

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

**Arrow Field Services, LLC
10-Inch & 8-Inch NGL Pipeline Project - McKenzie
Siting Application**

Case No. PU-17-48

**ORDER ON
RECOMMENDED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER
June 30, 2017**

On June 15, 2017, the Substantive Administrative Law Judge filed his Recommended Findings of Fact, Conclusions of Law and Order regarding the application of Arrow Field Services, LLC, a wholly owned subsidiary of Crestwood Equity Partners, LP (Crestwood) for a certificate of corridor compatibility and a route permit for approximately 2.6-miles of 8-inch natural gas liquids (NGLs) and 2.6 miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota.

On June 19, 2017, Commission staff requested further information from the company regarding how the proposed project differs from previous projects that resulted in spills, and what the company has done to prevent future spills.

On June 21, 2017, Crestwood responded to the request by letter. Crestwood explained how the proposed project differs from previous projects that resulted in spills, and what the company has done to prevent future spills. Crestwood stated that it has no objection to the information provided in the letter being included as record evidence in this matter.

Order

The evidence of record has been considered and appraised.

The Commission Orders:

1. Arrow's June 21, 2017 response letter is made a part of the evidence of record in this proceeding.
2. The Hearing Officer's June 15, 2017 Recommended Findings of Fact, Conclusions of Law and Proposed Order, a copy of which is attached to and made a part of this Order, is ADOPTED as the Public Service Commission's Findings of Fact, Conclusions of Law and Order, with the following additional Findings of Fact:

45. During the hearing Evan Whiteford, a representative from Labors International Union of North America appearing as a member of the public, testified that Arrow and its parent company, Crestwood Equity Partners, LP (Crestwood), have a history of spills in North Dakota, including a million-gallon spill in July 2014.

46. In a filing received on June 20, 2017, Crestwood responded that the previous projects were acquired, and not constructed by Crestwood. Crestwood

stated that the pipelines of concern were gathering pipelines constructed with Fiberspar pipe; whereas, this proposed pipeline will be a transmission pipeline constructed from API 5L X42 steel pipe with a wall thickness of 0.365 inches. The proposed pipeline will have a system that monitors volumes and pressures, which the other pipelines did not have at the time they were acquired. External protective coating and cathodic protection will be used with the proposed project to prevent corrosion. All welds will be x-rayed and the proposed project will be hydrostatically tested prior to being placed in service. Crestwood reports that subsequent to the July 2014 gathering system pipeline spill, the following safety, operational and environmental improvements have been made to the system:

- Inspection of all valve cans;
- Removed air release valves to eliminate connections similar to the one involved in the July 2014 incident;
- Installed 39+ additional check valves (back flow preventers) throughout the gathering system;
- Installed Flexsteel for all new produced water pipeline segments;
- Hydrostatically tested segments of the pipeline;
- Increased monitoring of the pipeline with biweekly aerial patrols to check for potential releases;
- Ensure monitoring of the pipeline through daily patrols by field operators (many of whom traverse the entire Pipeline more than once each day) to check for potential releases;
- Developed and implemented new training and operational policies and procedures for staff and personnel;
- Developed, installed and implemented a remote monitoring system that measures the volume and pressure of produced water at different points and that transmits data to Crestwood's computer terminals approximately every twenty minutes;
- Decreased maximum operating pressures on the pipeline;
- Performed an Overland Spill Modeling of the pipeline to assess the extent of hypothetical releases of produced water to prioritize ongoing mitigation efforts that will result in the replacement of 41.6 miles by the end of 2017 (18.3 miles already completed) of pipe to reduce the risk of a future release impacting streams and water bodies; and
- Regularly monitor remediation efforts in the field and communicate with affected tribal, local, state and federal parties.

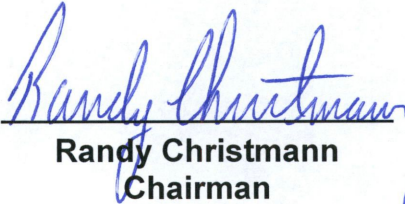
3. Certificate of Corridor Compatibility No. 199 is issued to Arrow Field Services, LLC designating a Corridor for the construction, operation, and maintenance of approximately 2.6-miles of 8-inch natural gas liquids (NGLs) and 2.6 miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota.

4. Route Permit No. 210 is issued to Arrow Field Services, LLC designating a Corridor for the construction, operation, and maintenance of approximately 2.6-miles of 8-inch natural gas liquids (NGLs) and 2.6 miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota. The designated route for this purpose is depicted in Appendix A of Hearing Exhibit 1.

