Liquefaction and Landslides

The Project area is not within a mapped liquefaction hazard area; therefore, liquefaction is not anticipated to affect the Project.

Flooding and Scour

According to the Federal Emergency Management Agency's floodplain maps, the onshore segment of the pipeline is within the 100-year floodplain; therefore, flooding may occur the Project area. The potential risk of flooding to impact abandonment activities is low; however, onshore locations may be inaccessible for abandonment activities following a storm event until water levels recede and ground conditions allow equipment access.

It is expected the areas within water where abandonment activities would take place would restore naturally through deposition of sediments by wave action. In relation to onshore excavations, the excavated areas would be restored upon completion of the Project as close to pre-construction contours and conditions as practicable. The permits obtained from the LDNR OCM and USACE would require monitoring of the disturbed areas until restoration is complete. It is anticipated any scouring occurring within one year of the Project would be documented

during these monitoring events and subsequently the OCM or USACE would require Texas Eastern to perform repairs, thus reducing the risk of long-term scouring. Therefore, we conclude that impacts from flooding and scour would not be significant.

2.0 Soils

The Project would impact six soil types, including Creole mucky clay, Mermentau clay, Scatlake mucky clay, Peveto fine sand, Hackberry-Mermentau Complex, Hackberry, and Mermentau. Potential impacts on soils include erosion, reduction of soil productivity by mixing topsoil with subsoil, soil compaction and rutting due to heavy equipment traffic, and contamination from spills.

Ground disturbance for pipeline removal would include a 700-foot-long section of Line 41 nearshore and 4-foot sections on the north and south sides of LA-82. The section of Line 41 under the highway would be grouted in place per the Louisiana Department of Transportation and Development. Ground disturbance associated with removal of onshore aboveground facilities include Valve 41-117 approximately 700 feet south of the Grand Chenier Compressor Station, Valve 41-108 within the Grand Chenier Compressor Station, Valve 41-42 approximately 250 feet north of LA-82, and the Desco tap approximately 0.7 mile south of LA-82. Each valve and the tap would be removed, along with all associated aboveground piping and fencing.

In federal waters of the Gulf of Mexico, the proposed abandonment involves limited sediment disturbance to cut, cap, jet to 3 feet below natural bottom, and cover with 3:1 sand/cement bags. Additionally, sediment disturbance would occur for abandonment of the two offshore platforms where Texas Eastern would sever the piles 15 feet below the mudline. The limited disturbance to offshore sediments within the previously disturbed footprints for installation of the facilities are expected to settle rather quickly and not migrate to affect other nearby natural bottom locations. Due to the short period of time these areas would be disturbed and the small area of disturbance, offshore abandonment activities would have minor and temporary impacts on offshore sediments.

Texas Eastern would implement its E&SCP, which incorporates the FERC's Plan and Procedures. Temporary erosion control best management practices would be followed prior to ground disturbance and in accordance with Texas Eastern's E&SCP. Erosion control devices would be inspected daily in areas of active construction, weekly in areas of no construction, and within 24 hours of each 0.5-inch rainfall. Texas Eastern would repair or replace ineffective or damaged erosion control structures, as appropriate, within 24 hours of identification.

Texas Eastern would monitor restoration of disturbed areas, and would decompact soils as necessary during final restoration in accordance with its E&SCP. Texas Eastern would use a native seed mix to revegetate upland areas. In wetland areas, it is anticipated the areas would revegetate naturally within one growing season, thus Texas Eastern does not plan any vegetative seeding or planting. During monitoring of restoration success, if revegetation is not progressing, planting of native wetland species may be required by the LDNR OCM. Texas Eastern would comply with restoration requirements included in the Coastal Use Permit issued by the LDNR OCM. Texas Eastern would control the spread of noxious weeds by bringing clean equipment

into the work areas and removing soil and vegetation from equipment prior to removing the equipment from each work area.

Contamination from spills or leaks of fuels, lubricants, coolants, or solvents from construction equipment could adversely affect soils. Texas Eastern has developed a Spill Prevention Control and Countermeasure Plan and Preparedness, Prevention, and Contingency Plan for Construction Projects (Spill Plan), which includes preventative measures and clean up procedures, in the case of an inadvertent spill or leak. We have reviewed the plan and find it acceptable.

With implementation of the E&SCP, which includes the measures in FERC's Plan and Procedures, the Spill Plan, and the limited area of disturbance, we conclude that impacts on soils would be minimal and not significant.

3.0 Water Resources

Groundwater

The Chicot Aquifer system is the predominant groundwater resource in Cameron Parish. Generally, groundwater from the Chicot is semi-confined in the Project area, hard, and has increasing total dissolved solids with depth until saltwater is encountered. There are no U.S. Environmental Protection Agency (EPA) designated Sole Source Aquifers in the Project area.

One private water supply well is within the Grand Chenier Compressor Station. This active well is owned by Texas Eastern and is approximately 250 feet from proposed abandonment activities. Texas Eastern confirmed that no equipment or vehicle travel along the access road to the well or staging of equipment would occur in this area of the compressor station. Further, Texas Eastern would protect this well from abandonment activities by installing orange safety fencing around the well.

The excavation and other activities required for abandonment of the Cameron System are not anticipated to adversely affect the quantity or quality of groundwater resources in the Project area. Accidental spills and leaks could cause impacts on groundwater resources through introduction of contaminants. To minimize the potential for impact on groundwater, Texas Eastern has developed a Spill Plan that describes the management of potentially hazardous materials (*e.g.*, fuels, lubricants, and coolants) that would be implemented during construction. The Spill Plan includes procedures for spill response, training, mitigation measures/response, and storage and disposal of potentially hazardous materials.

Implementation of the Spill Plan would minimize the Project's potential short- and long-term impacts on groundwater resources. The Project area generally traverses rural areas where contaminated groundwater is not anticipated. In the unlikely event potential contamination is identified during Project work, Texas Eastern would stop work, notify the appropriate state and federal agencies, and proceed in accordance with local, state, and federal regulations. Therefore, we conclude that impacts on groundwater resources, if any, would not be significant.

Surface Water

Line 41 crosses the Mermentau River, Mud Lake, and state and federal waters of the Gulf of Mexico. The laterals are entirely within federal waters of the Gulf of Mexico. The pipeline would be abandoned in place beneath the Mermentau River and Mud Lake, and no work would be completed within the banks of either waterbody. Abandonment activities within waterbodies would include removal of approximately 700 feet of pipeline within the nearshore waters of the Gulf of Mexico; cutting and capping the offshore pipelines within the footprint of the area previously disturbed during the installation of the pipelines; and severing piles for removal of two offshore platforms. Dive crews would locate platform riser transitions at the sea floor, cut out the tube turn, and install a plumbers plug on both ends of the abandoned pipeline. The plugged ends would be jetted down to a minimum of three feet below natural bottom and covered with 3:1 sand/cement bags. Texas Eastern would sever the piles 15 feet below the mudline.

Open water activities proposed for the removal of approximately 700 feet of pipeline in nearshore waters would include working in shallow water, near shore, and would not impact navigation in major channels in the vicinity. Lines 41-A-6 and 41-A-6-EXT cross designated shipping fairways in the Gulf of Mexico. These laterals would be abandoned in place; therefore, no impacts on shipping fairways are anticipated.

No watershed protection areas would be crossed by the Project. Additionally, no potable surface water intake sources occur within three miles downstream of any waterbodies in the Project area. Based on review of the most recent 303(d) list for Louisiana, the Gulf of Mexico is not listed as an impaired waterbody, nor were any contaminated sediments identified. The Mermentau River, south of Workspace 4, has been listed as impaired for fecal coliform pathogens, Total Maximum Daily Load. No work would occur in the Mermentau River as part of the Project. Therefore, it is unlikely that the Project would contribute to the further impairment of this waterbody.

The temporary disturbance of unconsolidated bottom within gulf waters would include the trenching and removal of a small nearshore segment of pipeline within Workspace 6 and within the footprint of existing platforms in the Gulf of Mexico. Project activities could result in increased turbidity and sedimentation throughout the water column. Project activities that may contribute to increased turbidity include removal of piles and platforms via pulling, jetting, or through use of excavators. Activities at any one location would not last more than a few days. Therefore, increases in turbidity would be temporary and short-term and water quality would quickly return to pre-construction conditions following the completion of Project activities.

