

KEYSTONE XL PIPELINE PROJECT

0465-SD-P4-319.8-321.5-S

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM				
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Footprint: <input type="text"/> Design: <input type="text"/> Centerline: <input checked="" type="checkbox"/> Pump Station: <input type="text"/> Valve Site: <input type="text"/> CAR: <input type="text"/>			
2	LOCATION: Sketch: <input type="text" value="Attached"/> Pictures: <input type="text" value="N/A"/> State: <input type="text" value="SD"/> County: <input type="text" value="Harding"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="19N"/> Range: <input type="text" value="05E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="021, 028"/> Centerline: <input type="text" value="6/11/2013"/> MP: <input type="text" value="319.84"/> to <input type="text" value="321.49"/>			
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The primary reason for this route variation is to modify previous approved route variations 0381-01 and 0382-01 to match civil survey data. Both original RVs were to avoid pond/wetland features. This proposed reroute is requested by Engineering and is proposed based on civil survey data.			
	DETAIL ROUTE VARIATION (Please describe route variation in detail): The proposed route variation starts near MP 319.8 and deviates ~1° from the existing CL and continues for ~740 ft before the route variation shifts southeast. It then continues along this path for an additional ~2,518 ft. before shifting slightly southwest. The proposed route variation will extend in this direction for ~5,484 ft. and will rejoin the current CL near MP 321.5.			
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): 4 Tracts are impacted by this centerline reroute: ML-SD-HA-01770.000, ML-SD-HA-01780, ML-SD-HA-01790, ML-SD-HA-11792, ML-SD-HA-11795 (all Doolittle Wagner Ranch, LLC) ~3,521 ft of the proposed reroute is outside the current environmental surveyed corridor, so additional costs associated with environmental surveys will be incurred. Reroute does not impact MLV-16A current location. Costs savings include the elimination of a reclamation issues at the pond crossing: ~\$20,000.			
	Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input checked="" type="checkbox"/>			
	If yes, please list: <input type="text"/> <input type="text"/>			
	COST ANALYSIS (costs incurred or saved from the route variation)			
	Additional length of route realignment:	<input type="text" value="16"/> ft.	\$ 5,696.93	\$ 360/ft
	Additional length of side-hill construction:	<input type="text"/> ft.	\$ -	\$ 19/ft
	Additional length of wetland construction:	<input type="text"/> ft.	\$ -	\$ 195/ft
	Additional bore length (Road, RR):	<input type="text"/> ft.	\$ -	\$ 540/ft
	Additional foreign line/pipeline crossings:	<input type="text"/> EA	\$ -	\$ 30,000/EA
	Additional water body crossing (streams, ponds, etc.):			
	35 - 65' +	<input type="text" value="0"/> EA	\$ -	\$ 185,000/EA
	10' - 19'	<input type="text" value="0"/> EA	\$ -	\$ 77,250/EA
	Less than 10'	<input type="text" value="0"/> EA	\$ -	\$ 32,500/EA
	Additional survey required:			
	Civil:	<input type="text" value="0.00"/> mile	\$ -	\$ 5,000/mile
	Cultural:	<input type="text" value="0.67"/> mile	\$ 1,675.00	\$ 2,500/mile
	Biological:	<input type="text" value="0.67"/> mile	\$ 1,876.00	\$ 2,800/mile
	Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above:		\$	<input type="text" value="(20,000)"/>
	Overall estimated costs of the route variation:	<input type="text" value="\$ (10,752.07)"/>	(See "Additional Impacts" above)	

