



**Office of
Energy Projects**

December 2020

Rio Bravo Pipeline Company, LLC

Docket No. CP20-481-000

Rio Bravo Pipeline Project Amendment

Environmental Assessment

Cooperating Agencies:



U.S Department
of Transportation



U.S. Army Corps
of Engineers

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:

OEP/DG2E/Gas 4

Rio Bravo Pipeline Company, LLC

Rio Bravo Pipeline Project

Amendment

Docket No. CP20-481-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Rio Bravo Pipeline Project Amendment (Project Amendment), proposed by Rio Bravo Pipeline Company, LLC (RB Pipeline) in the above-referenced docket. RB Pipeline filed an application in Docket No. CP20-481-000 requesting a Certificate of Public Convenience and Necessity pursuant to Section 7(c) of the Natural Gas Act to construct and operate certain natural gas pipeline facilities. The proposed Project Amendment would modify the pipeline system facilities approved in the Commission's *Order Granting Authorizations under Sections 3 and 7 of the Natural Gas Act* (Order) issued on November 22, 2019, that will transport natural gas to Rio Grande LNG, LLC's previously approved (but not yet constructed) liquefied natural gas (LNG) Terminal in Cameron County, Texas. RB Pipeline's entire pipeline system as authorized, and as modified by the Project Amendment, is located entirely in Texas.

The EA assesses the potential environmental effects of the construction and operation of the Project Amendment in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Project Amendment, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment.

The U.S. Army Corps of Engineers and the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration participated as cooperating agencies in the preparation of the EA. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis.

The Rio Bravo Pipeline Project, as authorized in the November 2019 Order, consists of a 2.4-mile-long, 42-inch-diameter pipeline, including 0.8 mile of dual pipeline (referred to as the Header System) in Kleberg and Jim Wells Counties; 135.5 miles of parallel 42-inch-diameter pipelines originating in Kleberg County and terminating at Rio Grande LNG, LLC's Rio Grande LNG Terminal in Cameron County (referred to as Pipelines 1 and 2); four metering sites along the Header System; two interconnect booster compressor stations, each

with a metering site; three compressor stations (one at the Rio Grande LNG Terminal); and other associated utilities, systems, and facilities, all in Texas. As part of the Project Amendment, RB Pipeline proposes various facility modifications to the authorized pipeline system:

- decrease the maximum allowable operating pressure (MAOP) of the 2.4-mile-long Header System pipeline from 1,480 pounds per square inch gauge (psig) to 1,200 psig;
- construct an extension of 0.2 mile of mainline pipeline for each of Pipelines 1 and 2 for a total of 135.7 miles each;
- increase the diameter of Pipeline 1 from 42 inches to 48 inches and increase the MAOP of both pipelines from 1,480 psig to 1,825 psig (Pipeline 2 will remain a 42-inch-diameter pipeline); and
- increase the transportation capacity of Pipeline 1 from 2.25 billion cubic feet per day (Bcf/d) to 2.6 Bcf/d, and decrease the transportation capacity of Pipeline 2 from 2.25 Bcf/d to 1.9 Bcf/d, resulting in the total authorized capacity of 4.5 Bcf/d remaining unchanged.

The Project Amendment also includes modifications to the following aboveground facilities that are authorized (but as yet unbuilt) along the Rio Bravo Pipeline right-of-way:

- eliminate Compressor Station 2 in Kenedy County;
- eliminate Compressor Station 3 within the Rio Grande LNG Terminal in Cameron County, except for a meter and other ancillary facilities within the LNG Terminal;
- eliminate all facilities associated with Booster Stations 1 and 2, including related meter stations, in Kenedy County; and
- increase the horsepower (hp) at Compressor Station 1 in Kleberg County from 180,000 hp to 282,000 hp by switching from six 30,000-hp natural gas compressor units to four 43,000-hp natural gas compressor units and two 55,000-hp compressor units.

The Commission mailed a copy of the *Notice of Availability* for this EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the project area. The EA is only available in electronic format. It may be viewed and downloaded from the FERC's website (www.ferc.gov), on the Environmental Documents page (<https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents>). In addition, the EA may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (<https://elibrary.ferc.gov/eLibrary/search>), click on General Search, and enter the docket number in the "Docket Number" field, excluding the last three

digits (i.e., CP20-481). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

The EA is not a decision document. It presents Commission staff's independent analysis of the environmental issues for the Commission to consider when addressing the merits of issues raised in this proceeding. Any person wishing to comment on the EA may do so. Your comments should focus on EA's disclosure and discussion of potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on the Project Amendment, it is important that we receive your comments in Washington, DC **on or before 5:00 pm Eastern Time on January 20, 2021.**

For your convenience, there are three methods you can use to file your comments to the Commission. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208-3676 or FercOnlineSupport@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

- (1) You can file your comments electronically using the [eComment](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). This is an easy method for submitting brief, text-only comments on a project;
- (2) You can also file your comments electronically using the [eFiling](#) feature on the Commission's website (www.ferc.gov) under the link to [Documents and Filings](#). With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "[eRegister](#)." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or
- (3) You can file a paper copy of your comments by mailing them to the following address. Be sure to reference the Project docket number (CP20-481-000) with your submission: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426.

Filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered. Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. At this point in this proceeding, the timeframe for filing timely intervention requests has expired. Any person seeking to become a party to the proceeding must file a motion to intervene out-of-time pursuant to Rule 214(b)(3) and (d) of the Commission's Rules of Practice and Procedures (18

CFR 385.214(b)(3) and (d)) and show good cause why the time limitation should be waived. Motions to intervene are more fully described at <https://www.ferc.gov/ferc-online/ferc-online/how-guides>.

Additional information about the Project Amendment is available from the Commission's Office of External Affairs, at (866) 208-FERC, or on the FERC website (www.ferc.gov) using the [eLibrary](#) link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to <https://www.ferc.gov/ferc-online/overview> to register for eSubscription.

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TECHNICAL ACRONYMS

April 2019 FEIS	April 26, 2019 final environmental impact statement for the Rio Bravo Pipeline Project and the Rio Grande LNG Project
AQCR	Air Quality Control Region
Bcf/d	billion cubic feet per day
CAA	Clean Air Act of 1970, as amended in 1977 and 1990
CEQ	Council on Environmental Quality
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
Commission or FERC	Federal Energy Regulatory Commission
dBA	decibels on the A-weighted scale
DOT	U.S. Department of Transportation
EA	environmental assessment
Enbridge	Enbridge, Inc.
EPA	U.S. Environmental Protection Agency
FWS	U.S. Fish and Wildlife Service
GHG	greenhouse gas
GWP	global warming potential
hp	horsepower
HAP	hazardous air pollutant
HCA	high consequence area
HDD	horizontal directional drill
L _{dn}	day-night sound level
L _{eq}	equivalent sound level
LNG	liquefied natural gas
MAOP	maximum allowable operating pressure
MCA	moderate consequence area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGA	Natural Gas Act
NOI	<i>Notice of Intent to Prepare an Environmental Assessment for the Proposed Rio Bravo Pipeline Project Amendment and Request for Comments on Environmental Issues</i>
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSA	noise-sensitive area
NSPS	New Source Performance Standards
NSR	New Source Review
Order	<i>Order Granting Authorizations under Sections 3 and 7 of the Natural Gas Act</i>
Plan	<i>Upland Erosion Control, Revegetation, and Maintenance Plan</i>
PHMSA	Pipeline and Hazardous Materials Safety Administration

TECHNICAL ACRONYMS (continued)

PM _{2.5}	particulate matter with an aerodynamic diameter of 2.5 microns
PM ₁₀	particulate matter with an aerodynamic diameter of 10 microns
Procedures	<i>Wetland and Waterbody Construction and Mitigation Procedures</i>
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
RB Pipeline	Rio Bravo Pipeline Company, LLC
SO ₂	sulfur dioxide
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
tpy	tons per year
TX SHPO	Texas State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USGCRP	U.S. Global Change Research Program
VOC	volatile organic compound

A. PROPOSED ACTION

1. Introduction

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental impacts of the amendment to the Rio Bravo Pipeline Project proposed by Rio Bravo Pipeline Company, LLC (RB Pipeline), a subsidiary of Enbridge, Inc. (Enbridge). An *Order Granting Authorizations under Sections 3 and 7 of the Natural Gas Act* (Order) was issued for the Rio Bravo Pipeline Project by the Commission on November 22, 2019.¹ On June 16, 2020, RB Pipeline filed an amendment application with the Commission (Docket No. CP20-481-000) pursuant to Section 7(c) of the Natural Gas Act (NGA) for a Certificate of Public Convenience and Necessity (Certificate). RB Pipeline is seeking authorization to modify its authorized Rio Bravo Pipeline Project to reduce the total number of compressor stations, eliminate certain measurement facilities, decrease the operating condition of its Header System pipeline, increase the length and operating conditions of the Pipelines 1 and 2, and increase the diameter of Pipeline 1. The modified pipeline system facilities are collectively referred to as the Project Amendment.

We² prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (Title 40 of the Code of Federal Regulations Parts 1500-1508 [40 CFR 1500-1508]) and the Commission's implementing regulations under 18 CFR 380. The assessment of environmental impacts is an integral part of the Commission's decision-making process on whether to issue RB Pipeline a Certificate to construct and operate the proposed facilities. The Commission may grant approval if, after consideration of both environmental and non-environmental issues, the Commission finds that the Project Amendment is in the public convenience and necessity. As such, we prepared this EA to assess the environmental impacts that would likely occur as a result of construction of the Project Amendment. Our principal purposes in preparing this EA are to:

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

RB Pipeline requested a Certificate by December 17, 2020, in order to complete the Project Amendment facilities and be prepared to commence service in accordance with the timing and shipping needs to Rio Grande LNG, LLC's Rio Grande liquefied natural gas (LNG) Terminal in Cameron County, Texas.

¹ The Commission's November 22, 2019 Order is available on FERC's eLibrary website (see accession number 20191122-3046).

² "We," "us," and "our" refers to environmental staff of the Commission's Office of Energy Projects.

2. Project Purpose and Need

Under Section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. Several comment letters were received regarding whether a Certificate should be granted for the Project Amendment. This determination is not made in the EA; rather, the Commission will make that decision based on economic issues, including need, and environmental impacts.

On November 22, 2019, the Commission issued a joint Order to RB Pipeline and Rio Grande LNG, LLC for authorization to construct the Rio Grande LNG Project, which requires the natural gas provided by RB Pipeline to operate the Rio Grande LNG Terminal. The original Rio Bravo Pipeline Project application was filed at FERC under Docket No. CP16-455-000, and the Rio Grande LNG Project was filed under Docket No. CP16-454-000. RB Pipeline states it has reevaluated the approved project facilities and now proposes certain modifications (which are more specifically described in section A.5, below) to provide flexibility and efficiency in satisfying the requirements of the natural gas shipper supplying natural gas to the Rio Grande LNG Terminal.

Although the capacity of Pipeline 1 would increase as a result of the change in pipeline diameter, constructing and operating the Project Amendment would not result in a change to the total transmission capacity (4.5 billion cubic feet per day [Bcf/d]) approved by the Commission for the Rio Bravo Pipeline Project in its November 22, 2019 Order, as the capacity of Pipeline 2 would be equally decreased.

3. Scope of this Environmental Assessment

The topics addressed in section B of this EA include geology and soils; groundwater, surface water, and wetlands; aquatic resources, vegetation, wildlife, and special status species; land use, recreation, and visual resources; cultural resources; air quality and noise; reliability and safety; and cumulative impacts. The EA describes the affected environment as it currently exists, discusses the environmental consequences of the proposed Project Amendment, identifies measures proposed by RB Pipeline to reduce impacts, and presents our additional recommended mitigation measures, which are summarized in section D. This EA supplements the Commission staff's April 26, 2019 final environmental impact statement (April 2019 FEIS)³ for the Rio Bravo Pipeline Project and the Rio Grande LNG Project, and will not discuss the environmental impacts related to the authorized Rio Grande LNG Terminal, as the impacts of the terminal have been disclosed in the April 2019 FEIS and in the November 22, 2019 Commission Order.⁴ Further, the EA clarifies how the proposed Project Amendment changes the April 2019 FEIS

³ Staff's April 26, 2019 final environmental impact statement for the Rio Bravo Pipeline Project and Rio Grande LNG Project can be found on FERC's eLibrary website (see accession number 20190426-3033).

⁴ On August 13, 2020, staff issued, by Delegated Order, an approval of a design change at the Rio Grande LNG Terminal (*rehearing pending*). Design changes include reducing the number of liquefaction trains from six to 5; increasing the liquefaction capacity of the five remaining trains while keeping the total export capacity the same; and other design changes to ancillary facilities within the LNG Terminal.

analysis of the Rio Bravo Pipeline Project. Many comment letters requested an environmental impact statement be prepared for Project Amendment. However, the scope of Project Amendment is limited to the RB Pipeline modifications, and because this EA will not discuss the environmental impacts related to the already authorized Rio Bravo Pipeline Project and Rio Grande LNG Project, an environmental impact statement was not warranted.

As the lead federal agency for the NEPA review of the Project Amendment, FERC is required to comply with Section 7 of the Endangered Species Act, as amended, and Section 106 of the National Historic Preservation Act. These statutes have been considered in the preparation of this EA. In addition to FERC, other federal, state, and local agencies may use this EA in approving or issuing any authorizations required for all or part of the proposed Project Amendment. Permits, approvals, and consultations for the Project Amendment are discussed in section A.10 of this EA.

The U.S. Army Corps of Engineers (USACE) is a cooperating agency because it has jurisdiction under Section 404 of the Clean Water Act. The U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) is also a cooperating agency because of that agency's expertise on pipeline safety and design requirements.

4. Public Review and Comment

On July 28, 2020, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Rio Bravo Pipeline Project Amendment and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to affected landowners (as defined in the Commission's regulations); federal, state, and local officials; Native American groups; agency representatives; environmental and public interest groups; and local libraries and newspapers.

In response to the NOI, the Commission received 960 comment letters from interested public, local non-governmental groups, the City of South Padre Island, Texas Parks and Wildlife Department (TPWD), U.S. Fish and Wildlife Service (FWS), Texas State Historic Preservation Office (TX SHPO), and the U.S. Environmental Protection Agency, Region 6 (EPA). Many letters were received requesting a formal public scoping meeting for the Project Amendment. Staff considered the NOI issued to request comments as sufficient and commensurate for the limited scope of the proposed Project Amendment; therefore, a public scoping meeting was not scheduled. The interested public and local non-governmental groups provided comments in response to the Notice of Application and the NOI largely related to the authorized RB Pipeline Project and Rio Grande LNG Project, which are not being re-assessed by staff or the Commission and are outside of the scope of the environmental analysis for the Project Amendment facilities. This EA addresses all substantive comments related to the Project Amendment, which are summarized in table 1, along with the EA section that addresses each topic. Issues identified that are not considered environmental considerations or are outside the scope of the EA process are summarized in table 2 and are not addressed further in this EA.

