

**BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL**

In the Matter of:

Application No. 2013-01

TESORO SAVAGE, LLC

*VANCOUVER ENERGY DISTRIBUTION
TERMINAL*

CASE NO. 15-001

WRITTEN EXPERT TESTIMONY OF
DANIEL R. KEGLEY

I, DANIEL R. KEGLEY, declare that I am qualified to provide expert testimony in the adjudicatory hearing regarding the application by Tesoro Savage, LLC as set forth below:

I am the current Director of the Water and Hydroelectric Department and the Director of Wastewater Management Departments for the City of Spokane. I am responsible for overseeing the City's entire water distribution system and wastewater collection systems.

As part of my job as Director I am the person directly responsible for the public water distribution system for the City of Spokane. I am familiar with the Spokane Valley – Rathdrum Prairie Aquifer which supplies the City of Spokane with its water.

I have been employed with the City of Spokane for approximately 25 years, since 1991. During my employment, I have held numerous positions from an entry level laborer, repair and maintenance foreman, construction and maintenance supervisor, and Cross Connection Control Program Manager. In December 2015 I became the Director of the Wastewater Management department for the City of Spokane. As of March 2016, I am also the acting Director of Environmental Programs for the City of Spokane.

I have been a Certified Water Distribution Manager for over 20 years. I currently hold the certifications as Water Distribution Manager IV and Cross Connection Specialist. The Water Distribution Manager Certification is the highest designation issued by the Washington State Department of Health and is required for a group A water system. The City of Spokane water system is a group A water system.

I attended Eastern Washington University and studied community health and education.

I regularly teach classes throughout the Pacific Northwest for the American Water Works Association (AWWA), have served as a Trustee for the Pacific Northwest Section (PNWS) of AWWA and will be Chair Elect commencing in May 2016. AWWA is the

National organization with regional chapters and provides information, guidelines, and recommendations in all of the areas of delivering public water service to customers.

I am also a member of Idaho/Washington Aquifer Collaborative (IWAC) and the Spokane Aquifer Joint Board (SAJB). Both of these entities are responsible for the joint strategic planning, management and conservation of the Spokane Valley - Rathdrum Prairie Aquifer and adjoining water supplies.

The City of Spokane has a population of over 215,000 residents, operates the largest public water distribution system in the region and is the third largest water purveyor in the State of Washington. The City of Spokane sits above one of the largest sole source aquifers in the country. The Spokane Valley-Rathdrum Prairie Aquifer (Aquifer) was designated in 1978 by the Federal Environmental Protection Agency (EPA) as the sole source of drinking water for Eastern Washington and North Idaho and serves over 500,000 connections every day.

Our Aquifer is considered an "unconfined" aquifer which means that it could easily become contaminated. It has highly permeable flood deposits which combined with very thin topsoil layers in many locations make it highly susceptible to pollution. Our Aquifer underlies approximately 370 square miles under two states. It has one of the fastest flow rates in the United States, flowing as much as 60 feet per day in some areas. In comparison, a typical aquifer has a flow rate between 1/4-inch and five feet per day. The volume of the entire Aquifer is approximately 10 trillion gallons, making it one of the most productive aquifers in the country. The City of Spokane pumps nearly 22 billion gallons of water annually. The aquifer is intimately linked with the Spokane River which flows into the Columbia River.

The Aquifer has been studied in considerable detail since 1977. The results of these studies have produced programs and regulations which are designed to ensure this aquifer will remain a valued and protected resource for future generations.

Our sole source Aquifer is subject to special management practices, such as eliminating septic tanks, pre-treating stormwater in all areas located over the Aquifer. The Aquifer is a jointly managed cooperative by two (2) states (Washington and Idaho), three or four local counties in both states, as well as numerous local cities in both states. There are local water and irrigation utility companies in both states, who draw from the Aquifer and regulatory agencies in both states.

The Aquifer is the sole source of clean portable public water for the region. There is no other reliable source of clean drinking water available in the volumes to serve the population demand. Therefore, due care must be exercised to insure the water quality of the aquifer for current consumption and future generations.

I have reviewed the Draft Environmental Impact Statement for the proposed Tesoro Savage Vancouver Energy Distribution Terminal which was filed with the Washington Energy Facility Site Evaluation Council. In my expertise, I have a number of observations about the impact the proposed oil car and trains will have on the Aquifer, the City's water service ability and obligations; and the City's stormwater utility.