The impact of increased turbidity would depend on several factors including the ambient turbidity in the Project area at the time of construction, which is influenced by several factors such as wind speed and direction, sediment type, precipitation, coastal erosion, and anthropogenic activities, such as oyster dredging and boating. Texas Eastern would allow the disturbed seafloor from nearshore and offshore abandonment activities to return to natural contours by wave action and natural sediment redeposition. Texas Eastern would implement its E&SCP to minimize impacts on the aquatic environment during abandonment activities.

An approximately 150-foot by 700-foot area would be dredged to a depth of 6 feet to facilitate access for the cargo barge and crane barge to the shore. Spoil would be side cast along the west side of the dredged area. Following abandonment activities, the dredge spoils would be redeposited into the excavation as practicable. Dredging would cause a high amount of turbidity in the water column and temporarily cause mortality to benthic organisms. The excavated area at the shoreline would be restored as close to pre-construction contours as practicable. Turbidity would dissipate and the benthic habitat would recover within days to weeks.

Vessels that utilize anchors can also impact water bottoms and thus benthic habitats. The location in which an anchor drops, and any sweeping of the anchor cable that occurs as the vessel moves, could disturb the water bottom. Texas Eastern would use air boats to navigate through shallow marsh areas in the Project area. Air boats were selected to minimize impacts on the marsh and are recommended for use in the November 2000 guidance document *Marsh Buggy Use in Coastal Zone* prepared by the LDNR OCM. Texas Eastern would further minimize impacts on coastal wetlands by following the guidelines below.

- Limit airboat travel to a single pass at the start of the day and end of the day, unless unavoidable.
- Airboat operators would be instructed to alternate travel lanes to avoid creating ruts or channels.
- The airboats would be equipped with solid lubricant wearpads or coated with biodegradable lubricants.

Refueling construction equipment and heavy machinery during construction could result in a spill. Hazardous materials such as fuels, lubricants, or solvents could adversely impact surface waters if large volumes are released. In the event of a spill, Texas Eastern would implement its Spill Plan. Texas Eastern would obtain coverage under the NPDES General Permit for the discharge of treated wastewater purged from the onshore and nearshore portions of Line 41. Because of the limited area of disturbance, short duration that impacts would occur, implementation of the E&SCP and Spill Plan, we conclude that impacts on surface waters would be minimal and not significant.

Fisheries

Fish species common in the Project area include speckled trout, gulf flounder, striped mullet, and Atlantic croaker, as well as multiple types of cobia, mackerel, and drum. Coastal Louisiana is popular for commercial and recreational fisheries, including drum species, striped mullet, eastern oysters, blue crab, white shrimp, and brown shrimp. No adverse impacts on fisheries are anticipated due to fish species being highly mobile and the minor, temporary, and localized nature of the Project's abandonment activities.

Offshore and nearshore impacts on fisheries would be limited to approximately 700 linear feet of temporary seabed disturbance associated with the removal of the pipeline in state waters of the Gulf of Mexico, as well as cutting and capping the offshore pipelines and removal of the two offshore platforms in federal waters of the Gulf of Mexico. The nearshore disturbed area would be approximately 20 feet wide for a length of approximately 240 feet where the concrete

mats and pilings would be removed, and approximately 5 feet wide along the remainder of the 700-foot pipeline segment in state waters of the Gulf of Mexico. Texas Eastern would lift the shallow and partially exposed pipeline from the seafloor with minimal trenching required to cut and cap the pipeline approximately 700 feet south of the shoreline. Additionally, there would be minimal disturbance from jetting for cutting and capping the offshore pipelines, and severing the platform pilings. As stated previously, an approximately 150 foot by 700 foot area would be dredged to a depth of 6 feet to facilitate access for the cargo barge and crane barge to the shore which would cause disturbance to fish species in the area.

An amendment to Magnuson-Stevens Act of 1966 strengthened the ability of the National Marine Fisheries Service (NMFS) and associated councils to protect and conserve the habitat of certain marine, estuarine, and anadromous finfish, mollusks, and crustaceans. These specific habitats have been deemed as Essential Fish Habitat (EFH). EFH can be broadly defined as “those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity.” According to the National Oceanic and Atmospheric Administration’s EFH mapper, the entire coast of Louisiana is EFH for many species, including various sharks, red drum, various reef fish, and shrimp.

Project activities within EFH would involve minor trenching to expose a segment of pipeline for cutting and capping prior to removal. When practicable, the pipeline, piles, and platforms would be pulled from the seafloor without jetting or excavation to minimize turbidity impacts. Seawater utilized for the pigging of the pipelines would be obtained offshore using screened intakes to reduce potential impacts on fisheries resources. No impacts on fisheries are anticipated from the intake of the water.

Following the completion of Project activities, disturbed sediment would settle or dissipate and the area would continue to serve as EFH. Impacts on the water column would similarly be short-term and last a few days to weeks. Turbidity and disturbance caused by dredging would dissipate and the benthic habitat would recover within weeks. Boat traffic for the Project would not likely affect EFH as vessels with sufficient clearance from the water bottom and/or air boats would be used. Because Project activities would not result in a change in habitat type, EFH species and/or other species, including displaced invertebrates, would be able to return to the area shortly following the completion of Project activities. Due to these factors and because the footprint of the Project is minor, we conclude that effects on EFH would be temporary, likely indiscernible, and the Project would not adversely impact EFH.

Texas Eastern, acting as the Commission’s designated federal representative, initiated coordination with NMFS regarding EFH on June 15, 2018.

Wetlands

A field survey to delineate wetlands in the Project footprint was performed on April 26, 2018 in accordance with the three-parameter methodology outlined in the 1987 USACE Wetlands Delineation Manual (USACE, 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (USACE, 2012) and per guidance issued jointly by the EPA and the USACE. Wetlands were classified as

persistent, estuarine, intertidal emergent (E2EM1) and shrub-scrub (E2SS1); marine, tidally influenced unconsolidated shoreline of both sand and mud (M2US2); and subtidal marine wetlands with an unconsolidated mud bottom (M1UB3).

| Table 5 Wetlands Impacted by Project | | | |
|---|-------------------------------|--------------------------------------|--------------------------------------|
| Workspace | Wetland Classification | Temporary Impacts (acres) | Permanent Impacts (acres) |
| 1 ^a | E2SS1 | 0.6 | 0.0 |
| 4 | E2EM1 | <0.1 | 0.0 |
| 6 ^b | M2US2 | 0.1 ^c | 0.0 |
| 6 ^b | M1UB3 | 0.2 ^c | 0.0 |
| Total | | <1.0 | 0.0 |
| E2EM1 - Persistent, estuarine, intertidal emergent wetland E2SS1 - Persistent, estuarine, intertidal shrub-scrub wetland M1UB3 - Subtidal marine wetland with unconsolidated mud bottom M2US2 - Tidally influenced Shoreline of both sand and mud N/A - Not Applicable | | | |
| ^a Wetlands within Workspace 1 would be matted during abandonment which would potentially temporarily impact the shrub-scrub wetland. No permanent impacts are anticipated. ^b Low impact equipment would be used for abandonment by removal of Line 41 in the marsh north of the beach to reduce temporary impacts on wetlands. The wetlands within Workspace 6 would be restored upon completion of abandonment activities. ^c Only the areas within Workspace 6 which would be directly impacted by the dredging and temporary spoil storage associated with the removal of the pipeline were included as temporary impacts. Matted areas were not included in the construction impacts since the mats would be placed to avoid impacts and would be removed once abandonment activities were completed. | | | |

Texas Eastern would utilize open cut techniques to remove segments of the pipeline from within Workspaces 2, 3, and 6. Approximately 1.0 acre of wetlands would be temporarily affected during abandonment activities. During clearing, temporary erosion control measures would be implemented in accordance with Texas Eastern's E&SCP to minimize the potential for sedimentation in wetlands. To avoid excessive disruption of wetland soils and the native seed and rootstock, excavation within wetland areas would be limited to the area immediately over the trench line. To facilitate revegetation in unsaturated wetlands, up to 12 inches of topsoil would be removed from the trenchline and stored separately from subsoil. Topsoil would not be stripped in saturated areas or in areas of standing water, in areas where no topsoil layer is evident, or in areas where the topsoil layer exceeds the depth of the trench.

Where wetland soils are dry and stable, Texas Eastern would operate equipment the same as in upland areas. If wetland soils cannot support construction equipment, a temporary work surface would be constructed with prefabricated construction mats or layers of timber. Crews would use low ground pressure equipment in saturated wetlands or where standing water is present. Following construction, Texas Eastern would restore contours as nearly as practicable to pre-existing conditions, remove temporary construction mats or timber riprap, and allow wetlands to revegetate naturally unless otherwise required by applicable permits.

