



**Office of
Energy Projects**

December 2020

Southern Star Central Gas Pipeline, Inc.

Docket No. CP21-2-000

Lines DT and DS Replacement Project Amendment

Environmental Assessment

Washington, DC 20426

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 3
Southern Star Central Gas Pipeline,
Inc.
Lines DT and DS Replacement
Project Amendment
Docket No. CP21-2-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Lines DT and DS Replacement Project Amendment (Project), proposed by Southern Star Central Gas Pipeline, Inc. (Southern Star) in the above-referenced docket. Southern Star requests authorization to abandon Lines DT and DS entirely in-place, rather than primarily by removal in Anderson and Franklin Counties, Kansas. Southern Star contends that the abandonment of the pipeline facilities in-place would reduce impacts on landowners and the environment.

The EA assesses the potential environmental effects of the abandonment of the Project in accordance with the requirements of the National Environmental Policy Act (NEPA). 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 proposed Project includes the abandonment in-place of approximately 31.8 and 31.4 miles of the Line DT and Line DS pipelines, respectively in Anderson and Franklin Counties, Kansas.

The Commission mailed a copy of the *Notice of Availability* to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the project area. The EA is only available in electronic format. It may be viewed and downloaded from the FERC's website (www.ferc.gov), on the natural gas environmental documents page (<https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents>). In addition, the EA may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (<https://elibrary.ferc.gov/eLibrary/search>), select "General Search" and enter the docket number in the "Docket Number" field (i.e. CP21-2). Be sure you have

selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

The EA is not a decision document. It presents the Commission staff's independent analysis of the environmental issues for the Commission to consider when addressing the merits of all issues in this proceeding. Any person wishing to comment on the EA may do so. Your comments should focus on the EA's disclosure and discussion of potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this project, it is important that we receive your comments in Washington, DC on or before 5:00pm Eastern Time on **January 27, 2021**.

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

- (1) You can file your comments electronically using the [eComment](#) feature on the Commission's website (www.ferc.gov) under the link to [FERC Online](#). 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 [FERC Online](#). 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 Commission. Be sure to reference the project docket number (CP21-2-000) on your letter. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

Filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered. Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. At this point in this proceeding, the timeframe for filing timely intervention requests has expired. Any person seeking to become a party to the proceeding must file a motion to intervene out-of-time pursuant to Rule 214(b)(3) and (d) of the Commission's Rules of Practice and Procedures (18 CFR 385.214(b)(3) and (d)) and show good cause why the time limitation should be waived. Motions to intervene are more fully described at <https://www.ferc.gov/ferc-online/ferc-online/how-guides>.

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

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

**LINES DT AND DS REPLACEMENT PROJECT AMENDMENT
ENVIRONMENTAL ASSESSMENT**

TABLE OF CONTENTS

SECTION	PAGE NUMBER
SECTION A – PROPOSED ACTION	1
1.0 Introduction	1
2.0 Purpose and Need.....	2
3.0 Public Review and Comment	2
4.0 Proposed Facilities	2
5.0 Land Requirements.....	5
6.0 Abandonment Schedule.....	6
7.0 Abandonment Procedures.....	6
8.0 Environmental Compliance Inspection and Monitoring	8
9.0 Permit Approvals and Regulatory Consultations	8
SECTION B – ENVIRONMENTAL ANALYSIS	10
1.0 Soils.....	10
2.0 Groundwater.....	12
3.0 Water Resources.....	12
4.0 Land Use, Recreation, and Visual Resources.....	21
5.0 Cultural Resources	22
6.0 Air Quality and Noise.....	23
7.0 Reliability and Safety	24
SECTION C – ALTERNATIVES.....	25
SECTION D – STAFF’S CONCLUSIONS AND RECOMMENDATIONS	28
SECTION E – REFERENCES.....	33
SECTION F – LIST OF PREPARERS	34

LIST OF TABLES

TABLE	PAGE NUMBER
Table 1 Summary of Lines DT and DS Replacement Project Amendment by Milepost.....	3
Table 2 Temporary and Permanent Access Roads	5
Table 3 Federal and State Permits and Approvals.....	9
Table 4 Surface Waterbody Crossings	14
Table 5 Wetlands Crossed.....	15
Table 6 Summary of Vegetation Impacts (acres).....	16
Table 7 Common Wildlife Species in the Project Area.....	19
Table 8 Lines DT and DS Replacement Project Amendment Alternatives Comparison	27

LIST OF FIGURES

FIGURE	PAGE NUMBER
Figure 1 Vicinity Map of the Lines DT and DS Replacement Project Amendment	4

TECHNICAL ABBREVIATIONS AND ACRONYMS

CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
Commission	Federal Energy Regulatory Commission
DOT	U.S. Department of Transportation
EA	environmental assessment
EI	environmental inspector
EFA	ecological focus area
EO	Executive Order
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FWS	U.S. Fish and Wildlife Service
KDWPT	Kansas Department of Wildlife, Parks, and Tourism
MP	milepost
NAAAs	nonattainment areas
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969 (as amended)
NGA	Natural Gas Act
NOS	<i>Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Lines DT and DS Replacement Project Amendment</i>
NRCS	Natural Resources Conversation Service
O ₃	ozone
OEP	Office of Energy Projects
PHMSA	Pipeline and Hazardous Materials Safety Administration
Plan	FERC's <i>Upland Erosion Control, Revegetation, and Maintenance Plan</i>
Procedures	FERC's <i>Wetland and Waterbody Construction and Mitigation Procedures</i>
Project	DT and DS Replacement Project Amendment
SO ₂	sulfur dioxide
Southern Star	Southern Star Central Gas Pipeline Inc.
SPCC	Spill Prevention, Containment, and Countermeasures Plan
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation

SECTION A – PROPOSED ACTION

1.0 Introduction

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental impacts of the proposed Lines DT and DS Replacement Project Amendment (Project). On October 2, 2020, Southern Star Central Gas Pipeline, Inc. (Southern Star) filed an application pursuant to section 7 (b) of the Natural Gas Act (NGA), in FERC Docket No. CP21-2-000, seeking to amend the Order Issuing Certificate and Approving Abandonment granted in Docket No. CP19-31-000 for its Lines DT and DS Replacement Project in Anderson and Franklin Counties, Kansas. Southern Star proposes to abandon the 31.8-mile-long, 26-inch-diameter Line DT and the 31.4-mile-long, 20-inch-diameter Line DS entirely in-place, rather than primarily by removal.

We¹ prepared this EA in compliance with the requirements of the National Environmental Policy Act (NEPA); the Council on Environmental Quality's (CEQ) regulations for implementing NEPA (Title 40 Code of Federal Regulations (CFR), and the Commission's regulations at 18 CFR 380. On July 16, 2020, CEQ issued a final rule, *Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act* (Final Rule, 85 Fed. Reg. 43,304), which was effective as of September 14, 2020. Therefore, we are using the new regulations in the preparation of this EA.

The FERC is the lead federal agency for authorizing interstate natural gas transmission facilities under the NGA, and the lead federal agency for preparation of this EA, in accordance with NEPA (40 CFR 1501) and the Energy Policy Act of 2005.

The assessment of environmental impacts is an integral part of the Commission's decision-making process to determine whether to authorize Southern Star's proposal. 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 impacts; and
- facilitate public involvement in the environmental review process.

The environmental setting for the proposed actions considered in this EA was addressed in the EA prepared in FERC Docket No. No. CP19-31-000 (Lines DT and DS

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

Replacement Project). As explained in the following, the actions proposed here are modifications to the type of abandonment that Southern Star proposes. The environmental setting, however, is the same.

2.0 Purpose and Need

The purpose of this amendment is to allow Lines DT and DS to be abandoned entirely in-place, rather than primarily by removal. Southern Star contends that the abandonment of the pipeline facilities in-place would reduce impacts on landowners and the environment.

Section 7(b) of the NGA specifies that no natural gas company shall abandon any portion of its facilities subject to the Commission's jurisdiction without the Commission first finding that the abandonment would not negatively affect the present or future public convenience and necessity.

3.0 Public Review and Comment

On October 27, 2020, the Commission issued a *Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Lines DT and DS Replacement Project Amendment* (NOS). The NOS was sent to affected landowners; federal, state, and local government agencies; elected officials; environmental and public interest groups; Native American tribes; other interested parties; and local libraries and newspapers. The NOS established a 30-day scoping period and requested comments on specific concerns about the Project or issues that should be considered during the preparation of the EA. The scoping period ended on November 26, 2020.

