

# CONFIDENTIAL

8. The permittee will provide recognition of the planted trees and species identification by marking each tree with high visibility flagging tape. Tree planting shall be completed on or before **November 30, 2003**.
9. Tree plantings shall be maintained so that an **75%** survival rate is achieved throughout the mitigation planting area. The permittee shall be responsible to ensure that **75%** of all planted vegetation survives within the first five consecutive years. All dying vegetation shall be removed and replanted immediately after its death with the same species at an equal or greater size. In the event that a particular size or species of tree(s) does not maintain a healthy disposition after the first two (2) consecutive years, then additional physical plantings will be required. A larger or different species may be substituted after approval by the U.S. Army Corps of Engineers Regulatory Branch is obtained. Survivability monitoring in the mitigation planting area is the responsibility of the permittee and will occur for a minimum of five (5) years. Additional monitoring and/or replanting may be required if the survivability of the planted species is not established after the first five (5) consecutive years.
10. If the hydrology of the site is not adequate, (ponding, inundation, or saturation) corrective measures must be designed and implemented to restore the required wetland hydrology. The areas natural high water table and periodic over bank flooding events should provide adequate hydrology to induce natural wetland functions. Hydrological monitoring in the on-site mitigation area will occur for a minimum of five (5) years.
11. The permittee shall conduct project monitoring, maintenance, and management of the wetland mitigation areas for five (5) consecutive years. Monitoring is to include yearly site visits with members of the St. Louis District Regulatory Staff. The monitoring, at the discretion of the U.S. Army Corps of Engineers, shall include an on-site review prior to construction, during construction, and long-term monitoring not to exceed five (5) years. If at the end of the monitoring period, the mitigation site is providing adequate functions and values, then no additional monitoring will be required. If the mitigation site is not functioning after the monitoring period as reasonably anticipated, then corrective measures shall be implemented.
12. The mitigation parcel will be equally divided and ownership will be assigned from the applicant to the U.S. Army Corps of Engineers and the Illinois Department of Natural Resources. The conveyance of property will be initiated upon permit approval by working with members of the St. Louis District Real Estate Branch.
13. Any mitigation establishment activities that alter surrounding waters of the United States, including wetlands, must be corrected to return surrounding waters of the United States to their pre-project conditions. Stand management and maintenance of the mitigation site during the five year monitoring period shall be the responsibility of the permittee.
14. That the permittee shall complete the pipeline installation activities in conformance with the submitted double ditching method and return the project area to original contours to allow natural re-establishment of emergent wetlands. Mitigation of emergent wetlands will not be required if the disturbed emergent wetland areas are allowed to naturally revegetate.
15. That the permittee contact the St. Louis District Regulatory Branch at the beginning of construction and at the end of all construction.

**Caddis, Karen**

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**From:** Caddis, Karen  
**Sent:** Friday, May 19, 2006 5:20 PM  
**To:** Frerker, Charles F MVS; Gramke, Robert MVS  
**Cc:** Ellis, Scott; Giere, Molly; Duncan, Scott  
**Subject:** Two Rivers Pipeline FOIA request

Chuck and Rob,

Thank you for the information on the 2 Rivers Pipeline Project that traversed a portion of the Carlyle Lake area. We have reviewed the information and have determined that the majority of the proposed Keystone Pipeline Project ROW appears to lie within the corridor that was surveyed for the 2 Rivers Project. We would like to arrange a conference call with both of you to discuss how best to incorporate the 2 Rivers information into our study. If you feel it would be appropriate, we could include our wetland contractors in Illinois (Laurie Farmer and Matt Shively with SCI Engineering) in the discussion. We are hoping to initiate our field studies in Illinois and Missouri next week and would like to discuss this issue with you as soon as possible. Would you both be able to participate in a conference call on May 24 or 25? If this timing would not fit your schedules, please let us know the earliest date that you would be available to discuss the 2Rivers Project delineation. Thank you for your continued assistance with the Keystone Pipeline Project.

Regards,

Karen Caddis  
Wetlands Coordinator  
970-218-0031 (cell)  
970-493-8878, ext. 170 (office)

**Caddis, Karen**

**From:** Frerker, Charles F MVS [Charles.F.Frerker@mvs02.usace.army.mil]  
**Sent:** Monday, May 22, 2006 7:49 AM  
**To:** Giere, Molly  
**Cc:** Caddis, Karen; Duncan, Scott; Ellis, Scott; Tillquist, Heidi; Dufresne, Doree  
**Subject:** RE: Keystone Pipeline - Interagency Meeting with Illinois State Agencies

Molly,

I am available for the interagency meeting on June 12-15. It would be very beneficial if you have a preliminary or final jurisdictional delineation available for the proposed route. The delineation will provide key information about the proposed acreage, wetland types and stream/waterway types potentially impacted by the direct installation of the pipe and long-term maintenance of the corridor. The acreage of all federal and state lands proposed within the right-of-way will also be required at some point.

I'll leave the meeting location to your discretion. Most pre-application meetings are held on-site to allow agency representatives an opportunity to discuss and see the project area. If you have an interest, I can see if our meeting room is available at the Carlyle Lake Visitor Center. The visitor center is within 20 minutes of the area where the pipeline would cross federal and state property.

The following are additional folks you might want to invite to the meeting:

1. Illinois State Historic Preservation Office. They had an active role and cultural resource survey requirements for the Equilon/2Rivers project.
2. Carlyle Assistant Lake Manager - Dick Conner (618-594-2484, [james.r.connner@MVS02.usace.army.mil](mailto:james.r.connner@MVS02.usace.army.mil)). Impacts and conversion of federal lands will require coordination beginning at the lake level. The following weblink provides general information about Carlyle Lake <http://www.mvs.usace.army.mil/Carlyle/>
3. IDNR Carlyle State Fish and Wildlife Area - Manager Bob Hammel. Impacts and conversion of state lands will require coordination beginning at the area wildlife management office. The following is a weblink showing area resources and contact information: <http://dnr.state.il.us/lands/Landmgt/PARKS/R4/CARLYLE.HTM>

Thanks,  
Chuck

-----Original Message-----

**From:** Giere, Molly [mailto:[mgiere@ensr.aecom.com](mailto:mgiere@ensr.aecom.com)]  
**Sent:** Thursday, May 18, 2006 6:08 PM  
**To:** Frerker, Charles F MVS  
**Cc:** Caddis, Karen; Duncan, Scott; Ellis, Scott; Tillquist, Heidi; Dufresne, Doree  
**Subject:** Keystone Pipeline - Interagency Meeting with Illinois State Agencies

Mr. Frerker,

As a representative of TransCanada, ENSR Corporation would like to coordinate an interagency meeting with representatives from the USACE, USFWS, Illinois EPA, and Illinois DNR to discuss issues regarding environmental permitting and mitigation along the proposed Keystone Pipeline route as it pertains to Illinois.

