Federal Energy Regulatory Commission
Office of Energy Projects

January 2016

Texas Gas Transmission, LLC **Docket No. CP15-513-000**

Northern Supply Access Project

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 2
Texas Gas Transmission , LLC
Docket No. CP15-513-000

TO THE PARTY ADDRESSED:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared this environmental assessment (EA) for the Northern Supply Access Project (Project) proposed by Texas Gas Transmission, LLC (Texas Gas) in the above-referenced docket. Texas Gas requests authorization to construct and operate natural gas facilities in Ohio, Indiana, Kentucky, Tennessee, Mississippi, and Louisiana to provide an additional 384,000 million standard cubic feet per day of natural gas of north to south transportation capacity on Texas Gas's existing system.

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

The Project involves modifications at eight existing compressor stations in Morehouse Parish, Louisiana; Coahoma County, Mississippi; Tipton County, Tennessee; Webster, Breckinridge, and Jefferson Counties, Kentucky; and Lawrence and Dearborn Counties, Indiana. Texas Gas would also construct one new 23,877 horsepower compressor station in Hamilton County, Ohio.

The FERC staff mailed copies of the EA to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners within 0.5 mile of the above ground facilities; interested individuals and groups; newspapers and libraries in the project area; and parties to this proceeding. Everyone on our environmental mailing list will receive a CD version of the EA. In addition, the EA is available for public viewing on the FERC's website (www.ferc.gov) using the eLibrary link. A limited number of copies of the EA are available for distribution and public inspection at:

Federal Energy Regulatory Commission
Public Reference Room
888 First Street NE, Room 2A
Washington, DC 20426
(202) 502-8371

Any person wishing to comment on the EA may do so. Your comments should focus on the 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 this Project, it is important that we receive your comments in Washington, DC on or before **February 25, 2016.**

For your convenience, there are three methods you can use to file your comments with the Commission. In all instances please reference the Project docket number (CP15-513-000) with your submission. The Commission encourages electronic filing of comments and has expert staff available to assist you at 202-502-8258 or efiling@ferc.gov.

(1) You can file your comments electronically using the eComment feature located 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:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18

CFR 385.214).[1] Only intervenors have the right to seek rehearing of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding which no other party can adequately represent. **Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.**

Additional information about the Project 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. Click on the eLibrary link, click on "General Search," and enter the docket numbers excluding the last three digits in the Docket Number field (i.e., CP15-513). 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 eLibrary link also provides access to the texts of 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 www.ferc.gov/docs-filing/esubscription.asp.

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[1] See the previous discussion on the methods for filing comments.

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ABBREVIATIONS AND TECHNICAL ACRONYMS

BCR	Bird Conservation Regions
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_{2e}	carbon dioxide equivalents
Commission	Federal Energy Regulatory Commission
dBA	A-weighted decibel
DOT	U.S. Department of Transportation
EA	environmental assessment
EI	environmental inspector
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FWS	U.S. Fish and Wildlife Service
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutants
L_{dn}	day-night sound level
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NGA	Natural Gas Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOI	Notice of Intent to Prepare an Environmental Assessment for the Proposed Northern Supply Access Project and Request for Comments on Environmental Issues
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
OHDNR	Ohio Department of Natural Resources
OEP	Office of Energy Projects
Plan	FERC Upland Erosion Control, Revegetation, and Maintenance Plan
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
Procedures	FERC Wetland and Waterbody Construction and Mitigation Procedures
Project	Northern Supply Access Project
Secretary	Secretary of the Commission
SSA	Sole Source or Principle Source Aquifers
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SPCC	Spill Prevention Containment and Countermeasure
Texas Gas	Texas Gas Transmission, LLC
USGS	United State Geological Survey
VOC	volatile organic compound

A. PROPOSED ACTION

1.0 INTRODUCTION

The staff of the Federal Energy Regulatory Commission (Commission or FERC) has prepared this environmental assessment (EA) to assess the environmental effects of the natural gas pipeline facilities proposed by Texas Gas Transmission, LLC (Texas Gas). We[1] prepared this EA in compliance with the requirements of the National Environmental Policy Act of 1969 (Title 40 of the Code of Federal Regulations, Parts 1500-1508 [40 CFR 1500-1508]), and with the Commission's implementing regulations under 18 CFR 380.

On June 5, 2015, Texas Gas filed an application with the Commission in Docket No. CP15-513-000 for the Northern Supply Access Project (Project) under section 7(c) of the Natural Gas Act (NGA). Texas Gas seeks to construct and operate certain natural gas facilities in Ohio, Indiana, Kentucky, Tennessee, Mississippi, and Louisiana to provide an additional 384,000 million standard cubic feet of natural gas per day of north to south transportation capacity on Texas Gas's system while maintaining bi-directional flow capability on its system.

The EA is an important and integral part of the Commission's decision on whether to issue Texas Gas a Certificate of Public Convenience and Necessity (Certificate) to construct and operate the proposed facilities. Our principal purposes in preparing this EA are to:

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

2.0 PURPOSE AND NEED

Texas Gas' stated purpose is to reliably flow natural gas bidirectionally, to transport Marcellus/Utica shale supplies from the northern end of the Texas Gas system with an ultimate destination to serve markets in the Midwestern and Gulf Coast regions of the United States. Texas Gas would transport diversified sources of natural gas to enhance the overall reliability and flexibility of its transmission system.

Under section 7 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. The Commission bases its decisions on technical competence, financing, rates, market demand, gas supply, environmental impact, long-term feasibility, and other issues concerning a proposed project.

[1] "We," "us," and "our" refers to environmental staff of the Office of Energy Projects.

3.0 PROPOSED FACILITIES

Texas Gas proposes to construct, install, own, operate, and maintain the proposed Northern Supply Access Project, which (as described more fully below) would involve modifications at eight existing compressor stations along its existing pipeline and add one new compressor station located in Ohio, Indiana, Kentucky, Tennessee, Mississippi, and Louisiana. Specifically, Texas Gas' proposed Project would consist of the following:

- construct and operate one new 23,877 horsepower Harrison Compressor Station in Hamilton County, Ohio;
- modify the existing Bastrop Compressor Station in Morehouse Parish, Louisiana by classifying four existing compressor units as back-up units (a total of 7,040 horsepower) and adding one new 9,688 horsepower turbine compressor unit;
- modify the existing Dillsboro Compressor Station in Dearborn County, Indiana by installing air-cooled heat exchangers, valves, and fittings; and
- modify the existing Clarksdale Compressor Station in Coahoma County, Mississippi, Covington Compressor Station in Tipton County, Tennessee, Slaughters Compressor Station in Webster County, Kentucky, Hardinsburg Compressor Station in Breckinridge County, Kentucky, Jeffersontown Compressor Station in Jefferson County, Kentucky, and Leesville Compressor Station in Lawrence County, Indiana, by installing yard and station pipeline and various auxiliary facilities.

Texas Gas proposes to begin construction April 1, 2016, to achieve a targeted in-service date of April 1, 2017. Figure 1 shows the general location of the Project facilities and aerial maps are provided in appendix 1.

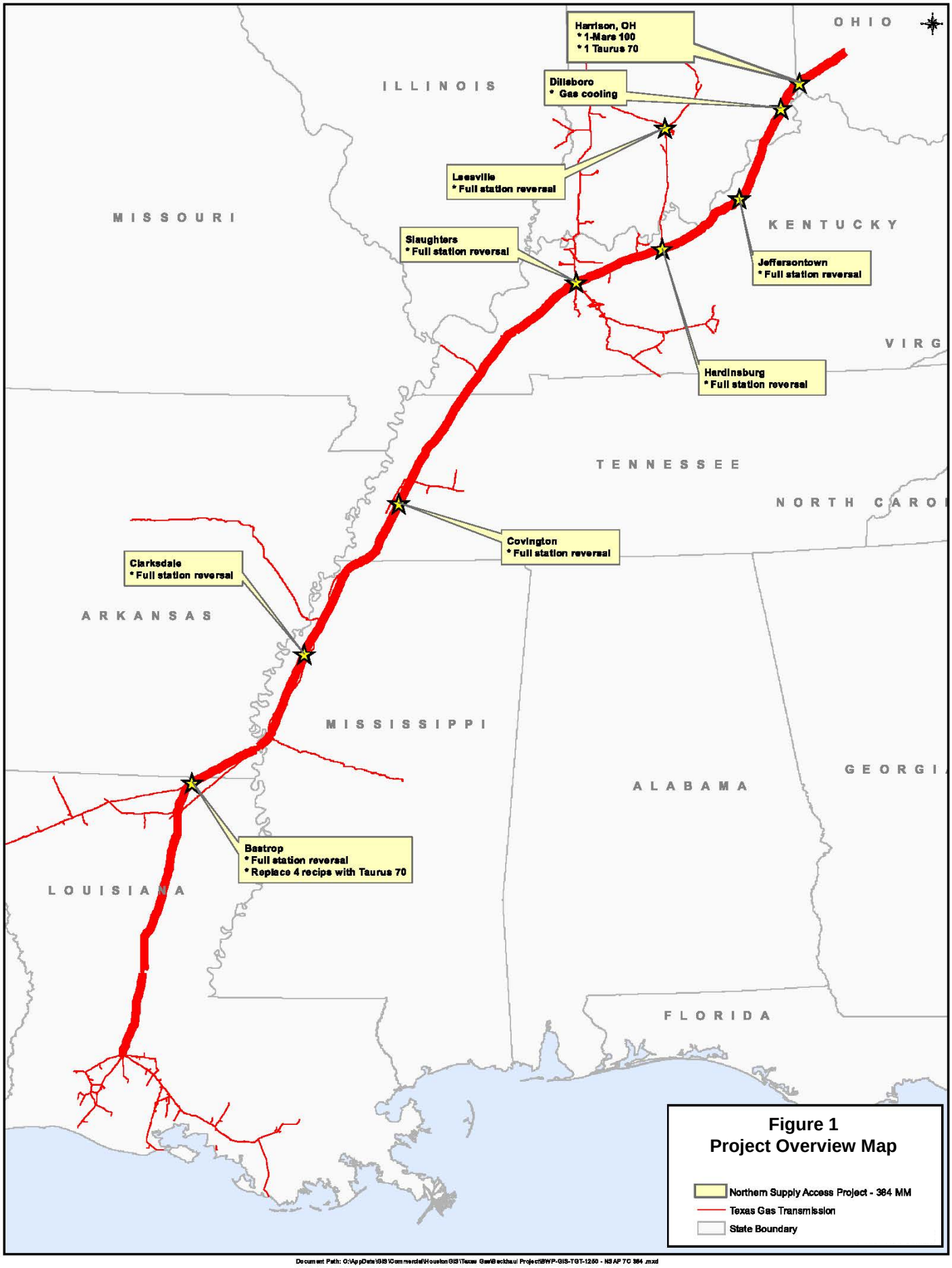
4.0 NON-JURISDICTIONAL FACILITIES

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

The new Harrison Compressor Station would require a 4,000-foot-long three-phase power line from an existing power line, running parallel to the north side of Dry Fork Road. Duke Energy Corporation would obtain all necessary permits to provide the electrical service.

The Harrison Compressor Station would also require a 4,000-foot-long utility water pipe from the existing Greater Cincinnati Water Works water line to the west side of the compressor station. Greater Cincinnati Water Works would install a new tap and meter on the existing water line. Texas Gas would install a 1- to 2-inch PVC water line to the station within the access road. Greater Cincinnati Water Works would obtain all necessary permits at the state and local level.

Because the new power line and water line would be located within or adjacent to the proposed facility and would be constructed and operated in compliance with applicable permits, these non-jurisdictional facilities would not result in significant environmental impact and, thus, are not analyzed further in this EA.


Harrison, OH
* 1-Mars 100
* 1 Taurus 70
Dilleboro
* Gas cooling
Leesville
* Full station reversal
Slaughters
* Full station reversal
Jeffersontown
* Full station reversal
Hardinsburg
* Full station reversal
Covington
* Full station reversal
Clarksdale
* Full station reversal
Bastrop
* Full station reversal
* Replace 4 recips with Taurus 70
OHIO
ILLINOIS
MISSOURI
KENTUCKY
VIRG
TENNESSEE
NORTH CAROI
ARKANSAS
MISSISSIPPI
ALABAMA
GEORGI
LOUISIANA
FLORIDA
Figure 1
Project Overview Map
Northern Supply Access Project - 384 MM
Texas Gas Transmission
State Boundary

5.0 PUBLIC REVIEW AND COMMENT

On September 4, 2015, the Commission issued a *Notice of Intent to Prepare an Environmental Assessment for the Proposed Northern Supply Access Project and Request for Comments on Environmental Issues* (NOI). The NOI was mailed to federal, state, and local government representatives and agencies; elected officials; Native American tribes; potentially affected landowners; environmental and public interest groups; newspapers and libraries in the Project area; and parties to this proceeding.

In response to the NOI, the Commission received consultation letters from U.S. Fish and Wildlife Service (FWS), Tennessee Department of Environment and Conservation, and Mississippi, Kentucky and Indiana State Historic Preservation Officer. The Commission also received comments from the City of Harrison, Great Parks of Hamilton County, and the Allegheny Defense Project/Center for Biological Diversity/Fresh Water Accountability Project/Heartwood/Ohio Valley Environmental Coalition.

Comments primarily focused on the impacts of the proposed new Harrison Compressor Station on land use/planning conflicts, aquifers, migratory birds, threatened and endangered species, air emissions, noise, and safety concerns. Commenters requested that alternative sites to be evaluated for the new compressor station. One commenter requested that we evaluate the indirect and cumulative impacts of shale gas development.

All written comments received throughout the scoping period have been addressed in the appropriate areas within sections B and C of this EA. However, with respect to the indirect impact of shale gas development, we note here that similar to many past projects where this issue has been raised, the Commission has previously determined that shale gas development is not caused by the proposed action and is not reasonably foreseeable to be considered an indirect impact under the National Environmental Policy Act. Shale development, which is regulated by the states, continues to drive the need for takeaway interstate pipeline capacity to allow the gas to reach markets. Therefore, companies are planning and building interstate transmission facilities in response to this new source of gas supply. In addition, many production facilities have already been permitted and/or constructed in the region, creating a network through which natural gas may flow along various pathways to local users or the interstate pipeline system. As identified in section B.9 of this EA, shale production facilities would not occur within the Project's geographic scope; therefore, there would be no cumulative impacts.

6.0 PERMITS, APPROVALS, AND REGULATORY CONSULTATIONS

Texas Gas would obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the Project. The company would provide all relevant permits and approvals to the contractor, who would be required to adhere to applicable requirements. Table 1 displays the major anticipated federal and state permits for the Project.

