ENSR
1601 Prospect Parkway, Fort Collins, Colorado 80525
T 970.493.8878 F 970.493.0213 www.ensr.aecom.com

		1/25: ENSR contacted Russ to request the name of a COE contact in Washington, D.C. Russ indicated that Mark Sudol, the COE's Branch Chief would be the best contact. Russ also said that he would try to get the project a lead contact for the Omaha District, probably in Omaha; however, permits would be issued by each state and that meeting at Steve Naylor's office and conferencing in the other COE representatives would likely be the most workable meeting strategy.
Rob Gramke	St. Louis District Program Manager	1/18, 1/19, 1/23: Left voice messages. Received e-mail on 1/24 confirming that Rob will be the St. Louis District contact and is available for meetings in early February.
Stephen Naylor	Omaha District, South Dakota Field Office Regulatory Program Manager	1/23: Steve confirmed that he will be the South Dakota contact for the COE. General survey protocol, including surveying only in questionable areas, was discussed. South Dakota may be amenable to doing abbreviated surveys. Steve would like to have a pre-application conference meeting with Dan Cimarosti, Michael Rabbe, and Russ Rocheford and ENSR so all are on the same page as far as permitting in the Omaha District is concerned. Stephen will contact Russ to discuss how best to accommodate this. He is available weeks of February 6 and 13 for meetings.
Dan Cimarosti	Omaha District, North Dakota State Program	1/25: left message introducing ENSR and the project. Jon Alstad contacted Dan on 1/26 to discuss project.
Michael Rabbe	Omaha District, Nebraska Program Manager	1/25: Michael indicated that he would likely assign another person to prepare the COE permit for his state, but will discuss this with Russ. He would like a formal letter identifying the project that provides a general description and map to be sent to him so that a file can be opened on the project. After reviewing that, he will discuss doing abbreviated field surveys in questionable areas. Michael is available February 6, 9, and 10 for meetings. He said that the main Nebraska Section 401 contact would be Ms. Terry Hickman at 402-471-2875. The COE has an agreement with the state of Nebraska on pipeline project whereas the state will adopt the COE's 404 application and permit for their 401 permitting needs.

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COE contacts for Keystone Pipeline Project						
District	Field Offices	Main Contact	Title	Phone	E-mail	Address
Omaha		**Cheryl Goldsberry (main contact) and Russ Rocheford**	Asst. Branch Chief = Rocheford	402-221-4125 (Russ) 402-221-4142 (Cheryl)	Cheryl.goldsberry@usace.army.mil	106 S. 15th Street, Omaha, NE 68102
	North Dakota	**Patsy Crooke and Dan Cimarosti**	Project Manager	701-255-0015	patsy.j.crooke@usace.army.mil	USACE-NDRO, 1513 S. 12th Street Bismarck, ND 58504
	South Dakota	**Steven Naylor**	Regulatory Program Manager	605-224-8531	steven.e.naylor@nwo02.usace.army.mil	28563 Powerhouse Road, Room 118, Pierre, SD 57501
	Nebraska	**Keith Tillotson**	Project Manager	308-234-1403	dwight.k.tillotson@usace.army.mil	Kearney Field Office, 1430 Central Avenue, Kearney, NE 68847
Kansas City						
	Kansas, western Missouri	**Cody Wheeler**	Special Projects Manager	816-389-3739	cody.s.wheeler@usace.army.mil	USACE - Kansas City District, 700 Federal Building, 601 E. 12th Street, Attn: OD-R, Room 706, Kansas City, MO 64106
St. Louis						
	Carlyle Lake, Illinois, Missouri	**Chuck Frerker**	Regulatory/Carlyle Lake	314-331-8583	Charles.F.Frerker@mvs02.usace.army.mil	USACE Regulatory Office, 1222 Spruce Street, St. Louis, MO 63103
Tulsa						
	Oklahoma	**Timothy Hartsfield**	Permitting	918-669-7237	Not known at this time	USACE - Tulsa Regulatory District, Regulatory Office - CESWT-RO, 1645 South 101st East Ave., Tulsa, OK 74128

NOTE: THE TULSA DISTRICT HAS NOT BEEN FORMALLY NOTIFIED OF THE PROJECT SINCE THE ROUTING FOR THE CUSHING EXTENSION PORTION OF THE PIPELINE HAS NOT BEEN FINALIZED AS OF AUGUST 14, 2006.

Regulatory Requirement Summary for Wetlands and Other Waters of the U.S.
Keystone Pipeline Project
August 2006

As part of federal regulatory requirements under the Clean Water Act, wetland and other waters of the U.S. (WUS) inventories involving field surveys are required to evaluate the potential for adverse effects to WUS along the proposed pipeline ROW and other associated areas of disturbance related to project construction. Information gathered during the inventories will be used to complete notification and permitting requirements under Section 401 and 404 of the Clean Water Act, as managed by the US Army Corps of Engineers and applicable state agencies. The Keystone Pipeline Project crosses four U.S. Army Corps of Engineers' (USACE) districts; including the Omaha, Kansas City, St. Louis, and Tulsa districts. Each of these districts has slightly different surveying and permitting requirements as outlined below. Meetings were held in 2006 with the Omaha (March 29), Kansas City (March 27), and St. Louis Districts (May 24 and July 14), to discuss surveying, permitting, and construction requirements.

Consultation with the various USACE Districts resulted in the following general survey requirements:

- Omaha District (North Dakota, South Dakota, Nebraska): Field surveys along the Mainline ROW route will be required only at specific locations. Information will be provided to the USACE on other crossings, such as ephemeral streams and farmed wetlands, using remote sensing and GIS.
- Kansas City District (Kansas and the majority of Missouri): The proposed Keystone Pipeline Mainline ROW through Kansas and Missouri parallels an existing pipeline ROW and the proposed Rockies Express Pipeline ROW. Field data obtained during the Rockies Express Pipeline Project surveys can be used to identify wetlands and other WUS crossed by the Keystone Pipeline Project in these states.
- St. Louis District (eastern Missouri and Illinois): All wetland and drainage crossings along the Mainline Route in eastern Missouri and in Illinois will require ground surveys.
- Tulsa District (Oklahoma): All wetland and drainage crossings along the Cushing Lateral in Oklahoma will require ground surveys.

Omaha District:

Meeting Summary

The March 29, 2006 meeting was held in the USACE office in Pierre, South Dakota with representatives from the North Dakota, South Dakota, Nebraska, and Omaha regional office, Scott Ellis and Karen Caddis with ENSR, and Mike Koski with Trow. During this meeting the USACE agreed that ENSR's modified wetland survey protocol could be applied to delineations in all three states in the Omaha District crossed by the proposed ROW. Based on information provided by the Keystone Pipeline Project to date, the Omaha District expects that pipeline construction disturbance across the Omaha District will be temporary, and will not result in permanent fills within wetlands and Waters of the United States. As a consequence, the USACE anticipates that wetland and waterbody disturbance associated with the project could be permitted under Nationwide Permit 12 (Utility Line Discharges) if the conditions of the Permit are met.

The Omaha District anticipates that the Missouri River crossing can be permitted under Section 10. The USACE can authorize a crossing if all of the conditions of the Nationwide permit are met; including getting a confirmation in writing from the National Park Service that says that construction techniques will meet the conditions of the Wild and Scenic River designation. The USACE recommends that Keystone ask the National Park Service for written documentation

regarding how to comply with the Wild and Scenic River designation. The Omaha District would be interested in participating in an interagency task to discuss the Missouri River crossing.

Survey Requirements

Because of the linear nature of the project, and the temporary nature of the expected surface disturbance, wetland delineation in accordance with the 1987 USACE wetlands delineation manual (three parameter method) will not be required in the Omaha District, with the exception of locations where permanent aboveground facilities will be constructed.

In order for the Omaha District to confirm that Nationwide conditions will be met, and to determine USACE jurisdiction, the Omaha District approves of the following methods for describing wetland and waterbody crossings and making USACE jurisdiction determinations:

- An inventory of wetland and waterbody crossings based on data obtained from the USGS/EPA surface water drainage data base, National Wetland Inventory (NWI) mapping, aerial photography and/or topographic map interpretation will be prepared. A preliminary list was provided to the USACE in a pre-meeting letter provided by ENSR.

- Keystone Project wetland scientists will visit and describe the wetland and waterbody crossings illustrated on the 1:100,000 scale map set, and crossing tables furnished to the USACE prior to the March 29 meeting. These field survey locations include perennial stream crossings and adjacent floodplains; large wetland complexes; streams that have been identified as containing populations of the Topeka Shiner; other streams called out by agencies as containing sensitive aquatic resources; forested wetlands. These crossings will be described in accordance with the ENSR draft survey protocols previously submitted to the USACE (see Appendix A for a summary of these survey protocols). These protocols include the use of the 1987 Manual three parameter delineation methods for wetland crossings to insure consistency of description. Sites not requiring field confirmation will include unnamed ephemeral and intermittent drainages and highly modified channels across farmed fields.

Section 404 Permitting Submittals

Evidence supporting the project's permitting under Nationwide permits will be provided to the USACE and will include information collected from field delineation, tabular data obtained from G National Wetland Inventory (NWI) and USGS GIS databases and mapping, aerial photography, and/or topographic map interpretation for ROW crossings. This supporting information will be provided in tabular format and will include the location of the feature (UTM or Latitude/longitude); county and state; type of feature (e.g.; intermittent drainage, palustrine emergent wetland); crossing distance and potential temporary disturbance acreage; and proposed crossing methodology (e.g.; open cut, horizontal directionally drilled). Wetlands will also be documented as isolated or not isolated along with the rationale used to make that determination. Direct and indirect impacts from construction will be reviewed, including whether hydrology would be altered.

