United States Department of State
Bureau of Oceans and International
Environmental and Scientific Affairs
OES/ENV Room 2657
Washington, D.C. 20520

Date: September 22, 2011

To: All interested parties

From: Alexander Yuan, U.S. Department of State (DOS), Project Manager and NEPA Coordinator

Subject: Keystone XL Project
Final Environmental Impact Statement (final EIS) – Errata Sheet

On August 26, 2011, a paper copy and/or CD copy of the final EIS for the Keystone XL Project was distributed to the Cooperating Agencies, other federal agencies, Members of Congress, relevant state and local governments, libraries identified in the states along the proposed pipeline route, and organizations and individuals who are known to have an interest in the final EIS. At the same time, all known stakeholders (including government representatives and agencies, media, landowners and companies, Indian tribes, non-governmental organizations, and public organizations) were mailed letters regarding the Notice of Availability of the final EIS.

Due to an oversight, two paragraphs describing available ways to mitigate or offset for greenhouse gases associated with operation of the Project were not included in Section 3.14 Cumulative Impacts (Volume 2). These two paragraphs are now provided in the amended EIS section at the top of page 3.14-60 as well as the relevant footnotes at the bottom of the same page and the relevant three new references listed on pages 3.14-73 and 3.14-74 and are presented in Table 1 of the attached Errata Sheet. Additionally, inconsistencies between the final EIS and the EnSys reports (2010, 2011) have been amended in the EIS and are also presented in Table 1 of the attached Errata Sheet.

The Department of State (DOS) requests that all interested parties accept this Errata Sheet and include it with the final EIS.

DOS will notify all interested parties that received a copy of the final EIS or the Notice of Availability of this change. Together with this cover letter, Errata Sheet and the amended sections of the EIS will be made available on the Project website: http://www.keystonepipeline-xl.state.gov.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

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Errata Sheet

Keystone XL Project – Final EIS

As of September 22, 2011 the following errata and clarifications to the final EIS for the Keystone XL Project are presented in the table below.

TABLE 1. Errata and Clarifications	
Page	**Differences in the original text and the amendment are highlighted in gray**
Volume 1: Page 1-11	Original Text: EnSys (2010) projected that excess cross border capacity for areas of the U.S. outside of PADD III would exist until about 2019 to 2030. Amendment: EnSys (2010) projected that excess cross border capacity for areas of the U.S. outside of PADD III would exist until about 2019 to 2030, depending on the development of pipeline or other transport capacity to the British Columbia Coast.
Volume 2: Page 3.13-48; Table 3.13.5-7	Benzene data (bottom row of table on the page) under Dubai Heavy (Fateh) has been corrected from 6.5 to 0.65.
Volume 2: Page 3.14-60	New Text: Although the GHG footprint of pipeline operations is much smaller than the life-cycle footprint of the oil sands crude transmitted through the pipeline, mitigation opportunities exist for reducing GHGs from operations as well. One such opportunity would involve purchase of "green power" – i.e., electricity generated from renewable sources – to provide electricity for operations, potentially eliminating the carbon footprint from electricity. Both EPA (2011) and DOE (2011) provide information on green power products offered by organizations in the United States. These products include green pricing programs (which allow consumers to pay a premium to support utility company investments in renewable energy), retail green power products (i.e., the sale of electricity generated from renewables in competitive markets), and renewable energy certificate (REC) products[21] (also known as green tags or tradable renewable credits) (DOE 2010).[22] In Canada, the Ecologo Program[23] provides third-party certification of renewable electricity products that can be purchased for green power. Carbon credits and carbon offsets could also be purchased to offset GHG emissions from the Proposed project via GHG reductions made elsewhere. Carbon credits are tradable certificates that allow entities to emit a certain quantity of CO_2 or CO_2-equivalent GHG emissions. Under a cap-and-trade program that establishes a limit on GHG emissions that can be emitted by a group of entities, credits—or excess allowances—are generated by entities that emit below their regulated limit, and can be sold to other regulated and non-regulated entities. In the United States, excess allowances could be purchased from the Regional Greenhouse Gas Initiative (RGGI), and the cap-and-trade system being developed under California's Global Warming Solutions Act (Assembly Bill 32). Carbon offsets, in contrast, are certified reductions in GHG emissions generated from entities not included in cap-and-trade programs. Several organization and entities have developed carbon offset standards and protocols to ensure that offsets are