Table 1 Key Environmental Concerns Identified during Scoping	
Issue/Specific Comment	EA Section Addressing Comment
FERC should not issue a Certificate to RB Pipeline for this project	A.2
Request for Environmental Impact Statement	A.3
Wetland impacts along pipeline route	B.3
Wildlife impacts along pipeline route	B.4
State-listed species along pipeline route	B.4
Larger pipeline diameter, wider and deeper trench	B.5
Impact on Tribal lands, Carrizo Comecrudo Tribe of Texas	B.6
Socioeconomics of Project Amendment	B.7
Air quality impacts associated with Project Amendment facilities	B.8
Pipeline impact radius, increase in pipeline pressure	B.10
Emergency Response Plan	B.10
Cumulative impacts related to Project Amendment facilities	B.11
Climate Change and greenhouse gas emissions	B.11
Available capacity on the Valley Crossing Pipeline to meet the Project Amendment requirement	C.
Pipeline path and alternatives	A.5 and C.
Justified increase in pipeline diameter and pressure	C.

Issue/Specific Comment	Explanation
Corporate structure of Enbridge/RB Pipeline/Rio Grande LNG LLC and transfer of pipeline ownership to Enbridge	The EA discloses environmental impacts of the Project Amendment and not corporate structures of jurisdictional companies.
City of South Padre Island resolution in opposition against LNG development at Port of Brownsville and along Brownsville Ship Channel	The EA is not analyzing the previously evaluated and approved Rio Grande LNG Terminal.
Effects of hydraulically fractured shale gas production	The development of natural gas in shale plays by hydraulic fracturing is not the subject of this EA nor is the issue directly related to the proposed Project Amendment.
Reconsider cumulative impacts of the Rio Bravo Pipeline Project and Rio Grande LNG Project	These cumulative impacts were disclosed in the April 2019 FEIS.
Future increases in capacity at LNG Terminal is reasonably foreseeable	Outside of the scope of the EA. If the project sponsor desires to increase capacity in the future, a new FERC application would be assessed at that time.
Social cost, economic costs, environment, climate change impacts associated with LNG export	The EA is not analyzing the impacts of the previously evaluated and approved Rio Grande LNG Terminal, nor is it evaluating policy decisions regarding LNG export.
FERC issued a combination permit for the Rio Bravo Pipeline Project and Rio Grande LNG Project; FERC should issue separate permits.	Outside of the scope of the EA.
Impacts on ecotourism (fishing and birding) near the authorized Rio Grande LNG Terminal	The EA is not re-analyzing the impacts of the Rio Grande LNG Terminal.
More renewable energy and less oil gas production	Outside of the scope of the EA.
Market viability of Rio Grande LNG Project	Outside of the scope of the EA.
Visual resource, construction-related air quality, light, and noise impacts along the pipeline system	These resource impacts would not change from what was previously evaluated. The April 2019 FEIS disclosed the impacts associated with the authorized pipeline system.
Loss of brush and upland vegetation along the pipeline system	These resource impacts would not change from what was previously evaluated. The April 2019 FEIS disclosed the impacts associated with the authorized pipeline system.
Environmental and health impacts on the shrimping and fishing industries at the end of the pipeline and Rio Grande LNG Terminal	These resource impacts would not change from what was previously evaluated. The April 2019 FEIS disclosed the impacts associated with the authorized pipeline system and LNG Terminal.
Environmental impacts of additional gas production facilitated by the pipeline and LNG facilities	Outside of the scope of the EA.
Questioning approval of authorized pipeline system considering that the modified system eliminates multiple compressor stations	FERC staff does not design pipeline systems for efficiency.
No demand for gas, no public benefit to justify eminent domain	Outside of the scope of the EA.

Environmental Justice within the area of the LNG Terminal	The EA is not re-analyzing the impacts of the Rio Grande LNG Terminal.
Design of the Rio Grande LNG Terminal	Outside of the scope of the EA.
Correct reported flaws in the FEIS	Outside of the scope of the EA.
LNG exportation creating loss of fuel for the U.S.	Outside of the scope of the EA.
Potential political change after presidential elections	Outside of the scope of the EA.
Concerns related to SpaceX facility near the Rio Grande LNG Terminal	Previously discussed in the April 2019 FEIS and outside of the scope of the EA. The EA is not re-analyzing the impacts of the Rio Grande LNG Terminal.
Alternative project sites near the upper Texas Gulf Coast	Outside of the scope of the EA.

5. Proposed Facilities

RB Pipeline proposes to modify the Rio Bravo Pipeline Project facilities approved in the Commission’s November 22, 2019 Order. The Rio Bravo Pipeline Project pipeline system, as authorized, consists of a 2.4-mile-long, 42-inch-diameter pipeline, including 0.8 mile of dual pipeline (referred to as the Header System) in Kleber and Jim Wells Counties; 135.5 miles of parallel 42-inch-diameter pipelines originating in Kleberg County and terminating at Rio Grande LNG Terminal in Cameron County (referred to as Pipelines 1 and 2); four metering sites along the Header System; two interconnect booster compressor stations, each with a metering site; three compressor stations (one at the Rio Grande LNG Terminal); and other associated utilities, systems, and facilities, all in Texas.

As part of the Project Amendment, RB Pipeline proposes the following pipeline facility modifications:

- decrease the maximum allowable operating pressure (MAOP) of the 2.4-mile-long Header System pipeline from 1,480 pounds per square inch gauge (psig) to 1,200 psig;
- construct an extension of 0.2 mile of mainline pipeline for each Pipeline 1 and Pipeline 2 for a total of 135.7 miles each;
- increase the diameter of Pipeline 1 from 42 inches to 48 inches and increase the MAOP of both pipelines from 1,480 psig to 1,825 psig (Pipeline 2 will remain a 42-inch-diameter pipeline); and
- increase the transportation capacity of Pipeline 1 from 2.25 Bcf/d to 2.6 Bcf/d, and decrease the transportation capacity of Pipeline 2 from 2.25 Bcf/d to 1.9 Bcf/d, resulting in the total authorized capacity of 4.5 Bcf/d remaining unchanged.

The Project Amendment also includes modifications to the following aboveground facilities that are authorized (but as yet unbuilt) along the Rio Bravo Pipeline Project right-of-way:

- eliminate Compressor Station 2 in Kenedy County;
- eliminate Compressor Station 3 within the Rio Grande LNG Terminal in Cameron County, except for a meter and other ancillary facilities within the LNG Terminal;

- eliminate all facilities associated with Booster Stations 1 and 2, including related meter stations, in Kenedy County;
- eliminate the meter station at Compressor Station 1; and
- increase the horsepower (hp) at Compressor Station 1 in Kleberg County from 180,000 hp to 282,000 hp by switching from six 30,000-hp natural gas compressor units to four 43,000-hp natural gas compressor units and two 55,000-hp compressor units.

The general project location is shown in figure 1. There are no proposed changes to the authorized Rio Bravo Pipeline Project pipeline system routes for Pipelines 1, 2, or the Header System.

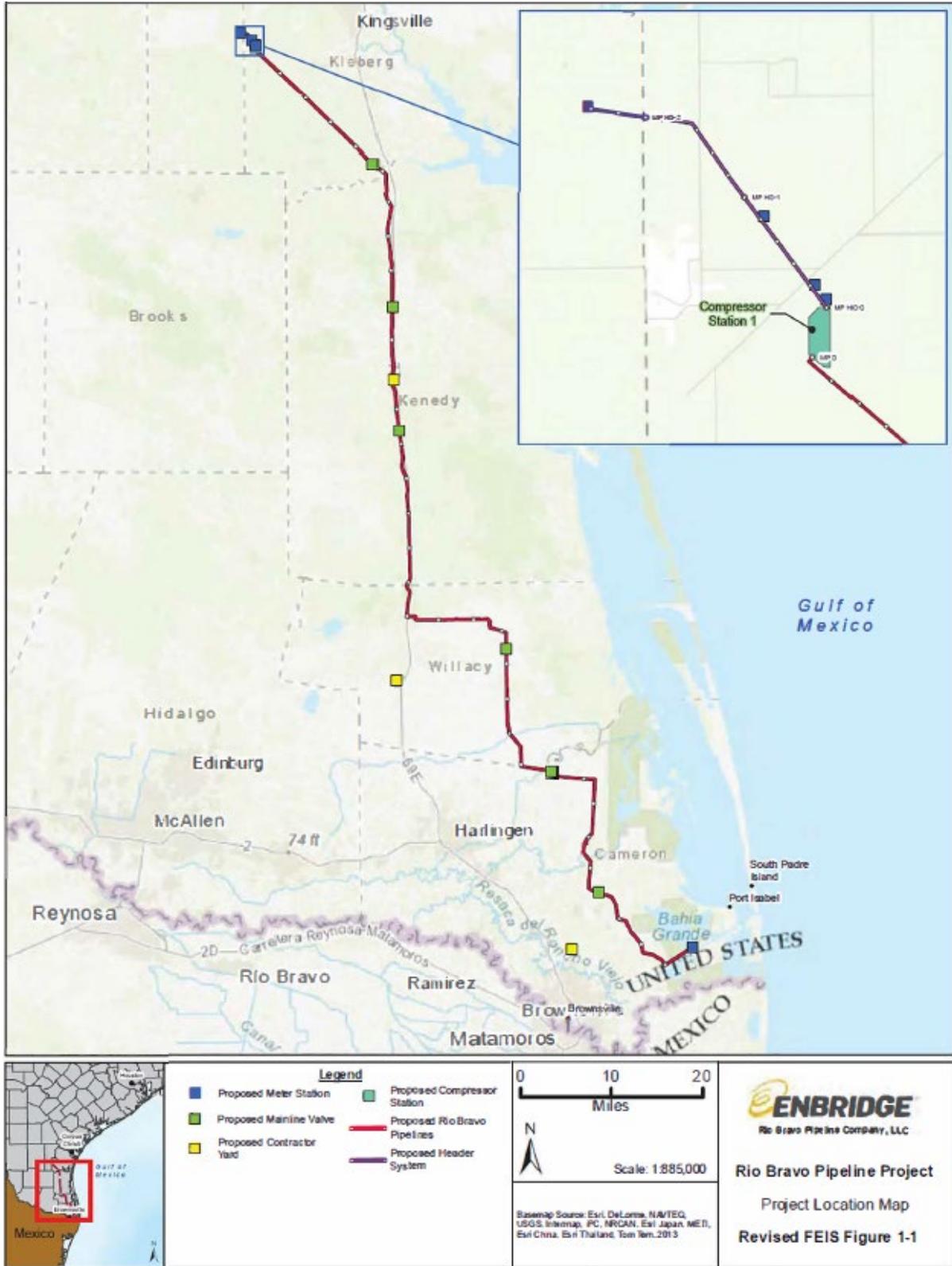


Figure 1: Project Amendment Location Map

6. Land Requirements

All proposed facilities and activities would be located and conducted within workspaces previously approved in the Certificate for the Rio Bravo Pipeline Project. RB Pipeline proposes only to obtain or retain, as appropriate, easements for land associated with the facilities and rights-of-way it will require and utilize to construct, own, and operate the facilities authorized by the Commission. Eliminating Compressor Stations 2 and 3, Booster Stations 1 and 2 (including the related meter stations), and the meter station at Compressor Station 1 would not require ground disturbance associated with these facilities and would result in a decrease of 48.2 acres of land from the scope of the analysis authorized Rio Bravo Pipeline Project. Increasing compression at Compressor Station 1 and changes to MAOPs would not require additional ground disturbance or the use of additional lands. RB Pipeline would construct the larger-diameter Pipeline 1 using previously approved workspaces and would not require the use of additional lands. The extension of Pipelines 1 and 2 would be conducted in workspace that was previously designated for the now-eliminated Compressor Station 3, which would have been located within the boundaries of the Rio Grande LNG Terminal. Lastly, RB Pipeline would use access roads, pipe yards, and other workspaces previously approved for the Rio Bravo Pipeline Project.

7. Construction Schedule

RB Pipeline proposes to use the same general construction sequence as already approved in the November 2019 Order. As described in the April 2019 FEIS for the Rio Bravo Pipeline Project and Rio Grande LNG Project, the phased construction for the pipeline will be completed in accordance with the timing needs of the Rio Grande LNG Terminal. Phase 1 will consist of the Header System, Pipeline 1, Compressor Station 1 and related aboveground facilities, and meter station facilities, to be operational upon the commencement of the LNG Terminal operations. Phase 1 will begin in Year 3 of the LNG Terminal construction. Phase 2 includes construction of Pipeline 2 and installation of electric units and remaining facilities at Compressor Station 1, and is estimated to begin about 18 months following the commencement of Phase 1 operations.

The pipeline system construction schedule described in the April 2019 FEIS was Monday through Saturday during daylight hours, from 7 a.m. to 7 p.m. RB Pipeline states that construction of the Project Amendment would primarily occur Monday through Saturday, during daylight hours from 7 a.m. to 7 p.m., with activities associated with horizontal directional drills (HDD), pump operation at dry-ditch waterbody crossings, hydrostatic testing, and tie-ins to be conducted during additional Sunday or nighttime hours. To the extent any such work is in close proximity to noise sensitive receptors, RB Pipeline would, where practicable, avoid performing work on Sundays or during nighttime hours, or otherwise minimize noise, disturbance, and other potential impacts during Sundays or nighttime hours. We find this change acceptable.

8. Construction, Operation, and Maintenance Procedures

The Project Amendment would be designed, constructed, operated, marked, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192, which ensure adequate protection for the public and to prevent natural gas facility accidents and

failures. Part 192 specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion.

The construction, operation, maintenance, and environmental compliance procedures described in the April 2019 FEIS would be applied to the Project Amendment facilities. RB Pipeline also proposes to use the same standard and special construction techniques as described in the April 2019 FEIS.

9. Non-Jurisdictional Facilities

Under section 7 of the NGA, and as part of its decision regarding whether or not to approve the facilities under its jurisdiction, the Commission is required to consider all factors bearing on the public convenience and necessity. Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the FERC.

No non-jurisdictional facilities not already assessed in the April 2019 FEIS for the Rio Bravo Pipeline Project would be required to construct the proposed Project Amendment facilities.

10. Permits, Approvals, and Regulatory Consultations

Table 3 lists the major federal, state, and local permits, approvals, and consultations for construction and operation of the Project Amendment. In its comment letter responding to the NOI, the EPA recommended that FERC work with the Texas Commission on Environmental Quality (TCEQ) and the local health departments to ensure that water and air permits be implemented utilizing complete and accurate data for the protection of the impacted populations. FERC has no regulatory mechanism to participate in the state or local water and air permit applications needed for projects. RB Pipeline would be responsible for obtaining and abiding by all permits and approvals required for construction and operation of the Project Amendment regardless of whether or not they appear in the table. As required by the November 2019 Order, RB Pipeline must, however, obtain and file documentation with the Commission that it has received all applicable authorizations required under federal law prior to any construction of its pipeline system.