To assist the Omaha District with its project review, Keystone will make a preliminary determination of USACE jurisdiction for the project wetland and waterbody crossings. An explanation of the regulatory basis for the jurisdiction determination will be provided (e.g.; intrastate water, Section 10 water, etc.). The preliminary jurisdiction assessment table/report will be provided to the USACE when the project believes it has a firmly defined pipeline route. After Keystone completes its preliminary jurisdiction review and provides its report, Keystone will request a jurisdictional determination from the Omaha District. When the determination from the USACE is received, Keystone will apply for the Section 404 and/or Section 10 Permits.

Other Factors to be Considered Related to Nationwide Permits

- The Nationwide 12 Permit cannot be used to permit crossings on Class 1 or 1A streams in North Dakota. The locations of these streams should be discussed with Mike Sauer with North Dakota Department of Health to determine whether any would be crossed by the project.

- Nationwide permits are expiring in March 2007. Although the Omaha District anticipates that the permits will be renewed, they suggest that Keystone work to get permitted now, so that they can be "grandfathered in" if permit requirements change.

- Regional conditions may limit the use of Nationwide permits in areas involving construction through fens and springs in the Omaha District. The Omaha District also indicated that there may be seasonal restrictions on spawning streams in North Dakota. The Maple, Sheyenne, Elkhorn, Missouri, and Platte rivers are of concern and will be field-delineated.

- Cultural resource information should be shared with the USACE as soon as possible after field surveys are completed. No mitigation should begin until the USACE has had time to comment. The USACE needs to be kept apprised of all major project developments and cultural issues and interactions with tribal representatives. USACE contacts should be copied on all major communications with other agencies (e.g. USFWS).

- The USACE is interested in the location of farmed and prior converted (PC) wetlands along the ROW. ENSR has requested this information from the Natural Resources Conservation Service (NRCS) state office; however, based on landowner privacy requirements or price, this information is generally not available. ENSR documented when this information was not available. If PC wetlands are located adjacent to jurisdictional wetlands, the USACE may take jurisdiction on the PC wetlands. If farmed wetlands are isolated, intrastate and can't "float a boat", the USACE will likely not take jurisdiction. Regarding prairie potholes; the Omaha District indicated that if potholes could "float a boat" and are adjacent to or hydrologically influenced by jurisdictional wetlands, the USACE will likely take jurisdiction. Prairie pothole crossings will be included in the wetland summary table and field-evaluated as applicable.

St. Louis District:

Meeting Summary

A conference call was conducted on Wednesday, May 24, 2006 with Chuck Frerker, the Keystone Pipeline Project's contact with the St. Louis District. One of the items discussed included the Two Rivers Pipeline Project Wetland Delineation and whether it can be adopted for use in the Section 404 application for the Keystone Pipeline Project. ENSR participants in the conference call included Scott Ellis, Karen Caddis, and Molly Giere. Mike Koski and Mike Schmaltz with Trow, and Laurie Farmer, an ENSR wetlands subcontractor, also participated.

According to Chuck Frerker, the July 2001 Two Rivers Wetland Delineation was conducted when the US Department of Agriculture (NRCS) still had an MOU with the USACE regarding delineation of farmed and prior converted wetlands. At that time, the USACE could adopt USDA mapping of farmed wetlands for any project. Because of this, no farmed or prior converted wetlands were delineated in the Two Rivers report. Since that time, the MOU is no longer in effect and the USDA is not allowing the use of their mapping for any non-agriculturally related project. With these changes, the USACE is requesting that non-agriculture projects conduct evaluations of farmed/prior converted wetlands that may be affected by the project. For this reason, the St. Louis District will only allow the Two Rivers Delineation to be used as a "starting point" and has requested that all potential wetlands and other Waters of the U.S. (WUS) be delineated along the proposed Keystone ROW. The USACE is also requesting that delineators indicate if they believe the WUS being delineated are jurisdictional or not. Chuck Frerker also suggested reviewing

NRCS "slides" of the ROW areas to determine if any potential farmed or prior converted wetlands could occur along the ROW. Subsequent attempts by ENSR to obtain these slides were not successful due to landowner privacy restrictions.

Chuck also indicated that agricultural drainage ditches would need to be delineated if they are connected to a natural drainage. Chuck also indicated that any levee crossings would require permitting through Public Law 99, which is conducted through a separate branch of the USACE. This branch would evaluate construction techniques for potential consequences to the structural stability of the levee being crossed. He indicated that the review process would involve evaluation of boring depths, setbacks, compaction, backfill perimeters, etc. If this information is provided in the initial application, Chuck indicated that the review process would be expedited, possibly within 1 month. Chuck anticipates that the Keystone Pipeline Project could be permitted under Nationwide permits depending upon the results of the field studies.

A second meeting was held on July 14 at the USACE's Carlyle Lake offices in Illinois to discuss the proposed crossing of the Carlyle Lake Management Area. A summary of that meeting is provided in Appendix B. No additional survey requirements were identified during that meeting.

Survey Requirements

As indicated during the May 24 meeting with Chuck Frerker, the St. Louis District has required 100 percent delineation of all potential WUS along the proposed ROW. The general survey protocol currently being followed is provided in Appendix A.

Section 404 Permitting Submittals

Section 404 permitting submittals for the St. Louis District will follow the strategy outlined in Appendix A.

Other Factors to be Considered Related to Nationwide Permits

No additional factors, other than those previously mentioned, have been identified for the St. Louis District.

Kansas City District:

Meeting Summary

During the March 27, 2006 meeting with Cody Wheeler (the USACE's Kansas City District contact), ENSR mentioned that biological, wetland, and cultural resource surveys are currently being completed along 100 percent of the Rockies Express (REX) Pipeline Project right-of-way (ROW) in Kansas and Missouri. A majority of the proposed line in those two states is co-located within the proposed Keystone Pipeline Project ROW. REX surveys consist of a 200-foot wide corridor that includes Keystone's proposed 110-foot wide construction corridor, plus an addition 50 feet for Keystone work space areas. At the time of the meeting, ENSR indicated that Keystone was hoping to reach an agreement with REX to share wetland, biological, and cultural data collected along the route in Kansas and Missouri. As of March 31, REX and Keystone have made a commitment to share this information. Cody indicated at the meeting that the USACE Kansas City District would be comfortable with Keystone using REX wetland and waterbody GPS and delineation data to determine wetland/waterbody boundaries within the Keystone ROW. Because of the REX survey overlap, field survey areas for Keystone in the Kansas City District should involve only reroutes that deviate from the REX ROW, pump station sites, and large work spaces that extend beyond the survey corridor evaluated under the REX field program.

Based on discussions during the March 27 meeting, the USACE indicated that it is likely that disturbance associated with construction of the ROW through the Kansas City District would be

permitted under nationwide permits since disturbance would be temporary, less than 0.5 acre, and no permanent structures would be constructed within wetland boundaries. The USACE would not be likely to issue a Section 404 permit until the EIS Record of Decision had been issued.

Survey Requirements

The basic delineation procedures outlined in Appendix A and provided to the USACE in March is generally acceptable to the Kansas City District. The Kansas City District expects surveys to be completed at all wetland and waterbody crossings along the ROW in their district. REX data should meet that requirement. Minor stream crossings and grassy swales have been identified using ENSR's stream crossing form. Grassy swales were inspected on a case by case basis and photos taken of crossings in those areas.

Section 404 Permitting Submittals

Requirements for Section 404 permitting follow those outlined in Appendix A. ENSR would provide the Kansas City District with a summary table of wetlands and waterbodies crossed by the Keystone Pipeline Project. This table would include: the location of the feature; county and state; type of feature (e.g.; intermittent drainage, palustrine emergent wetland); crossing distance and potential temporary disturbance acreage; if the feature is isolated and the reasoning behind that; if it appears that the feature is jurisdictional or not based upon USGS Statsgo data; and proposed crossing methodology (e.g.; open cut, horizontal directionally drilled).

Other Factors to be Considered Related to Nationwide Permits

Cody requested that forested wetlands be called out so that potential mitigation for loss of these areas could be calculated.

The USACE is interested in the location of farmed and prior converted wetlands along the ROW. This information may be available from the Natural Resources Conservation Service (NRCS) state office or the State of Missouri. If maps of farmed wetlands are not available, ENSR will need to review National Wetland Inventory (NWI) maps of the route, specifically in farmed bottomlands, and identify if any farmed or prior converted wetlands appear to be located in these areas. If so, field delineations may need to be completed in these locations. The procedure for identifying farmed and prior converted wetlands should be clearly documented in the wetland delineation report and Section 404 application. Based on subsequent discussions with the NRCS, data from the NRCS is not available due to landowner privacy issues.

Wetlands crossed by the proposed ROW should be documented as isolated or not isolated along with the thought process used to make that determination.

Drainage ditches may be considered jurisdictional if they function as or took the place of a natural drainage. Road side ditches would not need to be surveyed unless they are associated with streams.

Tulsa District:

Meetings with the Tulsa District to finalize survey requirements have not been finalized as of the date of this summary. Surveys along the Cushing Lateral have not been initiated to date since this routing has not been approved for survey. ENSR anticipates that survey requirements would be similar to those identified for the St. Louis USACE District.