Table 1 Federal and State Permits and Approvals			
Agency or Organization	**Permit/Approval**	**Submittal**	**Receipt**
Federal			
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity	Application submitted May 2015	Pending
U.S. Army Corps of Engineers Huntington District	Clean Water Act, Section 404 Nationwide Permit 12	Application submitted July 28, 2015	August 3, 2015
U.S. Fish and Wildlife Service – Ohio Ecological Field Office	Endangered Species Act, Section 7; Migratory Bird Treaty Act Consultation	April 13, 2015	May 13, 2015
U.S. Fish and Wildlife Service - Louisiana, Mississippi, Tennessee, Kentucky, Indiana, Ecological Services Field Offices	Endangered Species Act, Section 7; Migratory Bird Treaty Act Consultation	March 20, 2015.	Louisiana - April 8, 2015; Mississippi - March 27, 2015; Kentucky – May 6 and May 18, 2015; Tennessee –April 21, 2015; and Indiana – May 22, 2015
State of Ohio			
Ohio Historical Society	Consultations under Section 106 of the *National Historic Preservation Act*	April 24, 2015	June 30, 2015
Ohio Environmental Protection Agency	Clean Water Act, Section 401 Water Quality Certification	Automatic Authorization with Nationwide Permit 12	
	NPDES General Permit for Discharges of Hydrostatic Test Water	1st Quarter 2016	Pending
	Clean Air Act, Permit to Install and Operate	April 24, 2015	June 10, 2015
Ohio Department of Natural Resources Division of Wildlife	State-listed Species Identification	April 14, 2015	May 26, 2015
State of Louisiana			
Louisiana Department of Environmental Quality	Hydrostatic Test Water Discharge Permit (LAG-67)	Notice of Intent to be submitted in accordance with Texas Gas' Statewide General Permit	
	State (Minor Source) Air Permit	May 29, 2015	August 13, 2015
Louisiana Department of Wildlife and Fisheries	Threatened and Endangered Species Consultation	March 20, 2015	April 2, 2015
Louisiana Office of Cultural Development Division of Historic Preservation	National Historic Preservation Act Section 106 Consultation	March 20, 2015	April 8, 2015
State of Mississippi			
Mississippi Department of Archives and History	Consultation under Section 106 of the National Historic Preservation Act	March 20, 2015	April 7, 2015
Mississippi Department of Wildlife, Fisheries, and Parks	Threatened and Endangered Species Consultation	March 20, 2015	April 20, 2015

Table 1 Federal and State Permits and Approvals			
Agency or Organization	**Permit/Approval**	**Submittal**	**Receipt**
Mississippi Department of Environmental Quality	Hydrostatic Test General Permit to Discharge	1st Quarter 2016	Pending
State of Tennessee			
Tennessee Historical Commission	Consultation under Section 106 of the National Historic Preservation Act	March 20, 2015	May 6, 2015
Tennessee Department of Environment & Conservation	Hydrostatic Test General Permit to Discharge;	1st Quarter 2016	Pending
	Threatened and Endangered Species Consultation	March 20, 2015	May 14, 2015
State of Kentucky			
Kentucky Department for Environmental Protection Division of Water	NPDES General Permit for Discharge of Hydrostatic Test Water	1st Quarter 2016	Pending
Kentucky Department of Fish and Wildlife	Threatened and Endangered Species Consultation	March 20, 2015	March 27, 2015
Kentucky Heritage Council	Consultations under Section 106 of the *National Historic Preservation Act*	March 20, 2015	May 14, 2015
	Historic Architectural Evaluation Concurrence	October 13, 2015	October 22, 2015
State Of Indiana			
Indiana Department of Environmental Management	Elimination System (NPDES) Wastewater Discharge Associated with Hydrostatic Testing of Commercial Pipelines (Rule 11)	1st Quarter 2016	Pending
Indiana Department of Natural Resources	Threatened and Endangered Species Consultation	March 20, 2015	April 1, 2015
Indiana Division of Historic Preservation	Section 106 of the National Historic Preservation Act Consultation/Clearance	March 20, 2015	April 17, 2015

7.0 CONSTRUCTION, OPERATION, AND MAINTENANCE

Texas Gas would construct, operate, and maintain the proposed Project in compliance with the U.S. Department of Transportation (DOT) under 49 CFR 192 - *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*, and all other applicable federal and state permit requirements, regulations, and environmental guidelines. Texas Gas has adopted FERC staff's *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan), and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures)[2], with minor modifications (see section B.3.2). Texas Gas would also implement its Spill Prevention, Control, and Countermeasures (SPCC) Plan to protect areas from inadvertent releases of fuel and other

[2] The Plan and Procedures includes best management practices for pipeline facility construction to minimize resource impacts. Copies of the Plan and Procedures may be accessed on our website (http://www.ferc.gov/industries/gas/enviro/guidelines.asp).

mechanical fluids. Winter construction techniques may be required in some Project areas. Therefore, Texas Gas has developed and would implement its Winter Construction Plan for snow management, working with frozen soils, temporary erosion and sediment control measures, and managing hydrostatic discharge water under freezing conditions.

During construction, Texas Gas would clear and grade the sites for the aboveground facilities. Erosion control devices would be installed prior to initiation of construction to prevent erosion and offsite impacts. Access to the aboveground facilities would be provided by existing public and private access roads and the improvement of one permanent access road for the Harrison Compressor Station. Any soils excavated for foundations of the aboveground facilities would be compacted in place and any excess soil would be used elsewhere onsite or disposed of at an approved offsite location. Fencing would be constructed around the compressor station sites. After construction, any disturbed area that is not covered in gravel or asphalt would be restored and revegetated.

Texas Gas would utilize two full-time environmental inspectors (EI) during major ground disturbing activities, and one EI the remainder of construction. The EI would be on site during construction activities to ensure compliance with the construction procedures contained in FERC's Plan and Procedures.

Texas Gas would conduct environmental training sessions in advance of and during construction to ensure that all individuals working on the Project are familiar with the environmental mitigation measures appropriate to their jobs and the EI's authority.

8.0 LAND REQUIREMENTS

Construction of the Project would temporarily impact 146.1 acres of land during construction, and of this, 13.4 acres would be permanently affected by operation of the proposed facilities. Table 2 indicates the amount of impact that would occur at each site. Construction activity at the Bastrop, Clarksdale, Covington, Slaughters, Hardinsburg, Jeffersontown, Leesville, and Dillsboro Compressor Stations would occur within existing Texas Gas property or easements; therefore, additional operational footprint would not be required.

Table 2
Summary of Land Requirements

Facility	Land Affected During Construction (acres)	Land Affected During Operation (acres)
New Harrison Compressor Station	26.28	13.39
Existing Bastrop Compressor Station	23.75	0.0
Existing Clarksdale Compressor Station	9.42	0.0
Existing Covington Compressor Station	12.74	0.0
Existing Slaughters Compressor Station	14.63	0.0
Existing Hardinsburg Compressor Station	22.11	0.0
Existing Jeffersontown Compressor Station	11.22	0.0
Existing Leesville Compressor Station	9.59	0.0
Existing Dillsboro Compressor Station	16.36	0.0
Project Totals	**146.1**	**13.4**

B. ENVIRONMENTAL ANALYSIS

1.0 GEOLOGY

The Harrison and Dillsboro Compressor Stations are located within the Central Lowlands physiographic province, comprised primarily of Pleistocene age sediments, with limestone and sandstone bedrock. The Bastrop, Clarksdale, and Covington Compressor Stations are located within the Coastal Plains physiographic province, affected by the flooding of the Mississippi River which formed natural levees, and areas of alternating lowlands and ridges. Lastly, the Slaughters, Jeffersontown, Hardinsburg, and Leesville Compressor Stations are located in the Interior Low Plateau physiographic province, characterized by Missippian age limestones and shales, with regional uplift and land formations heavily influenced by erosion.

Each of the existing compressor station sites have been previously disturbed, and therefore bedrock is unlikely to be encountered. For the Harrison Compressor Station, shallow bedrock is not present; therefore, blasting would not be required. Topography at each of the compressor stations ranges from flat to gently sloping in Louisiana and Mississippi and gently to moderately sloping in Tennessee, Kentucky, Indiana, and Ohio.

The new Harrison Compressor Station and all existing compressor stations are not located within 1 mile of any existing oil or gas wells or active quarries or mines.

The new Harrison Compressor Station would not be located near any active faults, and there have been five earthquakes in Hamilton County, Ohio, all with magnitudes between 2.5 and 3.3 on the Richter scale. Therefore, the overall risk of significant seismic activity at the Harrison Compressor Station is low. The existing Bastrop, Jeffersontown, and Dillsboro Compressor Stations have low seismic probability. The existing Hardinsburg, Leesvile, Slaughters, and Clarksdale Compressor Stations are characterized as having a moderate seismic hazard and higher risk of soil liquefaction. The Covington Compressor Station is within an area of high probability of seismic hazard and higher risk of soil liquefaction. The proposed work at each of the existing stations with moderate to high seismic hazard and higher risk ok soil liquefaction includes minor valve and piping modifications to allow the facilities to be bidirectional, and each station has been constructed to federal and state building codes. Therefore, we find that the risk of damage to the proposed facilities from seismic activity is not significant.

Although Hamilton County, Ohio has known well-developed karst terrain, the Harrison Compressor Station would be located about 4 miles from any karst features and over 1 miles of any sinkholes. No areas of karst terrain or subsidence exist near the existing Slaughers, Covington, Clarksdale, and Bastrop Compressor Stations. The existing Leesville, Hardinsburg, Dillsboro, and Jeffersontown Compressor Stations are located in areas of known karst terrain. At these locations, karst terrain would occur well below the depth of excavation for the Project and the existing compressor stations have not been adversely affect by karst terrain or subsidence in the past. However, Texas Gas has developed an acceptable Karst Mitigation Plan if karst or subsidence features are encountered during construction.

According to the U. S. Geological Survey (USGS), the existing Bastrop, Slaughters, Hardinsburg, Leesville, and Jeffersontown Compressor Stations have low susceptibility and low incidence of landslides. The existing Clarksdale and Coving Compressor stations have a moderate susceptibility and low incidence of landslides, and the existing Dillsboro Compressor Station has a

high susceptibility and low incidence of landslide. More importantly, the new Harrison Compressor Station would be located in area of high incidence for landslides. The Harrison Compressor Station site, and surrounding land, is of level topography. Therefore, landslides, slumps, an debris flow would not adversely impact the compressor station.

All construction and operation workspace associated with the existing compressor stations are located outside of the Federal Emergency Management Agency 100-year floodplain. Half of the new Harrison Compressor Station site property is located within a 100-year floodplain; however, the compressor station facilities would be located outside of the floodplain. The Executive Order 11988 directs federal agencies to lead the Nation by example by demonstrating a comprehensive approach to floodplain management. The order requires agencies to:

(1) avoid, to the extent possible, the long and short term adverse impacts associated with the occupancy and modification of floodplains, and

(2) avoid the direct or indirect support of floodplain development whenever there is a practicable alternative.

The Executive Order 11988 establishes avoidance of actions on the base of the floodplain, or the 100-year floodplain, as the preferred method for meeting these requirements.

Texas Gas would construct the Harrison Compressor Station to meet or exceed federal, state, and local standards for construction within a floodplain to minimize any impact on the function of the floodplain. Further the alternative compressor station sites evaluated in section C.3 demonstrates that the proposed site is environmentally preferable. Therefore, our review concludes that impacts would be minimal and unavoidable, and the use of the proposed site does not conflict with the intent of Executive Order 11988.

2.0 SOILS

The soil types located at each existing and new compressor station were identified using the Natural Resources Conservation Service mapping. About 42 acres, or 29 percent, of the combined Project areas soils (with the majority at the Bastrop Compressor Station) are classified as hydric with the potential to cause compaction or rutting. Texas Gas would use timber mats in these areas to avoid or minimize compaction and rutting.

Less than 6 acres of the combined Project area soils have high erosion potential (primarily at the Harrison, Clarksdale, and Dillsboro Compressor Station). To minimize or avoid impacts from soil erosion, Texas Gas would use the sediment and erosion controls in accordance with FERC's Plan and Procedures for all soil types, regardless of erosion potential. About 31 acres of the combined Project area soils (primarily at the Bastrop Compressor Station) have low revegetation potential, and about 71 acres (primarily at the Harrison, Covington, Slaughters, Hardinsburg, Leesville, and Dillsboro Compressor Stations) have moderate revegetation potential. Texas Gas would apply soil amendments in areas of poor to moderate revegetation potential to aid the re-establishment of vegetation. Further, disturbed areas would be revegetated in accordance with the FERC Plan and Procedures.

Construction of the Harrison Compressor Station would temporarily impact 20 acres of prime farmland. Following construction, 9.4 acres of prime farmland would be permanently

converted to industrial use. The remaining soils would refer to their previous condition. This conversion would represent a small amount of the total area of agricultural land in Hamilton County, Ohio, and therefore the new compressor station would not significantly affect the availability of prime farmland. Further, construction at the existing compressor stations would temporarily impact less than 60 acres of prime farmland. However, none of this land would be permanently converted as the existing station sites have already been removed from potential agricultural production.

If encountered, Texas Gas would repair or replace all drain tiles damaged by construction. Drainage tiles potentially damaged by construction would be probed to determine if damage has occurred.

3.0 WATER RESOURCES

3.1 Groundwater Resources

The majority of the Project area is underlain by a total of four principal aquifers, including the Mississippi River Valley Alluvial aquifer, the Mississippi Embayment aquifer system, Pennsylvanian aquifers, and the Silurian-Devonian aquifers (USGS, 2014a). The existing Dillsboro Compressor Station, Hardinsburg Compressor Station, and Leesville Compressor Station are not underlain by a principal aquifer system, minor aquifer, or confining unit, but by shale deposits with interbedded limestone units characterized by low permeability. The proposed Harrison Compressor Station is underlain by the Greater Miami Buried Valley Aquifer, which is composed of several layers of well sorted sand and gravel mixed with layers of clay. It is enclosed by steeply sloping bedrock walls with low permeability. Depth to groundwater of this aquifer can be less than 20 feet, ranging from 16 to 30 feet in Hamilton County (USGS, 2014e). The aquifer is recharged through precipitation and high river flow periods from the Great Miami River.

The U.S. Environmental Protection Agency (EPA) defines Sole Source or Principal Source Aquifers (SSA) as those aquifers which supply at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas typically have no alternative drinking water source(s) that could be physically, legally, and/or economically supplied to all those who depend on the aquifer for their potable water supply (EPA 2014). According to the EPA, the Project is underlain by one SSA, the Greater Miami Buried Valley Aquifer, at the Harrison Compressor Station (EPA, 2012).

There are seven private water wells within 150 feet of the Project area, all of which are industrial and drinking water wells owned by Texas Gas. Through discussions with landowners, Texas Gas has not identified any water wells within the vicinity of the Project area at the Harrison Compressor Station. There are no wellhead protection areas or Drinking Water Source Protection Areas within 1 mile of any Project facilities and no leaking underground storage tanks or other sources of groundwater contamination were identified within the Project area.