Texas Eastern is seeking coverage under the USACE New Orleans District Programmatic General Permit - Category 1 for Activities in the Louisiana Coastal Zone. Category 1 activities cannot cause the loss of greater than 0.5 acre of special aquatic sites, including wetlands. Additionally, Texas Eastern would apply for a Coastal Use Permit from the LDNR OCM for activities within the Louisiana Coastal Zone. While abandonment activities are anticipated to temporarily disrupt approximately 1.0 acre of wetlands, no permanent impacts (losses) are anticipated. Because wetland impacts would be short-term and temporary, no compensatory mitigation is anticipated to be required. Texas Eastern would submit a joint permit application to the OCM and USACE for Project impacts on coastal wetlands. Texas Eastern anticipates that it would receive these permits in June 2019.

Inadvertent spills of fluids used during Project activities, such as fuels, lubricants, and solvents, could contaminate wetland soils and vegetation. As discussed, in the event of a spill, Texas Eastern would implement measures outlined in the Project's Spill Plan. Given the limited amount of disturbance and all wetlands affected by construction would be expected to revegetate, we conclude that impacts on wetlands would not be significant.

4.0 Vegetation and Wildlife

Vegetation

Terrestrial impacts related to onshore activities for abandonment of Line 41 would occur within the existing pipeline right-of-way, which is primarily herbaceous agriculture land and herbaceous wetlands. Vegetation communities within the Project area are classified as either emergent wetlands, scrub shrub wetlands, or upland herbaceous.

Emergent wetlands were further classified using the Cowardin System of wetland characterization as either brackish marsh, saltwater marsh, tidally influenced shorelines, and subtidal marine wetlands. About 0.1 acre of emergent wetlands would be affected by Project activities. A description of each emergent wetland type is as follows:

- Brackish marsh: Saltmeadow cordgrass, needlegrass rush, saltmarsh bulrush, and dune marsh-elder.
- Saltwater marsh: Saltmarsh cordgrass, seashore saltgrass, eastern baccharis, big leaf marsh-elder, and dune marsh-elder.
- Tidally influenced shorelines: Substrate is exposed but often flooded by tides. Vegetation often sparse, but includes glassworts, beach morning glory, seaside goldenrod, and sumpweed.
- Subtidal marine wetlands: Substrate is typically submerged and devoid of vegetation.

Vegetation within scrub shrub wetlands consists of switchgrass, seashore paspalum, chairmaker's bulrush, softstem bulrush, southern cattail, rattlebox, and various species of rush

and sedge. About 0.6 acre of scrub shrub wetlands would be temporarily affected by Project activities. Vegetation within upland herbaceous areas are dominated by bahiagrass, bermudagrass, hairy buttercup, and gophertail lovegrass. About 1.3 acres of upland herbaceous areas would be temporarily affected by Project activities.

Following construction, Texas Eastern would restore the temporarily disturbed areas, as practicable, to their original conditions, install temporary and permanent erosion control measures, and implement revegetation measures in accordance with its E&SCP. Upon completion of abandonment activities in upland areas, Texas Eastern would restore vegetation by spreading a native seed mix. Wetland areas would revegetate naturally, likely within one growing season. During Texas Eastern's monitoring of restoration success, if revegetation is not progressing, it would plant native wetland species. In addition, Texas Eastern would comply with restoration requirements included in the Coastal Use Permit issued from the LDNR OCM.

Texas Eastern would control the spread of noxious weeds by bringing clean equipment into the work areas and removing soil and vegetation from equipment prior to removing the equipment from each work area. The management of exotic non-native species would be in accordance with the prescribed post-construction monitoring procedures outlined in Texas Eastern's E&SCP. Because of the limited vegetation that would be disturbed by the Project and Texas Eastern's implementation of its E&SCP, we conclude that impacts on vegetation would be temporary, minor, and not significant.

Wildlife

Common wildlife that could occur in the Project area include otters, deer, raccoon, muskrat, nutria, various turtle species, and invertebrates that inhabit wetlands and near shore areas, such as crabs and mollusks. In addition, birds such as brown pelican, various gulls, terns, egrets, herons, and ibises also commonly occur in the Project vicinity.

Potential impacts on wildlife include removal of vegetation, temporary disturbance to habitat, and increases in turbidity and disturbance of the water bottom (benthic habitat) as discussed above in the fisheries section. Large, more mobile species such as birds would likely be temporarily displaced during Project activities. Direct mortality of less mobile species, such as mollusks, could occur as a result of benthic floor disturbance.

Wildlife in the area may also be affected by construction noise. Construction activities proposed for the Project including use of vessels, excavators, and cranes would produce low-frequency noise. While these low frequency noise sources can result in behavioral changes, they are not anticipated to cause physical injury or mortality.

Due to the minor and localized nature of the Project activities, we conclude impacts on wildlife would not be significant. Further, all impacts would be temporary and short-term (lasting days to weeks in locations of deeper dredging), with the disturbed area recovering to pre-construction conditions.

Migratory Birds

Texas Eastern consulted with the Louisiana Department of Wildlife and Fisheries (LDWF). In a letter dated June 22, 2018, LDWF found that there are bird nesting colonies within 1 mile of the Project. LDWF prohibits work within a certain radius of a nesting colony. Nesting colonies can move from year to year and no current information is available on the status of these colonies. LDWF recommends that if work for the proposed Project would commence during the nesting season, Texas Eastern should conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the Project begins. If no nesting colonies are found within 1,000 feet (2,000 feet for Brown Pelicans) of the proposed Project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed Project, further consultation with LDWF would be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies.

To minimize disturbance to colonial nesting birds, LDWF also recommends the following:

- for colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, Roseate Spoonbills, Anhingas, or cormorants), all Project activity occurring within 1,000 feet of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15); and
- for colonies containing nesting gulls, terns, or Black Skimmers, all Project activity occurring within 650 feet (2,000 feet for Brown Pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

Texas Eastern has committed to follow LDWF's recommendations regarding colonial nesting birds. Given the limited amount of temporary land disturbance and Texas Eastern's commitment to follow LDWF's recommendations, we conclude that the Project would have minimal impacts on transient migratory and colonial nesting birds.

Threatened and Endangered Species

Special status species are those species for which federal or state agencies afford an additional level of protection by law, regulation, or policy. Included in this category are federally listed species that are protected under the Endangered Species Act (ESA) of 1973. Under Section 7 of the ESA, federal agencies are required to ensure that any actions authorized, funded, or carried out by the agency would not jeopardize the continued existence of a federally listed or candidate threatened or endangered species, or result in the destruction or adverse modification of designated critical habitat of a federally listed or candidate species. As the lead federal agency authorizing the Project, FERC is responsible for consulting with the U.S. Fish and Wildlife Service (USFWS) and NMFS to determine whether federally listed threatened or endangered species or designated critical habitat are found in the vicinity of the Project, and determining the proposed action's potential effects on those species or critical habitats. In accordance with the Commission's regulations contained in 18 CFR 380.13(b), Texas Eastern

was designated as the Commission’s non-federal representative for purposes of informal consultation with the USFWS and NMFS.

