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September 22, 2017

Mr. Don Butler and Mr. Chris Reischman
Crestwood Midstream Partners, L.P.
700 Louisiana Street, Suite 2060
Houston, Texas 77002

RE: Addendum to the Natural Resources Report for the Arrow NB Residue Gas Pipeline and Arrow Bakken NGL Pipeline Project in McKenzie County, North Dakota

Dear Mr. Butler and Mr. Reischman:

SWCA Environmental Consultants (SWCA) conducted a wetland delineation and natural resources assessment on behalf of Arrow Field Services, LLC (Arrow) for the Arrow NB Residue Gas Pipeline and Arrow Bakken NGL Pipeline project on November 15 and 16, 2016 (Belisle 2016). The project, as approved by the State of North Dakota Public Service Commission (Case No. PU-17-48), is located on privately owned lands in McKenzie County, North Dakota, and includes two 2.6-mile-long pipelines in the transmission pipeline corridor: one is a 10-inch-diameter welded steel pipeline, and the other is an 8-inch-diameter welded steel pipeline. A reroute expansion is proposed to shift the centerline farther from the existing pipeline and encompasses a 0.22-mile-long reroute for the 8-inch pipeline and a 0.20-mile-long reroute for the 10-inch pipeline. The extension of these pipelines will connect to third-party transmission pipelines. The construction right-of-way would not exceed a 100-foot-wide corridor, with a 50-foot-wide permanent right-of-way. Natural resource surveys were conducted for the reroute expansion on August 9 and 22, 2017, and consisted of a 200-foot-wide survey corridor buffering the proposed pipeline reroutes in a portion of SW $\frac{1}{4}$ Section 29, Township 149 North, Range 98 West (Figure 1). The rerouted portion will occur in areas currently and previously surveyed as described herein and in Belisle (2016).

METHODS

Wetland Delineation

SWCA conducted determinations in accordance with guidelines presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (U.S. Army Corps of Engineers [USACE] 2010). For an area to be considered a wetland, it must exhibit three criteria: the presence of hydric soils, wetland hydrology, and a vegetative community comprised of greater than 50% hydrophytes.

EXHIBIT C

Waterbodies

Waterbodies (i.e., ponds, creeks, streams, rivers) were identified by the presence of an ordinary high water mark (OHWM). Common identifiable indicators of an OHWM include open water or evidence of a clear, natural line visible on the bank; shelving; changes in soil characteristics; the destruction of terrestrial vegetation; the presence of litter and debris; and watermarks on structures that are inundated during normal high water conditions. The OHWM typically represents the potential limits of the USACE jurisdiction. Please note that the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies.

SWCA classified streams as perennial, intermittent, or ephemeral based on field observations. During a typical year, a perennial stream contains flowing water year-round and the water table is located above the stream bed. Groundwater is the primary water source for stream flow while precipitation runoff is supplemental. Ecologists classified streams that showed significant flow during the field survey or were named or designated as solid blue lines on the U.S. Geological Survey topographic maps as perennial.

An intermittent stream has flowing water for only portions of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for stream flow. Runoff from rainfall is the primary source of water for stream flow.

Tree/Sapling/Shrub Enumeration

SWCA ecologists determined the total number of trees, saplings, and shrubs present within the survey area. Additionally, ecologists taxonomically identified all species observed within the survey area to species level. The boundary of all forested upland and shrubland habitat was geographically referenced using a Trimble GeoXT series handheld global positioning system (GPS) unit.

Noxious Weeds

“Noxious weed” is a plant species designated as state-listed or county-listed noxious weeds. They generally are not native to a given area, spread rapidly, and have adverse ecological and economic impacts. Noxious weed species may have high reproduction rates and are usually adapted to occupy a diverse range of habitats otherwise occupied by native species. These species may subsequently out-compete native plant species for resources, causing a reduction in native plant populations. Noxious weed communities (both alive and residual) were identified and mapped during field surveys by visual inspection of the survey corridor.

