

KEYSTONE XL PIPELINE PROJECT

0497-SD-P4-465.4-465.8-S

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	<b>VARIATION TYPE:</b> 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	<b>LOCATION:</b> Sketch: <input type="text" value="Attached"/> Pictures: <input type="text" value="N/A"/> State: <input type="text" value="SD"/> County: <input type="text" value="Haakon"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="003N"/> Range: <input type="text" value="022E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="021, 028, 027"/> Centerline: <input type="text" value="6/11/2013"/> MP: <input type="text" value="465.41"/> to <input type="text" value="465.78"/>		
3	<b>REASON FOR ROUTE VARIATION</b> (Please include reason for route variation): <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>The primary reason for this proposed reroute is to shift the CL to avoid cutting a hill way down to avoid a deep bore pit. This CL reroute was originally approved with conditions through PTR #130 (attached).</p> <p>This reroute has been proposed by Engineering based on recommendations from construction team (MPS) and field recon (civil survey).</p> </div>		
	<b>DETAIL ROUTE VARIATION</b> (Please describe route variation in detail): <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>This reroute begins near MP 465.41 and deviates ~8.5° east of the current CL. It continues straight southeast for ~1,875 ft., rejoining the current CL near MP 465.8. This reroute essentially straightens the CL between the mentioned MPs.</p> <p>Tracts Impacted:                      ML-SD-HK-01140.000 (Martin Nelson)                      ML-SD-HK-01170.000 (Jace Nelson)                      ML-SD-HK-01190.000 (Norma A. Nelson)</p> </div>		
	<b>ADDITIONAL IMPACTS</b> (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>This RV has been civil surveyed, but a section of the new reroute is outside the current limits of environmental survey, thus additional requiring environmental survey.</p> </div>		
	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"/>		
	<b>COST ANALYSIS</b> (costs incurred or saved from the route variation)		
	Additional length of route realignment:	<input type="text" value="-70"/> ft.	\$ (25,305.89) \$ 360/ft
	Additional length of side-hill construction:	<input type="text" value="0"/> ft.	\$ - \$ 19/ft
	Additional length of wetland construction:	<input type="text" value="0"/> ft.	\$ - \$ 195/ft
	Additional bore length (Road, RR):	<input type="text" value="0"/> ft.	\$ - \$ 540/ft
	Additional foreign line/pipeline crossings:	<input type="text" value="0"/> 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="0.19"/> mile	\$ 475.00 \$ 2,500/mile
	Biological:	<input type="text" value="0.19"/> mile	\$ 532.00 \$ 2,800/mile
	Miscellaneous costs saved or added due to route variation from <b>ADDITIONAL IMPACTS</b> listed above: <input type="text"/>		
	Overall estimated costs of the route variation:	\$ (24,298.89) (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:

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 / TransCanada** *Sandra Barnett*

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: ?

0497-SD-P4-465.4-465.8-S

KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: 8/15/2013	Tracking Number: 0497-SD-P4-465.4-465.8-S	
Description: The primary reason for this proposed reroute is to shift the CL to avoid cutting a hill way down to avoid a deep bore pit. This CL reroute was originally approved with conditions through PTR #130 (attached).	MP: 465.4 to 465.8	Originated By: Engineering
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
TransCanada - Land Tina Hill	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8-21-13
Comments:	If Rejected Why? Pending Loadings Approval	
TransCanada - Engineering Meera Kolhari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/19/13
Comments:	If Rejected Why?	
Exp - Engineering Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8-21-13
Comments:	If Rejected Why?	
TransCanada - Environmental Sandra Barnett	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/19/13
Comments:	If Rejected Why? Pending Survey	
Stantec - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - Facilities Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (Montana) Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (South Dakota) James Odom	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 21 Aug-13
Comments:	If Rejected Why?	
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - Area Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to: Tina Hill <input type="checkbox"/> Meera Kolhari <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/>	Sandra Barnett <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"/>

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## Ysela Love

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**From:** Brad Smith <brad\_smith@transcanada.com>  
**Sent:** Wednesday, August 28, 2013 6:28 PM  
**To:** Ysela Love; Mary Katherine Golding  
**Subject:** Fw: RV 0496-01 & 0497-01

Is this RV absolutely necessary?