Federally Listed Species

Federally listed species that could occur in the Project area are listed in table 6 below, along with species information and determination of effect.

| Table 6 Federally Listed Species Affected by the Project | | | |
|---|------------------------------|-----------------------|--------------------------------|
| Species | Common Name | Federal Status | Effect Determination |
| Marine Mammal Species | | | |
| <i>Balaenoptera physalus</i> | Fin whale | Endangered | Not Likely to Adversely Affect |
| <i>Balaenoptera borealis</i> | Sei whale | Endangered | Not Likely to Adversely Affect |
| <i>Physeter macrocephalus</i> | Sperm whale | Endangered | Not Likely to Adversely Affect |
| <i>Balaenoptera edeni - subspecies</i> | Gulf of Mexico Bryde’s whale | Proposed-Endangered | Not Likely to Adversely Affect |
| <i>Trichechus manatus</i> | West Indian manatee | Threatened | Not Likely to Adversely Affect |
| Sea Turtle Species | | | |
| <i>Chelonia mydas</i> | Green sea turtle | Threatened | Not Likely to Adversely Affect |
| <i>Eretmochelys imbricata</i> | Hawksbill sea turtle | Endangered | Not Likely to Adversely Affect |
| <i>Lepidochelys kempii</i> | Kemp's ridley sea turtle | Endangered | Not Likely to Adversely Affect |
| <i>Dermochelys coriacea</i> | Leatherback sea turtle | Endangered | Not Likely to Adversely Affect |
| <i>Caretta caretta</i> | Loggerhead sea turtle | Threatened | Not Likely to Adversely Affect |
| Fish Species | | | |
| <i>Acipenser oxyrinchus desotoi</i> | Gulf sturgeon | Threatened | Not Likely to Adversely Affect |
| <i>Carcharhinus longimanus</i> | Oceanic whitetip shark | Threatened | Not Likely to Adversely Affect |
| <i>Manta birostris</i> | Giant manta ray | Threatened | Not Likely to Adversely Affect |

| Bird Species | | | |
|------------------------------|---------------|-----------------|--------------------------------|
| <i>Charadrius melodus</i> | Piping plover | Near Threatened | Not Likely to Adversely Affect |
| <i>Calidris canutus rufa</i> | Rufa red knot | Threatened | Not Likely to Adversely Affect |

Species under USFWS Jurisdiction

Threatened and endangered species under USFWS jurisdiction that could occur in the Project area are West Indian Manatee, rufa red knot, piping plover, and nesting sea turtles.

West Indian Manatee

The West Indian manatee inhabits marine, brackish, and freshwater systems in coastal and riverine areas and their range extends into the Gulf of Mexico coastal areas. They prefer areas nearshore where there is seagrass and other submerged aquatic vegetation. The biggest threat to manatees is boat collisions. In accordance with USFWS recommendations, Texas Eastern would implement the following measures to minimize potential impacts on West Indian manatees as a result of Project activities.

- All work, equipment, and vessel operation would cease if a manatee is spotted within a 50-foot-radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work would resume under careful observation for manatee(s).
- If a manatee(s) is sighted in or near the Project area, all vessels associated with the Project would operate at “no wake/idle” speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a 4-foot clearance from the bottom. Vessels would follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers would be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Texas Eastern would post temporary signs concerning manatees prior to and during all in-water Project activities. Each vessel involved in construction activities would display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½” X 11” reading language similar to the following: “CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT.” A second temporary sign measuring 8½” X 11” would be posted at a location prominently visible to all personnel engaged in

water-related activities and would include language similar to the following: “CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION”.

- Texas Eastern would report collisions with, injury to, or sightings of manatees to the USFWS Louisiana Ecological Services Office (337/291-3100) and the LDWF Natural Heritage Program (225/765-2821). Texas Eastern would provide the nature of the call (i.e., report of an incident, manatee sightings, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

The Project would utilize approximately 15 vessels, consisting of tug boats, deep sea vessels, one Derrick barge and tug, cargo barge support tugs, crew boats, supply boats, and lift boats. Most work vessels are anticipated to make one trip to the Project area and one trip returning from the Project area. The crew boats and supply boats are expected to make 10-16 trips (round trip) each throughout the duration of the Project. Implementation of the measures outlined above, would minimize potential impacts on the West Indian manatee. Therefore, we conclude that, due to the short-term and localized nature of activities associated with the Project, as well as implementation of USFWS-recommended measures, the Project *is not likely to adversely* affect the West Indian Manatee.

Rufa Red Knot and Piping Plover

Suitable habitat for the rufa red knot and piping plover is present in the Project area. The piping plover breeds in the northern U.S. and Canada and migrates to Gulf of Mexico coast in the winter. They are typically found on flat, open, sandy beaches with little grass or other vegetation. One of the biggest threats to piping plovers is the development of coastal beaches and human presence. The rufa red knot also migrates to coastal Atlantic in the winter, and some subspecies winter on the coasts of the Gulf of Mexico. Red knots forage on soft sands and mud in tidal estuaries. The main threat contributing to its threatened status is habitat loss. For the rufa red knot, Texas Eastern would implement specific avoidance and minimization measures recommended by the USFWS during shoreline activities as described in its Resource Report 3 under Accession Number 20180618-5031. Due to the mobility of the piping plover and rufa red knot, the limited disturbance area, and the likelihood that only transient birds would be in the Project area during construction, we conclude that the Project *is not likely to adversely affect* these species.

Sea Turtle Nesting

USFWS has jurisdiction over sea turtle onshore nesting habitat. Sea turtles use coastal areas as nesting habitat, and various species ranges include the Gulf of Mexico. The greatest threat to turtles is loss of nesting habitat and human disturbance. Texas Eastern would implement the following measures to avoid disturbance of nesting sea turtles during onshore/nearshore Project activities:

- prior to commencing abandonment activities, Texas Eastern would conduct environmental training for company and contractor supervisory personnel to familiarize them with the Project’s environmental requirements;
- Texas Eastern would assign a biological monitor for abandonment activities occurring near potential nesting habitat and to inspect the beach at the start of each day for the presence of nesting sea turtles;
- Texas Eastern would only conduct abandonment activities on the beach during daytime hours; and
- Texas Eastern would implement the following measures, in accordance with USFWS recommended practices:
 - crews stationed overnight on the vessel near shore would be required to direct lighting from the vessel away from the beach; and
 - the beach work area would be kept clean of any trash or debris from abandonment activities.

Project activities could take place during the turtle nesting season, but because Project activities onshore would be short-term and temporary and Texas Eastern would follow the above avoidance and minimization measures, we determined that the Project *is not likely to adversely affect* nesting sea turtles.

Texas Eastern submitted a request for concurrence with the determination that the Project is not likely to adversely affect nesting sea turtles, West Indian manatee, rufa red knot, and piping plover and received a stamp of concurrence from the USFWS Louisiana Ecological Services Field Office on May 18, 2018. We agree that the Project is *not likely to adversely affect* these species.

Species under NMFS Jurisdiction

Threatened and endangered species under NMFS jurisdiction that could occur in the Project area are the hawksbill sea turtle, Kemp’s Ridley sea turtle, leatherback sea turtle, loggerhead sea turtle, green sea turtle, gulf sturgeon, fin whale, sperm whale, sei whale, Gulf of Mexico Bryde’s whale, giant manta ray, and oceanic whitetip shark. Sea turtles can be found foraging in coastal bays and estuaries. Threats to sea turtles in coastal waters include human disturbance, such as lighting and boat traffic. Gulf sturgeon and listed whale species could occur in the coastal areas of Gulf of Mexico during migrations or foraging activities. Threats to these species include boat traffic and marine habitat disturbance such as fuel and oil spills. Because these species are mobile, they would most likely leave the area during Project activities.

Sea Turtles at Sea

Increases in turbidity associated with Project activities could cause marine species to relocate to nearby suitable habitat or avoid the Project area. Texas Eastern would ensure that all Project personnel are trained in the identification of threatened and endangered species potentially occurring in the Project area, including sea turtles. Texas Eastern would implement the following standard measures to reduce the risk associated with vessel strikes on sea turtles in

accordance with the Bureau of Ocean Energy Management Notice to Lessees and Operators No. 2012-G01.

- Texas Eastern would provide training to vessel operators and crews on the vessel strike avoidance measures and identification of protected sea turtles.
- Texas Eastern would prepare and provide to vessel crews a brochure that includes photographs of the five protected sea turtles known to occur in the Gulf of Mexico, procedures to follow if a vessel strike occurs, and avoidance measures to be implemented.
- Whenever possible, Texas Eastern would attempt to maintain a distance of 50 yards or greater between sighted sea turtles and the vessel.
- Vessel crews would be required to report sightings of injured or dead protected sea turtles immediately regardless of whether the injury or death was caused by a Project vessel.

Indirect effects on sea turtles could include reduction of prey species abundance. The primary prey species for sea turtles include aquatic plants/algae, jellyfish, mollusks, crustaceans, and fish. Many species of sea turtles primarily feed along reefs or within submerged aquatic vegetation, which are not present in the Project area. Further, jellyfish and fish are generally mobile and expected to temporarily relocate from the Project area during pipeline abandonment and removal activities. Direct mortality of less mobile species, such as benthic invertebrates, could occur as a result of Project activities. Due to the small and localized areas of disturbance associated with Project activities, as well as the short duration of disturbance, we conclude that the Project *is not likely to adversely affect* sea turtles at sea.