PUBLIC SERVICE COMMISSION



Brian Kroshus
Commissioner



Randy Christmann
Chairman



Julie Fedorchak
Commissioner

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Certificate of Corridor Compatibility Number 199

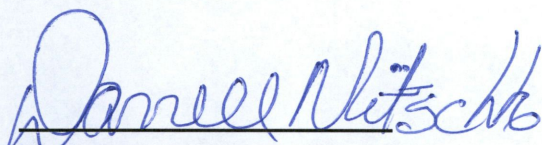
This is to certify that the Commission has designated a transmission facility corridor for Arrow Field Services, LLC, for the construction of approximately 2.6-miles of 8-inch natural gas liquids (NGLs) and 2.6 miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota.

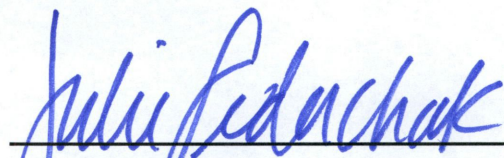
This certificate is issued in accordance with the Order of this Commission dated June 30, 2017 in Case No. PU-17-48 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, June 30, 2017.

ATTEST:

PUBLIC SERVICE COMMISSION


Executive Secretary


Commissioner

**PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA**

Route Permit Number 210

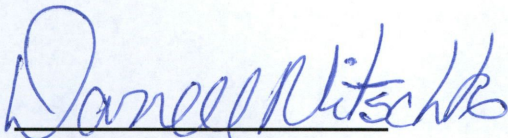
This is to certify that the Commission has designated a transmission facility route for Arrow Field Services, LLC, for the construction of approximately 2.6-miles of 8-inch natural gas liquids (NGLs) and 2.6 miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota.

This certificate is issued in accordance with the Order of this Commission dated June 30, 2017 in Case No. PU-17-48 and is subject to the conditions and limitations noted in the Order.

Bismarck, North Dakota, June 30, 2017.

ATTEST:

PUBLIC SERVICE COMMISSION


Executive Secretary


Commissioner



Timothy J. Dawson
DIRECTOR

OFFICE OF ADMINISTRATIVE HEARINGS

STATE OF NORTH DAKOTA

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June 14, 2017



John Hamre
Public Service Commission
600 East Boulevard Avenue – Dept. 408
Bismarck, ND 58505-0480

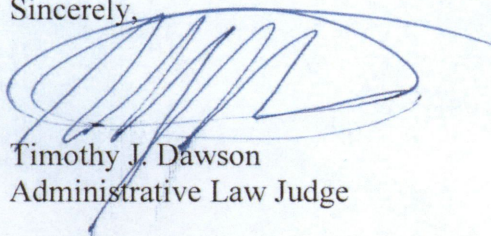
RE: Arrow Field Services / PU-17-048
OAH File No. 20170123

Dear Mr. Hamre:

Enclosed please find the Recommended Findings of Fact, Conclusions of law, and Order in the Arrow Field Services matter which was held in accordance with the Notice of Filings and Public Hearing on May 19, 2017, at Teddy’s Residential Suites, Watford City, North Dakota.

I will provide you with a closing letter upon the issuance of an order by the Public Service Commission.

Sincerely,


Timothy J. Dawson
Administrative Law Judge

Enclosures

Cc: Danielle Krause, counsel for Arrow Field Services

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Arrow Field Services, LLC
10-inch & 8-inch NGP Pipeline – McKenzie County
Siting Application

Case No. PU-17-048

RECOMMENDED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

June 14, 2017

Appearances

Danielle M. Krause, Attorney at Law, Fredrikson & Byron, P.A., 1133 College Drive, Suite 1000, Bismarck, North Dakota 58501, on behalf of Arrow Field Services, LLC.

John Schuh, Special Assistant Attorney General, Legal Counsel for Public Service Commission, 600 E. Boulevard, Dept. 408, Bismarck, North Dakota 58505.

Timothy J. Dawson, Administrative Law Judge, Office of Administrative Hearings, 2911 North 14th Street, Suite 303, Bismarck, North Dakota 58503, as Substantive Hearing Officer.

Preliminary Statement

On January 23, 2017, Arrow Field Services, LLC (Arrow), filed with the North Dakota Public Service Commission (Commission) a consolidated application for a Certificate of Corridor Compatibility and Route Permit (Application) for an approximately 2.6-mile, 8-inch natural gas liquids (NGLs) and a 2.6-mile, 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota (Project). The Project will be installed in the same ditch and right-of-way extending from a proposed natural gas processing plant (Plant) to a third-party transmission pipeline and NGL facility in McKenzie County, North Dakota.