No water wells outside those owned by Texas Gas and located within existing station property limits were identified; however, if Texas Gas identifies any additional water wells within 200 feet of the Project, if requested by the well owners, Texas Gas would perform pre- and post-construction monitoring of well yield and water quality for the wells. If during construction, a well has been determined to have been impaired, Texas Gas would compensate the landowner for the repair of the well, installation of a new well, or otherwise arrange for a suitable water supply.

Construction of aboveground facilities has the potential to temporarily affect the overland water flow and recharge of shallow aquifers. Clearing vegetation and soil compaction could hinder the infiltration of water into the ground and have an effect on local vegetation. However, these impacts would be temporary and adverse impacts on groundwater are not anticipated, as clearing and grading activities would primarily be minor and limited to the Project area at the Harrison Compressor Station, as the remaining Project activities would occur within previously cleared and maintained facilities.

The Great Parks of Hamilton County expressed concerns that industrial activity at the Harrison Compressor Station could increase the risk of spills to the aquifer. An inadvertent spill of fuels, lubricants, or solvents could result in groundwater contamination. These potential impacts would be minimized by prohibiting fuel storage and refueling activities within 200 feet of private wells and implementing proper storage, containment, and handling procedures. In the event of a spill, Texas Gas would implement its SPCC Plan. The SPCC Plan describes measures that would be implemented to prevent or control inadvertent spills of hazardous materials and groundwater contamination, which we find acceptable. In addition to Texas Gas' SPCC Plan, Texas Gas would comply with the measures outlined in the FERC Plan and Procedures.

Although the Project area at the Harrison Compressor Station is underlain by the Greater Miami Buried Valley aquifer, the depth of excavation would not exceed approximately 10 feet. Based on the nature of the construction activities, Texas Gas' proposed construction procedures, and the protective measures included in the SPCC Plan and the FERC Plan and Procedures, we conclude that construction and operation of the Project would not have a significant impact on the Greater Miami Buried Valley aquifer and other groundwater resources.

3.2 Surface Water

The Project would occur within the vicinity of eight waterbodies, as described in table 3; no wetlands were identified in the Project area. Two waterbodies would be crossed by the station road at existing culverts and one waterbody would require a new culvert to allow access to the Harrison Compressor Station.

Table 3
Waterbodies in the Project Area

Facility Name	Location	Stream ID	Distance from Workspace (feet)
Harrison Compressor Station	Hamilton County, OH	SP1001	0[a]
		SP1002	310
Bastrop Compressor Station	Morehouse Parish, LA	SP1MO007_DT	0[b]
Clarksdale Compressor Station	Coahoma County, MS	SP1CO005_DT	0[b]
		SP1CO006_DT	10
Covington Compressor Station	Tipton County, TN	SP1MO008_DT	60
Jeffersontown Compressor	Jefferson County, KY	SP1JE010_DT	143
		SP1JE011_DT	7

[a] Proposed culvert permitted by the Nationwide Permit 12.
[b] Stream is within the workspace as it is crossed by an existing station road which has a culvert in place.

No sensitive surface waters occur within 0.5 mile of the Project area. Under section 303(d) of the Clean Water Act, states are required to identify waterbodies that are not attaining their designated use(s) and develop total maximum daily loads, which represent the maximum amount of

a given pollutant that a waterbody can assimilate and still meet its designated use(s). Two 303(d) listed impaired waterbodies are located within 0.5 mile of the Project facilities: the East Fork of Deer Creek, located 0.5 mile east of the Project area at the Slaughters Compressor Station, and Chenowath Run, located directly east of the Jeffersontown Compressor Station. Project activities, however, would not impact these waterbodies, as construction would occur entirely within the existing compressor station facilities at these locations and appropriate erosion control measures would preclude material movement off-site into these waterbodies. Therefore, no impacts on these waterbodies are anticipated.

Great Parks of Hamilton County expressed concern that the Project could disturb riparian habitat on the Dry Fork Whitewater River and wetland habitat at the Shaker Trace Wetland Complex at Miami Whitewater Forest. Construction activity would occur about 310 feet away from Dry Fork Whitewater River and about 0.5 mile from the wetlands. To protect water quality of the Dry Fork Whitewater River near the Harrison Compressor Station, Texas Gas would implement the FERC Plan and Procedures and any conditions included in the U.S. Army Corps of Engineers Nationwide Permit 12 – Utility Line Activities authorization dated August 3, 2015, to keep disturbed soils within approved workspace areas and minimize opportunities for off-site movement of materials. Due to the distance to the habitat identified, construction activities would not affect hydrology of any riparian or wetland habitat.

Construction activities within the Project area could result in impacts on waterbodies, such as increased sedimentation, increased turbidity, decreased dissolved oxygen concentrations, and introduction of chemical contaminants through spills. One waterbody would be impacted by construction of the permanent access road for the Harrison Compressor Station, where a permanent culvert would be placed to facilitate the crossing of the access road. Other than installation of the new culvert, Project activities would not directly impact waterbodies, as construction would occur entirely within the existing compressor station facilities.

In order to minimize adverse impacts on surface waterbodies, Texas Gas would implement its SPCC Plan as well as the FERC Plan and Procedures, with its proposed alternate measures. Texas Gas would comply with the storage of petroleum products, refueling, and lubricating operations that take place in upland areas that are more than 100 feet from wetlands, waterbodies, or designated watershed areas. In areas where the distance between the workspace and the waterbodies is less than 50 feet, as identified in table 3, Texas Gas has requested site specific alternate measures from the FERC Procedures. Texas Gas would use best management practices and install temporary erosion and sediment control devices, such as silt fence and straw bales, to prevent the flow of spoil or heavily silt-laden water into any waterbody. We have reviewed this request and find the protective measures proposed by Texas Gas to be acceptable. We conclude that Texas Gas' implementation of its SPCC Plan and the FERC Plan and Procedures would adequately minimize impacts on waterbodies and wetlands.

3.3 Hydrostatic Testing

Texas Gas would hydrostatically test all pipelines in accordance with DOT pipeline safety regulations. Hydrostatic testing involves filling the pipeline facilities with water and pressurizing the pipeline facilities above their maximum allowable operating pressure. Table 4 provides the proposed hydrostatic test water volumes. The pressure in the facilities is then monitored for several hours. If a drop in pressure is recorded, then the pipeline facilities would be examined to determine if any leaks have occurred.

Table 4 Proposed Hydrostatic Test Water Volumes	
Facility	**Approximate Volume (gallons)**
Harrison Compressor Station	72,190
Bastrop Compressor Station	29,660
Clarksdale Compressor Station	42,130
Covington Compressor Station	25,480
Slaughters Compressor Station	37,450
Hardinsburg Compressor Station	38,290
Jeffersontown Compressor Station	13,470
Leesville Compressor Station	3,100
Dillsboro Compressor Station	9,260

All water used for hydrostatic testing would be obtained from municipal sources and discharged within well-vegetated upland areas at each Project facility. This method would minimize the potential for erosion and is in compliance with applicable federal and state regulations and the FERC Plan and Procedures. Additionally, Texas Gas would follow all federal, state, and local permit requirements with regard to water discharge. For the reasons discussed above, we conclude that the hydrostatic testing of the Project would not have a significant impact on water resources.

3.4 Wetlands

No wetlands would be affected by construction or operation of the Project.

4.0 VEGETATION, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES

4.1 Vegetation

The Project facilities are located within three ecoregions, the Eastern Broadleaf Forest Province, the Lower Mississippi Riverine Forest Province, and the Southeastern Mixed Forest Province. Four general vegetation types were identified throughout the Project area, including industrial land, agriculture, open land, and forest.

Industrial lands are typically either sparsely vegetated or lack vegetation due to the presence of impervious structures such as cement foundations, pavement, or gravel pads, and may include various grass species, ornamental shrubs and trees. Agricultural land in the Project area consists of actively cultivated row crops including corn and a turf farm. The primary crop at the Harrison Compressor Station Project area was corn. Naturally occurring vegetation is generally not present in these areas, since they are regularly maintained or harvested. Open land is comprised of non-forested areas that are not otherwise classified as agriculture, and includes existing utility rights-of-way and unimproved pastures. Unimproved pastures are typically characterized as open areas with mixed herbaceous vegetation interspersed with scrub-shrub vegetation. Forested land may include American elm, American sycamore, hackberry, Eastern black walnut, and multiflora rose.

The majority of Project impacts would occur at existing compressor station sites and affect industrial land. Construction at the existing compressor station sites would temporarily impact 119.8 acres of industrial land. Construction of the proposed Harrison Compressor Station and access road would disturb 25.3 acres of agriculture, 0.3 acre of open land, and 0.8 acre of forest. Operation of the Harrison Compressor Station would require the conversion of about 12.8 acres of agricultural land, 0.1 acre of open land, and 0.6 acres of forest to industrial use for operation of the facility and the permanent access road.

Upon completion of construction, the temporary workspaces associated with the Project would be stabilized and seeded in accordance with the FERC Plan and seeding recommendations provided by the local Natural Resources Conservation Service office. The majority of the operational workspaces associated with construction at the existing aboveground facilities have already been permanently converted to industrial land that does not currently support diverse vegetative communities. The areas temporarily disturbed at the Harrison Compressor Station would be allowed to revegetate to their previous vegetation types following restoration. Therefore, we conclude that the Project would not result in any significant impacts on vegetation.

4.2 Fisheries

Only one minor perennial stream occurring within the Project area would be impacted by construction and operation of the Project. This stream would be crossed by the new permanent access road at the Harrison Compressor Station. In-stream disturbance would be minimal and would consist of installation of a culvert, which could result in minor short-term impacts on fisheries resources. Due to these impacts, the Ohio Department of Natural Resources (OHDNR) recommends that in-stream work be avoided between April 15 and June 30 to reduce impacts on indigenous aquatic species and their habitat. If Texas Gas is unable to comply with this construction timing restriction, a waiver from OHDNR may be requested prior to construction. Texas Gas would comply with the FERC Plan and Procedures and its SPCC Plan to further minimize potential impacts on waterbodies and fisheries. Due to the limited stream disturbance and the protective measures proposed, we conclude that the Project would not significantly impact fisheries.

4.3 Wildlife

As mentioned in section B.4.1, the Project area consists of industrial land, agriculture, open land, and forest. Common wildlife species inhabiting these areas are accustomed to human disturbances and include raccoons, squirrels, white-tailed deer, rabbits, snakes, and various birds, including the northern mockingbird, house finch, mourning dove, American crow, red-tailed hawk, and field sparrow.

Potential impacts on wildlife include habitat loss and construction-related ground disturbance and noise. Some less mobile individuals could be inadvertently injured or killed by construction equipment. However, more mobile species such as birds and mammals would relocate to other suitable nearby habitat once construction activities begin. The temporary disturbance of local habitat would not have a population-level impact on wildlife because the amount of habitat disturbed represents a small portion of the available habitat throughout the project areas. Therefore, we conclude that the Project would not have a significant impact on wildlife.

4.3 Migratory Birds

Migratory birds are species that nest in the United States and Canada during the summer and then migrate to and from the tropical regions of Mexico, Central and South America, and the Caribbean for the non-breeding season. Migratory birds are protected under the Migratory Bird Treaty Act ([MBTA]-16 U.S. Code 703-711) and Bald and Golden Eagles are additionally protected under the Bald and Golden Eagle Act (16 U.S. Code 668-668d). The MBTA, as amended, prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Executive Order 13186 (66 FR 3853) was enacted in 2001 to, among other things, ensure that environmental analyses of federal actions evaluate the impacts of actions on migratory birds. Executive Order 13186 directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the FWS. The environmental analysis should further emphasize species of concern, priority habitats, key risk factors, and that particular focus should be given to population-level impacts.

The Project is located within four Bird Conservation Regions (BCR) including, BCR 24 Central Hardwoods, BCR 25 West Gulf Coastal Plain, BCR 26 Mississippi Alluvial Valley, and BCR 27 Southeastern Coastal Plain. Great Parks of Hamilton County indicated that the Harrison Compressor Station would be within 1 mile of wetlands that are part of the Shaker Trace Wetland Complex at Miami Whitewater Forest, which is listed as part of the Great Miami River Audubon Important Bird Area.

The Project would involve construction of new facilities and expansion of existing facilities, which necessitate clearing of vegetation at locations as previously described. For most facilities, the Project is sited within an existing compressor station site, avoiding vegetation clearing and minimizing the potential impacts on migratory birds. Vegetation removal at the Harrison Compressor Station would include the temporary and permanent removal of agricultural land and 0.8 acre of forested land.

Tree and vegetation removal can result in the direct loss of nests, eggs, and nestlings if clearing occurs within the nesting season. Texas Gas would conduct all necessary tree clearing at the Harrison Compressor Station between October 1 and March 31, which would avoid tree clearing during the nesting season for most migratory birds. The Project would be co-located with pre-existing industrial facilities for the remaining locations to further minimize habitat disturbance on migratory birds by avoiding forest clearing and impacts on surface waters and wetlands.

Great Parks of Hamilton County indicated that the Harrison Compressor Station would be within 1 mile of 35 nesting boxes installed for migratory bird use and expressed concern regarding impacts on sensitive wildlife, including migratory birds, due to operational noise and emissions associated with the Harrison Compressor Station. Air quality is discussed in greater detail in section B.7.1 and noise impacts are discussed in greater detail in section B.7.2. However, the air emission standards and noise levels developed to protect nearby residences are also in place to ensure that compressor stations authorized by FERC would not have significant adverse impacts on the environment, including wildlife and potentially sensitive species.

The amount of proposed removal of suitable migratory bird habitat within the proposed project areas is minimal (0.6 acre of forested land would be required for operation of the Harrison Compressor Station). Adult birds relocating to avoid construction is an impact of limited duration

that would not result in a substantial or long-term change in migration patterns through the area nor constitute a population-level impact. Therefore, we conclude that the Project would not have a significant impact on migratory birds of special concern, including the Great Miami River Audubon Important Bird Area.

4.4 Special Status, Threatened, and Endangered Species

Federal agencies are required under section 7 of the Endangered Species Act (ESA), as amended, to ensure that any actions authorized, funded, or carried out by the agency would not jeopardize the continued existence of a federally listed endangered or threatened species, or result in the destruction or adverse modification of the designated critical habitat of a federally listed species. As the lead federal agency authorizing the Projects, the FERC is required to consult with the FWS and/or the National Oceanic and Atmospheric Administration – National Marine Fisheries Service to determine whether federally listed endangered or threatened species or designated critical habitat are found in the vicinity of the Projects, and to evaluate the proposed action's potential effects on those species or critical habitats.

Texas Gas, acting as FERC's non-federal representative for the purpose of complying with section 7(a)(2) of the ESA, initiated informal consultation with the FWS through the Information, Planning, and Conservation System and the FWS Louisiana Ecological Services Project Review tool. A total of 20 federally listed species were identified as potentially occurring in the Project area, including 11 mussel species, 3 bat species, 2 birds, 1 fish, 1 insect, and 2 plants. No species were identified under the jurisdiction of the National Marine Fisheries Service. All Project activities that would be conducted entirely within existing Texas Gas facilities in Louisiana, Kentucky, Mississippi, Tennessee, and Indiana have been previously authorized by the FWS under categorical exclusions. Texas Gas requested and received concurrences from the FWS offices that these clearances are still valid (see table 1).

