

KEYSTONE XL PIPELINE PROJECT

0383-SD-P4-524.1-524.4-1

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	VARIATION TYPE:	Refinement: <input type="text"/>	Reroute: <input checked="" type="checkbox"/> X
		Centerline: <input checked="" type="checkbox"/> X	Footprint: <input type="text"/> Design: <input type="text"/>
		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="Jones"/>	Quad Map: <input type="text" value="N/A"/>
	Township: <input type="text" value="02S"/>	Range: <input type="text" value="031E"/>	Aerial Map: <input type="text" value="See attached map sheet"/>
	Section: <input type="text" value="20"/>	Centerline: <input type="text" value="8/15/2012"/>	MP: <input type="text" value="524.15"/> to <input type="text" value="524.40"/>
3	REASON FOR ROUTE VARIATION (Please include reason for route variation):		
	<p>The primary reason for this route variation is to improve the crossing of the West River Lyman Jones Waterline (WAT-8034, 2.5 diameter) near MP 524.55. The crossing angle of the pipeline at the waterline is improved from 10° to 50°.</p> <p>This proposed reroute is requested by Engineering and is proposed based on the recommendations from the CPMS 60% Design Review. The proposed reroute was drawn based on a combination of aerial imagery, Pictometry, and LIDAR data.</p>		
	DETAIL ROUTE VARIATION (Please describe route variation in detail):		
	<p>The proposed route variation starts near MP 524.2 and deviates ~1.5° southeast of the current centerline. It extends in this direction for ~669.5 ft. prior to turning northeast towards the current CL. This turn, allows for a 50° crossing of the WRLJ waterline. The proposed reroute continues in this direction for ~119 ft. Then the reroute turns southeast and continues for ~576 ft to rejoin the current CL near MP 524.4.</p>		
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.):		
	<p>1 Tract is impacted by this centerline reroute: ML-SD-JO-10880.000 (Ted L. Nies & Beverly J. Nies, Douglas P. Nies)</p> <p>The proposed route variation falls within the current environmental surveyed corridor, so no additional costs associated with environmental surveys will be incurred. Additionally, the bore length is reduced from 30 ft. to 10 ft. crossing.</p>		
	Is there an increase/decrease in the number of crossings?	Yes <input type="text"/>	No <input checked="" type="checkbox"/> X
	If yes, please list: <input type="text"/>		
	COST ANALYSIS (costs incurred or saved from the route variation)		
	Additional length of route realignment:	<input type="text" value="20"/> ft.	\$ <input type="text" value="7,140.75"/> \$ 360/ft
	Additional length of side-hill construction:	<input type="text" value="0"/> ft.	\$ <input type="text" value="-"/> \$ 19/ft
	Additional length of wetland construction:	<input type="text" value="0"/> ft.	\$ <input type="text" value="-"/> \$ 195/ft
	Additional bore length (Road, RR):	<input type="text" value="-20"/> ft.	\$ <input type="text" value="(10,800.00)"/> \$ 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" value="0"/> EA	\$ <input type="text" value="-"/> \$ 185,000/EA
	10' - 19'	<input type="text" value="0"/> EA	\$ <input type="text" value="-"/> \$ 77,250/EA
	Less than 10'	<input type="text" value="0"/> EA	\$ <input type="text" value="-"/> \$ 32,500/EA
	Additional survey required:		
	Civil:	<input type="text" value="0.13"/> mile	\$ <input type="text" value="628.82"/> \$ 5,000/mile
	Cultural:	<input type="text" value="0.00"/> mile	\$ <input type="text" value="-"/> \$ 2,500/mile
	Biological:	<input type="text" value="0.00"/> mile	\$ <input type="text" value="-"/> \$ 2,800/mile
	Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above:	<input type="text"/>	
	Overall estimated costs of the route variation:	\$ <input type="text" value="(3,030.43)"/> (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 - 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: ?