In response to the NOS, the Commission received one comment from the Bureau of Indian Affairs (BIA), Southern Plains Region, who indicate that there are no tribal or individual Indian trust lands in the vicinity of the proposed improvement area. Therefore, BIA has no concerns that the proposed Project would impact Indian trust lands within the Southern Plains Region's jurisdiction. In addition, we received two comments from landowners who would like to have the pipeline abandoned by removal, as was originally proposed by Southern Star and authorized by the Commission. The landowner's comments are discussed in Sections A-7.0, B-4.0, and B-7.0 of this EA.

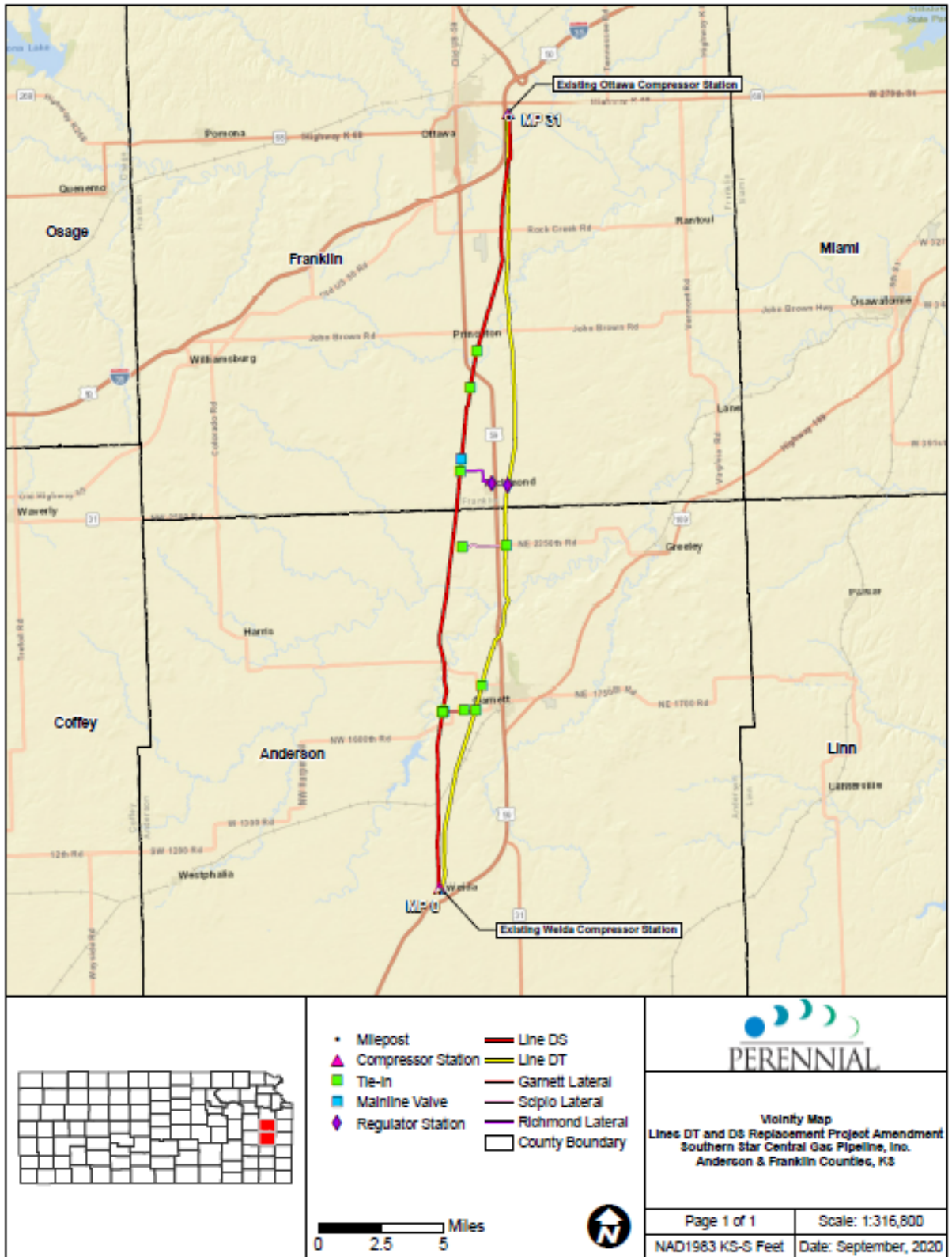
4.0 Proposed Facilities

Southern Star proposes to abandon primarily in-place approximately 31.8 and 31.4 miles of the Line DT and Line DS pipelines, respectively in Anderson and Franklin Counties, Kansas. Figure 1 shows the Vicinity Map of the Lines DT and DS Replacement Project Amendment. Table 1 provides a summary of Lines DT and DS Replacement Project Amendment by Milepost (MP). Southern Star would use workspaces located within and adjacent to the existing Line DT permanent easement.

Table 1 Summary of Lines DT and DS Replacement Project Amendment by Milepost		
Milepost	Description	Tract ID
Line DT		
0.00 – 31.79	Abandon the entirety of the existing Line DT in-place with cutting and capping activities required for in-place abandonment at road and railroad crossings.	Various
4.83 – 4.86	Two temporary workspaces totaling 0.1 acre (25 feet by 66 feet and 32 feet by 66 feet) to facilitate cutting and capping for in-place pipeline abandonment at a railroad crossing.	23074; 23089
10.62 – 10.66	A 0.3-acre (210 feet by 66 feet) temporary workspace to facilitate cutting and capping for in-place pipeline abandonment at the U.S. Highway 59 crossing.	23087-1
29.49 – 29.54	A 0.3-acre (260 feet by 47 feet) temporary workspace to facilitate cutting and capping for in-place pipeline abandonment at the Labette Terrace Road crossing.	23087-1
31.09-31.17	Two temporary workspaces totaling 0.51 acre (288 feet by 66 feet and 110 feet by 66 feet) to facilitate cutting and capping for in-place pipeline abandonment at the Neosho Road crossing.	19324; 19370/10694/4504
Line DS		
0.00-31.36	Abandon the entirety of the existing Line DS in-place with cutting and capping activities required for in-place abandonment at road and railroad crossings.	Various
19.31-19.34	A 0.21-acre (135 feet by 92 feet) temporary workspace to facilitate cutting and capping for in-place pipeline abandonment at the Missouri Road crossing.	26318
23.24-23.31	Two temporary workspaces totaling 0.52 acre (193 feet by 124 feet and 123 feet by 120 feet) to facilitate cutting and capping for in-space pipeline abandonment at the Montana Road crossing.	19382; 19377

Southern Star would abandon and remove existing auxiliary facilities, including valves, farm taps, meters and regulators, and other minor appurtenances, at multiple sites located within and adjacent to the existing Line DT permanent easement. The abandoned Line DS and associated permanent easement would be retained by Southern Star as the newly installed Line DPA generally parallels Line DS. The abandoned Line DT and associated permanent easement would be released back to landowners. Southern Star would no longer maintain these lands. All pipeline markers would be removed, and cathodic protection would be turned off and disconnected.

Figure 1 Vicinity Map of the Lines DT and DS Replacement Project Amendment



5.0 Land Requirements

Abandoning Lines DT and DS in-place would require the use of about 37.0 acres of land. Southern Star would utilize existing public and private roads to access project workspaces to the extent practicable. Access roads are shown in Table 2.