The locations in which the proposed oil cars and trains will cross are directly over the Aquifer. They also pass over the wellhead capture zone areas of two of our largest producing wells, the wells where the City directly pumps its public water from the Aquifer. A derailment or spill in these areas would be crippling to the public water supply system and the economies of the entire region. As such, consideration must be given to how the impact of a derailment or spill could be mitigated.

Wellhead Protection Zone: The railway corridor not only crosses the Aquifer, but it also crosses a number of wellhead protection zones and travels within close proximity of the City's two largest producing wells for the public drinking water. The wellhead protection zone is designated as the area around the pumps which pump the public water from the Aquifer. These wells also are located within the gaining reaches of the Aquifer, which interconnect with the Spokane River. (For ease of reference, a copy of the Wellhead Capture Zone Map is attached to this testimony as Ex2503-000001-SPO, which has been filed with EFSEC.) As you can see, Well Electric and Parkwater Wells have a large wellhead capture zones. These two wells pump more than 12 billion gallons per year, accounting for more than 55% of the City's annual public water supply. This amount is irreplaceable in the event of an accident or spill. The remaining wells would be unable to pump enough water to compensate for the loss of 55% of our water supply.

The Tesoro Savage, LLC application for the Vancouver Energy Distribution Terminal (the "application") fails to take into account the City's wellhead protection and capture zones and minimizes the impact from a small or large spill of crude oil. It certainly minimizes any impacts to the region's public drinking water supply.

Spokane River Impact: The Spokane River flows directly into the Columbia River. The proposed oil cars and trains cross over and travel along the Spokane River for considerable distances. The relationship between the Spokane River and the Aquifer has been documented it shows a close connectivity of the two water bodies. The rail corridor through the Spokane Community crosses the Spokane River at two locations upstream of Upriver Dam, and passes several more times over the Spokane River downstream within the urban area. It also runs immediately adjacent to the river for considerable distances. The railway is less than a mile from the River at its furthest point and more often within a few hundred yards of the river. A spill to the river would have a direct impact on the aquifer through the losing reaches; conversely, spills

occurring away from the river can have direct impacts to the river through the gaining reaches of the Aquifer.

Aquifer Impact: The Spokane Valley-Rathdrum Prairie Aquifer is one of the largest sole source aquifers in the country. The City of Spokane Water and Hydroelectric Department operates and pumps the water for public water supply from the Aquifer.

Nearly 22 billion gallons of water annually come from the Aquifer. The Aquifer is intimately linked with the Spokane River, which flows into the Columbia River.

In the event of an accident or spillage of crude oil during the transport through the Spokane area, over the Aquifer or along the Spokane River, such spillage could be crippling to the public's sole source of drinking water, along with the Spokane River environment and to the City's stormwater and wastewater system.

The application fails to take into account the strong interconnection between the Spokane River and the Aquifer and the impact of any spill on the public drinking water.

Stormwater & Wastewater Utility: Additionally, the City and its citizens are making a significant investment to improve the health of the Spokane River and to protect the health of the Aquifer. Spokane's Integrated Clean Water Plan includes work costing more than \$300 million to keep pollution out of the river, which exchanges water with the drinking water aquifer.

The Integrated Clean Water Plan includes work:

- To manage overflows from combined sanitary and stormwater sewers (CSO);
- To address untreated stormwater going to the river; and
- To add a third level of wastewater treatment at the City's Riverside Park Water Reclamation Facility.

The application minimizes the impact to the City's stormwater and wastewater infrastructure in the event of a derailment or spill. Oil spills from train derailments throughout the City would undermine the City's investments to protect the river, expand treatment at our water reclamation facility, and the health of the Aquifer.

A spill in the Spokane region could have a catastrophic impact on the City's storm facilities, could degrade the water quality of the river, and undermine the extensive cleanup efforts to comply with the Clean Water Act and Washington State Department of Ecology regulations around water quality for the Spokane River.

Risk Management: The application fails to provide assurances that the risk of a potentially catastrophic incident will be eliminated, minimized, or mitigated. EFSEC should consider imposing requirements in the site certification agreement that all crude oil-by-rail transportation use double-lined walled container carriers when traveling through the Spokane region to provide some protection to the City's water and wastewater assets and mitigate potential spillage. Additional requirements to provide

and maintain readily available clean-up equipment and emergency personnel who can be mobilized quickly also should be required.

DECLARATION

I, Daniel R. Kegley, declare under penalty of perjury under the laws of the State of Washington that I make this declaration of personal knowledge, could and would competently testify to its content and that the foregoing is true and correct.

Signed at: Spokane, Washington on this 9th day of May, 2016.


DANIEL R. KEGLEY