Table 3 Federal and State Permits and Approvals			
Administering Agency or Organization	Permit/Approval	Submittal / Anticipated Submittal	Receipt / Anticipated Receipt
Federal			
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity	June 16, 2020	Pending
U.S. Fish and Wildlife Service	<i>Endangered Species Act</i> , Section 7 <i>Fish and Wildlife Coordination Act</i> Consultation	N/A	Final Biological Opinion issued October 1, 2019; Final Biological Opinion Amended Terms and Conditions issued October 8, 2019; Final Biological Opinion Addendum issued January 9, 2020.
	<i>Migratory Bird Treaty Act</i> Consultation	N/A	Migratory Bird Conservation Plan Rev 1 submitted on August 27, 2019; FWS indicated it had no additional comments (email dated August 28, 2019).
U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration	49 CFR 192 Consultation (standards for natural gas pipelines) 49 CFR 193, Subpart B	N/A	Informal consultation is ongoing.
U.S. Army Corps of Engineers	Section 404 (Nationwide Permit 12)	Updated permit application filed May 1, 2018.	Army Permit No. SWG-2015-00114 issued on February 21, 2020. Permit may require a modification for the increased Pipeline 1 diameter.
National Park Service	Consultation on potential impacts on historic resources pursuant to Section 106 of the <i>National Historic Preservation Act</i>	Initial agency consultation meeting on February 5, 2016. Follow-up meeting on July 23, 2019. Cultural resource survey reports submitted December 19, 2019.	Consultation ongoing.
International Boundary and Water Commission (IBWC)	Permit to cross waterbodies regulated by the IBWC	Outgrant License Application for the IBWC filed on January 17, 2020.	IBWC-furnished license executed by RB Pipeline on May 21, 2020. RB Pipeline is awaiting IBWC's execution of the license.
State			
Texas Commission on Environmental Quality	<i>Clean Air Act</i> --New Source Review and Title V Operating Permit	Standard Permit applications for Compressor Station 1 filed March 24, 2017. Revised Title V Operating permit application to be submitted in 2021/2022, prior to beginning construction.	Anticipated receipt in 2021/2022.

Table 3 Federal and State Permits and Approvals			
Administering Agency or Organization	Permit/Approval	Submittal / Anticipated Submittal	Receipt / Anticipated Receipt
	Temporary Water Use Permit	Anticipated permit application submittal once month after FERC Certificate receipt.	Prior to construction.
	Coastal Use Permit Coastal Zone Management Consistency Determination	March 6, 2017.	Coastal Management Program Consistency Determination of U.S. Army Corps of Engineers Permit No. SWG-2015-00114 issued February 14, 2020.
Railroad Commission of Texas (RRC)	Section 401 Water Quality Certification (automatic with Nationwide Permit 12)	March 29, 2019.	RRC Statement of Basis and Response to Comments Concerning State Water Quality Certification of U.S. Army Corps of Engineers Permit Application No. SWG-2015-00114 issued February 14, 2020.
	Hydrostatic Test Water Discharge permit; Operations Discharge and Surface Water Management Permit, New Construction Commencement Report Permit	Anticipated permit application submittal once month after FERC Certificate receipt.	Prior to construction.
Texas Parks and Wildlife Department	Consultation pursuant to Title 5, TPWD Code- Chapters 67, 68, and 88 and Title 31, Texas Administrative Code- Section 65	Technical assistance request submitted March 27, 2015. Follow-up meetings through 2019.	Consultation ongoing.
Texas State Historic Preservation Office	Section 106 of the <i>National Historic Preservation Act</i> Clearance	Phase 1 report submitted June 29, 2016. TX SHPO concurrence September 2, 2016. Addendum Report submitted September 12, 2016. Remaining reports - December 19, 2019.	Phase I TX SHPO concurrence - September 2, 2016. Addendum Report TX SHPO concurrence - November 30, 2016. Remaining reports TX SHPO concurrence – January 14, 2020. Unanticipated Discovery Plan approval November 10, 2016.
Texas Department of Transportation	Utility Crossing/Temporary Driveway Permit	Anticipated permit application submittal once month after FERC Certificate receipt.	Prior to construction.

B. ENVIRONMENTAL ANALYSIS

The following sections discuss the Project Amendment's potential direct and indirect impacts on environmental resources, and supplements the analysis included in the April 2019 FEIS to address the proposed pipeline system modifications. When considering environmental consequences, the duration and significance of any impacts may be temporary, short-term, long-term, or permanent. Temporary impacts generally occur during construction, with the resources returning to pre-construction conditions almost immediately. Short-term impacts could continue for up to 3 years following construction. Long-term impacts would require more than 3 years to recover, but eventually would recover to pre-construction conditions. Permanent impacts occur when activities modify resources to the extent that they would not return to pre-construction conditions during the life of the project pipeline system, such as with the construction of an aboveground facility. An impact would be considered significant if it would result in a substantial adverse change in the physical environment.

1. Geology

The Project Amendment would not affect new, undisturbed lands beyond what was authorized for the Rio Bravo Pipeline Project. The proposed 0.2-mile-long extension of Pipelines 1 and 2 is due to the elimination of Compressor Station 3 within the LNG Terminal site and would only affect land that would otherwise have been affected by construction of Compressor Station 3. Further, the Project Amendment would not change the number or location of the authorized HDDs along the pipeline system route. The April 2019 FEIS described the mineral resources crossed by the Rio Bravo Pipeline Project and concluded that potential geologic hazards in the area would not significantly impact the Rio Bravo Pipeline Project, and that the project would not be significantly impacted by geologic hazards. No further analysis is necessary.

2. Soils

The Project Amendment would reduce the construction and operation acreage of the authorized Rio Bravo Pipeline Project by 48.2 acres. This acreage reduction is a result of the proposed elimination of Compressor Stations 2, including all related facilities; Compressor Station 3, except for the gas custody transfer meter station and other ancillary facilities; and the facilities associated with Booster Stations 1 and 2, including related meter stations. Notwithstanding, the underground soils disturbance would increase due to a deeper trench for the larger diameter Pipeline 1. The April 2019 FEIS indicates that the trench for the pipeline system would be excavated to a depth to allow a minimum of 3 feet of soil cover between the top of the pipe and the ground surface, and the trench would be about 7 feet below the ground surface. For the proposed larger diameter Pipeline 1, RB Pipeline states that the trench depth would increase by an additional foot, or to 8 feet, to meet the required minimum depth of cover of 3 feet. RB Pipeline does not propose to increase the construction right-of-way width for either Pipelines 1 or 2 or the Header System. Further, RB Pipeline maintains its commitment to implement the mitigation measures described in the April 2019 FEIS to minimize impacts of construction on soils within the construction workspaces (e.g., installation and maintenance of temporary erosion and sediment control structures during construction, use of dust suppression to control and minimize wind erosion, revegetate disturbed areas within six working days of final grading

[weather and soil conditions permitting], etc.). Therefore, we conclude that impacts on soils due to construction and operation of the Project Amendment would be temporary and minor.

3. Water Resources and Wetlands

3.1 Groundwater

The Project Amendment would not affect new, undisturbed lands beyond what was authorized for the Rio Bravo Pipeline Project. However, the underground soils disturbance would increase due to a deeper trench for the larger diameter Pipeline 1 (see discussion above, in section B.2). The April 2019 FEIS described the existing groundwater resources and groundwater impacts and mitigation of the pipeline system, including the Header System and the aboveground facilities along the pipeline system. RB Pipeline would employ the same mitigation measures as identified in the April 2019 FEIS for construction of the Project Amendment facilities. As such, we conclude that the Project Amendment would not significantly impact the quantity or quality of groundwater.

3.2 Surface Waters

Surface water impacts for the Project Amendment would be the same as described for the original project in the April 2019 FEIS. As discussed in section A.6 above, an additional 0.2 mile of Pipelines 1 and 2 would be added to both Pipelines 1 and 2 within the LNG Terminal site where Compressor Station 3 was proposed. However, Compressor Station 3 has been eliminated from the authorized Rio Bravo Pipeline Project, and construction of the extended pipe for the Project Amendment would not impact any waterbodies.

The EPA filed a comment letter recommending that FERC continue to consult with the USACE on the project impacts to jurisdictional waters. No additional surface waters would be impacted beyond what was authorized for the Rio Bravo Pipeline Project in the November 22, 2019 Order. Thus, we conclude that the Project Amendment would not impact surface waters.

3.3 Wetlands

The Project Amendment would not affect any additional wetlands, beyond what was described in the April 2019 FEIS for the Rio Bravo Pipeline Project. RB Pipeline does not anticipate any increase in the number of affected wetlands or wetland acreage as a result of the proposed larger diameter pipe. While the Project Amendment would not affect any additional wetlands, the pipeline diameter increase of Pipeline 1 may result in additional temporary impacts of the wetlands crossed by the project due to the increased trench depth.

On August 6, 2020, RB Pipeline filed a request with the USACE to suspend the Section 404 Department of the Army Permit SWG-2015-00114 that was issued for the Rio Grande LNG Project. On September 22, 2020, and updated on October 28, 2020, RB Pipeline and Rio Grande LNG, LLC submitted a Request for Permit Modification to the USACE. The Request for Permit Modification includes the elimination of RB Pipeline's Compressor Station 3 that would reduce wetland impacts within the Rio Grande LNG Terminal.

RB Pipeline is required to have all federal permits, including a valid Section 404 of the Clean Water Act permit, prior to construction. When a Section 404 permit is required, a Section 401 Certification is also required. The 401 Certification for the Rio Bravo Pipeline Project was issued by the Railroad Commission of Texas on February 14, 2020. The 401 Certification contains the following statement: "...the following conditions should be included in any USACE permit to assure that the action will not violate applicable water quality requirements and that the action is consistent with the goals and enforceable policies of the Texas Coastal Management Program." Therefore, all 401 Certificate conditions are expected to be included in the modified Section 404 USACE permit for the Rio Bravo Pipeline Project, as modified by the Project Amendment.

We conclude that any additional impacts on wetlands would not be significant as a result of the Project Amendment.

4. Aquatic Resources, Vegetation, Wildlife, and Special Status Species

4.1 Aquatic Resources

The April 2019 FEIS described the existing aquatic resources and impacts and mitigation of the pipeline system, including the Header System and the aboveground facilities along the pipeline system. Given that no additional waterbodies are crossed or would be impacted by the Project Amendment, no aquatic resources would be impacted by the Project Amendment.

4.2 Vegetation

The Project Amendment would not impact additional vegetation outside that already described and approved for the Rio Bravo Pipeline Project. Rather, the Project Amendment would impact approximately 48.2 fewer acres of land than the originally designed Rio Bravo Pipeline Project. Construction impact reductions, due to elimination of the aboveground facilities, total about 41 acres of open land, 7 acres of forest/shrub land, and 0.2 acre of barren land.

We received comments from the TPWD on August 2, 2020, recommending that RB Pipeline, during construction of the amended facilities, implement the same project-specific plans as described in the April 2019 FEIS to minimize impacts on vegetation, wildlife habitat, and state-listed threatened and endangered animal species. The comments were mostly related to the original Rio Bravo Pipeline Project, but we respond here for clarity, transparency, and comprehensiveness. To minimize impacts on vegetation, RB Pipeline has collocated approximately 66 percent of the routes for Pipelines 1 and 2 with other utility rights-of-way. RB Pipeline would seed all of the previously vegetated areas disturbed by construction in accordance with the project-specific *Upland Erosion Control, Revegetation, and Maintenance Plan (Plan)* and project-specific *Wetland and Waterbody Construction and Mitigation Procedures (Procedures)*. Seed mixes would be developed in consultation with the local soil conservation agency and/or the landowner. RB Pipeline is consulting with the local offices of the Natural Resources Conservation Service and the Ceasar Kleberg Wildlife Research Institute to determine the most appropriate seed mixes for use in south Texas. RB Pipeline would also refer to the online Lady Bird Johnson Wildflower Center Native Plant Database. In addition, RB Pipeline would implement its Noxious and Invasive Plant Management Plan to prevent the introduction

and spread of noxious weeds and invasive species during construction of the Project Amendment. Finally, to preserve grass cover crops and low growing bushes, RB Pipeline would use hydro axes or flail mowers instead of mowers. Large trees in the temporary right-of-way would be removed by cutting at ground level, leaving the root systems intact.

Given that the April 2019 FEIS concluded that construction and operation of the Rio Bravo Pipeline Project would not have a significant impact on vegetation communities, and the Project Amendment would reduce the land impacted by the authorized Rio Bravo Pipeline Project, no further analysis is necessary.

4.3 Wildlife and Migratory Birds

The Project Amendment does not involve additional ground disturbance outside that already authorized for the original Rio Bravo Pipeline Project; therefore, there would not be additional impacts on wildlife or migratory birds beyond that already described in the April 2019 FEIS.

In response to the TPWD letter filed on August 2, 2020, and as described in the April 2019 FEIS, RB Pipeline would implement its Migratory Bird Conservation Plan,⁵ and avoid trapping wildlife in trenches. Sediment control fences would be used to exclude wildlife from the construction areas. RB Pipeline would use no-till drilling, hydromulching, or hydroseeding for soil stabilization, rather than erosion control blankets, for erosion control to reduce entanglement hazards to wildlife. Staging areas and access roads would be located in previously disturbed areas, as approved in the November 22, 2019 Order, to minimize added impacts on wildlife. RB Pipeline would implement measures in its Erosion Control and Sediment Control Plan and Spill Prevention Control and Countermeasure Plan to further minimize impacts.

Given that the Project Amendment involves no additional ground disturbance that has not been described and approved under the Rio Bravo Pipeline Project, and would involve a reduction in impacts from the Rio Bravo Pipeline Project, we conclude that the Project Amendment would not have a significant impact on wildlife and migratory birds. No further analysis is necessary.

4.4 Special Status Species

Special status species are those species for which state or federal 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 of 1973, as amended, and those species that are state endangered or threatened.

The April 2019 FEIS described the state- and federally-listed species that could be impacted by the Rio Bravo Pipeline Project, and the potential impacts on those species. The Project Amendment would not result in ground-disturbing activities, vegetation removal, or

⁵ The Migratory Bird Conservation Plan was filed on November 25, 2019, and can be found at accession number 20191125-5026.

otherwise impact listed species or their habitats beyond what was described for the Rio Bravo Pipeline Project.

In response to the TPWD letter filed on August 2, 2020, RB Pipeline would implement the measures described in the April 2019 FEIS and approved in the November 22, 2019 Order to minimize potential negative impacts on state-listed species, including RB Pipeline's project-specific version of FERC's Plan and Procedures; RB Pipeline's Texas Tortoise Best Management Practices; presence of an environmental inspector; and contractor training.

