

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	<b>VARIATION TYPE:</b> Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Footprint: <input checked="" type="checkbox"/> Design: <input type="text"/> Centerline: <input checked="" type="checkbox"/> Pump Station: <input type="text"/> Valve Site: <input checked="" type="checkbox"/> CAR: <input checked="" type="checkbox"/>		
2	<b>LOCATION:</b> Sketch: <input type="text"/> 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="96N"/> Range: <input type="text" value="75W"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="03, 10"/> Centerline: <input type="text" value="3/14/2012"/> MP: <input type="text" value="586.23"/> to <input type="text" value="586.64"/>		
3	<b>REASON FOR ROUTE VARIATION</b> (Please include reason for route variation): The primary reason for this reroute is to avoid a well (temporary workspaces impact well). Furthermore, current temporary workspaces also impact a fence surrounding a historical site. This proposed route variation will impact the current location of MLV-23A and VAR-23A. The valve will be moved south of 293rd. Street to ML-SD-TR-11650.000 (Chandler E. Shippy) tract.  The reroute has been proposed based on the field reconnaissance efforts and has been civil surveyed.		
<b>DETAIL ROUTE VARIATION</b> (Please describe route variation in detail): Route variation starts near MP 586.2 and deviates ~7° in the southeast direction. It extends for ~2,104 ft. to rejoin the CL near MP 586.6.			
<b>ADDITIONAL IMPACTS</b> (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): No New Landowners are impacted by this route variation. Three tracts are impacted by reroute: ML-SD-TR-11620.000 (David & Sherry Rohde) ML-SD-TR-11630.000 (Judell A Weidner and Lee O. Trustees...) ML-SD-TR-11650.000 (Chandler E. Shippy)  Route Variation impacts the relocation of MLV-23A and VAR-23A south of 293rd Street.  Miscellaneous Costs savings include landowner and construction savings (avoid well).			
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"/>			
<b>COST ANALYSIS</b> (costs incurred or saved from the route variation)			
Additional length of route realignment:	<input type="text" value="-27"/> ft.	\$ <input type="text" value="(9,728.03)"/>	\$ 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"/> ft.	\$ <input type="text" value="-"/>	\$ 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="0.00"/> mile	\$ <input type="text" value="-"/>	\$ 5,000/mile
Cultural:	<input type="text" value="0.21"/> mile	\$ <input type="text" value="527.21"/>	\$ 2,500/mile
Biological:	<input type="text" value="0.21"/> mile	\$ <input type="text" value="590.48"/>	\$ 2,800/mile
Miscellaneous costs saved or added due to route variation from <b>ADDITIONAL IMPACTS</b> listed above:			\$ <input type="text" value="(10,000)"/>
Overall estimated costs of the route variation:		\$ <input type="text" value="(18,610.34)"/>	(See "Additional Impacts" above)

4 **LAND / TransCanada** *Tina Hall*

a) Is a new landowner affected by the proposed variation? Yes  No

b) Is the affected landowner/tract a possible condemnation? Yes  No

c) Does proposed route variation impact Tribal Lands? Yes  No

d) Does proposed route variation impact any Federal/State Lands? Yes  No

-If yes, name type (i.e. USFWS, BLM, etc.):

e) Is proposed realignment outside the easement/workspace? Yes  No

f) Is realignment proposed to satisfy landowner request? Yes  No

-If yes, name of landowner(s)/track number(s):

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes  No

If no, please explain why:

5 **ENGINEERING/CONSTRUCTION - TransCanada** *Meera Kothari*

a) Maximum deviation perpendicular to proposed alignment:  ft.

b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor? Yes  No

c) Has the centerline been staked for construction? Yes  No

d) Does route variation affect HDD crossing alignment? Yes  No

e) Is realignment proposed for engineering/construction reasons? Yes  No

f) Will the route variation require the relocation of a pump station? Yes  No

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes  No

If no, please explain why:

6 **ENVIRONMENTAL / exp** *Jonathan Minton*

a) Has the corridor been environmentally surveyed? Yes  No

b) Has the proposed variation been environmentally surveyed? Yes  No

c) Does proposed route variation impact Sage Grouse areas? Yes  No

d) Does route variation impact ABB areas? Yes  No

e) Was variation proposed to satisfy environmental issues? Yes  No

f) Was realignment proposed to satisfy agency request? Yes  No

-If yes, name of agency(s):

g) Environmental features:

Added (+):  Subtracted (-):

Wetland ID # for newly impacted wetlands:

h) Has all the evaluation criteria been examined/provided for this specific discipline? Yes  No

If no, please explain why:

7 **ENGINEERING / FACILITIES AND HYDRAULICS (if applicable)** *Sandra Gigovic*

a) Will the route variation require the relocation of a pump station? Yes  No

b) Will route variation impact hydraulics? Yes  No

c) Are additional valves required at HCA's or water crossing? Yes  No

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes  No

If no, please explain why:

8 **STAKEHOLDER RELATIONS / TCPL (if applicable)** *Bud Andersen*

a) Does the variation result in any new stakeholders? Yes  No

b) Does the variation require follow-up with specific stakeholder groups? Yes  No

c) Was the variation proposed to satisfy stakeholder request? Yes  No

-If yes, please specify issue type (as it aligns to stakeholder database):

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes  No

If no, please explain why:

9

Originator:

Date:

10

Received by:

Date:

Fax to: ?

11

Assigned Tracking Number:

12

Filed by:

Date:

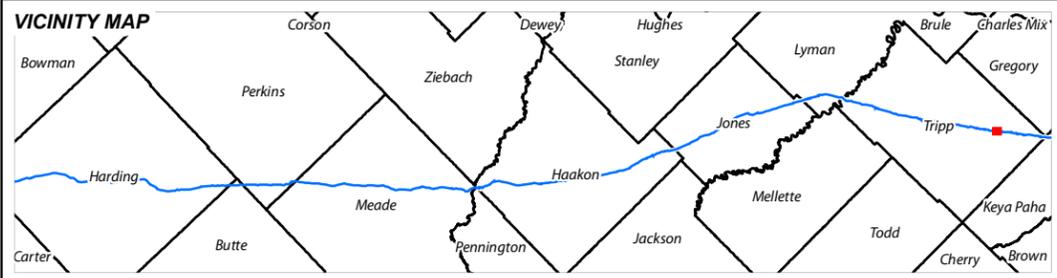
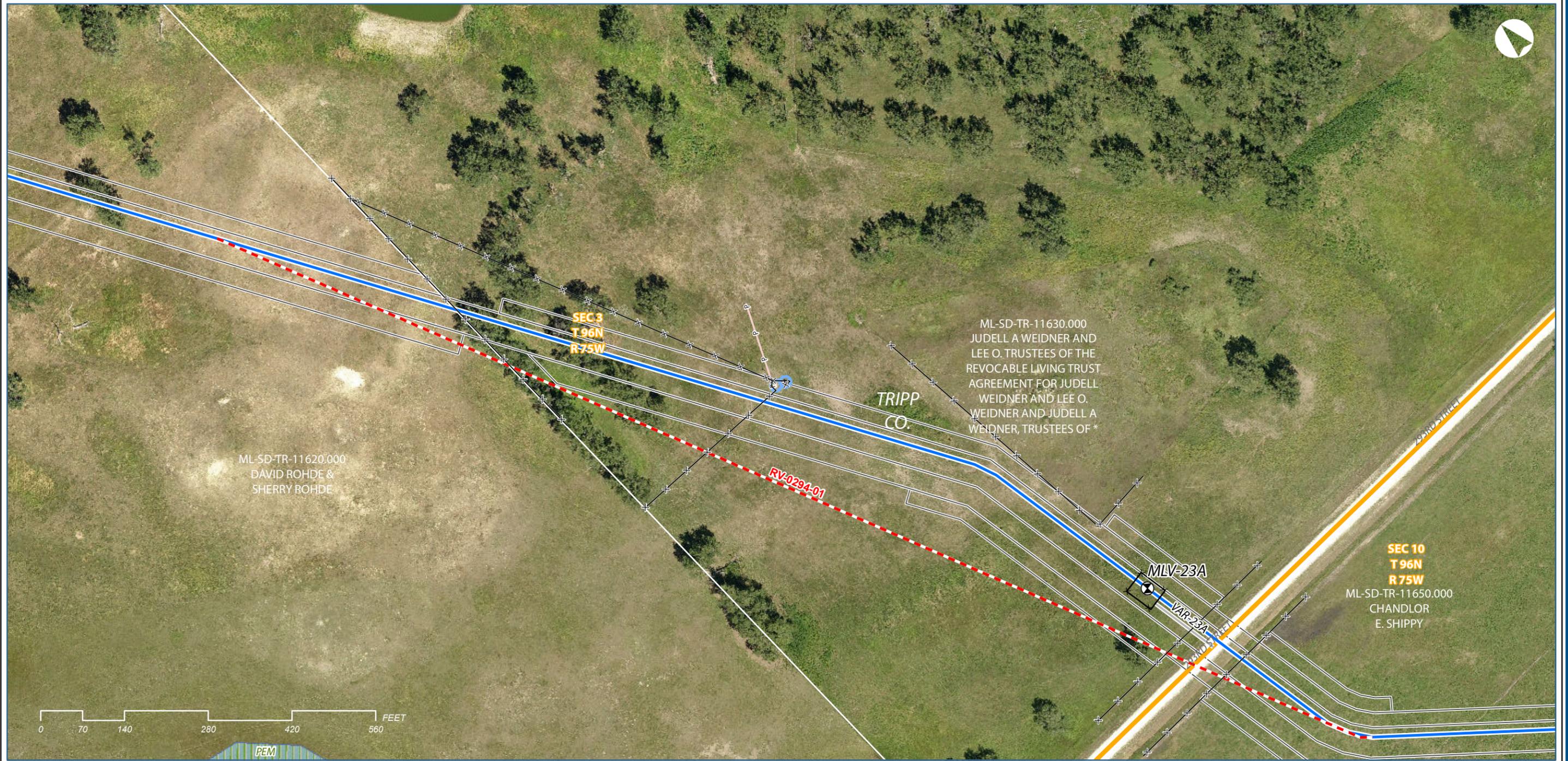
Fax to: ?