Table 2 Temporary and Permanent Access Roads					
Access Road ID	Milepost / Facility	Proposed Use	Existing Use	Upgrade Requirements	Approx. Length (feet)
Line DPA and DS Abandonment					
DPA-TAR-01	1.65	Temporary	Dirt Field Road	Grading, Gravel	793
DPA-TAR-02	3.21	Temporary	Open Land	Tree clearing, Grading, Gravel	857
DPA-TAR-03	3.36	Temporary	Agricultural Land; Forest	Tree clearing, Grading, Gravel	677
DPA-TAR-04	8.02	Temporary	Open Land	Tree clearing, Grading, Gravel	207
DPA-TAR-05	8.69	Temporary	Agricultural Land	Grading, Gravel	597
DPA-TAR-06	8.91	Temporary	Dirt Field Road	Grading, Gravel	155
DPA-TAR-07	12.15	Temporary	Agricultural Land	Grading, Gravel	355
DPA-TAR-08	22.26	Temporary	Gravel Field Road	Tree clearing, Grading, Gravel	2,032
DPA-TAR-09	29.52	Temporary	Private Gravel Road	None	383
DPA-TAR-10	30.45	Temporary	Agricultural Land; Forest	Tree clearing, Grading, Gravel	1,130
DPA-TAR-11	30.71	Temporary	Private Dirt Road	Tree clearing, Grading, Gravel	1632
Line DT Abandonment					
DT-TAR-01	0.69	Temporary	Private Gravel Road	None	576
DT-TAR-02	2.06	Temporary	Agricultural Land	Grading, Gravel	669
DT-TAR-03	7.13	Temporary	Private Gravel Road	None	1,044
DT-TAR-04	8.26	Temporary	Private Gravel Road	None	715
DT-TAR-05	9.10	Temporary	Private Gravel Road	Grading, Gravel	2,059
DT-TAR-07	10.76	Temporary	Dirt Field Road	Grading, Gravel	939
DT-TAR-08	11.81	Temporary	Dirt Field Road	Tree clearing, Grading, Gravel	1,559
DT-TAR-09	12.00	Temporary	Gravel and Dirt Field Road	Tree clearing, Grading, Gravel	2,489
DT-TAR-10	12.38	Temporary	Agricultural Land	Tree clearing, Grading, Gravel	1,522
DT-TAR-11	12.99	Temporary	Private Gravel Road; Open Land	Tree clearing, Grading, Gravel	1,510
DT-TAR-12	13.36	Temporary	Private Gravel Road; Open Land	Tree clearing, Grading, Gravel	1,540
DT-TAR-13	18.58	Temporary	Agricultural Land	Grading, Gravel	350
DT-TAR-14	19.46	Temporary	Private Gravel Road	None	351
DT-TAR-15	21.97	Temporary	Private Dirt and Gravel Road	Tree trimming, Grading, Gravel	5,571
DT-TAR-17	24.18	Temporary	Private Gravel Road	None	1,275
DT-TAR-18	25.29	Temporary	Private Gravel Road	None	992
DT-TAR-19	27.70	Temporary	Private Gravel Road	None	476
DT-TAR-20	28.34	Temporary	Agricultural Land	Tree clearing, Grading, Gravel	370
DT-TAR-21	30.70	Temporary	Agricultural Land	Grading, Gravel	22

Existing roads include paved, graveled, or dirt roads, and other conveyances. Some private roads would require modification or improvement to facilitate safe access.

Southern Star would generally use previously affected workspace at existing road and railroad crossings. Additionally, Southern Star would use new temporary workspaces at various locations along the existing Lines DT and DS to facilitate cutting, capping and grouting.

6.0 Abandonment Schedule

Abandonment and removal activities are scheduled to begin in May 2021, with all cutting, capping, abandonment, and removal activities completed by October 2021. All Project activities are anticipated to be completed between the hours of 7:00 a.m. to 7:00 p.m., and abandonment would not take place on Sundays.

7.0 Abandonment Procedures

Southern Star would abandon the Project in accordance with the requirements of the U.S. Department of Transportation's (USDOT) regulations in Title 49 CFR, Part 192, *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*; by 18 CFR 380.15, *Siting and Maintenance Requirements*; and by other applicable federal and state regulations. The abandonment-related construction activities would follow industry-standard procedures for abandoning, modifying, replacing, or installing pipelines and associated facilities.

Prior to abandoning in-place, the existing Lines DT and DS will be cleaned with a pig² tool to remove any residual materials. Containment would be placed under the door of the pig receiver to capture any material, and any collected materials would be disposed of at an approved facility. Segments of the existing Lines DT and DS will be abandoned in-place by cutting and capping the pipe with weld caps or a steel plate. In addition, all existing aboveground appurtenances located along Lines DT and DS will be relocated to Line DPA or abandoned and removed. Southern Star states that existing customers disconnected from service as a result of the abandonments of Lines DT and DS would be compensated to facilitate continued service via alternative energy sources, such as propane or electric, and in accordance with existing service agreements. Ground disturbance activities at road crossings would typically be conducted within one day in order to minimize the interruption of traffic. Southern Star would coordinate all railroad crossings with the respective companies that own the railroads.

Southern Star only proposes to excavate the minimum amount necessary to safely and effectively abandon the pipeline. Excavation activities would involve the use of a trenching machine, backhoe, or similar equipment to remove soil above the pipeline.

² Pig is a tool that is used to remove any residual materials in the pipeline.

Furthermore, and consistent with our previous review and approval in Docket No. CP19-31-000, Southern Star would, to reduce the potential for environmental impacts, implement numerous environmental plans and best management practices including its Revegetation Plan, Fugitive Dust Plan, Spill Prevention, Containment and Countermeasures (SPCC) Plan, and Plan for the Unanticipated Discovery of Contaminated Environmental Media.³

Southern Star would first stake the Project area, including the outside limits of workspaces and the centerline of the existing pipeline to be abandoned in areas proposed for cutting, capping, and grouting. Kansas One-Call (Kansas811) would be notified prior to any ground-disturbing activities to locate and mark existing utility lines (e.g., cables, conduits, and pipelines) to prevent accidental damage.

Mr. John Cubit in a letter dated November 27, 2020 raised a concern regarding asbestos coating of the existing pipeline.

Southern Star has identified Potential Asbestos Containing Material (PACM), which was utilized for pipeline coating on the existing pipelines proposed for abandonment or removal. Therefore, abandonment of Lines DT and DS has the potential to contaminate Project workspaces with PACM. Southern Star assumes that the entire lengths of the existing Lines DT and DS are coated in PACM and would implement its Operation Safety Procedure – Asbestos Operations Plan to control worker exposure to hazards associated with asbestos. The abandonment of pipe coated with PACM would be managed in accordance with the applicable requirements defined in 40 CFR 763 and the Occupational Safety and Health Administration rules specified under 29 CFR 1926.1101 to avoid the potential for site contamination. Contractors would be required to have an asbestos removal certification, and containment procedures would be followed when PACM coating is removed from the pipe as well as during pipe transportation and storage.

Erosion and Sedimentation Control

Southern Star has committed to adhering to the FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and the FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures). Temporary soil erosion and sedimentation control measures would be installed along the proposed workspaces in accordance with the FERC Plan and Procedures. No deviations to the FERC Plan and Procedures are proposed for the Project. Topsoil segregation would be utilized where necessary per the FERC Plan and Procedures.

³ Affirmation submitted on November 11, 2020; Accession No. 20201119-5141. Environmental plans can be accessed in FERC Docket No. CP19-31-000, Application for Lines DT and DS Replacement Project; Accession No. 20181221-5135.

Following installation of erosion and sedimentation control measures, vegetation would be cleared. If necessary, workspaces would then be graded to create a reasonably level working surface to allow safe passage of equipment. Once cleared and graded, abandonment cutting, and capping would occur. Waste generated during Project construction would be managed in accordance with all applicable federal and state regulations. Excess rock generated from excavation would be disposed of in a solid waste landfill or construction debris disposal site. Areas disturbed to accommodate pipeline abandonment would be restored in accordance with the FERC Plan and Procedures and the previously authorized *Revegetation Plan*. Disturbed areas would be graded to reestablish pre-construction contours, topsoil would be redistributed, and disturbed areas, except annual cropland, would be seeded with a perennial seed mix. Preference would be given to species requested by the landowner and if no preference is designated, Southern Star would implement species recommendations, seeding rates, dates, and fertility recommendations provided in the *Revegetation Plan*.

8.0 Environmental Compliance Inspection and Monitoring

Southern Star personnel and its contractors would be required to comply with any conditions of a FERC Order, all mitigation measures identified in its application, and any other federal and state permits and authorizations. At least one environmental inspector (EI) would be responsible for Southern Star's environmental compliance. The EIs performing environmental oversight would serve to monitor the implementation of all environmental requirements during construction. The EIs would have the authority to enforce permit conditions and considerations and comments from FERC. FERC staff would also monitor project-related activities and if necessary, may conduct field inspections to determine compliance with any conditions of the FERC authorization.