The proposed 30-inch Keystone crude oil pipeline route intends to be collocated with the 58 mile Wood River Pipeline (former Equilon 2Rivers Pipeline). We have received the information on the Equilon 2Rivers Pipeline Project as requested through our FOIA Request and are currently reviewing this material. We

8/19/2006

have been in touch with a number of Illinois State Agency contacts regarding environmental permits and mitigation and would like to schedule a meeting with all parties concerned. The primary topic would be the proposed crossing of Carlyle Lake, however, we feel it would be advantageous to address other waterbody crossings in Illinois as well. Would you be able to meet one day during the week of June 12, 2006?

The parties that have been involved in environmental permits and consultations and have expressed an interest in meeting with us again include:

- Bruce Yurdin – Illinois EPA, Division of Water Pollution Control (404/401 Certification)
- Mike Diedrichsen – Illinois DNR, Office of Water Resources (404/401 Certification)
- Blaine Kinsley – Illinois EPA, Division of Water Pollution Control (Stormwater and Hydrostatic Water Discharge)
- Rick Pietruszka – Illinois DNR, Division of Natural Resource and Review (Special Status Species)
- Jeff Torricelli – Illinois DNR, Division of Natural Resource and Review (State Lands)
- Joyce Collins – USFWS, Marion Ecological Services Sub-office

Representatives from ENSR's Keystone Pipeline Project team would include:

- Karen Caddis - Federal Agency Coordinator for USACE
- Molly Giere - State Agency Coordinator for Illinois
- Scott Duncan - Lead State Agency Coordinator

Since many of the agency contacts have offices in Springfield, Illinois, we thought it would be easiest to meet there. Please let us know if you have a preference as to which day you would be able to meet during the week of June 12, or propose an alternate date if that week does not work with your schedule. Once we have chosen a date, we will begin contacting the individuals listed above and secure a meeting location.

Thank you for your time. I look forward to hearing from you soon.

Sincerely,

Molly Giere  
Project Coordinator  
1601 Prospect Parkway  
Fort Collins, CO 80525  
970-493-8878  
mgiere@ensr.aecom.com

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

**Memorandum**

Date:	May 25, 2006			
To:	Project File			
From:	S. Ellis, K. Caddis			
Subject:	St. Louis COE District Conference Call on Two Rivers Pipeline Wetland Delineation			
Distribution:				

A conference call was conducted on Wednesday, May 24 at 12:30 pm Mountain Time to discuss 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. Participants in the conference call included:

ENSR: Scott Ellis, Karen Caddis, and Molly Giere  
 Trow: Mike Koski and Mike Schmaltz  
 St. Louis District COE: Chuck Frerker  
 SCI (ENSR wetlands subcontractor): Laurie Farmer

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 COE regarding delineation of farmed and prior converted wetlands. At that time, the COE 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 COE 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 COE 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.

Chuck also indicated that agricultural drainage ditches would need to be delineated if they are connected to a natural drainage.

In an aside, Chuck also mentioned that ROW construction in the Carlyle Lake area will be highly controversial based upon his experience with the Two Rivers Pipeline project and he recommended that meetings be held with interested groups.

Proposed meetings with agencies involved in management of the Carlyle Lake area were discussed. A tentative meeting date was suggested for June 13 or 14 at the Carlyle Lake visitor's center. Molly Giere

**ENSR**

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will contact the appropriate parties and set up meeting times and confirm the meeting dates. Chuck Frerker is available to meet either June 13 or 14.

Chuck indicated that any levee crossings would require permitting through Public Law 99, which is conducted through a separate branch of the COE. This branch would evaluate construction techniques for potential consequences to the structural stability of the levee being crossed. Chuck will provide ENSR with a point of contact at a later date. 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.

The meeting concluded with commitments from ENSR to finalize the dates and times for the June 13 or 14 meeting in Lake Carlyle. Mike Koski indicated that he would like to have a review of the farmed wetland slides completed prior to the June meeting with the agencies.

## Keystone Project Carlyle Lake Meeting: USACE Visitor Center at Carlyle Lake, IL

June 14, 2006 (10:00 AM-12:00 PM)

### *Attendees:*

#### Keystone Team:

TransCanada – Michael Schmaltz  
ENSR - Scott Ellis, Molly Giere, Karen Caddis, Kim Munson\  
SCI – Laurie Farmer  
Trow Engineering – Mike Koski, Steve Skoropat  
Universal – Johnny B. Sellers  
Ellis & Associates – Phil Phillips  
TransCanada Public Consultation – Tom Madsen, Jim Prescott

#### Federal Agencies:

USACE - Chuck Frerker, Joe Smothers, Dick Conner, Lynn Neher  
USFWS – Joyce Collins, Nate Caswell

#### IL State Agencies:

IDNR – Bob Hammel, Rick Pietruszka, Jeff Torricelli, Lou Hannig  
IEPA – James Allison, Alyson Grady  
IHPA – David Halpin

### *Meeting Objectives: (Ellis - ENSR)*

The primary objective of the meeting was to address any questions the agency representatives have regarding the crossing of Carlyle Lake and to obtain feedback/input on issues such as (but not limited to):

- additional environmental survey needs (e.g., threatened and endangered species),
- construction window (e.g., to time construction to coincide with lowest water level in WMA, to have the least impact on the use of the WMA by wildlife as well as outdoor enthusiasts, and to have minimal impact on threatened and endangered species and species of concern), and
- lessons learned from previous pipeline construction through the area (i.e., 2Rivers).

Additionally, Keystone would like to discuss any related issues of concern along the remainder of the proposed pipeline route through Illinois.

