



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

MAR 02 2012

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: ^{ACTING} Regional Director, Great Plains Region

SUBJECT: Supplemental to Environmental Assessment

A Categorical Exclusion has been completed in compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended. The proposed Supplemental Categorical Exclusion is for information tiering off of an existing Environmental Assessment for Arrow Pipeline, LLC, and authorizes the Arrow Phase 1 Loop Natural Gas Pipeline in the previously approved right-of-way on the Fort Berthold Reservation.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the Categorical Exclusion.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Tex Hall, Chairman, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, THPO (with attachment)
Derek Enderud, BLM, Dickinson, ND (with attachment)
Mike Cook, SWCA (with attachment)
John Shelman, US Army Corps of Engineers
Jeffrey Hunt, Fort Berthold Agency



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EXCEPTION CHECKLIST FOR BIA CATEGORICAL EXCLUSIONS

Project: Arrow Phase 1 Loop Natural Gas Pipeline Date: 3/1/2012

Nature of Proposed Action: A signed categorical exclusion checklist would authorize Arrow Pipeline, LLC (Arrow) to construct and install a single pipeline which would transfer primarily natural gas, but also small amounts of natural gas liquids and water due to condensation. The proposed pipeline would be constructed entirely within the previously approved 100-foot-wide ROW on trust lands within the Fort Berthold Indian Reservation. The pipeline would originate from the west side of the proposed Arrow Phase 1B Highway 22 South Compressor and Pump Station (CPS) and traverse north and then west adjacent to the existing AMHP for approximately 64,499 feet (12.22 miles). Approximately 6.97 miles (non-contiguous) of the proposed alignment would be constructed within the approved ROW on trust land. The remaining 5.25 (non-contiguous) miles of pipeline would be constructed on fee land. The project would terminate at the Arrow CDP, a storage and shipping facility, located outside of the exterior boundaries of the Fort Berthold Indian Reservation. This document is tiered to Environmental Assessment and Finding of No Significant Impact; Arrow Midstream Holdings, LLC Oil and Gas Gathering System (March 2009).

Exclusion category and number: 516 DM 10.5 F (1) Rights-of-Way

Evaluation of Exceptions to use of Categorical Exclusion:

1. This action would have significant adverse effects on public health or safety. No X Yes _____
2. This action would have an adverse effect on unique geographical features, such as wetlands, wild or scenic rivers, refuges, floodplains, rivers placed on nationwide river inventory, or prime or unique farmlands. No X Yes _____
3. The action will have highly controversial environmental effects. No X Yes _____
4. The action will have highly uncertain environmental effects or involve unique or unknown environmental risks. No X Yes _____
5. This action will establish a precedent for future actions. No X Yes _____
6. This action is related to other actions with individually insignificant, but cumulatively significant environmental effects. No X Yes _____
7. This action will affect properties listed or eligible for listing in the National Register

- No X Yes _____
8. This action will affect a species listed, or proposed to be listed as endangered or threatened. No X Yes _____
9. This action threatens to violate federal, state, local or tribal law or requirements imposed for protection of the environment. No X Yes _____
10. This action will have a disproportionately high and adverse effect on low income or minority populations. No X Yes _____
11. This action will limit access to, and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners, or significantly adversely affect the physical integrity of such sacred sites. No X Yes _____
12. This action will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or may promote the introduction, growth, or expansion of the range of such species. No X Yes _____

A "yes" to any of the above exceptions will require that an EA be prepared.

NEPA Action - - - CE X EA _____

Preparer's Name and Title: Jeffrey Davis, Environmental Protection Specialist

Regional Archeologist Concurrence with Item 7 Jason B. M...

