American
Fuel & Petrochemical
Manufacturers

1800 M Street NW
Suite 900 North
Washington, DC
20036

202.457.0480 office
202.457.0486 fax
afpm.org

October 23, 2019

Paul J. Roberti, Chief Counsel
Docket Operations Facility (M-30)
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Via e-mail: phmsachiefcounsel@dot.gov

Re: Hazardous Materials: The State of Washington Crude Oil by Rail – Vapor Pressure Requirements – Docket PHMSA-2019-0149; PDA-40(R)

Dear Mr. Roberti:

The American Fuel & Petrochemical Manufacturers ("AFPM") submits this rebuttal to comments filed in opposition to North Dakota and Montana's application ("Application") for a preemption determination that the federal Hazardous Materials Transportation Act ("HMTA")[1] preempts the State of Washington's law relating to the volatility of crude oil transported by rail ("Washington Law").[2]

Section I of these rebuttal comments addresses North Dakota and Montana's ("Petitioning States") standing to file an application for a preemption determination. In Section II, we rebut comments suggesting the Washington Law does not create an obstacle to the purposes of the HMTA and show that the Washington Law results in hazardous materials rerouting and modal shifts. We also highlight the results of the recently released Sandia National Laboratory study that shows crude oil vapor pressure has no relevant impact on the consequences of derailment. In Section III, we rebut arguments that the Washington Law is substantively the same as one of the covered subjects specified in HMTA Section 5125(b).

I. Standing

The Washington State Attorney General criticizes the Application as deficient, alleging the Petitioning States do not have standing to file for preemption. This procedural attack on the Application is completely without merit and conflates a *taxpayer's* standing to sue in court with the Petitioning States' direct injuries of diminished revenue. North Dakota and Montana have demonstrated how they are directly affected by the Washington Law and thus, have standing to file an application for

[1] *See* Hazardous Materials Transportation Act, 49 U.S.C. §§ 5101-5127.
[2] *See* 2019 Wash. Sess. Laws, *(Crude Oil by Rail—Vapor Pressure*), ch.354 §1, http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5579-S.SL.pdf.

preemption under 49 U.S.C. § 5125(d)(1).[3] We do not restate their arguments here; rather, we will point out the fallacy of Washington's arguments and offer an alternative ground for standing.

Washington's argument that a reduction in demand for Bakken crude oil as Washington refineries identify other crude sources will not reduce North Dakota or Montana state tax and royalty revenue demonstrates a fundamental misunderstanding of the global petroleum market.[4] Only in a hypothetical world where demand and supply are perfectly elastic, the number of customers and suppliers are limitless, and there are no transaction costs, could the removal of significant markets have no effect on a producing state's tax and royalty revenues. In the real world, the options for Bakken crude oil producers/suppliers to market their crude oil are reduced as a result of the Washington Law. The amount of oil sent by rail to Washington is substantial—North Dakota sends roughly 160,000 barrels of oil by rail daily to Washington refineries, comprising roughly 11% of North Dakota's day-to-day oil production.[5] One would be hard pressed to imagine how altering this market does not directly affect the Petitioning States. There is a shortage of pipeline infrastructure to move Bakken crude oil to market; as a result, much of this crude oil is moved by rail. If Washington refineries stop receiving Bakken crude oil, it would likely still move by rail, but potentially at longer distances and at a higher cost. This would reduce the crude oil value at the wellhead, which directly reduces the Petitioning States' state tax and royalty revenue. This is an immediate and harmful effect of the Washington Law that cannot be papered over by Washington's pronouncement that its law has no real-world effect.[6]

In contesting the Petitioning States' standing to file their Application, the Washington State Attorney General argues that the Petitioning States failed to substantiate their claims that the Washington Law presents an obstacle to compliance with the HMTA, because they failed to establish which compliance method (*i.e.,* pretreatment, rerouting, modal shifts) crude producers and Washington-based refineries would choose.[7] This argument also is without merit. Petitioning States need not establish with exacting specificity which methods for compliance will be used by other affected parties, as these methods can and will vary based on evolving market conditions. As AFPM and others have explained, each option for compliance with the Washington Law presents an independent obstacle

---

[3] *See* North Dakota & Montana, Part 107.203 Application for Preemption of Washington State's Volatility Restrictions on Crude Oil Transported by Rail Applicable to the Transportation of Certain Hazardous Materials at 3, 9-12 (July 17, 2019), https://attorneygeneral.nd.gov/sites/ag/files/documents/MediaAttachments/2019-07-17-Petition-PHMSA.pdf (hereinafter "Preemption Application").

[4] *See* Earthjustice et al., Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements at 6 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4112&attachmentNumber=1&contentType=pdf (hereinafter "Earthjustice Comments").

[5] *See North Dakota: Study 'Undermines' Washington State's Rail Law*, Associated Press. August 29, 2019. Accessed August 26, 2019. https://www.usnews.com/news/best-states/washington/articles/2019-08-29/north-dakota-study-undermines-washington-states-rail-law.

[6] *See* Washington Attorney General, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 9-10 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4074&attachmentNumber=1&contentType=pdf (hereinafter "Washington AG Comments"); *see also* Earthjustice Comments at 6.

[7] *See* Washington AG Comments at 13-17; *see also* Earthjustice Comments at 8-10.

to compliance with the HMTA.[8] AFPM's initial comments demonstrate that the Washington Law erects a distinct barrier to transporting Bakken crude oil above and beyond federal requirements, which impacts the modes, routes, distance, handling, and time hazardous materials remain in transportation.

As the nation's leading trade association representing the refining industry, AFPM also has standing to seek a preemption determination since its members are directly affected by the Washington Law. AFPM members Phillips 66,[9] BP,[10] and Marathon Petroleum[11] filed comments explaining how they are directly affected by the Washington Law within the meaning of 49 C.F.R. § 107.203(b)(5). These AFPM-member companies each own and operate refineries in Washington that receive Bakken crude oil by rail that exceeds 9 psi vapor pressure.[12] To the extent PHMSA has concerns with the Petitioning

[8] *See* American Fuel & Petrochemical Manufacturers, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 5-9 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4114&attachmentNumber=1&contentType=pdf (hereinafter "AFPM Comments").

[9] *See* Phillips 66, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 2-6 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4120&attachmentNumber=1&contentType=pdf (hereinafter "P66 Comments") (explaining that Phillips 66's Ferndale, Washington Refinery receives 35,000 barrels per day of crude oil by rail, which Phillips had to curtail as directly, solely caused by the Washington Law; and that Phillips will be forced "to obtain crude oil from other sources [than the Bakken region] that can be substituted for low-sulfur Bakken crude oil in the production of IMO 2020-compliant fuel," such as Russia, Saudi Arabia, and West Africa, which entails receiving the crude oil at Phillips' marine terminal, rather than by rail).

[10] *See* BP, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4115&attachmentNumber=1&contentType=pdf (hereinafter "BP Comments") (explaining that BP's Cherry Point, Washington refinery recently invested more than $100 million in a Rail Logistics Project to unload crude oil via rail at its facility, and received an Order of Approval to construct the project from the Northwest Clean Air Agency; "Washington's rule prevents the facility from receiving and unloading crude oil at the rate allowed under the permit issue in 2013").

[11] *See* Marathon Petroleum, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 2-3 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4116&attachmentNumber=1&contentType=pdf (hereinafter "Marathon Comments") (explaining that Marathon's Anacortes, Washington refinery receives Bakken crude oil by rail and was permitted to do so by federal, state and local authorities; and the Washington Law could severely reduce the value of its investment by "impacting the amount, grade, and type of crude that could be handled by the facility").