### *Project Overview: (Koski – TransCanada)*

Some key points made included:

- 1,830 miles total (US and Canada) with 1,070 miles in the US
- Mostly 30" diameter pipe (to Wood River terminal)
  - 24" through most of Illinois (from Wood River to Patoka)
- Construction from mid 2008 through 2009
- In-service by end of 2009
- US Dept. of State (USDOS) is the lead agency through issuance of a Presidential Permit

- Filed Permit Application April 19, 2006
- Following the NEPA process (will require an EIS)
- Proposed line through Illinois is to be offset from the existing 2Rivers pipeline by 40 feet (generally south of existing ROW)
  - Temporary workspace needed for construction will overlap with existing 2Rivers ROW

**Overview of Carlyle Lake Management:** (Hammel - IDNR-Manager of Carlyle Lake WMA)

- A 40-foot offset (either north or south) from existing pipelines through Carlyle Lake would be directly on a levee.
- Levees are licensed to the state; owned by federal government in fee.
- Will also need to cross the Kaskaskia River and Hurricane Creek
  - 2Rivers bored the Kaskaskia.
- 35 acres of sub-impoundment is flooded in the fall for waterfowl management
  - Impoundment area is pedestrian only – public access is very limited
  - There are interior and exterior levees – all managed by IDNR
  - 1 of 4 impoundments are typically wet year-round
    - IDNR/USACE would be willing to work with us to adjust water depth for the year that construction is to take place.
  - The best window would be to build in summer (late June – August/September)
    - Start flooding for waterfowl mgt. in October
    - Waterfowl seasons end:
      - Ducks – Jan. 1
      - Canada geese – Jan. 31
      - Snow geese – March 31
    - Dewatering starts in April – typically takes a few months due to spring rains.
    - Waterfowl nesting is in late spring/early summer

Ellis (ENSR): Is there a land use management plan for the WMA we need to follow? If so, can we get a copy of it?

- Conner (USACE) – the management plan changes seasonally, not a formal management plan.
  - June to August would present the least amount of obstacles.
    - This would be the growing season.
    - They try to maintain a steady pool level, so release rates are limited during this time. This could create concerns downstream depending on the weather.

**Two Rivers Project Permit Requirements/Mitigation/Lessons Learned:**

Hammel (USACE):

- 2Rivers had 2 major issues that delayed construction:
  - Unusual flood year - started construction in August and were typically in 3 feet of water
  - Labor issues with construction crew – had a strike on site



- 2Rivers was able to complete construction through the WMA in about 2 months
  - There were no problems after they left
- 2Rivers bored under the levees.
  - Phillips (Ellis & Assoc.) wanted to know if they bored or drilled (HDD).
  - Hammel is not clear on the difference and does not know.
- Despite the fact that the impoundments are typically wet year-round, 2Rivers were able to find dry areas before each levee to set-up/stage drill. (wettest season is March and April)
  - They welded on the west and pushed the pipe through
- Ellis (ENSR): There is a parking area west of the lake – did 2 Rivers use this for staging?
  - No - Staging area was in Greenville

#### Neher (USACE): Cultural Resources

- There was 1 cultural resource site found in Carlyle Lake area that was of concern during 2Rivers
  - See FOIA for action required

#### Frerker (USACE): Post construction management and mitigation

- 2Rivers was required to insert block valves on either side of crossing to allow for flow to be shut-off in case of leaks.
  - This would likely be asked for at other waterbody crossings (e.g., any public waterbodies in the state as listed in Appendix A of IL Rule 3704).
- Mitigation will be required for replacement of forested wetlands
  - See FOIA for what was required for 2Rivers
- Ellis (ENSR): The ownership transfer took some time and delayed 2Rivers. How can we avoid that?
  - Once our delineations are complete, USACE will also assess the area
  - USACE will then (based on their assessment) determine how much and what type of wetlands will need to be mitigated
    - Amount is based on ratios established by USACE St. Louis District Office
  - Locations will be suggested by USACE (i.e., they will assist in finding site)
- Caddis (ENSR): As part of mitigation process, should wetland delineation be turned in before or in conjunction with 404 Certification application process?
  - Frerker: It would be to our advantage to get the delineation report in as early as possible (i.e., before the 404 process begins).
    - USACE will cooperate on this to help initiate the mitigation process early.
  - Grady (IEPA): Delineations will also need to go through the Anti-degradation Review with IEPA. (SEE details/needs under Section 404/401 and Section 10 Application below)

#### ***Agency Issues, Concerns, and Questions:***

##### Section 106 Consultation (Halprin - IHPA)

- The lead agency (USDOS) has to initiate Section 106 consultation.
- In further conversations (post-meeting), Munson (ENSR) explained that the USDOS has not yet identified a contact person for the consultation.

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- A contact person at USDOS will need to be identified for review of the Cultural Resource survey reports generated from the surveys currently being conducted and prior to review by any of the State Historic Preservation Offices (SHPO).

## Section 404/401 and Section 10 application process (*Frerker* – USACE):

- If a wetland or waterbody is changed or converted by construction (i.e.; wooded wetlands converted to palustrine emergent wetlands), mitigation would likely be required.
  - Generally mitigation would involve purchasing land and developing wooded wetlands on it.
  - Land ownership would be transferred to the USACE.
    - USACE can give recommendations on lands to purchase.
  - Mitigation process will be triggered after receipt of the wetland delineation report.
  - USACE will do a field check following receipt of the report and mitigation will likely involve 3:1 to 5:1 replacement depending on the quality of the wetlands affected.
  - Mitigation acreage identified in the 2Rivers report was for the entire state of Illinois.
  - Section 404 and Section 10 process should be combined.
- Grady (IEPA): The state will need to do an anti-degradation review.
  - It would also be advantageous to provide IEPA with the delineation reports early to allow time for this process.
    - Agency develops a fact sheet
    - Agency provides for a public comment period
      - Typically concurrent with USACE public comment period.
      - If not concurrent with USACE, than 30 days
  - IEPA needs all concurrent communications that occur with the USACE
    - Send delineation reports to Bruce Yurdin at IEPA

## Indiana Bat (Collins - USFWS):

- Roosting time is April 1 – Sept. 30 (no construction during this time).
  - This is during suggested WMA construction window.
- Frerker suggested that 2Rivers cleared necessary trees prior to April 1 even though construction was not to start until summer. This kept the bats from roosting in the trees to begin with.
  - Collins said this would be acceptable.
- Collins: In terms of bat surveys, should probably do habitat surveys first to see if area to be cleared has any trees that would potentially be roosting habitat for bats (e.g., shagbark hickory). Bats are known to be in the woods to west of WMA (staging area for bore), but impact trying to avoid would be to potential nurseries in such trees.