9.0 Permit Approvals and Regulatory Consultations

As all activities would generally occur within workspace approved under CP19-31-000 (Lines DT and DS Replacement Project), the permits and approvals applicable to the workspace needed for that project are applicable for the proposed Project. Therefore, we have listed those authorizations in Table 3.

Table 3 Federal and State Permits and Approvals		
Agency or Organization	Permit/Approval	Status
Federal		
U.S. Army Corps of Engineers – Kansas City District (USACE)	Section 404 of the Clean Water Act – Nationwide Permit 12	Issued March 26, 2019
U.S. Fish and Wildlife Service – Kansas Ecological Field Services Office	Section 7 of the Endangered Species Act, Threatened and Endangered Species Consultation; Migratory Bird Treaty Act Consultation	Received concurrence March 6, 2019; July 11, 2019
State		
Kansas Department of Health and Environment	Section 401 Water Quality Certification	Automatic with USACE NWP 12 Authorization
Kansas Department of Wildlife, Parks and Tourism	State Threatened and Endangered Species Consultation	Concurrence received May 3, 2019
	Action Permit for potential impact threatened and endangered species or their critical habitats	Concurrence received May 3, 2019
Kansas State Historic Preservation Office	Section 106 National Historic Preservation Act Consultation	Concurrence received January 22, 2019

SECTION B – ENVIRONMENTAL ANALYSIS

Abandoning the proposed facilities would have temporary, short-term, and long-term impacts on the environment. As discussed throughout this EA, temporary impacts are defined as occurring only during the construction phase. Short-term impacts are defined as lasting between two to five years. Long-term impacts would eventually recover but require more than five years. Our analysis also addresses direct effects by resource.

Based on our review of the Project, there would be no permanent adverse impacts on the environment. Ground disturbing activities would be limited to the areas where cutting, capping, and grouting the existing pipelines under roads and railroads would occur. Due to the limited amount of work to be performed and the nature of this work, we conclude that geology and mineral resources would not be affected; and therefore, are not addressed further in this analysis.

The analysis contained in this EA is based upon Southern Star's application and supplemental filings and our experience with the construction and operation of natural gas infrastructure. However, if the Project is approved and proceeds to the construction phase, it is not uncommon for a project proponent to require minor modifications (e.g., minor changes in workspace configurations). These changes are often identified by a company once on-the-ground implementation of work is initiated. Any Project modifications would be subject to review and approval from FERC and any other permitting/authorizing agencies with federal or federally delegated jurisdiction.

Both Anderson and Franklin counties are sparsely populated, with population densities of 14 persons per square mile and 43 persons per square mile, respectively. The general land surface in this region is undulating, with field interspersed with forested stream corridors. Agricultural crops include corn, wheat, oats and Kafir corn. The livestock industry is also significant. The largest industries in Franklin County are retail trade, health care and social assistance, and manufacturing. The largest industries in Anderson County are health care and social assistance, educational services, and agriculture.

1.0 Soils

Soil characteristics in the Project area were assessed using the Natural Resources Conservation Service (NRCS) Soil Survey geographic database (NRCS, 2020). No prime farmland or farmland of statewide importance would be converted to commercial/industrial use as a result of the Project. Given that locations of earth disturbance are within existing rights-of-way, it is not anticipated that shallow bedrock would be encountered during abandonment activities. If blasting becomes necessary, Southern Star would develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public

notification; and mitigation measures for building foundations, groundwater wells, and springs.

Project area soils are generally not highly compaction prone but exhibit high potential for rutting. Southern Star would minimize rutting and compaction by using timber mats, geo-textile fabric, or equivalent in saturated soils and would implement decompaction measures as specified in our Plan.

The majority of Project area soils have moderate to high revegetation potential and are not highly susceptible to erosion by wind or water; however, ground disturbance activities can accelerate the erosion process. To minimize or avoid project-related impacts, Southern Star would implement topsoil conservation and segregation measures and install temporary erosion controls. To minimize wind erosion, Southern Star would utilize dust-control measures as specified in its Fugitive Dust Control Plan.

Following abandonment activities, all temporary workspace would be stabilized and seeded, unless the landowner requests that it not be because it is in agricultural production, and temporary erosion control devices would be maintained until the Project area is successfully revegetated.

Soil contamination from accidental spills or leaks of fuels, lubricants, and coolant could adversely impact soils. To minimize these impacts, Southern Star would implement measures contained in its SPCC Plan which specifies cleanup procedures in the event of an inadvertent spill(s). In the event that contaminated soils or other environmental media are identified during abandonment activities, Southern Star would implement its Plan for the Unanticipated Discovery of Contaminated Environmental Media.

We have reviewed the Fugitive Dust Plan, SPCC Plan, and Plan for the Unanticipated Discovery of Contaminated Environmental Media and find them acceptable. We conclude that Southern Star's implementation of the FERC Plan and Procedures, its SPCC Plan, Fugitive Dust Control Plan, and Plan for the Unanticipated Discovery of Contaminated Environmental Media during abandonment and restoration would minimize impacts on soils and that the Project would not significantly affect soils.

In comments received from Mr. Cubit, he states that a sinkhole developed shortly after Southern Star repaired a section of the existing pipeline and that it is around 20 feet deep and 5 feet across. Mr. Cubit acknowledges that this development is probably just an "act of nature", but that Southern Star should be aware of it. In response, Southern Star states that the sinkhole is located more than 600 feet from the existing Line DS and does not appear to be associated with Southern Star's pipelines and activities on this property. Consequently, neither abandonment in-place nor abandonment by removal are likely to impact the sinkhole.

2.0 Groundwater

The Project area does not overlie any U.S. Environmental Protection Agency-designated sole source aquifers, nor wellhead protection areas. There are also no known sources of groundwater contamination in the immediate vicinity of Project work areas.

Based on a review of water supply well records from the Kansas Geological Survey, no public or private water supply wells were identified within 150 feet of proposed new temporary workspaces. Southern Star has committed to offer pre-and post-construction water quality and yield testing to landowners with water supply wells and springs located within 150 feet of Project construction workspace, if any are identified prior to construction. If a well is determined to have been impaired by Project activities, Southern Star would compensate the landowner for the repair of the well, installation of a new well, or otherwise arrange for a suitable water supply.

Surface drainage and groundwater recharge patterns can be temporarily altered by ground disturbing activities, potentially causing minor fluctuations in groundwater levels and/or increased turbidity, particularly in shallow surficial aquifers. We expect the resulting changes in water levels and/or turbidity in these aquifers to be localized and temporary because water levels quickly re-establish equilibrium and turbidity levels rapidly subside. Further, upon completion of abandonment activities, Southern Star would restore the ground surface to original contours, to the extent practicable, and would re-vegetate disturbed areas, with the goal of restoring preconstruction overland flow and recharge patterns. Therefore, we conclude no significant impacts on groundwater resources would occur from facility abandonment.

3.0 Water Resources

Surface Water Resources

Abandonment activities would require crossing three waterbodies. The streams affected include one intermittent and two ephemeral waterbodies. Information for each waterbody crossing, including name, water quality classification, flow regime, crossing width, and crossing method is provided in Table 4. All three waterbody crossings are associated with Southern Star accessing cut and cap locations.

To avoid and reduce impacts on surface waterbodies, Southern Star would install and use timber mat bridges and an existing culvert. Southern Star would also implement the best management practices in the Procedures. Lastly, Southern Star's adherence to measures within its SPCC Plan, including locating hazardous material storage and equipment refueling activities at least 100 feet from waterbodies, would reduce the potential for hazardous materials to enter waterbodies.

During final restoration, Southern Star would seed stream banks and riparian areas in accordance with the Procedures. Any stream banks disturbed would be restored to pre-construction contours to the maximum extent possible. Implementation of the Procedures would minimize and mitigate impacts on surface waters. Therefore, we conclude that the Project would not have a significant impact on surface waters.