Texas Gas agreed to exclude the removal of any trees for the Slaughters Compressor Station and Jeffersontown Compressor Station, as requested by the FWS Kentucky Field Office on May 18, 2015. This eliminated any impacts on potentially suitable Indiana bat and northern long-eared bat summer roosting and foraging habitat, resulting in a no effect determination for the bats. The FWS concurred with this determination in correspondence dated October 1, 2015. We concur, and as such, consultation under ESA for work at the existing compressor stations in Kentucky is completed.

Great Parks of Hamilton County indicated that the Harrison Compressor Station is within 0.5 mile of northern long-eared bats, as well as oak/hickory habitat for Indiana bat, and that federally endangered running buffalo clover has been found in numerous nearby parks. The proposed Harrison Compressor Station would be primarily located within an active agricultural area with some minor tree clearing. Based on recommendations received from the FWS Ohio Ecological Services Office on May 13, 2015, Texas Gas would conduct all necessary tree clearing at the Harrison Compressor Station between October 1 and March 31 to avoid impacts on the Indiana bat and northern long-eared bat. No other suitable threatened and endangered species habitat, including for running buffalo clover, is present at the proposed Harrison Compressor Station. Due to a lack of suitable habitat and Texas Gas' commitment to conduct tree clearing between October 1 and March 31[3], we have determined that Project activities associated with the

[3] If Texas Gas is unable to perform tree clearing during this timing window, it would need to consult with FWS.

Harrison Compressor Station are not likely to adversely affect any threatened and endangered species. The FWS Ohio Field Office concurred with this determination on July 23, 2015 and the ONDR concurred on May 28, 2015.

Great Parks of Hamilton County indicated that the Harrison Compressor Station is within 0.5 mile of Ohio-endangered cave salamanders and compass plants. Texas Gas consulted with the OHDNR regarding potential impacts on state-listed species. The OHDNR responded in correspondence dated May 26 and 28, 2015 that the Project is not likely to adversely affect any state-listed species and that consultation is complete.

Texas Gas also requested information regarding state listed threatened and endangered species from the Louisiana Department of Wildlife and Fisheries, Mississippi Museum of Natural Science, Tennessee Department of Environment and Conservation, Kentucky State Nature Preserves Commission, and Indiana Department of Natural Resources. No additional consultations are required with these agencies and consultation is complete.

Our evaluation of the Project resulted in a not likely to adversely affect or no effect determination for all the federally or state-listed species. Therefore, we conclude that there would be no significant impacts on special status species and consultation under the ESA is complete.

5.0 CULTURAL RESOURCES

Texas Gas completed cultural resources surveys for the Harrison Compressor Station and associated access road, and provided a Phase I survey report and addendum report to the FERC and Ohio State Historic Preservation Office (SHPO). The surveys employed surface inspection augmented by shovel and auger testing, and included both archaeological and architectural resources. Approximately 27.5 acres were examined.

As a result of the Phase I survey, two prehistoric artifact scatters (33HA845 and 33HA846) and one prehistoric/historic artifact scatter (33HA847) were identified. All were recommended as not eligible for the National Register of Historic Places (NRHP) due to lack of integrity, and no further work was recommended. No cultural resources were identified by the addendum survey. In a letter dated June 30, 2015, the Ohio SHPO commented on the Phase I and addendum reports and agreed that the three sites were not eligible for the NRHP and that the project would not affect historic properties.

Texas Gas contacted the Mississippi, Louisiana, Indiana, Tennessee, and Kentucky SHPOs regarding the modifications to the project facilities in those states. In a letter dated April 7, 2015, the Mississippi SHPO indicated that no cultural resources were likely to be affected by the project. On April 8, 2015, the Louisiana SHPO indicated no known historic properties would be affected by the project. In letters dated April 17 and July 14, 2015, the Indiana SHPO indicated that it had not identified any historic structures or archaeological sites eligible for the NRHP within the project area. In a letter dated May 6, 2015, the Tennessee SHPO indicated that there were no NRHP listed or eligible properties affected by the project. In a letter dated May 14, 2015, the Kentucky SHPO indicated that no further archaeological work was required for the project. However, the SHPO also requested that a historic survey be done for any compressor facilities older than 50 years. Texas Gas completed a map and aerial imagery review to determine the age of the compressor facilities, and provided the results of the review to the FERC and SHPO. None of the facilities

were found to be older than 50 years. In a letter dated October 22, 2015, the SHPO concurred and indicated that no historic properties would be affected by the project.

Texas Gas also provided "Blanket Environmental Clearances" with the Louisiana, Mississippi, Tennessee, and Kentucky SHPOs which stipulate certain minor construction activities not requiring further review, and which Texas Gas would utilize, as applicable. However, the Louisiana, Mississippi, and Tennessee clearances expire at the end of 2015, and would not be applicable to Texas Gas' 2016 construction activities. Therefore, **we recommend that**:

Texas Gas should not begin construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads <u>until</u>:

a. Texas Gas files with the Secretary of the Commission (Secretary) updated "Blanket Environmental Clearances" with the Louisiana, Mississippi, and Tennessee SHPOs, applicable to Texas Gas' planned 2016 construction activities; and
b. the Director of the Office of Energy Projects (OEP) notifies Texas Gas in writing that construction may proceed.

Texas Gas provided plans to address the unanticipated discovery of cultural resources and human remains during construction. We requested minor revisions to the plans. Texas Gas provided revised plans which we find acceptable.

Texas Gas contacted the following Native American tribes, providing a project description and mapping: Chickasaw Nation; Chitimacha Tribe of Louisiana; Coushatta Tribe of Louisiana; Delaware Nation; Eastern Shawnee Tribe of Oklahoma; Jena Band of Choctaw Indians; Miami Tribe of Oklahoma; Mississippi Band of Choctaw Indians; Muscogee (Creek) Nation; Peoria Tribe of Indians of Oklahoma; Pokagon Band of Potawatomi Indians; Quapaw Tribe of Oklahoma; Shawnee Tribe of Oklahoma; Thlopthlocco Tribal Town; Tunica-Biloxi Indian Tribe of Louisiana; and United Keetoowah Band of Cherokee Indians.

The Chickasaw Nation, Jena Band of Choctaw Indians, and Muscogee (Creek) Nation requested additional project information, mapping, and/or the survey reports, which Texas Gas provided. The Coushatta Tribe of Louisiana, Peoria Tribe of Indians of Oklahoma, Pokagon Band of Potawatomi Indians, and United Keetoowah Band of Cherokee Indians indicated they had no objections, comments, or concerns about the project, but requested to be notified in the event of an inadvertent discovery during construction. The unanticipated discovery plans provide for notification of Native American tribes in the event of a discovery of Native American human remains during construction. No other comments have been received. We sent our NOI to these same tribes. No responses to our NOI have been received.

6.0 LAND USE, RECREATION, AND VISUAL RESOURCES

6.1 Land Use

The land use at each of the existing compressor stations is entirely industrial, and would remain industrial following construction. The City of Harrison commented that the land for the new Harrison Compressor Station has been zoned residential by the city and a new compressor station would be inconsistent with this use. Regardless of zoning and future unapproved plans, the

existing land use at the site of the new Harrison Compressor Station is primarily agricultural, with small amounts of forest and open land. Construction at all of the compressor stations combined, including the new access road, would disturb 0.8 acre of forest, 0.3 acre of open land, 25.3 acres of agricultural land, and 119.8 acres of industrial land, totaling about 146.2 acres of land. Operation of the new Harrison Compressor Station and new permanent access road would permanently impact 13.4 acres of land, primarily agricultural land, which would become commercial/industrial land. Land used for temporary workspace at the Harrison Compressor Station would be re-graded, stabilized and allowed to revert to forest/open/agricultural space in accordance with FERC's Plan and Procedures. We also encourage cooperation between interstate pipelines and local authorities, including zoning. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction and operation of facilities that are approved by the Commission.

Texas Gas contacted local zoning and planning boards to determine if there is any new residential or commercial development planned near each compressor station. There are no proposed residential or commercial developments within 0.25 miles of the existing compressor stations. There are many residences currently within 1 mile of the new Harrison Compressor Station, with more under potential development. In particular, the City of Harrison Building and Zoning Department identified the adjacent parcel as under consideration for potential residential development. However, this parcel has had the option for potential development for several years and a development has not yet been approved. No residences or are present within 0.25 mile of the proposed Harrison Compressor Station.

Temporary construction impacts and permanent operating impacts on residential areas would primarily be limited to noise and dust, and air pollutants generated by construction equipment and operation of the compressor stations. As discussed in section B.7.1, air pollutants from construction equipment generally would be minimal, limited to the immediate vicinity of each compressor station (less than 0.5 mile), and would be temporary, lasting the duration of construction at each site. Texas Gas would implement the measures in its Fugitive Dust Control Plan to control dust form construction and would not conduct any open burning. Long-term to permanent air quality and noise impacts from operation of the compressor stations are discussed in sections B.7.1 and B.7.2.

With the above-mentioned construction procedures, primary use of existing industrial and agricultural land, and Texas Gas' implementation of FERC's Plan and Procedures, temporary and long-term impacts on land use would be adequately minimized or avoided.

6.2 Recreation

Public grade schools or churches are not located within 0.5 mile of the compressor stations. None of the following resources have been identified within 0.25 mile of the Project construction work areas: national or state parks, forests, or wildlife management areas; Indian reservations; National Wildlife Refuges; registered natural landmarks; National Wild and Scenic Rivers; or national trails. The Project also would not impact land managed under the Conservation Reserve Program, Conservation Reserve Enhancement Program, or Wetland Reserve Program.

The new Harrison Compressor Station would be located adjacent to the Miami Whitewater Forest in Hamilton County, Ohio. The park is operated by Great Parks of Hamilton County and is

used for recreation activities, including camping, hiking, biking, swimming, fishing, soccer, and horseback riding. No direct land use conflict would result from construction and operation of the compressor station, as the station would be located outside of park property. However, Great Parks of Hamilton County commented with concerns that air and noise emissions from the new station could impact birds and sensitive species in the park and impact park users, lowering attendance. Impacts on birds and sensitive species are discussed in section B.4.3 and B.4.4 of this EA. In section B.7.2, the nearest camp ground in the park to the compressor station is considered a noise sensitive area and noise impacts are evaluated. We also note that as the park is largely forested, and a large vegetative buffer exists between the compressor station and park use areas, which would minimize impacts on park users.

Because the Project primarily includes the use of existing infrastructure with limited scope of the construction and operation of Project facilities, the Project would result in minimal impacts on recreational activities in the Project areas.

6.3 Visual Resources

The proposed Project would not impact or be located near any local, state, or federally designated visual resources of significance (e.g., scenic roads/highways or National Wild and Scenic Rivers, or historic structures). Construction would result in temporary visual and aesthetic impacts including increased numbers of company and contractor personnel, presence/storage of additional equipment and materials, and disturbance of soils. These impacts would cease following the completion of construction and successful restoration.

The proposed activities at each of the eight existing compressor stations would occur on property already consisting of an existing compressor station with an industrial land use and presence within the surrounding view shed. Modifications at these existing facilities would be consistent with the existing visual environment.

The site of the new Harrison Compressor Station is about 0.25 mile from the nearest residence that would view the station. Also, the Miami Whitewater Forest is adjacent to the compressor station. The compressor station would be located on land that is surrounded by trees bordering the property on two sides (between the compressor station and residences) and dense forest on the other two sides (between the compressor station and Miami Whitewater Forest). Therefore, the new compressor station would not significantly alter the existing viewshed.

6.4 Coastal Zone Management Areas

None of the Project facilities are located within a Coastal Management Zone, would not have any impact on coastal zones or Coastal Zone Management Areas.

6.5 Contaminated Sites

The existing Bastrop, Clarksdale, Covington, Dillsboro, Hardinsburg, Jeffersontown, and Leesville Compressor Stations were identified has having historic polychlorinated biphenyl contamination. Texas Gas implemented a monitoring plan, approved by EPA. Recent data indicates that polychlorinated biphenyls greater than 50 parts per million are no longer present at these existing facilities. No other contamination was identified within 0.5 mile of any of the Project compressor stations. However, if Texas Gas encounters contamination during construction,

it would implement its *Plan for the Unanticipated Discovery of Contaminated Environmental Media* and comply with applicable federal, state, and local regulations.

7.0 AIR QUALITY AND NOISE

7.1 Air Quality

Air quality would be affected by construction and operation of the Project. During construction of the Project, short-term emissions would be generated by operation of equipment, land disturbance, and increased traffic from worker and delivery vehicles. Operation of the modified Bastrop Compressor Station and new Harrison Compressor Station would result in minimal long-term air emissions, as presented below.

Ambient air quality is protected by federal and state regulations. The EPA established National Ambient Air Quality Standards (NAAQS) to protect human health and welfare.[4] Primary standards protect human health, including the health of sensitive subpopulations, such as children, the elderly, and those with chronic respiratory problems. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. NAAQS have been developed for sulfur dioxide (SO_2), particulate matter with a diameter of 10 microns or less (PM_{10}), particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), nitrogen dioxide (NO_2), carbon monoxide (CO), ozone, and lead, and include levels for short-term (acute) and long-term (chronic) exposures.

Areas of the country in violation of NAAQS are designated as non-attainment areas and areas previously designated as nonattainment that have since demonstrated compliance with the NAAQS are designated as maintenance for that pollutant. New sources to be located in or near non-attainment or maintenance areas may be subject to more stringent air permitting requirements. The EPA and state and local agencies have established a network of ambient air quality monitoring stations to measure and track the background concentrations of criteria pollutants across the United States. Hamilton County, Ohio is designated non-attainment for ozone and maintenance for $PM_{2.5}$. Jefferson County, Kentucky is designated non-attainment for SO_2 and maintenance for ozone. There are no non-attainment or maintenance areas for the other Project counties.

The EPA now defines air pollution to include greenhouse gases (GHGs), finding that the presence of GHGs in the atmosphere may endanger public health and welfare through climate change. The Project would contribute GHG emissions. The principle GHGs that would be emitted by the Project are carbon dioxide, methane, nitrous oxide. GHG emissions are quantified and regulated in units of carbon dioxide equivalents (CO_2e). The CO_2e takes into account the global warming potential (GWP) of each GHG. The GWP is a ratio relative to carbon dioxide of a particular GHG's ability to absorb solar radiation as well its residence time within the atmosphere. Thus, carbon dioxide has a GWP of 1, methane has a GWP of 25, and nitrous oxide has a GWP of 298.[5] In compliance with EPA's definition of air pollution to include GHGs, we have provided estimates of GHG emissions for construction and operation, as discussed throughout this section.