The FWS provided a Biological Opinion for the Rio Bravo Pipeline Project on October 1, 2019 (as amended on October 8, 2019). Further, the FWS provided a letter on August 24, 2020, noting that no supplemental Biological Opinion is required for the Project Amendment. There would be *no affect* on any federally listed species by the implementation of the Project Amendment. Based on the fact that the Project Amendment would not result in new or additional impacts on state- or federally-listed species or their habitats, no further analysis is necessary.

5. Land Use, Recreation, and Visual Resources

5.1 Land Use and Recreation

The Project Amendment facilities would affect the same land uses during construction and operation as described in the April 2019 FEIS. However, given the elimination of Compressor Station 2, Booster Stations 1 and 2 (and the related meter stations), and the meter station at Compressor Station 1, the Project Amendment would decrease the overall footprint of the authorized Rio Bravo Pipeline Project by 48.2 acres of land. The Project Amendment would also eliminate Compressor Station 3 within the footprint of the Rio Grande LNG Terminal. Land uses that would no longer be disturbed by construction or operation due to elimination of the aboveground facilities comprise of about 41 acres of open land, about 7 acres of forest/shrub land, and 0.2 acre of barren land. RB Pipeline would implement the mitigation measures described in the April 2019 FEIS across all land uses, included recreational areas, impacted along the pipeline route.

5.2 Visual Resources

The Project Amendment would have similar impacts on visual resources as described in the April 2019 FEIS; however, elimination of aboveground facilities would decrease certain visual impacts along the pipeline system. Because the Project Amendment eliminates Compressor Station 2, passing motorists traveling along U.S. Highway 77 would no longer have this facility in their sight. Further south along the pipeline route and U.S. Highway 77, passing motorists would no longer see Booster Stations 1 and 2 and related meter facilities because the Project Amendment also proposes to eliminate these facilities. RB Pipeline proposes to modify the compression facilities authorized, but not yet constructed, at Compressor Station 1. The authorized configuration at Compressor Station 1 consists of six 30,000-hp natural gas-driven turbines, two natural gas-fired backup generators, and other ancillary facilities. The modified Compressor Station 1 would consist of four 43,000-hp natural gas-driven turbines, two 55,000-hp electric motor-driven compressor units, one natural gas-driven heater, and two natural gas-fired backup generators, and other ancillary facilities. These proposed changes to Compressor

Station 1 would not have a significant visual effect when compared to the authorized Compressor Station 1 design. As described in the April 2019 FEIS, because of the lack of visual receptors in proximity to Compressor Station 1 (i.e., over 4 miles away from Highway 281 and about 5.5 miles away from the closest residence) and the existing commercial infrastructure just northwest to the site, visual impacts from the modified Compressor Station 1 would be permanent, but remain minor.

The April 2019 FEIS concluded that the Rio Bravo Pipeline Project's impact on land use, recreational activities, and visual resources would be permanent but not significant. Based on the elimination of aboveground facilities and the location and land use of Compressor Station 1, we do not anticipate that the Project Amendment would have a significant impact on land use, recreational activities, or visual resources.

6. Cultural Resources

All construction activities would take place in areas previously approved for the Rio Bravo Pipeline Project in Docket No. CP16-455-000. Cultural resources/Section 106 of the National Historic Preservation Act review and consultation with federally recognized Native American tribes completed under that docket concluded that no historic properties would be adversely affected. In addition, RB Pipeline would implement the Unanticipated Discoveries Plan approved for the Rio Bravo Pipeline Project in the event of a discovery during construction. This would extend to the Project Amendment as well.

In response to the NOI, we received comments regarding the Rio Bravo Pipeline Project's lack of examination for and avoidance of indigenous ancestral sites, and potential impacts on sites of concern to the Carrizo Comecrudo Tribe of Texas including burials, village sites, and sacred sites. As noted above, we have completed the cultural resources/Section 106 review and consultation with federally recognized Native American tribes. All required cultural resources surveys were completed, and no burial sites, village sites, or sacred sites were identified.

7. Socioeconomics

7.1 Socioeconomic Impacts

Construction and operation of the Project Amendment could impact socioeconomic conditions, either adversely or positively, in the general project vicinity. These potential impacts include alteration of population levels or local demographics, increased employment opportunities, increased demand for housing and public services, increased traffic on area roadways, and an increase in state and local government revenues associated with sales and payroll taxes. Many comment letters were received regarding the potentially adverse socioeconomic impacts from the authorized Rio Bravo Pipeline Project and Rio Grande LNG Project, such as impacts on tourism, recreational fishing, and commercial shrimping. The April 2019 FEIS already described the socioeconomic impact of the authorized Rio Bravo Pipeline Project and Rio Grande LNG Project; this section will focus on the socioeconomic impact of the Project Amendment facilities.

Under the proposed Project Amendment (incorporating the new facility arrangements into the overall Rio Bravo Pipeline Project), the average monthly workforce to be utilized during construction of Phase 1 is estimated to be about 870 workers (peak of 1,700). Similar to the authorized Rio Bravo Pipeline Project construction timeline, Phase 2 of the Project Amendment construction is expected to occur after about 18 months following commencement of Phase 1 operations. Phase 2 of the Project Amendment construction would also occur over a 12-month period and would require an average workforce of approximately 870 workers. While Phase 1 of the Project Amendment's construction peak would be higher than Stages 1 and 2 of the authorized Rio Bravo Pipeline Project, the sustained average monthly workforce over the course of the entire construction period for the Project Amendment would be lower (2,240 workers for the authorized Rio Bravo Pipeline Project versus 1,740 workers for the Project Amendment). The other potential impacts regarding employment opportunities, increased demand for housing and public services, increased traffic on area roadways, and an increase in state and local government revenues associated with sales and payroll taxes, would largely be the same or reduced to that described in the April 2019 FEIS, as the Project Amendment facilities would eliminate a portion of the aboveground facilities associated with the authorized Rio Bravo Pipeline Project. Therefore, we do not anticipate adverse socioeconomic impacts as a result of the Project Amendment.

7.2 Environmental Justice

For projects with major aboveground facilities, FERC regulations (18 CFR 380.12(g)(1)) directs us to consider the impacts on human health or the environment of the local populations, including impacts that would be disproportionately high and adverse for minority and low-income populations. The April 2019 FEIS described the impact of the Rio Bravo Pipeline Project and Rio Grande LNG Project on minority and low-income populations, and concluded they would not be significant. The Project Amendment involves elimination and modifications to the facilities authorized under the Rio Bravo Pipeline Project; as such, the Project Amendment does not involve additional major aboveground facilities. No further analysis is necessary.

8. Air Quality

Construction and operation of the Project Amendment would result in impacts on local and regional air quality. Public scoping comments expressed concern regarding impacts on air quality due to construction and operation emissions associated with the Project Amendment and the authorized Rio Bravo Pipeline Project and Rio Grande LNG Project. The April 2019 FEIS described the air quality impacts of the authorized projects; this section will focus on the potential air quality impacts due to the Project Amendment facilities. This section also summarizes federal and state air quality regulations that are applicable to the proposed facilities. The regional climate and existing air quality in the Project Amendment area are incorporated by reference from the April 2019 FEIS.

Combustion of natural gas would produce criteria air pollutants such as ozone, carbon monoxide (CO), sulfur dioxide (SO₂), and inhalable particulate matter (PM_{2.5} and PM₁₀). PM_{2.5} includes particles with an aerodynamic diameter less than or equal to 2.5 micrometers, and PM₁₀ includes particles with an aerodynamic diameter less than or equal to 10 micrometers. Combustion of fossil fuels also produces volatile organic compounds (VOC), a large group of

organic chemicals that have a high vapor pressure at room temperature; and oxides of nitrogen (NO_x). VOCs react with nitrogen oxides, typically on warm summer days, to form ozone. Other byproducts of combustion are greenhouse gases (GHG) and hazardous air pollutants (HAP). HAPs are chemicals known to cause cancer and other serious health impacts.

GHGs produced by fossil-fuel combustion are carbon dioxide (CO₂), methane, and nitrous oxide. GHGs are non-toxic and non-hazardous at normal ambient concentrations, and there are no applicable ambient standards or emission limits for GHGs under the Clean Air Act (CAA). Emissions of GHGs are typically expressed in terms of CO₂ equivalents (CO₂e). The GHG CO₂e unit of measure takes into account the global warming potential (GWP) of each GHG. The GWP is a ratio relative to CO₂ that is based on the particular GHG's ability to absorb solar radiation as well its residence time within the atmosphere. For example, CO₂ has a GWP of 1, methane has a GWP of 25, and nitrous oxide has a GWP of 298. To obtain the CO₂e quantity, the mass of the particular GHG compound is multiplied by the corresponding GWP, the product of which is the CO₂e for that compound. The CO₂e value for each of the GHG compounds is summed to obtain the total CO₂e GHG emissions.

Other pollutants, not produced by combustion, are fugitive dust and fugitive emissions. Fugitive dust is a mix of PM_{2.5}, PM₁₀, and larger particles thrown up by construction vehicles, earth movement, or wind erosion. Fugitive emissions, in the context of this EA, would be fugitive emissions of methane from operational pipelines and aboveground facilities.

8.1 Ambient Air Quality Standards

The EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: SO₂, CO, ozone, nitrogen dioxide (NO₂), PM₁₀, PM_{2.5}, and lead. The NAAQS were established under the CAA to protect human health (primary standards) and public welfare (secondary standards). Primary standards set limits the EPA believes are necessary to protect human health including sensitive populations such as children, the elderly, and asthmatics. Secondary standards are set to protect public welfare from detriments such as reduced visibility and damage to crops, vegetation, animals, and buildings.

Individual state air quality standards cannot be less stringent than the NAAQS. The federal NAAQS for criteria pollutants are the same as the state standards established by the TCEQ in accordance with Section 30 of the Texas Administrative Code (30 TAC), Part 101.21. The TCEQ has also established 30-minute average property line standards for SO₂ and hydrogen sulfide in 30 TAC Part 112. The federal NAAQS and state ambient air quality standards are incorporated by reference from the April 2019 FEIS.

Air Quality Control Regions (AQCR) are established by the EPA and local agencies for air quality planning purposes, in which State Implementation Plans describe how the NAAQS would be achieved and maintained. Each AQCR, or portion(s) of an AQCR, is classified as either attainment, nonattainment, or maintenance with respect to the NAAQS. The facilities specific to the Project Amendment are within the Corpus Christi-Victoria Intrastate and the Brownsville-Laredo Intrastate AQCRs. Areas where air quality data are not available are

considered to be unclassifiable and are treated as attainment areas. All components of the Project Amendment are in areas classified as in attainment for all criteria pollutants.

Regulatory Requirements for Air Quality

State air quality rules govern the issuance of air permits for construction and operation of a stationary emission source. The TCEQ has the primary jurisdiction over air emissions produced by stationary sources associated with the Project Amendment. The TCEQ's air quality regulations are codified in Title 30 of the TAC. The regulations incorporate federal program requirements listed in 40 CFR 50-99 and establish permit review procedures for all facilities that can emit pollutants to the ambient air. New facilities are required to obtain an air permit prior to construction. For larger facilities subject to major New Source Review (NSR) review, and approval at the federal level may be required.

Federal Air Quality Requirements

New Source Performance Standards

Section 111 of the CAA authorized the EPA to develop technology-based standards that apply to specific categories of stationary sources. These standards, referred to as New Source Performance Standards (NSPS), are found in 40 CFR 60. The NSPS apply to new, modified, and reconstructed affected facilities in specific source categories. We have determined that the following NSPS would be applicable to one or more of the proposed Project Amendment facilities.

Subpart A – General Provisions. The general provisions listed in Subpart A include broader definitions of applicability and various methods for maintaining compliance with requirements listed in subsequent subparts of 40 CFR 60. Subpart A also specifies the state agencies to which the EPA has delegated authority to implement and enforce standards of performance. The TCEQ has been delegated authority for all 40 CFR 60 standards promulgated by the EPA. Equipment at the modified Compressor Station 1 subject to any of the NSPS subparts listed below would all be subject to Subpart A.

Subpart JJJJ – Standards of Performance for Spark Ignition Internal Combustion Engines. Subpart JJJJ provides requirements for stationary spark ignition internal combustion engines that are constructed, modified, or reconstructed after June 12, 2006. The two natural gas backup generators located at the modified Compressor Station 1 would be subject to the requirements of Subpart JJJJ for emergency natural gas-fired engines greater than or equal to 130 hp.

Subpart KKKK – Standards of Performance for Stationary Combustion Turbines. Subpart KKKK applies to owners and operators of stationary combustion turbines with a heat input peak load equal to or greater than 10 British thermal units per hour that commenced construction, modification, or reconstruction after February 18, 2005. Subpart KKKK regulates emissions of NO_x and SO₂. Subject turbines must meet the applicable emission limits and operational requirements as well as recordkeeping and reporting requirements of this subpart. The turbines at the modified Compressor Stations 1 would be subject to NSPS KKKK.

Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas

Industry. Subpart OOOOa applies to owners and operators of crude oil and natural gas production, transmission, and distribution facilities. Subpart OOOO regulates emissions of VOCs and methane. RB Pipeline anticipates that NSPS OOOOa would apply to the modified Compressor Station 1. The fugitive emissions at this compressor station would be subject to NSPS OOOOa. RB Pipeline would monitor fugitive emissions at this facility.

National Emissions Standards for Hazardous Air Pollutants

Section 112 of the CAA authorized the EPA to develop technology-based standards that apply to specific categories of stationary sources that emit HAPs. These standards are referred to as National Emission Standards for Hazardous Air Pollutants (NESHAP) and are found in 40 CFR 61 and 63. Eight hazardous substances are regulated per 40 CFR 61, including asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. The EPA develops national priorities for NESHAPs that focus on significant environmental risks and noncompliance patterns.

The 1990 CAA Amendments established a list of 189 HAPs, resulting in the promulgation of Part 63, also known as the Maximum Achievable Control Technology standards. Part 63 regulates HAPs from major sources of HAPs and specific source categories emitting HAPs. Some NESHAPs may apply to area (minor) sources of HAPs. Major source thresholds for NESHAPs are 10 tons per year (tpy) of any single HAP or 25 tpy of total HAPs. As discussed in the April 2019 FEIS, operations of the overall LNG Terminal would be a major source of HAPs, as potential total emissions of HAPs would be greater than 25 tpy and emissions of individual HAPs would have the potential to exceed 10 tpy. Elimination of Compressor Station 3 within the LNG Terminal does not change the major source designation of the LNG Terminal. However, total potential HAPs emissions at the modified Compressor Station 1 would be less than 10 tpy, and would therefore be considered area (minor) sources of HAPs. The following NESHAPs would be applicable to Compressor Station 1.

Subpart A – NESHAP General Provisions. The general provisions listed in Subpart A include broader definitions of applicability and various methods for maintaining compliance with requirements listed in subsequent subparts of 40 CFR 63. This subpart also addresses the delegation of NESHAP authority to the states.

Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines. Subpart ZZZZ regulates HAP emissions from reciprocating internal combustion engines. Although area sources based on their potential to emit for HAPs, Subpart ZZZZ would also apply to the backup generators at modified Compressor Station 1. In accordance with Subpart ZZZZ, compliance would be achieved through compliance with NSPS IIII and JJJJ.

Mandatory Greenhouse Gas Reporting

Subpart W of 40 CFR 98 requires petroleum and natural gas facilities that emit 25,000 metric tons or more of CO₂e per year to report annual emissions of specified GHGs from various processes within the facility. The Mandatory Reporting Rule does not require emission control devices and is strictly a reporting requirement for stationary sources based on actual emissions.

Compressor stations are subject to GHG reporting requirements under Subpart W. Reporting is required for CO₂e from reciprocating compressor rod packing venting, centrifugal compressor venting, transmission storage tanks, blowdown vent stacks, natural gas pneumatic device venting, and equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters. Because the estimated annual emissions of GHGs for modified Compressor Station 1 would be above 25,000 metric tpy, this facility would be included in the GHG reporting.

General Conformity

A General Conformity applicability analysis is required for any part of the Project occurring in nonattainment or maintenance areas for criteria pollutants. Section 176(c) of the CAA requires federal agencies to ensure that federally approved or funded projects conform to the applicable approved State Implementation Plan. As identified previously, all components of the Project Amendment are in areas classified as in attainment for all criteria pollutants; therefore, General Conformity requirements do not apply.

New Source Review – Prevention of Significant Deterioration

Congress established the NSR pre-construction permitting program as part of the 1977 CAA Amendments. Federal pre-construction review under NSR is conducted under separate procedures for sources in attainment areas and sources in nonattainment areas. Nonattainment NSR applies to sources in nonattainment areas. Because the Project Amendment is not in nonattainment areas, this process does not apply and is not discussed further.

Prevention of Significant Deterioration (PSD) permitting applies to new major sources or major modifications at existing sources located in attainment areas or in areas that are unclassifiable. PSD is intended to keep new air emission sources from causing the existing air quality to deteriorate beyond acceptable levels. Under PSD, any new major source or major modification of an existing source of air pollutants is required to obtain an air quality permit before beginning construction. The definition of a PSD major source of air pollutants as applicable to the Project Amendment is any stationary source which emits, or has the potential to emit, 250 tpy of a regulated criteria pollutant (40 CFR 51.166(b)(1)(i)(b)). The modified Compressor Station 1 would not have the potential to emit 250 tpy of any regulated criteria pollutants, and would not be subject to the PSD permitting requirements.

Title V Operation Permit

The Part 70 Operating Permit program, as described in 40 CFR 70, requires major stationary sources of air emissions to obtain a federally enforceable operating permit. Part 70 operating permits are more commonly referred to as “Title V” permits. The EPA has delegated the authority to issue Title V permits to the TCEQ, which has incorporated the program in 30 TAC Chapter 122.

The threshold levels for determining the applicability for a Title V permit are:

- 100 tpy of any criteria air pollutant;

- 10 tpy of any individual HAP; or
- 25 tpy of any combination of HAPs.

Estimated potential emissions for the modified Compressor Station 1 would be expected to exceed the 100 tpy threshold for both NO_x and CO, and would be subject to the Title V Operating Permit Program. For new sources, applications for Title V permits are due prior to commencing operation. RB Pipeline plans to submit the Title V permit applications for modified Compressor Station 1 prior to commencing operations.

Texas Air Quality Requirements

The Project Amendment would be subject to state standards, codified in Title 30 of the TAC. The regulations listed below would apply to the new facilities associated with the Project Amendment, including turbines, thermal oxidizers, flares, generators, fire water pumps, and fugitive emissions:

- 30 TAC Chapter 101, Subchapter A – *General Rules*. This chapter includes provisions related to circumvention, nuisance, traffic hazards, sampling and sampling ports, emissions inventory requirements, sampling procedures and terminology, compliance with EPA standards, inspection and emission fees, and emission events and scheduled maintenance, start-up, and shutdown activities.
- 30 TAC Chapter 111 – *Control of Air Pollution from Visible Emissions and Particulate Matter*. This chapter outlines the allowable visible emission (i.e., opacity) requirements and total suspended particulate emission limits based on calculated emission rates.
- 30 TAC Chapter 112 – *Control of Air Pollution from Sulfur Compounds*. This chapter outlines emission limits and monitoring, reporting, and recordkeeping requirements. This chapter also lists net ground-level concentration standards at the property line for certain sulfur compounds.
- 30 TAC Chapter 113 – *Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants*. Chapter 113 incorporates by reference the NESHAP source categories (40 CFR 63).
- 30 TAC Chapter 116, Subchapter B – *Control of Air Pollution by Permits for New Construction or Modification*. This chapter outlines the permitting requirements for the construction of new sources. The modified Compressor Station 1 would require a minor source permit authorized under the TCEQ Standard Permits regulations (30 TAC Chapter 116, Subchapter F).
- 30 TAC Chapter 118 – *Control of Air Pollution Episodes*. This chapter outlines the requirements relating to generalized and localized air pollution episodes.
- 30 TAC Chapter 122 – *Federal Operating Permits Program*. This chapter outlines the requirements for complying with the federal operating permits program.

RB Pipeline has outlined in its permit applications the methods and measures by which it would comply with the requirements of each applicable TCEQ air quality regulation. It is expected that the TCEQ would include conditions in the permit issued to RB Pipeline for the modified Compressor Station 1 to ensure compliance with these regulations.

8.2 Impacts and Mitigation

Construction

During construction, a reduction in ambient air quality would result from emissions and fugitive dust generated by construction equipment. Fugitive dust and other emissions from construction activities generally do not result in a significant increase in regional pollutant levels, although local pollutant levels could intermittently increase during the lengthy construction period. Air pollutant emissions during construction of the Project Amendment facilities would result from the operation of construction vehicles, and vehicles driven by construction workers commuting to and from work sites.

During construction of the Project Amendment, GHGs would be emitted from various types of construction equipment and vehicles (e.g., cranes, trenching machines, bulldozers, excavators, backhoes, haul trucks, construction worker commuter vehicles, etc.). Emissions of GHGs are typically expressed in terms of CO₂e.

The increase in diameter of Pipeline 1 would not result in additional construction emissions beyond the emission detailed in table 4.11.1-14 of the April 2019 FEIS. The construction emissions associated with Compressor Station 2 and Booster Stations 1 and 2, as detailed in table 4.11.1-15 of the April 2019 FEIS, would be avoided as the Project Amendment would eliminate these facilities. Construction emissions would also be avoided due to elimination of Compressor Station 3; however, construction of the meter and other ancillary facilities on the Compressor Station 3 site within the LNG Terminal would still occur, and the associated construction emissions remain unchanged from the estimates presented in table 4.11.1-4 of the April 2019 FEIS. Construction emissions for the modified Compressor Station 1 are estimated to remain unchanged from the estimates presented in table 4.11.1-15 of the April 2019 FEIS, also shown below.

Different construction emissions would occur at the modified Compressor Station 1 as a result of the Project Amendment. A summary of the estimated construction emissions from the Project Amendment is presented in table 4.

Facility and Year	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	VOC	Total HAPs	CO _{2e}
Compressor Station 1								
Year 1	1.3	10.3	<0.1	3.8	0.4	0.3	<0.1	1,371.5
Year 2	0.1	0.7	<0.1	0.1	<0.1	<0.1	<0.1	114.8
Year 3	0.7	6.5	<0.1	0.4	<0.1	<0.1	<0.1	933.9
Year 4	0.7	5.8	<0.1	1.9	0.2	<0.1	<0.1	831.5
Year 5	0.4	4.4	<0.1	0.7	<0.1	<0.1	<0.1	642.8
^a Emission estimates include construction emissions from on- and off-road vehicle activity, truck deliveries, vessel activity, worker commutes, and fugitive dust.								

In its comment letter, EPA noted that the agency responsible for the Project Amendment should include a Construction Emission Mitigation Plan and adopt this plan in its Finding of No Significant Impact. To minimize construction air emissions, RB Pipeline would use the most fuel-efficient construction equipment available and would use buses where feasible to minimize emissions from worker commutes. Further, RB Pipeline would use recent models of construction equipment, conduct regular inspections and emissions testing of construction vehicles, and limit idling of heavy equipment to less than 5 minutes to the extent practicable.

To minimize fugitive dust emissions associated with construction of the pipeline facilities, RB Pipeline would implement the measures described in its Fugitive Dust Control Plan approved for the authorized Rio Bravo Pipeline Project. Fugitive dust emissions would occur during the construction period and would subside once construction activities for any given Project Amendment component are complete. With the implementation of the measures in the Fugitive Dust Control Plan, we have determined that fugitive dust emissions associated with construction of the Project Amendment are not expected to contribute to degradation of the NAAQS. While elevated emissions may occur near construction areas, impacts would be short-term and minor. We find that RB Pipeline's proposed construction emission mitigation for the Project Amendment addresses the EPA's recommendation.

Operation

Fugitive emissions in the form of minor leaks from flanges, valves, and connectors could occur along the length of the pipeline route during operation. Although the length of the pipelines per the Project Amendment is slightly increased, the emissions estimate and anticipated impact of the emissions from the pipeline operation would remain the same as detailed in the April 2019 FEIS. At full build-out, the Project Amendment pipeline system would emit 2.7 tpy of VOC and 337.6 tpy of CO_{2e}. Emissions from the pipelines would be minor and dispersed over the entirety of the pipeline length.

The authorized Rio Bravo Pipeline Project configuration at Compressor Station 1 consists of six 30,000-hp natural gas-driven turbines, two natural gas-fired backup generators, and other ancillary facilities. The modified Compressor Station 1 proposed in the Project Amendment

would consist of four 43,000-hp natural gas-driven turbines, two 55,000-hp electric motor-driven compressor units, one natural gas-driven fuel heater, and two natural gas-fired backup generators, and other ancillary facilities. Lube oil coolers, turbine exhaust systems, turbine air intake systems, and unit control panels would be included with the new turbine compressor units. Emissions would also result from fugitive losses associated with piping components, such as valves and seals. Table 5 details the estimated emissions from the modified Compressor Station 1.

Equipment	NO_x	CO	SO₂	PM₁₀	PM_{2.5}	VOC	Total HAPs	CO_{2e}
Electric compressors	-	-	-	-	-	-	-	-
Gas turbines	153.8	30.2	84.9	40.0	40.0	18.9	4.1	717,635
Emergency generators	3.2	6.5	<0.01	0.06	0.06	2.9	1.8	1,422
Fuel heater	2.1	2.6	0.2	0.13	0.13	0.62	0.14	2.07
Flare	1.44	2.88	0.18	0.07	0.07	0.83	0.03	10,773
Separator Vessel	-	-	-	-	-	0.59	0.04	32
Storage tank	-	-	-	-	-	0.03	0.02	-
Truck loading	-	-	-	-	-	-	-	0.03
Gas release events	-	-	-	-	-	105.1	4.8	30,308
Piping components	-	-	-	-	-	3.8	0.2	229.7
Parts washer	-	-	-	-	-	0.4	-	-
Total	160.54	42.18	85.29	40.26	40.26	133.17	11.13	760,401.80
^a The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the sum of the addends.								

The electric motor-driven compressors would not have any associated emissions and would not be a source of air emissions. The four natural gas-driven turbines would have a simple cycle design and would utilize an oxidation catalyst to control CO, VOC, and organic HAP emissions. Emissions of SO₂ and PM₁₀/PM_{2.5} would be minimized through the use of pipeline quality natural gas and efficient combustion controls. The two emergency generators would be four-stroke, lean-burn, natural gas-fired stationary reciprocating internal combustion engines. RB Pipeline would limit the operation of the emergency generators for maintenance checks and readiness testing to no more than 100 hours per year as per NSPS JJJJ requirements. The separator vessels and storage tank would be used to separate and store condensate generated from the compression of natural gas. Emissions from separators with normal operation emissions would be controlled by the ground flare. All separator emissions not controlled by the ground flare would be gas releases that would occur as part of maintenance, startup, and shutdown activities, including, but not limited to, compressor blowdowns, pigging and purging. The low-pressure ground flare would control emissions from normal operation gas releases, such as compressor seal leakage, emission from three separator vessels, pipeline liquid storage tank,

and pipeline liquid truck loading operations. As such, the ground flare would result in emission from the combustion of the controlled operations' waste gas, as well as combustion emission from the pilot.

Based on the emission estimates provided in table 5, modified Compressor Station 1 would be Title V major sources for NO_x, exceeding the major source threshold of 100 tpy. The facility would be considered a minor source of all other criteria pollutants, as well as HAP emissions. A preliminary NAAQS analysis was performed for CO, NO₂, PM₁₀, PM_{2.5}, and SO₂ in comparison to the NAAQS for modified Compressor Station 1. The air dispersion modeling was completed for the natural gas-fired turbines, the emergency generators, the flair, and fuel gas heater, as these are the combustion sources at the proposed compressor station. The modeling was completed consistent with the TCEQ's methodology. The resulting modeled concentrations are added to a representative background monitor concentration for each pollutant and averaging period. The cumulative impacts are less than the NAAQS for all pollutants. Further, the facility's impacts decrease significantly at a relatively short distance from the proposed site location. The worst-case Radius of Impact across all pollutants impacts is about 1 kilometer. As identified in table 6, the modeled impacts with included background concentrations would not cause a NAAQS exceedance.

Pollutant	Averaging Time	Maximum Modeled Result (µg/m³)	Background Value^a (µg/m³)	Modeled Result + Background Concentration (µg/m³)	NAAQS (µg/m³)
NO ₂	1-hour	46.2	65.8	112.0	188.7
	Annual	12.2	8	20.2	100
CO	1-hour	2,467	1,829	4,296	40,000
	8-hour	1,764	1,257	3,011	10,000
PM _{2.5}	24-hour	8.0	24	32.0	35
	Annual	0.8	9.2	10.0	12
PM ₁₀	24-hour	13.2	53	66.2	150
SO ₂	1-hour	21.9	16	37.9	196
	3-hour	34.6	26	6.6	1,300

µg/m³ = micrograms per meter cubed
^a Background concentrations are based upon available background levels presented in table 4.11.1-2 of the April 2019 FEIS.

Elevated levels of air pollutants would occur during the period of construction, primarily from fugitive dust. However, through implementation of RB Pipeline's construction work practices, its pipeline system Fugitive Dust Control Plan, analysis of the estimated emissions from construction and operation, and an analysis of the modeled air quality impacts from operation of the modified Compressor Station 1, we find that the Project Amendment would not result in any significant impacts on air quality.

While construction of the Project Amendment would result in localized minor to moderate elevated levels of fugitive dust and combustion emissions near the construction areas, impacts related to construction of the facilities would be limited to the construction period for the Project Amendment. RB Pipeline would implement its construction work practices and its pipeline system Fugitive Dust Control Plan during construction of the Project Amendment. Based upon the entirety of our analysis, we conclude that operation of the Project Amendment would not cause, or significantly contribute to, an exceedance of the NAAQS, and would not result in regionally significant impacts on air quality.

