

| KEYSTONE XL PIPELINE PROJECT - STEELE CITY SEGMENT PIPELINE ROUTE VARIATION FORM | | | |
|---|--|--|--|
| 1 | VARIATION TYPE: | | |
| | Refinement: <input type="checkbox"/> <input checked="" type="checkbox"/> | Reroute: <input type="checkbox"/> | |
| | Centerline: <input type="checkbox"/> <input checked="" type="checkbox"/> | Valve Site: <input type="checkbox"/> | Pump Station: <input type="checkbox"/> |
| 2 | LOCATION: | | |
| | Sketch: <input type="checkbox"/> <input checked="" type="checkbox"/> Attached | Pictures: <input type="checkbox"/> <input checked="" type="checkbox"/> See attached. | |
| | State: <input type="checkbox"/> SD | County: <input type="checkbox"/> Harding | Quad Map: <input type="checkbox"/> N/A |
| | Township: <input type="checkbox"/> 21N | Range: <input type="checkbox"/> 2E, 3E | Aerial Map: <input type="checkbox"/> See attached map sheet |
| | Section: <input type="checkbox"/> 13, 18 | Centerline: <input type="checkbox"/> 11/18/2010 | MP: <input type="checkbox"/> 297.49 to <input type="checkbox"/> 298.79 |
| 3 | REASON FOR ROUTE VARIATION (Please include reason for route variation): | | |
| <p>The current centerline gets close to a waterline (1/2") near MP 298 and also crosses the waterline two times near MP 298.5. This reroute is proposed to accommodate landowner's request (Marcella M. Gunderson et al) to avoid these multiple waterline crossings which will also avoid delays and save cost of construction.</p> | | | |
| DETAIL ROUTE VARIATION (Please describe route variation in detail): | | | |
| <p>The proposed reroute starts at the PI near MP 297.5 and deviates slightly (~2") from the centerline towards the east. It continues in this direction for ~5,750 ft until it is at a sufficient distance (~110ft.) to avoid any construction impacts to the landowner's waterline. Along its path, it crosses a minor stream feature at a preferred spot. It then turns towards the southeast and continues for ~1,140 ft to rejoin the current centerline at the PI near MP 298.8.</p> | | | |
| ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): | | | |
| <p>The proposed reroute is ~29 ft longer than the original route. If the landowner is not agreeable to cut and replace the waterline during construction, the cost of matting and crossing the waterline at two locations is estimated to be ~\$30,000, there is a day of delay estimated at this location.</p> | | | |
| Is there an increase/decrease in the number of crossings? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| If yes, please list: <input type="checkbox"/> 2 fewer water line crossings as listed above | | | |
| COST ANALYSIS (costs incurred or saved from the route variation) | | | |
| Additional length of route realignment: | <input type="checkbox"/> 29 | ft. | \$ 10,440.00 \$ 360/ft |
| Additional length of side-hill construction: | <input type="checkbox"/> | ft. | \$ - \$ 19/ft |
| Additional length of wetland construction: | <input type="checkbox"/> | ft. | \$ - \$ 195/ft |
| Additional bore length (Road, RR): | <input type="checkbox"/> | ft. | \$ - \$ 540/ft |
| Additional foreign line/pipeline crossings: | <input type="checkbox"/> | EA | \$ - \$ 30,000/EA |
| Additional water body crossing (streams, ponds, etc.): | | | |
| | 35 - 65' + | <input type="checkbox"/> EA | \$ - \$ 185,000/EA |
| | 10' - 19' | <input type="checkbox"/> EA | \$ - \$ 77,250/EA |
| | Less than 10' | <input type="checkbox"/> EA | \$ - \$ 32,500/EA |
| Additional survey required: | | | |
| | Civil: | <input type="checkbox"/> 1.31 | mile \$ 6,550.00 \$ 5,000/mile |
| | Cultural: | <input type="checkbox"/> 1.31 | mile \$ 3,275.00 \$ 2,500/mile |
| | Biological: | <input type="checkbox"/> 1.31 | mile \$ 3,668.00 \$ 2,800/mile |
| Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above: | | | \$ (30,000) |
| Overall estimated costs of the route variation: | | | \$ (6,067) (See "Additional Impacts" above) |

4
LAND / UNIVERSAL FIELD *Doug Reichley*

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

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

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

-If yes, name of landowner(s)/track number(s): ML-SD-HA-00640 (Marcella M. Gunderson Et Al)

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

If no, please explain why: _____

5
ENGINEERING/CONSTRUCTION / STATE PM *David Guien*

a) Maximum deviation perpendicular to proposed alignment: 230 ft.