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	real, measurable, permanent, and in addition to what would have happened without a market for selling offsets.[24] Landfill methane collection and combustion systems, avoiding methane emissions from organic waste, and implementing agricultural and forestry practices to enhance carbon sequestration in soils and forests are examples of projects that can register carbon offsets, provided they meet the requirements of the certifying standard or protocol. Some cap-and-trade programs also allow the use carbon offsets to meet emission limits.
Volume 2: Page 3.14-60	New Footnotes: [21] In the context of offsetting GHG emissions, RECs only guarantee that an amount of electricity has been generated from renewable sources; they do not necessarily guarantee that the renewable electricity generated is additional to what would have been generated but for the purchase of a REC. [22] See EPA's Green Power Partnership (http://www.epa.gov/greenpower/) and DOE's Green Power Network (http://apps3.eere.energy.gov/greenpower/). [23] The Ecologo is a Type I eco-label (as defined by the International Organization for Standardization (ISO), meaning that it involves third-party certification of environmental performance based on an evaluation of multiple environmental criteria. Ecologo was founded by the Government of Canada in 1988 and is managed by TerraChoice since 1995. [24] Examples of carbon offset standards and trading entities include: the Clean Development Mechanism (CDM) (http://cdm.unfccc.int/index.html), the Climate Action Reserve (CAR), (http://www.climateactionreserve.org/), the Verified Carbon Standard (http://www.v-c-s.org/), the Gold Standard Registry (http://goldstandard.apx.com/), and the Chicago Climate Exchange (CCX) (https://www.theice.com/ccx.jhtml).
Volume 2: Pages 3.14-73 and 3.14-74	New References: U.S. Department of Energy (DOE). 2010. Green Power Markets. U.S. Department of Energy (DOE), Energy Efficiency and Renewable Energy. The Green Power Network. Website: http://apps3.eere.energy.gov/greenpower/markets/index.shtml. U.S. Department of Energy (DOE). 2011. Buying Green Power: Can I Buy Green Power in my State? U.S. Department of Energy (DOE) Energy Efficiency and Renewable Energy. The Green Power Network. Website: http://apps3.eere.energy.gov/greenpower/buying/buying_power.shtml. U.S. Environmental Protection Agency (EPA). 2011. Green Power Locator. U.S. Environmental Protection Agency (EPA), Green Power Partnership. Website: http://www.epa.gov/greenpower/pubs/gplocator.htm.

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Volume 2: Page 4-17	Original Text: Based on that study, EnSys (2011) conservatively estimated that the four major existing cross-border rail lines from Canada to the U.S. could accommodate crude oil train shipments of over 1,000,000 bpd. EnSys (2011) noted that although information was only available about the four major rail crossings of the international border, there were in fact 56 existing rail border crossings with Canada in the geographic area where crude oil train shipments would be most likely. Amendment: Based on that study, and statistics from the Department of Transportation, EnSys (2011) conservatively estimated that the existing cross-border rail lines from Canada to the U.S. could accommodate crude oil train shipments of over 1,000,000 bpd.
Volume 2: Page 4-17	Original Text: Rail capacity has increased rapidly to fill the gap between the increased crude oil production and pipeline transport capacity. The first rail shipments of crude oil out of the Williston Basin occurred in the latter half of 2008. By 2010 there was loading capacity of just over 100,000 bpd. By June 2011 there was nearly 300,000 bpd of rail capacity, and projects announced and under construction will increase that to 450,000 bpd by the end of 2012 (Figure 4.1.2-2). At least one of the rail projects is designed to be expandable to 700,000 bpd of rail capacity that could be available by 2013 if market conditions warranted (EnSys 2011). Amendment: Rail capacity has increased rapidly to fill the gap between the increased crude oil production and pipeline transport capacity. The first rail shipments of crude oil out of the Williston Basin occurred in the latter half of 2008. By 2010 there was loading capacity of just over 100,000 bpd. By June 2011 there was nearly 300,000 bpd of rail capacity, and projects announced and under construction will increase that to 450,000 bpd by the end of 2012 (Figure 4.1.2-2). At least one of the rail projects is designed to be expandable to 750,000 bpd of rail capacity that could be available by 2013 if market conditions warranted (EnSys 2011).
Volume 2: Page 4-28	Original Text: The existing Keystone Oil Pipeline Project extends from the U.S. border in North Dakota to Patoka, Illinois; it also includes the Cushing Extension which extends from Steele City, Nebraska to Cushing, Oklahoma. It currently has the capacity to transport 435,000 bpd of WCSB crude from Canada to refineries in PADD II. On December 22, 2010, Argus.com (2010) reported that the existing Keystone Oil Pipeline was transporting approximately 250,000 bpd of crude oil. Amendment: The existing Keystone Oil Pipeline Project extends from the U.S. border in North Dakota to Patoka, Illinois; it also includes the Cushing Extension which extends from Steele City, Nebraska to Cushing, Oklahoma. It currently has the capacity to transport 591,000 bpd of WCSB crude from Canada to refineries in PADD II. On December 22, 2010, Argus.com (2010) reported that the existing Keystone Oil Pipeline was transporting approximately 250,000 bpd of crude oil.

