

TransCanada–Keystone XL Steele City Contact Record

Date/Time: 06.08.2010	Meeting Phone Conversation E-Mail (attach) <i>(highlight)</i>
Agency/Organization(s):	Natural Resources Conservation Service (NRCS), South Dakota State Office
Person(s) Involved:	NRCS: Kent Cooley (Area Resource Soil Scientist) WESTECH: Corey Baker

Notes: This meeting incorporated NRCS input from the CON/REC meeting on June 7 to determine specific criteria for identifying soils with low reclamation potential or triple lift soil salvage. Also discussed were the preliminary data results, including identification of specific soil series to be added or deleted from future consideration based on NRCS knowledge of soil characteristics and distribution.

General comments:

- 1) Shallow soils are typically over-estimated in western South Dakota soil surveys
- 2) Often beneficial for plant growth to mix natric(sodic) soil horizons with deeper non-sodic horizons

Suggested changes to soil data analysis:

TripleLift

- 1) Consider triple lift on soils with paralithic contact between 15" and 32" instead of strictly using shallow soils (i.e. <20" deep).
- 2) Triple lifting of saline/sodic soils should be minimal since most saline or sodic horizons are found at shallow depths. Only soils with 12 inches or more of suitable material above saline/sodic horizons should be considered for triple lift.
- 3) Update gravelly soils criteria for triple lift analysis to include horizons with 15% or more coarse fragments by volume, instead of the proposed 35% minimum volume.

Low Rec Potential

- 1) Paralithic contact within 24-inches of surface not much of a concern for reclamation given existing reclamation plans that mitigate for erosion control and poor soil conditions
- 2) Bentonite is not much of a concern since it is widely scattered across project area - more of a problem for transportation and handling in wet weather during construction
- 3) Consider including soils with Wind Erodibility Group rating of 3 or less (instead of 2 or less)
- 4) Consider surface stabilization of fine-textured soils with slopes less than 8% if slope length exceeds 200 feet

Is follow up required?	Yes-send updated soil criteria for triple lift and low reclamation soils for written approval. KC requested to be provided with results of soil analysis report.
------------------------	--

Commitments made:	Soil analysis will be adjusted to include changes listed above
-------------------	--

Recorded by:	Corey Baker, WESTECH
--------------	----------------------

