

**ENSR**

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## Memorandum

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Date: August 21, 2006  
To: Mike Koski  
From: Kim Munson  
Subject: Strategy for remaining cultural resources investigations

Distribution: S. Ellis B. Hope

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### **TRANSCANADA KEYSTONE PIPELINE PROJECT STRATEGY FOR REMAINING CULTURAL RESOURCES WORK**

ENSR's archaeological subcontractors completed the pedestrian field surveys along the majority of the proposed Keystone ROW in North and South Dakota, Nebraska, Missouri, and Illinois. Several segments of the pipeline ROW were not surveyed because of denied access or because reroutes were under consideration at the time of the field surveys. It is anticipated that these segments will be surveyed in the fall after the crops have been harvested, and if the weather is suitable for survey.

The following is a strategy summary for the remaining work:

SURVEY – Remaining surveys will be conducted as soon as reroutes are finalized and access is obtained. The following are factors to consider for these remaining surveys:

- Weather – Remaining surveys most likely will be finished in fall 2006. If they are not completed in the fall, there is a slight possibility that if surface visibility is not hampered by snow and the weather is agreeable, surveys could be conducted in the winter. If surveys cannot be completed this year, they would be finished in early to late spring 2007, weather permitting.
- Crops – Remaining surveys in active cropland will be conducted after the crops are harvested in late September to early November, depending on the crop.
- Survey Report – It would be best if the entire ROW was surveyed prior to submitting the survey report to the SHPOs. However, since the majority of the ROW has been surveyed, it is anticipated that most, if not all, of the SHPOs will allow the report to be submitted prior to completed surveys. Submittal time for the reports is tentatively planned for early to late December 2006. After the survey report is submitted, any outstanding field surveys of the ROW, access roads, contractor/pipe yards, and extra workspace would be included in an addendum report.

SHOVEL PROBES – Shovel probes were conducted in areas that had low surface visibility during survey and moderate to high site potential, primarily at stream crossings. The majority of these were done in July and August. Additional shovel probes still need to be conducted at selected stream crossings. These will be completed in fall 2006, weather permitting.

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**TESTING** – Several sites will require evaluative testing to make a definitive determination of NRHP-eligibility. Factors to consider:

- **Weather** – Evaluative testing consists of digging several 1 x 1 meter test pits in the ground and backhoe trenching (only in Nebraska, Missouri, and Illinois). Evaluative testing is tentatively scheduled for September, October, and November 2006, weather permitting.
- **Crops** – If testing were done prior to harvest, TransCanada would have to pay for crop damage. However, since testing disturbs a relatively small area and can be done within a reasonable timeframe, it would be preferable to wait until the crops are harvested.
- **SHPO guidelines** – The timing of evaluative testing is different for each state. The ND/SD SHPOs prefer that evaluative testing be done prior to submitting the survey report. This enables the SHPO to make a more informed decision when determining site significance. Nebraska and Missouri SHPOs are open to testing before the report is submitted. The Illinois SHPO requests that testing not occur until after the report is submitted to them.
- **Evaluation** – Following evaluative testing, if a site is determined eligible for the NRHP, and the SHPO/DOS agrees with the evaluation, avoidance most likely would be recommended. If avoidance is not feasible, the SHPO/DOS would recommend mitigation (e.g., data recovery, historical research, photo-documentation, signs/kiosks). The type of mitigation would depend on the site type.
- **Treatment Plan** – If avoidance is not feasible and mitigation is recommended, a treatment plan would be prepared and submitted to the SHPO/DOS for review and concurrence. Review of a treatment plan could take up to 30 days. Note: Tribes involved in the consultation process may request review of the treatment plan.
- **Mitigation** – Mitigation as described in the treatment plan would be conducted in summer 2007.

**CORE SAMPLING** – The drive-by reconnaissance of stream crossings was completed in early summer. Shovel probes at selected stream crossings were conducted in July and August 2006. As a result of the drive-by reconnaissance and shovel probes, several stream crossings were selected for core sampling. Core sampling will be conducted in fall 2006 or spring 2007. Results of the core sampling will determine the need for any additional investigations (e.g., open trench inspection).

**SURVEY REPORT** – The tentative submittal date for the survey report is mid- to late-December 2006. The SHPO/DOS will have 30 days to review and comment. Any outstanding surveys or testing to be done after the survey report is submitted would be included in an addendum report. Review and comment on addendum reports also is 30 days. Note: The Tribes may request copies of the survey report, but are not involved in review and concurrence.