Also on January 23, 2017, Arrow filed an application for waiver of procedures and time schedules established under North Dakota Century Code sections 49-22-07.2, 49-22-08, 49-22-08.1, 49-22-13, and North Dakota Administrative Code chapter 69-06-06 and section 69-06-01-02, requiring separate filings and applications for a certificate of corridor compatibility and a route permit, separate notice of such applications, separate hearings on such applications, and certain time schedules.

On March 15, 2017, the Commission deemed Arrow's Application complete and issued a Notice of Filings and Public Hearing (Notice) scheduling a public hearing for May 19, 2017, at 11:00 a.m. CST, at Teddy's Residential Suites, 113 9th Ave. SW, Watford City, North Dakota 58854.

The Notice identified the following issues to be considered with respect to the application for waiver of procedures and time schedules:

1. Are the proposed facilities of such length, design, location, or purpose that they will produce minimal adverse effects and that adherence to applicable procedures and time schedules may be waived?
2. Is it appropriate for the Commission to waive any procedures and time schedules as requested in the application?

The Notice identified the following issues to be considered with respect to the Application:

1. Will the location and operation of the proposed facilities produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?
2. Are the proposed facilities compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility locations minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On May 19, 2017, the hearing was held as scheduled.

Having allowed all interested persons an opportunity to be heard, and having heard, reviewed and considered all testimony and evidence presented, the Hearing Officer makes the following:

Findings of Fact

1. Arrow is a Delaware limited liability company authorized to do business in the State of North Dakota, as evidenced by the corporate papers filed with the Commission in Case No. PU-11-117.
2. The Project, in connection with the proposed natural gas processing plant and associated gathering system, will provide for enhanced recovery and utilization of natural gas resources, including NGLs. These facilities will help reduce the volume of nonmarketed natural gas released presently and minimize future releases as more wells are completed and tied into the gathering system. The Project will allow consumer-quality residue gas produced by the Plant to be transported to an existing natural gas transmission pipeline and sent to consumers in North Dakota and nearby states. The Project will allow the NGLs to be transported to a third-party NGL facility for subsequent use in a variety of manufacturing and commercial enterprises.

Size, Type, and Preferred Location of Facility

3. The Project consists of two pipelines, both approximately 2.6 miles in length. The 8-inch NGL and 10-inch residue gas pipeline and associated facilities will be located in McKenzie County, North Dakota.
4. The Project will be located approximately 7.5 miles southeast of Watford City, North Dakota. The 2.6-mile-long, 10-inch residue gas pipeline will extend from the natural gas processing Plant to a third party transmission pipeline. The 8-inch NGL pipeline will extend from the same natural gas processing Plant to a different third party NGL facility. The two pipelines will be located in the same right-of-way (ROW) and installed in the same ditch, with approximately two feet of separation between the pipelines.
5. The proposed pipe for the residue gas line will have a 10.750-inch outside diameter and wall thickness of 0.365-inches for line pipe and 0.500-inches for bore pipe.
6. The maximum operating pressure of the residue gas pipeline will be 1,480 pounds per square inch. The maximum flow rate of the residue gas pipeline will be 30 million cubic feet per day.
7. The proposed pipe for the NGL line will have an 8.625-inch outside diameter and wall thickness of 0.322-inches for line pipe and 0.500-inches for bore pipe.
8. The maximum operating pressure of the NGL pipeline will be 1,440 pounds per square inch. The maximum flow rate of the NGL pipeline will be 5,000 barrels per day.
9. Above-ground facilities for the residue gas pipeline will consist of compressors, a metering station, a block valve, and pig launcher which will be tied directly to the discharge end of the Plant.
10. Above-ground facilities for the NGL pipeline will consist of pumps, a metering station, a block valve, and pig launcher which will also be tied directly to the discharge end of the Plant.
11. Block valves at the tie-in points to the third party natural gas transmission pipeline will have pneumatic controllers and will have emergency shutdown capability.
12. Delivery point equipment will include pig receivers and associated equipment.
13. Selection of the route for the Project was based on a multifaceted approach. Arrow worked with landowners to minimize impacts to the environment and current land uses. Arrow routed the Project to avoid impacts to Exclusion and Avoidance Areas.
14. The design, construction, and operation of the pipeline will be in accordance with the United States Department of Transportation (USDOT) regulations, including USDOT regulations as set forth in 49 Code of Federal Regulations Parts 192 and 195.
15. The total anticipated cost of the Project is approximately \$6.3 million.

