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Montana Department of  
**ENVIRONMENTAL QUALITY**

Brian Schweitzer, Governor

P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

• STAFF  
• LES GENERAL  
• FINAL PPELORD -  
LOGIC RE MOU  
• [unclear]

July 25, 2011

Dear Consulting Party,

The Montana Department of Environmental Quality (DEQ) has received and reviewed comments from consulting parties on the numerous drafts of the Keystone XL paleontological Memorandum of Agreement (MOU). After consideration, the DEQ has developed this final agreement to ensure the ongoing protection and conservation of Montana's important paleontological resources during the construction of the Keystone XL pipeline. This MOU will only take effect if the Department of State issues a Presidential Permit for the proposed project and DEQ issues a Certificate of Compliance for the Montana portion of the project.

Please review and sign the attached MOU and make a copy for your records. Then please forward a digital copy to DEQ for tracking purposes. A copy of the final MOU with all signatures will be forwarded to all consulting parties once DEQ receives the fully signed document.

Included with this package is a routing list. Please initial and date your organizations information and forward the signed agreement and routing list to the next party. Your cooperation in achieving a timely circulation of this document is greatly appreciated.

Sincerely,

James D. Strait, RPA  
Environmental Specialist/Cultural Resources  
DEQ/MFSA  
1520 E. 6th Ave.  
PO Box 200901  
jstrait@mt.gov  
406-444-6765

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Montana Department of ENVIRONMENTAL QUALITY

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Routing List:

Montana DEQ

Attn: James Strait  
1520 East Sixth Avenue  
PO Box 200901  
Helena, MT 59620-0901

*JD-S  
7-22-11*

Montana State Historic Preservation Office

Attn: Stan Wilmoth, Ph.D.  
1410 Eighth Avenue  
Helena, MT 59620

*Stan Wilmoth  
7-11-11*

Montana DNRC

Attn: Patrick Rennie  
1625 Eleventh Avenue  
PO Box 201601  
Helena, MT 59620

*7-16-11  
(Strait Strait)*

Bureau of Land Management

Attn: Debby Morford  
Miles City Field Office  
111 Garryowen Road  
Miles City, MT 59301-0940

*DM  
Aug. 11, 2011*

EXP (TROW/TransCanada Keystone XL)

Attn: Jon A. Schmidt  
1300 Metropolitan Boulevard,  
Tallahassee, Florida 32308

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AUG 30 2011

U.S. Department of State

Attn: Rachel Tamigniaux  
Cardno ENTRIX  
200 First Avenue West, Suite 500  
Seattle, WA 98119

Please remit to DEQ once all signatures have been completed.

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**MEMORANDUM OF UNDERSTANDING  
FOR PALEONTOLOGICAL RESOURCE INVESTIGATIONS  
ON THE MONTANA PORTION OF THE KEYSTONE XL PIPELINE PROJECT**

**WHEREAS**, in February 2010, the Montana Department of Environmental Quality (DEQ) received a complete application for a certificate of compliance from TransCanada Keystone Pipeline, LP (Keystone) for the portion of the Keystone XL Pipeline Project that is proposed to be constructed in Montana, hereinafter referred to as the Project. Keystone is required to obtain a certificate of compliance from DEQ prior to construction of the Project under the Major Facility Siting Act (MFSA); and

**WHEREAS**, the Area of Potential Effects (APE) for the Project includes a 300 foot-wide survey area that includes a 110-foot-wide construction corridor for the proposed pipeline as approved by DEQ. Finally, the APE includes all areas that are directly affected by construction of proposed pumping stations, stockpile yards, and other associated facilities; and

**WHEREAS**, the U.S. Department of State (DOS) is the lead federal agency responsible for administering the National Environmental Policy Act, the Endangered Species Act, and the National Historic Preservation Act; and

**WHEREAS**, the Bureau of Land Management (BLM), in accordance with the Federal Land Policy and Management Act (FLPMA 1976) is required to minimize adverse impacts on natural, environmental, scientific, cultural and other resources and values on federal land. Instruction Memorandum (IM) 2009-011 requires BLM to assess and mitigate potential impacts to paleontological resources on federal land; and