Wildlife including Threatened and Endangered Species

Information regarding the presence of threatened or endangered species, which may occur within the survey area, was obtained from the U.S. Fish and Wildlife Service list of threatened and endangered species by North Dakota county (U.S. Fish and Wildlife Service 2015). This document

does not represent a comprehensive survey, but rather acknowledges the past and/or current presence of listed species. The lack of discovery of threatened or endangered species does not signify their non-existence within the area, but only that no primary or secondary indications of these species were recorded.

SWCA completed a cursory survey for all listed species and their habitat potentially impacted by construction activities within the survey area. A line-of-sight survey for wildlife was also conducted for a distance of approximately 0.5 mile with the aid of binoculars. Unique wildlife habitats were closely inspected on foot. Additionally, SWCA characterized suitable threatened and endangered species habitat encountered during the field survey.

SWCA ecologists noted all wildlife observed during the field survey. Wildlife sightings can involve primary observations (i.e., actual sighting of an animal) or secondary observations (i.e., observation of scat, tracks, or fur deposits).

Mapping

The survey area was inventoried using a Trimble GeoXT GPS unit. The aforementioned GPS unit is capable of recording geographic data with sub-meter accuracy. SWCA used Universal Transverse Mercator Zone 13N as the projected coordinate system and North American Datum 1983 as the datum. ArcGIS v10.5 (ESRI Redlands, California) was used to generate the survey area maps. Please note that any data recorded using the GPS unit, and displayed on the attached map, are for review purposes only and do not represent a professional civil survey.

RESULTS

Wetlands

SWCA ecologists did not identify any wetlands within the survey area.

Waterbodies

SWCA ecologists did not identify any waterbodies within the survey area.

Tree/Sapling/Shrub Enumeration

SWCA ecologists did not identify any woody vegetation with a diameter at breast height (DBH) of ≥ 1 inch within the survey area.

Noxious Weeds

SWCA ecologists did not identify any state/county listed noxious weeds within the survey area.

Wildlife including Threatened and Endangered Species

No threatened and endangered wildlife species or their habitats were observed within the survey area. The survey area is 95% agricultural fields and 5% non-native grasslands. Overall, this reroute will not alter the results and affects determinations provided in the original Arrow NB Residue Gas Pipeline and Arrow Bakken NGL Pipeline Natural Resources Report (Belisle 2016).

CONCLUSIONS

On August 9 and 22, 2017, SWCA completed a natural resources survey of the proposed Arrow NB Residue Gas Pipeline and Arrow Bakken NGL Pipeline reroutes located in SW¼ Section 29, Township 149 North, Range 98 West, McKenzie County, North Dakota (see Figure 1).

- SWCA ecologists did not observe any wetlands or waterbodies within the survey area.
- No areas of woody vegetation or state/county listed noxious weeds were recorded within the survey area.
- No threatened or endangered species or suitable habitat were observed within the survey area.

Please contact me at 701-258-6622 or jbivens@swca.com should you have any further questions regarding the information gathered during SWCA's field survey.

Sincerely,



Jason Bivens
Environmental Specialist/Project Manager
Bismarck Natural Resources
SWCA Environmental Consultants

Attachment: Site Layout Map

REFERENCES

- Belisle, D. 2016. *Natural Resources and Wetland Delineation Report for the Arrow NB Residue Gas Pipeline and Arrow Bakken NGL Pipeline Project, McKenzie County, North Dakota*. Prepared by SWCA Environmental Consultants. Bismarck, North Dakota.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)*. Edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-30. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Survey. 2015. County occurrence of endangered, threatened, and candidate species and designated critical habitat in North Dakota. Available at: <http://www.fws.gov/northdakotafielddoffice/SEtable.pdf>. Accessed August 10, 2017.