9. Noise

The noise environment can be affected both during construction and operation of pipeline projects. The magnitude and frequency of environmental noise may vary considerably over the course of the day, throughout the week, and across seasons, in part due to changing weather conditions and the effects of seasonal vegetation cover. Two measures to relate the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level (L_{eq}) and day-night sound level (L_{dn}). The L_{eq} is the level of steady sound with the same total (equivalent) energy as the time-varying sound of interest, averaged over a 24-hour period. The L_{dn} is the L_{eq} plus 10 decibels on the A-weighted scale (dBA) added to account for people's greater sensitivity to nighttime sound levels during late evening and early morning hours (between the hours of 10:00 pm and 7:00 am). The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. The human ear's threshold of perception for noise change is considered to be 3 dBA; 6 dBA is clearly noticeable to the human ear, and 10 dBA is perceived as a doubling of noise.

Construction noise is highly variable. Many construction machines operate intermittently, and the types of machines in use at a construction site change with the construction phase. The sound level impacts on residences due the construction activities would depend on the type of equipment used, the duration of use for each piece of equipment, the number of construction vehicles and machines used simultaneously, and the distance between the sound source and receptor. Construction activities associated with the pipeline facilities would involve clearing and grading associated with site preparation; trenching and HDD activities; materials and equipment delivery; installation of the pipelines; and construction of aboveground facilities.

As noted in section A.7, RB Pipeline states that construction of the Project Amendment would primarily occur Monday through Saturday, during daylight hours from 7 a.m. to 7 p.m., with activities associated with HDDs, pump operation at dry-ditch waterbody crossings, hydrostatic testing, and tie-ins to be conducted during Sunday or nighttime hours as well. To the extent any such work is in close proximity to noise sensitive receptors, RB Pipeline would, where practicable, avoid performing work on Sundays or during nighttime hours, or otherwise minimize noise, disturbance, and other potential impacts during Sundays or nighttime hours. We find this change acceptable and the construction noise associated with these activities would not result in significant impacts.

RB Pipeline would construct the pipeline facilities using the same techniques as described in the April 2019 FEIS, including the HDDs along the pipeline route. The April 2019 FEIS identified seven HDD locations that would require site-specific mitigation measures to

minimize noise levels attributable to the HDDs to at or below FERC's noise criterion of an L_{dn} of 55 dBA at the nearest noise-sensitive areas (NSA). Environmental condition 37 of the November 22, 2019 Order requires RB Pipeline to file with the Secretary of the Commission, for review and written approval by the Director of the Office of Energy Projects, a HDD noise mitigation plan to reduce noise levels attributable to the proposed drilling operations. RB Pipeline must comply with this, and all remaining applicable environmental conditions included in the November 22, 2019 Order for the Project Amendment.

RB Pipeline's sources of operational sound would include daily operation of the aboveground facilities. There are no NSAs within 1 mile of any of the stand-alone metering sites, and potential sound level impacts associated with the operation of these metering sites would be minor and are not expected to be perceptible at any NSAs.

The location of the modified Compressor Station 1 is in the same location as authorized for the Rio Bravo Pipeline Project. The nearest NSA remains 5.5 miles to the west from the facility, and no new noise receptors were documented within 1 mile of the compressor station beyond what was described in the April 2019 FEIS. RB Pipeline completed an acoustical analysis to estimate the noise levels attributable to the modified Compressor Station 1 at the nearest NSA. The results of the acoustical analysis concluded that no increase in noise levels attributable to the modified station would occur at the nearest NSA and that Compressor Station 1 would remain in compliance with the FERC sound level requirement of 55 dBA L_{dn} at the nearest NSA. However, to ensure that NSAs are not adversely impacted by the operation of the compressor station, **we recommend that:**

- **RB Pipeline should file a noise survey with the Secretary of the Commission (Secretary) no later than 60 days after the modified Compressor Station 1 is placed in service. If a full load condition noise survey is not possible, RB Pipeline should provide an interim survey at the maximum possible hp load and provide the full load survey within 6 months. If the noise attributable to the operation of all of the equipment at the facility under interim or full hp load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, RB Pipeline should file a report on what additional noise controls are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. RB Pipeline should confirm compliance with the above requirement by filing an additional noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Potential noise impacts from operation of Compressor Stations 2 and 3 and Booster Stations 1 and 2 as described in the April 2019 FEIS would not occur, as the Project Amendment would eliminate these facilities.

While construction of the Project Amendment would result in localized minor to moderate elevated noise levels near construction areas, impacts would be limited to the construction period for the Project Amendment. During operations, noise impacts would be minor at the aboveground facilities along the pipeline system.

10. Reliability and Safety

Natural gas pipeline transmission carries risks to workers and the public that result from the potential for unintended gas release. Although rare, risks primarily include fire and/or explosion after a gas pipeline leak or rupture. Potential hazards to the safe construction and operation of natural gas pipelines include corrosion, equipment malfunction, and external forces such as third-party line strikes and natural forces including lightning, flooding, tornadoes, and earthquakes.

Methane is the primary constituent of natural gas. The gas is colorless, odorless, and tasteless. It is not considered poisonous but poses a low inhalation hazard that could result in asphyxiation. Methane is light and will quickly disperse in areas where there is sufficient air flow. However, if released in enclosed, poorly ventilated areas and consumed in high doses, injuries and fatalities are possible. In concentrations between 5 percent and 15 percent, methane is flammable and will automatically ignite at 1,000 °F. These properties of methane and the potential for pipeline ruptures require that natural gas transmission pipelines be carefully regulated.

10.1 Safety Standards

Public scoping comments in response to the Project Amendment expressed concern regarding the safety of the pipeline system, including the proposed larger diameter Pipeline 1; additional detail and responses to these scoping comments are addressed in this section and section 10.2. The DOT is mandated to prescribe minimum safety standards to protect against risks posed by pipeline facilities under Title 49, U.S.C. Chapter 601. The DOT's PHMSA administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. It develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities. Many of the regulations are written as performance standards which set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. PHMSA's safety mission is to ensure that people and the environment are protected from the risk of pipeline incidents. This work is shared with state agency partners and others at the federal, state, and local level.

Title 49, U.S.C. Chapter 601 provides for a state agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the federal standards. A state may also act as DOT's agent to inspect interstate facilities within its boundaries; however, the DOT is responsible for enforcement actions. Texas has adopted the minimum federal pipeline safety regulations as authorized by PHMSA under Section 5(a) to assume all aspects of the intrastate safety program, but not interstate facilities (PHMSA 2016a). In Title 16 of the TAC, Texas has also instituted multiple more stringent safety requirements beyond the federal standards. The Texas Railroad Commission is charged with overseeing the state's safety program for intrastate natural gas facilities.

The DOT pipeline standards are published in 49 CFR 190-199. Part 192 specifically addresses natural gas pipeline safety requirements to be implemented by the pipeline operator.

The DOT has the exclusive authority to promulgate federal pipeline safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of the FERC's regulations require that an applicant certify that it would design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection. Alternatively, an applicant must certify that it has been granted a waiver of the requirements of the safety standards by the DOT in accordance with Section 3(e) of the Natural Gas Pipeline Safety Act. Under a *Memorandum of Understanding on Natural Gas Transportation Facilities* dated January 15, 1993, between the DOT and the FERC, the FERC accepts this certification and does not impose additional safety standards. If the Commission becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert DOT. The Memorandum also provides for referring complaints and inquiries made by state and local governments and the general public involving safety matters related to pipelines under the Commission's jurisdiction.

The FERC also participates as a member of the DOT's Technical Pipeline Safety Standards Committee which determines if proposed safety regulations are reasonable, feasible, and practicable.

The pipeline and aboveground facilities associated with the Project Amendment must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. The DOT specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion.

PHMSA's Gas Rule - Amendments to 49 CFR Parts 191 and 192

On July 1, 2020⁶, the new Gas Rule regulations to improve the safety of onshore gas transmission pipelines⁷ were placed into effect. These changes address congressional mandates, National Transportation Safety Board recommendations, and public input. The amendments address actions an operator must take to reconfirm the MAOP of previously untested existing natural gas transmission pipelines and pipelines lacking certain material or operational records, the periodic assessment of pipelines in populated areas not designated as high consequence areas, the reporting of exceedances of MAOP, the consideration of seismicity as a risk factor in integrity management, safety features on in-line inspection launchers and receivers, and related recordkeeping provisions.

⁶ PHMSA announced it will not enforce provisions of the recently finalized gas transmission rule for certain items that were due to be implemented on July 1, 2020. PHMSA has extended this July 1 deadline to December 31, 2020. <https://www.phmsa.dot.gov/news/phmsa-issues-notice-enforcement-discretion-gas-pipeline-operators>.

⁷ <https://www.federalregister.gov/documents/2019/10/01/2019-20306/pipeline-safety-safety-of-gas-transmission-pipelines-maop-reconfirmation-expansion-of-assessment>.

Newer Provisions

49 CFR 192.67 requires each operator collect or make, and retain for the life of the pipeline, records that document the physical characteristics of the pipeline, including tests, inspections, and attributes required by the manufacturing specification in effect at the time the pipe was manufactured.

49 CFR 192.205 requires the verification of records of pipeline components such as valves, flanges, fittings, branch connections, extruded outlets, anchor forgings, and other components to ensure they accurately reflect the physical operation characteristics of certain pipelines and to confirm the established MAOP of the pipelines. These records must be kept for the life of the pipeline.

49 CFR 192.127 requires the verification of records of pipe design to ensure they accurately reflect the physical and operational characteristics and anticipated external pressures and loads on the pipeline and to confirm the established MAOP of the pipelines. These records must be kept for the life of the pipeline.

49 CFR 192.150 requires that each new transmission line and each replacement of line pipe, valve, fitting, or other line component in a transmission line, with certain exceptions - be designed and constructed to accommodate the passage of instrumented internal inspection devices (i.e., smart pigs or inline inspection tools).

49 CFR Part 192.227 requires individual welder qualification records to be retained for a minimum of five years following construction.

Pipeline Class Locations

The DOT also defines area classifications, based on population density in the vicinity of the pipeline, and specifies more rigorous safety requirements for populated areas. The class location unit is an area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline. The four area classifications are defined below:

- | | |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Class 1 | Location with 10 or fewer buildings intended for human occupancy. |
| Class 2 | Location with more than 10 but less than 46 buildings intended for human occupancy. |
| Class 3 | Location with 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of any building, or small well-defined outside area occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12-month period. |
| Class 4 | Location where buildings with four or more stories aboveground are prevalent. |

Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation. For instance, pipelines constructed on land in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Class 2, 3, and 4 locations, as well as drainage ditches of public roads and railroad crossings, require a minimum cover of 36 inches in normal soil and 24 inches in consolidated rock.

Class locations also specify the maximum distance to a sectionalizing block valve (*e.g.*, 10.0 miles in Class 1, 7.5 miles in Class 2, 4.0 miles in Class 3, and 2.5 miles in Class 4). Pipe wall thickness and pipeline design pressures; hydrostatic test pressures; MAOP; inspection and testing of welds; and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas.

RB Pipeline completed an additional desktop analysis for the Project Amendment, confirming that the entire pipeline system is located within Class 1 locations. Both Pipelines 1 and 2 would be designed for an MAOP of 1,825 psig and tested to a minimum of 2,293 psig for Class 1 locations; RB Pipeline would test the pipelines to the required pressures for any Class 2 and 3 locations along the route if the Class 1 designation changes. In addition, RB Pipeline would place the mainline valves in compliance with 49 CFR 192.179. RB Pipeline also confirms that the pipeline would be designed to enable the pipelines to be assessed using in-line inspection tools in compliance with 49 CFR 192.150, 192.710 (assessments outside high consequence areas [HCAs]), and Subpart J (HCA assessments).

High Consequence Areas

The DOT federal Pipeline Safety Regulations require operators to develop and follow a written integrity management program that contain all the elements described in 49 CFR 192.911 and address the risks on each transmission pipeline segment. The rule establishes an integrity management program which applies to all HCA.

The DOT has published rules that define HCAs where a gas pipeline accident could do considerable harm to people and their property and requires an integrity management program to minimize the potential for an accident. This definition satisfies, in part, the Congressional mandate for DOT to prescribe standards that establish criteria for identifying each gas pipeline facility in a high-density population area.

The HCAs may be defined in one of two ways as described in 49 CFR 192.903. In the first method an HCA includes:

- current class 3 and 4 locations,

- any area in Class 1 or 2 where the potential impact radius⁸ is greater than 660 feet and there are 20 or more buildings intended for human occupancy within the potential impact circle⁹, or
- any area in Class 1 or 2 where the potential impact circle includes an identified site.

An identified site is an outside area or open structure that is occupied by 20 or more persons on at least 50 days in any 12-month period; a building that is occupied by 20 or more persons on at least 5 days a week for any 10 weeks in any 12-month period; or a facility that is occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate.

In the second method, an HCA includes any area within a potential impact circle which contains:

- 20 or more buildings intended for human occupancy, or
- an identified site.

Once a pipeline operator has determined the HCAs along its pipeline, it must apply the elements of its integrity management program to those segments of the pipeline within HCAs. The DOT regulations specify the requirements for the integrity management plan at section 192.911. The pipeline integrity management rule for HCAs requires inspection of the pipeline HCAs every 7 years.

RB Pipeline provided an updated Class Location and HCA Designation report in its Project Amendment application to update the previous Class Location Study and HCA Designation Report originally identified in the April 2019 FEIS, to address the proposed Project Amendment pipeline modifications, including the modifications to pipeline diameter and MAOP. As stated in the updated Class Location and HCA Designation report, RB Pipeline states it would finalize its assessment and make any necessary changes regarding the Class Location and HCA designations in the 2021/2022 timeframe prior to the finalization of design. This is to ensure that the installed pipelines meet the most current information and comply with 49 CFR 192.5 and 49 CFR 192.903.

Moderate Consequence Areas

On October 1, 2019, DOT's PHMSA issued new regulations modifying and expanding the standard pipeline safety standards under 49 CFR Parts 191 and 192 (new Gas Rule). These regulations, in part, established: new standards for in-line inspections; requirements for newly established moderate consequence areas (MCA); explicit requirements for consideration of

⁸ The potential impact radius is calculated as the product of 0.69 and the square root of: the MAOP of the pipeline in psig multiplied by the square of the pipeline diameter in inches.

⁹ The potential impact circle is a circle of radius equal to the potential impact radius.

seismicity and geotechnical risks in integrity management plans for pipelines; a requirement to reconfirm MAOP for certain pipelines; requirements for installation of pressure relieving devices for pig launcher/receivers; and reporting protocols for exceedances of MAOP (plus the allowed margin of buildup) to PHMSA. These regulations went into effect on July 1, 2020.