[12] Upstream Bakken oil producers also are directly affected by Washington's crude by rail restrictions. Hess Corporation produces crude oil in North Dakota and submitted comments that it will be forced either to ship to Louisiana refineries by rail—avoiding Washington altogether—or construct new or expanded processing facilities to treat Bakken crude oil. Hess Corporation, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 9-10 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4119&attachmentNumber=1&contentType=pdf (hereinafter "Hess Corporation Comments") (highlighting that there would be an additional 600 miles traveled to deliver the oil to St. James, Louisiana, increasing the cost of transportation by $4 to $5 per barrel).

States' standing, AFPM asks that PHMSA treat AFPM's comments in this matter as a separate application to PHMSA for a preemption determination on the Washington Law.[13]

Washington refineries, such as Phillips 66's Ferndale Refinery, have already had to reduce their rail shipments of crude oil into Washington as a result of the Washington Law.[14] To comply with the Washington Law, the Washington refineries had to ensure that they did not exceed the Washington Law's 10% volumetric increase trigger.[15] As, such, some or all of the refineries had to reduce their planned rail shipments of crude oil into Washington in order to ensure compliance with this new limit. There is uncertainty as to how Washington will test crude oil vapor pressure, and results vary substantially based on the test used and methods of sampling.[16] As a result, Washington refineries must include a volumetric buffer to guarantee that they do not exceed the 10% volumetric increase limit.

The Washington Law directly impacts and conflicts with several Washington refineries' existing permits, which specify the amount of crude oil rail capacity allowed at each facility. Phillips 66, Marathon Petroleum, and BP each obtained permits that allow for certain capacities of crude oil to be received by rail. The Washington Law has the effect of preventing these facilities from utilizing their rail logistics facilities to their designed and permitted capacities.[17]

The Washington State Attorney General argues that the Washington Law has no immediate regulatory effect on the transportation of crude oil, because "[t]he [Washington] Department of Ecology has not yet determined whether any facility will become subject to regulation because data for calendar year 2019 are not yet available" and "the facility will have two years before compliance becomes mandatory."[18] This argument is erroneous, as several entities have already been forced to adjust their previously planned operational strategies to ensure compliance with the Washington Law.[19] Given this

---

[13] AFPM incorporates by reference Petitioning States' application for preemption. *See* Preemption Application. AFPM has included in these Rebuttal Comments all additional materials required to satisfy the requirements to seek a preemption determination from PHMSA under 49 C.F.R. § 107.203(b). The provisions of the Washington Law for which the preemption determination is sought and the provisions of the HMTA and HMRs that should be compared to the Washington Law are set forth in Appendix A. Parties to these proceedings have had sufficient time to respond to the arguments AFPM advanced in its original comments set forth in Appendix B.

[14] *See, e.g.,* P66 Comments at 3.

[15] *See id.*at 6; *see also* Hess Corporation Comments at 11 ("The tested vapor pressure of any particular crude oil sample can vary widely depending on the temperature, age, and condition of the sample as well as the sampling collection method and testing protocol used.").

[16] *See* P66 Comments at 6; *see also* David Lord et al., Sandia Nat'l Labs, DOE/DOT Crude Oil Characterization Research Study, Task 2 Test Report on Evaluating Crude Oil Sampling and Analysis Methods, Revision 1 – Winter Sampling (June 2018), https://www.osti.gov/servlets/purl/1458999.

[17] *See, e.g.,* P66 Comments at 2-3; BP Comments at 1-2.

[18] Washington AG Comments at 6.

[19] *See* P66 Comments at 3, 6 (explaining that Phillips' Ferndale Refinery already reduced its receipts of crude by rail to avoid triggering the Washington Law's 10% volumetric increase trigger, which prevented it from utilizing its permitted capacity, and intends to import low-sulfur crude oil from abroad to produce IMO-2020 compliant marine fuel, rather than use Bakken crude oil); *see also* BP Comments at 1-2 (effect on permitted capacity); *see also* Hess Corporation Comments at 9-10 (explaining that Hess will be forced to either construct costly pretreatment facilities or deliver the oil to St. James, Louisiana instead, increasing the cost of transportation by $4 to $5 per barrel over an additional 600 miles).

immediate regulatory effect, it is irrelevant that demand for crude oil by rail fluctuates.[20] Additionally, because the Washington Law applies to all new facilities, it immediately creates a disincentive to anyone seeking to utilize new crude-by-rail facilities.

For these reasons, the Petitioning States and AFPM have demonstrated that they are directly affected by the Washington Law and have properly applied to PHMSA for a preemption determination.

II. The Washington Law is an Obstacle to Accomplishing the HMTA's Purposes.

Commenters opposing preemption have failed to mount a serious challenge to the Petitioning States' Application, which details the myriad obstacles to the uniform transportation of hazardous materials the Washington Law poses. First, the purported foundation of the Washington Law – to enhance hazardous materials transportation safety – is without scientific foundation, as there is no evidence that crude oil with a Reid Vapor Pressure ("RVP") greater than 9 psi poses elevated rail transportation risks. Second, Washington and others opposing the Petitioning States' Application have failed to contradict Petitioning States' and commenters' evidence that pretreatment of crude oil, which the Washington Law was expressly intended to force, is infeasible. Likewise, Washington and others have failed to substantiate their arguments that existing crude oil conditioning infrastructure is sufficient to reduce any substantial volumes of Bakken crude oil below the Washington Law's 9 psi limit. Finally, Washington and others have failed to refute Petitioning States' data that the Washington Law will cause modal transportation shifts, lead to alternative routing and additional handling (*e.g.,* transloading), and increase transportation mileage and transit time—data that many commenters have substantiated. In sum, the Washington Law poses an obstacle to hazardous materials transportation law; PHMSA should therefore find that it is preempted.

A. The Washington Law does not enhance the safe transportation of hazardous materials.

Washington's purported reason for enacting crude-by-rail vapor pressure restrictions is to improve the safe transportation of petroleum crude oil. This rationale was echoed by the Washington State Attorney General and others in their comments on the Application; however, the science does not support this rationale.[21]

In 2015, Congress directed and the U.S. Department of Transportation ("DOT") commissioned Sandia National Laboratory ("Sandia") to study the chemical and physical characteristics of crude oil. Sandia issued its report in August 2019 ("Sandia Study").[22]

---

[20] *See* Earthjustice Comments at 6 (citing EIA data current through the end of 2015). In fact, the most recent annual EIA data shows a substantial increase in intra-US crude oil transportation by rail from around 87 million barrels in 2017 to 113 million barrels in 2018, as well as a substantial increase through the first half of 2019. *See U.S. Crude Oil by Rail*, Energy Information Administration, https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=esm_epc0_rail_nus-nus_mbbl&f=a.

[21] *See* Earthjustice Comments at 3; Washington AG Comments at 16.