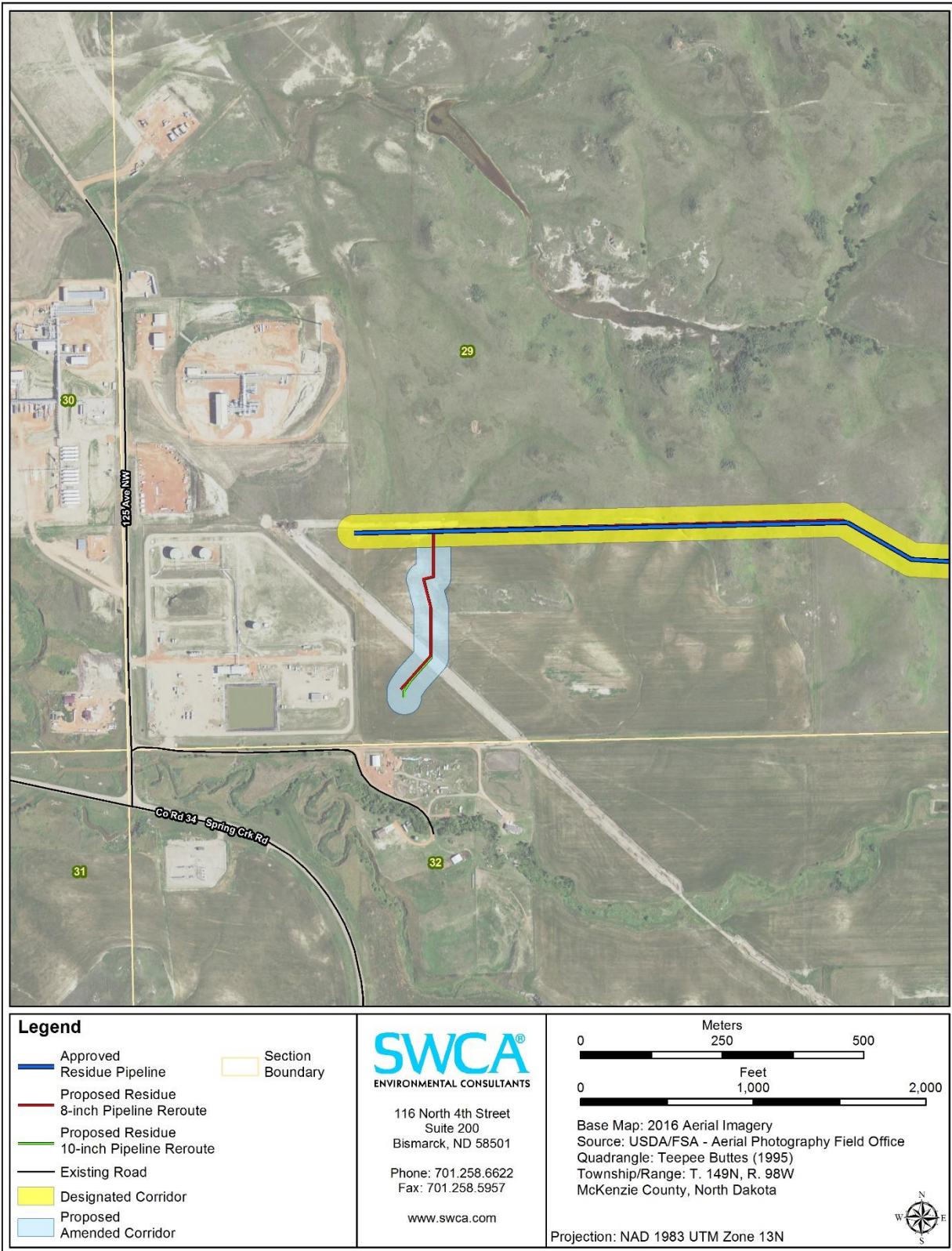


Figure 1. Site layout map for the Arrow NB Residue Gas and Bakken NGL Pipelines reroute.