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

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

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

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

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

If no, please explain why: _____

6
ENVIRONMENTAL / TROW *Jonathan Minton*

a) Has the corridor been environmentally surveyed? Yes No

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

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

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

-If yes, name of agency(s): _____

e) Environmental features:

Added (+): None Subtracted (-): None

Wetland ID # for newly impacted wetlands: _____

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

If no, please explain why: _____

7
ENGINEERING / FACILITIES AND HYDRAULICS *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 *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: Land

Date: 12/10/2010

10

Received by: _____

Date: 12/10/2010

Fax to: ?

11

Assigned Tracking Number: 0192-SD-P2-297.5-298.8-I

12

Filed by: _____

Date: _____

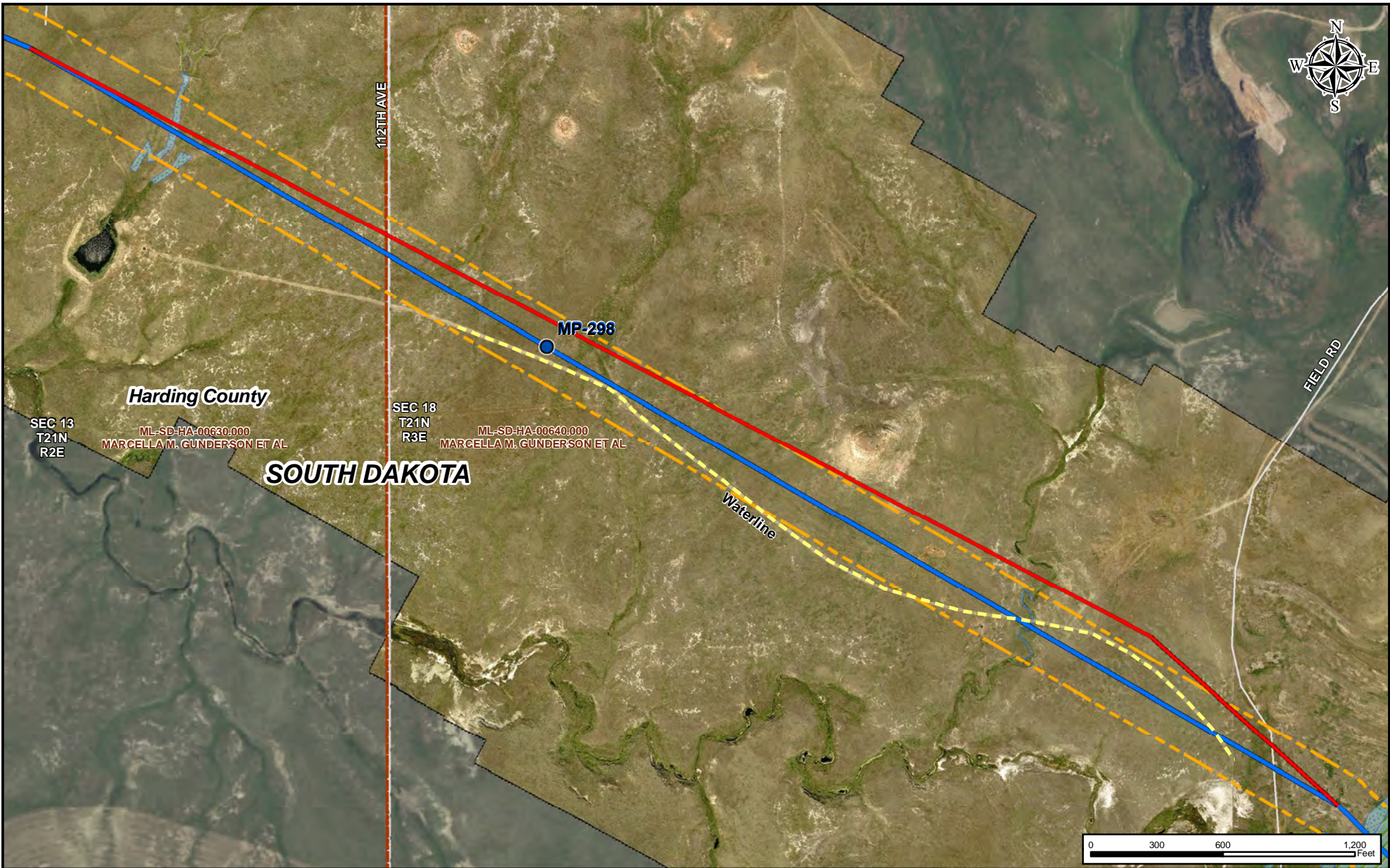
Fax to: ?