APPENDIX A
GENERAL SURVEY PROTOCOLS BY USCOE DISTRICT

To initiate this project, ENSR completed a review of USGS topographic maps, National Wetland Inventory (NWI) maps, available soil surveys, and aerial photos pertaining to the proposed ROW. The objectives of this data review were to identify wetlands and other WUS intercepted by the proposed pipeline route, including intermittent and ephemeral streams, and to identify specific wetlands and other WUS that will require field evaluation to confirm their status.

Other Waters of the U.S.

Using USGS GIS watershed drainage databases (USGS surface water drainages and waterbodies, in cooperation with EPA 2004), a draft version of a table that identifies WUS crossed by the proposed ROW centerline was prepared (This table was included in the map package sent to the USACE Districts on March 21, 2006). USGS 1:24,000 topographic maps and high resolution aerial photographs of the proposed route were also evaluated to identify areas where the ROW appears to lie within 50 feet of a water feature or run within the high water mark of a drainage for more than 100 feet. These areas and other potential locations of concern associated with drainages and other waterbodies were highlighted on route maps. A copy of these maps was provided to the applicable USACE District representatives on March 22, 2006.

Wetlands

Maps of the proposed route, including USGS topographic maps and high resolution aerial photography over which NWI wetland polygons were placed, were evaluated for wetland crossings. Areas identified for field checking included: 1) NWI-mapped wetlands intercepted by the pipeline route that are not farmed; 2) areas that appear to meet the wetlands three-parameter criteria, but are not mapped on the NWI; and 3) forested areas where wetland boundaries could not be estimated from aerial photos. Additional areas to be field checked will be included if recommended by the various USACE districts. Areas identified on the NWI maps as farmed wetlands or agricultural or roadway drainage ditches were not considered for field delineations. Potential survey areas were highlighted on maps of the proposed route that were provided to the Omaha District on March 22, 2006.

Site-specific Field Delineation of Potential Wetlands and Other Waters of the U.S.

ENSR will coordinate with USACE representatives regarding features that will be field-checked and delineated. Preliminary areas to be surveyed are identified on maps of the proposed ROW previously provided to Omaha District offices. For each site surveyed a decision will be made by the field team regarding the presence of wetlands and/or other waters of the United States (WUS). For drainages with no wetland (e.g. unvegetated channel, defined bed and bank, etc.) characteristics, a Stream Data field form developed by ENSR (Attachment C) will be completed to evaluate stream crossing characteristics. This data sheet applies to stream crossings that support, or do not support, adjunct wetland plant communities. If both wetlands and other WUS are present, a Stream Data form and a Routine Wetland Determination Form (Attachment C) will need to be completed for the survey site.

The methods and techniques used to evaluate and delineate wetlands and other WUS on the maps of the proposed route will correspond to those specified for "routine on-site delineations" in the publication Corps of Engineers Wetlands Delineation Manual (USACE 1987). As identified in the Manual, a "three-parameter" approach will be used for defining wetlands. The USACE (1987) requires that, under normal circumstances, all three of the conditions listed below must be met for an area to be defined and delineated as wetland.

1. The prevalent vegetation consists of hydrophytic plants that have the ability to grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content and depleted soil oxygen levels.

2. Soils are present and are classified as hydric or possessing characteristics that are associated with reducing soil conditions. Hydric soils are poorly drained and have a seasonal high water table within 6 inches of the surface.

3. The area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation (usually 12.5 percent of the growing season) (USACE 1987, WTI 1995).

Formal sample point locations will be identified at each potential wetland site visited to adequately characterize the wetland and uplands present and to justify wetland/upland boundaries. Sample points will be paired, where appropriate, to depict wetland and upland community characteristics. Each sample point will be given a unique identification code number and its location will be recorded with a hand-held GPS unit. Sample pits will be dug to a depth of at least 12 to 16 inches. Vegetation, soil, and hydrology data collected at each sample point will be entered onto a standardized wetland delineation field data sheet. The form will also include a field sketch locating the sample point in relation to the site as a whole. A determination as to whether the sample point qualified as wetland or upland will also be noted on the field data sheet. Wetland/upland boundaries at the sites will be mapped using a GPS system with sub-meter accuracy (Trimble Pro-XRS or equivalent). Photographs showing a representative view of each wetland visited will also be taken. A photo board with the appropriate wetland identification code number will be included in each photograph.

At each sample point, percent total cover of dominant plant species will be visually estimated. Dominant species will be defined as those species in each stratum that, when ranked in decreasing order of abundance and cumulatively totaled, exceed 50 percent of the total dominance measure for that stratum, plus any additional plant species comprising 20 percent or more of the total dominance measure for the stratum. Data form completion will include recording the dominant plant species' wetland indicator status as defined in the U.S. Fish and Wildlife Service's Revision of the National List of Plant Species That Occur in Wetlands, February 1997 (Reed 1997). Recorded data also will indicate whether hydrophytic vegetation was present at the observation point as described in Part III, paragraph 35 of the 1987 USACE Manual. This will include recording all herbaceous species within a 5- to 15-foot radius of the observation point and all woody species within a 30-foot radius in approximate order of dominance in the community. Species will then be classed as OBL (obligate wetland species), FACW (facultative wetland species), FAC (facultative species), FACU (facultative upland species) or UPL (upland species).

Soil and hydrologic data will also be collected to determine the presence or absence of wetlands at each sample point. The presence of hydric soils at each sample point will be determined using the definition, criteria, and indicators identified in Section III, Paragraphs 36, 37, 44, and 45, and Appendix D of the 1987 USACE Manual (with revisions related to the 1991 and 1992 guidance memorandums from the USACE). A Munsell Soil Color Chart will be used to determine soil color and soils will be described using standard USDA nomenclature (Munsell 1979). Soil survey reports for each county will also be reviewed, if available. Wetland soil indicators could potentially include the presence of a histic epipedon, mottling, gleying, an aquic soil moisture regime, and high organic matter content and/or organic matter streaking in the surface layers of sandy soils.

Within North Dakota, a registered soil classifier will also provide input on soils at each site that is delineated.

Potential wetland hydrology indicators (Section III, Paragraph 49 of the 1987 USACE Manual) will include topographic position, presence of standing water and/or saturated soil profile conditions, drainage patterns, water marks, sediment deposits, and/or oxidized root channels in the upper 12 inches of the soil profile. Adjunct test holes will also be dug, where appropriate, to gain additional vegetation, soil, and hydrologic information used to aid in the characterization of wetlands, uplands, and transition zones.

In addition to collecting sufficient data for "routine on-site delineations" as per the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and channel characteristics data for drainage crossings, wetland survey teams will be required to collect and provide sufficient data (e.g., defined bed and bank and connectivity to navigable waters) for the USACE to make jurisdictional determinations for all wetlands and drainage crossings surveyed in the field. However, field personnel will not be required to track the origin and termination of WUS beyond the 300-foot survey corridor. Evidence of connectivity would be completed as an office mapping task using available USGS topographic maps.

Additional Regional Condition Requirements

In addition to general nationwide permit requirements, the following regional conditions have been identified that must be considered during field surveys.

North Dakota:

1. Nationwide permits 1, 2, 4, 6-19, 21-25, 28-30, 33-36 and 39-44 are revoked for use in fens in North Dakota. Wetlands commonly known as fens are defined as wetlands that are characterized by waterlogged spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.
For all nationwide permits, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) for activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

South Dakota:

1. Fens: (a) All nationwide permits, with the exception of 3, 5, 20, 27, and 32, are revoked for use in fens in South Dakota. For Nationwide Permits 3, 5, 20, 27, and 32, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) prior to initiating any regulated activity impacting fens in South Dakota.
(b) Wetlands commonly known as fens are defined as wetlands that are characterized by waterlogged, spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.
2. Springs: For all nationwide permits except NWP 40(a), permittees must notify the Corps in accordance with General Condition No. 13 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in South Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

Nebraska:

1. Fens: (a) Nationwide permits 1, 2, 4, 6-19, 21-25, 28-30, 33-36, 39-44 are revoked for use in fens in Nebraska. For nationwide permits 3, 5, 20, and 32, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) prior to initiating any regulated activity impacting fens in Nebraska.
(b) Wetlands commonly known as fens are defined as wetlands that are characterized by waterlogged, spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.

2. Springs: All nationwide permits, with the exception of NWPs 3, 20, 31, 37, and 38, are revoked for activities located within 100 feet of the water source in natural spring areas in Nebraska. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

Kansas:

1. Notification Requirements. For discharges of dredged or fill material in waters of the United States for the category of activities listed in items b through d below, the permittee must notify the District Engineer in accordance with "Notification" general condition 13.
b. Fens and Bogs. For any regulated activity that impacts a fen or bog of any size.
c. Playa Wetlands. For discharges of dredged or fill material into jurisdictional playa wetlands of any size.
d. Forested Wetlands. For discharges of dredged or fill material into forested wetlands in the state of Kansas, which impact greater than 1/10 acre of these wetlands. Note: forested wetlands are characterized by woody vegetation that is 20 feet tall or taller.

Missouri:

1. Notification Requirements for Activities in Fens, Seeps and Bogs (Applicable To All NWPs). The permittee must notify the District Engineer in accordance with "Notification" general condition of the NWPs (general condition 13) when any regulated activity impacts a fen, seep or bog of any size.