0294-SD-P4-586.2-586.6-I

KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: 4/5/2012	Tracking Number: 0294-SD-P4-586.2-586.6-1	
Description: The primary reason for this reroute is to avoid a well (temporary workspaces impact well). This proposed route variation will impact the current location of MLV-23A and VAR-23A.	MP: 586.2 to 586.6	Originated By: Engineering
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>TransCanada - Land</b>	Tina Hall	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date: 4-16-12
		If Rejected Why?
<b>TransCanada - Engineering</b>	Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date: 4-26-12
		If Rejected Why?
<b>Exp - Engineering</b>	Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date: 4-17-2012
		If Rejected Why?
<b>Exp - Environmental</b>	Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments: pending Survey		Date: 6-1-12
		If Rejected Why?
<b>Stantec - Risk Assessment</b>	Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
<b>Facilities - TransCanada</b>	Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
<b>TransCanada - PM (Montana)</b>	Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
<b>TransCanada - PM (South Dakota)</b>	James Odom	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
<b>TransCanada - PM (Nebraska)</b>	Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
<b>TransCanada - Keystone XL Manager</b>	Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:		Date:
		If Rejected Why?
Forward to:	Tina Hall <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Butch Wallace <input type="checkbox"/>	Jonathan Minton <input type="checkbox"/> Heidi Tillquist <input type="checkbox"/> Sandra Gigovic <input type="checkbox"/> Alan Lietz <input type="checkbox"/>
		James Odom <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Steve Marr <input type="checkbox"/>

0294-SD-P4-586.2-586.6-1



**LEGEND**

- MILEPOST
- KEYSTONE XL CL (2012-03-14)
- - - PROPOSED ROUTE VARIATION
- ▭ SECTION LINE
- ACCESS ROAD
- ▭ PUMP STATION
- ⊗ VALVE
- ⊗ SURVEYED FENCE
- ▭ PROPERTY PARCEL
- ▭ CULTURAL SITE
- ▭ WETLAND
- ▭ WATERBODY
- ▭ 500FT MDEQ CORRIDOR
- WELL

**KEYSTONE XL PROJECT**

*Proposed Route Variation 0294-01*

COUNTY:	TRIPP	DRAWN BY:	PD
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	0	REVISION	ISSUED FOR REVIEW.
		DATE	2012-04-05
<b>PRELIMINARY</b>			
DATE:	2012-04-05	PROJECTION:	NAD83   UTM14 N

PREPARED BY:  
**exp** Energy Services Inc.  
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 • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-30-P-9200 SHEET: 1



**RV-0294-01 - Looking Southeast at minute 01:44.871**

**03/14/2012 CL - Blue line**

**Reroute - Red line**



**RV-0294-01 - Looking Northwest at minute 06:51.844**  
**03/14/2012 CL - Blue line**  
**Reroute - Red line**