[22] *See* Anay Luketa et al., *Pool Fire and Fireball Experiments in Support of the US DOE/DOT/TC Crude Oil Characterization Research Study*, SANDIA NAT'L LABS at. 19-20 (Aug. 2019),

The Sandia Study concluded that "vapor pressure is not a statistically significant factor in affecting" thermal hazard outcomes.[23] Thus, the Sandia Study concluded that "results from this work do not support creating a distinction for crude oils based on vapor pressure with regards to these combustion events."[24]

The comments submitted by Washington and environmental groups fail to rebut the extensive scientific research that is included in this docket, and PHMSA should give no weight to Washington and others' unsupported conclusions.[25]

Washington argues that the Sandia Study is irrelevant, and asserts that the Washington Law regulating crude oil vapor pressure is "intended to prevent the ignition of fires on trains bringing in volatile oil into the state of Washington."[26] According to Washington, for the Sandia Study to be relevant, it must examine the relation between higher vapor pressures and *ignition*.[27] However, the Sandia Study clearly contradicts this assertion, concluding that "ignition potential cannot be identified by a single index, but rather involves several properties which include: flashpoint, flammability limits, auto-ignition temperature, minimum ignition energy, and burning velocity."[28]

As AFPM detailed, the Sandia Study concluded that vapor pressure is not a statistically significant factor in affecting thermal hazardous outcomes in a derailment and there is no scientific support for making regulatory distinctions based on vapor pressure.[29] Furthermore, derailments typically produce ignition sources such as sparks from metal-on-metal stresses. The vapor pressure of the flammable liquid has no bearing on the likelihood of ignition or the frequency of derailment in these circumstances. Washington and other commenters do not refute the Sandia Study's conclusions, and their heightened concerns about high-RVP ignition potential in a derailment is misplaced.

Washington's assertion that the Sandia Study's sample of crude oils in not comparable to Bakken crude oil is expressly contradicted by the Sandia Study itself.[30] First, the Sandia Study examined a wide range of crude oils with a large variance in vapor pressures.[31] Second, the Sandia Study explained that "[b]ased on comparison to combustion data from public literature on common liquid fuels

---

https://www.osti.gov/servlets/purl/1557808 (hereinafter "Sandia Study"); *see also* Anay Luketa, *Crude Oil Characterization Research Study Task 3: Combustion Experiments*, presentation to Crude Oil Quality Association delivered October 10, 2019.

[23] *Id.*

[24] *Id.*

[25] The observation that there have been train derailments, like Lac-Mégantic, involving Bakken crude oil with varying degrees of severity fails to show any additional dangers for carrying Bakken crude oil by rail *relative* to non-Bakken crude. *See, e.g.,* Councilman Breean Beggs, Spokane City Council, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 1-3 (Sept. 4, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-3816&attachmentNumber=1&contentType=pdf (discussing train derailments involving Bakken crude oil) (hereinafter "Councilman Beggs Comments").

[26] Washington AG Comments at 3 n.11.

[27] *See* Sandia Study at 75.

[28] *Id.*

[29] *See* Sandia Study at 19-20, 77.

[30] *See* Washington AG Comments at 3 n. 11.

[31] *See* Sandia Study at 255.

(primarily commercial grade propane and butane), the results of this study are considered to be pertinent to crude oils and most hydrocarbon liquids that exceed the vapor pressures of the crude oils tested here."[32] Nor is there any truth to Washington's assertion that there is a need for further research on Bakken crude vapor pressure,[33] since the Sandia Study indicated its conclusions were final and no further research was necessary.[34]

Earthjustice cites "Operation Safe Delivery" to support the proposition that Bakken crude oil is uniquely dangerous.[35] Operation Safe Delivery was DOT's examination of the entire system of crude oil delivery using a comprehensive approach to ensure the safe transportation of crude oil by rail.[36] "Operation Classification" was part of DOT's Operation Safe Delivery, and was mainly a DOT enforcement exercise consisting of unannounced spot inspections, data collection and sampling, and verification of compliance with federal safety regulations.[37] PHMSA investigators collected samples from various points along the crude oil supply chain for testing.[38] Additionally, Earthjustice fails to mention that the Operation Safe Delivery report concluded that the crude oils "displayed characteristics consistent with those of a Class 3 flammable liquid, PG I or II."[39] Ultimately, this early stage report that (a) relied on DOT agents—as opposed to scientists—to take the samples, and (b) drew conclusions without statistical analysis,[40] is vastly inferior to the Sandia Study—the most comprehensive and current scientific research in this area, as AFPM explained in its comments.[41]

Additionally, there is no merit to Washington's claim that there is a regulatory gap because "the federal government has undertaken no serious effort to regulate vapor pressure."[42] To the contrary, DOT has taken a measured, thorough approach in considering whether to regulate vapor pressure.[43] As explained in the Petitioning States' Application,[44] in 2015 PHMSA and the Federal Railroad Administration implemented new regulations requiring improvements to the design of tank cars carrying oil and other flammable liquids, which expressly considered and decided not to add vapor pressure to the classification standard at that time.[45]

---

[32] *See id.* at 20.
[33] Washington AG Comments at 3.
[34] *See* Sandia Study at 77-78.
[35] Earthjustice Comments at 3.
[36] *Operation Safe Delivery Update*, Department of Transportation (2014), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/07_23_14_Operation_Safe_Delivery_Report_final_clean.pdf (hereinafter "Operation Safe Delivery").
[37] *See id.*
[38] *See id.*
[39] Operation Safe Delivery at 1.
[40] *See id.* at 15-16.
[41] *See* AFPM Comments at 14.
[42] Washington AG Comments at 4.
[43] Even after the HM-251 rulemaking, DOT revisited the issue in its ANPRM concerning the role of vapor pressure in January of 2017, but it decided to await results from the Sandia study before moving forward.
[44] *See* Preemption Application at 23-24.
[45] *See* Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains, 80 Fed. Reg/ 26,643, 26,665, 26,706.

Because the Sandia Study effectively completes federal research on this topic and no additional regulation on vapor pressure limits is warranted, the Washington Law offers no additional safety benefit and creates several obstacles to the purposes of the HMTA. The Washington Law is therefore preempted.

B. Pretreatment is prohibitively costly and existing conditioning infrastructure is insufficient to comply with the Washington Law.

Evidence provided by Petitioning States and commenters leaves little doubt that pretreatment infrastructure would be necessary but prohibitively costly to comply with Washington's law,[46] contrary to Washington, Earthjustice, and Councilman Beggs' contentions.[47] Even if the economics of constructing topping refineries were attractive, the environmental NGOs that filed comments in this docket are the very same organizations that likely would oppose the permits necessary to construct these types of facilities.

Washington and other commenters have asserted, without evidence, that conditioning infrastructure is sufficient to reduce the vapor pressure of the substantial volumes of Bakken crude oil down to 9 psi. Citing North Dakota's Oil Conditioning FAQ, Spokane City Councilmember Breann Beggs claims that "[c]onditioning oil is estimated to cost about ten cents a barrel and does not require the construction of significant infrastructure."[48] But conditioning costs are not the relevant cost for most Bakken crude oil, which will need pretreatment and cannot rely on existing conditioning infrastructure, on which this cost figure is based.[49] Even assuming some crude oil can be conditioned down to below 9 psi with little effort, since some Bakken crude oil is naturally near 9 psi,[50] this is not true for most Bakken crude oil.[51] Indeed, figures cited by Washington—that the average vapor pressures of Bakken crude oil

---

[46] *See* Equinor, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 6 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4107&attachmentNumber=1&contentType=pdf (pointing out that pretreating 150,000 barrels of crude oil—transported daily to Washington—with vapor recovery units "would cost approximately $300 million in capital alone."); *see also* American Petroleum Institute, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 5-7 (Sept. 23,2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4111&attachmentNumber=1&contentType=pdf (hereinafter "API Comments") (explaining that it is uneconomical to install fractionators at every wellsite, hence new facilities amounting to small scale refineries would need to be constructed for pretreatment).