Concur: Jeffrey Davis Date: 3-1-2012
Regional Office/Agency Environmental Coordinator

Concur: Jim Labonte Date: 3-2-2012
ACTING Regional Director/Superintendent

Categorical Exclusion with Pertinent Analysis Documentation

United States Bureau of Indian Affairs

**Great Plains Regional Office
Aberdeen, South Dakota**



Arrow Pipeline, LLC

Categorical Exclusion to Authorize Land Use for the Arrow Phase 1 Loop Natural Gas Pipeline

Fort Berthold Indian Reservation

March 2012

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources Management
115 4th Avenue SE, Aberdeen, South Dakota 57401
(605) 226-7656

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1. Purpose and Need for the Proposed Action

The purpose of the proposed action is to authorize the land use by Arrow Pipeline, LLC (Arrow) for the construction and installation of the Phase 1 Loop Natural Gas pipeline (pipeline). The proposed pipeline would be located entirely within the previously approved 100-foot-wide construction right-of-way (ROW) of the Arrow Midstream Holdings Pipeline (AMHP) and would transport natural gas from producing wells to markets.

Developments have been proposed on land held in trust by the United States in McKenzie County, North Dakota. The Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The economic development of available resources and associated BIA actions are consistent with the BIA's general mission. Leasing and development of mineral resources offer substantial economic benefits to the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nations and to individual tribal members.

2. Authorities

Oil and gas exploration and development activities are conducted under authority of the Indian Mineral Leasing Act of 1938 (25 United States Code [USC] 396a, et seq.), the Indian Mineral Development Act of 1982 (25 USC 2101, et seq.), and the Energy Policy Act of 2005 (42 USC 15801, et seq.).

3. Legal Land Description for Proposed Action

The pipeline would be located on trust and fee lands originating from the proposed Arrow Phase 1B Highway 22 South Compressor and Pump Station, in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 15, Township (T) 149 North (N), Range (R) 94 West (W), 5th Prime Meridian (P.M.), McKenzie County, North Dakota, and terminate at the Arrow Central Delivery location (CDP) in the NW $\frac{1}{4}$, NW $\frac{1}{4}$ of Section 20, T150N, R95W, 5th P.M., McKenzie County, North Dakota, approximately 10.5 miles northwest of Mandaree, North Dakota (Figure 1). The proposed pipeline would traverse trust lands in Sections 15, 10, 9, and 8, T149N, R94W; through fee land in Section 5, T149N, R94W; then through trust lands in Sections 32, 29, 30, and 19, T150N, R94W, and Section 24, T150N, R95W. The pipeline would continue trending west on fee lands in Sections 23, 22, 21, and 20, T150N, R95W, until terminating at the existing CDP in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 20, T150N, R95W, 5th P.M., McKenzie County, North Dakota.