0192-SD-P2-297.5-298.8-I

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

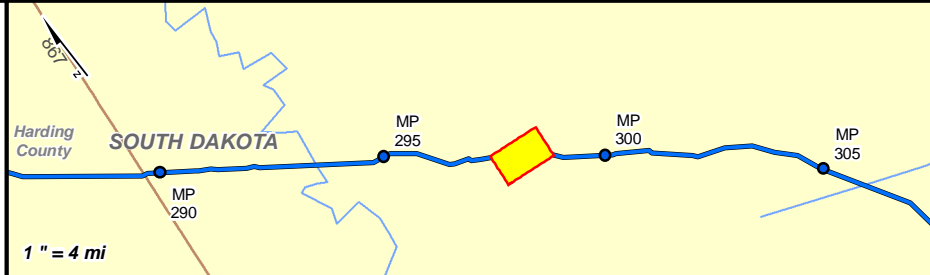
0192-SD-P2-297.5-298.8-1

| KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM | | | |
|--|--|--|--|
| Date: <input type="text" value="12/10/2010"/> | Tracking Number: <input type="text" value="0192-SD-P2-297.5-298.8-1"/> | | |
| Description: <input type="text" value="Reroute to avoid crossing a waterline multiple times."/> | MP: <input type="text" value="297.5"/> to <input type="text" value="298.8"/> | | Originated By: <input type="text" value="Land"/> |
| | 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"/> | | |
| Comments: <input type="text"/> | <input type="text" value="Doug Reichley"/> Date: <input type="text" value="12/13/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| State PM - Construction / Eng. David Guien | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text"/> | <input type="text" value="David Guien"/> Date: <input type="text" value="12/14/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| Trow - Environmental Jonathan Minton | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text" value="Environmental surveys will need to be completed."/> | <input type="text" value="Jonathan Minton"/> Date: <input type="text" value="12/13/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| AECOM -Risk Assessment Heidi Tillquist | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text" value="This reroute slightly improves but does not substantially alter risk to HCAs. Therefore the reroute is therefore acceptable from a operational risk perspective."/> | <input type="text" value="Heidi Tillquist"/> Date: <input type="text" value="12/13/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| Project Management Butch Wallace | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text"/> | <input type="text" value="R.E. Wallace"/> Date: <input type="text" value="12/13/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| Stakeholder Relations Bud Andersen | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text" value="Once approved this could enhance some of the conversations with Harding County Officials."/> | <input type="text" value="Bud Andersen"/> Date: <input type="text" value="12/13/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| Facilities: Sandra Gigovic | Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text"/> | Date: <input type="text"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| TransCanada: Alan Lietz | Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/> | | |
| Comments: <input type="text"/> | <input type="text" value="Alan Lietz"/> Date: <input type="text" value="12/15/2010"/> | | If Rejected Why? <input type="text"/> |
| | | | |
| Forward to: Butch Wallace <input checked="" type="checkbox"/> Jonathan Minton <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/> David Guien <input checked="" type="checkbox"/> Bud Andersen <input checked="" type="checkbox"/> Alan Lietz <input checked="" type="checkbox"/> Doug Reichley <input checked="" type="checkbox"/> Sandra Gigovic <input checked="" type="checkbox"/> | Dispute Resolution, if Required: Yes <input type="checkbox"/> No <input type="checkbox"/> | | |
| Comments: <input type="text"/> | Teleconference Required: Yes <input type="checkbox"/> No <input type="checkbox"/> | | |
| | Decision: <input type="text"/> | | |
| Database - <input type="text"/> | Database - <input type="text"/> | | |
| Filed By: <input type="text"/> | Filed By: <input type="text"/> | | |
| Date: <input type="text"/> | Date: <input type="text"/> | | |
| Fax to: ? <input type="text"/> | Fax to: ? <input type="text"/> | | |



Legend

| | |
|--------------------------|-----------------|
| ● Milepost | Waterbody |
| Centerline (2010-11-18) | Wetland |
| Proposed Route Variation | Parcel Boundary |
| Waterline | Section Line |
| 300ft Corridor | County Boundary |
| | State Boundary |



| KEYSTONE US - PHASE IV PIPELINE PROJECT PROPOSED ROUTE VARIATION 0192 HARDING COUNTY, SOUTH DAKOTA | | | | | |
|--|------------|-------------|---|-------|------|
| Trow | DATE | PROJECT | MAP PARAMETERS | | |
| | 2010-12-08 | 50388X | PROJECTION: UTM 13, NAD83, US FT SCALE: 1" = 600', 1:7,200 | | |
| DRAWN BY | CHECKED BY | APPROVED BY | ROUTE VARIATION NUMBER | SHEET | REV. |
| ACB | CPA | WSF | 0192-SD-P2-297.5-298.8-I | 001 | 0 |