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[4] The current NAAQS are listed on EPA's website at http://www.epa.gov/air/criteria.html.

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

Permitting/Regulatory Requirements

The Clean Air Act, as amended in 1977 and 1990, is the basic federal statute governing air pollution. The provisions of the Clean Air Act that are potentially relevant to the Project are discussed further below.

New Source Review is a pre-construction permitting program designed to protect air quality when air pollutant emissions are increased either through the modification of existing sources or through the construction of a new source of air pollution. Similarly, Title V is an operating permit program run by each state. Air permitting of stationary sources has been delegated to each state. Table 5 presents the new operating air emissions at the Bastrop and Harrison Compressor Stations. Based on the operating emissions presented in table 5 for the new Harrison Compressor Stations and modified Bastrop Compressor Station, emissions from the Project equipment would not require a New Source Review permit. The new Harrison Compressor Station would not be required to obtain a Title V Permit. The existing Bastrop Compressor Station operates under a Title V Permit and the modifications that this station would require Texas Gas to modify this permit.

Table 5
Operation Emission Estimates
(tons per year)

Source	NO_x [a/]	CO	SO_2	VOC [b/]	PM_{10}	$PM_{2.5}$	HAPs [c/]	GHG (CO_2e)
New Harrison Compressor Station								
Turbine 1	7.0	7.1	0.1	0.8	0.5	0.5	0.3	13,774
Turbine 2	4.8	4.8	<0.1	0.6	0.4	0.4	0.2	9,373
Emergency Generator	3.5	7.1	<0.1	1.8	<0.1	<0.1	0.4	667
(2) Fuel Gas Heaters	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	118
Fugitives and Leaks [d/]	N/A	N/A	N/A	1.2	N/A	N/A	<0.1	2,599
Station Total	**15.4**	**19.1**	**0.1**	**4.4**	**0.9**	**0.9**	**0.9**	**26,530**
Existing Bastrop Compressor Station								
Existing Emissions	4,174.7	220.5	0.5	95.7	40.2	40.2	54.4	154,741
New Turbine	20.9	21.3	0.2	2.4	1.5	1.5	0.9	41,054
New Emergency Generator	0.9	1.8	<0.1	0.4	<0.1	<0.1	0.1	167
(2) New Fuel Gas Heaters	0.4	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	512
(4) Existing compressors removed	-1,759.8	-189.7	-0.2	-38.6	-15.6	-15.6	-22.8	-37,632
Existing Emergency Generator Removed	-1.5	-1.5	0.0	0.0	0.0	0.0	N/A	0
New Station Total	**2,435.6**	**52.8**	**0.5**	**59.9**	**26.1**	**26.1**	**32.6**	**158,842**
Station Net change	**-1,739.1**	**-167.7**	**0.0**	**-35.8**	**-14.1**	**-14.1**	**-21.8**	**4,101**

a/ NO_x = Nitrogen oxides
b/ VOC = Volatile Organic Compound, a precursor pollutant in the formation of ozone
c/ HAP = Hazardous Air Pollutants, which are also regulated under the Clean Air Act
d/ Fugitives and Leaks includes natural gas venting, leaks, and miscellaneous emissions.

The EPA promulgates New Source Performance Standards to establish emission limits and fuel, monitoring, notification, reporting, and recordkeeping requirements for stationary source types or categories that cause or contribute significantly to air pollution. Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) sets emission standards for nitrogen oxides (NO_x), CO, and volatile organic compounds (VOC). Subpart JJJJ would apply to the emergency generators at the Bastrop and Harrison Compressor Stations. Subpart KKKK

(Standards of Performance for Stationary Combustion Turbines) sets emission standards for NO_x and SO_2 and would apply to the new turbines at the Bastrop and Harrison Compressor Stations. Texas Gas would comply with all applicable requirements of subparts JJJJ and KKKK.

The Clean Air Act Amendments established a list of 189 hazardous air pollutants (HAP), resulting in the promulgation of National Emission Standards for Hazardous Air Pollutants to regulate HAP emissions from stationary sources by setting emission limits, monitoring, testing, record keeping, and notification requirements. Subpart ZZZZ (*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*) would apply to the emergency generators at the Bastrop and Harrison Compressor Stations. Texas Gas would comply with all applicable Subpart ZZZZ monitoring, recordkeeping, and reporting requirements and/or would comply with Subpart ZZZZ by complying with NSPS Subpart JJJJ requirements.

The General Conformity Rule was developed to ensure that federal actions in nonattainment and maintenance areas do not impede states' attainment of the NAAQS. The lead federal agency must conduct a conformity determination if a federal action's construction and operational activities is likely to result in generating direct and indirect emissions that would exceed the General Conformity Applicability threshold levels of the pollutant(s) for which an air basin is designated nonattainment or maintenance. Conforming activities or actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of the NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity Rule entails both an applicability analysis and a subsequent conformity determination, if triggered. A General Conformity Determination must be completed when the total direct and indirect emissions of a project would equal or exceed the specified pollutant thresholds on a calendar year basis for each nonattainment or maintenance area.

As noted earlier, the Project would be located in several nonattainment and maintenance areas. Areas designated as nonattainment or maintenance for ozone need to be evaluated for VOC and NO_x precursors, and areas designated as nonattainment or maintenance areas for $PM_{2.5}$ need to be evaluated for $PM_{2.5}$, NO_x, and SO_2. Tables 5 and 6 present the operation and construction emissions, respectively, for the Project compressor stations. Each facility is within its own designated area, with no overlap of facilities. We compared each compressor stations construction and operation emissions with the applicability thresholds for each nonattainment or maintenance area and the precursor pollutants. Based on these emissions, the General Conformity Applicability thresholds would not be exceeded in any non-attainment or maintenance area. Therefore, a General Conformity Determination is not required.

In addition to federal regulations, the Harrison Compressor Station would be required to obtain a Permit to Install and Operate from the Southwest Ohio Air Quality Agency.

Construction Air Emission Impacts

The Project would produce air pollutant emissions primarily from construction. Construction of all facilities would occur over a one year period, with construction of the new

Harrison Compressor Station estimated to take seven months, the modified Bastrop Compressor Station to take five months, and all remaining compressor stations to take one month each. The air quality impacts of Project construction are considered short-term. Following construction, air quality would transition to operating emission conditions.

Construction of the Project would result in short-term, localized increases in emissions of some pollutants from the use of fossil fuel-fired equipment and the generation of fugitive dust due to earthmoving activities. There may also be some temporary indirect emissions attributable to construction workers commuting to and from work sites during construction and from on-road and off-road construction vehicle traffic. Construction emissions are presented in table 6. These emissions present the combined emissions of construction equipment combustion, on-road vehicle travel, off-road vehicle travel, and earthmoving fugitives.

Table 6
Estimated Construction Emissions
(tons)

Compressor Station	NO_x	CO	SO_2	VOC	PM_{10}	$PM_{2.5}$	HAPs	GHG (CO_{2e})
Harrison	3.86	3.30	<0.01	0.39	1.07	0.32	0.01	594
Bastrop	2.11	1.80	<0.01	0.21	0.14	0.13	<0.01	317
Clarksdale	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Covington	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Hardinsburg	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Jeffersontown	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Leesville	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Slaughters	0.52	0.44	<0.01	0.05	0.04	0.04	<0.01	74
Total Project	**9.1**	**7.76**	**<0.1**	**0.91**	**1.44**	**0.66**	**0.03**	**1,357**

Construction related emission estimates were based on a typical construction equipment list, hours of operation, and vehicle miles traveled by the construction equipment and supporting vehicles. These emission-generating activities would include earthmoving, construction equipment exhaust, on-road vehicle traffic, and off-road vehicle traffic.

The volume of fugitive dust generated by surface disturbance and vehicle travel on unpaved roads would be dependent upon the area disturbed and the type of construction activity, along with the soil's silt and moisture content, wind speed, and the nature of vehicular/equipment traffic. Texas Gas has developed an acceptable Fugitive Dust Control Plan identifying several mitigation measures it would implement to reduce construction emissions and fugitive dust, including:

- using water at the construction sites as necessary to reduce fugitive dust;
- removing spilled or tracked dirt/materials from paved streets;
- limiting vehicle speeds to 10 miles per hour during construction on unsurfaced roads; and
- covering open-bodied haul trucks, as appropriate.

Total Project construction emissions would result in short-term, localized impacts on air quality. However, these emissions may be further reduced by implementation of state regulations and with use of the Fugitive Dust Control Plan.

Operation Air Emission Impacts

As shown in table 5 above, operation of the new Harrison Compressor Station would result in minimal long-term air quality impacts. Operation of the modified Bastrop Compressor Station would result in reduced emissions from the station for all pollutants except CO_2e. All remaining compressor stations would experience no change in operating emissions.

We received comments regarding potential air quality impacts from operation of the new Harrison Compressor Station on nearby residences and at the Miami Whitewater Forest. As part of its air permitting process, Texas Gas performed air modeling of the new Harrison Compressor Station to determine air quality impacts. Table 7 presents the results of the air modeling analysis for the Harrison Compressor Station.

Table 7 Harrison Compressor Station Air Modeling Impact (micrograms per cubic meter)

Pollutant	Averaging Period	Concentration	Significant Impact Level
CO	1-hour	324.9	2,000
	8-hour	199.9	500
NO_2	1-hour	**33.7**	7.5
	Annual	**1.34**	1.0
PM_{10}	24-hour	0.17	5.0
$PM_{2.5}$	24-hour	**2.88**	1.2
	Annual	0.17	0.3
SO2	1-hour	0.38	7.9
	3-hour	0.37	25

As shown in table 7, Project air impacts would exceed the Significant Impact Levels for several pollutants and averaging times. Therefore, a more refined analysis is needed. Texas Gas performed more detailed air modeling, adding in background monitoring concentrations and comparing with the NAAQS. The results of this more detailed analysis showed that NO_2 and $PM_{2.5}$ concentrations, when combined with background air concentrations, would be well below the NAAQS. Therefore, the new Harrison Compressor Station would not result in significant impacts on air quality.

7.2 Noise

The Project would contribute to noise in the Project area during construction of each compressor station and operation of the new Harrison Compressor Station and modified Bastrop and Dillsboro Compressor Stations. Due to natural and anthropogenic influences such as weather conditions, seasonal vegetative cover, and human activity, the magnitude and frequency of environmental noise may vary considerably over the course of a day and throughout the year.

In 1974, the EPA published its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Noise levels are expressed as decibels on the A-weighted scale (dBA) to put more emphasis on frequencies in the range that humans hear best. Because noise levels are perceived differently, depending on length of exposure and time of day, the day-night sound level (L_{dn}) takes into account the duration and time the noise is encountered. Specifically the L_{dn} adds 10 dBA to nighttime sound levels between the hours of 10 p.m. and 7 a.m. to account for a people's greater sensitivity to sound during the night. The EPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity

interference. We have adopted this criterion and use it to evaluate the potential noise impacts from the proposed Project at noise sensitive areas (NSAs), such as residences, schools, or hospitals. Also, in general, a person's threshold of perception for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 5 dBA change is clearly noticeable, and a 10 dBA change is perceived as either twice or half as loud.

Construction Noise Impacts

Construction of the facilities would involve operation of general construction equipment and noise would be generated during the installation of the Project components. Construction noise would be highly variable because the types of equipment in use at a construction site changes with the construction phase and the types of activities. The noise from construction activities may be noticeable at nearby NSAs; however, noise would be localized and short-term, and construction equipment would be operated on an as-needed basis during the short-term construction period. Measures to mitigate construction noise would include compliance with federal regulations limiting noise from trucks, proper maintenance of equipment, and ensuring that sound muffling devices provided by the manufacturer are kept in good working condition. Further, nighttime noise levels would not increase during construction because construction activities would be limited to daylight hours. Therefore, construction noise would generally not result in significant noise impacts on residents or the surrounding communities.

Operation Noise Impacts

In February 2015, Texas Gas conducted an ambient noise survey at the site of the Harrison Compressor Station. Texas Gas identified three NSAs surrounding the compressor station, representing the nearest campground in the Miami Whitewater Forest (NSA1), a group of residences northwest of the compressor station (NSA 2), and a group of residences north of the compressor station (NSA3).

In March 2015, Texas Gas conducted an ambient noise survey of the existing Bastrop Compressor Station. Texas Gas identified three NSAs surrounding the compressor station, representing the residences east, northeast, and north of the compressor station (NSAs 4 through 6)

In July 2015, Texas Gas conducted an ambient noise survey of the existing Dillsboro Compressor Station. Texas Gas identified four NSAs surrounding the compressor station, representing the residences west, northwest, northeast, and south of the compressor station (NSAs 7 through 10)

Noise would generally be produced on a continuous basis at the Harrison, Bastrop, and Dillsboro Compressor Stations by the compressor units and associated equipment. A noise analysis for these facilities was completed using sound level data for the specific equipment proposed for each facility and calculations for the noise attenuation over distance. The existing noise levels along with the results of the noise analysis at each NSA are summarized in table 8.

The noise analyses accounts for several noise control measures, including insulation, acoustically treated compressor buildings, mufflers, and equipment specific maximum noise levels. The noise analysis for the Harrison Compressor Station conservatively estimates the noise contribution from the compressor station at some NSAs by excluding the noise reduction that would occur as a result of the existing dense forest. The estimated noise increase at the nearby NSAs would range from 1 to 10 dBA at the NSAs. While the additional noise from the new

Harrison Compressor Station would be clearly noticeable at some NSAs, the noise levels from the compressor station, including noise mitigation, would be below our 55 dBA L_{dn} criterion at the nearest NSAs and would be further reduced by the presence of well-established forest vegetation.

The existing noises levels at the Bastrop and Dillsboro Compressor Stations are above our 55 dBA L_{dn} criterion at most NSAs. The existing compressor units at these stations were installed between 1950 and 1969, before any noise criterion existed. Noise levels at the Bastrop Compressor Station would go down at all NSAs, although this reduction may not be noticeable. Noise levels are projected to increase slightly at the Dillsboro Compressor station, but would not likely be noticeable.

Table 8
Estimated Compressor Station Sound Levels

NSA	Distance/ Direction	Existing Noise Level (dBA L_{dn})	Compressor Station Noise Level (dBA L_{dn})	Total Combined (dBA L_{dn})	Total Increase (dBA)
Harrison Compressor Station					
NSA 1	1,400 feet Southeast	44.9	54.8	55.2	10.3
NSA 2	1,880 feet Northwest	48.2	51.8	53.4	5.2
NSA 3	3,480 feet North	49.5	44.0	50.6	1.1
Bastrop Compressor Station					
NSA 4	806 feet East	67.0	65.5 [a/]	N/A	-1.5
NSA 5	1,403 feet Northeast	63.0	61.1 [a/]	N/A	-1.9
NSA 6	1,478 feet North	63.0	61.0 [a/]	N/A	-2.0
Dillsboro Compressor Station					
NSA 7	1,081 feet West	64.0	53.9	64.4	0.4
NSA 8	1,218 feet Northwest	63.8	52.7	64.1	0.3
NSA 9	1,456 feet Northeast	51.4	43.6	52.1	0.7
NSA 10	1,082 feet South	57.3	50.3	58.1	0.8

a/ This includes the existing equipment that would continue to operate and the new equipment, without the existing compressors that would be placed in stand-by mode. Therefore, this also represents the total combined noise level.