**WHEREAS**, DEQ is the lead state agency responsible for administering the Montana Environmental Policy Act and MFSA prior to issuance of a certificate of compliance; and

**WHEREAS**, the Montana Department of Natural Resources and Conservation (DNRC), in accordance with the Montana State Antiquities Act (Section 22-3-421, *et seq.*, M.C.A.), is required, in part, to assess and mitigate potential adverse effects to paleontological remains on agency managed state land; and

**WHEREAS**, the Montana State Historic Preservation Office (SHPO) in accordance with the Montana State Antiquities Act (Section 22-3-423(7), M.C.A.) shall cooperate and assist local, state, and federal government agencies in comprehensive planning that allows for the preservation of paleontological resources; and

**WHEREAS**, the Programmatic Agreement (PA) developed under Section 106 of the National Historic Preservation Act (NHPA) for the Keystone XL project will maintain precedence over this MOU in regards to the identification and evaluation of paleontological resources that may have Traditional Cultural Property (TCP) value; and

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**WHEREAS**, DEQ has consulted with the BLM, DOS, DNRC, SHPO and Keystone to secure concurrence with the terms of this Memorandum of Understanding; and

**WHEREAS**, the Bureau of Reclamation, National Park Service and the U.S. Corps of Engineers were invited to consult in the development of this Memorandum of Understanding and have declined to participate;

**NOW THEREFORE**, the following terms and conditions will govern the consideration of paleontological resources that may be affected by the Project.

**STIPULATIONS AND METHODS OF INVESTIGATION:**

- 1) Keystone has completed most of the paleontological record searches and survey work using BLM paleontological resource management guidelines (BLM Manual H-8270-1; BLM IM 2008-009; BLM IM 2009-011) using the services of a permitted and qualified paleontologist.
- 2) Keystone shall use the services of a qualified paleontologist (BLM Manual H 8270-1; IM 2009-011) to gather and evaluate information concerning the existence and location of paleontological resources within the APE as needed.
- 3) Where required, Keystone shall submit a written request under ARM 17.20.804(2) to conduct a paleontological literature and file search with the Montana SHPO for a one (1) mile wide area (0.5 mile on either side of the centerline) of the route and associated facility locations as defined by 75-20-104(3)(a), M.C.A., prior to conducting field surveys. Keystone shall conduct a concurrent file search with the appropriate field offices of the BLM and with the DNRC for state-owned lands.
- 4) Keystone's paleontological consultant shall continue to maintain a valid BLM Paleontological Resources Use Permit and any other permits required under federal or state law.
- 5) Where surveys have not been completed, Keystone shall complete a pedestrian survey prior to construction. Keystone shall conduct the pedestrian survey at an intensity required under BLM IM 2009-011.
- 6) Keystone shall monitor construction in those portions of the APE with unknown, moderate, high, and very high paleontological potential (classes 3a, 3b, 4, or 5) based on the Potential Fossil Yield Classification System (PFYC). Areas of very low to low potential (1 or 2) will not be subject to pedestrian survey. Areas of moderate potential (3a), if discovered, will be spot checked only. Areas with unknown potential (if any) (3b), and with high and very high potential (4 and 5) will be subject to a 100% pedestrian survey of bedrock exposures. Existing access roads that have been "crowned and ditched" do not need to be surveyed.
- 7) Keystone shall record and evaluate paleontological resources located in the APE on the forms and within the standards specified in the Montana SHPO

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Planning Bulletin No. 21, as well as BLM Manual H-8270-1, BLM IM 2008-009, and BLM IM 2009-011.