Brad Smith  
Project Engineer  
Keystone Pipeline Project  
TransCanada  
t: 713.693.6407 | m: 832.301.1338  
2700 Post Oak Blvd., Suite 400  
Houston, TX 77056

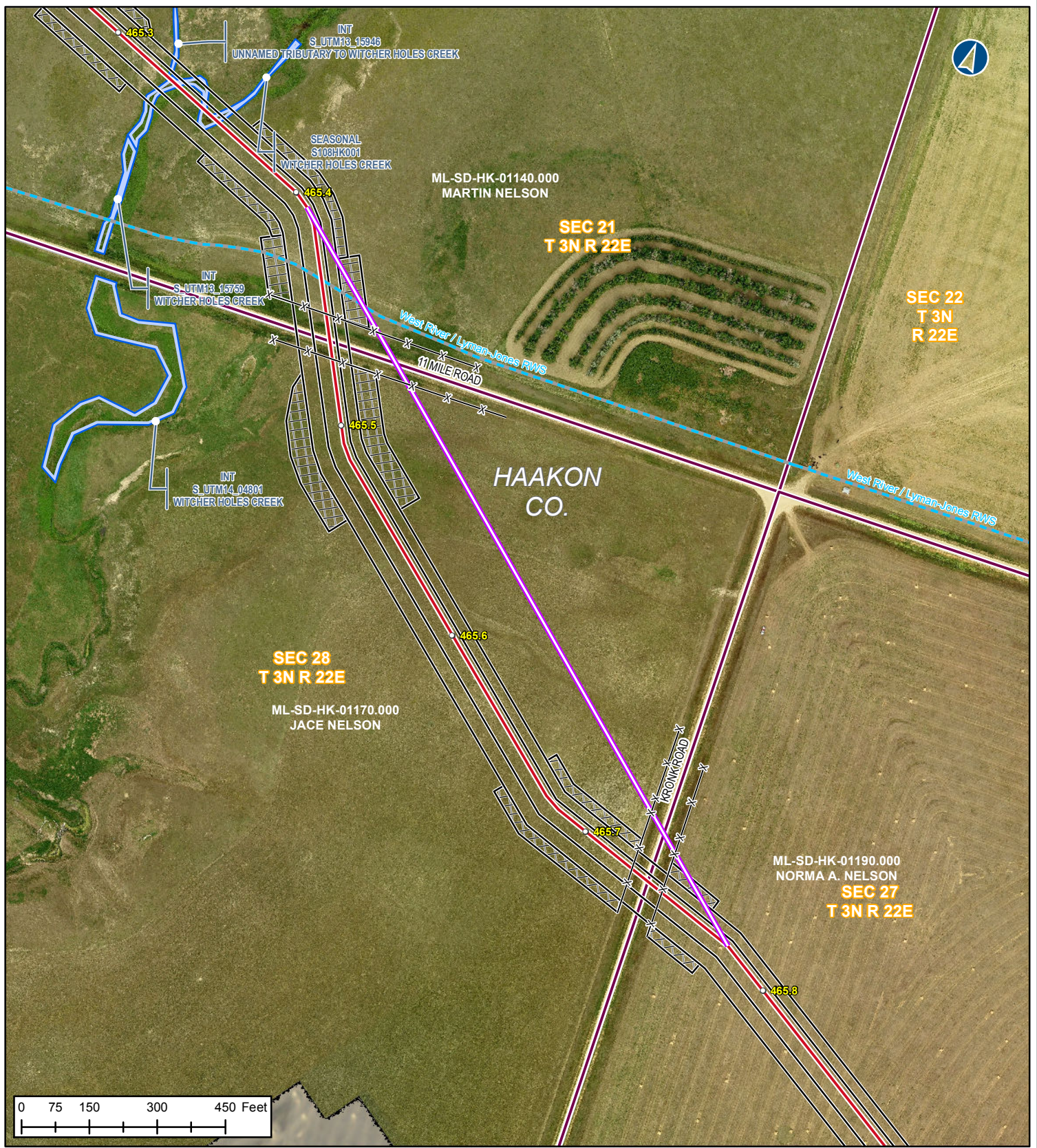
----- Original Message -----

From: Jones, Craig [<mailto:Craig.Jones@universalpegasus.com>]  
Sent: Wednesday, August 28, 2013 04:54 PM  
To: Brad Smith  
Subject: RV 0496-01 & 0497-01