To address these regional conditions, ENSR would implement applicable surveys to identify these locations as determined in consultation with the USACE's Omaha District representatives.

Work Products

A wetlands delineation report and a Section 404 application package will be prepared upon completion of the wetland and other WUS field surveys. The wetland delineation report will include methodology used, results, a summary and conclusions, and a table identifying wetlands and other WUS that will be crossed by the ROW or associated access roads. The delineation report also would include copies of delineation sheets for ground-truthed wetland areas, photographs of wetlands and waterbody crossings, agency communications, and location maps (presented in 8.5 x 11 inch format). The wetland delineation report will be submitted to the USACE either in conjunction with the Section 404 application or earlier if directed to do so by the USACE. It is assumed that the Section 404 application will consist of a cover letter, the appropriate application form and map attachments, and the wetland delineation report along with proposed crossing methodologies and engineering cross-sections prepared to support the permit.

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Contents

U.S. ARMY CORP OF ENGINEERS COMMUNICATIONS KEYSTONE 2006

Note: maps and mileposting based on March 2006 centerline

- Email, March 16, 2006-USACE St. Louis District
- Letter, March 22, 2006-USACE St. Louis District
- Email, April 8, 2006-USACE St. Louis District
- Letter, April 8, 2006-USACE St. Louis District
- Email, April 24, 2006-USACE St. Louis District
- Certified Letter, May 10, 2006-USACE St. Louis District
- Email, May 19, 2006-USACE St. Louis District
- Email, May 22, 2006-USACE St. Louis District
- Memo, May 25, 2006-USACE St. Louis District, 2Rivers Conference Call
- Meeting, June 14, 2006-Illinois, IDNR, USACE, USFWS, IEPA, IHPA
- Meeting to be Scheduled in October-USCOE
- Meeting to be Scheduled in October-USCOE St. Louis, Mississippi and Missouri Levee Districts

- **TULSA DISTRICT**
  - Meeting, March 13, 2006-Oklahoma, ODWC, OWRB, OKCC, ODOT, ODEQ, OKDOE, USACE
  - Letter, March 9, 2006-USACE Tulsa
  - Letter, March 9, 2006-USACE Tulsa
- **NATIONAL PARK SERVICE**
  - Meeting, February 14, 2006-NPS Nebraska
  - Meeting, May 19, 2006-NPS Nebraska, Washington DC, in Yankton
  - Proposed Geotechnical Bore Sites, August 17, 2006

Note: maps and mileposting based on March 2006 centerline

Keystone Project Meeting: Corps of Engineers, USFWS, NRCS, ND Fish and Game, Bismarck, ND.

Date: February 6, 2006 (1 PM – 3:30 PM)

Keystone Attendees: M. Schmaltz, S. Ellis, J. Alstad

Agencies:

Dan Cimarosti, COE Regulatory Program Manager ND
Patsy Crooke, COE Project Manager
Terry Ellsworth, USFWS (ESA)
David Dewald, NRCS
John Schumacher, Biologist ND Game and Fish

Introduction

- Schmaltz: Background on TransCanada and the project, TransCanada environmental philosophy and commitments.

- Ellis: Status of NEPA process (State Dept. is lead agency, Project recently met with the State Dept., EA vs. EIS decision to be made soon, future federal agency coordination at the Washington DC level; Keystone represents a unique project for the State Dept because of large size, and no other major federal land management agency involved; schedule discussion with November 07 as the target date to obtain all permits).

NEPA discussion:

- Cimarosti interested in the lead agency determination process – wants State Dept. reps contact info –wants to talk about coordination issues. One of Cimarosti's major issues was to insure that tribal consultation was initiated, and maintained by the lead federal agency. He cited recent Burec difficulties on the Missouri River (Programmatic Agreement) because of a lack of timely tribal consultation – doesn't want to see something similar happen on this project.
- Ellsworth asked whether electrical distribution lines could be buried to reduce waterfowl collision risk. Keystone: will look into request as a possible alternative.

404 Process

- All 404, no Section 10 in ND, based on first look. Patsy Crooke will be COE project manager for ND – survey protocols and other issues should go through her. ND COE coordinating with SD COE to insure consistency of approach. May

end up with a separate North Dakota 404 application depending on what Omaha allows the individual states to do.

- Recommends submitting wetland delineations and plans informally early in process so that there is a heads up on the type of permit expected. Need to minimize permanent wetland losses to avoid an individual permit – noted that ND was the only state to require an Individual permit for Alliance – need to look into Alliance permitting history for lessons learned.
- Wetland delineations – COE mentioned that ND may require a "certified soil classifier" to do the soils component – limited expertise available, and specific to ND. COE will consider a stratified wetland sampling approach, but technical backup for sampling criteria needs to be sound (ie. We need to evaluate hydric soils to insure we don't underestimate wetland extent). COE, USFWS, and NRCS will jointly review protocols. PerDewald – Professional Soil Classifiers of ND - (www.soilsci.ndsu.nodak.edu/soilclassifiers/pscand) Bruce Sielig, NDSU soil scientist.
- Mitigation – COE may require mitigation for temporary wetland losses – formula not discussed. USFWS will recommend mitigation for non – COE jurisdictional wetlands under Executive Order 11990. COE noted that non COE jurisdiction mitigation is at the discretion of the lead federal agency – State Dept. may take different approach from FERC on natural gas pipelines.
- Application filing – COE wants application filed after FEIS. Wants lots of informal consultation prior to filing so that application becomes a formality for approval. COE wants to make the jurisdictional calls as early as possible so that project can make adjustments.
- 401/404 review. COE has a list of permit types that require, or do not require ND review of the 404 applications.

Swampbuster/easements on private lands (Dewald, Ellsworth).

- Guidance was: project should not to do side deals with landowners that would modify wetland functions, or drain wetlands, e.g. don't fix culverts for landowners that result in ponding or draining. Project needs to be careful that it doesn't get caught in the middle between landowners and government re wildlife easement maintenance requirements. NRCS gets involved in these disputes, usually at a county level.

CRP Lands/ Prime Farmlands (DeWald)

- Keystone: in EA, we will not identify where all CRP lands are, since identification is a major job, and may not be necessary. Will establish policy for crossing CRP lands, i.e. restore disturbed land to same condition it was in. NRCS agreed with this policy concept, but suggested project contact the Farm Service Agency (FSA) directly. FSA contact – Jim Jost, Program Manager. 701-893-2214. jim.jost@nd.usda.gov.
- Prime farmlands contacts: Steve Sieler,– 701-530-2019. steve.sieler@nd.usda.gov.

USFWS issues (Ellsworth)

- USFWS easement and fee land crossings. USFWS will want mitigation for USFWS easements in wetlands (waterfowl production areas); also across easements in grassland areas (mostly native prairie). Initial position was that project may not be able to cross USFWS fee lands, then backed off – this needs to be investigated. Land disturbance across an USFWS easement will require purchase of a comparable surface area somewhere else, even though disturbance is considered temporary by COE.
- USFWS internal/external coordination. USFWS is discussing internally how they want to interact with this project across two regions. They think they will issue one letter that addresses ESA consultation, provide maps of USFWS ownerships and easements, crossing requirements for refuge easements and fee lands, and other issues.
- USFWS indicated that the Taayer State Wildlife Management Area may be converted to federal ownership, become a refuge. Route currently located about 0.1 mile west of Lake Taayer. May need to consider a re-route in this area (location is 6 mi. E. of Oakes in Sargent County).

ND Game and Fish

- ND rep didn't say much. Crossing wildlife management areas will require a special user permit, and special mitigation requirements, depending on habitats affected. WMA's managed by region – need to contact the local managers.

Action Items:

- ENSR provide Dept. of State contact info to Dan Cimarosti, COE.
- ENSR review EO 11990 to better understand USFWS mitigation position.
- ENSR obtain COE wetland mitigation ratios, criteria for temporary and permanent wetland dredge and fill.
- ENSR provide 1:100,000 scale maps to each agency (COE, USFWS, NDFG, NRCS).

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Keystone Project Meeting: Corps of Engineers, USFWS, Pierre, SD.

Date: February 8, 2006 (1 PM – 3:30 PM)

Keystone Attendees: M. Schmaltz, S. Ellis, J. Alstad, Drew Duncan

Agencies:

Steven Naylor, COE Regulatory Program Manager ND
Jeff Breckenridge, COE Regulatory Project Manager
James Oehlerking, COE
Scott Larson, USFWS (ESA)
Charlene Bessken, USFWS

Introduction

- Schmaltz: Background on TransCanada and the project, TransCanada environmental philosophy and commitments.

- Ellis: Status of NEPA process (State Dept. is lead agency, Project recently met with the State Dept.; EA vs. EIS decision to be made soon; future federal agency coordination at the Washington DC level; Keystone represents a unique project for the State Dept because of large size, and no other major federal land management agency involved; schedule discussion with November 07 as the target date to obtain all permits).

NEPA discussion:

- Naylor concerned about State Department capability to administer a major EIS. He said that further internal discussions within Omaha District need to start – he would like to see a single COE point of contact for the NEPA process. He wants to understand the game plan in Washington DC because he expects downward pressure from the administration on the federal agencies to expedite processing for this project.