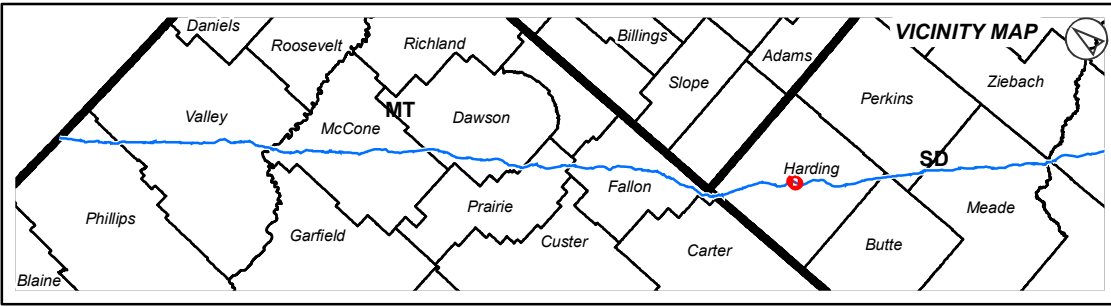
4 LAND / TransCanada <i>Tina Hall</i>	
a) Is a new landowner affected by the proposed variation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Is the affected landowner/tract a possible condemnation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Does proposed route variation impact Tribal Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does proposed route variation impact any Federal/State Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name type (i.e. USFWS, BLM, etc.): <input type="text"/>	
e) Is proposed realignment outside the easement/workspace?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Is realignment proposed to satisfy landowner request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of landowner(s)/track number(s): <input type="text"/>	
g) Has all the evaluation criteria been examined/provided for this specific discipline?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If no, please explain why: <input type="text"/>	
<input type="text"/>	
5 ENGINEERING/CONSTRUCTION - TransCanada <i>Meera Kothari</i>	
a) Maximum deviation perpendicular to proposed alignment:	<input type="text" value="245"/> ft.
b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor?	Yes <input type="text" value="N/A"/> No <input type="checkbox"/>
c) Has the centerline been staked for construction?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation affect HDD crossing alignment?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Is realignment proposed for engineering/construction reasons?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
g) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
<input type="text"/>	
6 ENVIRONMENTAL - TransCanada <i>Sandra Barnett</i>	
a) Has the corridor been environmentally surveyed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
b) Has the proposed variation been environmentally surveyed?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Does proposed route variation impact Sage Grouse areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation impact ABB areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Was variation proposed to satisfy environmental issues?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
f) Was realignment proposed to satisfy agency request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of agency(s): <input type="text"/>	
g) Environmental features:	
Added (+): <input type="text"/>	Subtracted (-): <input type="text"/>
Wetland ID # for newly impacted wetlands: <input type="text"/>	
h) Has all the evaluation criteria been examined/provided for this specific discipline?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If no, please explain why: <input type="text"/>	
<input type="text"/>	
7 ENGINEERING / FACILITIES AND HYDRAULICS (if applicable) <i>Sandra Gigovic</i>	
a) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Will route variation impact hydraulics?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Are additional valves required at HCA's or water crossing?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
8 STAKEHOLDER RELATIONS / TCPL (if applicable) <i>Bud Andersen</i>	
a) Does the variation result in any new stakeholders?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Does the variation require follow-up with specific stakeholder groups?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Was the variation proposed to satisfy stakeholder request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, please specify issue type (as it aligns to stakeholder database): <input type="text"/>	
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
<input type="text"/>	
9 Originator: <input type="text" value="Engineering"/>	10 Received by: <input type="text"/>
Date: <input type="text" value="8/7/2013"/>	Date: <input type="text" value="8/7/2013"/>
Fax to: ?	
11 Assigned Tracking Number: <input type="text" value="0465-SD-P4-319.8-321.5-S"/>	12 Filed by: <input type="text"/>
Date: <input type="text"/>	
Fax to: ?	

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KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: 8/7/2013	Tracking Number: 0465-SD-P4-319.8-321.5-S	
Description: The primary reason for this route variation is to modify previous approved route variations 0381-01 and 0382-01 to match civil survey data. Both original RVs were to avoid pond/wetland features.	MP: 319.8 to 321.5	Originated By: Engineering
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<u>TransCanada - Land</u> Tina Hall	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/9/13
Comments:	If Rejected Why?	
<u>TransCanada - Engineering</u> Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/15/13
Comments:	If Rejected Why?	
<u>Exp - Engineering</u> Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8-20-13
Comments:	If Rejected Why?	
<u>TransCanada - Environmental</u> Sandra Barnett	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/15/13
Comments:	If Rejected Why? Pending Survey	
<u>Stantec - Risk Assessment</u> Heidi Tilquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A.	If Rejected Why?	
<u>TransCanada - Facilities</u> Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A. Does not affect facilities	If Rejected Why?	
<u>TransCanada - PM (Montana)</u> Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
<u>TransCanada - PM (South Dakota)</u> James Odorn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 20-Aug-13
Comments:	If Rejected Why?	
<u>TransCanada - PM (Nebraska)</u> Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
<u>TransCanada - Area Manager</u> Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to: Tina Hall <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/>	Sandra Barnett <input type="checkbox"/> Heidi Tilquist <input type="checkbox"/> Sandra Gigovic <input type="checkbox"/> Alan Lietz <input type="checkbox"/>	James Odorn <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Steve Marr <input type="checkbox"/>

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LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	HARDING	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	0	REVISION	ISSUED FOR REVIEW.
		DATE	2013-06-27

PRELIMINARY

DATE:	2013-06-27	PROJECTION:	NAD83 UTM13 N
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PREPARED BY:
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DWG:	XL-30-P-9299-A-CLRV	SHEET:	1 of 1
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