## Backup plan in the event that construction is delayed (Hammel – IDNR)

- What would be the plan if construction were delayed?
  - There needs to be a fallback plan so that construction will not impact waterfowl season.

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## Active Environmental Groups in the Area (Frerker - USACE):

- Suggest bringing them into process early.
- Example includes Webster Grove Nature Society, Audubon Society, Ducks Unlimited (see 2Rivers FOIA letters).
- Koski (TransCanada) - asked about active Ducks Unlimited chapters.
  - Hammel is quite active with this group. Yes, there are several chapters active in the area.
- Frerker will work with ENSR to get a more complete list.

## Permanent ROW and Temporary Easement (Neher – USACE)

- The project team needs to contact the USACE land agents in St. Louis as soon as possible to arrange for easements across USACE land (Carlyle Lake and the Mississippi River)
- Torricelli / Hammel – IDNR
  - State land managers will initiate Comprehensive Environmental Review Process (CERP) within IDNR for any State Lands that are crossed
    - This needs to be done for ROW plus any lands being purchased for mitigation.
  - Process will be initiated once land manager has obtained all information needed from Keystone team
    - Should include a mini-report with cultural and sensitive species information.
    - Hammel will send Giere (ENSR) a list of what information is needed to initiate CERP

## Initiating a CERP (Torricelli – IDNR)

- Conduct a Title search to identify all State Lands crossed by the project.
- Land Managers:
  - Carlyle Lake - Hammel
  - Other state lands in Illinois – contact Torricelli to determine who needs the information to initiate CERP
- Torricelli will provide Giere with a blank CERP for review

## Special Environmental Surveys Needed (Collins - USFWS):

- Indiana bat - Habitat quality assessment for roosting trees. Be sure to use approved USFWS survey methodology.
- Decurrent false aster - on the Mississippi River floodplain.
- Massasauga rattlesnake
- Raptors – just prior to construction
- Bald Eagle - known active bald eagle nest ~1.5 south of proposed route through Carlyle Lake.
  - No bald eagle winter roosts are located in the area.
- Migratory birds - Not needed if construction is avoiding migration period
  - avoidance of migration period is considered minimizing impacts
  - Best time is in August and September to minimize impacts.
  - General waterfowl season ends in January. Snow goose hunting ends March 31

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- *Neher* (USACE) – can provide shape files for Carlyle Lake area
  - Will send files to *Skoropat* (Trow) who will forward them on to ENSR GIS department

## ***ACTION ITEMS:***

- Follow-up with USDOS regarding their assigned contact within the Department for Section 106 consultation. (Trow)
- Check FOIA for cultural resource site found at Carlyle Lake during 2Rivers and required action. (ENSR)
- Look into construction method used by 2Rivers to go under levees in WMA (boring or HDD). (Trow/Universal)
- Develop a backup plan for construction through the WMA in case construction is delayed so that waterfowl season is not impacted. (Trow/Universal)
- Obtain list of active environmental groups in the area from *Frerker*. (ENSR)
- Contact USACE land agents regarding easements across USACE land (Carlyle Lake and Mississippi River). USACE needs a letter requesting the easement. (Trow/Ellis and Associates)
- Conduct Title search for State Lands crossed by the project. (Ellis and Associates)
  - Obtain list from *Hammel* of required information for IDNR land managers to initiate CERP. (ENSR)
  - Obtain blank CERP from *Torricelli*. (ENSR)
- Check with *Hammel* to clarify if there is a written land management plan and obtain a copy if possible. (ENSR)
- Obtain shape files for T&E species in Carlyle Lake area from *Neher* at USACE. (Trow)
  - Also forward these files to Todd White at ENSR GIS department. (Trow)
- Arrange for surveys for potential Indiana Bat roosting habitat. (ENSR)
- Provide USACE (*Frerker*) and IEPA (*Yurdin*) with delineation reports when complete (prior to initiating Section 404 and Section 10 application process). (ENSR)

August 25, 2006

Mr. Chuck Frerker  
Project Manager  
USACE – St. Louis District  
1222 Spruce Street  
St. Louis, MO 63103

**Subject: Keystone Pipeline Project Status Summary**

Dear Mr. Frerker,

Keystone Pipeline (Keystone) has completed its first session of surveys for wetlands and other waters of the U.S. (WUS) along portions of the proposed Keystone Pipeline Project right-of-way (ROW) in the St. Louis District. At this time we would like to provide for your records copies of communications to date between the St. Louis District, Keystone and its contractors, summarize future survey plans for the St. Louis District, and confirm our understanding of regulatory requirements in your District. Meeting notes, phone communications, and correspondence between Keystone and the St. Louis District through August 24, 2006 are provided as attachments to this letter.

The following notations summarize our understanding of regulatory requirements to date in your district:

- 1) The St. Louis District has requested that all potential wetlands and other WUS be delineated along the proposed Keystone ROW in your District. The USACE is also requesting that delineators indicate if they believe the WUS being delineated are jurisdictional or not.
- 2) At a May 24 conference call with you, you suggested that Keystone review NRCS "slides" of the ROW areas to determine if any potential farmed or prior converted wetlands could occur along the ROW. Slide reviews were completed for the following areas as shown in Table 1; data review for Lincoln County, Missouri is still in process. To date, the presence of farmed wetlands within the proposed ROW has only been identified in the state of Missouri.
- 3) ENSR understands that agricultural drainage ditches would need to be delineated in the St. Louis District if they are connected to a natural drainage and 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.
- 4) The St. Louis District has indicated that it anticipates that the Keystone Pipeline Project could be permitted under Nationwide permits depending upon the results of the field studies.

If any of these points are not correct or if you have any concerns regarding the attached communications, please let us know and we will work with you to correct our understanding and to answer your questions.