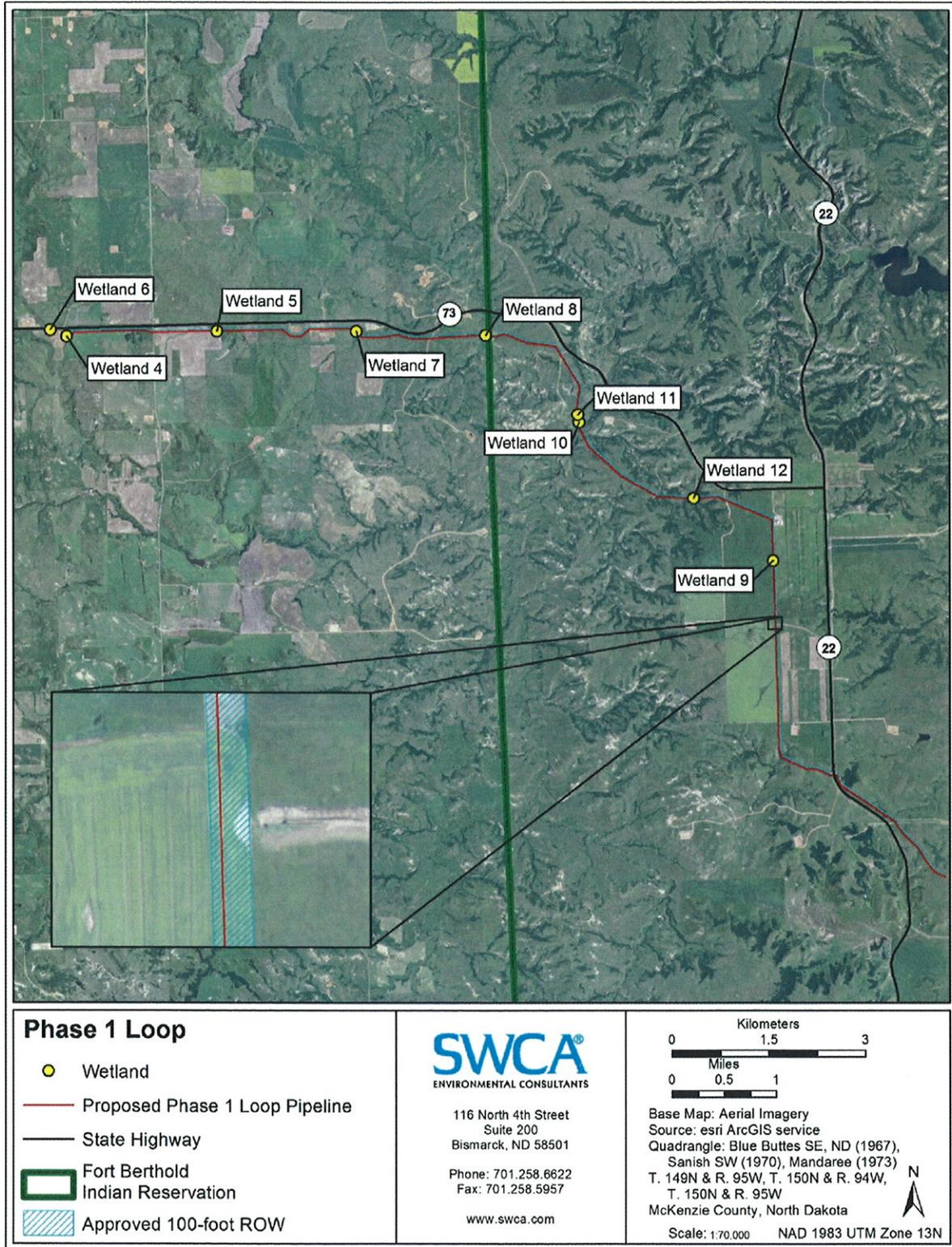


Figure 1. Map of the proposed Phase 1 Loop Natural Gas Pipeline. Note: Inset map shows relationship of proposed pipeline centerline to overall approved AMHP ROW.

4. Scope of Work for Proposed Action

Arrow proposes to construct and install a single pipeline which would transfer primarily natural gas, but also small amounts of natural gas liquids and water due to condensation. The proposed pipeline would be constructed entirely within the previously approved 100-foot-wide ROW on trust lands within the Fort Berthold Indian Reservation. The pipeline would originate from the west side of the proposed Arrow Phase 1B Highway 22 South Compressor and Pump Station (CPS) and traverse north and then west adjacent to the existing AMHP for approximately 64,499 feet (12.22 miles). Approximately 6.97 miles (non-contiguous) of the proposed alignment would be constructed within the approved ROW on trust land. The remaining 5.25 (non-contiguous) miles of pipeline would be constructed on fee land. The project would terminate at the Arrow CDP, a storage and shipping facility, located outside of the exterior boundaries of the Fort Berthold Indian Reservation.

The pipeline would be constructed of new steel and buried in either a 2.5-foot-wide or a 5.0-foot-wide trench. The outside diameter of the pipe would be no greater than 12.75 inches. Approximately 64,499 feet of new steel pipe would be needed to connect the proposed Arrow CPS to the CDP (Appendix A). All construction (temporary) and permanent surface disturbance would occur within a 30-foot-wide ROW, i.e., 15 feet on each side of the proposed centerline and entirely within the previously approved 100-foot-wide ROW of the AMHP. To avoid any disturbance to the existing AMHP, the Phase 1 Loop pipeline would be located approximately 20 feet from the existing AMHP centerline. No additional surface disturbance outside of the approved ROW would occur.