Table 4 Surface Waterbody Crossings					
Milepost / Facility	Waterbody Name	State Water Quality Classification ^{a, b}	Flow Regime	Approximate Waterbody Width (feet)	Proposed Crossing Method
Existing Line DS Abandonment (Line DPA)					
Franklin County, Kansas					
22.58	Unnamed Tributary of Middle Creek	AL-E, CR-B, DS, FP, GR, IW, IR, L	Intermittent	20	Timber Mat
Existing Line DT Abandonment					
Franklin County, Kansas					
23.00	Unnamed Tributary of Middle Creek	AL-E, CR-B, DS, FP, GR, IW, IR, L	Ephemeral	3	Timber Mat
Existing Line DS Abandonment (Line DPA)					
Anderson County, Kansas					
DPA-TAR-06 (MP 8.91)	Unnamed Tributary of Cedar Creek	AL-E, CR-B, DS, FP, GR, IW, IR, L	Ephemeral	5	Existing Culvert / Timber Mat
^a State Water Quality Classifications: AL - Aquatic Life Support Use (S - Table Special Aquatic Life Use [also denoted as SALU in Resource Report 3], E – Expected Aquatic Life Use) CR - Contact Recreational Use (C – Primary Contact: Not Open to Public, B – Secondary Contact: Not Open to Public) DS - Domestic Water Supply Use FP - Food Procurement Use GR - Groundwater Recharge Use IW - Industrial Water Supply Use IR - Irrigation Use L - Livestock Watering Use ^b All waterbodies are considered warmwater					

Wetlands

A total of five palustrine emergent (PEM) wetlands would be crossed or would be located within workspace necessary for abandonments. PEM wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. Dominant vegetation observed in PEM wetlands in the Project areas included Davis' sedge (*Carex davisii*), bottlebrush sedge (*Carex hystericina*), troublesome sedge (*Carex molesta*), barnyardgrass (*Echinochloa crus-galli*), common water hyacinth (*Eichhornia crassipes*), flatstem spikerush (*Eleocharis compressa*), common spikerush (*Eleocharis palustris*), foxtail barley (*Hordeum jubatum*), annual marsh elder (*Iva annua*), rice cutgrass (*Leersia oryzoides*), red mulberry (*Morus rubra*), thin paspalum (*Paspalum setaceum*), smartweed (*Persicaria hydropiperoides*), reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), curly dock (*Rumex crispus*), broadleaf arrowhead (*Sagittaria*

latifolia), softstem bulrush (*Schoenoplectus tabernaemontani*), blackgirdle bulrush (*Scirpus atrocinctus*), green bulrush (*Scirpus atrovirens*), woolgrass (*Scirpus cyperinus*), green bristlegrass (*Setaria viridis*), and broadleaf cattail (*Typha latifolia*).

In the wetlands located in areas of the pipeline abandonment, temporary work surfaces consisting of timber mats would be installed over wetland areas that cannot support the weight of equipment to provide access along the right-of-way.

Impacts on wetlands would occur from the clearing and alteration of any wetland vegetation. Project-related activities could also affect soils, and water quality within wetlands due to sediment loading or inadvertent spills of fuel or chemicals. Impacts on wetlands would be greatest during and immediately following construction. The majority of these impacts would be short-term in nature and would cease when, or shortly after, the wetlands are restored. Following revegetation, wetlands would eventually transition back into a community similar to that of the pre-construction state. In emergent wetlands, the herbaceous vegetation would regenerate quickly (typically within 1 to 3 years). There will be no operation impacts on PEM wetlands, as all impacts associated with the Project Amendment are temporary. Table 5 provides the wetland type and classification of each wetland crossed by the Project.

Table 5 Wetlands Crossed					
Milepost / Facility	Feature ID	Wetland Type^a	Jurisdictional Status	Proposed Crossing Method	Construction Impacts (acres)
Anderson County, Kansas					
4.34	WP5AN001	PEM	§ 404	Timber Mat	0.09
6.40	WP5AN002	PEM	§ 404	Timber Mat	0.02
14.33	WP5AN007	PEM	§ 404	Timber Mat	0.19
Franklin County, Kansas					
28.02	WP5FR008	PEM	§ 404	Timber Mat	0.07
28.03	WP4FR007	PEM	§ 404	Timber Mat	0.04
PROJECT TOTAL					0.41
^a Cowardin Wetland Types: PEM - palustrine emergent					

Southern Star would minimize wetland impacts by implementing the construction and mitigation measures outlined in the Procedures, and by adhering to applicable permit requirements. Impact minimization measures include:

- limiting construction equipment in wetlands;
- segregating topsoil in unsaturated wetlands
- installing sediment barriers and properly maintaining them throughout construction;

- using low ground weight equipment or operating equipment on timber riprap on saturated soils or where standing water is present;
- adhering to measures outlined in the SPCC Plan and its Procedures to avoid impacts from hazardous materials;

With implementation of these measures, we conclude that wetland impacts from the abandonment activities would not be significant.

Vegetation

The Project would be located across lands characterized by the following vegetative communities: agricultural, open land, developed land, forest, and wetlands. The Project impact acreages are presented in Table 6.

Table 6 Summary of Vegetation Impacts (acres)						
Facility	Agriculture	Open Land	Developed	Forest	Wetland	Grand Total
Line DT Abandonment						
Right-of-Way	15.3	14.0	1.3	0.13	0.29	30.9
Additional Temp Workspace	0.08	0.10	0.09	0.0	0.0	0.27
Access Roads	0.19	0.02	0.21	0.004	0.0	0.42
Line DS Abandonment						
Right-of-Way	3.4	1.3	0.43	0.10	0.0	5.2
Line DT Abandonment						
Existing Auxiliary Facilities	0.0	0.06	0.02	0.0	0.0	0.08
Access Roads	0.0	0.00	0.00	0.0	0.0	0.00
PROJECT TOTAL	19.0	15.5	2.05	0.23	0.29	36.9

Agricultural vegetation includes cultivated row crops with some pasture areas. Common crops include corn (*Zea mays*) and soybean (*Glycine max*). Open land was observed to include herbaceous species such as Canada goldenrod (*Solidago canadensis*), little bluestem (*Schizachyrium scoparium*), soft brome (*Bromus hordeaceus*), sideoats grama (*Bouteloua curtipendula*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), common dandelion (*Taraxacum officinale*), prairie ironweed (*Vernonia fasciculata*), common milkweed (*Asclepias syriaca*), and Queen Anne's lace (*Daucus carota*).

Developed land lacks vegetation or is sparsely vegetated. Representative species include Bermudagrass (*Cynodon dactylon*), red clover, and common dandelion. Upland forested vegetation included species such as Osage-orange (*Maclura pomifera*), American elm (*Ulmus americana*), roughleaf dogwood (*Cornus drummondii*), western snowberry (*Symphoricarpos occidentalis*), eastern redcedar (*Juniperus virginiana*), and bitternut hickory (*Carya cordiformis*).

Abandoning the proposed facilities would require the temporary clearing of vegetation. Primarily herbaceous and scrub shrub vegetation would be cleared for the Project. Individual trees may be affected for access roads. Disturbed areas will be graded to re-establish pre-construction contours, topsoil will be redistributed, and disturbed areas, except annual cropland, will be seeded with a perennial seed mix. Preference will be given to species requested by the landowner and if no preference is designated, Southern Star will implement species recommendations, seeding rates, dates, and fertility recommendations provided in its Revegetation Plan.

Based on the types and amounts of vegetation affected by the Project and Southern Star's proposed avoidance, minimization, and mitigation measures to limit Project impacts, we conclude that impacts on vegetation from the Project would not be significant.

Aquatic Resources

Waterbodies in Kansas are classified by the Kansas Department of Wildlife, Parks, and Tourism (KDWPT) according to water quality and aquatic communities. All the waterbodies crossed by the Project are classified as warmwater fisheries by the KDWPT. Warmwater fish species that are known to be common in the Project area include red shiner (*Cyprinella lutrensis*), fathead minnow (*Pimephales promelas*), black bullhead (*Ameiurus melas*), and green sunfish (*Lepomis cyanellus*). In addition, perennial warmwater streams may support largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), spotted bass (*Micropterus punctulatus*), striped bass (*Morone saxatilis*), white bass (*Morone chrysops*), freshwater drum (*Aplodinotus grunniens*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis olivaris*), black crappie (*Pomoxis nigromaculatus*), white crappie (*Pomoxis annularis*), northern pike (*Esox lucius*), walleye (*Sander vitreus*), bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), and redear sunfish (*Lepomis microlophus*).