Study of Preferred Location

16. SWCA Environmental Consultants (SWCA), on behalf of Arrow, evaluated a one-mile-wide study corridor centered on the route (Study Area) for exclusion and avoidance areas, including federal and state parks, protected and sensitive plants and animals, wildlife, and civil and social structures such as recreational areas, rural homes, and farmsteads.

17. Field surveys were conducted on a typically 200-foot-wide area centered on the route (Survey Area) to inventory any potential resource issues such as wetlands, water bodies, protected species, critical habitats, and/or cultural resources, as depicted in Exhibit 1, Appendix A. Additionally, environmental data collected included information on soils, land use, wetlands and waterbody crossings, noxious weeds, and protected species and habitats.

18. Arrow conducted a Class I cultural resource literature search on the Study Area and a Class III cultural resources field inventory on the Survey Area.

19. The following agencies were contacted by Arrow regarding the Project, pursuant to North Dakota Administrative Code § 69-06-01-05, to which comments were received: the North Dakota Aeronautics Commission (NDAC); North Dakota Department of Health (NDDOH); North Dakota Game and Fish Department (NDGFD); North Dakota Department of Transportation (NDDOT); the North Dakota State Historic Preservation Office (SHPO); North Dakota State Trust Lands Department; the North Dakota State Water Commission; United States Army Corps of Engineers, North Dakota Regulatory Office (USACE); U.S. Federal Aviation Administration; McKenzie County Weed Control; and McKenzie County Planning and Zoning Department.

20. In a response dated November 16, 2016, the U.S. Federal Aviation Administration noted no objection to the Project provided notification of construction or alterations are provided.

21. In a response dated November 16, 2016, the North Dakota Department of Trust Lands noted the section of land directly north of the proposed plant associated with the Project is School Trust Land. The Department of Trust Lands also noted that Arrow has an easement request to cross the land, and the concern is the availability of corridor space for additional pipelines that might serve the proposed gas plant.

22. In a response dated November 17, 2016, the McKenzie County Weed Office required Arrow to complete a weed management plan for approval.

23. In responses dated November 23, 2016, January 4, 2017, and March 20, 2017, the NDDOH recommended that care be taken during construction activity near any water of the state to minimize adverse effects on a water body from disturbance, reclamation, and oil, gas, or fuel spills associated with construction equipment; that a storm water discharge permit may be necessary; that care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality and all spills must be immediately reported to the NDDOH and appropriate remedial actions performed; that the location of the pipeline should select locations that minimize the potential for impacts to human health and the environment during and after construction by

avoiding, when possible, source water protection areas and sensitive surface and groundwater environments; pipeline routes should select areas with natural barriers to both surface and ground waters; human health and the environment should be further protected by developing a spill response plan that emphasizes rapid deployment of prepositioned assets necessary to contain spills and subsequent cleanup; and proper surveillance and monitoring for early detection of leaks should be required.

24. In responses dated November 28, 2016, and January 5, 2017, the USACE noted that a Section 10 and/or Section 404 permit would be required if the Project results in work by navigable waters or discharge of dredged or fill materials into waters of the United States.

25. In responses dated December 2, 2016, and January 17, 2017, the North Dakota State Water Commission noted that no permits relative to the National Flood Insurance Program are required based on the current effective FIRM and State minimum standards. The State Water Commission also noted that initial review may require a conditional or temporary permit for water appropriation. A review of the local groundwater resources showed the Project area does not overlie a major glacial aquifer, and surface water supplies are also limited. The State Water Commission also noted that all waste material associated with the Project must be disposed of properly and not placed in identified floodway areas.

26. In a response dated December 7, 2016, the NDDOT stated the Project should have no adverse effect on the NDDOT highways, but if work needs to be done on highway right of way, appropriate permits and risk management documents need to be obtained.

27. In responses dated December 9, 2016, and January 12, 2017, the NDGFD determined it does not believe the Project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided disturbed areas are reclaimed to pre-project conditions.

28. In a letter dated December 23, 2016, the SHPO determined there has been a good faith effort to identify and avoid impacts to "Significant Sites."

29. In responses dated January 3 and January 9, 2017, the NDAC reviewed the Project and found no known private and public use airports within the Project boundary. The NDAC also noted there would be no adverse impacts to aeronautical purposes. However, the NDAC recommended Arrow complete the Federal Aviation Administration Form for Notice of Proposed Construction or Alteration if any man made obstructions exceed 200 feet.