Under PHMSA’s new Gas Rule, PHMSA provides a description for areas that may have moderate consequences if a pipeline incident would occur. PHMSA defines an MCA as an onshore area, not meeting the definition of an HCA, that is within a potential impact circle containing 5 or more buildings intended for human occupancy; an occupied site; or a right-of-way for a designated interstate, freeway, expressway, or other principal four-lane arterial roadway.¹⁰ Also, 49 CFR 192.3 provides the definition of MCA which requires data analysis, assessment methods, and immediate repair conditions for these MCAs. In addition, 49 CFR 192.624 provides the assessment requirements of pipelines in MCAs. MCAs require integrity assessments every 10 years not to exceed 126 months in accordance with 49 CFR 192.710. In addition, section 192.710 requires RB Pipeline to conduct integrity assessments for pipelines operating above 30 percent of specified minimum yield strength and that are located in one of the following areas:

1. A Class 3 or Class 4 location; or
2. An MCA as defined in 49 CFR 192.3, if the pipeline segment can accommodate inspection by means of an instrumented inline inspection tool (i.e., “smart pig”).

The initial assessment for these locations must be completed by July 3, 2034, or 10 years after a pipeline segment is identified as meeting one of the above conditions, whichever is later. 49 CFR 192 does not specify any differences in design, construction, and pressure testing requirements based on the classification of a pipeline segment as being inside or outside of an MCA. RB Pipeline expects to finalize the MCA designation along the pipelines rights-of-way in the 2021/2022 timeframe.

The DOT prescribes the minimum federal standards for operating and maintaining pipeline facilities, including the requirement to establish a written plan and procedures governing these activities. Each pipeline operator is required to establish an emergency plan that includes procedures to minimize the hazards of a natural gas pipeline emergency. Key elements of the plan include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response;
- emergency system shutdown and safe restoration of service;
- making personnel, equipment, tools, and materials available at the scene of an emergency; and

¹⁰ Federal Highway Administration’s “Highway Functional Classification Concepts, Criteria and Procedures.”

- protecting people first and then property, and making them safe from actual or potential hazards.

The DOT requires that each operator establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and to coordinate mutual assistance. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials. RB Pipeline would provide the appropriate training to local emergency service personnel before the pipeline is placed in service.

10.2 Pipeline Accident Data

Significant natural gas transmission pipeline incidents include pipeline leaks that result in death or injury that requires a hospital stay. According to 49 CFR 191, all significant pipeline incidents must be reported to the DOT within 1 hour after confirmed discovery, and a written report must be submitted within 30 days as required in 49 CFR 191.15. During the 20-year period from 1996 through 2015, a total of 1,310 significant incidents were reported on the more than 300,000 total miles of natural gas transmission pipelines nationwide. Additional insight into the nature of service incidents may be found by examining the primary factors that caused the failures. Table 7 provides a distribution of the causal factors as well as the number of each incident by cause.

We received numerous comments regarding potential pipeline accidents, including explosions, fires, and ruptures, among others. The dominant causes of pipeline incidents from 1996 to 2015 were corrosion and pipeline material, weld, or equipment failure, constituting 50.7 percent of all significant incidents. The pipelines included in the data set in table 7 vary widely in terms of age, diameter, and level of corrosion control. Each variable influences the incident frequency that may be expected for a specific segment of pipeline.

Cause^a	Number of Incidents	Percentage
Pipeline material, weld or equipment failure	354	27.0
Corrosion	311	23.7
Excavation	210	16.0
All other causes ^b	165	12.6
Natural force damage ^c	146	11.1
Outside force ^d	84	6.4
Incorrect operation	40	3.1
Total	1,310	--

- | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a | All data gathered from PHMSA Significant Incident files, February 2016, http://www.phmsa.dot.gov/pipeline/library/data-stats/pipelineincidenttrends (PHMSA 2016b). |
| b | All other causes includes miscellaneous, unspecified, or unknown causes. |
| c | Natural forces damage includes earth movement, heavy rain, floods, landslides, mudslides, lightning, temperature, high winds, and other natural force damage. |
| d | Outside force damage includes previous mechanical damage, electrical arcing static electricity, fire/explosion, fishing/maritime activity, intentional damage, and vehicle damage (not associated with excavation). |

The data presented in table 7 include natural gas transmission system failures of all magnitudes with widely varying consequences. The dominant causes of pipeline incidents are corrosion; and pipeline material, weld, or equipment failure, together which constitute 50.7 percent of all significant incidents. The pipelines included in the data set in table 7 vary widely in terms of age, diameter, and level of corrosion control. Each variable influences the incident frequency that may be expected for a specific segment of pipeline. The frequency of significant incidents is strongly dependent on pipeline age. Older pipelines have a higher frequency of corrosion incidents and material failure, because corrosion and pipeline stress/strain are a time-dependent process.

The use of both an external protective coating and a cathodic protection system,¹¹ required on all pipelines installed after July 1971, significantly reduces the corrosion rate compared to unprotected or partially protected pipe. Outside force, excavation, and natural forces are the cause in 33.5 percent of significant pipeline incidents. These result from the encroachment of mechanical equipment such as bulldozers and backhoes; earth movements due to soil settlement, washouts, or geologic hazards; weather effects such as winds, storms, and thermal strains; and willful damage. Table 8 provides a breakdown of external force incidents by cause.

¹¹ Cathodic protection is a technique to reduce corrosion (rust) of the natural gas pipeline through the use of an induced current or a sacrificial anode (like zinc) that corrodes at faster rate to reduce corrosion.

**Table 8
Outside Forces Incidents by Cause^a 1996-2015**

Cause	Number of Incidents^b	Percent of All Incidents^c
Third-party excavation damage	172	13.1
Heavy rains, floods, mudslides, landslides	74	5.6
Vehicle (not engaged with excavation)	49	3.7
Earth movement, earthquakes, subsidence	32	2.4
Lightning, temperature, high winds	27	2.1
Operator / contractor excavation damage	25	1.9
Unspecified excavation damage / previous damage	13	1.0
Natural force (unspecified and other)	13	1.0
Fire / explosion	9	0.7
Fishing or maritime activity	9	0.7
Other outside force	9	0.7
Previous mechanical damage	6	0.5
Intentional damage	1	0.1
Electrical arcing from other equipment / facility	1	0.1
Total	440	-
^a	Excavation, outside force, and natural force from table 7.	
^b	The numbers in this table have been rounded for presentation purposes. As a result, the totals may not reflect the sum of the addends.	
^c	Percentage of all incidents was calculated as a percentage of the total number of incidents natural gas transmission pipeline significant incidents (i.e., all causes) presented in table 7.	

Older pipelines have a higher frequency of outside forces incidents partly because their location may be less well known and less well marked than newer lines. In addition, older pipelines contain a disproportionate number of smaller-diameter pipelines; which have a greater rate of outside forces incidents. Small-diameter pipelines are more easily crushed or broken by mechanical equipment or earth movement.

Since 1982, operators have been required to participate in “One-Call” public utility programs in populated areas to minimize unauthorized excavation activities in the vicinity of pipelines. The “One-Call” program is a service used by public utilities and some private sector companies (e.g., oil pipelines and cable television) to provide pre-construction information to contractors or other maintenance workers on the underground location of pipes, cables, and culverts.

We received comments regarding the safety history on Enbridge’s existing pipeline systems. Enbridge is the parent company to RB Pipeline. The Commission reviews each project based on its own merits and has siting authority for interstate natural gas infrastructure. PHMSA would be notified of and investigate all pipeline accidents and take any necessary action. In

addition, pipeline operator compliance and incident history is publicly available at <https://primis.phmsa.dot.gov/comm/reports/enforce/OpSearch.html?nocache=9941#>.

10.3 Impacts on Public Safety

Public scoping comments expressed concern regarding the safety of the RB Pipeline, including potential damage due to weather events such as flooding, leak detection, and pipeline accidents (including releases of natural gas and explosions). As described above, RB Pipeline must operate and maintain its facilities in compliance with the DOT regulations at 49 CFR 192 to minimize the potential for pipeline damage and accidents. These requirements include specifications for the depth of soil cover over the pipeline, which would protect the pipe from damage or exposure during flood events, and patrolling (49 CFR 192.705).

Operation of the Project Amendment pipeline system would be monitored by a supervisory control and data acquisition system on a continuous basis, and an emergency shutdown system would be installed. In addition, annual overflight inspections or routine pipeline right-of-way walkover patrols and leak surveys would be conducted by trained operations personnel to detect pipeline damage or integrity concerns on a periodic basis as defined in 49 CFR 192.705 and 192.706. In the event of a natural gas pipeline leak or rupture, if the pipeline is not isolated quickly, there is a likelihood of a fire. RB Pipeline’s implementation of DOT safety regulations would further reduce the risk of an incident.

Table 9 presents the annual injuries and fatalities that occurred on natural gas transmission lines from incidents for the 5-year period between 2011 and 2015. The majority of fatalities from pipelines are due to local distribution pipelines not regulated by FERC. These are natural gas pipelines that distribute natural gas to homes and businesses after transportation through interstate natural gas transmission pipelines. In general, these distribution lines are smaller-diameter pipes and/or plastic pipes which are more susceptible to damage. Local distribution systems do not have large rights-of-way and pipeline markers common to the FERC-regulated natural gas transmission pipelines. Therefore, incident statistics inclusive of distribution pipelines are inappropriate to use when considering natural gas transmission projects.

Year	Injuries	Fatalities
2011	1	0
2012	7	0
2013	2	0
2014	1	1
2015	14	6
Source: PHMSA 2016b		

The nationwide totals of accidental fatalities from various anthropogenic and natural hazards are listed in table 10 in order to provide a relative measure of the industry-wide safety of natural gas transmission pipelines. Direct comparisons between accident categories should be made cautiously, however, because individual exposures to hazards are not uniform among all

categories. The data nonetheless indicate a low risk of death due to incidents involving natural gas transmission pipelines compared to the other categories. Furthermore, the fatality rate is much lower than the fatalities from natural hazards such as lightning, tornadoes, or floods.

The available data show that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation. From 1996 to 2015, there were an average of 65.4 significant incidents, 9.1 injuries, and 2.3 fatalities per year. The number of significant incidents over the more than 303,000 miles of natural gas transmission lines indicates the risk is low for an incident at any given location. While the data indicate that the operation of the RB Pipeline would represent a slight increase in risk to the safety of the nearby public, that the risk would be considered low.

Type of Accident	Annual No. of Deaths
Motor vehicle ^a	35,369
Poisoning ^a	38,851
Falls ^a	30,208
Drowning ^a	3,391
Fire, smoke inhalation, burns ^a	2,760
Floods ^b	81
Tornado ^b	72
Lightning ^b	49
Hurricane ^b	47
Natural gas distribution lines ^c	13
Natural gas transmission pipelines ^c	2
^a Accident data presented for motor vehicle, poisoning, falls, drowning, fire, smoke inhalation, and burns represent the annual accidental deaths recorded in 2013 (Centers for Disease Control 2013). ^b NOAA National Weather Service, Office of Climate, Water and Weather Services, 30-year average (1985-2014) (NOAA 2015). ^c Accident data presented for natural gas distribution lines and transmission pipelines represent the 20-year average between 1996 and 2015 (PHMSA 2016b).	

11. Cumulative Impacts and Climate Change

11.1 Cumulative Impacts

In accordance with NEPA and with FERC policy, we identified other actions in the vicinity of the project facilities and evaluated the potential for a cumulative impact on the environment. As defined by the CEQ, a cumulative effect is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of the agency or party undertaking such other actions. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over time.

As described in section B of this EA, constructing and operating the Project Amendment would temporarily and permanently impact the environment. However, the Project Amendment would not result in additional impacts on resources beyond what was described in the April 2019 FEIS, with the exception of air quality impacts due to the modified Compressor Station 1. Thus, the proposed modified Compressor Station 1 could contribute to cumulative impacts on local and/or regional air quality. Cumulative impacts related to other resource areas were not evaluated, due to there being no additional impacts (or, in many cases, fewer impacts) associated with the Project Amendment as compared to the impacts already assessed in the April 2019 FEIS.

To avoid unnecessary discussions of insignificant impacts and projects, and to adequately address and accomplish the purposes of this analysis, an action must first meet the following three criteria to be included in the cumulative analysis:

- affects a resource also potentially affected by the project;
- causes this impact within all, or part of, the project area defined by the resource-specific geographic scope; and
- causes this impact within all, or part of, the time span of the proposed project's estimated impacts.

The resource-specific geographic boundary for air quality is 0.5 mile of the proposed modified Compressor Station 1 for construction-related cumulative impacts and within 31 miles (or 50 kilometers) of the modified station for operation-related cumulative impacts. Actions outside of this defined boundary were not evaluated because their potential to contribute to a cumulative impact diminishes with increasing distance from the Project Amendment. In addition to the geographic scope, the temporal relationship between the Project Amendment and other activities in the areas was considered.

We considered past, present, and reasonably foreseeable future projects in the geographic boundary of modified Compressor Station 1. Table 11 identifies past and present projects or actions that occur within the geographic scope for air quality for the modified Compressor Station 1; no reasonably foreseeable future projects were identified beyond what was described in the April 2019 FEIS. Past and present projects were identified specific to the Project Amendment, not previously discussed in the April 2019 FEIS. These projects were identified through RB Pipeline's review of TCEQ data.

**Table 11
Past and Present Projects Considered in the Cumulative Impacts Analysis
for the Modified Compressor Station 1**

Project Proponent	Project Name	Project Description	County	Estimated Construction Timeframe/ Operating Status	Distance from Project
City of Alice	Trench Burner	Authorize a trench burner for the City of Alice	Jim Wells	Permit issued, construction status unknown	< 10 kilometers
DCP Operating Company, LP	Los Olmos Compressor Station	Add three produced water/condensate storage tanks and associated truck loading, revise three existing lube oil tanks, revise two engine VOC emissions.	Jim Wells	Operational, permit issued July 8, 2019	< 10 kilometers
ETC Texas Pipeline, Ltd	King Ranch Gas Plant	Add Thermal Oxidizer	Kleberg	Operational, permit issued April 13, 2020	< 10 kilometers
City of Kingsville	Solid Waste Management Trench Burner	Air Curtain Incinerator General Operating Permit	Kleberg	Operational, permit issued September 27, 2019	< 10 kilometers
EOG Resources, Inc.	Permit Renewal	TCB Central Tank Battery	Kleberg	Operational, permit issued January 9, 2020	< 10 kilometers
King Ranch, Inc.	Cotton Gin	Replacement of cyclones, installation of mote collector, add a fan and cyclone, update grin stand representation.	Kleberg	Operational, permit issued May 8, 2020	< 10 kilometers

Construction of the modified Compressor Station 1 would involve the use of heavy equipment that would generate air emissions (including fugitive dust). The majority of these impacts would be temporary and limited to the duration of the construction period. Of the projects listed in table 11, the trench burner for the City of Alice is the only project that could be under construction at the same time as the modified Compressor Station 1. While construction emissions estimates from the trench burner project is not available, based on the intermittent and short-term nature of construction, this project would have a minor impact on cumulative air emissions when considered with the proposed modified Compressor Station 1.