As discussed above, no in-stream excavation would occur. Spills of hazardous materials and fuels could impact fishery resources and aquatic species. Fish may come into contact directly with spilled materials or large volumes could impact aquatic habitat. To minimize or avoid these hazards, Southern Star would implement measures in its SPCC Plan as well as the Procedures. This includes storing hazardous materials and fuel more than 100 feet from surface waterbodies and not fueling or parking heavy equipment within 100 feet of these features as well. Other precautions such as having secondary

containment structures, utilizing spill kit readiness, and monitoring of fuel transfers would also occur.

Based on the information above, impacts on aquatic resources are not expected. Therefore, we conclude that impacts on aquatic resources from the Project would not be significant.

Wildlife Resources

Wildlife habitat types are generally based on the vegetation cover types within the Project area and, as stated above, include agricultural land, forested upland, open upland, and developed land. Open water and wetlands also provide habitat for wildlife. Each of these habitat types provides foraging, cover, and nesting habitat for a variety of wildlife species described in Table 7.

The Project is within the KDWPT designated terrestrial Eastern Tallgrass Prairies Ecological Focus Area (EFA) and the aquatic Marais des Cygnes EFA. The Eastern Tallgrass Prairies EFA is one of the largest tracks of unbroken prairie remaining in eastern Kansas and provides habitat for the state listed eastern spotted skunk (*Spilogale putorius*). The Marais des Cygnes EFA provides habitat for the hornyhead chub, flat floater mussel (*Anodonta suborbiculata*), flutedshell mussel (*Lasmigona costata*), mucket mussel (*Actinonaias ligamentina*), rock pocketbook mussel (*Arcidens confragosus*), and northern map turtle (*Graptemys geographica*). Southern Star received an email from the KDWPT on April 12, 2019 that with the exception of the measures recommended for the crossings of state-designated critical habitat, no additional best management practices for crossing of the EFAs are required. No state-designated critical habitat is affected by the Project. Southern Star stated it would implement all special conditions included in the Action Permit received from the KDWPT on May 1, 2019.

Table 7 Common Wildlife Species in the Project Area

Habitat Type	Common Wildlife Species
Agriculture	Woodchuck (<i>Marmota monax</i>), mourning dove (<i>Zenaida macroura</i>), American crow (<i>Corvus brachyrhynchos</i>), house finch (<i>Haemorhous mexicanus</i>), barn swallow (<i>Hirundo rustica</i>), and garter snake (<i>Thamnophis sirtalis</i>)
Open upland	Coyote, (<i>Canis latrans</i>) cottontail rabbit (<i>Sylvilagus floridanus</i>), least shrew (<i>Cryptotis parva</i>), white-tailed deer (<i>Odocoileus virginianus</i>), deer mouse (<i>Peromyscus maniculatus</i>), mourning dove, red-tailed hawk (<i>Buteo jamaicensis</i>), scissor-tailed flycatcher (<i>Tyrannus forficatus</i>), American kestrel (<i>Falco sparverius</i>), field sparrow (<i>Spizella pusilla</i>), and box turtle (<i>Terrapene ornata</i> spp.)
Developed land	Mostly human commensal species such as common garter snake, raccoon (<i>Procyon lotor</i>), gray squirrel (<i>Sciurus carolinensis</i>), northern mockingbird (<i>Mimus polyglottos</i>), house finch, and mourning dove
Upland forest	Opossum (<i>Didelphis virginiana</i>), least shrew (<i>Cryptotis parva</i>), woodchuck, cottontail rabbit, deer mouse, cardinal (<i>Cardinalis cardinalis</i>), gray squirrel, raccoon, and copperhead (<i>Agkistrodon contortrix</i>)
Wetlands	Raccoons, squirrels, Woodhouse's toad (<i>Anaxyrus woodhousii</i>), beaver (<i>Castor canadensis missouriensis</i>), red-winged blackbird (<i>Agelaius phoeniceus</i>), wood duck (<i>Aix sponsa</i>), and red eared slider (<i>Trachemys scripta elegans</i>).
Open Water	Bullfrog (<i>Lithobates catesbeiana</i>), common snapping turtle (<i>Chelydria serpentine</i>), Plains spadefoot toad (<i>Spea bombifrons</i>), Woodhouse's toad, western painted turtle (<i>Chrysemys picta bellii</i>), red-eared slider (<i>Trachemys scripta elegans</i>), and ribbonsnake (<i>Thamnophis sauritus</i>)

Ground disturbing activities would result in temporary- and long-term impacts on wildlife. Impacts would vary depending on the specific habitat requirements of the species in the area and the habitat type affected. Potential impacts on wildlife include the displacement of individuals from construction areas and adjacent habitats and the direct mortality of small, less mobile mammals, reptiles, and amphibians that are unable to vacate the construction area. To reduce impacts on wildlife, Southern Star would implement measures identified in our Plan and Procedures including stabilizing and reseeding disturbed areas following construction; and training contractors and workers in the appropriate steps to take should wildlife be encountered.

Although individual mortality of some wildlife species could occur as a result of the Project, the effects of these individual losses on wildlife populations would be minor. Based on the presence of similar habitats adjacent to and in the vicinity of ground disturbing activities, and the implementation of impact avoidance and minimization measures, we conclude that the Project would not significantly impact wildlife.

Migratory Birds

Migratory birds are species that nest in the United States and Canada during the summer and then migrate to and from 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 (16 U.S Code [U.S.C.] 703-711); bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). Executive Order (EO) 13186 (66 FR 3853) directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the U.S. Fish and Wildlife Service (FWS).

The Project would be located within Region 22-Eastern Tallgrass Prairie of the North American Bird Conservation Initiative (FWS, 2008). Based on the characteristics and habitat requirements of wildlife and migratory birds known to occur in the proposed Project area, the minimal amount of tree clearing, the amount of similar habitat adjacent to and in the vicinity of the Project, and Southern Star's implementation of the Plan and Procedures, we have determined that the Project would not result in population-level impacts or significant measurable negative impacts on migratory birds.

Special Status Species

Special status species are those species for which state or federal agencies afford an additional level of protection by law, regulation, or policy. Special status species include federally listed species protected under the Endangered Species Act (ESA), species proposed or candidates for listing by the FWS, and those species that are state listed as threatened or endangered, or other special status. Section 7(a)(2) of the ESA requires the Commission to ensure that any action it authorizes, funds, or carries out would not jeopardize the continued existence of federally listed or proposed listed species, or result in the adverse modification or destruction of critical habitat for federally listed and proposed species.

Southern Star conducted informal consultations, as our non-federal representative, with the United States Fish and Wildlife Service (FWS) – Kansas Ecological Field Office to determine whether any federally listed threatened or endangered species, federal species of concern, or designated critical habitats occur in the Project area. Southern Star also consulted with KDWPT regarding state listed species and habitats. Southern Star had conducted general habitat and species-specific surveys and the entire Project is located entirely within these previously surveyed areas.

Listed species consultations were conducted under Docket No. CP19-31-000 for the Lines DT and DS Replacement Project. The areas affected by the proposed Project overlap the abandonment areas that would have been affected by the Lines DT and DS Replacement Project. Because the scope of the proposed Project is substantially smaller

and overlaps that project, for which Southern Star conducted consultation, we accept the previous consultation as applicable for the proposed Project.

Two federally listed species were identified as having the potential to occur within the Project area: northern long-eared bat (*Myotis septentrionalis*) and Mead's milkweed (*Asclepias meadii*). We determined that the Project *may affect but would not likely adversely affect* these species. The FWS provided concurrence with our determinations for Mead's milkweed and the northern long-eared bat, on March 6, 2019 and July 11, 2019. Therefore, ESA Section 7 consultation for this Project is complete.

State designated critical habitat for the eastern spotted skunk, hornyhead chub, northern map turtle (*Graptemys geographica*), mucket mussel, rock pocketbook mussel, and sharp hornsnail (*Pleurocera acuta*) is located in the vicinity of the Project. For crossing this habitat, Southern Star submitted an Action Permit to the KDWPT. The KDWPT issued its action permit on May 3, 2019. Southern Star agreed to these measures on May 3, 2019. Southern Star agreed to all measures of the action permit on May 5, 2019.