- Alternatives. Naylor: Need alternatives for purposes of the 401b analysis. Ellis: it is unlikely that there will be lengthy route alternatives based on the control points at the border, the Missouri River crossing at Yankton, and delivery points at Wood River and Cushing. The project recognizes that there is overlap in federal jurisdiction at the Missouri River crossing at Yankton. We will likely look at alternative river crossing methods at this location COE commented that it was a long way in either direction to avoid the Wild and Scenic recreational river section at Yankton. Ellis – National Park Service rep (Tyler Cole) will attend agency meeting in NB next week to discuss NPS issues. Breckenridge asked

whether the pipeline could be suspended on the Missouri River bridge at Yankton. Schmaltz – very unlikely for safety reasons. We talked briefly about the option of crossing the reservoir impoundment – they commented such a crossing would be much longer, but didn't immediately reject the option. They did say COE would not allow a crossing at the dam on COE property – they had already rejected an application from a rural water provider who wanted to cross immediately downstream of the dam. Larson of USFWS stated that there were several t&e species issues in this reach – least tern, piping plover, pallid sturgeon, bald eagle – and recommended a HDD crossing to avoid "likely to adversely affect" findings at this crossings.

106 Compliance

Naylor wanted to know whether the Section 106 compliance process had begun – Ellis stated that initial discussions with SHPOs have been completed, and research designs will be submitted to SHPOs this month. Naylor inquired how 106 coordination would be handled by the State Dept. Ellis responded by saying this coordination process is perceived to be very important, and is on the list of issues to be worked out at the Washington DC level.

404 Process (Naylor, Breckenridge, Oehlerking)

- Nearly all 404, two potential Section 10 crossings (Missouri, James Rivers) in SD, based on first look. Could avoid Section 10 by drilling these crossings – general statement was that COE would like to see wetlands and waters drilled wherever possible. Naylor discussed the need for permit application review consistency within the Omaha District – he seemed to be headed toward an Omaha District permit review. He said that Kansas City and Saint Louis would probably go their own way. More internal discussion will follow across the state offices.
- Information needed for the 404. Naylor went through the steps he anticipated: 1) identification of waters and wetlands crossed at level of detail so that COE can make jurisdictional determinations; 2) identify the methods to be used to cross jurisdictional waterbodies and wetlands; 3) based on anticipated dredge and fills (temporary or permanent), COE will decide whether to grant a nationwide or individual permit.
- Wetland delineations. To determine areas to be sampled, we can start with the NWI maps. COE suggested that we contact NRCS and FSA to see if we can obtain wetland maps that have been developed for wetland easements. COE said that we cannot rely on NRCS maps as a "better" source than NWI – some mapped wetlands have been ground verified, others not. NRCS contacts: Janet Ortley in Huron, SD, and Sean Vickers. Final determination should be based on COE 1987 manual. No requirement for a"certified soil classifier" to do the soils component. COE will consider a stratified wetland sampling approach – major concern is the

crossing method to be used – stressed the importance of complete surveys for permanent disturbances such as pump stations.

- Mitigation – COE does not require mitigation for wetland disturbances if no net loss– need to square this guidance with that received in ND. No mitigation comments provided by USFWS reps.
- 401/404 review. COE only provides opportunities for state to comment on individual permits; blanket agreement covers nationwide permits – no comment from state.

USFWS issues (Larson, Bessken)

- USFWS easement and fee land crossings. USFWS deferred discussion on refuge crossing (waterfowl production areas) and wetland and grassland easements to refuge managers – recommended we talk to Lloyd Jones with FWS in Bismarck.
- Listed/candidate species. Charlene indicated that they were working on the project data request. Major species of concern is the Topeka shiner – there are a number of smaller streams in southern SD that may contain this species. No construction in spawning season (May 15 to July 31). Recommended HDD or crossing in low flow period (they commented that many of these streams stop flowing – fish survive in isolated pools). FWS provided us a with a Topeka shiner- occupied stream map. Recommended we look at GAP data to identify native grassland areas. Avoid Dakota skipper that inhabits native grasslands – however, is a candidate species. As discussed above re Missouri river crossings – several listed species present at proposed crossing (mussels, least tern, piping plover, bald eagle). Potential bald eagle nesting along the Missouri and James Rivers – post nesting date is usually August 1.
- Consultation process. Brief discussion. Biological Assessment would be prepared that would provide an opportunity to discuss preliminary effects findings between lead federal agency and FWS.
- SD Fish and Game Permits – COE recommended that we contact Leslie Petersen, SD Fish and Game Dept for permits for crossing "meander waters" = same issue as "sovereign lands" in ND.

Action Items:

- ENSR provide 1:100,000 scale maps to each agency (COE, USFWS).
- ENSR contact Lloyd Jones to discuss issues associated with crossing USFWS waterfowl production areas and private land easements.
- Contact Leslie Petersen, SD Fish and Game to discuss "meander waters" crossings.

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Keystone Project Meeting: Corps of Engineers, USFWS, Nebraska Dept. of Roads Lincoln, NE.

Date: February 15, 2006 (9 AM-11 AM)

Keystone Attendees: M. Schmaltz, S. Ellis, A. Prenda

Agency Attendees:

USFWS

John Cochnar, Assistant Field Supevisor, Grand Island Field Office
Brooke Stansberry, USFWS biologist, Liaison with NE Dept. of Roads

COE

Keith Tillotson, Project Manager

N Dept. of Roads

Art Yonkey, Planning and Project Development
Gary Prey, District 1 Permit Officer
Mark Otteman, Utilities Engineer
Sandy Wojtasek, Utilities Coordinator
Gary Britton, Assistant ROW manager.
Frank Blankenal, Property Management

Introduction

- Schmaltz: Background on TransCanada and the project, TransCanada environmental philosophy and commitments. .

- Ellis: Status of NEPA process (State Dept. is lead agency, Project recently met with the State Dept., EA vs. EIS decision to be made soon, future federal agency coordination at the Washington DC level; Keystone represents a unique project for the State Dept because of large size, and no other major federal land management agency involved; schedule discussion with November 07 as the target date to obtain all permits).

USFWS (Cochnar)

- Consultation Process. In response to the NEPA discussion, Gary stated that FWS didn't want to go through a species list/data request twice, per the FERC process for REX (Once for the FERC resource reports, then again when the EIS

contractor comes on board). Ellis – we will try to avoid a second round of data requests by making this one adequate for the EIS process. FWS has decided that Grand Island Office will be the central point of contact for all input from the affected FWS Regions and offices. The letter will address migratory bird issues (easements, waterfowl production areas) as well as the species to be addressed in the consultation.

- Species. Primarily river dependent species: least tern, piping plover, pallid sturgeon, bald eagle. Also mentioned Massagua rattlesnake. Cochnar thought we were outside habitat for prairie fringed orchid and burying beetle.

COE

- Primary feedback was that the Omaha District needs to figure out its approach to both NEPA and the 404/10 process. Said he would go back to his Branch Chief to discuss. From remarks, it sounds like the District will want to set consistency standards across the Omaha District for 404 process, but 404 applications by state may be required. Commented that District needs to get its strategy together before Washington tells them what to do. Tillotson will be point of contact for time being. Ellis – we will be getting back shortly to Omaha because we need to discuss the 2006 field program.

- Wetlands Mitigation. Omaha has a SOP for mitigation – can obtain from COE website.

NE Department of Roads

- Expect road crossing permit applications late in process. Project should be aware of State Highway 2006-2011 year plan for highway improvements. Copy of plan provided to ENSR at meeting.

Action Items:

- ENSR provide FWS with 1:24,000 and 1:100,00 sheets for NE.
- ENSR check on status of NGPC data response letter.
- ENSR provide copies of the 2006 – 2011 NE DOT Plan book to Engineering and Lands.
- ENSR monitor the Omaha District (Tillotson) to find out how COE will organize itself for this project.

Posted to Sharepoint 4/10/06

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline
Contact Summary Form

cation of Meeting	Fort Collins, Colorado via phone
te/Time of Meeting	2/22/06 Approximately 3 pm
ystone Team ember(s)	Karen Caddis, Jon Alstad

ontact Information:

ame	Dan Cimarosti
itle	ND State Program Manager
rganization	USCOE – Omaha District, North Dakota
ddress	1513 S. 12th St. Bismarck, ND 58504
ounty	
hone	701-255-0015
mail address	

Meeting Information:

Type of Contact (phone, in-person, etc.): _____Phone_____

Issue: _Request for contact information, clarification on certified soil classifier requirements.

Concern Level: High___Moderate___Low X__.

Description:

Returned Dan's call. He requested Karen Caddis' e-mail address and contact information and contact information for the Department of State main contact person. Karen indicated that she would provide Dan with the DOS information via e-mail. Karen also asked for clarification on the requirement for certified soil classifiers during wetland delineations in North Dakota. This item was identified during prior state meetings. According to Dan, this is not a COE requirement, but is a North Dakota state regulation. Dan will be meeting with the state on Thursday and will identify a state contact that ENSR can call for clarification on this requirement and whether it actually pertains to COE wetland delineations and Section 401 permitting or not.

Follow-up Required / Requested

ren to provide DOS contact information to Dan Cimarosti.

Dan to provide Karen with the name of a state contact to call regarding soil classifier requirements.

