

7

0195-SD-P2-576.4-577.0-S

KEYSTONE XL PIPELINE PROJECT - STEELE CITY SEGMENT PIPELINE ROUTE VARIATION FORM			
1	VARIATION TYPE:		
	Refinement: <input type="text"/>	Reroute: <input checked="" type="checkbox"/>	
	Centerline: <input checked="" type="checkbox"/>	Valve Site: <input type="text"/>	Pump Station: <input type="text"/>
2	LOCATION:		
	Sketch: <input type="text" value="Attached"/>	Pictures: <input type="text" value="See attached."/>	
	State: <input type="text" value="SD"/>	County: <input type="text" value="Tripp"/>	Quad Map: <input type="text" value="N/A"/>
	Township: <input type="text" value="97N"/>	Range: <input type="text" value="76W"/>	Aerial Map: <input type="text" value="See attached map sheet"/>
	Section: <input type="text" value="2.1"/>	Centerline: <input type="text" value="11/18/2010"/>	MP: <input type="text" value="576.36"/> to <input type="text" value="577.01"/>
3	REASON FOR ROUTE VARIATION (Please include reason for route variation):		
<p>This reroute is proposed to accommodate two separate requests proposed by landowners</p> <ul style="list-style-type: none"> - To avoid locating the pipeline on tract ML-SD-TR-11345. - To accommodate landowner's (John & Tammy Harter) request to avoid a row of trees near MP 576.8. <p>The approval of this reroute avoids the potential condemnation of three tracts i.e. ML-SD-TR-11345, ML-SD-TR-11340, ML-SD-TR-11360.</p>			
DETAIL ROUTE VARIATION (Please describe route variation in detail):			
<p>The proposed reroute starts at the PI near MP 576.4 and continues in the southward direction, deviating (~28°) from the centerline. It continues in this direction for ~1,200 ft until it avoids the tract ML-SD-TR-11345. It then turns towards the east and continues for ~2,420 ft to rejoin the current centerline near MP 577. Along its path, it passes through a gap in the row of trees to avoid any tree clearance as intended by the landowner. The proposed reroute also maintains sufficient distance from the Colome source water protection area.</p>			
ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.):			
<p>The proposed reroute is ~202 ft longer than the original route. The approval of this proposed reroute avoids the potential condemnation of 3 landowners, the average cost of a condemnation of one landowner is estimated at ~\$30,000.</p>			
<p>Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input checked="" type="checkbox"/></p> <p>If yes, please list: <input type="text"/></p>			
COST ANALYSIS (costs incurred or saved from the route variation)			
Additional length of route realignment:	<input type="text" value="202"/> ft.	\$ <input type="text" value="72,720.00"/>	\$ 360/ft
Additional length of side-hill construction:	<input type="text"/> ft.	\$ <input type="text" value="-"/>	\$ 19/ft
Additional length of wetland construction:	<input type="text" value="185"/> ft.	\$ <input type="text" value="36,075.00"/>	\$ 195/ft
Additional bore length (Road, RR):	<input type="text"/> ft.	\$ <input type="text" value="-"/>	\$ 540/ft
Additional foreign line/pipeline crossings:	<input type="text"/> EA	\$ <input type="text" value="-"/>	\$ 30,000/EA
Additional water body crossing (streams, ponds, etc.):			
	35' - 65' + <input type="text"/> EA	\$ <input type="text" value="-"/>	\$ 185,000/EA
	10' - 19' <input type="text"/> EA	\$ <input type="text" value="-"/>	\$ 77,250/EA
	Less than 10' <input type="text"/> EA	\$ <input type="text" value="-"/>	\$ 32,500/EA
Additional survey required:			
	Civil: <input type="text" value="0.69"/> mile	\$ <input type="text" value="3,428.84"/>	\$ 5,000/mile
	Cultural: <input type="text" value="0.69"/> mile	\$ <input type="text" value="1,714.42"/>	\$ 2,500/mile
	Biological: <input type="text" value="0.69"/> mile	\$ <input type="text" value="1,920.15"/>	\$ 2,800/mile
Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above:			\$ <input type="text" value="90,000"/>
Overall estimated costs of the route variation:		\$ <input type="text" value="25,858"/>	(See "Additional Impacts" above)