4.0 Land Use, Recreation, and Visual Resources

As described previously, abandoning Lines DT and DS in-place would require the use of about 37.0 acres of land. Construction impacts would be temporary and project-related activities would not result in a permanent change to existing land uses. Furthermore, abandonment activities would result in short-term impacts on residential areas, including removal of existing vegetation and landscaping from the workspace, increased construction related traffic on local roads, as well as dust and noise generated during construction. Southern Star would minimize these potential impacts through implementation of mitigation measures specified in its Residential Construction Implementation Plan.

In response to the NOI, the Commission received comments from two landowners, Messrs. Rayne and Cubit, expressing concerns about impacts on land use and the environment resulting from the proposed abandonment in-place; and requesting that the pipeline segments across their respective properties be abandoned by removal as originally proposed by Southern Star. In its response to an environmental information request from FERC staff concerning Mr. Rayne's comments, Southern Star reiterated its intent to abandon Line DS across his property citing the presence of shallow bed rock, additional environmental impacts, and the presence of Line DPA across the property. We have reviewed the lands potentially affected and have determined that abandoning the Line DS pipeline segments across these properties would result in additional impacts on the environment including about 20 acres of ground disturbance, five waterbody crossings, and the limited clearing of woody vegetation. Based on the scope of the landowner's requests, we conclude that these additional impacts on the environment would be minor and would not be significant. Therefore, **we recommend that:**

- **Southern Star should abandon the Line DS pipeline segments across the Rayne (Tract ID – 19358) and Cubit (Tract IDs – 19365, 24062, 19386, 19386-1) properties by removal and should include in its Implementation Plan descriptions of the abandonment procedures and construction alignment sheets for these removals. If Southern Star reaches an agreement with either landowner to abandon the pipeline in-place, Southern Star should file documentation with the Secretary prior to abandonment indicating the landowner’s change in preference for the abandonment method, and then implement the landowner preference at these locations. If Southern Star believes that there are safety or environmental concerns that it has not previously identified that would preclude the removal on either the Rayne and Cubit properties, Southern Star should file supplemental information and justification with the Secretary and request specific approval from the Director of OEP, or the Director’s designee, to abandon the pipeline in-place.**

Residential and Commercial Areas

As previously stated, abandonment activities would result in short-term impacts on residential areas, including removal of existing vegetation and landscaping from the workspace, increased construction related traffic on local roads, as well as dust and noise generated during construction. Southern Star would minimize these potential impacts through implementation of mitigation measures specified in its Residential Construction Implementation Plan.

Visual Resources

The Project would use construction equipment that would only temporarily affect visual resources. The Project is not expected to permanently impact visual resources. Project activities would occur within Southern Star’s existing permanent right-of-way and would not involve the construction of new aboveground facilities.

5.0 Cultural Resources

The area of potential effects for this Project is completely contained within the cultural resources survey area for Docket No. CP19-31-000. Therefore, our determination, made in consultation with the Kansas State Historic Preservation Officer and interested Indian Tribes, that the Project would have no adverse effect on any properties listed in or eligible for listing in the National Register of Historic Places also applies to the Project.

FERC and Southern Star contacted eleven Indian tribes with an interest in the project area in Docket No. CP19-31-000. None of the tribes had any objections to the project.

Southern Star has prepared a plan in the event any unanticipated cultural resources or human remains were encountered during construction. We reviewed and approved that plan in Docket No. CP19-31-000 and approve its use for this Project.

On November 20, 2020, in response to our scoping notice, the Southern Plains Region of the BIA commented that there were no tribal or individual Indian trust lands in the vicinity of the Project and it had no concerns that the Project would affect Indian lands within its jurisdiction.

6.0 Air Quality and Noise

Air Quality

The Project would result in temporary emissions of regulated air pollutants and other air contaminants during ground disturbing activities. There would be no operational emissions from the Project.

Combustion of fossil fuels (natural gas, gasoline, diesel, etc.) would produce criteria air pollutants such as carbon monoxide, sulfur dioxide, and inhalable particulate matter. Combustion of fossil fuels also produces the ozone precursors volatile organic compounds (VOC), a large group of organic chemicals that have a high vapor pressure at room temperature, and oxides of nitrogen (NO_x). VOCs react with NO_x, typically on sunny days to form O₃. Another byproduct of combustion is Greenhouse Gases (GHG), and hazardous air pollutants (HAPs). HAPs are chemicals known to cause cancer and other serious health impacts.

GHG produced by fossil fuel combustion include carbon dioxide, methane, and nitrous oxides. GHGs are generally non-toxic and non-hazardous at normal ambient concentrations; however, they absorb infrared radiation in the atmosphere, and an increase in emissions of these gases has been determined by the U.S. Environmental Protection Agency to endanger public health and welfare by contributing to global climate change. Other pollutants, not produced by combustion, are fugitive dust and fugitive emissions. Fugitive dust is a mix of PM_{2.5}, PM₁₀, and larger particles that become airborne due to vehicle travel, earth movement, or wind erosion.

The Clean Air Act (CAA) of 1970, as amended in 1977 and 1990, is the basic federal statute governing air quality. The provisions of the CAA that are potentially relevant to the Project include National Ambient Air Quality Standards (NAAQS) and General Conformity. No county or local air quality regulations have been identified as being potentially applicable to the Project.

Anderson County is located in the Southeast Kansas Intrastate Air Quality Control Region, while Franklin County is located in the Northeast Kansas Intrastate AQCR (EPA,

2018b). The EPA designates the attainment status of an area for each criteria pollutant based on whether an area meets the NAAQS. Areas that meet the NAAQS are termed “attainment areas.” Anderson and Franklin Counties are currently designated as attainment or unclassifiable (considered attainment) for all criteria pollutants (EPA, 2018c). Therefore, a Clean Air Act General Conformity Determination is not required.

Project equipment used for deconstruction of surface facilities and other abandonment activities would cause localized minor increases of air pollutants. Residents in the area may notice fugitive dust emissions due to vehicle travel and earth movement. As only a few locations would be used during the abandonment activities spread across multiple sites. These sites where cutting/capping or aboveground facility removal would take place would not require a large amount of equipment, or a significant period of time. The activities at each location would not generate a large daily magnitude of emission, and these emissions would temporary. Therefore, we conclude that air quality would not be significantly affected by the Project.

Noise

Abandonment activities would result in short-term impacts on residential areas, including removal of existing vegetation and landscaping from the construction workspace, increased construction related traffic on local roads, as well as noise generated during the cutting, capping and grouting of the pipelines. These noise levels would be of short duration and would have temporary impact. Therefore, no significant effect is anticipated resulting from construction noise. The Project is limited to abandonment of pipelines; therefore, there would be no operational noise from the Project.

7.0 Reliability and Safety

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. Southern would be required to purge the line of natural gas as part of the abandonment process. Removing the natural gas removes any resulting natural gas release as a result of a rupture due to pipeline failure, natural hazards, third party damage or other causes of damage to the pipeline.

The pipeline and aboveground facilities associated with the Project must be abandoned in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192. Specifically, 49 CFR Part 192.727 - Abandonment or deactivation of facilities. These regulations are intended to ensure adequate protection for the public near an abandoned pipeline.

We conclude that Southern Star’s compliance with applicable USDOT abandonment regulations, as well as applicable state regulations, would be protective of

public safety. Thus, we find that Southern Star's abandonment activities would represent a decrease in risk to the public.

Polychlorinated Biphenyls and Asbestos Containing Material

For many years, from approximately 1950 to the early 1970s, PCB-containing compounds were used by some interstate natural gas transmission companies as a lubricant, hydraulic fluid, or sealant for turbines and air compressors within compressor stations. As part of normal operation, PCBs could leak or blow by pressure seals and enter the transmission pipeline. PCBs may also be present in natural gas pipelines due to the historical practice of oil fogging, performed in the late 1940s through 1960s (EPA, 2004). Older pipeline segments and associated facilities in operation at the time that PCBs were employed in the natural gas transmission industry may be contaminated with PCBs at levels requiring abandonment and disposal procedures consistent with EPA's regulations found in 40 CFR 761.

Southern Star has no history of PCB contamination on its existing pipeline systems including Lines DP, DS, and DT systems. In 1981, Southern Star's predecessor, Cities Service Gas Company, participated in the EPA and industry effort to determine the extent of the PCB contamination in U.S. natural gas transmission systems. The EPA concluded that no significant PCB levels were detected in the Cities Service company pipeline system. In the event any PCB contamination is encountered unexpectedly during construction, these materials would be managed in accordance with the EPA's Toxic Substances Control Act regulations found in 40 CFR Part 761, as well as any applicable state regulations. In addition, Southern Star would implement its Plan for the Unanticipated Discovery of Contaminated Environmental Media.