Concurrent operation of the modified Compressor Station 1 and the other projects in table 11 could result in a cumulative increase in combustion and fugitive emissions. Compressor Station 1 would emit NO_x, CO, SO₂, PM, VOC, HAPs, and GHG emissions; however, the station would not trigger PSD major source permitting requirements for any pollutant. Operation of the modified Compressor Station 1 would not cause a NAAQS exceedance, and concurrent operations with the other projects listed in table 11 are not expected to result in a NAAQS exceedance. Therefore, emissions from operation of RB Pipeline's modified Compressor Station 1 is not expected to contribute to a significant cumulative impact on local or regional air quality.

11.2 Climate Change

Climate change is the variation in climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time, whether due to natural variability, human activities, or a combination of both, and cannot be characterized by an individual event or anomalous weather pattern. For example, a severe drought or abnormally hot summer in a particular region is not a certain indication of climate change. However, a series of severe droughts or hot summers that statistically alter the trend in average precipitation or temperature over decades may indicate climate change. Recent research has begun to attribute certain extreme weather events to climate change (U.S. Global Change Research Program [USGCRP] 2018).

The leading U.S. scientific body on climate change is the USGCRP, composed of representatives from 13 federal departments and agencies.¹² The Global Change Research Act of 1990 requires the USGCRP to submit a report to the President and Congress no less than every four years that “1) integrates, evaluates, and interprets the findings of the Program; 2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and 3) analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.” These reports describe the state of the science relating to climate change and the effects of climate change on different regions of the United States and on various societal and environmental sectors, such as water resources, agriculture, energy use, and human health.

¹² The USGCRP member agencies are: Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of Health and Human Services, Department of the Interior, Department of State, Department of Transportation, Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation, Smithsonian Institution, and U.S. Agency for International Development.

In 2017 and 2018, the USGCRP issued its *Climate Science Special Report: Fourth National Climate Assessment*, Volumes I and II (Fourth Assessment Report) (USGCRP 2017; and USGCRP 2018, respectively). The Fourth Assessment Report states that climate change has resulted in a wide range of impacts across every region of the country. Those impacts extend beyond atmospheric climate change alone and include changes to water resources, transportation, agriculture, ecosystems, and human health. The United States and the world are warming; global sea level is rising and acidifying; and certain weather events are becoming more frequent and more severe. These changes are driven by accumulation of GHG in the atmosphere through combustion of fossil fuels (coal, petroleum, and natural gas), combined with agriculture, clearing of forests, and other natural sources. These impacts have accelerated throughout the end 20th and into the 21st century (USGCRP 2018).

Climate change is a global phenomenon; however, for this analysis, we will focus on the existing and potential cumulative climate change impacts in the Project Amendment area. The USGCRP's Fourth Assessment Report notes the following observations of environmental impacts are attributed to climate change in the Southern Great Plains and South Texas regions (USGCRP 2017; USGCRP 2018):

- the region has experienced an increase in annual average temperature of 1-2 °F since the early 20th century, with the greatest warming during the winter months;
- over the past 50 years, significant flooding and rainfall events followed drought in approximately one-third of the drought-affected periods in the region when compared against the early part of the 20th century;
- the number of strong (Category 4 and 5) hurricanes has increased since the early 1980s; and
- global sea level rise over the past century averaged approximately eight inches; along the Texas coastline, sea levels have risen 5-17 inches over the past 100 years depending on local topography and subsidence.

The USGCRP's Fourth Assessment Report notes the following projections of climate change impacts in the Project Amendment region with a high or very high level of confidence¹³ (USGCRP 2018):

- annual average temperatures in the Southern Great Plains are projected to increase by 3.6–5.1 °F by the mid-21st century and by 4.4-8.4 °F by the late 21st century, compared to the average for 1976-2005;

¹³ The report authors assessed current scientific understanding of climate change based on available scientific literature. Each "Key Finding" listed in the report is accompanied by a confidence statement indicating the consistency of evidence or the consistency of model projections. A high level of confidence results from "moderate evidence (several sources, some consistency, methods vary and/or documentation limited, etc.), medium consensus." A *very* high level of confidence results from "strong evidence (established theory, multiple sources, consistent results, well documented and accepted methods, etc.), high consensus." <https://science2017.globalchange.gov/chapter/front-matter-guide/>.

- the region is projected to experience an additional 30 to 60 days per year above 100 °F than it does currently;
- tropical storms are projected to be fewer in number globally, but stronger in force, exacerbating the loss of barrier islands and coastal habitats;
- southern Texas is projected to see longer dry spells, although the number of days with heavy precipitation is expected to increase by mid-century; longer periods of time between rainfall events may lead to declines in recharge of groundwater, which would likely lead to saltwater intrusion into shallow aquifers and decreased water availability; and
- sea level rise along the western Gulf of Mexico during the remainder of the 21st century is likely to be greater than the projected global average of 1-4 feet or more, which would result in the loss of a large portion of remaining coastal wetlands.

It should be noted that while the impacts described above taken individually may be manageable for certain communities, the impacts of compound extreme events (such as simultaneous heat and drought, wildfires associated with hot and dry conditions, or flooding associated with high precipitation on top of saturated soils) can be greater than the sum of the parts (USGCRP 2018).

The GHG emissions associated with construction and operation of the Project Amendment are described in section B.8. Construction and operation of the Project Amendment would increase the atmospheric concentration of GHGs in combination with past, current, and future emissions from all other sources globally and contribute incrementally to future climate change impacts.

Currently, there is no universally accepted methodology to attribute discrete, quantifiable, physical effects on the environment to Project Amendment's incremental contribution to GHGs. We have looked at atmospheric modeling used by the EPA, National Aeronautics and Space Administration, the Intergovernmental Panel on Climate Change, and others, and we found that these models are not reasonable for project-level analysis for a number of reasons. For example, these global models are not suited to determine the incremental impact of individual projects, due to both scale and overwhelming complexity. We also reviewed simpler models and mathematical techniques to determine global physical effects caused by GHG emissions, such as increases in global atmospheric CO₂ concentrations, atmospheric forcing, or ocean CO₂ absorption. We could not identify a reliable, less complex model for this task and we are not aware of a tool to meaningfully attribute specific increases in global CO₂ concentrations, heat forcing, or similar global impacts to project-specific GHG emissions. Similarly, it is not currently possible to determine localized or regional impacts from GHG emissions from the Project Amendment.

Absent such a method for relating GHG emissions to specific resource impacts, we are not able to assess potential GHG-related impacts attributable to the Project Amendment. Additionally, we have not been able to find any GHG emission reduction goals established either at the federal

level¹⁴ or by the State of Texas. Without either the ability to determine discrete resource impacts or an established target to compare GHG emissions against, we are unable to determine the significance of the Project Amendment's contribution to climate change.

¹⁴ “The national emissions reduction targets expressed in the EPA’s Clean Power Plan were repealed, *Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emissions Guidelines Implementing Regulations*, 84 Fed. Reg. 32,520, 32,522–32 (July 8, 2019), and the targets in the Paris Climate Accord were withdrawn (November 2020).”

C. ALTERNATIVES

In accordance with NEPA and Commission policy, we evaluated alternatives to the Project Amendment to determine whether they would be reasonable and environmentally preferable to the proposed action, while meeting the project objective. These alternatives included the no-action alternative and system alternatives. We received comments regarding the Valley Crossing Pipeline as a potential system alternative and the potential for a single pipeline to deliver the necessary capacity to the Rio Grande LNG Terminal. The Project Amendment eliminates Compressor Stations 2 and 3 and Booster Stations 1 and 2, and proposes to modify the authorized Compressor Station 1. The proposed modifications to Compressor Station 1 would be constructed within an authorized, but not yet constructed, site and would otherwise not result in significant environmental impacts. Thus, we did not assess facility site alternatives. Our evaluation criteria used for developing and reviewing alternatives were:

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

1. No-Action Alternative

Under the no-action alternative, the environmental impacts associated with the authorized Rio Bravo Pipeline Project would still occur. RB Pipeline would construct the facilities authorized in the November 22, 2019 Order to deliver the needed natural gas to the authorized Rio Grande LNG Terminal in Cameron County, Texas. In many respects, the no-action alternative would result in greater environmental impacts. Specifically, a Commission decision to not authorize the Project Amendment would result in construction and operational air emissions from the eliminated compressor stations and booster stations, use of 48.2 acres of land for these aboveground facilities, including reduced wetland impacts at the Compressor Station 3 site, compared to avoidance of these impacts due to the Project Amendment. The no-action alternative would not meet the Project Amendment objectives and would result in greater overall environmental impacts over the authorized Rio Bravo Pipeline Project. Therefore, we do not recommend the no-action alternative.

2. Valley Crossing Pipeline System Alternatives

System alternatives are alternatives to a proposed action that would make use of other companies' existing, modified, or proposed pipeline systems to meet the stated objective of the proposed project. To serve as a viable system alternative to the Project Amendment, a system would have to: (1) transport all or part of the volume of natural gas required for the Rio Grande LNG Terminal, and (2) cause significantly less impact on the environment than the proposed pipeline system. We received comments regarding the Valley Crossing Pipeline being able to provide the natural gas volumes required by the Rio Bravo Pipeline Project.

Valley Crossing Pipeline, LLC, also an affiliate of Enbridge, constructed the new 165-mile-long intrastate natural gas pipeline (Valley Crossing Pipeline) from the Agua Dulce Hub to Brownsville to provide service to Mexico's Comisión Federal de Electricidad. The Valley Crossing Pipeline has a similar route as the Rio Bravo Pipelines 1 and 2, with abutting rights-of-

way between mileposts 35.6 and 70.0. The Valley Crossing Pipeline rejoins and overlaps the proposed right-of-way for the Rio Bravo Pipelines 1 and 2 in the Brownsville Navigational District utility corridor between mileposts 132.3 and 135.4 before crossing the Brownsville Ship Channel and continuing offshore and connecting with a FERC-jurisdictional Border Crossing Project (FERC Docket CP17-19-000) and at its terminus to the non-jurisdictional Comisión Federal de Electricidad pipeline. The Valley Crossing Pipeline is designed to transport 2.6 Bcf/d and connect with the Sur de Texas – Tuxpan pipeline which extends to Mexico. The pipeline was placed into service in February 2019.

As explained in our April 2019 FEIS for the Rio Grande LNG and Rio Bravo Pipeline projects, the Valley Crossing Pipeline’s volume is fully subscribed by end users in Mexico; this remains accurate. Any transportation service that could be obtained for the Project Amendment from the Valley Crossing Pipeline would be on an interruptible basis only. As such, the Valley Crossing Pipeline cannot provide the entire required capacity or a portion of this capacity on a firm basis. Therefore, we do not consider the Valley Crossing Pipeline to be a viable system alternative to the Project Amendment, and we did not analyze it further.

3. One Single 60-inch-diameter Pipeline

We received comments regarding the potential for one single 60-inch-diameter pipeline to transport the natural gas volumes needed as an alternative to dual Pipelines 1 and 2. This concept was also raised in the earlier proceedings and discussed in our April 2019 FEIS. There, we described the advantages of a single pipeline trench over dual pipeline trenches, such as less cumulative soil disturbance than two adjacent pipelines and shorter construction schedules for a single pipeline versus multi-year construction for the dual pipelines. The April 2019 FEIS also describes the safety and constructability issues related to construction of a 60-inch-diameter pipeline. These concerns, such as lack of equipment and skilled contractors to install a 60-inch-diameter pipeline remain the same. Further, RB Pipeline states that a single pipeline is operationally inferior to a dual pipeline system as a dual pipeline system would provide for uninterrupted gas flow through one of the pipes in the event of shut-down, maintenance, or inspection activities on the other pipe. For these reasons, a single 60-inch-diameter pipeline remains an infeasible alternative to the Rio Bravo Pipeline Project and thus, the Project Amendment.

4. Alternatives Conclusion

We conclude that the proposed project is the preferred alternative to meet the project objectives.

D. STAFF'S CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis in this EA, we have determined that if RB Pipeline constructs and operates the proposed facilities in accordance with its application, supplements, and staff's recommended mitigation measures below, approval of the Project Amendment would not constitute a major federal action significantly affecting the quality of the human environment.

We recommend that the Commission Order contain a finding of no significant impact and that the following mitigation measures be included as conditions to any Certificate the Commission may issue. In addition, all applicable conditions of the Commission's November 22, 2019 *Order Granting Authorizations Under Sections 3 and 7 of the Natural Gas Act* specific to Docket No. CP16-455-000 (not repeated here) apply to the amended facilities.

1. RB Pipeline shall follow the construction 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. RB Pipeline 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 the Office of Energy Projects (OEP), or the Director's designee, **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 construction and operation 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 construction and operation.
3. RB Pipeline shall continue to comply with environmental conditions set forth in Appendix A of the Commission's November 22, 2019 *Order Granting Authorizations Under Sections 3 and 7 of the Natural Gas Act* specific to Docket No. CP16-455-000.

4. RB Pipeline shall file a noise survey with the Secretary **no later than 60 days** after the modified Compressor Station 1 is placed in service. If a full load condition noise survey is not possible, RB Pipeline shall provide an interim survey at the maximum possible hp load and provide the full load survey **within 6 months**. If the noise attributable to the operation of all of the equipment at the facility under interim or full hp load conditions exceeds an L_{dn} of 55 dBA at any nearby NSAs, RB Pipeline shall file a report on what additional noise controls are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. RB Pipeline shall confirm compliance with the above requirement by filing an additional noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

E. REFERENCES

Centers for Disease Control and Prevention. 2013. Deaths: Final Data for 2013. Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf. Accessed February 2016.

National Oceanic and Atmospheric Administration. 2015. National Weather Service Office of Climate, Water, and Weather Services, 30 year average (1985-2014). Available at: <http://www.weather.gov/om/hazstats.shtml>.

Pipeline and Hazardous Materials Safety Administration. 2016a. States Participating in the Federal/State Cooperative Gas and Hazardous Liquid Pipeline Safety Programs. Available at: <http://phmsa.dot.gov/portal/site/PHMSA/>.

Pipeline and Hazardous Materials Safety Administration. 2016b. National Gas Transmission: Significant Incidents Summary Statistics. Available at: <http://www.phmsa.dot.gov/pipeline/library/data-stats/pipelineincidenttrends>.

Rio Bravo Pipeline Company, LLC 2020. Rio Bravo Pipeline Project Amendment Application. Public Information Resource Reports. FERC Docket No. CP20-481-000.

U.S. Global Change Research Program. 2017. Climate Science Special Report: Fourth National Climate Assessment, Volume I, Chapter 3. Detection and Attribution of Climate Change [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp., doi: 10.7930/J0J964J6.

U.S. Global Change Research Program. 2018. Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II: Report-in-Brief [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 186 pp.

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