Mr. Charles Frerker  
Page 2

Keystone is currently identifying locations that remain to be surveyed in the St. Louis District for WUS. Field crews are expected to begin delineations in those areas by mid-September 2006.

Karen will be out of the office between August 28 and October 16, 2006 and will be checking phone messages and e-mails infrequently during that time. If you have questions or concerns regarding any aspects of the project during her absence, please contact Scott Ellis or Heidi Tillquist at 970-493-8878 or via e-mail ([sellis@ensr.aecom.com](mailto:sellis@ensr.aecom.com) and [htillquist@ensr.aecom.com](mailto:htillquist@ensr.aecom.com)). We want to thank you for your participation and recommendations regarding regulatory requirements for your district. We appreciate your help.

Sincerely,



Karen Caddis

Wetlands Survey Field Coordinator



Scott Ellis

Environmental Project Manager

Ref. no. 10623-004-803

Enclosures

Mr. Charles Frerker  
Page 3

**Table 1 – Mileposts of Aerial Slide Review**

<b>Waterbody</b>	<b>State</b>	<b>County</b>	<b>Milepost</b>
Shoal Creek	Illinois	Bond	1050.5-1051
East Fork of Silver Creek/Silver Lake	Illinois	Madison	1041.5
Silver Creek	Illinois	Madison	1032.5-1033.5
Mississippi River	Illinois	Madison	1017-1023
Mississippi River	Missouri	St. Charles	980-1016
Missouri River	Missouri	St. Charles	980-1016
Cuivre River	Missouri	St. Charles/ Lincoln	967-980

Mr. Charles Frerker  
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**KEYSTONE PIPELINE PROJECT  
COMMUNICATIONS WITH THE ST. LOUIS DISTRICT AS OF  
AUGUST 24, 2006**



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## List of Enclosures

Attached to **St. Louis COE District Letter to Mr. Charles Frerker**

Dated August 25, 2006 Subject Line: Keystone Pipeline Project Status Summary

- *E-mail*  
From Robert Gramke  
Subject: FW St. Louis District Contact  
Attachments: Regional Conditions, NW12-Utility line discharges, NWP 12-Final.doc  
Date: January 24, 2007
  
- *TransCanada Contact Summary*  
Keystone Member: Scott Duncan  
To: US Army Corp St. Louis District  
Date: February 3, 2006
  
- *E-mail*  
From Robert Gramke  
Subject: Keystone Pipeline Project Meeting  
Date: February 10, 2006
  
- *Keystone Project Meeting: Corps of Engineers, St. Louis District, St. Louis Meeting Minutes*  
February 17, 2006
  
- *E-mail*  
From Charles Frerker  
Subject: TransCanada Keystone pipeline project  
Date: March 16, 2006
  
- *Letter*  
To Charles Frerker  
Subject: Keystone Pipeline Project  
Date: March 22, 2006
  
- *Keystone Mainline Maps*  
Missouri 10, 11, and 12 of 12 Land Access Areas  
Illinois 1, 2, and 3 of 3 Land Access Areas
  
- *Waterbodies Crossing Table 1, 13 pages*
  
- *Construction Mitigation Plan Rev. 1*

# CONFIDENTIAL

- *E-mail*  
From Karen Caddis  
To Charles Frerker  
Subject: FOIA Request  
Attachment FOIA Request
- *E-mail*  
From Karen Caddis  
To Charles Frerker  
Subject: Keystone Interagency Meeting with Illinois State Agencies  
Date: May 22, 2006
- *Memo*  
To Project File  
From S. Ellis, K. Caddis  
Conference Call on Two Rivers Wetland Delineation  
Date: May 25, 2006
- *Keystone Project Meeting Carlisle Lake Meeting: USACE Visitor Center Meeting Minutes*  
June 14, 2006

**ENSR**

1601 Prospect Parkway, Fort Collins, Colorado 80525  
T 970.439.8878 F 970.493.0213 www.ensr.aecom.com

August 25, 2006

Mr. Charles Frerker  
Corps of Engineers – Saint Louis District  
1222 Spruce Street  
Saint Louis, Missouri 63103

**Subject: Keystone Pipeline Project Geotechnical Field Studies in Missouri and Illinois**

Dear Mr. Frerker:

The Keystone Pipeline Project is proposing to conduct geotechnical exploration surveys in the late summer and fall of 2006 at several river crossings in the Saint Louis District. Information collected during these studies will assist in determining the design of pipeline crossing construction at the identified drainage locations. The purpose of this letter is to notify you of the borehole locations that we believe are located within Corps of Engineers (USACE) jurisdiction (below the ordinary high water mark of a stream channel or within wetlands).

To facilitate your review, the details of the proposed geotechnical exploration site surveys in the Saint Louis District including location, equipment utilized, methods of installation and data collection, and resource evaluations are provided in Attachment A (project description), Attachment B (site location table), Attachment C (representative equipment photos). Maps showing the proposed geotechnical exploration survey locations are also enclosed. Surface disturbance at each drill site would occur within an area of approximately 100 square feet. No access roads or paths would be cleared to the sites and no construction would occur within any active channels. No fill or drilling fluids would be discharged and no drilling fluid collection pits would be constructed. The anticipated acreage of disturbance associated with geotechnical activities would be significantly less than 0.5 acre at each proposed bore site and would fall within conditions as outlined under Nationwide Permit Number 6.

ENSR Corporation (ENSR) conducted archaeological surveys at the Mississippi River crossing locations depicted on the attached figure. No archaeological sites were identified within areas proposed for surface disturbance. ENSR contacted the U.S. Fish and Wildlife Service (John Cochran, Grand Island Nebraska Field Office) and the Missouri Department of Conservation (Doyle Brown) to verify that there are no threatened and endangered or sensitive species issues at this location.

The Keystone Project applied with the USACE St. Louis District in August for special use permits for the geotechnical drilling at the Hurricane Creek and Kaskaskia River crossings within the Carlyle Lake boundary. The project received the requested special use permits on August 7, 2006. The proposed drill site locations are illustrated in Attachment D, which includes copies of the special use permits, and an aerial photo map illustrating the currently proposed locations. The borehole locations at the Kaskaskia River crossing have not yet been surveyed for cultural resources. These surveys will be completed within the next two weeks, and the results will be reported to the USACE.