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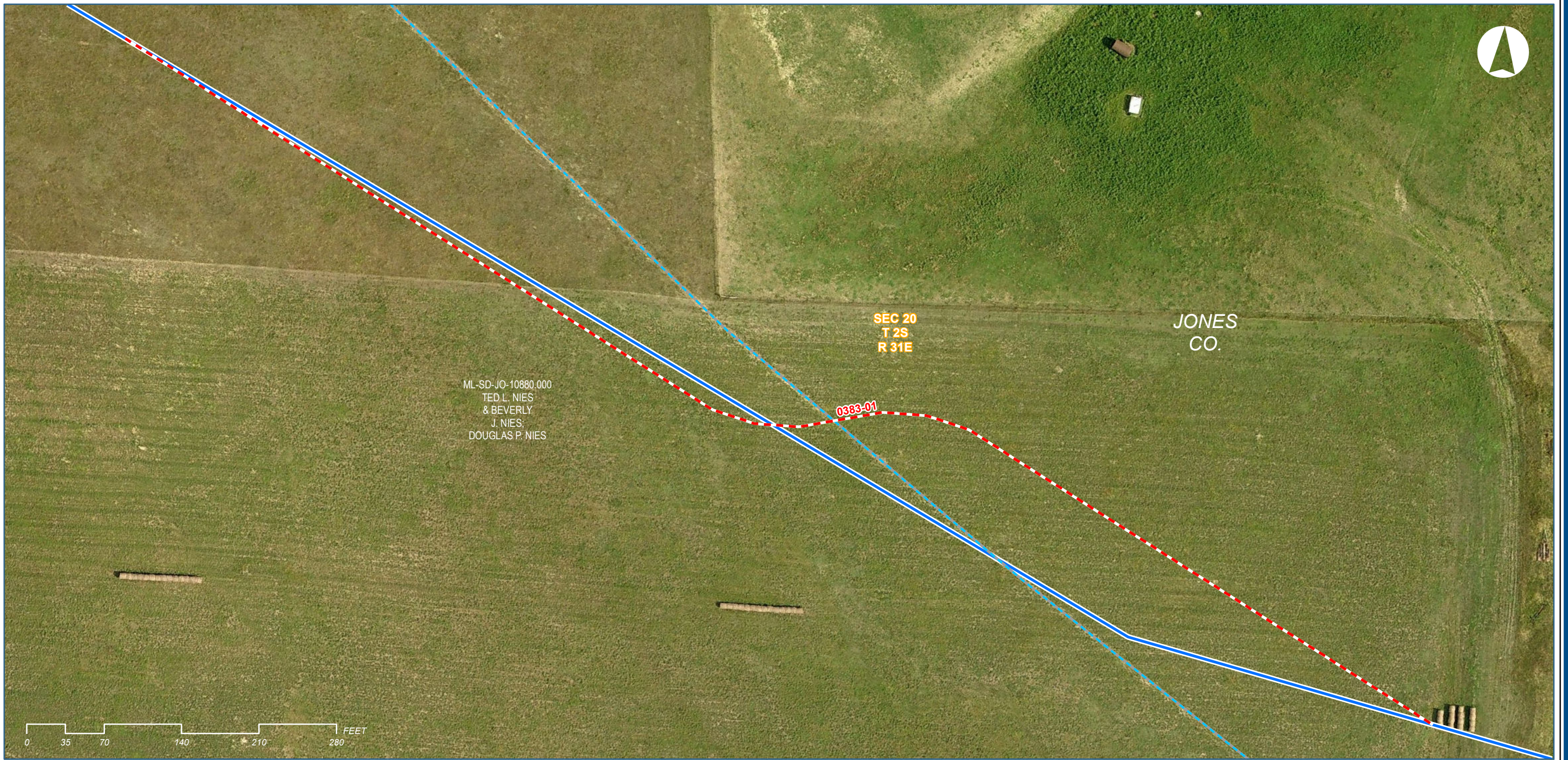
KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: <u>10/30/2012</u>	Tracking Number: <u>0383-SD-P4-524.1-524.4-1</u>	
Description: <u>The primary reason for this route variation is to improve the crossing of the West River Lyman Jones Waterline (WAT-8034, 2.5 diameter) near MP 524.55. The crossing angle of the pipeline at the waterline is improved from 10° to 50°.</u>	MP: <u>524.1</u> to <u>524.4</u>	
	Originated By: <u>Engineering</u>	
	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"/>	
Comments:	<u>T. Hall</u> Date: <u>11-5-12</u>	
	If Rejected Why?	
<u>TransCanada - Engineering</u> Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	<u>Meera</u> Date: <u>11/2/12</u>	
	If Rejected Why?	
<u>Exe - Engineering</u> Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	<u>Kevin</u> Date: <u>12/10/12</u>	
	If Rejected Why?	
<u>TransCanada - Environmental</u> Sandra Barnett	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	<u>Sandra</u> Date: <u>10-27-12</u>	
	If Rejected Why?	
<u>Stantec - Risk Assessment</u> Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	
Comments: <u>N/A.</u>	Date: _____	
	If Rejected Why?	
<u>TransCanada - Facilities</u> Sandra Gligovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	
Comments: <u>N/A. Does not affect facilities</u>	Date: _____	
	If Rejected Why?	
<u>TransCanada - PM (Montana)</u> Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	Date: _____	
	If Rejected Why?	
<u>TransCanada - PM (South Dakota)</u> James Odom	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	<u>James</u> Date: <u>12/10/12</u>	
	If Rejected Why?	
<u>TransCanada - PM (Nebraska)</u> Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	Date: _____	
	If Rejected Why?	
<u>TransCanada - Area Manager</u> Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	
Comments:	Date: _____	
	If Rejected Why?	
Forward to: Tina Hall <input type="checkbox"/> Sandra Barnett <input type="checkbox"/> James Odom <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Heidi Tillquist <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/> Sandra Gligovic <input type="checkbox"/> Steve Marr <input type="checkbox"/> Alan Lietz <input type="checkbox"/>		

