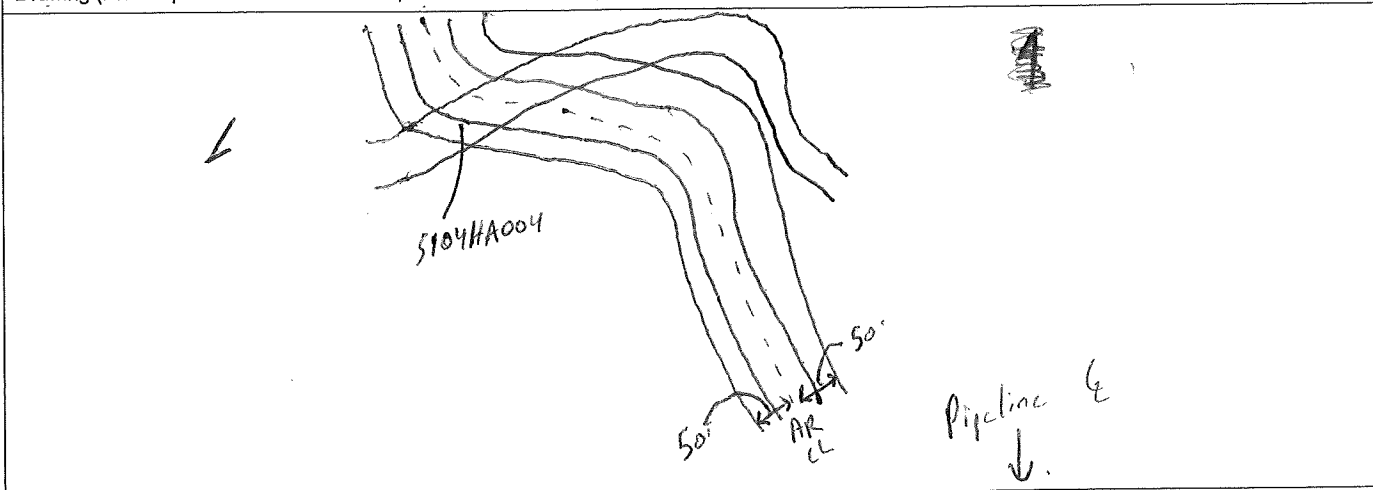


Waterbody Data Form

☐ Centerline ☐ Re-Route ☒ Access Road ☐ Ancillary Facility ☐ Transmission Line ☐ Other

Centerline ID: <u>5104HA004</u>		Project Designated Name: <u>KXL Phase IV</u>	
Date: <u>5/18/10</u>	Client/Project Name: <u>TransCanada-TKOW-KXL Phase IV</u>		Milepost Enter/Exit: <u>EMP: 292.35 CAR MP: 1.75</u>
Team: <u>104</u>	State/County: <u>South Dakota/Hodgins</u>		Quad Name:
Logbook No.: <u>1</u>	Logbook Page No.:	Tract No.: <u>AR-SD-KA-00030.000, 00050.00</u>	

Drawing (Please provide orientation arrow, all features identified, location to centerline, etc.)



Waterbody Type:		☐ Lake	☐ Pond	☐ Borrow Pit	☒ Stream	☐ Ag. Ditch	☐ Other
Stream Flow:		☐ Fast	☐ Moderate	☐ Slow	☒ Very Slow	☐ None	
Flow Type:		☐ Perennial (Flows year round)		☒ Intermittent (Flows <3 month)		☐ None	
		☐ Seasonal (Continuous flow ≥ 3 months)		☐ Ephemeral (Flows only in response to rainfall)			
Direction of Flow:		☐ N	☐ NE	☐ E	☐ SE	☐ S	☒ SW
		☐ W	☐ NW	☐ No Flow			
OHWM Width (ft.):		<u>5.0'</u>					
Sinuosity:		☐ Braided	☐ Meandering	☒ Straight		☐ N/A	
Stream Width (ft.):		<u>25.0' to 35'</u>		Water Surface (At Crossing Location) <u>25.0' Low water Crossing</u>			
Stream Depth (ft.):		☐ 0	☒ 1-3	☐ 3-6	☐ 6-12	☐ 12-18	☐ 18-24
		☐ 24-36	☐ 36-48	☐ 48-60	☐ 60+		
OHWM Indicators:		<u>Drainage Patterns</u>					
Bank Height (ft.): (Looking Downstream)		Left:		☒ 0-2	☐ 2-4	☐ 4-6	☐ 6-8
		Right:		☒ 0-2	☐ 2-4	☐ 4-6	☐ 6-8
Bank Slope: (Looking Downstream)		Left:		☒ 4:1	☐ 3:1	☐ 2:1	☐ 1:1
		Right:		☒ 4:1	☐ 3:1	☐ 2:1	☐ 1:1
				☐ Vertical			

Qualitative Attributes

Water Appearance:			
☐ Clear	☐ Turbid	☐ Sheen on Surface	☒ Floating Algal Mats
☒ Slightly Turbid	☐ Very Turbid	☐ Greenish Color	☐ Obvious Surface Scum
☐ No Flow	☒ Other: <i>Brownish Color</i>		
Stream Substrate %: <i>Clay 100%</i>			
Aquatic Habitats:			
☐ Sand Bar	☐ Gravel Riffle	☒ In-stream Emergent Plant	% Cover: <i>75% Juncus balticus</i>
☐ Gravel Bar	☐ Deep Pools	☐ In-stream Submerged Plant	% Cover:
☒ Mud Bar	☐ Bank Root Systems	☐ Fringing Wetlands	Characteristics:
☐ Undercut Banks	☐ Overhanging Trees/Shrubs	☐ None	
Aquatic Organisms Observed: <i>NONE</i>			
Riparian Zone:			
Width of Natural Vegetation Zone from Edge of Active Channel out to Flood Plain (ft): Left - <i>30'</i> Right - <i>30'</i>			
Vegetative Layers: ☒ Herbs ☒ Shrubs ☐ Trees ☐ Multiple			
Significant Bare Areas Within Riparian Zone ☐ Yes ☒ No ☐ Unknown			
Evidence Of Non-Buffered Concentrated Flows: ☐ Yes ☒ No ☐ Unknown			
Tributary Condition: ☒ Natural ☐ Artificial (Man-Made) ☐ Manipulated			
Channel Condition:			
☐ Channelization/Braiding	☐ Unnatural Straightening	☐ Downcutting	
☐ Dikes/Berms	☐ Excessive Bank Erosion	☒ N/A	
Disturbances:			
☒ Livestock Access to Riparian Zone	☒ Manure In Stream or On Banks		
☐ Waste Discharge Pipes Present			
☐ Other:			

Habitat Characteristics, Aquatic, and Terrestrial Diversity Description:	
Habitat ID Number:	<i>Shallow intermittent stream with Juncus balticus emerging from it. Banks are very low with the exception of the north bank on the western side of AR.</i>

Comments:	<i>Intermittent stream with a low water crossing. Improvements will be needed for equipment to cross especially during the rainy season. Possible culvert location.</i>
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Stream Quality:	☐ High ☒ Moderate ☐ Low
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Photos: S104HA004-001 W Downstream
 002 E Upstream
 003 SE Across
 004 NW Across