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

4	<p>LAND / UNIVERSAL FIELD <i>Doug Reichley</i></p> <p>a) Is a new landowner affected by the proposed variation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>b) Is proposed realignment outside the easement/workspace? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>c) Is realignment proposed to satisfy landowner request? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p style="padding-left: 20px;">-If yes, name of landowner(s)/track number(s): <input type="text" value="O'Bryan (ML-SD-TR-11345),"/> <input type="text" value="John & Tammy Harter (ML-SD-TR-11360)"/></p> <p>d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If no, please explain why: <input type="text"/></p>		
5	<p>ENGINEERING/CONSTRUCTION / STATE PM <i>Meera Kothari</i></p> <p>a) Maximum deviation perpendicular to proposed alignment: <input type="text" value="560"/> ft.</p> <p>b) Has the centerline been staked for construction? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>c) Does route variation affect HDD crossing alignment? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>d) Is realignment proposed for engineering/construction reasons? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>e) Will the route variation require the relocation of a pump station? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>f) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If no, please explain why: <input type="text"/></p>		
6	<p>ENVIRONMENTAL / EXP <i>Jonathan Minton</i></p> <p>a) Has the corridor been environmentally surveyed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b) Has the proposed variation been environmentally surveyed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>c) Was variation proposed to satisfy environmental issues? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>d) Was realignment proposed to satisfy agency request? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p style="padding-left: 20px;">-If yes, name of agency(s): <input type="text"/></p> <p>e) Environmental features:</p> <p style="padding-left: 40px;">Added (+): <input type="text"/> Subtracted (-): <input type="text"/></p> <p style="padding-left: 40px;">Wetland ID # for newly impacted wetlands: <input type="text"/></p> <p>f) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If no, please explain why: <input type="text"/></p>		
7	<p>ENGINEERING / FACILITIES AND HYDRAULICS (if applicable) <i>Sandra Gigovic</i></p> <p>a) Will the route variation require the relocation of a pump station? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>b) Will route variation impact hydraulics? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>c) Are additional valves required at HCA's or water crossing? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If no, please explain why: <input type="text"/></p>		
8	<p>STAKEHOLDER RELATIONS / TCPL (if applicable) <i>Bud Andersen</i></p> <p>a) Does the variation result in any new stakeholders? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>b) Does the variation require follow-up with specific stakeholder groups? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>c) Was the variation proposed to satisfy stakeholder request? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p style="padding-left: 20px;">-If yes, please specify issue type (as it aligns to stakeholder database): <input type="text"/></p> <p>d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>If no, please explain why: <input type="text"/></p>		
9	<p>Originator: <input type="text" value="Land"/></p> <p>Date: <input type="text" value="3/8/2011"/></p>	10	<p>Received by: <input type="text"/></p> <p>Date: <input type="text" value="3/8/2011"/></p> <p>Fax to: ?</p>
11	<p>Assigned Tracking Number: <input type="text" value="0195-SD-P2-576.4-577.0-S"/></p>	12	<p>Filed by: <input type="text"/></p> <p>Date: <input type="text"/></p> <p>Fax to: ?</p>