[47] *See* Washington AG Comments at 13-16; Earthjustice Comments at 4-5, 8-9; Councilman Beggs Comments at 1, 5.

[48] Councilman Beggs Comments at 5.

[49] *See* American Fuel & Petrochemical Manufacturers, Comments on the Department of Transportation's Notice of Regulatory Review, at 14-15 (Dec. 1, 2017), https://www.afpm.org/sites/default/files/issue_resources/AFPM_Comments_DOT_Reg_Review.pdf (displaying the extreme costs related to pretreatment requirements, from new heater treaters, gathering systems, storage tanks, distribution systems, topping refineries, pressurized tank cars, unloading infrastructure for pressurized tank cars, pressurized cargo tanks for highway transport, and increased testing cost and frequency).

[50] *See* Washington AG Comments at 14.

[51] *See* AFPM, *Comments on the Department of Transportation's Regulatory Review,* Docket No. DOT-OST-2017-0069, pp. 14-15 (December 1,2017) (highlighting the potential burdens of revisions to flammable liquid classifications).

in the Sandia Study averaged 10.2 psi and that Bakken crudes coming from North Dakota by rail can reach up to 13.7 psi[52]—demonstrate that most Bakken crude oil would require additional pretreatment.

Similarly, Washington's statement that a pipeline operator within North Dakota requires lower psi Bakken crude oil is of no relevance to PHMSA's preemption analysis,[53] particularly since this requirement is needed to reduce *pipeline* cavitation and ensure the smooth flow of crude oil through the pipeline system.[54] Whether and on what terms owners of private property agree to do business has no bearing on a State's authority to *mandate* terms that contradict the HMRs.

Washington and other commenters also argue that the Application should be denied on the grounds that North Dakota already has a different pretreatment requirement.[55] These commenters are correct that North Dakota has put in place regulations that limit crude oil vapor pressure to 13.7 psi; however, the fact that North Dakota or any other state has a requirement that impacts crude oil vapor pressure is beyond the scope of this proceeding and has no relevance on PHMSA's analysis of the impacts of the Washington Law on the transportation of hazardous materials.[56]

Washington argues that Petitioning States failed to provide evidence of the anticipated increase in miles traveled for Bakken crude oil that requires pretreatment.[57] But this is because such facilities do not currently exist.[58] Additionally, a shift to tank trucks *automatically* increases miles traveled, since it takes approximately three tank trucks to transport the same amount of crude oil as one railcar.[59] Furthermore, light ends coming out of the pretreatment process, if transported, will necessarily increase time and distance of hazardous materials in transit since *both* the treated crude oil and light ends must travel separately.[60]

C. The Washington Law will cause companies to shift transportation modes and take alternative routes, resulting in increased distance and time of hazardous materials in transportation.

Washington and Earthjustice each argued that the Petitioning States failed to provide sufficient evidence that the Washington Law will necessitate alternate modes of transportation or rerouting of

---

[52] *See* Washington AG Comments at 3 n.11, 14.
[53] *See* Washington AG Comments at 15; Earthjustice Comments at 9.
[54] *See* AZO Materials, *Vapor Pressure in the Transport, Storage, and Bending of Crude Oil*,
[55] *See* Washington AG Comments at 5-7.
[56] *See* 49 CFR § 107.202 (PHMSA Regulations defining the Standards for Determining Preemption).
[57] *See* Washington AG Comments at 14; Earthjustice Comments at 9.
[58] There are no topping refineries nearby the Bakken region and North Dakota's two active refineries have only a 90,000 bpd capacity and are operating around mid-90% utilization rates. *See* AFPM Comments at 6 n. 21. Therefore, these existing facilities could not be relied on for pretreatment of the volumes of Bakken crude shipped by rail daily to Washington, which exceed the *total* capacity of North Dakota refineries.
[59] *See* Railway Supply Institute, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 4 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4078&attachmentNumber=1&contentType=pdf (hereinafter "RSI Comments").
[60] *See* Crestwood Midstream Partners LP, Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 7-8 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4109&attachmentNumber=1&contentType=pdf.

crude oil such that PHMSA could find that the Washington Law negatively impacts crude oil transit time, distance traveled, or the number of transloading events.[61] These comments virtually concede that increased mileage, time in transit, and handling are obstacles to the purposes of the HMTA – key facts in prior preemption determinations. Petitioning States and commenters provided ample evidence that the Washington Law will directly result in a modal shift from rail to marine or vehicular transportation, and that it is an obstacle to hazardous materials transportation.[62] A shift to marine transportation is especially problematic since there are substantial impediments to using barges and ships to transport crude oil. The Jones Act requires a limited set of U.S.-made ships and barges to carry the oil between any two U.S. ports.[63] Forcing refineries to rely on barges is not only problematic because of the inability to scale and increase shipments,[64] but also increases risk because these "circuitous routes" involve increased mileage and increased time in transportation.[65] Similarly, AFPM and other commenters have already explained the infeasibility of truck transport,[66] as well as the increased distances for alternative crude-by-rail routes from North Dakota to the East and Gulf Coasts.[67] As such, the administrative record for this proceeding already has sufficient data demonstrating that the Washington Law will result in increased transit time, distance traveled, and handling (e.g., transloading events) from modal shifts and alternative routes.

III. The Washington Law Imposes Inconsistent Crude Oil Classification and Handling Requirements.

None of the comments in opposition to the Application presented credible evidence that the Washington Law is substantively the same as the HMRs with respect to crude oil classification or handling.

A. The Washington Law Reclassifies Crude Oil.

The Washington State Attorney General claims that the Washington Law does not reclassify Bakken crude because shippers do not need to alter their classification practices.[68] This comment

---

[61] *See* Washington AG Comments at 16-17; *see also* Earthjustice Comments at 9-10.
[62] *See* P66 Comments at 3-4 (detailing how Washington's law has forced its Ferndale Refinery to limit volumes of crude oil it receives by rail and search for alternative sources of low-sulfur crude oil abroad).
[63] *See* JOHN FRITTELLI ET. AL, CONG. RESEARCH SERV., R43390, U.S. RAIL TRANSPORTATION OF CRUDE OIL: BACKGROUND ISSUES FOR CONGRESS 24 (2014), https://fas.org/sgp/crs/misc/R43390.pdf.
[64] *Id.* at 9, 24-25.
[65] *Id.* at 8.
[66] *See, e.g.,* AFPM Comments at 7-8; API Comments at 7-8; RSI Comments at 4.
[67] *See* American Association of Railroads et al., Comments on Hazardous Materials: The State of Washington Crude Oil by Rail-Vapor Pressure Requirements, at 21 n.61 (Sept. 23, 2019), https://www.regulations.gov/contentStreamer?documentId=PHMSA-2019-0149-4110&attachmentNumber=1&contentType=pdf (hereinafter "AAR Comments"); see also API Comments at 9 (noting 1,200 additional roundtrip miles to the East Coast, and finding that transportation to the Gulf Coast is likely infeasible); Hess Corporation Comments at 10 (finding that Hess' alternative is rail transportation to St. James, Louisiana, which "costs $4 to $5 more per barrel than the current cost for shipment to Washington and increases travel time and distance (by 600 miles per train)").
[68] *See* Washington AG Comments at 19-20.

ignores Washington's imposition of a new vapor pressure parameter that has the effect of dividing the HMR petroleum crude oil classification into two distinct subsets: one for crude oil with vapor pressure above 9 psi, and one for crude oil with vapor pressure below 9 psi.[69] The HMRs do not regulate the vapor pressure of crude oil and do not limit crude oil transportation according to that parameter. Washington's reclassification and transportation restrictions of crude oil with a vapor pressure above 9 psi is not "substantively the same" as the federal HMRs and is therefore preempted.

