OIL SANDS FACT CHECK

Environmentally Safe and Sound Transportation

Pipelines are widely acknowledged to be among the safest and most efficient means of moving energy products overland for long distances. The Keystone XL pipeline will meet safety measures that go above and beyond any existing pipeline.

Myth: Keystone XL will increase greenhouse gas emissions

FACT: In five separate assessments over six years of study, the State Department *found* that Keystone XL will have a negligible impact on the environment. Research institutions, climate and energy experts, and even multiple news outlets have agreed that the pipeline won't significantly exacerbate greenhouse gas emissions.

Myth: Oil sands are more corrosive than other crude oils and therefore more likely to spill

FACT: A *report* by the National Academy of Sciences (NAS) states unequivocally that diluted bitumen (one of the kinds of oil that will be transported by the Keystone XL pipeline) is no more corrosive than any other kind of crude oil and therefore not more likely to spill from a pipeline. As Mark Barteau, an author of the report and professor of chemical engineering at the University of Michigan *put it*: "Diluted bitumen has density and viscosity ranges that are comparable with those of other crude oils. It moves through pipelines in a manner similar to other crude oils with respect to flow rate, pressure, and operating temperature. There's nothing extraordinary about pipeline shipments of diluted bitumen to make them more likely than other crude oils to cause releases."

The State Department noted in its 2013 assessment, "[B]ased on averages of approximately 5 years, the acids [in diluted bitumen] are too stable to be corrosive under transmission pipeline temperatures." It continues, "Dilbit viscosity is comparable to those of conventional heavy crude oils and there is no evidence of increased corrosion or other potential pipeline threat due to viscosity."

In a 2011 report, Canadian research group Alberta Innovates *found* that acid and sulfur compounds found in oil sands crudes "are too stable to be corrosive and some may even decrease corrosion." Recent testing and studies by ASTM International and Penspen *support* this conclusion.

Myth: Keystone XL poses a threat to aquifers

FACT: All U.S. pipelines must operate under Maximum Operating Pressure limitations and a host of other safety requirements administered by (PHMSA). Keystone XL will exceed those requirements by adopting 59 extra safety measures, leading the State Department to declare that the project would "have a degree of safety over any other."

The State Department also pointed out in its 2013 assessment that it is highly unlikely that the pipeline would pose a threat to the Great Plains Aquifer: "Overall, it is very unlikely that the proposed pipeline area would affect water quality in the [Great Plains Aquifer] ... "[T]here is an extremely low probability that a petroleum release from the proposed Project would affect water quality in [the Western Interior Plains Aquifer.]"

Leading water experts in the United States agree that Keystone XL does not pose a credible threat to aquifers. Bert Fisher, hydro-geologist at the University of Tulsa, *found* that in the unlikely event that a spill did happen, the water saturation of the soil, combined with the viscous nature of crude oil, would make it very hard for a crude oil spill to move through the aquifer. In Nebraska, James Goeke, who is viewed widely as one of the leading water experts in the United States *said*, "A leak from the XL pipeline would pose a minimal risk to the aquifer as a whole." Professor Goeke concluded about Keystone XL pipeline that "If people recognize the science of the situation, I think that should allay a lot of the fears."