0195-SD-P2-576.4-577.0-S

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230

KEYSTONE XL PIPELINE PROJECT - STEELE CITY SEGMENT PIPELINE ROUTE VARIATION FORM	
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Centerline: <input checked="" type="checkbox"/> Valve Site: <input checked="" type="checkbox"/> Pump Station: <input type="text"/>
2	LOCATION: Sketch: <input type="text"/> Attached <input type="text"/> Pictures: <input type="text"/> See attached <input type="text"/> State: <input type="text"/> Multiple <input type="text"/> County: <input type="text"/> Multiple <input type="text"/> Quad Map: <input type="text"/> N/A <input type="text"/> Township: <input type="text"/> Multiple <input type="text"/> Range: <input type="text"/> Multiple <input type="text"/> Aerial Map: <input type="text"/> See attached map sheet <input type="text"/> Section: <input type="text"/> Multiple <input type="text"/> Centerline: <input type="text"/> 11/18/2010 <input type="text"/> MP: <input type="text"/> XXX.X <input type="text"/> to <input type="text"/> XXX.X <input type="text"/>
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The Reason for each Route Variation (RV) is given with the respective RV file. These reroutes are proposed based on aerial/pictometry/Lydar/flyover analysis of current line through Montana, South Dakota, and Nebraska.
	DETAIL ROUTE VARIATION (Please describe route variation in detail): See respective Route Variation Files. No new landowners were affected by the proposed route variations. RVs included: Discussed prior to 6/20/2011: Western Prairie Fringe Orchid Reroute (RV-0194) John Harter Reroute (RV-0195) Buzek Reroute (RV-0197) Discussed during 6/20/2011 Meeting: Reroute away from sidehill (SOM Land) (RV-0209) Discussed during 6/21/2011 Meeting: Reroutes to avoid creek Crossings (RV-0199) MP 475 Reroute (RV-0200) Reroutes to lessen/reduce PIs (RV-0213) Reroutes to avoid waterwell; fence (RV-0214) Reroutes to avoid creeks, dropoffs, wetlands, etc. (RV-0215) Reroutes to avoid sideslopes/hills (RV-0216) Reroutes to avoid pivot centers (RV-0217) Discussed during 8/10/2011 Meeting: HWY 73 Reroute (RV-0196) HWY 56 Reroute (RV-0219) Bad River HDD realignment reroute (RV-0220) MP 396 Reroute (RV-0224) Yellowstone River HDD Entry Pt (RV-0227) PI Breakdowns of all previous RV's for new CL (RV-0228 and RV-0229) CK-MLV-06 and CK-11 Valves relocation (RV-0230)
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
	Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input type="text"/> If yes, please list: <input type="text"/> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
9	Originator: <input type="text"/> Multiple <input type="text"/> Date: <input type="text"/> 8/12/2011 <input type="text"/>
10	Received by: <input type="text"/> Date: <input type="text"/> 8/12/2011 <input type="text"/> Fax to: ? <input type="text"/>
11	Assigned Tracking Number: <input type="text"/> RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230 <input type="text"/>
12	Filed by: <input type="text"/> Date: <input type="text"/> Fax to: ? <input type="text"/>