Siting Criteria

30. The Commission has established criteria pursuant to North Dakota Century Code Section 49-22-05.1 to guide the Commission in evaluating the suitability of granting a certificate of corridor compatibility and route permit. The criteria, as set forth in North Dakota Administrative Code Section 69-06-08-02, are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria.

31. Arrow evaluated the Project for the Exclusion, Avoidance, Selection, and Policy criteria of the Commission.

32. An Exclusion Area may not encompass more than fifty percent of a corridor width unless there is no reasonable alternative. An Exclusion Area must be excluded in the consideration of a route for a transmission facility. A buffer zone of a reasonable width to protect the integrity of an Exclusion Area must be included in the siting of the transmission facility.

33. No Exclusion Areas are present within the Survey Area.

34. An Avoidance Area is a geographic area that may not be considered in the routing of a transmission facility unless the applicant shows that, under the circumstances, there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a transmission facility, the Commission may consider, among other things, the proposed management of adverse impacts, the orderly siting of facilities, system reliability and integrity, the efficient use of resources, and alternative routes.

35. No Avoidance Areas are present within the Survey Area.

36. Wetland surveys were completed for the proposed route. Wetlands and waterbodies are present within the Survey Area and will be crossed by the route. Arrow will take steps to protect wetlands and waterbodies, and no permanent impacts to wetlands or waterbodies are anticipated.

37. In accordance with the Commission's Selection Criteria, a transmission facility route may be approved if it is demonstrated that any significant adverse effects that will result from the location, construction, and maintenance of the transmission facility will be at an acceptable minimum or managed and maintained at an acceptable minimum. Arrow has analyzed the impacts of the Project in relation to all of the relevant Selection Criteria. The Project will have no significant adverse effects on the Commission's Selection Criteria.

38. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits of the transmission facility. Arrow has committed to: designing, constructing, and operating the pipelines in accordance with all applicable federal, state, and local laws and regulations; energy conservation through the facility's location, process, and design; training and utilizing available labor in the state; constructing the Project to take advantage of economies of scale; achieving capacity in the most minimally intrusive and most efficient way

possible; and coordinating with state and local officials. Arrow submitted evidence to demonstrate its commitment to maximize the benefits of the proposed transmission facility to the extent possible so as to meet the Policy Criteria.

Measures to Minimize Impact

39. Arrow testified that it will conduct regular pipeline monitoring, periodic inspection, internal inspections, and aerial patrol inspections as required by the Department of Transportation regulations (DOT).

40. Arrow testified that it will participate in the North Dakota One-Call notification system.

41. Arrow has agreed to a number of steps to mitigate the impact of the Project, as indicated by the executed Certification Relating to Order Provisions – Transmission Facility Siting, with accompanying Tree and Shrub Mitigation Specifications, which is incorporated by reference and attached to this Order.

42. The Project's permanent ROW will typically be 50 feet wide, while its temporary construction ROW will be 100 feet wide.

43. The design, construction, and operation of the Project will be in accordance with the United State Department of Transportation regulations, including U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regulations as set forth in 49 C.F.R. Parts 192 and 195.

44. Arrow will non-destructively test all field welds to ensure structural integrity and compliance with USDOT regulations.

From the foregoing Findings of Fact, the Hearing Officer makes the following:

Conclusions of Law

1. The Commission has jurisdiction over Arrow and the subject matter of the Application under Chapter 49-22 of the North Dakota Century Code.

2. Arrow is a utility as defined in Section 49-22-03(13) of the North Dakota Century Code.

3. The Project is a transmission facility as defined in North Dakota Century Code Section 49-22-03(12).

4. The location, construction, and operation of the Project will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.

5. The location, construction, and operation of the Project are compatible with environmental preservation and the efficient use of resources.

6. The Project will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

7. The Project is of such design and location that it will produce minimal adverse effects, in accordance with Section 49-22-07.2 of the North Dakota Century Code.

8. It is appropriate for the Commission to waive those certain procedures and time schedules as requested in the application for waiver of procedures and time schedules and pursuant to North Dakota Century Code Section 49-22-07.2 and North Dakota Administrative Code Chapter 69-06-06.

From the foregoing Findings of Fact and Conclusions of Law, the Hearing Officer now issues the following:

Recommended Order

1. Arrow Field Services, LLC's application for a waiver of procedures and time schedules is granted.

2. A Certificate of Corridor Compatibility is issued to Arrow Field Services, LLC designating a corridor for the construction, operation, and maintenance of approximately 2.6-miles of 8-inch natural gas liquids pipeline and 2.6-miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota. The Corridor will consist of a typical 200-foot-wide corridor centered on the pipeline route as surveyed, and will also include the additional areas surveyed at the origination and termination points of the Project.