Per the NMFS ESA Section 7 Effects Determination Guidance (2014), if habitat is present, but it is predicted that individuals would avoid the area due to construction activities, then a “may affect, not likely to adversely affect” determination is appropriate. Based on this guidance as well as the mobility of the listed species and the likelihood that they would temporarily avoid the area during Project activities, we conclude that the Project *may affect, but is not likely adversely affect* threatened and endangered species under NMFS jurisdiction discussed above.

As our non-federal representative for the purpose of consultation under Section 7 of the ESA, Texas Eastern submitted a letter to NMFS on August 1, 2018 requesting concurrence with the determination that the Project would not likely adversely affect federally listed species under NMFS jurisdiction. NMFS is currently in the process of reviewing the Project. Therefore, because consultation is not yet complete, **we recommend that:**

Texas Eastern should not begin construction or abandonment activities until:

- a. FERC staff completes Section 7 ESA consultation with NMFS; and**
- b. Texas Eastern has received written notification from the Director of the Office of Energy Projects (OEP) that construction or use of mitigation may begin.**

State-listed Species

Texas Eastern consulted with the LDWF regarding state-listed special status species. In a letter dated June 22, 2018, LDWF indicated occurrence of Wilson's plover and snowy plover near the Project area. These species are considered critically imperiled in the state. These species have a breeding season that begins in late March and extends into August, and are commonly found on beaches, sand flats, and fresh dredged-material. Threats to Wilson's plover and snowy plover include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, environmental contaminants, and un-naturally high populations of predators. The LDWF recommends that Texas Eastern take the necessary precautions to protect the breeding/wintering habitat of these species.

Wilson's and snowy plovers have the potential to occur within the Project area year-round, as they both breed and winter along the Louisiana coast. Once construction activities begin, a qualified Texas Eastern biological monitor would remain on-site to identify shorebird species and halt work if there is evidence of potential disturbance. Work on the beach would be temporary and no beach habitat would be lost as a result of the abandonment activities. Personnel would access construction work areas by airboat along Texas Eastern's right-of-way north of the beach and equipment would be brought to the work area by vessel. Texas Eastern anticipates that there would be no or minimal impacts on individual species, as they have the ability to easily relocate temporarily to readily available areas of beach habitat outside of the Project work area. In addition, Texas Eastern would implement the following measures to protect the breeding and wintering habitat of the Wilson's and snowy plovers as recommended by the LDWF:

- Texas Eastern would conduct environmental training for company and contractor supervisory personnel to familiarize them with the Project's environmental requirements prior to commencing abandonment activities.
- A qualified biologist would conduct a survey of the Project area for the presence of individual nests or nesting colonies within two weeks of start of abandonment activities. Texas Eastern would provide a survey report to the LDWF for further consultation if evidence of active nesting is identified within 1,000 feet of the proposed Project areas.

Given the limited duration and amount of disturbance, and Texas Eastern's commitment to implement the LDWF recommendations, we conclude that any impacts from the Project on Wilson's or snowy plovers would be negligible.

6.0 Land Use, Recreation, and Visual Resources

Land Use

Land use in the Project area includes industrial/commercial, agriculture/wetlands, open land/upland, and open water. The predominant land uses are open water and agriculture/wetlands (emergent herbaceous wetlands). Where possible, abandonment activities

would be confined to the previously disturbed rights-of-way for Line 41 and the associated laterals.

Abandonment of Line 41, associated laterals, and related facilities would temporarily affect approximately 6.9 acres of land, consisting of existing pipeline right-of-way, temporary workspaces, aboveground appurtenances within existing facilities, and a staging area. Following abandonment, Texas Eastern would restore temporary construction areas to pre-Project conditions and revegetated with a native seed mix. A summary of land use impacts for the Project is in table 7 below.

Equipment staging areas within the Grand Chenier Compressor Station would be limited to existing maintained parking areas and roads. A 0.75-acre area within the compressor station would be utilized for frac tank storage, necessary for storage and separation of hydrocarbons and seawater resulting from initial flushing and pigging of the pipeline prior to commencement of additional abandonment activities.

An approximately 0.5-acre staging area along the northern side of LA-82 and adjacent to Workspace 2, would be utilized for equipment storage, parking, and vehicle turnarounds. The staging area would be in an upland area and is necessary to facilitate the access of vehicles and equipment to the work area, house portable restroom and eyewash facilities, and provide a safe staging area away from highway traffic.

Impacts on land use within the Project area would be temporary during abandonment activities, because the land would be allowed to revert to pre-construction conditions. Texas Eastern would retain and maintain the onshore pipeline right-of-way following completion of abandonment activities; however, the pipeline right-of-way in state and federal waters would be relinquished.

The Project is in a sparsely populated rural area. The nearest residence is 0.5 mile north of the proposed workspace areas. No impacts on planned developments are anticipated.

The Project is within the Louisiana Coastal Zone. Texas Eastern would file a Joint Permit Application with the USACE and LDNR OCM. Because Texas Eastern has not received its coastal zone consistency determination, **we recommend that:**

- **Texas Eastern should not begin construction or abandonment of the Project until it files with the Secretary of the Commission (Secretary) a copy of the determination of consistency with the Coastal Zone Management Plan issued by the LDNR OCM.**

**Table 7
Land Use Acreage Affected by the Project**

| Project Area | Industrial/ Commercial | | Agriculture/ Wetlands | | Open land/ Upland | | Open Water | |
|--------------------------|---------------------------|------------------------------|--------------------------|---------------------------|----------------------|-----------------|------------------|-----------------|
| | Const (acres) | Oper ^d (acres) | Const (acres) | Oper (acres) | Const (acres) | Oper (acres) | Const (acres) | Oper (acres) |
| Workspace 1 | 0.03 | 0.00 | 0.54 | (0.03) | 0.00 | 0.00 | 0.00 | 0.00 |
| Workspace 2 | 0.04 | 0.00 | 0.56 | (0.04) | 0.00 | 0.00 | 0.00 | 0.00 |
| Workspace 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 |
| Workspace 4 ^a | 0.03 | 0.00 | <0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Workspace 5 ^b | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Workspace 6 ^c | 0.00 | 0.00 | 1.28 ^c | 0.00 | 0.00 | 0.00 | 3.75 | 0.00 |
| Staging Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 |
| Workspace Totals | 0.10 | 0.00 | 2.39 | (0.07)^d | 0.63 | 0.00 | 3.75 | 0.00 |

a/ Workspace 4 includes an approximately 20 foot x 20 foot wetland area, where the exposed pipeline and 2-inch tap would be removed.

b/ Workspace 5 would be utilized for construction access to the beach area by airboat along the existing pipeline right-of-way. No impacts are anticipated from boat travel within this area.

c/ Workspace 6 wetland acreage includes emergent marsh, tidally influenced shoreline wetlands, and subtidal marine wetlands.

d/ Within Workspaces 1 and 2, mainline valve assemblies, aboveground piping, and fences would be removed, and the area converted to agricultural land use.

Given the limited disturbance associated with the Project and that all areas would be restored after construction, we conclude that impacts on land use would be temporary and not significant.

Recreation

The Project is not within 0.25 mile of federal, state, or local parks, forests, trails, scenic highways, nature preserves, wildlife refuges, wilderness areas, game management areas, or other designated natural, recreational, or scenic areas or registered natural landmarks. Therefore, we conclude that no impacts on recreation (other than minor impacts on boating) would occur as a result of the Project.

Visual Resources

Most visual impacts associated with the Project would be temporary during abandonment of the pipeline and associated facilities, and would occur as a result of construction equipment, personnel, and disturbed soil. Aesthetic impacts may include elevated noise and dust associated with the use of construction equipment. Construction-related visual and aesthetic impacts would be temporary and would decrease with distance from areas of active construction. Dust generated by abandonment activities would be mitigated using the dust control procedures described in Texas Eastern's E&SCP. Therefore, we conclude that impacts on visual resources would be temporary and not significant.

7.0 Cultural Resources

Texas Eastern completed a cultural resources survey for the terrestrial portion of the Project and provided the resulting report to the FERC and the Louisiana State Historic Preservation Office (SHPO). The survey included both archaeological and architectural resources. Workspaces, staging areas, and access roads were investigated with a pedestrian survey, visual inspection, air boat survey, and 37 shovel test units. Approximately 33.7 acres were surveyed. No cultural resources were identified. In a letter dated June 26, 2018, the SHPO concurred that no properties listed in or eligible for listing in the National Register of Historic Places would be affected by the terrestrial portion of Project. We concur.

