

KEYSTONE XL PIPELINE PROJECT

0478-SD-P4-419.8-420.1-1

| 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 checked="" type="checkbox"/> 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="Meade"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="007N"/> Range: <input type="text" value="016E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="1"/> Centerline: <input type="text" value="6/11/2013"/> MP: <input type="text" value="419.85"/> to <input type="text" value="420.11"/> | | |
| 3 | REASON FOR ROUTE VARIATION (Please include reason for route variation): <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> The primary reason for this reroute is to shift PI out of road crossing (field road, CAR 166). This reroute has been proposed by Engineering based on 90% alignment sheet review and has been civil surveyed. </div> | | |
| | DETAIL ROUTE VARIATION (Please describe route variation in detail): <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> The proposed reroute begins near MP 419.85 and deviates from the current CL ~14". It continues along a straight southeast path for ~1,279 ft. Then it turns a couple of times for a total distance of ~80 ft. to rejoin the current CL near MP 420.11. </div> | | |
| | ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> Proposed RV falls within existing Environmentally surveyed corridor. </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"/> | | |
| | COST ANALYSIS (costs incurred or saved from the route variation) | | |
| | Additional length of route realignment: | <input type="text" value="-4"/> ft. | \$ (1,417.36) \$ 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="0.00"/> mile | \$ - \$ 2,500/mile |
| | Biological: | <input type="text" value="0.00"/> mile | \$ - \$ 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="\$ (1,417.36)"/> (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:

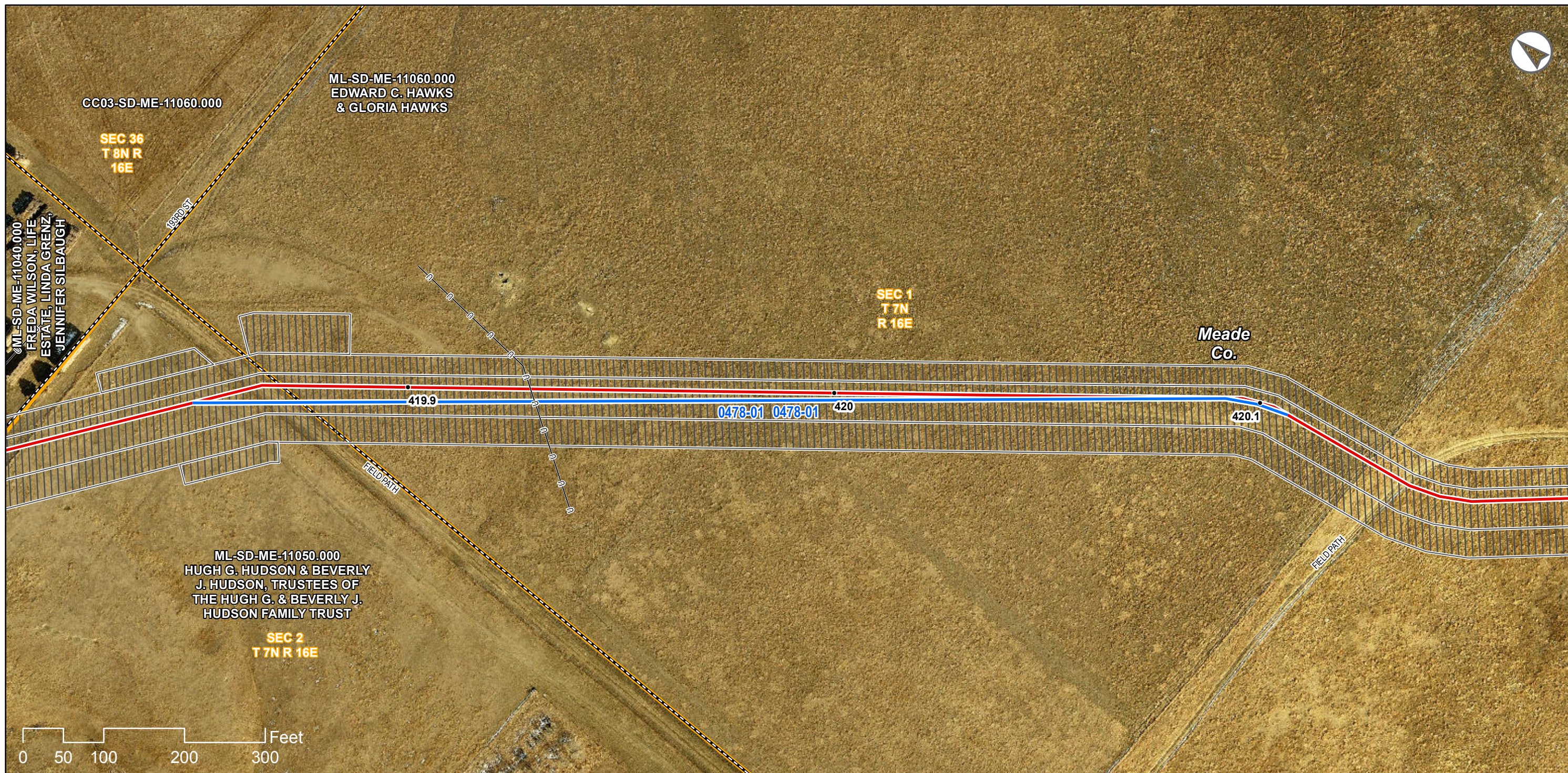
12 Filed by:
 Date:
 Fax to: ?

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KEYSTONE XL PIPELINE PROJECT

| KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM | | | |
|---|---|--|---|
| Date: 8/7/2013 | Tracking Number: 0478-SD-P4-419.8-420.1-1 | MP: 419.8 to 420.1 | |
| Description: The primary reason for this reroute is to shift PI out of road crossing (field road, CAR 166). | 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: 8-11-13 | |
| 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? | | |
| <u>Startec - Risk Assessment</u> Heidi Tillquist | Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/> | Date: _____ | |
| Comments: | If Rejected Why? | | |
| <u>TransCanada - Facilities</u> Sandra Gigovic | Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/> | Date: _____ | |
| Comments: | 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 Odom | 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"/> | 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 Gigovic <input type="checkbox"/> | Steve Marr <input type="checkbox"/> |
| | | Alan Lietz <input type="checkbox"/> | |

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Keystone XL Project

LEGEND

- Milepost
- Valve
- Foreign Utilities
- Exclusion Fencing
- Keystone XL Project Centerline
- Centerline RV
- Workspace
- Pump Station
- Cultural Site
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ 500' Corridor

KEYSTONE XL PROJECT
RV-0478-01 CL CHANGES

| | | | |
|--------------------|--------------------|-------------|-----------------|
| COUNTY: | MEADE | DRAWN BY: | CR |
| STATE: | SD | CHECKED BY: | PD |
| REV. NO.: | REVISION | DATE | |
| 0 | ISSUED FOR REVIEW. | 2013-07-29 | |
| PRELIMINARY | | | |
| DATE: | 2013-07-29 | PROJECTION: | NAD83 UTM13 N |

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DWG: XL-P-9299-RV-20130726 SHEET: 1