3. A Route Permit is issued to Arrow Field Services, LLC designating a route for the construction, operation, and maintenance of approximately 2.6-miles of 8-inch natural gas liquids pipeline and 2.6-miles of 10-inch residue gas pipeline and associated facilities in McKenzie County, North Dakota. The designated route for this purpose is depicted in Appendix A of Hearing Exhibit 1.

4. The May 17, 2017, Certification Relating to Order Provisions – Transmission Facility Siting (Certification), with accompanying Tree and Shrub Mitigation Specifications, (Hearing Exhibit 2) is incorporated by reference and attached to this Order.

5. To the extent there are any conflicts or inconsistencies between Arrow Field Services, LLC's Applications and the Certification, the Certification provisions control.

6. One year after the Project is placed in service, Arrow Field Services, LLC shall file with the Commission a summary of the status of restoration activities related to the Project, including any restoration-related issues raised by landowners or identified by Arrow Field Services, LLC.

7. If a spill by Arrow Field Services, LLC requires notification to any other state or federal agency Arrow Field Services, LLC shall inform the Commission of such spill within 24 hours of occurrence by leaving a message at the Commission's toll free number, with a follow-up email to the Commission's Executive Secretary.

8. Arrow Field Services, LLC is required to comply with all applicable laws, rules, and/or regulations in the event that it desires to construct another or different transmission facility than was specified in the application.

Dated at Bismarck, North Dakota this 14th day of June, 2017.

State of North Dakota
Public Service Commission



Timothy L. Dawson
Administrative Law Judge
Office of Administrative Hearings
2911 North 14th Street – Suite 303
Bismarck, North Dakota 58503

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Arrow Field Services, LLC
10-Inch & 8-Inch NGP Pipeline Project - McKenzie
Siting Application

Case No. PU-17-48

CERTIFICATION RELATING TO ORDER PROVISIONS
TRANSMISSION FACILITY SITING

I am Robbie R. McDonough a representative of Arrow Field Services LLC ("Company") with authority to bind Company to requirements to be set forth by the Commission in its Order and I certify the following:

1. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission will be subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.
2. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the transmission facility including all city, township, and county zoning regulations.
3. Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the transmission facility that requires said license or permit.
4. Company understands and agrees that any Certificate of Corridor Compatibility or Route Permit issued by the Commission is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to comply with the Commission's order, the conditions and criteria of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.
5. Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission's order issuing a Certificate of Corridor Compatibility or Route Permit, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.
6. Company understands and agrees that the authorizations granted by any Certificate of Corridor Compatibility or Route Permit issued by the Commission for

the transmission facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.

Construction:

7. Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.
8. Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.
9. Company understands and agrees that topsoil removal will begin when the Commission's third-party construction inspector is present at the Project site to observe that topsoil is properly removed and kept segregated from subsoil until replacement occurs. Company shall establish the date and time for the Commission's third-party construction inspector's topsoil removal oversight in the preconstruction conference.
10. Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the transmission facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated on construction activities on a monthly basis.
11. Company understands and agrees that the pipeline will be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in range land, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.
12. Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be carefully stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. The stripped topsoil must not be stockpiled in natural drainages, and must be protected from water erosion. Care must be taken to protect topsoil from unnecessary compaction by heavy machinery. Unless otherwise approved by the Commission, topsoil must be removed before topsoil freezes in the late fall/ early winter to the point that frost inhibits proper soil segregation. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.

13. Company understands and agrees that all buried facility crossings of graded roads must be bored unless the responsible governing agency specifically permits Company to open cut the road.
14. Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.
15. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made and a report of such examination is filed with the Commission and the State Historical Society.
16. Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures are taken by Company.
17. Company understands and agrees that the Commission has authority to stop Project construction activities in the event of a probable violation of the siting laws, siting rules, or applicable Commission Orders if, in the opinion of the Commission, construction activities are likely to result in irreparable or significant harm.

Restoration and Maintenance:

18. Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.
19. Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the transmission facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.
20. Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.

21. Company will fulfill its obligation for reclamation and maintenance of the approved transmission facility right-of-way, transmission facility, and associated facilities continuing throughout the life of the transmission facility.
22. Company will repair all fences and gates removed or damaged during all phases of construction and operation of the transmission facility.
23. Company will repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility.
24. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.
25. Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.
26. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the transmission facility.