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

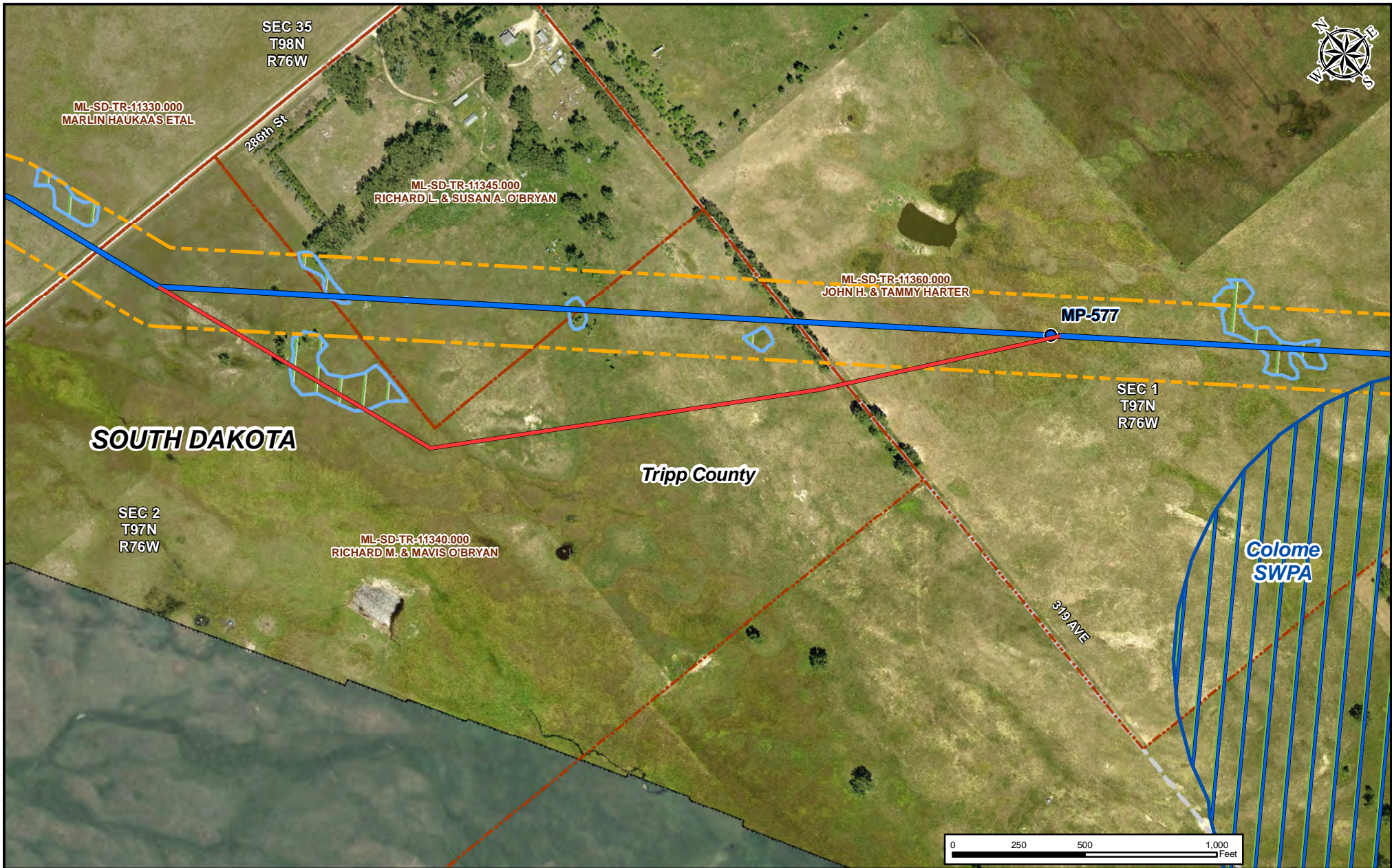
KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM		
Date: 8/12/2011	Tracking Number: RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217	MP: XXX.X to XXX.X
Description: Western Prairie Fringe Orchid Reroute (RV-0194); John Harter Reroute (RV-0195); Buzek Reroute (RV-0197); Reroute away from sidehill (SOM Land) (RV-0209); Reroutes to avoid creek crossings (RV-0199); MP 475 Reroute (RV-0200); Reroutes to lessen/produce PIs (RV-0213); Reroutes to avoid waterwell, fence (RV-0214);	Originated By: Multiple	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Universal Field - Land Doug Reichley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Pending Survey</i>	If Rejected Why? <i>By G. Fij 10/5/11</i>	
TransCanada - Engineering Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: and by David Gulen on the 6/20 and 6/21 meetings. <i>for meera Kothari.</i>	If Rejected Why?	
Exp - Engineering Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
TransCanada - Construction Bobby Curbow	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
Exp - Environmental Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Pending Survey Completion</i>	If Rejected Why?	
TransCanada - Environmental Stephen Craycroft	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
Facilities: Sandra Gigovic	Variation: Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A. Does not affect Facilities.	If Rejected Why?	
AECOM - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A	If Rejected Why?	
TransCanada - Senior PM Alan Lietz	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Conditional approval pending approval of regulatory approval</i>	If Rejected Why?	
TransCanada - Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to:	Doug Reichley <input checked="" type="checkbox"/> Jonathan Minton <input checked="" type="checkbox"/> Alan Lietz <input checked="" type="checkbox"/>	Meera Kothari <input checked="" type="checkbox"/> Stephen Craycroft <input checked="" type="checkbox"/> Steve Marr <input checked="" type="checkbox"/>
	Butch Wallace <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/>	
	Bobby Curbow <input checked="" type="checkbox"/> Sandra Gigovic <input type="checkbox"/>	

RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

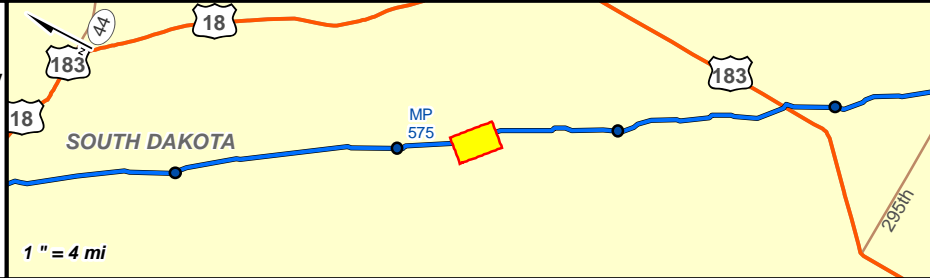
KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM			
Date:	8/12/2011	Tracking Number:	RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230
Description:	Western Prairie Fringe Orchid Reroute (RV-0194) John Harter Reroute (RV-0195) Buzek Reroute (RV-0197) Reroute away from sidehill (SOM Land) (RV-0209)	MP: XXXX to XXXX	Originated By: Multiple
Universal Field - Land	Doug Reichley	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	<i>Pending civil survey</i>	Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	<i>By S. King 10/5/11</i>
TransCanada - Engineering	Meera Kothari	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	and by David Gulen on the 6/20 and 6/21 meetings.	Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	
Exp - Engineering	Butch Wallace	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	
TransCanada - Construction	Bobby Curbow	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	
Exp - Environmental	Jonathan Minton	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	
AECOM - Risk Assessment	Heidi Tillquist	Variation:	Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	N/A.	Date:	
		If Rejected Why?	
Facilities	Sandra Gigovic	Variation:	Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	N/A. Does not affect Facilities.	Date:	
		If Rejected Why?	
TransCanada - PM (NE)	Robert Bradley	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:	8/10/2011
		If Rejected Why?	
TransCanada - Senior PM	Alan Lietz	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	<i>conditional approvals pending appropriate regulatory approvals</i>	Date:	6/20, 6/21, & 8/10/11
		If Rejected Why?	
TransCanada - Manager	Steve Marr	Variation:	Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:	8/9/11
		If Rejected Why?	
Forward to:	Doug Reichley <input checked="" type="checkbox"/> Meera Kothari <input checked="" type="checkbox"/> Butch Wallace <input checked="" type="checkbox"/> Bobby Curbow <input checked="" type="checkbox"/>	Jonathan Minton <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/> Robert Bradley <input checked="" type="checkbox"/> Sandra Gigovic <input type="checkbox"/>	Alan Lietz <input checked="" type="checkbox"/> Steve Marr <input checked="" type="checkbox"/>

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230



Legend

- Milepost
- Centerline (2010-11-18)
- Proposed Route Variation
- 300 ft Corridor
- Wetland
- Colome SWPA
- Parcel Boundary
- Section Line
- County Boundary
- State Boundary



KEYSTONE US - PHASE IV PIPELINE PROJECT PROPOSED ROUTE VARIATION 0195 TRIPP COUNTY, SOUTH DAKOTA					
	DATE	PROJECT	MAP PARAMETERS		
	2011-02-23	50388X	PROJECTION: UTM 14, NAD83, US FT SCALE: 1" = 500', 1:6,000		
DRAWN BY	CHECKED BY	APPROVED BY	ROUTE VARIATION NUMBER	SHEET	REV.
ACB	CPA	NJA	0195-SD-P2-576.4-577.0-S	001	0