FYI  
Met with L/O ( Nelson ) today to discuss RV's on his land. We staked out line of site, reviewed with L/O and made our case. L/O has rejected 0496-01 in favor of original line due to erosion concerns but has accepted 0497-01 as proposed.  
Thanks  
Craig  
Universal Ensco, Inc., Pegasus International, Inc., UP International Inc. are UniversalPegasus International Companies

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**LEGEND**

○ 1/10 Mile Post	— Access Road - Permanent	□ Pump Station
● Centerline Mile Post (2013-06-11)	— Access Road - Temporary	□ Property Parcel
○ Valve	X Surveyed Fence	□ Section Line
□ Valve Site	— Pipeline	□ County Line
⊗ Power Pole	— Telephone	□ Wetland
— Keystone XL Project (2013-06-11)	— UG Cable	
— Keystone XL Route Variation	— OH Electric	
	— Water Lines	

**KEYSTONE XL PROJECT**  
**RV-0497-01 ROUTE VARIATION**

COUNTY: HAAKON	DRAWN BY: CC
STATE: SOUTH DAKOTA	CHECKED BY: PD
REV NO.: A	ISSUED FOR REVIEW 2013-08-07
<b>PRELIMINARY</b>	
DATE: 2013-08-07	PROJECTION: NAD83 UTM14 N

PREPARED BY:  
**exp Energy Services Inc.**  
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DWG: XL-46-P-9299-RV-497-01 SHEET: 1



# Change Variance Request

<b>PROJECT NAME:</b>		Keystone Pipeline Gulf Coast Project		
<b>CONTRACTOR SPREAD:</b>		MPS	<b>PROJECT NO:</b>	25472
<b>CONTRACT TITLE:</b>			<b>PTR #:</b>	25472-KXL-CVR-MPS-00130
<b>SUBJECT:</b>		SD-CL-47-RX		
<b>INITIATOR:</b>		Ploederl Benjamin (MPS Constructors LLC)	<b>SOURCE (CRMP, Clause, Drawing #):</b>	SD Map Book CL
<b>DATE CREATED:</b>		06-Nov-2012	<b>SPREAD/LOCATION (MILEPOST):</b>	MP465.11
<b>REQUIRED RESPONSE DATE:</b>		01-Dec-2012	<b>LANDOWNER:</b>	
<b>TRACT NO.:</b>			<b>TYPE OF CHANGE</b>	Major
<b>DOCUMENT STATUS</b>		Approve with Conditions	<b>ALIGNMENT SHEET/STATION NUMBER</b>	135
<b>VARIANCE FROM:</b>		Other	<b>OTHER:</b>	
<b>DESCRIPTION OF CHANGE</b>		<p>Re-route to be consider round the road x-ing.</p> <p>Craig Jones was looking into a possible re-route.</p> <p>(see recon report)</p>		
<b>JUSTIFICATION</b>		<p>The north side of the road has a waterline 25' off the fence line and a hill that will need to be cut way down to keep from having to deep of a bore pit.</p> <p>(see recon report)</p>		
<input checked="" type="checkbox"/>	Cost/Schedule Impact	<b>Survey Type</b>	<b>Survey Results/Explanation</b>	<b>Additional Survey</b>
<input checked="" type="checkbox"/>	Civil Survey			N
<input checked="" type="checkbox"/>	Cultural Survey			
<input checked="" type="checkbox"/>	T & E Survey			
<input type="checkbox"/>	Wetlands Survey			
<b>FINAL DISPOSITION</b>		<p>Approved with conditions: Pending results of additional environmental and cultural surveys of the proposed reroute. Tentative landowner approval. Landowner will need to execute an easement amendment for the reroute when a sketch is issued.</p>		
<b>DOCUMENTS ATTACHED</b>		25472-KXL-CVR-MPS-00130.pdf		
<b>APPROVALS</b>				
<b>Stage</b>		<b>Reviewer Name</b>		<b>Review Date</b>
CVR - Engineering Disposition		Kothari, Meera (TRANSCAN)		12 Mar 2013
CVR - Environmental Disposition		Craycroft, Kevin (EXP)		08 May 2013
CVR - Land Disposition		Hall, Tina (TRANSCAN)		15 Jun 2013
CVR - PMT Manager		Odom, James (TRANSCAN)		18 Jun 2013

Mp 465.1 11 mile rd, the north side of rd has a water line 25' off the fence and a hill that will need to be cut way down to keep from having such a deep bore pit. Not a good place for a road crossing , Craig Jones said he had turned in a reroute for this place last March . He was going to check on its status.

### Sheet 135