To further ensure that the actual noise levels resulting from operation of the new Harrison Compressor Station and modified Bastrop and Dillsboro Compressor Stations are not significant, **we recommend that:**

> **Texas Gas should file noise surveys with the Secretary no later than 60 days after placing the new Harrison Compressor Station and modified Bastrop and Dillsboro Compressor Stations in service. If a full load condition noise survey is not possible, Texas Gas should provide an interim survey at the maximum possible horsepower load and provide the full load survey within 6 months. If the noise attributable to the operation of the new or modified compressor stations at full or interim power load conditions exceeds existing noise levels at any nearby NSAs that are currently at or above an Ldn of 55 dBA, or exceeds 55 dBA L_{dn} at any nearby NSAs that are currently below 55 dBA L_{dn}, Texas Gas should file a report on what changes are needed and should install the additional noise controls to meet the level within 1 year of the in-service date. Texas Gas should confirm compliance with the above requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Based on the operating noise analyses conducted, mitigation measures proposed at these compressor stations, and post-construction verification survey that we recommend, we conclude that the Project would not result in significant noise impacts on residents and the surrounding communities.

8.0 RELIABILITY AND SAFETY

One commenter expressed safety concerns about the new Harrison Compressor Station near residences. A natural gas compressor station involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a leak, or rupture at the facility. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

The new Harrison Compressor Station and modifications to each of the existing compressor stations must be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. The regulations are intended to ensure adequate protection for the public and to prevent facility accidents and failures, including emergency shutdowns and safety equipment. The DOT - Pipeline and Hazardous Materials Safety Administration's mission is to ensure that people and the environment are protected from the risk of pipeline facility incidents. This work is shared with state agency partners and others at the federal, state, and local level.

Title 49, U.S. Code 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. For the Project, Ohio has been delegated authority to inspect interstate natural gas pipeline facilities. DOT federal inspectors perform inspections on interstate natural gas pipeline facilities in Louisiana, Mississippi, Kentucky, Tennessee, and Indiana. DOT enforces the pipeline safety regulations for interstate gas pipeline facilities in all project states.

The DOT also defines area classifications, based on population density in the vicinity of the pipeline facility, and specifies more rigorous safety requirements for populated areas. This includes design requirements for compressor station piping. Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation.

Part 192 also requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in an emergency. Additionally, the operator must establish a continuing education program to enable the public, government officials, and others to recognize an emergency at the facility and report it to appropriate public officials. Texas Gas would provide the appropriate training to local emergency service personnel before the facilities are placed in service.

The DOT requires all operators of natural gas transmission pipeline systems to notify the DOT of any significant incident and to submit a report within 30 days. Significant incidents are defined as any leaks that: caused a death or personal injury requiring hospitalization; or involve property damage of more than $50,000 in 1984 dollars.[6] The available data from the DOT shows that natural gas transmission pipeline systems continue to be a safe, reliable means of energy

[6] $50,000 in 1984 dollars is about $115,000 as of March 2014 (U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index, February 2014).

transportation. From 1995 to 2014, there were a nationwide average of 63 significant incidents, 9 injuries, and 2 fatalities per year. Over that same time period, there were 24 total significant incidents in Ohio with 5 injuries and no fatalities. The number of significant incidents over the more than 300,000 miles of natural gas transmission pipelines and associated facilities nationwide and 10,000 miles of natural gas transmission pipeline in Ohio indicates that the risk is low for an incident at any given location.

The construction and operation of the new Harrison Compressor Station and modified existing compressor stations would represent a minimum increase in risk to the nearby public and we are confident that with implementation of the required design criteria for the design of these facilities, that they would be constructed and operated safely.

9.0 CUMULATIVE IMPACTS

Although the individual impact of the separate projects might be minor, the additive or synergistic effects from multiple projects could be significant. Cumulative impact is the incremental impact on the environment of multiple projects occurring within the same timeframe and vicinity as the proposed action. When evaluating cumulative impacts, we consider past, present, and reasonably-foreseeable future projects within the area affected by the proposed Project.

Project activities at the Clarksdale, Covington, Slaughters, Hardinsburg, Jeffersontown, and Leesville Compressor Stations would be minor in scope, would occur within the limits of the existing fenced facilities and access roads currently owned by Texas Gas, and would not result in any changes to air emissions or noise impacts. Therefore, cumulative impacts with these facilities would be negligible and are not considered further.

Modifications to the existing Dillsboro Compressor Station would be minor in scope and would occur within the limits of the existing fenced facilities and access roads owned by Texas Gas, temporarily affecting localized areas. Operation of the air-cooled heat exchangers would result in minor, undetectable increases in noise and no change in air emissions. Therefore, we considered the cumulative impacts of other projects that would result in long-term or permanent noise impacts on the same NSAs that would be impacted by the Dillsboro Compressor Station. Texas Gas was recently authorized to perform minor yard and station modification at the Dillsboro Compressor Station to provide for bidirectional flow.[7] However, the minor modifications under the Ohio-Louisiana Access Project at the Dillsboro Compressor Station would take place entirely within the station yard and the impacts are likely to be limited and temporary, with no change in noise levels. Therefore, the cumulative impacts of the two projects combined would not be significant.

The modified Bastrop Compressor Station and new Harrison Compressor Station would result in temporary and localized impacts during construction on soils, land use, and water resources. Therefore, we have considered the cumulative impacts on these resources with other projects within 0.25 mile of each compressor station site. Operation of the Harrison Compressor Station would result in new air emissions and increases in noise levels, while the modifications to the Bastrop Compressor Station would result in a decrease in air emissions and noise levels.

[7] FERC Docket CP14-553, Ohio-Louisiana Access Project

Therefore, we considered the cumulative air impact with other potential projects that would result in long-term impacts on air quality within 50 kilometers of the Harrison Compressor Station; and the cumulative impacts of other potential projects that would result in long-term or permanent noise impacts on the same NSAs that would be impacted by the Harrison Compressor Station.

Based on our review, no other projects were identified within 0.25 mile of the Harrison or Bastrop Compressor Stations. Similarly, no other projects were identified that could result in long-term or permanent noise impacts on the same NSAs that would be impacted by the Harrison Compressor Station. Therefore, our analysis focuses on the cumulative air impact for the Harrison Compressor Station.

First and most important, Texas Gas performed air modeling for the Harrison Compressor Station (see section B.7.1) demonstrating that the compressor station would not result in significant impacts on air quality. However, Texas Gas further identified that three states (Indiana, Kentucky, and Ohio) and twenty counties are within 50 kilometers of the Harrison Compressor Station. A review of air permitting databases showed numerous other permits, including very minor air permit actions, within 50 kilometers of the compressor station. To evaluate the likelihood of overlapping or cumulative impacts of these permitting actions with the Harrison Compressor Station, we used a screening method. This method considers the annual emissions of a source, in tons per year, and the distance between sources, in kilometers. If the ratio of the emissions to the distance is less than 20, the likelihood of an overlapping or cumulative impact is very low and further analysis is not required. None of the permitting actions we reviewed would result in a ratio greater than 20. Therefore, we conclude that other projects would not result in a cumulative air impact with the Harrison Compressor Station.

C. ALTERNATIVES

In accordance with National Environmental Policy Act and Commission policy, we identified and evaluated alternatives to the Project to determine whether they would be reasonable and environmentally preferable to the proposed action. These alternatives include the no action alternative, system alternatives, and compressor station site alternatives. The criteria used for selecting potentially environmentally preferable alternatives are: the ability to meet the Project objectives; technical and economic feasibility and practicality; and significant environmental advantage over the proposed Project.

1.0 NO ACTION ALTERNATIVE

The no-action alternative would consist of not constructing the Project and continuing with the status quo. The no-action alternative for the Project would avoid the temporary and permanent environmental impacts associated with construction and operation of the proposed Project. However, the result of the no-action alternative is that the objectives of the Project would not be met. By not constructing the proposed Project, Texas Gas would not have the ability to provide reliably flow natural gas bidirectionally to its customers. While the proposed Project would primarily use Texas Gas' existing pipeline and compression infrastructure to meet the purpose, under the no-action alternative, other natural gas transmission companies would most likely be required to increase their capacity and construct new facilities to meet the Project's customers need for natural gas. Lacking access to an additional affordable supply of natural gas, the customers may seek other options, including the use of other sources of fuel. Such actions would likely result in the transference of impacts from one location to another, but would not eliminate or reduce impacts. This alternative was not found to be a feasible alternative because it does not satisfy the purpose and need for the Project.

2.0 SYSTEM ALTERNATIVES

The purpose of identifying and evaluating system alternatives is to determine whether the environmental impacts associated with the construction and operation of the Project could be avoided or reduced by using existing, modified, or other proposed facilities rather than constructing new facilities. No other system alternatives were identified or evaluated because the proposed Project primarily uses existing infrastructure to meet the objectives of the Project and the proposed Project would result in the least impact on the environment.

3.0 COMPRESSOR STATION SITE ALTERNATIVES

The City of Harrison and Great Parks of Hamilton County requested that we evaluate alternative sites for the Harrison Compressor Station, preferable in a location currently zoned for industrial use. Therefore, we evaluated three alternative locations for the proposed Harrison Compressor Station that would work within the geographical constraints of Texas Gas' system (see figure 2).

Alternative Site 1 is an entirely agricultural property adjacent to the northern boundary of the proposed site. This alternative would permanently impact more acres of prime farmland (8.52 acres) than the proposed site (8.24 acres), but it would avoid impacts on one minor waterbody that the proposed site would impact. More importantly, this alternative would have many more residences/NSAs within 0.5 mile (81) than the proposed site (32), which is inconsistent with the

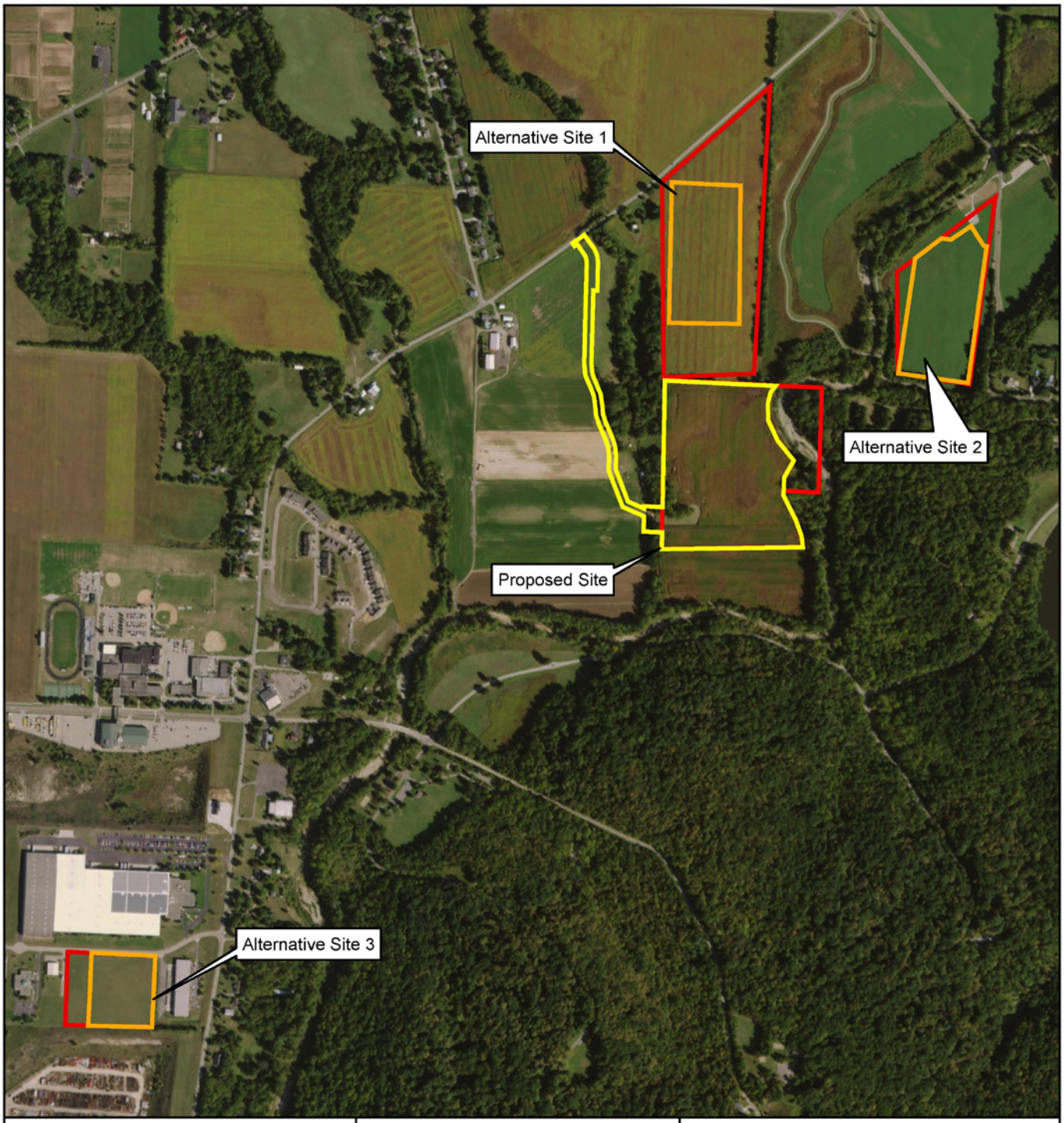
commenters desire for the compressor station to be located further from NSAs. Therefore, we do not find this alternative to be environmentally preferable.

Alternative Site 2 is located 0.17 mile east of the proposed site within an entirely agricultural/open land property, completely surrounded by tree buffer. This alternative would permanently impact more acres of prime farmland (11.82 acres) than the proposed site (8.24 acres), but it would avoid impacts on one minor waterbody that the proposed site would impact. Alternative Site 2 would have less residences/NSAs within 0.5 mile (7) than the proposed site (32), and a tree buffer on all sides would provide sufficient noise attenuation. However, this site is within the Miami Whitewater Forest, managed by Great Parks of Hamilton County. This site would not meet the commenter's goal of locating the facility further from the park to reduce impacts on park users. Therefore, we do not find this alternative to be environmentally preferable.

Lastly, Alternative Site 3 is located 0.9 mile southwest of the proposed site within an industrial area, and surrounded by other industrial buildings. While, Alternative Site 3 would meet the commenters request for siting within an industrial area and the site would have a lower number of NSAs near the station, Alternative Site 3 is located within 0.5 mile of two schools, while the proposed site is over 0.5 mile away from the schools. Further, the new Harrison Compressor Station requires about 11.8 acres of land for the facilities, not including construction work space. Alternative Site 3 is about half of this size and cannot accommodate construction and operation of the compressor station. Therefore, Alternative Site 3 has been removed from further consideration.