5. Materials Information and Corrosion Rates

Arrow proposes to construct the pipeline using new steel pipe rated by the American Petroleum Institute (API) as API 5L X52. Arrow would ensure that each steel pipe segment is coated with approximately 14 to 16 millimeters of fusion bonded epoxy coating. Further, Arrow would deploy an active cathodic protection system for all steel pipe, which further reduces the likelihood of external corrosion. Arrow would ensure that each steel pipe segment is allotted a 1/16-inch corrosion allowance; however, because of the non-corrosive nature of Bakken crude and the low concentrations of hydrogen sulfide, Arrow does not anticipate any external or internal corrosion during the operating lifetime of the pipe, which, at a minimum, is estimated to be 50 years.

6. Pipeline Marking Procedures

Arrow adheres to the requirements of Title 49 Code of Federal Regulations (CFR) Part 192.707 with regard to the marking of buried pipelines. Specifically, Arrow would place pipeline markers within 1,000 feet of one another, at all public road crossings, railroad crossings, creek crossings, fence crossings, and at all points of major direction change.

7. Quality Control/Quality Assurance Measures

Arrow purchases steel pipe that is rated as API 5L X52 and inspects all pipe while at the mill to ensure quality. Arrow is also present to ensure that external epoxy coating is applied to a

minimum thickness of 14 millimeters. During construction, all welds are visually inspected for quality and completeness by qualified professionals. Once welds have passed visual inspection, they are subjected to 100 percent non-destructive testing. After passing these tests, the weld areas are covered for corrosion protection. After the weld areas have been covered, the external coating of the pipe is inspected using a jeepmeter to detect holes and cracks. The pipe is lowered into the trench and buried. Prior to being put into service, the steel pipe is hydrotested to approximately 1.5 times the minimum design pressure of 1,180 pounds per square inch gauge.

8. Valve Locations

Two valves would be installed at each end of the proposed pipeline. One valve would be installed at the well location while the second valve would be installed at the proposed tie-in. The installation of two valves would allow Arrow to isolate the proposed pipeline if required.

9. Reclamation

Interim Reclamation

Reclamation would continue to occur over the life of the pipeline. Initial reclamation would be required after initial construction and then following any maintenance work or additions of infrastructure. Reclamation would be required before final abandonment of the decommissioned pipeline. Successful reclamation would at all times be the responsibility of the system's operator.

Trenches would be back-filled immediately after the pipe is installed and testing is complete, assuming frozen or saturated soils are not present. Back-fill piles would be stored opposite of the topsoil piles during construction. If construction occurs during winter, Arrow would partially fill the trench with useable, non-frozen, back-fill soil to the extent possible and cover the entire ROW including the trench with straw. The trench would be back-filled and topsoil distributed as soon as practicable after the soil has defrosted. Topsoil piles would be covered to eliminate the potential for rill erosion and subsequent loss of soil during spring snow melt and precipitation events.

Applicable short- and long-term best management practices would be used to minimize and control erosion in disturbed areas. To reduce compaction, the ROW would be plowed before the stockpiled topsoil is distributed.

The disturbed areas would be reclaimed and contoured as soon as possible after construction is complete (fall/spring). The ROW would be covered with stockpiled topsoil and seeded with a seed mixture determined by the BIA. Arrow would control noxious weeds within the ROW and other applicable facilities by approved chemical or mechanical methods. If seeding of the ROW does not occur due to growing season constraints, Arrow would deploy approved weed-free hay across the entire ROW. The presence of hay across the ROW would reduce the potential for excessive erosion as a result of spring snow melt and precipitation.

The entire ROW would be monitored for erosion, subsidence, and noxious weeds. In areas where problems are found to occur, reclamation efforts would continue until the BIA feels the ROW is successfully reclaimed. Reclamation is considered successful when:

- seeded areas are established;
- adjacent vegetative communities spread back into the disturbed areas; and
- noxious weeds are under control.

If after two growing seasons the new seeding is not successful, the BIA may require additional efforts to establish vegetation. For noxious weeds, a survey was conducted on the ROW prior to the construction commencing. The BIA has developed a weed management plan to treat known or likely to occur noxious weed species.