The Washington State Attorney General's comments include examples where Bakken crude is treated the same as other Class 3 hazardous materials under federal requirements for "packaging, marks, labels, and shipping paper requirements,"[70] but the comments conveniently ignore the Washington Law's outright prohibition on transporting certain crude oils by rail. As AFPM explained in its comments, the Washington Law effectively reclassifies Bakken crude oil as "forbidden," an HMR classification for which there are no packaging, marking, labeling, or shipping paper requirements authorizing its transportation.

PHMSA previously has preempted state and local laws that affect the classification of hazardous materials. For instance, PD-30 preempted the Houston Fire Code's classification of hazardous materials differently than the HMRs, which redefined what constituted flammable and combustible liquids, classified some materials as combustible in the fire code that were flammable in the HMRs, and regulated liquids with higher flash points than those in the HMRs as combustible.[71] Likewise, PHMSA should preempt Washington's division of crude oil into two classifications based on vapor pressure that entail different regulatory consequences based on these classifications.[72]

B. The Washington Law Regulates the Handling of Hazardous Materials Both During and Incidental to Transportation.

Commenters opposing preemption argue that the Washington Law merely regulates "unloading practices at Washington refineries" and thus the law is confined to activity "within the gates of its facility," and beyond the reach of federal regulations under HM-223.[73] Washington argues that "the vapor pressure limit . . . applies solely to *facility-directed* unloading activities" and "does not regulate the *movement* of crude oil in any way."[74] These comments mischaracterize the purposes of the Washington Law and the jurisdictional limits PHMSA established in HM-223.

Yet in the very first sentence of its comments, Washington acknowledges that it enacted the law to "respond[] to a surge in crude-by-rail *transportation* in the past decade," and to "improve public safety in light of the potentially catastrophic risks of an accident" involving an oil train carrying Bakken

[69] *Compare* Washington Law, sec. 1(a) (restricting the loading or unloading of crude oil with a vapor pressure higher than 9 psi with 49 C.F.R. § 172.101 (federal Hazardous Materials Table, which contains no vapor pressure classification parameter for "Petroleum crude oil, UN 1267").
[70] *Id.*
[71] *See* Preemption Determination No. PD-30; Houston, TX Requirements on Storage of Hazardous Materials During Transportation, 71 Fed. Reg. 9413, 9418 (Feb. 23, 2006).
[72] *See* AAR Comments at 23-24.
[73] Earthjustice Comments at 10.
[74] Washington Comments at 7, 17 (emphasis in original).

crude oil.[75] Washington asserts it enacted the law based on "the right and obligation" to address the "pressing threat" of "an oil train explosion."[76] Other commenters defending the Washington Law also concede that its intent is to regulate and address potential safety issues associated with the *transport* of Bakken crude oil by rail, not the unloading of the products at the facilities to which they are shipped.[77]

The Washington Law is not an attempt to merely regulate the safety of crude oil unloading or handling practices at the unloading facility. The Washington Law does not address areas typically reserved to local police powers, such as work processes governing unloading operations, personal protective equipment requirements, public health and safety requirements, set-back requirements, spill prevention requirements, or requirements to install secondary containment at unloading facilities. As such, the Washington Law is not confined to unloading activities once transportation has concluded and thus is in conflict with the HMRs. The Washington Law starts regulating from the time that the crude is loaded on to rail cars in North Dakota or Montana, slated for delivery in Washington. Once the crude arrives at its destination, it is not allowed to be unloaded in cases where the facility cannot exceed the 10% volumetric limit, and there are significant penalties for noncompliance.

Washington's reliance on HM-223 is misplaced because its prohibition against unloading crude oil with a vapor pressure greater than 9 psi impacts transportation prior to unloading and applies regardless of the presence of carrier personnel.[78] PHMSA's response to appeals filed on HM-223 clarify that PHMSA did not intend to abdicate its authority over actions that truly affect hazardous materials transportation safety.

> [W]hen functions that might be performed by entities other than a carrier or outside the carrier's presence affect the safety of the transportation of materials in commerce, they are regulated in a functional approach irrespective of who performs them.[79]

Earthjustice argues that PD 8(R)-11(R) is controlling.[80] On close inspection, however, these preemption determinations do not save the Washington Law. First, it is important to note that PD 8(R)-11(R) predated HM-223. More importantly, however, the regulations that were upheld obligated

---

[75] *Id.* at 1 (emphasis added).

[76] *Id. See also id.* at 3 (referring to "[t]he safety risk posed by crude-by-rail transportation"); *id.* at 4 (providing a list of oil train accidents).

[77] Comments of Spokane City Council at 1 (claiming the law is justified by "[t]he dangers inherent in the *transport* of a highly flammable substance like Bakken crude oil") (emphasis added); Comments of Friends of the Earth at 3-4 (claiming the law is justified based on the "hazards of crude oil *transportation*" and the lack of sufficient federal regulations to address them) (emphasis added).

[78] Washington-based refineries use carrier-owned locomotives operated by qualified engineers to facilitate hazardous materials tank car movements during the unloading process. *See* Tyler C. Dick, et al., *Design of Bulk Railway Terminals for the Shale Oil and Gas Industry*, SHALE ENERGY AND ENGINEERING (2014). https://railtec.illinois.edu/wp/wp-content/uploads/pdf-archive/9780784413654.071_1.pdf Pages 708-709 and 711-217.

[79] 70 Fed. Reg. 20018, 20022 (April 15, 2005).

[80] *See* Earthjustice Comments at 12.

hazardous materials handlers to register and submit risk management and storage-related spill prevention plans.[81] Unlike the Washington Law, the California regulations at issue in these preemption determinations did not impact the classification and movement of hazardous materials and did not cause rail rerouting and modal shifts. Finally, compliance with the regulations at issue in PD(8)-11(R) could be accommodated by adjusting facility personnel registration and facility storage methods – a strong indication that the California regulations addressed safety at the unloading facility after transportation was completed.

IV. Conclusion.

This comment period has substantially vindicated Petitioning States' arguments that the Washington Law results in the diversion and delay of hazardous materials in transportation and therefore constitutes an obstacle to the HMTA.

Furthermore, it is clear that the Washington Law creates a novel state-based hazardous materials classification and directly regulates the handling of hazardous materials in transportation differently than the HMRs. Federal requirements for these "covered subjects" provide both a floor and a ceiling, leaving no room for non-federal regulation that is not de minimis. A law that forces producers to reroute their product through neighboring states or engage in uneconomical pretreatment processes that also entail additional handling and time in transit cannot be considered de minimis. Likewise, a law that forces refiners to seek alternative sources of crude oil, artificially limit their receipts of crude-by-rail, and seek alternative transportation for unrefined crude oil is not a mere editorial change. Therefore, the Washington Law must be preempted.

On these bases, AFPM continues to support the Petitioning States' Application. AFPM trusts that PHMSA will recognize the Washington Law's lack of conformity with federal law and urges that PHMSA find the law preempted. AFPM reiterates that to the extent that PHMSA questions whether Montana and North Dakota have standing to seek this preemption determination, PHMSA should treat AFPM's comments in this matter as its own application for a preemption determination[82] and take whatever steps are necessary to ensure full consideration of its arguments consistent with law.