Based on our review of the alternative sites, we have determined that none offer a significant environmental advantage over the proposed Harrison Compressor Station site.

Because some of the Harrison Compressor Station would be located in an area of poorer air quality and in response to comments about air emissions from the station, we analyzed the feasibility of using electric motor-driven compressor units in lieu of the proposed natural gas-fired compressor units at the new Harrison Compressor Station. In order to to operate the compressor station using electric power, additional electrical buildings, transformers, and cooling would be required. Also, the electric provider (Duke Energy) would be required to construct a new transmission power line, substation, transformer, and associated equipment to provide electric power. These additional electric facilities would require new or expanded rights-of-way and result in additional environmental impacts and additional burdens on landowners. Finally, electric compression requires a third-party for operation, and may be affected by an electrical outage at the compressor station, particularly during major storm events. This could result in an unreliable, interrupted natural gas transmission service. For these reasons, we conclude that electric-driven compressor units at the proposed Harrison Compressor Station would not offer a significant environmental advantage over the proposed gas-driven turbines.



Proposed Site
Alternative Site
Property Limit

0 500 1,000 Feet

Figure 2
Harrison Compressor Station
Alternative Sites

	1:12,000
NAD83 OH South feet	Date: May 2015

Path: P:\GIS\Client\Boardwalk\TGT_NorthernSupplyAccess\Maps\CR\02_Aerial_Harrison.mxd

D. CONCLUSIONS AND RECOMENDATIONS

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

1. Texas Gas 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. Texas Gas must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;
    b. justify each modification relative to site-specific conditions;
    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
    d. receive approval in writing from the Director of OEP before using that modification.

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the Project. This authority shall allow:

    a. the modification of conditions of the Order; and
    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction**, Texas Gas shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Texas Gas shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

    Texas Gas' exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Texas Gas' right of eminent domain granted under NGA section 7(h) does not authorize them to increase the size of their natural gas facilities to

accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

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

   This requirement does not apply to extra workspace allowed by our Plan and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

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

   a. implementation of cultural resources mitigation measures;
   b. implementation of endangered, threatened, or special concern species mitigation measures;
   c. recommendations by state regulatory authorities; and
   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the Certificate and before construction begins**, Texas Gas shall file an Implementation Plan for the Project with the Secretary for review and written approval by the Director of OEP. Texas Gas must file revisions to its plan as schedules change. The plan shall identify:

   a. how the company will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;
   b. how the company will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
   c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
   d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;
   e. the location and dates of the environmental compliance training and instructions the company will give to all personnel involved with construction and restoration (initial and refresher training as the Project progresses and personnel change);

f. the company personnel (if known) and specific portion of the company's organization having responsibility for compliance;
g. the procedures (including use of contract penalties) the company will follow if noncompliance occurs; and
h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

(1) the completion of all required surveys and reports;
(2) the environmental compliance training of onsite personnel;
(3) the start of construction; and
(4) the start and completion of restoration.

7. Beginning with the filing of its Implementation Plan, Texas Gas shall file updated status reports for the Project with the Secretary on a **monthly basis until all construction and restoration activities are complete**. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on efforts to obtain the necessary federal authorizations;
b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;
c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;
e. the effectiveness of all corrective actions implemented;
f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
g. copies of any correspondence received by the company from other federal, state, or local permitting agencies concerning instances of noncompliance, and Texas Gas' response.

8. **Prior to receiving written authorization from the Director of OEP to commence construction of its project facilities**, Texas Gas shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

9. Texas Gas must receive written authorization from the Director of OEP **before placing its Project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of the areas affected by the Project are proceeding satisfactorily.

10. **Within 30 days of placing its authorized facilities in service**, Texas Gas shall file an affirmative statement with the Secretary, certified by a senior company official:

a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
b. identifying which of the Certificate conditions Texas Gas has complied with or will comply with. This statement shall also identify any areas affected by the Project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

11. Texas Gas shall not begin construction of facilities and/or use of staging, storage, or temporary work areas and new or to-be-improved access roads **until**:

a. Texas Gas files with the Secretary updated "Blanket Environmental Clearances" with the Louisiana, Mississippi, and Tennessee SHPOs, applicable to Texas Gas' planned 2016 construction activities; and
b. the Director of OEP notifies Texas Gas in writing that construction may proceed.

12. Texas Gas shall file noise surveys with the Secretary **no later than 60 days** after placing the new Harrison Compressor Station and modified Bastrop and Dillsboro Compressor Stations in service. If a full load condition noise survey is not possible, Texas Gas shall provide an interim survey at the maximum possible horsepower load and provide the full load survey **within 6 months**. If the noise attributable to the operation of the new or modified compressor stations at full or interim power load conditions exceeds existing noise levels at any nearby NSAs that are currently at or above an Ldn of 55 dBA, or exceeds 55 dBA Ldn at any nearby NSAs that are currently below 55 dBA Ldn, Texas Gas shall file a report on what changes are needed and should install the additional noise controls to meet the level **within 1 year** of the in-service date. Texas Gas shall confirm compliance with the above requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

E. LIST OF PREPARERS

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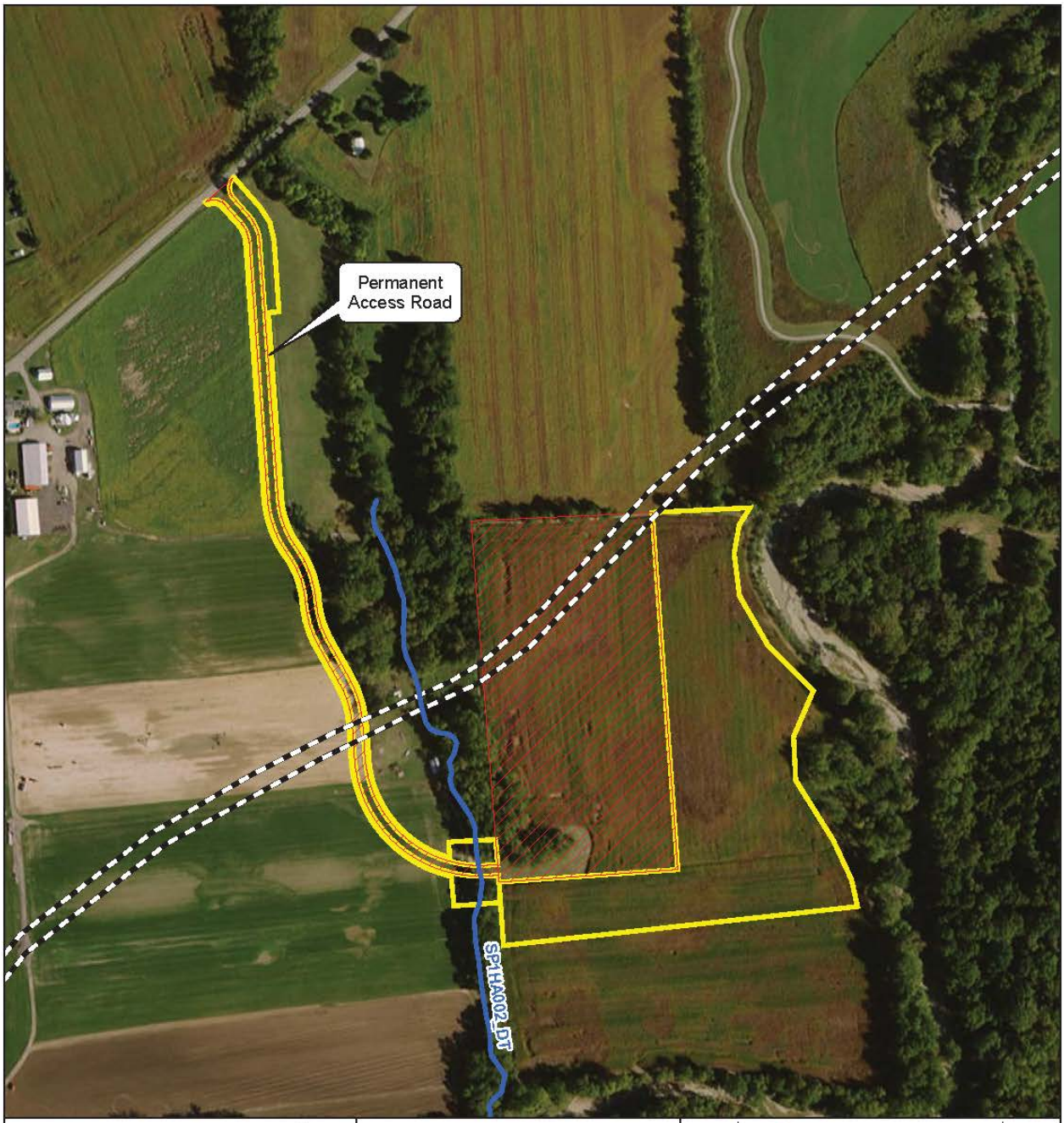
APPENDIX 1

PROJECT AERIAL MAPS



Texas Gas Existing Pipeline
Stream
Permanent Workspace
Temporary Workspace

0 200 400 Feet

TEXAS GAS TRANSMISSION, LLC

Harrison Compressor Staion
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Hamilton County, Ohio