Mr. Charles Frerker  
Page 2

We would appreciate your review of the Keystone Pipeline Project's proposed 2006 geotechnical exploration program in the Saint Louis District, and subsequent verification that this activity would comply with terms and conditions as outlined under Nationwide Permit Number 6. Please let me know if you would like any further information or need further clarification concerning the geotechnical exploration activities. You may reach me at ENSR at 970-493-8878. Thank you for your assistance.

Sincerely,



Scott Ellis  
Regulatory Program Manager

CC: Mike Koski – Trow Engineering

Ref. 10623-004-803

Attachments

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Page 3

**ATTACHMENT A  
DESCRIPTION OF PROPOSED GEOTECHNICAL EXPLORATION SURVEY ACTIVITIES**

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## 1.0 Purpose

Prior to construction of the proposed Keystone Pipeline Project, geotechnical soil characterization studies must be initiated at major drainage crossings in order to assess the surface and subsurface engineering characteristics of the native soils so that the optimal alignment, profile, and construction plan can be determined. In addition, the Keystone Pipeline Project is evaluating the use of the Horizontal Directional Drill (HDD) Crossing Method for sensitive and complex crossings on the proposed alignment. To assess the technical feasibility of these methods it will be necessary to obtain site-specific geotechnical information at each location.

The aim of the geotechnical soil investigation will be to identify the various soil groups found at the crossings, determine depth to groundwater, locate geologic hazards, collect soil samples, and describe rock properties.

## 2.0 Description

### Borehole Drilling

Locations of the proposed borehole for which notice is being provided are identified in Attachment B.

Borehole installation would require a small drilling rig (CME-45 or equivalent) and one or two support vehicles (such as passenger trucks or SUVs). All boreholes would be installed with a truck-mounted drill rig. Water for the drilling activities would be supplied using either a water truck or a heavy-duty truck, such as a Ford F-350 pulling a trailer with a water wagon. Water from the water tank would be used to mix cuttings from the drill rig with bentonite clay to create the slurry that serves as the drilling fluid during borehole installation. Steel casing would be installed to prevent sloughing of the borehole walls, if necessary. A photograph of a representative drill rig is provided in Attachment C. Rotary drilling would be used to advance the hole while samples would be collected through the use of a hollow tube at the end of the drill. This tube would be pushed into the ground by repeated blows from a large hammer attached to the drill rig. Where formations are encountered that are too hard to be sampled by soil sampling methods, the Contractor would drill into the hard formation with a rock bit to determine the nature of the rock formation encountered.

All excess drilling mud and fluids or waste generated during the investigation will be collected, removed, and transported offsite to an approved location for storage/disposal in accordance with existing regulations.

Drilling activities are expected to take approximately 9 days or less at each drainage crossing.

For crossings where HDDs are proposed, at least two boreholes on each side of the sites or series of obstacles would be required. Alternatively, the borings may be located at the ends and intermediate point along the crossing. Each borehole must be completed to a minimum depth of 100 feet, depending on site conditions. Boreholes would generally be offset 25 feet from the proposed pipeline right-of-way alignment. Whenever possible the offsets will alternate on either side of the proposed alignment.

For geotechnical exploration associated with potential HDD crossings, boreholes would be backfilled with Portland Cement Grout. The grout would be pumped from the bottom until the grout nears an elevation of 2 feet below the existing ground surface. The upper 2 feet would be backfilled with native soil. All other boreholes would be backfilled with cuttings to the surface. Local regulations concerning borehole abandonment would take precedence over these requirements.

Mr. Charles Frerker  
Page 5

Spills would be minimized via proper re-circulation of the mud and by using the cuttings (which may or may not be mixed with cement to plug the hole) so the need for removal of excess cuttings from the site should be reduced. No material would be disposed of in waterbodies or wetlands.

Only approved access roads may be used to access the drill sites. These roads may not be rutted, widened, graded, filled, or resurfaced.

### 3.0 Proposed Environmental Protection Measures

The following protection measures will be implemented by Keystone and their contractors during the geotechnical exploration surveys:

- Drilling contractors' equipment will be required to not leak any hydraulic fluids, oil, gasoline, or any other fuels. Equipment which leaks or is subject to leaks must be repaired or removed from the project area.
- Contractor shall have absorbent pads available for all equipment to clean and contain any spills of hydraulic fluids, oil, gasoline, or any other fuels. Contractor shall adhere to United States Coast Guard (USCG) and/or United States Army Corps of Engineers (COE) guidelines for spill prevention measures when working over or adjacent to waterbodies or wetlands, and make any notifications in the case of an emergency.
- Petroleum products and hazardous materials will not be stored and dispensed within 100 feet of wetlands, surface waters or drainage channels or within 150 feet of any wells. All petroleum products and hazardous materials on site will be kept in secure containers with secondary containment structures. Equipment will not be parked within 100 feet of wetland or waterbody boundaries or 150 feet from wells.
- All contaminated soils, adsorbent materials and other contaminated wastes will be handled, contained, and disposed of by the Contractor in accordance with all applicable state and federal regulations.
- Drill rigs may make one pass through wetlands to access borehole locations.
- If vehicle/drill rig traffic is anticipated to create significant rutting within a wetland, the Company's on-site engineer will instruct the Contractor to use support mats to minimize these impacts.
- Support vehicles will not be allowed to drive into the wetland drilling site(s).
- All project activities and equipment, spoil, and material storage will be limited to the area immediately adjacent to the borehole location.
- Water needed for geotechnical drilling will not be obtained from the stream at the drilling location.
- Water from the core hole and water from coring will be contained within a 35-foot radius of the hole. In no instance will any water from the drilling procedure be allowed to leave the site as defined. All excess drilling mud and fluids or waste generated during the investigation will be collected, removed, and transported offsite to an approved location for storage/disposal in accordance with existing regulations.
- Forging and bridging of streams will not be allowed. Equipment will use only existing surface roads or approved access roads.