Communication with Landowners and PSC:

27. Company understands and agrees that, prior to beginning construction of the transmission facility at a location, it shall send a letter to each landowner with whom an easement was executed for that location specifying the name and phone number of the company representative who is responsible for receiving and resolving landowner issues for the life of the easement.
28. Company understands and agrees that it will file with the commission the name and phone number of the current company representative who is responsible for receiving and resolving landowner issues for the transmission facility. The company will update this information whenever there is a change to the current company representative for the life of all easements for the transmission facility.
29. Upon request, Company agrees to provide the Commission with engineering design drawings of the transmission facility prior to construction.
30. Company understands and agrees that it shall advise the Commission as soon as reasonably possible of any extraordinary events which take place at the site of the transmission facility, including injuries to any person.
31. Company agrees to report to the Commission, as soon as reasonably possible, the presence in the permit area of any critical habitat or threatened or endangered species of which Company becomes aware and which were not previously reported to the Commission.

32. Company understands and agrees that it shall inform the Commission in writing of any plans to modify the transmission facility or of any plans to modify the site plan for the transmission facility.
33. Company agrees to provide the Commission with both an electronic and a paper copy of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.
34. Company shall notify the Commission as soon as reasonably possible if any damage, as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined.

Route Adjustments Before or During Construction:

35. Company agrees to utilize the following procedures if Company seeks a route adjustment before or during construction of the pipeline, pursuant under N.D.C.C. §49-22-16.3:
36. Company will specifically identify which subsection of NDCC 49-22-16.3 it is requesting the adjustment under. Company will file the name and contact information for a key contact person for the purposes of notice and communication during the adjustment application.
37. **ROUTE ADJUSTMENT WITHIN DESIGNATED CORRIDOR, NO AVOIDANCE AREA AFFECTED:** Before conducting any construction activities for any adjustment to the designated route within the designated corridor under NDCC 49-22-16.3(1), the Company will file:

- a. Certification and supporting documentation affirming that construction activities will be within the designated corridor, will not affect any known exclusion or avoidance areas within the designated corridor;
 - b. Certification and supporting documentation, including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying the designated corridor, route and the route adjustment;
 - c. Certification that Company will comply with the Commission's order, law and rules designating the corridor and route.
38. **ROUTE ADJUSTMENT WITHIN DESIGNATED CORRIDOR, AVOIDANCE AREA AFFECTED:** Before adjusting the route of a gas or liquid transmission line under NDCC 49-22-16.3(2), within the designated corridor that may affect an avoidance area, and before conducting any construction activities for any adjustment to the designated route within the designated corridor, the Company will file:
- a. A specific description of the avoidance area expected to be impacted, including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying:
 - i. the designated corridor, route and the route adjustment;
 - ii. all exclusion and avoidance areas within the portion of the designated corridor containing the route adjustment
 - b. Certification and supporting documentation affirming:
 - i. That construction activities will be within the designated corridor
 - ii. That construction activities will not affect any known exclusion area
 - c. All field studies performed on the portion of the designated corridor containing the route adjustment;
 - d. Specific information about any mitigation measures Company will take within the adjustment area;
 - e. Certification that each owner of real property on which the adjustment is to be located and any applicable governmental entity with an interest in the same adjustment area do not oppose the adjustment;
 - f. Certification that unless the Commission previously authorized the impact to the same avoidance area, that the utility has good cause and a specific reason to impact the avoidance area and a reasonable alternative does not exist;
 - g. Certification that Company will comply with the Commission's order, law and rules designating the corridor and route.

Company acknowledges and agrees that:

1. Written authorization from the Commission for impacting the avoidance area is necessary prior to commencement of construction activity unless the Commission fails to act within ten working days of receipt of filing a complete adjustment application, in which case the adjustment is deemed approved.
2. The initiation of the ten working days begins upon receipt of a complete filing, to include Company's certifications, supporting documentation and maps. However, Commission may extend the ten working day provision if Company, in the person of the key contact referenced above, is informed of the reason additional time is necessary for extension and has no objection to an extension.

39. **ROUTE ADJUSTMENT OUTSIDE DESIGNATED CORRIDOR, NO AVOIDANCE AREA AFFECTED:** Before adjusting the route of a gas or liquid transmission line under NDCC 49-22-16.3(3), outside the designated corridor and not affecting any exclusion and avoidance area, before conducting any construction activities for any adjustment to the designated route outside the designated corridor, the Company will file:

- a. Certification and supporting documentation affirming that construction activities will not affect any known exclusion or avoidance areas,
- b. Certification and supporting documents stating the length of the proposed route outside of the corridor and a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying the designated corridor, corridor adjustment, designated route and the route adjustment;
- c. Certification that each owner of real property on which the adjustment is to be located and any applicable governmental entity with an interest in the same adjustment area do not oppose the adjustment; and
- d. Detailed field studies indicating exclusion and avoidance areas for the proposed adjustment area; and
- e. Certification that Company will comply with the Commission's order, law and rules designating the corridor and route.