- 8) Keystone shall evaluate paleontological resources located within the APE for scientific significance as outlined in the BLM IM 2009-011. In areas that have been previously inventoried in which the agency with jurisdiction is satisfied with the work, no additional inventory is required.
- 9) Prior to DEQ's issuance of a certificate of compliance, Keystone will draft and submit for agency review and approval, a comprehensive Paleontological Resources Mitigation Plan that describes 1) the measures developed in consultation with the consulting parties to minimize and mitigate the adverse effects of the Project's construction activities on paleontological resources; 2) the manner in which these measures will be carried out; 3) a schedule for their implementation; and 4) how paleontological discoveries within each spread planned for Montana will be handled. The Paleontological Resources Mitigation Plan will be included within Keystone's Plan of Development and DEQ's Environmental Specifications.

a. Keystone will make a reasonable and good faith effort to complete implementation of the Paleontological Resources Mitigation Plan approved by the cooperating agencies prior to beginning construction of any spread. If it is not possible to meet this schedule, Keystone will develop a Coordination Plan that establishes how appropriate treatment will be determined and implemented during construction of the respective spread.

b. The mitigation plan will specify the precise locations within the Project APE where monitoring is required, and will describe procedures for fossil salvage and paleontological data recordation for non-extensive, isolated scientifically significant fossil discoveries. These types of discoveries are anticipated to be the most common during the course of construction as is typical during pipeline construction projects, and they can be quickly documented and collected with minimal construction delays. The mitigation plan will include agency or land owner notification procedures as appropriate, and procedures that construction personnel should follow in the event that an unexpected fossil discovery is made in an area that is not monitored by a paleontologist. The mitigation plan will also include procedures to be followed in the event of an extensive paleontological discovery as described in "c" below.

c. Extensive paleontological discoveries are defined as discoveries that are unanticipated and cannot be quickly mitigated due to their large size and/or complexity (e.g. partial or complete associated dinosaur skeleton or extensive vertebrate microfossil accumulation). For extensive paleontological discoveries, a Locality-Specific Paleontological Mitigation Plan will be developed and approved by the pertinent agency

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and SHPO. The Locality-Specific Paleontological Mitigation Plan will identify the specific research questions to be addressed with an explanation of their scientific significance, the paleontological methods to be used, and provisions for curation, public interpretation and education, subject to confidential restrictions, if any.

d. Keystone will submit the draft Locality Specific Paleontological Mitigation Plan to consulting parties for a seven (7) working day review. Keystone shall address timely comments and recommendations submitted by consulting parties in preparation of the draft Locality Specific Paleontological Mitigation Plan.

c. When it has addressed all of the comments and recommendations, Keystone will submit the Final Locality Specific Paleontological Mitigation Plan to all consulting parties and carry out the recommended mitigative measures.

- 10) BLM, DEQ, SHPO, DNRC and DOS will provide information in their possession regarding paleontological materials to aid the other agencies in satisfaction of their respective responsibilities.
- 11) All parties to this agreement will have jurisdiction of paleontological resources identified on lands which they manage. All parties to this agreement will be invited to comment on all paleontological resources identified as a result of this agreement.

Execution of this Memorandum of Understanding by BLM, SHPO, DEQ, DNRC, DOS and Keystone evidences that all parties have reviewed and commented upon the terms and conditions guiding the paleontological resource investigation for the Keystone XL Pipeline Project within the state of Montana.

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FOR PALEONTOLOGICAL RESOURCE INVESTIGATIONS  
ON THE MONTANA PORTION OF THE KEYSTONE XL PIPELINE PROJECT

Debra K. Moxley  
U.S. Bureau of Land Management

Aug 11, 2011  
Date

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U.S. Department of State

\_\_\_\_\_  
Date

[Signature]  
TransCanada Keystone XL Pipeline, L.P.

30-AUG-2011  
Date

[Signature]  
Montana State Historic Preservation Office

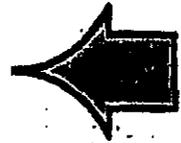
8/4/2011  
Date

[Signature]  
Montana Dept. of Environmental Quality

7/22/11  
Date

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Montana Dept. of Natural Resources and Conservation

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Date



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*Debra K. Motal*  
U.S. Bureau of Land Management

Aug. 11, 2011  
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U.S. Department of State

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Date

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TransCanada Keystone XL Pipeline, L.P.

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Date

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Montana State Historic Preservation Office

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Date

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Montana Dept. of Environmental Quality

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Date

*Thomas M. Kelly*  
Montana Dept. of Natural Resources and Conservation

7/26/11  
Date

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