As previously stated, Southern Star has identified PACM, which was utilized for pipeline coating on the existing pipelines proposed for abandonment. Therefore, abandonment or removal of Lines DT and DS has the potential to contaminate Project workspaces with PACM. As discussed in Section A.7 Southern Star would implement its Operation Safety Procedure – Asbestos Operations Plan to control worker exposure to hazards associated with asbestos. In addition, contractors would be required to have an asbestos removal certification, and containment procedures would be followed when PACM coating is removed from the pipe.

SECTION C – ALTERNATIVES

In accordance with NEPA and Commission policy, we consider and evaluate alternatives to the proposed action, including the no-action alternative and an alternative in which the pipelines are abandoned by removal. As the proposed action involves only an existing pipeline corridor, alternative routes were not considered.

Alternatives were evaluated using a specific set of criteria. The evaluation criteria applied to each alternative include a determination of whether the alternative:

- meets the objective of the proposed Project;
- is technically and economically feasible and practical; and
- offers a significant environmental advantage over the proposed Project.

Through environmental comparison and application of our professional judgment, each alternative is considered (in the sequence identified above) to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. An alternative that cannot achieve the purpose for the Project cannot be considered as an acceptable replacement for the Project.

Not all conceivable alternatives are technically and economically feasible and practical. Technically feasible alternatives, with exceptions, would generally involve the use of common pipeline construction methods. Economically practical alternatives would result in an action that generally maintains the price competitive nature of the proposed action. An alternative that would involve the use of a new, unique, or experimental construction method(s) may be technically feasible, but not economically practical. Generally, we do not consider the cost of an alternative as a critical factor unless the added cost to design, permit, and construct the alternative would render the project economically impractical.

To determine if an alternative is practicable and would provide a significant environmental advantage over the proposed action, we compare the impacts of the alternative and the proposed action (e.g., number of wetlands/waterbodies affected by the alternative and number of wetlands/waterbodies affected by the proposed action). To ensure consistent environmental comparisons and to normalize the comparison of resources, we generally use “desktop” sources of information (e.g., publicly available data, aerial imagery) and assume the same construction and operation right-of-way widths and general workspace requirements. We evaluate data collected in the field if surveys were completed for both the proposed action and the corresponding alternative. Our environmental comparison uses common factors such as (but not limited to) total amount, length/distance, and acres affected of a resource. Furthermore, this analysis considers impacts on both the natural and human environments.

Where appropriate and available, we also use site-specific information. In comparing the impact between resources, we also consider the magnitude of the impact anticipated on each resource. As applicable, we assess impacts on resources that are not common to the alternative and the proposed action.

Our determinations attempt to balance the overall impacts (and other relevant considerations) of the alternative(s) and the proposed action. Recognizing the often

competing interests driving alternatives and the differing nature of impacts resulting from an alternative (i.e., impacts on the natural environment versus impacts on the human environment), we also consider other factors that are relevant to a particular alternative or discount or eliminate factors that are not relevant or may have less weight or significance.

Because Southern Star has already received authorization to abandon its pipelines, the only consequence of the no-action alternative would be that the facilities would be abandoned by removal. Therefore, we examine the two alternatives as a single alternative in Table 8. This table provides an alternatives comparison of pipelines DT and DS abandonment entirely in-place versus abandonment by removal.

Table 8 Lines DT and DS Replacement Project Amendment Alternatives Comparison			
Category	Proposed Abandonment In-Place	Abandonment by Removal	Difference in Impacts
Total Land Disturbance (acres)	37.0	261.5	224.5
Agriculture Land (acres)	19.0	150.8	131.8
Open Land (acres)	15.5	97.2	81.7
Wetland (acres)	0.4	0.7	0.3
Total Waterbody Crossings	3	37	34

As shown in this table, abandoning the pipelines by removal as opposed to abandoning in-place would result in additional impacts on the environment. Abandonment in-place would reduce the overall footprint of the Project, thereby reducing potential environmental impacts.

Conclusion

We have determined that abandonment by removal would result in additional impacts on the environment and would not offer a significant environmental advantage over the proposed Project.

SECTION D – STAFF’S CONCLUSIONS AND RECOMMENDATIONS

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

1. Southern Star should follow the abandonment procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Southern Star 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, or the Director’s designee, **before using that modification.**

2. The Director of OEP, or the Director’s designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during activities associated with abandonment and restoration. This authority should allow:
 - a. the modification of conditions of the Order;
 - b. stop-work authority; and
 - c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental impact resulting from project abandonment and restoration activities.

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

4. The authorized abandonment activities should be as shown in the EA, as supplemented by filed alignment sheets, and should include the modifications specified in environmental condition 11. **As soon as they are available, and before the start of construction**, Southern Star should file with the Secretary any revised detailed survey maps/sheets at a scale not smaller than 1:6,000 with station positions for the abandonment of 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.

Southern Star's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Southern Star's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

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

This requirement does not apply to extra workspaces allowed by the Commission's 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 route realignments and facility location changes resulting from:

- a. implementation of cultural resource mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and

- d. agreements with individual's landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the Order and before abandonment begins**, Southern Star should file an Implementation Plan with the Secretary for review and written approval by the Director of OEP, or the Director's designee. Southern Star must file revisions to the plan as schedules change. The plan should identify:
- a. how Southern Star would 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 Southern Star would 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 per spread, and how the company would ensure that sufficient personnel are available to implement the environmental mitigation;
 - d. company personnel, including EIs and contractors, who would receive copies of the appropriate material;
 - e. the location and dates of the environmental compliance training and instruction Southern Star would 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 Southern Star's organizations having responsibility for compliance;
 - g. the procedures (including use of contract penalties) Southern Star would follow if noncompliance occurs; and
 - h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. the completion of all required surveys and reports;
 - j. the environmental compliance training of onsite personnel;
 - k. the start of construction; and
 - l. the start and completion of restoration.
7. Southern Star should employ at least one EI for the Project. The EI(s) should be:
- a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

- b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see condition 6 above) and any other authorizing document;
 - c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;
 - d. a full-time position, separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
8. Beginning with the filing of its Implementation Plan, Southern Star should file updated status reports with the Secretary on a **biweekly** basis until all abandonment and restoration activities are complete. On request, these status reports would also be provided to other federal and state agencies with permitting responsibilities. Status reports should include:
- a. an update on Southern Star's efforts to obtain the necessary federal authorizations;
 - b. the construction status of the Project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - c. a listing of all problems encountered, and each instance of noncompliance observed by the EI during the reporting period both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies;
 - d. a description of the corrective actions implemented in response to all instances of noncompliance;
 - e. the effectiveness of all corrective actions implemented;
 - f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and
 - g. copies of any correspondence received by Southern Star from other federal, state, or local permitting agencies concerning instances of noncompliance, and Southern Star's response.
9. Southern Star must receive written authorization from the Director of OEP, or the Director's designee, **before commencing abandonment by removal of any Project facilities**. To obtain such authorization, Southern Star must file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

10. **Within 30 days of completing Project abandonment**, Southern Star should file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been abandoned in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the conditions in the Order Southern Star has complied with or will comply with. This statement should 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. Southern Star shall abandon the Line DS pipeline segments across the Rayne (Tract ID – 19358) and Cubit (Tract IDs – 19365, 24062, 19386, 19386-1) properties by removal and shall include in its Implementation Plan descriptions of the abandonment procedures and construction alignment sheets for these removals. If Southern Star reaches an agreement with either landowner to abandon the pipeline in-place, Southern Star shall file documentation with the Secretary prior to abandonment indicating the landowner’s change in preference for the abandonment method, and then implement the landowner preference at these locations. If Southern Star believes that there are safety or environmental concerns that it has not previously identified that would preclude the removal on either the Rayne and Cubit properties, Southern Star shall file supplemental information and justification with the Secretary and request specific approval from the Director of OEP, or the Director’s designee, to abandon the pipeline in-place.

SECTION E – REFERENCES

Kansas Geological Survey. 2020. WWC5 Water Well Mapper.
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