40. **ROUTE ADJUSTMENT OUTSIDE DESIGNATED CORRIDOR, AVOIDANCE AREA AFFECTED:** Before adjusting the route of a gas or liquid transmission line under NDCC 49-22-16.3(4), outside the designated corridor that may affect an avoidance area, and before conducting any construction activities for any adjustment to the designated route outside the designated corridor, the Company will file:

- a. A specific description of the avoidance area expected to be impacted, including a map meeting the requirements of N.D. Admin. Code § 69-06-04-01(2)(n) identifying:

- i. the designated corridor, corridor adjustment, route and the route adjustment;
- ii. all exclusion and avoidance areas within the adjustment area
- b. Certification that construction activities will not affect any known exclusion area;
- c. Certification that the utility has good cause and a specific reason to impact the avoidance area and a reasonable alternative does not exist within the designated corridor and route;
- d. Certification that each owner of real property on which the adjustment is to be located and any applicable governmental entity with an interest in the same adjustment area do not oppose the adjustment;
- e. Provide specific information about any mitigation measures Company will take within the adjustment area;
- f. Detailed field studies indicating exclusion and avoidance areas for the proposed adjustment area; and
- g. Certification that Company will comply with the Commission's order, law and rules designating the corridor and route.


Company acknowledges and agrees that:

- 1. Written authorization from the Commission for impacting the avoidance area is necessary prior to commencement of construction activity unless the Commission fails to act within ten working days of receipt of filing a complete adjustment application, in which case the adjustment is deemed approved.
- 2. The initiation of the ten working days begins upon receipt of a complete filing, to include Company's certifications, supporting documentation and maps. However, Commission may extend the ten working day provision if Company, in the person of the key contact referenced above, is informed of the reason additional time is necessary for extension and has no objection to an extension.

41. When applicable, Company may submit the field studies from the original application for the corridor and route provided they cover the adjustment area.

Dated this 17 day of May, 2017.

COMPANY NAME

By 
Robbie R. McDonough

Its VP, Land & Gov't Relations

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Arrow Field Services, LLC
10-Inch & 8-Inch NGL Pipeline Project - McKenzie
Siting Application

Case No. PU-17-48

Tree and Shrub Mitigation Specifications

Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (e.g., *Caragana arborescens*, *Elaeagnus angustifolia*, *Rhamnus cathartica*, *Tamarix chinensis*, *T. parviflora*, *T. ramosissima*, *Ulmus pumila*), must be inventoried before cutting. The inventory must record the location, number, and species of trees and shrubs.
2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.
3. In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height (dbh) or greater must be inventoried for replacement.
4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.
5. In native growth areas outside the permanent right-of-way, shrubs must be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil must be preserved and replaced after construction. Shrubs must be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared must be inventoried for replacement.
6. In native growth areas, trees and shrubs may be inventoried by actual count or by a sampling method that will properly represent the woody vegetation

population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (Commission) and approved prior to the start of construction must define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots must be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

Clearing for Construction

7. Trees and shrubs must be selectively cleared, leaving mature trees and shrubs intact where practical.
8. The maximum width of clear cuts through windbreaks, shelterbelts and all other wooded areas is 50 feet, unless otherwise approved by the Commission.
9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced must be noted on the inventory.

Replacement

10. Prior to tree and shrub replacement, documentation identifying the number and variety of trees and shrubs removed, as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings, must be filed with the Commission for approval.
11. Two 2-year-old saplings must be planted for every one tree removed. Two shrubs (stem cuttings) must be planted for every one shrub removed.
12. Except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service. Invasive or noxious species must be replaced by similar non-invasive or non-

noxious species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

13. Tree and shrub replacement must not be conducted within a 20 to 30 foot wide path over the pipeline to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.
14. Landowners must be given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. The landowner must also be given the opportunity to waive those options in writing in order to have replacement trees and shrubs planted off the landowner's property.
15. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings must be filed with the Commission.
16. Tree and shrub replacements must be inspected annually, in September, for three years. The first annual inspection must be at least one year from the anniversary date of the original plantings. A report of each annual inspection must be submitted to the Commission by October 1 of each year, documenting the condition of plantings and any woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75%, the Commission may order additional planting(s).