Respectfully submitted,

Richard Moskowitz
General Counsel

[81] *See* Preemption Determination Nos. PD 8(R)-11(R); Research and Special Programs Administration: California and Los Angeles County Requirements Applicable to the Onsite Handling and Transportation of Hazardous Materials, 60 Fed. Reg. 8774, published February 15, 1995, https://www.govinfo.gov/content/pkg/FR-1995-02-15/pdf/95-3590.pdf; *see also* AAR Comments at 16.

[82] *See supra* pp. 1-5.

I certify that copies of these comments have been sent to the Attorneys General listed below:

Wayne Stenehjem
Attorney General
The State of North Dakota
Office of the Attorney General
600 East Boulevard Avenue
Department 125
Bismarck, ND 58505-0040

Tim Fox
Attorney General
The State of Montana
Office of the Attorney General
Justice Building, Third Floor
215 North Sanders
Helena, MT 59620-1404

Bob Ferguson
Attorney General
The State of Washington
Office of the Attorney General
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

Richard Moskowitz
General Counsel

Appendix A.

The following table sets forth the Washington Statute provisions that are the subject of this application for a preemption determination. The table compares these provisions to the federal Statutes/Regulations that govern the same subjects.

Washington Statute	HMRs and Federal Statutes
S. 5579, 66th Leg., 2019 Reg. Sess. § 1 (1)(a): "A facility constructed or permitted after January 1, 2019, may not load or unload crude oil into or from a rail tank car unless the oil has a vapor pressure of less than nine pounds per square inch."	**49 U.S.C. § 5125(a)(2) & 49 U.S.C. § 5125(b) in conjunction with 49 C.F.R. § 171; 49 C.F.R. § 173:** §5125(b) requires that state laws relating to the transport of hazardous materials not be substantively different. Requiring new facilities to not load or unload oil with a psi above 9 creates a different handling rule in comparison to the comprehensive and by statute exclusive rules for handling hazardous materials listed under 49 C.F.R. §171. The Washington law is also substantially different from federal law in that 49 C.F.R. § 173 provides clear and exclusive rules regarding the classification of hazardous materials, and in effect requiring Bakken Crude to be rejected amounts to classifying the oil in a separate category above and beyond the criteria set forth by the HMRs. § 5125(a)(2) requires that state transport laws not pose an obstacle to federal laws. Given that the Washington law in effect regulates the transportation of Bakken crude, it is regulating the interstate transport of hazardous materials and presents an obstacle to the uniform application of federal law.
S. 5579, 66th Leg., 2019 Reg. Sess. § 1 (1)(b): "A facility may not load or unload crude oil into or from a rail tank car unless the oil has a vapor pressure of less than nine pounds per square inch beginning two years after the volume of crude oil transported by rail to the facility for a calendar year as reported under RCW 90356.565 has increased more than ten percent above the volume reported for calendar year 2018."	**49 U.S.C. § 5125(a)(2) & 49 U.S.C. § 5125(b) in conjunction with 49 C.F.R. § 171; 49 C.F.R. § 173:** §5125(b) requires that state laws relating to the transport of hazardous materials not be substantively different. Requiring facilities to not load or unload oil with a psi above 9 creates a different handling rule in comparison to the comprehensive and by statute exclusive rules for handling hazardous materials listed under 49 C.F.R. §171. The Washington law is also substantially different from federal law in that 49 C.F.R. § 173 provides clear and exclusive rules regarding the classification of hazardous materials, and in effect requiring Bakken Crude to be rejected amounts to classifying the oil in a separate category above and beyond the criteria set forth by the HMRs. § 5125(a)(2) requires that state transport laws not pose an obstacle to federal laws. Given that the Washington law in effect regulates the transportation of Bakken crude, it is regulating the interstate transport of hazardous materials and presents an obstacle to the uniform application of federal law.

S. 5579, 66th Leg., 2019 Reg. Sess. § 1 (2):	49 U.S.C. § 5125(a)(2) & 49 U.S.C. § 5125(b) in conjunction with 49 C.F.R. Part 171; 49 C.F.R. § 173:
"The director may impose a penalty of up to twenty-five hundred dollars per day per rail tank car or the equivalent volume of oil for violations of this section. Any penalty recovered pursuant to this section must be credited to the coastal protection fund created in RCW 90.48.390"	§5125(b) requires that state laws relating to the transport of hazardous materials not be substantively different. Fining facilities for accepting oil with a vapor pressure above 9 psi creates a different handling rule in comparison to the comprehensive and by statute exclusive rules for handling hazardous materials listed under 49 C.F.R. §171. The Washington law is also substantially different from federal law in that 49 C.F.R. § 173 provides clear and exclusive rules regarding the classification of hazardous materials, and in effect requiring Bakken Crude to be rejected amounts to classifying the oil in a separate category above and beyond the criteria set forth by the HMRs. § 5125(a)(2) requires that state transport laws not pose an obstacle to federal laws. Given that the Washington law in effect regulates the transportation of Bakken crude by forcing facilities to reject oil based on a Washington imposed classification, the law is regulating the interstate transport of hazardous materials and presents an obstacle to the uniform application of federal law.
S. 5579, 66th Leg., 2019 Reg. Sess. § 1 (3): "This section does not: (a) Prohibit a railroad car carrying crude oil from entering Washington; (b) require a railroad car carrying crude oil to stop before entering Washington; or (c) require a railroad car carrying crude oil to be checked for vapor pressure before entering Washington."	**49 U.S.C. § 5125(b):** § 5125(a)(2) requires that state transport laws not pose an obstacle to federal laws. Given that the Washington law in effect regulates the transportation of Bakken crude by forcing facilities to reject oil based on a Washington imposed classification, the law is regulating the interstate transport of hazardous materials and presents an obstacle to the uniform application of federal law.

Appendix B.

September 23, 2019

Paul J. Roberti, Chief Counsel
Docket Operations Facility (M-30)
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Via ***www.regulations.gov***

Re: Hazardous Materials: The State of Washington Crude Oil by Rail – Vapor Pressure Requirements -- Docket PHMSA-2019-0149; PDA-40(R)

Dear Mr. Roberti:

The American Fuel & Petrochemical Manufacturers (AFPM) writes in support of North Dakota and Montana's application (the "Application") for a determination as to whether the Federal Hazardous Materials Transportation Act ("HMTA") preempts the State of Washington's rules relating to the volatility of crude oil received in the state.[83]

I. Introduction and Summary

AFPM is a national trade association representing virtually all U.S. refining and petrochemical manufacturing capacity. AFPM's member companies provide jobs, directly and indirectly, to over four million Americans, contribute to our economic and national security, and enable the production of thousands of vital products used by families and businesses throughout the United States.