Mr. Charles Frerker  
Page 6

- If it is necessary to leave the drill rig parked overnight in a wetland if the borehole cannot be completed during that workday, plastic sheeting will be placed beneath the rig to catch drips or leaks.
- No refueling will be allowed within 100 feet of wetlands. Drill rigs will be fully fueled prior to entering wetlands.
- Lubricants or other hazardous materials that need to accompany the drill rig within a wetland will be stored within a secondary container.
- Bentonite or other drill fluid additives may be introduced down hole but will not be discharged onto the surface of the wetland. Any inadvertent surface release of bentonite or other drilling liquids/slurries will be contained and removed from the wetland.
- Spill response materials will be carried on the drill rig in the event of a spill or release of fuels or other hazardous materials. Spills will be contained, cleaned up and reported to the Company immediately.



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Page 7

**ATTACHMENT B  
PROPOSED GEOTECHNICAL EXPLORATION SURVEY SITE LOCATION TABLE**

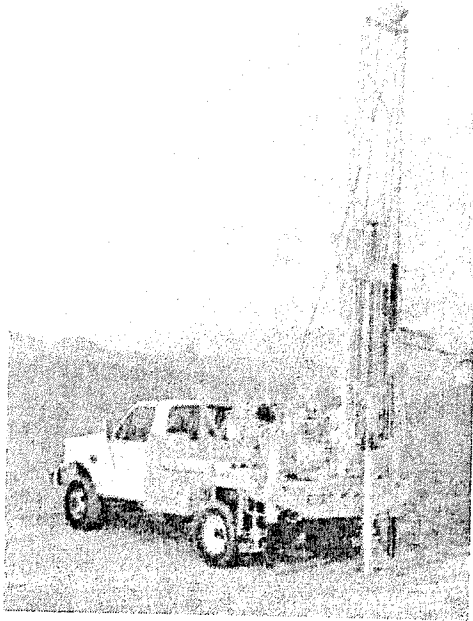
**Table B-1 Proposed Geotechnical Exploration Survey Sites in the Saint Louis USACE District**

Site Number	Borehole ID	Number of Boreholes	Approximate Milepost (MP)	Feature(s)	State	County	Section-Township-Range	X Coord.	Y Coord.
1.20	BH-1.20-1017.4-01	4	1016.8	Mississippi River	Missouri & Illinois	St. Charles (MO) & Madison (IL)	9-47N-8E	750033.51	4300933.74
	BH-1.20-1017.4-02							750174.57	4300948.01
	BH-1.20-1017.4-03						4-4N-9W	751012.80	4300934.08
	BH-1.20-1017.4-04							751071.53	4300932.98

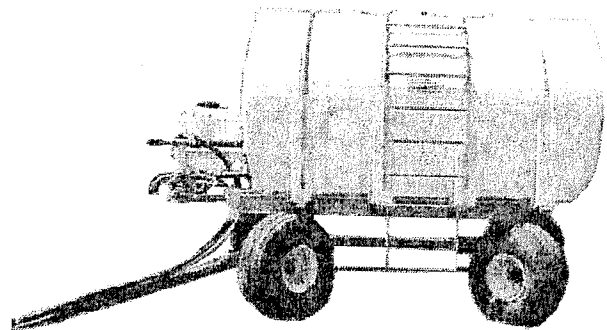
**CONFIDENTIAL**

**ATTACHMENT C  
REPRESENTATIVE PHOTOS OF PROPOSED GEOTECHNICAL EXPLORATION EQUIPMENT**

Mr. Charles Frerker  
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**CME 45 DRILL RIG**



**WATER WAGON**

Mr. Charles Frerker  
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**ATTACHMENT D  
SPECIAL USE PERMITS AND BOREHOLE LOCATIONS**

**LAKE CARLYLE**

- Hurricane Creek
- Kaskaskia River

U.S. ARMY CORPS OF ENGINEERS  
ST. LOUIS DISTRICT

SPECIAL USE PERMIT

(See Back for Privacy Act)

Permit No. 06-029

Expires: 31 OCTOBER 2006

(THIS APPLICATION TO BE COMPLETED IN DUPLICATE)

**I. REQUESTED BY:** *Kala Carter- TransCanada*

**DATE:** 07 August 2006

*Keystone Pipeline  
Ellis & Associates Inc.  
7108 South Alton Way, Bldg. J-1  
Centennial, CO 80112  
618-664-2789 or 979-450-4573*

I hereby request permission to use public lands as specified below.

**TYPE AND DESCRIPTION OF USE** (Attach Sketch, Map etc.)

*DRILL EIGHT CONSTRUCTION BORINGS TO APPROXIMATE DEPTH OF 100 FEET.*

*Tracts 1452, 1453, 1454, 1519- Hurricane Creek Crossing*

*Tracts 1514, 1517, 1528, 1529- Kaskaskia Creek Crossing*

*BORINGS SHOULD AVOID ALL KNOWN ARCHAEOLOGICAL SITES. NO TREES WILL BE IMPACTED.*

*(SEE SPECIAL CONDITIONS)*

(Continue on separate sheet if necessary)

**SIGNATURE** *Kala Carter*

**ADDRESS**

**PHONE**

SPACE BELOW FOR USE BY THE CORPS OF ENGINEERS

**II.**

**YOUR REQUEST IS APPROVED (SEE CONDITIONS ON BACK OF FORM)**

**YOUR REQUEST IS DENIED FOR THE FOLLOWING REASONS**

*Robert Williams*  
**PROJECT MANAGER**

**CEMVS-CO-A**

This permit is non-transferable and may be revoked at any time.

LMS Form 139

May 1996

This permit is subject to the following terms and conditions:

- a. This permit does not give any property rights either in real estate or material; in no way contemplates exclusive use of public lands; and such use will not prevent, interfere, or deny the public use and enjoyment of the area.
- b. That discrimination practices are prohibited as stated in Section 327.1(d), Title 36, Code of Federal Regulations.
- c. That the contemplated use shall be without cost, expense, or obligation on the part of the United States Government.
- d. That there be no interference with navigation, nor any attempt made to forbid the full and free use by the public of the public lands and/or waters.
- e. Permittee agrees to indemnify and hold the United States harmless from liability for all claims for damages to or injury or persons or property or death of persons arising out of any activities resulting from the issuance of this permit.
- f. This permit is granted solely for the purpose described by the permittee on the opposite side of this form.
- g. The permittee shall comply promptly with any lawful regulations or instructions of any Federal, State, or local agency of Government.
- h. That noncompliance with the conditions of this permit will invalidate this permit and that the permittee is responsible for repairing or reimbursing the U.S. Government for any damages incurred to the public lands.
- i. Special Conditions: (may be continued on separate page)
  - a. **THE CARLYLE LAKE PROJECT MANAGER SHALL BE NOTIFIED 24 HOURS PRIOR TO THE COMMENCEMENT OF WORK.**
  - b. **THE CARLYLE LAKE PROJECT MANAGER OR HIS REPRESENTATIVE WILL BE PRESENT ON SITE DURING THE INITIAL START OF THE WORK.**

Privacy Act

36 CFR 327.19 - Form filled out by individual who is requesting permission to use public lands for a certain type of activity. It is a record of an approval or disapproval of request by the applicant. It is also kept as a permit, recording the applicant's original intent and description of use.