Texas Eastern indicated that consultation with the BSEE and SHPO is ongoing to determine the need for, and extent of, survey of the off-shore components of the Project. Therefore, **we recommend that:**

- **Texas Eastern should not begin abandonment activities and use of staging areas or temporary work areas and to-be-improved access roads until:**
 - a. **Texas Eastern files with the Secretary:**
 - (1) **BSEE and any SHPO comments regarding the need for survey of the off-shore components of the Project; and**
 - (2) **any required off-shore survey report and BSEE and any SHPO comments on the report.**
 - b. **The Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and**
 - c. **FERC staff reviews and the Director of OEP approves any off-shore survey report, and notifies Texas Eastern in writing that construction may proceed.**

All materials filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: “CUI//PRIV – DO NOT RELEASE.”

Texas Eastern contacted the following Native American tribes regarding the Project: Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; Choctaw Nation of Oklahoma; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; Mississippi Band of Choctaw Indians; and Tunica-Biloxi Indian Tribe of Louisiana. The Choctaw Nation of Oklahoma responded and requested GIS shapefiles for the Project, which Texas Eastern provided. No other responses have been received to date. On July 25, 2018, the Bureau of Indian Affairs filed a letter with the FERC which identified the Alabama-Quassarte Tribal Town, in addition to the other tribes already contacted. In its data response filed on August 7, 2018, Texas Eastern filed a consultation letter sent to the Alabama-Quassarte Tribal Town dated July 30, 2018.

Texas Eastern provided a plan to address the unanticipated discovery of historic properties and human remains during construction. We requested revisions to the plan. Texas Eastern provided a revised plan which we find acceptable.

8.0 Air Quality, Noise, and Polychlorinated Biphenyl Contamination

Air Quality

The term air quality refers to relative concentrations of pollutants in the ambient air. Project construction would impact air quality in the Project area during the duration of abandonment activities. However, the Project would not result in any new sources of operational air emissions.

Existing Environment

Ambient air quality is protected by the Clean Air Act (CAA) of 1970, as amended in 1977 and 1990. The EPA oversees the implementation of the CAA and establishes National Ambient Air Quality Standards (NAAQS) to protect human health and welfare.³ NAAQS have been developed for seven “criteria air pollutants”, including nitrogen dioxide, carbon monoxide (CO), ozone, sulfur dioxide (SO₂), particulate matter less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5}), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀), and lead, and include levels for short-term (acute) and long-term (chronic) exposures. The NAAQS include two standards, primary and secondary. Primary standards establish limits that are considered to be protective of human health and welfare, including sensitive populations such as children, the elderly, and asthmatics. Secondary standards set limits to protect public welfare, including protection against reduced visibility and damage to crops, vegetation, animals, and buildings (EPA 2017). Additional pollutants, such as volatile organic compounds (VOC) and hazardous air pollutants (HAP), are emitted during fossil fuel combustion and are regulated through various components of the CAA. At the state level, the Louisiana Department of Environmental Quality has adopted the NAAQs, as promulgated by the EPA, and does not have any additional standards.

The EPA, state, and local agencies have established a network of ambient air quality monitoring stations to measure concentrations of criteria pollutants across the U.S. The data are then averaged over a specific time period and used by regulatory agencies to determine compliance with the NAAQS and to determine if an area is in attainment (criteria pollutant concentrations are below the NAAQS), nonattainment (criteria pollutant concentrations exceed the NAAQS), or maintenance (area was formerly nonattainment and is currently in attainment). The Project area is within federal waters in the Gulf of Mexico and in Cameron Parish, Louisiana, which is designated as attainment for all criteria pollutants.

Greenhouse gases (GHG) occur in the atmosphere both naturally and as a result of human activities, such as the burning of fossil fuels. Carbon dioxide, methane, and nitrous oxide are GHGs that are emitted during fossil-fuel combustion. GHGs are non-toxic and non-hazardous at

³ The current NAAQS are listed on EPA's website at <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

normal ambient concentrations, and there are no applicable ambient standards or emission limits for GHGs under the CAA. Emissions due to human activity are the primary cause of increased atmospheric concentration of GHGs since the industrial age and are the primary contributor to climate change. The primary GHG that would be emitted during Project construction is carbon dioxide (CO₂), which would be emitted due to the operation of construction equipment and support vessels.

Emissions of GHGs are typically quantified and regulated in units of carbon dioxide equivalents (CO₂e). The CO₂e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO₂. Thus, CO₂ has a GWP of 1, methane has a GWP of 25, and nitrous oxide has a GWP of 298.⁴

Regulatory Requirements

Due to the temporary nature of Project activities in an area classified as attainment, there are no applicable federal or state air quality permits that are necessary for the Project.

Construction Emissions Impacts and Mitigation

Project construction would result in temporary, localized emissions that would last the duration of construction activities (i.e., about 8 months). Texas Eastern would utilize heavy equipment and trucks for onshore construction and abandonment activities, and would utilize vessels including tug boats, barges, and airboats, among others, to support offshore activities. Heavy equipment, trucks, and marine vessels would generate exhaust emissions through the use of diesel or gasoline engines in order to complete the abandonment activities.

Construction activities would also result in the temporary generation of fugitive dust due to clearing and grading, ground excavation, and driving on unpaved roads. The amount of dust generated would be a function of construction activity, soil type, soil moisture content, wind speed, precipitation, vehicle traffic and types, and roadway characteristics. Emissions would be greater during dry periods and in areas of fine-textured soils subject to surface activity.

Texas Eastern estimated construction emissions based on the fuel type and anticipated frequency, duration, capacity, and levels of use of various types of construction equipment and vessel engines. Construction emissions were estimated using emission factors in the EPA's MOVES model and EPA's *Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories*. Table 8 below provides the total Project construction emissions, including exhaust emissions, from all construction equipment and marine vessels.

⁴ These GWPs are based on a 100-year time period. We have selected their use over other published GWPs for other timeframes because these are the GWPs the EPA has established for reporting of GHG emissions and air permitting requirements. This allows for a consistent comparison with these regulatory requirements.

| Table 8 Project Construction Emissions (tons per construction duration) | | | | | | | | |
|--|-----------------|-------|-----------------|------------------|-------------------|------|------|-------------------|
| | NO _x | CO | SO ₂ | PM ₁₀ | PM _{2.5} | VOC | HAPs | CO ₂ e |
| Total Construction Emissions | 90.95 | 46.34 | 0.02 | 5.80 | 4.31 | 3.69 | 0.07 | 6,882.41 |
| NO _x = Nitrogen Oxides | | | | | | | | |

Construction emissions shown in table 8 are not expected to result in a violation or degradation of ambient air quality standards. Texas Eastern would minimize construction exhaust emissions through the use of federal design standards imposed at the time of manufacture and would require the contractor to shut off equipment when not in active use. Texas Eastern would minimize fugitive dust emissions through the application of water to disturbed areas as necessary.

Construction emissions would occur over the duration of construction activity and would be emitted at different times throughout the Project area. Construction emissions would be relatively minor and would result in short-term, localized impacts in the immediate vicinity of construction work areas. Given the temporary nature of the Project, and with the mitigation measures proposed by Texas Eastern, we conclude air quality impacts from the Project would not result in significant impacts on local or regional air quality.

Noise

Noise is generally defined as sound with intensity greater than the ambient or background sound pressure level. Project construction would affect overall noise levels in the Project area; however, due to the Project's location offshore and in sparsely populated areas, there are no residences or noise sensitive areas within 0.5 mile of the proposed workspaces. Texas Eastern would mitigate noise impacts by installing mufflers on construction equipment, operating equipment in accordance with manufacturers' recommendations, and would limit onshore Project activities to daylight hours. Due to the temporary and short-term nature of construction activities, and distance to the nearest noise sensitive areas, we conclude noise impacts from construction would not result in significant impacts. No Project noise would occur after completion of the abandonment.

Polychlorinated Biphenyls

Texas Eastern states that polychlorinated biphenyls (PCB) contamination greater than 50 parts per million is not present at existing Project facilities. However, if piping with PCB concentrations greater than 50 parts per million is encountered during the abandonment work, Texas Eastern would dispose of piping and all related contaminated media in accordance with the EPA Toxic Substance Control Act and all other applicable regulations. Therefore, the Project would not impact any PCB contamination.

9.0 Reliability and Safety

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The Department of Transportation pipeline standards are published in 49 CFR 190-199. Part 192 of 49 CFR specifically addresses natural gas pipeline safety issues and prescribes the minimum standards for operating and maintaining pipeline facilities. Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency.