AFPM supports North Dakota and Montana's Application for preemption determination regarding Washington's crude oil vapor pressure law (the "Washington Law").[84] The Washington Law essentially prohibits the loading or unloading of crude oil into or from a rail tank car, unless the crude oil has a vapor pressure lower than nine pounds per square inch ("psi"). The Washington Law is nothing more than a thinly veiled attempt to prevent Bakken crude oil from being unloaded at Washington's refineries. The Washington Law is an obstacle to

[83] *See* Hazardous Materials Transportation Act, 49 U.S.C. §§ 5101–5127.
[84] *See* Washington State Engrossed Substitute Senate Bill 5579, "Crude Oil by Rail – Vapor Pressure," http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5579-S.SL.pdf#page=1.

the safe transportation of hazardous materials and erodes the regulatory uniformity guaranteed under the HMTA.[85]

AFPM supports PHMSA finding that the HMTA preempts the Washington Law because the law is an obstacle to uniform federal hazardous materials law and is not substantively the same as existing federal regulations. The Washington Law creates a significant obstacle to the HMTA's purposes by diverting and delaying the transportation of Bakken crude oil. Additionally, the Washington Law regulates the classification and handling of petroleum crude oil, two areas covered by the heightened preemption standards of 49 U.S.C. § 5125(b)(1) which leave almost no room for non-federal regulation. Finally, the Washington Law relies on bad science and pretextual reasoning meant to prohibit the refinement of Bakken crude within Washington state.[86] In fact, recently released federal research on the physical, chemical, and combustion characteristics of crude oils with varying vapor pressures further bolsters this point as United States Department of Energy ("DOE") and United States Department of Transportation ("DOT") found that there is no support for "creating a distinction for crude oils based on vapor pressure with regards to combustion events."[87]

To comply with the Washington Law's crude-by-rail vapor pressure limitations, Bakken producers must either (1) pretreat the crude oil before loading it into the tank cars, an expensive and inefficient process that requires additional movements of hazardous materials; (2) select an

---

[85] *Note* early drafts of SB5579 frequently and *solely* referenced "Bakken" crude oil—not any other types of crude oil—and included a storage prohibition only for Bakken crude oil. S. 5579, 66th Leg., 2019 Reg. Sess. § 1 (Wash. 2019) ("The legislature finds that **Bakken crude oils** have variable chemical compositions and that organic materials from oil and gas production at wellheads are not sufficiently separated or conditioned, increasing the volatility of the crude oil. **Bakken crude oil** is typically more volatile than other crude oil, increasing the flammability of the oil and the potential for far greater harm to the public in the event of a derailment. Since 2013 there have been at least fourteen events involving derailments of **Bakken crude** in the United States and Canada involving **Bakken crude**. . . . Volatility limits are necessary to ensure that **Bakken crude oil** is packaged and handled safely and securely during transportation. Volatility of crude oil limits are also necessary to provide effective communication to transportation workers and emergency responders of the **Bakken crude oil** being transported. Further, volatility limits are essential in minimizing the consequences of an accident or incident. The legislature further finds that railroads recognize the additional risks of transporting **Bakken crude oil** by charging a surcharge . . . . In the absence of such a nationwide standard, it is necessary for the state to adopt a standard that will reduce the risks to public safety and to the environment in the event of a derailment or other casualty involving one of the many unit trains transporting **Bakken crude oil** across the state. Therefore, it is the intent of this act to require facilities offloading or loading crude oil from a rail tank car to ensure that the oil meets specific vapor pressure standards. This will have the effect of requiring the owner of the oil to condition it to meet the standard prior to shipment from the **Bakken region**" (emphasis added)), http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Bills/5579.pdf#page=1; *id.* § 2(2) ("A facility may not store crude oil produced from the **Bakken region** unless the oil has a vapor pressure of less than nine pounds per square inch.") (emphasis added). Sponsors and supporters of the bill time and time again cited speculative derailment fears in support of the bill's vapor pressure limit on Bakken crude oil. *See* pages 7-9 and accompanying footnotes of North Dakota and Montana's Application for Preemption. While the storage prohibition and references to Bakken crude were excised from the final bill, the targeting of Bakken crude oil remains, since the substantive provision fulfilling that purpose—the vapor pressure limit—was left unaltered.

[86] Other federal and state constitutional infirmities surrounding the Washington Law, such as conflicts with the dormant commerce clause, are beyond the scope these comments.

[87] *See* Luketa, Anay, Blanchat, Thomas K., Lord, David, Hogge, Joseph, Cruz-Cabrera, Alvaro Augusto, & Allen, Ray, "Pool Fire and Fireball Experiments in Support of the US DOE/DOT/TC Crude Oil Characterization Research Study," https://www.osti.gov/biblio/1557808 (hereinafter the "Sandia Study"), last accessed September 19, 2019.

alternate mode of transportation, such as trucking; (3) transport the crude oil from North Dakota or Montana to other facilities outside Washington state, where it can then be transloaded onto another transportation mode before delivery into Washington state; or (4) export the crude oil to avoid dealing with Washington state altogether. All of these scenarios increase the time and distance needed to transport hazardous materials and therefore undermine hazardous materials transportation safety. North Dakota and Montana are rightly concerned, since the Washington Law threatens their interests in bringing Bakken crude oil to market. AFPM fully supports the arguments presented by North Dakota and Montana in their Application and provides additional data and rationales that further support their Application.

II. The Washington Law is an Obstacle to Compliance with the HMTA.

The HMTA includes several preemption standards. Under the HMTA, a state law, regulation, requirement, or order is preempted if the law is an obstacle to accomplishing and carrying out the requirements of the HMTA.[88] The Washington Law runs afoul of this preemption standard because compliance with the law results in diversion and delay of hazardous materials in transportation and therefore undermines safety, which is an obstacle to "accomplishing and carrying out" the purposes of the HMTA.

The preemption provision in HMTA § 5125(a) codifies the Supreme Court's obstacle test, under which reviewing courts determine whether the law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."[89] Simply put, "the purpose of Congress is the ultimate touchstone in every pre-emption case."[90] If a state law "interferes with the methods by which the federal statute was designed to reach" its goal, it will be preempted.[91] "[T]he case for preemption is particularly strong where, as here [in rail transportation], 'the State regulates in an area where there has been a history of significant federal presence.'"[92]

The HMTA's legislative history helps illuminate Congress's motivations for enacting the law: uniformity and safety. As noted by the Third Circuit:

> In the early 1970s, those who transported hazardous materials through interstate commerce were forced to navigate "a patchwork of sometimes conflicting state regulations." *Jersey Cent. [Power & Light Co. v. Twp. of Lacey]*, 772 F.2d [1103,] 1112-13 [(3d Cir. 1985)]. The prevailing regulatory regime was fragmented and, to some, incoherent. S. Rep. No. 93-1192, at 8 (1974) (explaining that "the fragmentation of regulatory power among the agencies dealing with the different modes of transportation blocks a coherent approach to the problem"). At the same time, the quantity of

[88] 49 U.S.C. § 5125(a).
[89] *Hillsborough Cty. v. Automated Medic. Labs.*, 471 U.S. 707, 713 (1985) (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)).
[90] *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 484 (1996).
[91] *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 494 (1987).
[92] *CSX Transp., Inc. v. Williams*, 406 F.3d 667, 673 (D.C. Cir. 2005) (citing *United States v. Locke*, 529 U.S. 89, 107 (2000) (concluding Congress had legislated in international maritime commerce "from the earliest days of the Republic").