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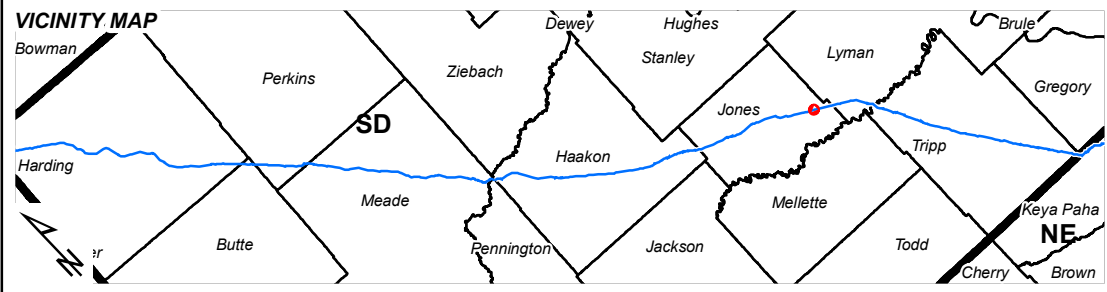
KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM	
Date: 10/30/2012	Tracking Number: 0383-SD-P4-524.1-524.4-1
Description: The primary reason for this route variation is to improve the crossing of the West River Lyman Jones Waterline (WAT-6034, 2.5 diameter) near MP 524.55. The crossing angle of the pipeline at the waterline is improved from 10° to 50°.	MP: 524.1 to 524.4
	Originated By: Engineering
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
TransCanada - Land Tina Hall	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Engineering Meera Kohari	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Enx - Engineering Kevin McGlynn	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Environmental Sandra Barnett	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Slantec - Risk Assessment Heidi Takousi	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments: N/A	Date:
	If Rejected Why?
TransCanada - Facilities Sandra Glogovik	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments: N/A. Does not affect facilities	Date: Dec 9, 2012
	If Rejected Why?
TransCanada - PM (Montana) Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - PM (South Dakota) James Odum	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Area Manager Steve Mann	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Forward to: Tina Hall <input type="checkbox"/> Sandra Barnett <input type="checkbox"/> James Odum <input type="checkbox"/> Meera Kohari <input type="checkbox"/> Heidi Takousi <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/> Sandra Glogovik <input type="checkbox"/> Steve Mann <input type="checkbox"/> Alan Lietz <input type="checkbox"/>	

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ML-SD-JO-10880.000
TED L. NIES
& BEVERLY
J. NIES;
DOUGLAS P. NIES



LEGEND

- MILEPOST
- KEYSTONE XL CL (2012-08-15)
- - - PROPOSED ROUTE VARIATION
- ▭ SECTION LINE
- ACCESS ROAD
- ▭ PUMP STATION
- ⊗ VALVE
- ▭ PROPERTY PARCEL
- ▭ CULTURAL SITE
- ▨ WETLAND
- ▨ WATERBODY
- Foreign Utilities**
- - - CAB
- - - FIB
- - - GAS
- - - OEL
- - - OIL
- - - PL
- - - TEL
- - - WAT

KEYSTONE XL PROJECT

Proposed Route Variation 0383-01

COUNTY:	JONES	DRAWN BY:	CR
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	0	REVISION	ISSUED FOR REVIEW.
		DATE	2012-10-30

PRELIMINARY

DATE:	2012-10-30	PROJECTION:	NAD83 UTM14 N
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PREPARED BY:

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DWG:	XL-00-P-9200_RVS	SHEET:	1
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