Additional Comments

Posted to Sharepoint
[illegible]/10/06

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline
Contact Summary Form

Location of Meeting	Phone Communication
Date/Time of Meeting	February 28, 2006
Keystone Team Member(s)	Karen Caddis

Contact Information:

Name	Mike Ulmer
Title	President
Organization	North Dakota State Board of Registration for Professional Soil Classifiers
Address	Not Available
County	Not Available
Phone	701-530-2020
mail address	mike.ulmer@nd.usda.gov

Meeting Information:

Type of Contact (phone, in-person, etc.): _Phone_____

Issue:_Requirements for soil classifiers and COE wetland delineations **Concern Level:**

High___Moderate_X__Low__.

Description:
Mr. Ulmer indicated that under North Dakota state law (North Dakota Century Code 43-36), any classification of soils, including identifying soils as hydric during wetland delineations, must be done by a certified soils classifier registered in the state. Wetland teams conducting delineations must include a classifier on their teams. Mr. Ulmer will e-mail Karen the website for the board that provides names of soil classifiers certified in the state (e-mail sent on 3/2). He indicated that any delineation sheet included in delineation reports filed with the COE in North Dakota should include a copy of the soil classifiers registration number. He also mentioned that the Public Service Commission of North Dakota should be contacted regarding the pipeline project (I believe it has been).

Follow-up Required / Requested
one identified.

Additional Comments
ENSR will need to confirm that any wetland delineator subcontractors chosen to work in North Dakota have registered soil classifiers.

Caddis, Karen

From: Caddis, Karen

Sent: Friday, March 24, 2006 10:48 AM

To: 'patsy.j.crooke@usace.army.mil'; 'steven.e.naylor@nwo02.usace.army.mil'; 'dwight.k.tillotson@usace.army.mil'; 'russell.w.rocheford@usace.army.mil'

Cc: Ellis, Scott

Subject: Proposed wetland survey protocols for the Keystone Pipeline Project

Attachments: WETLANDFORM2.doc; Wetland Protocol Omaha 3-23-06.doc; STREAMFORM.doc; Figure2-1-1_Project_Overview030506.pdf

To all:

Attached for your review is ENSR's proposed wetland survey protocol for the Keystone Pipeline Project and copies of our proposed data sheets and a general project map. We look forward to discussing the protocol with you during our meeting on Wednesday, March 29 at 10 am at the USACOE's office in Pierre, South Dakota. You should have received a Federal Express package from us with detailed maps of the route, our proposed crossing techniques and a list of waterbodies crossed. Let me know if you have not received that map set yet. Thank you for your participation in this project and please contact me if you have any questions (970-493-8878).

Karen Caddis

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ENSR | AECOM

ENSR
1601 Prospect Parkway, Fort Collins, Colorado 80525-9762
(970) 493-8878 FAX (970) 493-0213 www.ensr.aecom.com

March 21, 2006

Mr. Russ Rocheford
Assistant Branch Chief
USACE- Omaha District Office
106 South 15th Street,
Omaha, NE 68102

Subject: Keystone Pipeline Project

Dear Mr. Rocheford,

We look forward to meeting with you via phone on Wednesday, March 29 at 10 am at Steven Naylor's office in Pierre, South Dakota to provide a project status update on the Keystone Pipeline Project and to discuss our proposed field programs for 2006. Scott Ellis and Karen Caddis with ENSR will be attending. We understand that Keith Tillotson, and Patsy Crooke with the COE will also be attending via phone. The overall purpose of this meeting is to discuss survey and application requirements and the information that Keystone will provide to the U.S. Army Corps of Engineers (COE) so that project-related wetland and water body jurisdictional determinations can be made.

To assist with preparation for the meeting and review of the project, please find the following attachments:

1. Pipeline Route maps. These strip maps illustrate the proposed pipeline alignment on an aerial photo and topographic base at a scale of 1:24,000. The National Wetland Inventory polygons have been included as an overlay on both bases. Also included are preliminary wetland survey areas that were determined by ENSR from aerial photo review.

2. Drainage crossings. A table listing drainage crossings is derived from the USGS watershed drainage GIS layers. Crossing locations are correlated with project mileposts. This table is the starting point for the Waters of the U.S. review.

3. Wetland/waterbody crossing methods. This is a section from the filing that Keystone will submit to the Department of State at the end of March.

4. Draft Survey Protocol. The survey protocol will be provided to you later this week via e-mail.

Preliminary Meeting Agenda

The following is a list of items that we would like to cover. We would appreciate your input on these, and other topics that should be discussed.

1. Introductions
2. Keystone Waterbody and Wetland Crossing Methods
3. Pipeline route review (routing considerations and concerns)
4. Overview of 2006 Field Program
5. Field Survey Technical Issues (definitions and level of survey)

- Waters of the U.S.
- Farmed wetlands
- Prairie potholes

6. Technical reports (content and format).
7. COE expectations, and future communications

If you have questions regarding the attached information prior to the meeting on March 29, please call Karen Caddis or Scott Ellis at 970-493-8878, or contact us by e-mail (kcaddis@ensr.aecom.com or sellis@ensr.aecom.com). We appreciate the opportunity to meet with staff from all the COE offices within the Omaha District with responsibilities for this project.

Sincerely yours,

Karen Caddis

Karen Caddis
Senior Technical Specialist/Wetlands Program Coordinator

Scott Ellis
Environmental Permitting Project Manager

Proposed Protocol for Wetlands and Other Waters of the U.S. Surveys
U.S. Army Corps of Engineers - Omaha District
Keystone Pipeline Project
March 2006

Introduction to the Project

Keystone proposes to construct and operate an approximately 1,830-mile-long interstate crude oil transmission system from an oil supply hub near Hardisty, Alberta, Canada to destinations in the Midwestern United States (U.S.). In the U.S., the proposed Project will consist of approximately 1,070 miles of new pipeline constructed from the U.S.-Canada border in Pembina County, North Dakota to terminals and refineries in Salisbury (Chariton County), Missouri, Wood River (Madison County), and Patoka (Marion County), Illinois. Based on interest expressed by crude oil shippers, Keystone is considering the construction of the Cushing Extension, a 295-mile long pipeline segment that would link the Keystone Pipeline at the Nebraska/Kansas border (Jefferson County) with Cushing, Oklahoma. A general map depicting the ROW route in the U.S. is included as an attachment to this protocol document (Attachment A). An additional map package that includes detailed topographic and aerial mapping of the proposed route is also included with this document.

The Project also will require the construction of pump stations, valves, meters, and other ancillary facilities. Electrical powerlines and facility upgrades will be required in some locations to provide power for the new pump stations. Local power providers will be responsible for obtaining the necessary approvals and authorizations for any such construction.

Construction and operation of the proposed project is expected to result in "no net loss" of wetlands since none of the wetlands crossed by the proposed pipeline will be permanently drained or filled, and no aboveground facilities will be placed on wetlands. To minimize potential effects, Keystone will: 1) "neck down" to a construction ROW width of 85 feet at wetland crossings, 2) directionally drill large waterbody crossings (specifically the Missouri River at Yankton, South Dakota, and the Platte River in Nebraska within the Omaha District), and 3) reclaim and revegetate wetlands and other Waters of the U.S. (WUS) disturbed during construction as specified in the project's Wetland and Waterbody Crossing Procedures. Because of Keystone's proposed construction methods, it is anticipated that the Keystone Pipeline Project will meet the general conditions identified in Nationwide Permits 12, 14, and 33 and applicable regional conditions for the Omaha District as specified under this protocol document's methodology section.

The following sections outline the protocol that Keystone proposes to implement as part of wetland surveys in the Omaha District that may be required as part of NEPA and the Section 404 notification and application process. Similar protocols are being developed for presentation to other COE districts that will be crossed by the proposed pipeline. These include four districts; Omaha (North Dakota, South Dakota, Nebraska), Kansas City (Kansas and Missouri), St. Louis (Missouri and Illinois), and Tulsa (Kansas and Oklahoma). Initial contacts have been made with COE representatives of each of these districts.

Schedule

Keystone proposes to begin construction of the new pipeline in the spring of 2008, with the system in-service by the end of 2009.

Wetland and other waters of the U.S. (WUS) survey and delineation work is proposed to begin in April or May 2006. Weather, road conditions, and site-specific access concerns will determine the actual timing of the fieldwork. Aerial reconnaissance evaluations may precede the ground surveys for the ROW, all or in part.

Field Personnel

Survey personnel will be provided and managed by Keystone's environmental contractor, ENSR. Several wetland delineation ground survey teams will be assigned per state or COE district. Each team will consist of one wetland delineator formally trained, or sufficiently experienced, in COE wetland delineation techniques and one assistant familiar with providing GPS and technical field assistance. Personnel identifying wetland areas from the air, should an aerial reconnaissance be conducted, will be trained in identifying WUS characteristics visible from the air that will indicate if ground surveys will be required.

Karen Caddis, with ENSR, will serve as the primary COE contact for the project. Ms. Caddis may be reached at 970-493-8878 or kcaddis@ensr.aecom.com for questions or direction. If Ms. Caddis is not available, questions may be directed to Scott Ellis or Heidi Tillquist at the same number.

Methodology

Preliminary Analysis

To initiate this project, ENSR completed a review of USGS topographic maps, National Wetland Inventory (NWI) maps, available soil surveys, and aerial photos pertaining to the proposed ROW. The objectives of this data review were to identify wetlands and other WUS intercepted by the proposed pipeline route, including intermittent and ephemeral streams, and to identify specific wetlands and other WUS that will require field evaluation to confirm their status.

Other Waters of the U.S.