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**GENERAL CONCERNS:**

- THE SHPO WILL NOT REVIEW THE REPORT UNTIL SECTION 106 HAS BEEN INITIATED BY THE DOS.
- IF ANY OF THE CONTACTED TRIBES WANT TO MEET WITH THE AGENCIES OR VISIT ANY OF THE SITES, THE DOS MUST INITIATE GOVERNMENT-TO-GOVERNMENT CONSULTATION.
- THE ILLINOIS SHPO REQUIRES THAT ALL TESTING BE DONE AFTER THEY HAVE REVIEWED THE SURVEY REPORT AND EITHER AGREED OR DISAGREED WITH THE ELIGIBILITY FINDINGS. IF THE ILL SHPO AGREES THAT A SITE IS POTENTIALLY ELIGIBLE, THEY WILL REQUIRE TESTING TO MAKE A DEFINITIVE DETERMINATION. IF THE SITE IS TESTED AS ELIGIBLE, THEN THE SHPO WILL RECOMMEND AVOIDANCE. IF AVOIDANCE IS NOT FEASIBLE, THEN MITIGATION WOULD FOLLOW.
- THE ILLINOIS SHPO REQUIRES THAT THE ENTIRE ROW BE SURVEYED PRIOR TO SUBMITTING THE SURVEY REPORT. ARG IS DISCUSSING THIS ISSUE WITH THE SHPO TO SEE IF THE SHPO WOULD ACCEPT THE REPORT ONCE A CERTAIN PERCENTAGE OF THE ROW IS SURVEYED.

Schedule for Completing the Remaining Cultural Resources Investigations within the Keystone Pipeline Corridor

State	Remaining Survey Mileage/Sites to Test	Fieldwork Dates	Report Completion Date
North Dakota	Phase I Survey (reroutes)		
	Approximately 10 miles	Oct. 2	Preliminary Report Submitted December 1, 2006
	Geomorph coring	Oct. 2	
	Phase II Testing		
South Dakota	Four sites	Sept. 18-27	
	Phase I Survey (reroutes)		
	Approximately 15 miles	Oct. 2	Preliminary Report Submitted December 1, 2006
	Geomorph coring	Oct. 2	
Nebraska	Phase II Testing		
	One site	Oct. 15-20	
	Phase I Survey		
	Approximately 36 miles*	October 30-November 8, 2006	Draft Phase I Report Submitted December 22, 2006
Missouri	Phase II Testing**		
	None (all sites will be avoided)	n/a	
	Phase I Survey		
	Approximately 44 miles*	Oct. 2-12 Oct. 16-27	First Interim Report (including Phase I results) Submitted December 22, 2006
Illinois	Phase II Testing**		
	JM-5	Sept. 5-9	
	JM-9	Sept. 10-14	
	JM-10	Sept. 18-22	
	JM-11	Sept. 23-28	
	JM-12	Oct. 2-6	
	JM-13	Oct. 7-12	
	JM-15	Oct. 16-20	
	JM-16	Oct. 21-26	
	JM-20	Oct. 30-Nov. 2	
	JM-21	Nov. 3-7	
	JM-22	Nov. 8-11	
	Phase I Survey		Second Interim Report (including Phase I and II results) Submitted February 23, 2007
Approximately 15 miles*	Sept. 25- Oct. 2	Draft Phase I Report Submitted December 22, 2006	
Additional Survey to Avoid JM-13	Oct. 2		
Phase II Testing**			
JM-2	Sept. 5-9		
JM-3	Sept. 10-14		
JM-9	Sept. 18-22		
JM-17	Sept. 23-28		
JM-18	Oct. 2-6		
JM-19	Oct. 7-12		
JM-20	Oct. 16-20		
JM-28	Oct. 21-26		
JM-13 (if Necessary)	Oct. 30-Nov. 2		
		Draft Phase II Report Submitted Spring 2007	

\* Assuming all mileage is cleared for survey, and not considering potential reroutes, etc.

\*\* The formal evaluation of the National Register eligibility of a site through Phase II testing typically entails use of each of the following field-investigation methods: the hand excavation of two to six test units in order to document the horizontal and vertical distribution pattern of cultural material across the site; the mechanical removal of the plow zone/A horizon along a number of widely distributed stripping trenches in order to determine whether subplow zone features are present; the hand excavation of a sample of subsurface features identified in the test units and stripping trenches; and, the preparation of a detailed contour map showing the location of test units, stripping trenches, and features in relation to cultural landmarks and project boundaries.