Final Reclamation

Final reclamation would occur when the pipeline is decommissioned. All disturbed areas would be reclaimed, reflecting the BIA’s view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed. Access roads and work areas would be leveled or backfilled as necessary, scarified, recontoured, and seeded. Exceptions to these reclamation measures might occur if the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees. It is economically and environmentally unfeasible to excavate and remove the decommissioned pipelines. Instead, the pipelines would be purged with water of any natural gas remaining in the lines and abandoned in place.

10. Surveys

The AMHP ROW has been surveyed for impacts to natural and cultural resources with no significant findings. SWCA identified nine wetlands during the field surveys of the AMHP ROW (see Figure 1). In order to be consistent with the conditions of approval provided in the applicable National Environmental Policy Act (NEPA) document (see Section 11) Arrow would be required to directionally drill the four wetlands listed in Table 1. Construction would temporarily disturb vegetation in Wetlands 4, 5, 6, 7, and 12, but no long-term or permanent impacts are expected.

Table 1. Wetland Bore/Horizontal Directional Drill Locations.

Wetland ID	Location	Affected Resource	Crossing Length (feet)
8	NW¼ NW¼ Sec. 24, T150N, R95W	Handy Water Creek	420
9	SE¼ NE¼ Sec. 32, T150N, R94W	Palustrine Emergent Wetland in cultivated field	415
10	NW¼ NW¼ Sec. 30, T150N, R94W	Bear Den Creek	65
11	SW¼ SW¼ Sec. 19, T150N, R94W	Handy Water Creek	75

In total, approximately 44.42 acres of the previously approved AMHP ROW would be disturbed, including approximately 25.36 acres on trust land, as a result of activities

associated with the construction of the proposed pipeline. Pipeline plats are provided in Appendix A.

The cultural resource inventory of the AMHP ROW was conducted by SWCA Environmental Consultants, using an intensive pedestrian methodology. Approximately 331 acres were inventoried during field surveys in 2008 (Markman et al. 2009¹). A representative of the Three Affiliated Tribes Historic Preservation Office identified five areas of cultural consideration within the survey corridor. Avoidance of these five locations was recommended during the field inventory, and a new route was inventoried that successfully avoids these resources. One archaeological site was revisited that may retain the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion in the National Register of Historic Places. On the basis of the information provided, the BIA reached a determination of no historic properties affected for this undertaking, as the archaeological site will be avoided. This determination was communicated to the Tribal Historic Preservation Officer (THPO) on February 13, 2009, and the THPO concurred on February 18, 2009.

11. Applicable NEPA Document(s)

Environmental Assessment and Finding of No Significant Impact: Arrow Midstream Holdings, LLC Oil and Gas Gathering System (March 2009).

12. NEPA Adequacy Criteria

This document has identified the above-mentioned previously prepared NEPA document, which adequately describes the environmental consequences of the newly proposed action described herein and meets the following NEPA Adequacy Criteria.

1. The proposed action is substantially the same action and at the site specifically analyzed in the existing NEPA document.
2. The range of alternatives is reasonable with respect to the current proposed action in the existing NEPA document, which appropriately considers and analyzes current environmental concerns, interests, and resource values.
3. The existing analysis and conclusions are adequate in the existing NEPA document. The analysis is still valid in light of new studies or resource assessment information.
4. The methodology and analytical approach used in the existing NEPA document continues to be appropriate for the proposed action.
5. The direct and indirect impacts of the proposed action are unchanged from those identified in the existing NEPA document.
6. The cumulative impacts that would result from implementation of the proposed action are unchanged from those analyzed in the existing NEPA document.

¹ Markman, J.M., K.M. Ferris, E. Salisbury, and S. Slessman. 2009. *A Class I and Class III Cultural Resource Inventory of the Proposed Arrow Pipeline and Compressor Station, Fort Berthold Indian Reservation, McKenzie and Dunn County, North Dakota*. Prepared by SWCA Environmental Consultants for Arrow Midstream Holdings LLC, Tulsa, OK.

7. A 30-day comment period involving public input and interagency review was used in the development of the existing NEPA document.

APPENDIX A
**Plats, Drawings, and Diagrams for the
Arrow Phase 1 Loop Natural Gas Pipeline**