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Volume 2: Page 4-32	Original Text: Although Enbridge has stated that the Monarch Pipeline would transport some heavy crude oil, it is being designed and proposed to transport lighter crudes to the Gulf Coast. Even without the transport of lighter crudes, its maximum capacity would not be sufficient to satisfy market demand to which the proposed Project is responding (firm contracts to deliver 380,000 bpd to the Gulf Coast). Finally, it would be necessary to construct a pipeline to Cushing to supply the WCSB crude oil. The impacts of construction of that pipeline and construction of the Monarch Pipeline would result in impacts that would be similar in nature and extent to those of the proposed Project along the same approximate distance. Amendment: Although Enbridge has stated that the Monarch Pipeline would transport some heavy crude oil, it is being designed and proposed to transport lighter crudes to the Gulf Coast. Even without the transport of lighter crudes, its maximum capacity would not be sufficient to satisfy market demand to which the proposed Project is responding (firm contracts to deliver 380,000 bpd to the Gulf Coast). Finally, it would be necessary to construct a pipeline to Cushing to supply the WCSB crude oil. Enbridge announced it was considering such a "full pass" solution to the Cushing bottleneck by also constructing a pipeline from the Chicago area to Cushing, but the proposal is still in preliminary stages. The impacts of construction of that pipeline and construction of the Monarch Pipeline would result in impacts that would be similar in nature and extent to those of the proposed Project along the same approximate distance.
Volume 2: Page 4-35	Original Text (Page 4-35): The use of rail tank cars for delivery of WCSB crude oil may not be as cost-effective as transport by pipeline and may result in higher transportation costs. Although the Canadian National website has suggested that transport prices on rail are at least competitive with pipeline tariffs, the EnSys (2010) report states the following regarding PipelineOnRailTM: "This study did not allow for the expansion of the Pipeline*OnRail*™ capacity in any scenario because tariffs for rail are generally not considered attractive relative to pipelines. However, during a period of constrained pipeline capacity, the Pipeline*OnRail*™ could compete as an alternative." Amendment (Page 4-36): The use of rail tank cars for delivery of WCSB crude oil may not be as cost-effective as transport by pipeline and may result in higher transportation costs. Although the Canadian National website has suggested that transport prices on rail are at least competitive with pipeline tariffs, the EnSys (2010) report states the following regarding PipelineOnRailTM: "This study did not allow for the expansion of the Pipeline*OnRail*™ capacity in any scenario because tariffs for rail are generally not considered attractive relative to pipelines. However, during a period of constrained pipeline capacity, the Pipeline*OnRail*™ could compete as an

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	alternative." EnSys 2011 did note that when considered on a cost per barrel of bitumen basis, the difference between pipeline tariffs and the cost of rail shipment narrows.
Volume 3: Page A-43 (Consolidated Responses)	Original Text: The EnSys (2011) study indicated that the volume of refining that occurs in PADD III would be independent of the proposed Project and is controlled by market demands for refined petroleum products produced in PADD III. The EnSys (2011) study further indicated that the proposed Project would not increase total crude oil deliveries to the U.S. in general or PADD III in particular, but would largely replace decreasing heavy crude oil deliveries to PADD III from other existing sources. Amendment: The EnSys (2010) study indicated that the volume of refining that occurs in PADD III would be independent of the proposed Project and is controlled by market demands for refined petroleum products produced in PADD III. The EnSys (2010) study further indicated that the proposed Project would not increase total crude oil deliveries to the U.S. in general or PADD III in particular, but would largely replace decreasing heavy crude oil deliveries to PADD III from other existing sources.