Using USGS GIS watershed drainage databases (USGS surface water drainages and waterbodies, in cooperation with EPA 2004), a draft version of a table that identifies WUS crossed by the proposed ROW centerline in the Omaha District was prepared (This table was included in the map package sent to the Omaha District representatives on March 21, 2006). USGS 1:24,000 topographic maps and high resolution aerial photographs of the proposed route were also evaluated to identify areas where the ROW appears to lie within 50 feet of a water feature or run within the high water mark of a drainage for more than 100 feet. These areas and other potential locations of concern associated with drainages and other waterbodies were highlighted on route maps. A copy of these maps was provided to the applicable Omaha District representatives on March 22, 2006.

Wetlands

Maps of the proposed route, including USGS topographic maps and high resolution aerial photography over which NWI wetland polygons were placed, were evaluated for wetland crossings. Areas identified for field checking included: 1) NWI-mapped wetlands intercepted by the pipeline route that are not farmed; 2) areas that appear to meet the wetlands three-parameter criteria, but are not mapped on the NWI; and 3) forested areas where wetland boundaries could not be estimated from aerial photos. Additional areas to be field checked will be included if recommended by the various COE districts. Areas identified on the NWI maps as farmed wetlands or agricultural or roadway drainage ditches were not considered for field delineations. Potential survey areas were highlighted on maps of the proposed route that were provided to the Omaha District on March 22, 2006.

Site-specific Field Delineation of Potential Wetlands and Other Waters of the U.S.

ENSR will coordinate with Omaha District representatives regarding features that will be field-checked and delineated. Preliminary areas to be surveyed are identified on maps of the proposed ROW previously provided to Omaha District offices. For each site surveyed a decision will be made by the field team regarding the presence of wetlands and/or other waters of the United States (WUS). For drainages with no wetland (e.g. unvegetated channel, defined bed and bank, etc.) characteristics, a Stream Data field form developed by ENSR (Attachment C) will be completed to evaluate stream crossing characteristics. This data sheet applies to stream crossings that support, or do not support, adjunct wetland plant communities. If both wetlands and other WUS are present, a Stream Data form and a Routine Wetland Determination Form (Attachment C) will need to be completed for the survey site.

The methods and techniques used to evaluate and delineate wetlands and other WUS on the maps of the proposed route will correspond to those specified for "routine on-site delineations" in the publication *Corps of Engineers Wetlands Delineation Manual* (COE 1987). As identified in the Manual, a "three-parameter" approach will be used for defining wetlands. The COE (1987) requires that, under normal

circumstances, all three of the conditions listed below must be met for an area to be defined and delineated as wetland.

1. The prevalent vegetation consists of hydrophytic plants that have the ability to grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content and depleted soil oxygen levels.

2. Soils are present and are classified as hydric or possessing characteristics that are associated with reducing soil conditions. Hydric soils are poorly drained and have a seasonal high water table within 6 inches of the surface.

3. The area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation (usually 12.5 percent of the growing season) (COE 1987, WTI 1995).

Formal sample point locations will be identified at each potential wetland site visited to adequately characterize the wetland and uplands present and to justify wetland/upland boundaries. Sample points will be paired, where appropriate, to depict wetland and upland community characteristics. Each sample point will be given a unique identification code number and its location will be recorded with a hand-held GPS unit. Sample pits will be dug to a depth of approximately 12 to 16 inches. Vegetation, soil, and hydrology data collected at each sample point will be entered onto a standardized wetland delineation field data sheet (Attachment C). The form will also include a field sketch locating the sample point in relation to the site as a whole. A determination as to whether the sample point qualified as wetland or upland will also be noted on the field data sheet. Wetland/upland boundaries at the sites will be mapped using a GPS system with sub-meter accuracy (Trimble Pro-XRS or equivalent). Photographs showing a representative view of each wetland visited will also be taken. A photo board with the appropriate wetland identification code number will be included in each photograph.

At each sample point, percent total cover of dominant plant species will be visually estimated. Dominant species will be defined as those species in each stratum that, when ranked in decreasing order of abundance and cumulatively totaled, exceed 50 percent of the total dominance measure for that stratum, plus any additional plant species comprising 20 percent or more of the total dominance measure for the stratum. Data form completion will include recording the dominant plant species' wetland indicator status as defined in the U.S. Fish and Wildlife Service's *Revision of the National List of Plant Species That Occur in Wetlands, February 1997* (Reed 1997). Recorded data also will indicate whether hydrophytic vegetation was present at the observation point as described in Part III, paragraph 35 of the 1987 COE Manual. This will include recording all herbaceous species within a 5- to 15-foot radius of the observation point and all woody species within a 30-foot radius in approximate order of dominance in the community.

Species will then be classed as OBL (obligate wetland species), FACW (facultative wetland species), FAC (facultative species), FACU (facultative upland species) or UPL (upland species).

Soil and hydrologic data will also be collected to determine the presence or absence of wetlands at each sample point. The presence of hydric soils at each sample point will be determined using the definition, criteria, and indicators identified in Section III, Paragraphs 36, 37, 44, and 45, and Appendix D of the 1987 COE Manual (with revisions related to the 1991 and 1992 guidance memorandums from the COE). A Munsell Soil Color Chart will be used to determine soil color and soils will be described using standard USDA nomenclature (Munsell 1979). Soil survey reports for each county will also be reviewed, if available. Wetland soil indicators could potentially include the presence of a histic epipedon, mottling, gleying, an aquic soil moisture regime, and high organic matter content and/or organic matter streaking in the surface layers of sandy soils.

Within North Dakota, a registered soil classifier will also provide input on soils at each site that is delineated.

Potential wetland hydrology indicators (Section III, Paragraph 49 of the 1987 COE Manual) will include topographic position, presence of standing water and/or saturated soil profile conditions, drainage patterns, water marks, sediment deposits, and/or oxidized root channels in the upper 12 inches of the soil profile. Adjunct test holes will also be dug, where appropriate, to gain additional vegetation, soil, and hydrologic information used to aid in the characterization of wetlands, uplands, and transition zones.

In addition to collecting sufficient data for "routine on-site delineations" as per the *Corps of Engineers Wetlands Delineation Manual* (COE 1987) and channel characteristics data for drainage crossings, wetland survey teams will be required to collect and provide sufficient data (e.g., defined bed and bank and connectivity to navigable waters) for the COE to make jurisdictional determinations for all wetlands and drainage crossings surveyed in the field. However, field personnel will not be required to track the origin and termination of WUS beyond the 300-foot survey corridor. Evidence of connectivity would be completed as an office mapping task using available USGS topographic maps.

Additional Regional Condition Requirements

In addition to general nationwide permit requirements, the following regional conditions have been identified for the Omaha District that must be considered during field surveys.

North Dakota:

1. Nationwide permits 1, 2, 4, 6-19, 21-25, 28-30, 33-36 and 39-44 are revoked for use in fens in North Dakota. Wetlands commonly known as fens are defined as wetlands that are characterized by

waterlogged spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.

For all nationwide permits, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) for activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

South Dakota:

1. Fens: (a) All nationwide permits, with the exception of 3, 5, 20, 27, and 32, are revoked for use in fens in South Dakota. For Nationwide Permits 3, 5, 20, 27, and 32, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) prior to initiating any regulated activity impacting fens in South Dakota.

(b) Wetlands commonly known as fens are defined as wetlands that are characterized by waterlogged, spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.

2. Springs: For all nationwide permits except NWP 40(a), permittees must notify the Corps in accordance with General Condition No. 13 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in South Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

Nebraska:

1. Fens: (a) Nationwide permits 1, 2, 4, 6-19, 21-25, 28-30, 33-36, 39-44 are revoked for use in fens in Nebraska. For nationwide permits 3, 5, 20, and 32, permittees must notify the Corps in accordance with General Condition No. 13 (Notification) prior to initiating any regulated activity impacting fens in Nebraska.

(b) Wetlands commonly known as fens are defined as wetlands that are characterized by waterlogged, spongy ground and contain (in all or in part) soils classified as histosols or mineral soils with a histic epipedon. To determine whether this provision applies, the entire wetland must be examined for the presence of histosols or histic epipedons.

2. Springs: All nationwide permits, with the exception of NWPs 3, 20, 31, 37, and 38, are revoked for activities located within 100 feet of the water source in natural spring areas in Nebraska. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a

distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

To address these regional conditions, ENSR would implement applicable surveys to identify these locations as determined in consultation with the COE's Omaha District representatives.

Work Products

A wetlands delineation report and a Section 404 application package will be prepared upon completion of the wetland and other WUS field surveys. The wetland delineation report will include methodology used, results, a summary and conclusions, and a table identifying wetlands and other WUS that will be crossed by the ROW or associated access roads. The delineation report also would include copies of delineation sheets for ground-truthed wetland areas, photographs of wetlands and waterbody crossings, agency communications, and location maps (presented in 8.5 x 11 inch format). The wetland delineation report will be submitted to the COE either in conjunction with the Section 404 application or earlier if directed to do so by the COE. It is assumed that the Section 404 application will consist of a cover letter, the appropriate application form and map attachments, and the wetland delineation report along with proposed crossing methodologies and engineering cross-sections prepared to support the permit.

Literature Cited

Munsell. 1979. Munsell Soil Color Charts. Kollmorgen Corporation. Baltimore, Maryland.

Reed, P. 1997. Revision of the National List of Plant Species that Occur in Wetlands. Department of the Interior, U.S. Fish and Wildlife Service, in cooperation with the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and Natural Resources Conservation Service. February 15, 1997.