# CONFIDENTIAL

This permit is subject to the following terms and conditions:

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- b. That discrimination practices are prohibited as stated in Section 327.1(d), Title 36, Code of Federal Regulations.
- c. That the contemplated use shall be without cost, expense, or obligation on the part of the United States Government.
- d. That there be no interference with navigation, nor any attempt made to forbid the full and free use by the public of the public lands and/or waters.
- e. Permittee agrees to indemnify and hold the United States harmless from liability for all claims for damages to or injury or persons or property or death of persons arising out of any activities resulting from the issuance of this permit.
- f. This permit is granted solely for the purpose described by the permittee on the opposite side of this form.
- g. The permittee shall comply promptly with any lawful regulations or instructions of any Federal, State, or local agency of Government.
- h. That noncompliance with the conditions of this permit will invalidate this permit and that the permittee is responsible for repairing or reimbursing the U.S. Government for any damages incurred to the public lands.
- I. Special Conditions: (may be continued on separate page)
  - a. **THE CARLYLE LAKE PROJECT MANAGER SHALL BE NOTIFIED 24 HOURS PRIOR TO THE COMMENCEMENT OF WORK.**
  - b. **THE CARLYLE LAKE PROJECT MANAGER OR HIS REPRESENTATIVE WILL BE PRESENT ON SITE DURING THE INITIAL START OF THE WORK.**

#### Privacy Act

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Hurricane Creek Crossing



*Kaskaskia River Crossing*



**NOTES:**  
 THE ACCESS TO BOREHOLE SITES WILL NOT INVOLVE THE CLEARING OF TREES OR THE BUILDING OF ROADS MATS WILL BE USED AS NECESSARY.

**Legend**  
 BH-## APPROXIMATE BOREHOLE LOCATION, IDENTIFICATION NUMBER.  
 - - - - - PROPOSED ACCESS TO SITES

**2005 AERIALS**

NO.	REVISION	DATE	APPR.
2	ADDED PROPOSED ACCESS	08.25.06	RG
1	MODIFIED SITE NUMBER	07.21.06	RG
0	ISSUED WITH KML01-00007-01-AA-130-R01	06.23.06	RG



PREPARED BY:  
**TROW ENGINEERING CONSULTANTS INC.**  
 1300 Metropolitan Boulevard, Suite 200  
 Tallahassee, Florida, USA 32308  
 Phone: 1-850-385-5441  
 Fax: 1-850-385-5523



SCALE	DATE	DRAWN	CREATED	APPROVED	PROJECT	DRAWING NUMBER	STB	REVISION
1"=500'	05/31/2006	AH	JTG	RG	S0388E	K-29-P-6000-Z-1.20A	1.20	2



**NOTES:**  
 THE ACCESS TO BOREHOLE SITES WILL NOT INVOLVE THE CLEARING OF TREES OR THE BUILDING OF ROADS. MATS WILL BE USED AS NECESSARY.

**Legend**  
 Borehole  
 APPROXIMATE BOREHOLE LOCATION IDENTIFICATION NUMBER.  
 PROPOSED ACCESS TO SITES

**2005 AERIALS**

NO.	REVISION	DATE	APPR.
2	ADDED PROPOSED ACCESS	08.25.06	RG
1	ISSUED WITH KML01-00007-01-AA-130-R01 AND KEYSTONE LIMITED DISTRIBUTION	08.09.06	RG
0	ISSUED WITH KML01-00007-01-AA-130-R01	06.23.06	RG

PREPARED BY:  
**TROW ENGINEERING CONSULTANTS INC.**  
 1380 Metropolitan Boulevard, Suite 200  
 Tallahassee, Florida, USA 32308  
 Phone: 1-850-385-5441  
 Fax: 1-850-385-5523




**KEYSTONE PIPELINE PROJECT**  
 KASKASKIA RIVER CROSSING

SCALE	DATE	DRAWN	CHECKED	APPROVED	PROJECT	DRAWING NUMBER	SITE	REVISION
1"=500'	08/31/2006	AH	JTG	RG	50388E	K-47-P-6000-2-1.25A	1.25	2



**NOTES:**  
 THE ACCESS TO BOREHOLE SITES WILL NOT INVOLVE THE CLEARING OF TREES OR THE BUILDING OF ROADS. MATS WILL BE USED AS NECESSARY.

**Legend**  
 BH-## APPROXIMATE BORING LOCATION IDENTIFICATION NUMBER.  
 - - - - - PROPOSED ACCESS TO SITES

**2005 AERIALS**

NO.	REVISION	DATE	APPR.
2	ADDED PROPOSED ACCESS	08.25.06	RG
1	ISSUED WITH KML 01-00007-01-AA-130-R01 AND KEYSTONE LIMITED DISTRIBUTION	08.09.06	RG
0	ISSUED WITH KML 01-00007-01-AA-130-R01	08.23.06	RG

PREPARED BY:  
**TROW ENGINEERING CONSULTANTS INC.**  
 1388 Metropolitan Boulevard, Suite 200  
 Tallahassee, Florida, USA 32308  
 Phone: 1-850-385-5441  
 Fax: 1-850-385-5523

**Trow**

**TransCanada**  
*In business to deliver*  
**KEYSTONE PIPELINE PROJECT**  
**HURRICANE CREEK CROSSING**

PROJECT	DRAWING NUMBER	SITE	REVISION
50388E	K-17-P-6000-Z-1.24A	1.24	2