Page 1 of 9	1:4,800
NAD 83 UTM 16N Feet	Date: March 2015

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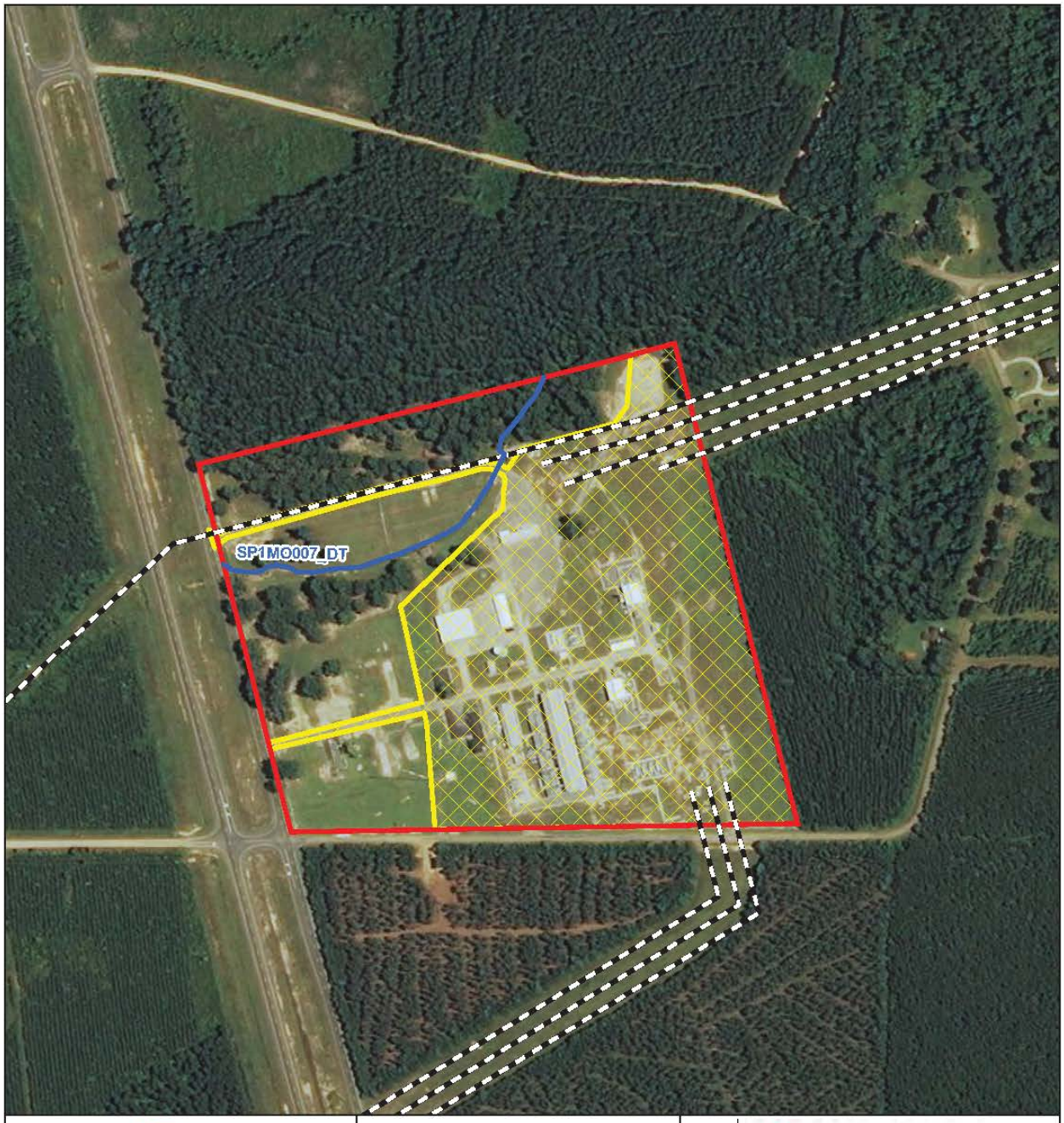
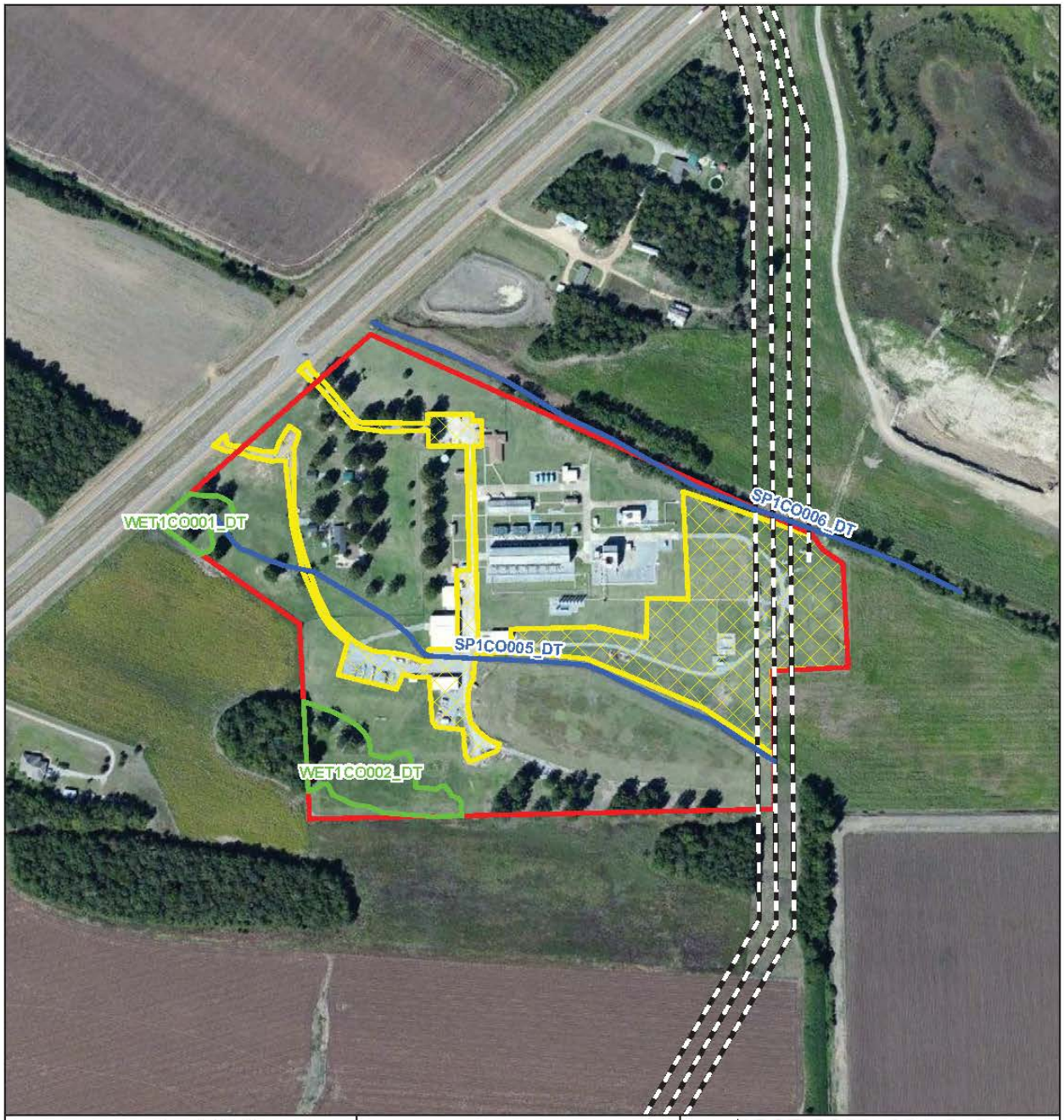
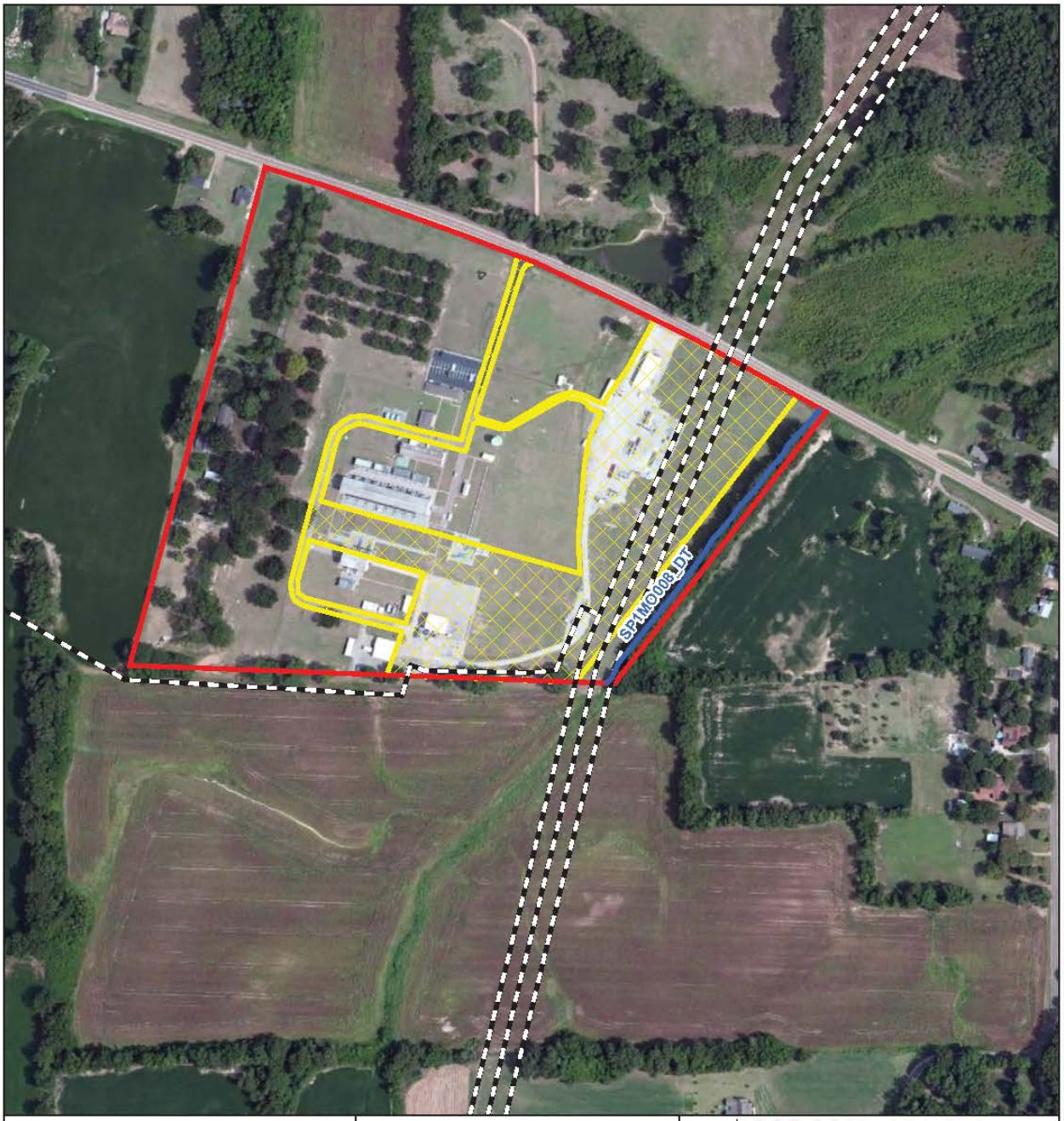

SP1MO007_DT
Texas Gas Existing Pipeline
Stream
Property Boundary
Temporary Workspace
TEXAS GAS
TRANSMISSION, LLC
Bastrop Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Morehouse Parish, Louisiana

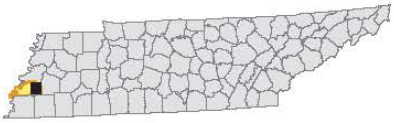


Texas Gas Existing Pipeline
Stream
Wetland
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Clarksdale Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Coahoma County, Mississippi

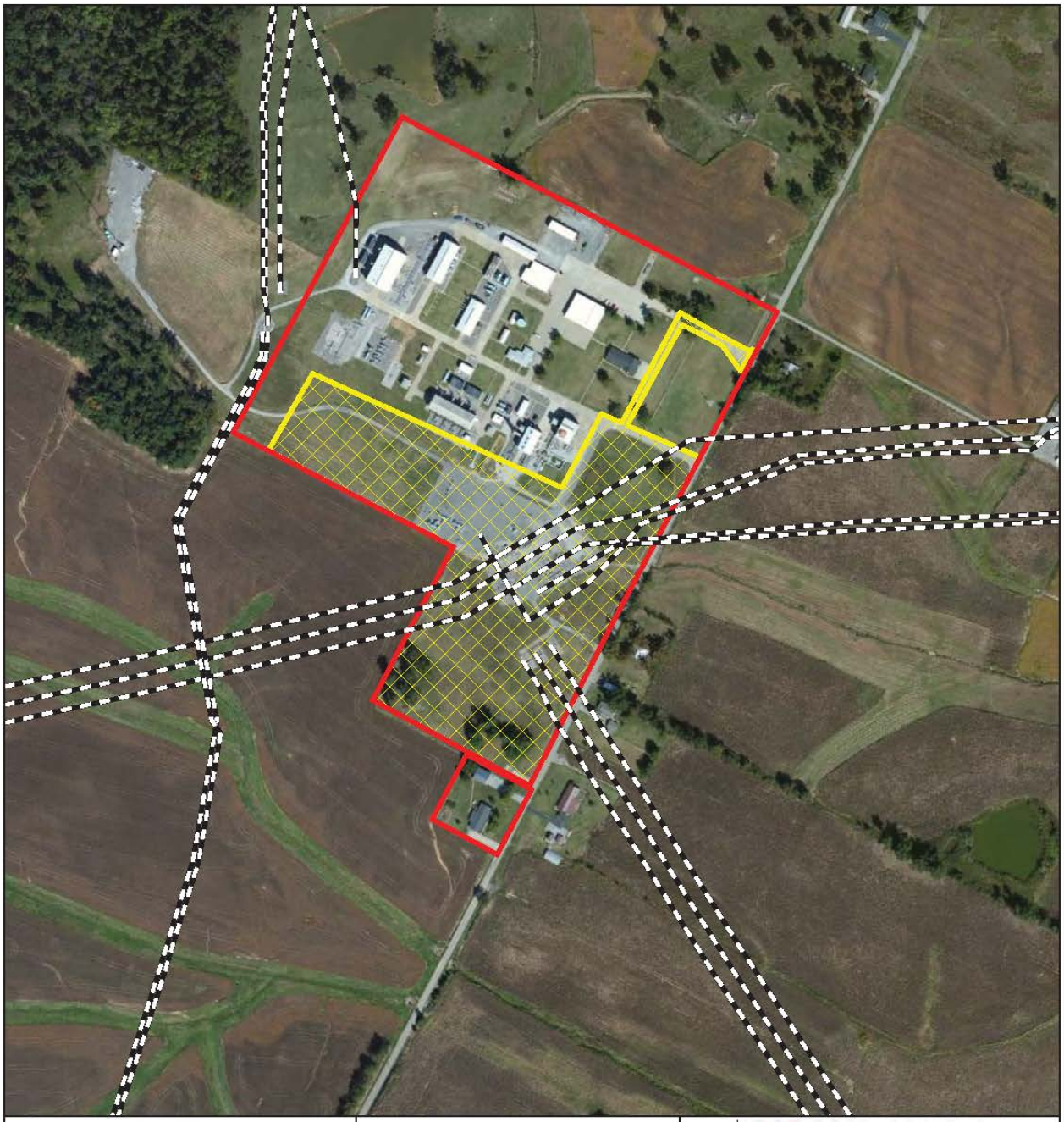




Texas Gas Existing Pipeline
Stream
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Covington Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Tipton County, Tennessee



Texas Gas Existing Pipeline
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Slaughters Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Webster County, Kentucky

Texas Gas Existing Pipeline
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Hardinsburg Compressor Statoin
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Breckinridge County, Kentucky

Texas Gas Existing Pipeline
Property Boundary
Temporary Workspace

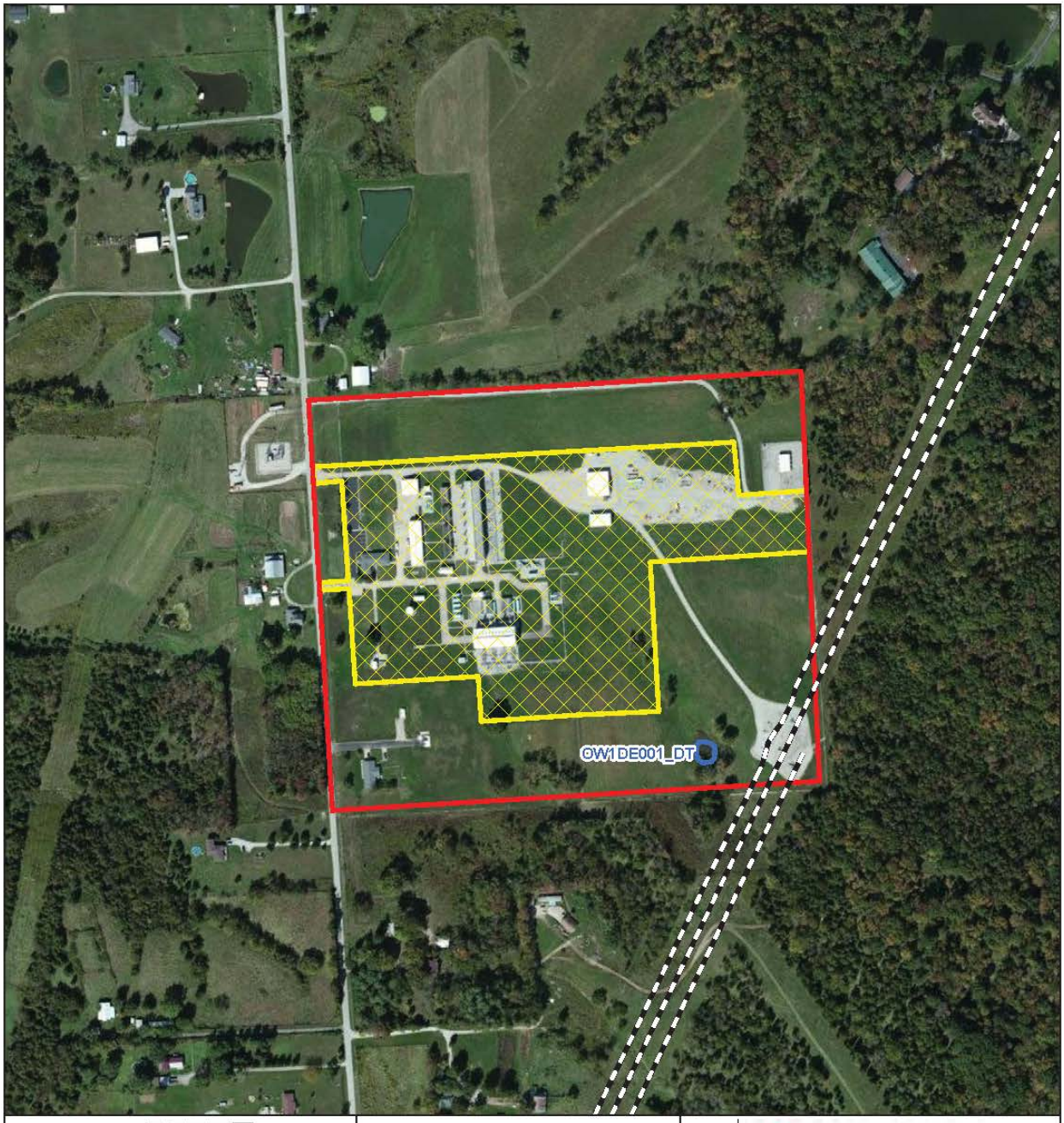
TEXAS GAS TRANSMISSION, LLC

Jeffersontown Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Jefferson County, Kentucky

Texas Gas Existing Pipeline
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Leesville Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Lawrence County, Indiana



Texas Gas Existing Pipeline
Pond
Property Boundary
Temporary Workspace

TEXAS GAS TRANSMISSION, LLC

Dillsboro Compressor Station
Workspace Map
Texas Gas Transmission, LLC
Northern Supply Access Project
Dearborn County, Indiana

Document Content(s)