Project activities would represent a minimum increase in risk to the public during abandonment activities; however, we are confident that Project facilities would be abandoned safely and in compliance with applicable Department of Transportation and Occupational Safety and Health Administration requirements.

10.0 Cumulative Impacts

In accordance with NEPA, we considered the cumulative impacts of the Project and other projects or actions in the Project area. Cumulative impacts represent the incremental effects of the proposed action when added to other past, present, or reasonably foreseeable future actions. Cumulative impacts can result in individually minor actions becoming collectively significant impacts on environmental resources if they take place in the same general area over a given period of time.

The purpose of this analysis is to identify and describe cumulative impacts that would potentially result from implementation of the Project. The cumulative impact analysis generally follows the methodology set forth in relevant guidance from the Council on Environmental Quality and the EPA. Under these guidelines, inclusion of other actions within the analysis is based on identifying commonalities of impacts from other actions to potential impacts that would result from the Project. An action must meet the following criteria to be included in the cumulative impacts analysis:

- impact a resource area potentially affected by the Project;
- cause this impact within all, or part, of the Project area; and
- cause this impact within all, or part, of the time span for the potential impact of the Project.

The EA analyzed the Project impacts on geology and soils; water resources; wildlife; cultural resources; land use and visual resources; and air quality and noise. As described earlier in section B of this EA, the Project-related construction and operational impacts would not impact groundwater and geological resources or be impacted by geologic hazards; therefore, cumulative impacts on geology and groundwater would not be realized and are not evaluated for

cumulative impacts. Additionally, the Project would not affect land use, historical properties, have visual impacts, or have operation impacts on air quality or noise, and as such cumulative impacts on these resources were not considered in the cumulative impact analysis.

Below, we assess the potential for cumulative impacts on soils, surface water, wetlands, wildlife and fisheries, air quality, and noise. The geographic scope used to assess cumulative impacts for each resource are discussed below in table 9.

| Table 9 Geographic Scope for Cumulative Impacts | | |
|--|---|---|
| Environmental Resources | Geographic Scope | Rationale |
| Surface Water, Wetlands, Fish, and Wildlife | Hydrologic Unit Code 12 Watershed (onshore) and 1 mile (offshore) | Watersheds are natural, well-defined boundaries for surface water flow. Wildlife possess an interconnected relationship to surface water resources; therefore, these resources are also considered during the watershed evaluation process. |
| Noise – Construction | 0.25 mile | Construction noise is limited and is commonly associated with the utilization of large equipment. |
| Air Quality – Construction | 0.25 mile | Construction equipment is the primary source of emissions during construction; however, these emissions will be minimal and will quickly dissipate to ambient levels as distance increases from the site. |

Texas Eastern identified major projects within the vicinity of the Project by reviewing publicly available resources, including FERC’s eLibrary, county, city, and chamber of commerce websites, other federal and state agencies, and phone/email communications with agencies or county of interest (Cameron Parish). The projects identified as occurring within the resource-specific geographic scopes and within current and/or reasonably foreseeable timeframes are identified based on resource type below in table 10.

Table 10
Past, Present, and Reasonably Foreseeable Projects Considered in the Cumulative Impacts Analysis for the
Cameron System Abandonment Project

| Project (Project Proponent) | Project Description | Estimated Construction Timeframe | Closest Distance from Project (miles)^a | Resources Potentially Affected within the proposed Project's Geographic Scope |
|---|--|---|--|--|
| Calcasieu Pass Project (TransCameron Pipeline, LLC) | Installation of an approximately 24-mile-long pipeline extending from the proposed LNG terminal to Grand Chenier | Early 2019 | Within 0.25 mile of Project Workspace 2. | Surface Water, Wildlife, Noise, Air Quality |
| CPRA ^a | Gulf Shoreline Protection Project – Rockefeller Wildlife Refuge | Construction started in July 2018 | Within HUC | Surface Water, Wildlife |
| CPRA | Cameron Nonstructural Risk Reduction Project | Currently in engineering and design | Within HUC | Surface Water, Wildlife |
| CPRA | South Grand Chenier Marsh Creation | Engineering and design complete. No construction timeframe. | Within HUC | Surface Water, Wildlife |
| CPRA | Cameron-Creole Freshwater Introduction | Currently in engineering and design | Within HUC | Surface Water, Wildlife |
| Texas Eastern | Abandonment in place of offshore Line 41-A-5-B and 41-A-8 | 2019 | Within 0.25 mile | Surface Water, Wildlife, Noise, Air Quality |

CPRA = Louisiana Office of Coastal Protection and Restoration Authority

Surface Water Resources

Potential impacts on surface water resources during Project activities would be associated with dredging, in-water excavation activities, and potential spills of hazardous materials. Construction of the TransCameron Pipeline, LLC project and the other Texas Eastern projects would occur concurrently with the proposed Project and may contribute cumulatively to impacts on surface water resources.

Texas Eastern's Workspace 2 would not impact any surface water resources; therefore, the proposed Project would not contribute to a cumulative impact when combined with the TransCameron Pipeline project. In addition, TransCameron and Texas Eastern would implement the measures in the FERC's Plan and Procedures to minimize impacts. Texas Eastern's Line 41-A-5-B and Line 41-A-8 Abandonment Projects would have similar impacts on surface water resources as those described above for this proposed Project. The CPRA projects would be specifically designed to impact surface water, wetlands, groundwater, vegetation, and wildlife; impacts are intended to be beneficial. Each of these projects, except for the Rockefeller Gulf Shoreline Protection Project, is still in the design and planning stages or does not have a construction timeframe and would likely not be implemented until the Cameron System Abandonment Project has been completed. As the Project's impacts are expected to return to background levels shortly after construction (likely within a few weeks), we conclude that there would not be any cumulative impacts from the Project with the CPRA Rockefeller Wildlife Refuge project.

Excavation of the water bottom has the greatest potential for impacts on surface water resources. These impacts include increased turbidity and sedimentation. These impacts could contribute to a cumulative impact if conducted concurrently with excavation activities of other projects considered. However, it is anticipated that turbidity associated with the Project would remain within a localized area, quickly returning to ambient conditions following the completion of Project activities. Therefore, impacts of Project activities would be highly localized and of short duration.

Before any in-water activities could occur for the proposed Project or other projects in the geographic scope, Texas Eastern and the other project proponents are required to obtain authorization under a Coastal Use Permit with the OCM, Section 404 Permit with the USACE, and corresponding Section 401 Water Quality Certification with the Louisiana Department of Environmental Quality. These authorizations are contingent on the use of best management practices to minimize impacts on water quality and ensure that state water quality standards are maintained.

Increased construction and industrial operation activities in and around surface waterbodies could result in an increased potential for spills of hazardous materials. Similar to the proposed Project, other projects would also be required to adhere to regulations associated with the use and storage of hazardous materials and are anticipated to implement their project specific best management practices to minimize the potential for spills of hazardous materials to reach surface waters. Therefore, we conclude the potential for cumulative impacts as a result of

spills of hazardous materials would be negligible, as spills would be cleaned up promptly by the responsible party, which would minimize the likelihood of any cumulative impacts.

While surface water impacts associated with the Project could contribute to a cumulative effect when combined with other projects within the geographic scope, this cumulative effect is not anticipated to be significant. Overall, cumulative impacts on surface water resources are anticipated to be minor and short-term.

Wetlands

Excavation activities of the proposed Project would result in minor and temporary impacts on wetland resources in the Project area (totaling less than 1.0 acre of temporary impact). The impacts would be associated with disturbance of the substrate bottom, the overall turbidity in the open water and marsh areas, and potential spills of hazardous materials. Texas Eastern would minimize the temporary impacts associated with excavation activities of the Project by implementing measures outlined in its E&SCP, such as returning the wetland and marsh areas to pre-construction contours upon completion of the Project.

Texas Eastern's Workspace 2 would not impact any wetlands; therefore, the proposed Project would not contribute to a cumulative impact when combined with the TransCameron Pipeline Project. Given the distance from the proposed Project and the CPRA Rockefeller Wildlife Refuge project, there would not be a cumulative impact on wetlands.

Texas Eastern and the proponents of other projects in the geographic scope are required to obtain authorization under Section 404 of the Clean Water Act from the USACE for wetland impacts. These authorizations are contingent on the use of best management practices to minimize impacts on wetlands. The proposed Project would not result in the loss or conversion of wetland habitat and the impacts on wetlands associated with the other projects is not known. However, if the identified projects resulted in permanent loss or conversion of wetlands, they would be required to mitigate for those impacts. Therefore, concurrent construction of the proposed Project and other projects would result in minimal short-term cumulative impacts on wetland resources, but would not contribute to long-term or permanent cumulative impacts on wetlands.