U.S. Army Corps of Engineers (COE). 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Wetland Training Institute, Inc. (WTI). 1995. Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual. Poolesville, Maryland. WTI 95-3.

ATTACHMENT A
GENERAL PROJECT LOCATION MAP

ATTACHMENT B
DATA FORMS

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ROUTINE WETLAND DETERMINATION FORM (1987 USACE METHOD)	Site ID No.:	GPS File:	Milepost:

Date:	WETLAND COORDINATES:	
Staff/Team I.D.:	Client/Project Name:	
Logbook Page No's.:	Block/Lot/Tract No.:	Photo LOCATIONS:
Nearest Waterway:	Watershed:	Drainage Basin:
Loop/Facility:	State/County/Municipality:	

DOMINANT PLANT SPECIES	Stratum	Indicator	NON-DOMINANT PLANT SPECIES	Stratum	Indicator
1.			1.		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
6.			6.		
7.			7.		
8.			8.		

Per Cent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):

REMARKS:

HYDROLOGY

Recorded Data? Describe:

Depth of Surface Water: _____ (in. or cm)	
Depth to Free Water in Pit: _____ (in. or cm)	
Depth to Saturated Soil: _____ (in. or cm)	

Primary Wetland Indicators:	**Secondary Wetland Indicators** (2 or more required):
___ Inundated	___ Oxidized Root Channels in Upper 12 Inches (30 cm)
___ Saturated in Upper 12 Inches (30 cm)	___ Water-Stained Leaves
___ Water Marks	___ Local Soil Survey Data
___ Drift Lines	___ FAC-Neutral Test
___ Sediment Deposits	___ Other (Explain in Remarks)
___ Drainage Patterns in Wetlands	

REMARKS:

SOILS

Soil Survey Map Unit (Series and Phase):	Drainage Class:
Taxonomy (to Subgroup):	Field Observations Confirm Mapped Type?
Profile Description:	USDA Land Resource Region:

Depth Range (Inches or cm)	Horizon Desig.	Matrix Color (Munsell Moist)	Mottles (Abundance/Contrast/Color)	Texture, Concretions, Structure, Redox Concen., etc.

___ Histosol	___ Concretions or Redox Concentrations
___ Histic Epipedon	___ High Organic Content
___ Sulfidic Odor	___ Organic Streaking in Sandy Soils
___ Aquic Moisture Regime	___ Listed on Local Hydric Soils List
___ Gleyed or Low-Chroma Colors	___ Other USDA Hydric Soil Indicator (Explain in Remarks)

REMARKS (INCLUDE SOIL PIT COORDINATES):

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	**Is This Sampling Point Within a Wetland?**	**YES**	**NO**
Wetland Hydrology Present?	Yes	No			
Hydric Soils Present?	Yes	No			

REMARKS:

Normal Circumstances?	Significantly Disturbed (Atypical):	Potential Problem Area?

COMPLETE SKETCH OF WETLAND ON BACK OF THIS SHEET; INCLUDE SOIL PIT AND PHOTO LOCATIONS, NORTH ARROW, AND CROSS-SECTION.

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STREAM DATA -

	Stream Name/Feature I.D. Number	GPS File/Coordinates:	MILEPOST:
Date:	Client/Project Name:	Topo Name:	
Survey Staff/Team Code:	State/County/Municipality:	LOOP/FACILITY NAME:	
Logbook page No's.:	Block/ Lot/Tract No.:	Photo No(s).: Upstr Dnstr	

Stream Sketch Plan (include surrounding area, cardinal direction arrow, flow direction arrow, cross-section of crossing with bank heights) – not required if entered on other sheet; use back if additional space required.

Stream Flow	Perceptible Flow? Y or N	Fast	Moderate	Slow	Pooled	None
		Perennial	Intermittent	Ephemeral	Direction:	

Avrg. Flow Depth (in.)	0 ___	0-3 ___	3-6 ___	6-12 __	12-24 ___	24-36 __	36-48 ___	48-60 __	60+ ___

Stream Width at Crossing (ft.)	Top of Banks:	Channel OHWM:	Water Surface:

Stream Substrate %	Bedrock ___ %	Gravel ___ %	Sand ___ %	Silt/Clay ___ %	Organic ___ %

Bank Height (ft.) (looking downstream)	Left	0-2	2-4	4-6	6-8	8+
	Right	0-2	2-4	4-6	6-8	8+
ınk Slope (%) ooking downstream)	Left	0-20	20-40	40-60	60-80	80+
	Right	0-20	20-40	40-60	60-80	80+

Water Clarity	Clear	Slightly Turbid	Turbid	Very Turbid	Color:

Aquatic Habitat	Sand Bar	Gravel Bar	Mud Bar	Gravel Riffles	Deep Pools
Undercut Banks/Evidence of Erosion?	Overhanging trees/shrubs	In-stream emergent plants	In-stream submerged plants	Bank root systems	Fringing Wetlands

Aquatic Organisms Observed	Waterfowl	Fish (adult)	Fish (juvenile)	Frogs	Turtles
	Snakes	Invertebrates	Other:		

T/E SPECIES / SUITABLE HABITAT

RIPARIAN VEGETATION DESCRIPTION

Comments (e.g. pipeline crossing angle, construction constraints, erosion potential, existing disturbances, meanders or width variations

STREAM QUALITY (indicate)	1	2	3

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization –

Medium Quality – mild to moderate disturbances result in minor recognizable alterations – existing pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbs dominate bank vegetation

ow quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing ivities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – w and depth variation lacking - does not provide suitable wildlife habitat – grass or forbs dominate bank vegetation

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ENSR
1601 Prospect Parkway, Fort Collins, Colorado 80525-3768
T 970.493.8878 F 970.493.0213 www.ensr.aecom.com

March 21, 2006

Ms. Patsy Crooke
Project Manager
USACE-North Dakota Regional Office
1513 S. 12th Street
Bismarck, ND 58504

Subject: Keystone Pipeline Project

Dear Ms. Crooke,

We look forward to meeting with you via phone on Wednesday, March 29 at 10 am at Steven Naylor's office in Pierre, South Dakota to provide a project status update on the Keystone Pipeline Project and to discuss our proposed field programs for 2006. Scott Ellis and Karen Caddis with ENSR will be attending. We understand that Keith Tillotson and Russ Rocheford with the COE will also be attending via phone. The overall purpose of this meeting is to discuss survey and application requirements and the information that Keystone will provide to the U.S. Army Corps of Engineers (COE) so that project-related wetland and water body jurisdictional determinations can be made.

To assist with preparation for the meeting and review of the project, please find the following attachments:

1. Pipeline Route maps. These strip maps illustrate the proposed pipeline alignment on an aerial photo and topographic base at a scale of 1:24,000. The National Wetland Inventory polygons have been included as an overlay on both bases. Also included are preliminary wetland survey areas that were determined by ENSR from aerial photo review.

2. Drainage crossings. A table listing drainage crossings is derived from the USGS watershed drainage GIS layers. Crossing locations are correlated with project mileposts. This table is the starting point for the Waters of the U.S. review.

3. Wetland/waterbody crossing methods. This is a section from the filing that Keystone will submit to the Department of State at the end of March.

4. Draft Survey Protocol. The survey protocol will be provided to you later this week via e-mail.

Preliminary Meeting Agenda

The following is a list of items that we would like to cover. We would appreciate your input on these, and other topics that should be discussed.

1. Introductions
2. Keystone Waterbody and Wetland Crossing Methods
3. Pipeline route review (routing considerations and concerns)
4. Overview of 2006 Field Program
5. Field Survey Technical Issues (definitions and level of survey)

- Waters of the U.S.
- Farmed wetlands
- Prairie potholes

6. Technical reports (content and format).
7. COE expectations, and future communications

If you have questions regarding the attached information prior to the meeting on March 29, please call Karen Caddis or Scott Ellis at 970-493-8878, or contact us by e-mail (kcaddis@ensr.aecom.com or sellis@ensr.aecom.com). We appreciate the opportunity to meet with staff from all the COE offices within the Omaha District with responsibilities for this project.

Sincerely yours,

Karen Caddis

Karen Caddis
Senior Technical Specialist/Wetlands Program Coordinator

Scott Ellis
Environmental Permitting Project Manager

ATTACHMENTS
SAME AS
THOSE FOR
ROCHEFORD
LETTER

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ATTACHMENTS
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ENSR
1601 Prospect Parkway Fort Collins Colorado 80525-9759
T 970.493.8878 F 970.493.0213 www.ensr.aecom.com

March 21, 2006

Mr. Keith Tillotson
Project Manager
USACE- Kearney Field Office
1430 Central Avenue
Kearney, NE 68847

Subject: Keystone Pipeline Project

Dear Mr. Tillotson,

We look forward to meeting with you via phone on Wednesday, March 29 at 10 am at Steven Naylor's office in Pierre, South Dakota to provide a project status update on the Keystone Pipeline Project and to discuss our proposed field programs for 2006. Scott Ellis and Karen Caddis with ENSR will be attending. We understand that Patsy Crooke and Russ Rocheford with the COE will also be attending via phone. The overall purpose of this meeting is to discuss survey and application requirements and the information that Keystone will provide to the U.S. Army Corps of Engineers (COE) so that project-related wetland and water body jurisdictional determinations can be made.

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