Increased construction and industrial operation activities in and around wetlands could result in an increase in the potential for spills of hazardous materials. However, all project proponents, including Texas Eastern, would be required to implement measures to minimize the potential for spills of hazardous materials to reach wetlands. Therefore, the potential for cumulative impacts as a result of spills of hazardous materials is considered to be minimal.

Wildlife and Fish

The majority of cumulative impacts on wildlife, fish, and threatened and endangered species would result from construction-related disturbances causing increased turbidity and disturbance of the water bottom. Following Project activities, disturbed sediments would quickly settle and the impacted area would return to pre-existing conditions. Removal of manmade

structures, including platforms, bulkheads, and signs would result in an insignificant beneficial change in habitat type. Thus, impacts on fish, wildlife, and vegetation resulting from Project activities would be minor, short-term, and localized.

The Line 41-A-5-B and Line 41-A-8 Abandonment Projects would result in similar impacts on fish, wildlife, and threatened and endangered species as the proposed Project, including temporarily increased turbidity and water bottom disturbance during construction. The aforementioned projects would not result in new permanent impacts. Given the distance from the proposed Project and the CPRA Rockefeller Wildlife Refuge project, there would not be a cumulative impact on fish, wildlife, or vegetation.

Where construction schedules overlap, increased noise, lighting, and human activity could also disturb wildlife in the area. More mobile species, such as fish or birds, may temporarily displace to nearby suitable habitat or avoid the areas affected by sediment disturbance and turbidity, but are anticipated to return to those areas temporarily impacted following the completion of project activities. Direct mortality of smaller, less mobile species, including various invertebrate species, may occur as a result of project activities in the area. Overlapping construction timelines increases the area and duration of disturbance for wildlife, thus increasing cumulative impact. Nevertheless, there is abundant available habitat within the geographic scope; therefore, cumulative impacts on fish and wildlife as a result of increased noise, light, and human activity are anticipated to be of short duration, localized, and minor.

Air Quality

Construction of the proposed Project would result in short-term construction impacts on air quality in the vicinity of the Project, as discussed in section B.8. Construction of the TransCameron Pipeline, LLC project, the CPRA Rockefeller project, and the other Texas Eastern projects could occur concurrently with the proposed Project and may contribute cumulatively to impacts on air quality. Construction of these projects would involve the use of heavy equipment that would generate emissions of air pollutants and would result in short-term emissions that would be highly localized, temporary, and intermittent. Based on the mitigation measures proposed by Texas Eastern, and the temporary and localized impacts of Project construction, the proposed Project would not result in significant cumulative impacts on air quality during construction.

Noise

Construction of the Project would result in short-term and temporary impacts on existing noise levels in the Project area. Construction of the TransCameron Pipeline, LLC project, the CPRA Rockefeller project, and the other Texas Eastern projects could occur concurrently with the proposed Project and may contribute cumulatively to impacts on noise levels. However, based on the short-term and temporary nature of construction-related activities, as well as the distance from the nearest noise sensitive areas, impacts from the Project are not expected to significantly contribute to cumulative impacts on noise levels during construction.

C. ALTERNATIVES

In accordance with NEPA and Commission policy, we evaluated alternatives to the Project to determine whether they would be reasonable and environmentally preferable to the proposed action. These alternatives included the no-action alternative. Due to the proposed Project involving the abandonment of existing facilities, no site alternatives or system alternatives were identified. The evaluation criteria used for developing and reviewing alternatives were:

- ability to meet the Project's stated objective;
- technical and economic feasibility and practicality; and
- significant environmental advantage over the proposed action.

Under the No-Action Alternative, Texas Eastern would not abandon the Cameron System facilities between the Grand Chenier Compressor Station in Cameron Parish, Louisiana, to the end of the Cameron System in the shallow waters of the Gulf of Mexico in the West Cameron, East Cameron, and Vermillion offshore areas and none of the environmental impacts identified in this EA would occur. The No-Action Alternative would not accomplish the Project objective of abandoning the underutilized facilities which Texas Eastern can no longer maintain using conventional maintenance techniques, including cleaning pigs with corrosion inhibitor. We have dismissed this as a reasonable alternative as it could not meet the Project's objectives.

Based on the limited environmental impact associated with this Project and Texas Eastern's proposed mitigation measures, we did not identify any unresolved resource conflicts which would present a need to examine further alternatives. Additionally, no comments were received regarding resources that would be impacted by the Project. Therefore, because the impacts associated with the proposed Project are not significant, we did not evaluate additional alternatives. We conclude that the proposed action is the preferred alternative to meet the Project objectives.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA, we have determined that if Texas Eastern abandons the proposed Cameron System Abandonment Project facilities in accordance with its application and supplements, and the staff's recommended mitigation measures, approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission Order (Order) contain a finding of no significant impact and include the mitigation measures listed below as conditions to any authorization the Commission may issue.

1. Texas Eastern shall follow the abandonment procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Texas Eastern 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, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during activities associated with abandonment of the Project. This authority shall allow:
 - a. the modification of conditions of the Order;
 - b. stop-work authority; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project abandonment activities.
3. **Prior to any construction or abandonment activities**, Texas Eastern 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 abandonment activities shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Texas Eastern 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.

5. Texas Eastern shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all 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, 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 **before construction in or near that area.**

Examples of alterations requiring approval include workspace 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 could affect sensitive environmental areas.
6. **Within 60 days of the Order and before abandonment activities begin,** Texas Eastern shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Texas Eastern must file revisions to the plan as schedules change. The plan shall identify:
 - a. how Texas Eastern will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
 - b. how Texas Eastern 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;
 - c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
 - e. the location and dates of the environmental compliance training and instructions Texas Eastern will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);
 - f. the company personnel (if known) and specific portion of Texas Eastern's organization having responsibility for compliance;

- g. the procedures (including use of contract penalties) Texas Eastern will follow if noncompliance occurs; and
 - h. 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 environmental compliance training of onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.
7. Texas Eastern shall employ at least one EI for the Project. The EI shall be:
- a. responsible for monitoring and ensuring compliance with all mitigation 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 (see condition 6 above) 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. 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
 - e. responsible for maintaining status reports.
8. Beginning with the filing of its Implementation Plan, Texas Eastern shall file updated status reports with the Secretary on a **monthly** basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. an update on Texas Eastern's efforts to obtain the necessary federal authorizations;
 - b. the construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
 - c. 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);
 - d. a description of the corrective actions implemented in response to all instances of noncompliance;
 - e. the effectiveness of all corrective actions implemented;
 - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

- g. copies of any correspondence received by Texas Eastern from other federal, state, or local permitting agencies concerning instances of noncompliance, and Texas Eastern's response.
- 9. Texas Eastern must receive written authorization from the Director of OEP **before commencing Project abandonment**. To obtain such authorization, Texas Eastern must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).
- 10. Texas Eastern shall **not begin construction or abandonment activities** until:
 - a. FERC staff completes Section 7 ESA consultation with NMFS; and
 - b. Texas Eastern has received written notification from the Director of the OEP that construction or use of mitigation may begin.
- 11. Texas Eastern shall **not begin construction or abandonment** of the Project until it files with the Secretary a copy of the determination of consistency with the Coastal Zone Management Plan issued by the LDNR OCM.
- 12. Texas Eastern shall **not begin abandonment activities and use of staging areas or temporary work areas and to-be-improved access roads** until:
 - a. Texas Eastern files with the Secretary:
 - (1) BSEE and any SHPO comments regarding the need for survey of the off-shore components of the Project; and
 - (2) any required off-shore survey report and BSEE and any SHPO comments on the report.
 - b. The Advisory Council on Historic Preservation is afforded an opportunity to comment if historic properties would be adversely affected; and
 - c. FERC staff reviews and the Director of OEP approves any off-shore survey report, and notifies Texas Eastern in writing that construction may proceed.

All materials filed with the Commission containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: **“CUI//PRIV – DO NOT RELEASE.”**

- 13. **Within 30 days of completing the abandonment**, Texas Eastern shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been abandoned in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions in the Order Texas Eastern 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.

E. LIST OF PREPARERS

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F. REFERENCES

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