> hazardous material moving across state lines was on the increase. S. Rep. No. 93-1192, at 7 ("The amount of hazardous material being transported in the United States increases every year."). Predictably, accidents involving such materials were concomitantly on the rise. S. Rep. No. 93-1192, at 7 ("The increasing volume of dangerous products in commerce has brought with it an increasing number of accidents."). To address these concerns, the Secretary of Transportation requested greater oversight capability. *See* S. Rep. No. 93-1192, at 7.[93]

In response, Congress enacted the HMTA in 1975. With it, Congress intended to create a uniform federal program for the safe transportation of hazardous materials. But this uniformity did not come all at once. As noted by the Third Circuit,

> [W]hen it was initially enacted, the HMTA preemption clause contained only a general inconsistency standard—state or local "requirement[s]" were preempted if "inconsistent" with federal regulations. Transportation Safety Act of 1974, Pub. L. 93-633, § 112, 88 Stat. 2156. This, thought the Senate Committee on Commerce, would serve "to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation." S. Rep. No. 93-1192, at 37. The Committee was mistaken. Non-federal requirements continued to proliferate over the next two decades, leading Congress to overhaul—and significantly expand—the HMTA's preemptive scope.[94]

In 1990, Congress reexamined hazardous material transportation and enacted the Hazardous Materials Transportation Uniform Safety Act ("HMTUSA"), 49 U.S.C. App. §§ 1801-1819, substantially amending the HMTA to provide strict preemption standards.[95] In doing so, Congress gave a number of justifications, three of which are relevant here:

> [M]any States and localities have enacted laws and regulations which vary from Federal laws and regulations pertaining to the transportation of hazardous materials, thereby creating the potential for unreasonable hazards in other jurisdictions and confounding shippers and carriers which attempt to comply with multiple and conflicting registration, permitting, routing, notification, and other regulatory requirements . . .
>
> because of the potential risks to life, property, and the environment posed by unintentional releases of hazardous materials, consistency in laws and regulations governing the transportation of hazardous materials is necessary and desirable . . .
>
> in order to achieve greater uniformity and to promote the public health, welfare, and safety at all levels, Federal standards for regulating the transportation of hazardous materials in intrastate, interstate, and foreign commerce are necessary and desirable[.][96]

---

[93] *Roth v. Norfalco*, 651 F.3d 367, 370 (3d Cir. 2011).
[94] *Id.* at 378 (3rd Cir. 2011).
[95] *See Chlorine Inst. Inc. v. Cal. Highway Patrol*, 29 F.3d 495, 497 (9th Cir. 1994).
[96] Hazardous Materials Transportation Uniform Safety Act of 1990, Pub L. No. 101-615, § 2, 104 Stat. 3244, 3245 (1990).

Following the HMTUSA's enactment, state and local laws must not only be consistent with the HMTA, but they must also not interfere with the goals and purposes that motivated the enactment of the HMTA.[97]

Courts have applied this standard scrupulously in light of Congress's paramount goals of uniformity and safety that animated the passage of this more exacting preemption standard.[98] For example, in *Chlorine Institute, Inc. v. California Highway Patrol*, the Court invalidated a California law requiring that shipments of chemicals such as chlorine and oleum be escorted by highway patrol vehicles to the point of unloading, while also imposing various requirements for those vehicles.[99] The Court acknowledged that "state regulations pertaining to an area already regulated under the [hazardous materials regulations] pose an obstacle to the goal of uniform national standards for the transportation of hazardous materials."[100] It also held that because the state's regulations "significantly exceed the federal requirements for the shipment of chemicals… 'they create a separate regulatory regime for these activities.'"[101] Where a second regulatory regime existed, uniformity was undermined to the point of violating the HMTA's preemption provisions.

The Washington Law plainly exceeds the federal requirements for the shipment of crude oil. Nowhere do the HMTA or Hazardous Materials Regulation ("HMRs") impose vapor pressure standards for crude oil, just as they did not require that highway patrol vehicles escort chemicals to the unloading point as in *Chlorine Institute.* With the enactment of the Washington Law, two regulatory regimes exist, with the Washington regime being stricter than the federal regime. Tank cars filled with properly classified hazardous materials that comply with the federal standards will be prevented from unloading in Washington, which cannot possibly comport with the HMTA's uniformity goals.

There are limited options for shippers and consignees of hazardous materials to comply with the Washington Law and each of those options increase the time and distance over which the hazardous materials must travel, and therefore increase the statistical risk of hazardous material transportation incidents. We discuss each of these alternatives below.

A. Pretreatment of Bakken Crude

[97] *See* 49 U.S.C. § 5125.
[98] *See Chlorine Inst.*, 29 F.3d at 496 ("We therefore must determine if the CHP regulations pose an obstacle to the accomplishment of the HMTUSA's goal of uniform national regulation. If they do create such an obstacle, they are preempted under the Act."); *Colorado Pub. Util. Comm'n v. Harmon*, 951 F.2d 1571, 1580 (10th Cir. 1991) ("In enacting new preemption standards, Congress expressly contemplated that the Secretary would employ his powers to achieve safety by enhancing uniformity in the regulation of hazardous materials transportation."); *CSX Transp. v. Pub. Util. Comm'n*, 901 F.2d at 501 ("We find it clear from [H.R.Rep. No. 1083, 93d Cong., 2d Sess.], and the legislative history behind it, that the purpose of the HMTA was to consolidate regulation of hazardous material transportation at the Secretarial level…"); *Jersey Cent.*, 772 F.2d at 1110.
[99] 29 F.3d at 497
[100] *Id.* (citing *S. Pac. Transp. Co. v. Pub. Serv. Comm'n of Nevada,* 909 F.2d 352, 358 (9th Cir. 1990)).
[101] *Id.* at 497-98.

Most Bakken crude oil transported into Washington state has a Reid Vapor Pressure ("RVP") higher than 9 psi.[102] Pretreatment of higher vapor pressure crude oil to lower its vapor pressure requires the removal of liquid petroleum gases and other "light-ends" contained in crude oil. This may be accomplished at a "topping refinery." Unfortunately, there are no topping refineries that are close to the Bakken reserves.[103] As such, pretreatment would require two separate movements of hazardous materials: the first from the well head to the topping refinery and the second from the topping refinery to the Washington-based refineries. These movements increase the time in transit and rail miles traveled, with the resulting concomitant increase in the risk of a transportation incident.

Moreover, as the pretreatment process removes flammable gases and natural gas liquids from crude oil, these component hazardous materials also will need to be transported.[104]

In addition, pretreating Bakken crude before sending it into Washington state is economically infeasible and likely would result in a modal shift or crude substitution, discussed below.

B. Alternate Modes of Transportation and Rerouting

As mentioned in the Application, rail shipments of crude oil above the 9.0 psi threshold will be prohibited from being loaded or unloaded within Washington's jurisdiction. Thus, without pretreatment as a viable option, the Washington Law would require utilizing alternative modes of transportation as described in the Application. Using these alternative means of transportation will add significant delay. These alternative means of transportation will also require that Bakken crude be transported for longer distances, and loaded and offloaded (*i.e.*, handled) more times than if the material traveled from North Dakota or Montana straight to the refineries in Washington state. This creates a convoluted compliance regime whereby consignees are incentivized to reroute their rail shipments to delivery points outside Washington where they will then be transloaded onto a barge or truck, resulting in increased handling, additional mileage, and unnecessary delays. For example, if a Washington-based refinery cannot receive Bakken crude directly by rail, it may, depending upon market conditions, consider routing that crude from North Dakota to the Gulf Coast (*e.g.*, Houston or Galveston), transloading the product onto a vessel, sending it through the Panama Canal and up to the refinery dock. This would increase the rail portion of the trip from 1,492 miles (Epping, ND to

---

[102] *See generally* American Fuel & Petrochemical Manufacturers, A Survey of Bakken Crude Oil Characteristics Assembled for the U.S. Department of Transportation (May 14, 2014), https://www.afpm.org/uploadedFiles/Content/documents/Survey-of-Crude-Oil-Characteristics.pdf.

[103] *See* https://www.eia.gov/state/?sid=ND. Given North Dakota has only two active refineries representing 90,000 bpd capacity and these refineries are operating at utilization rates in the mid-90% range, AFPM believes that pretreatment would require significant diversion, if feasible at all.

[104] AFPM has previously commented on the substantial costs related to pretreatment and the lack of safety benefits associated with vapor pressure regulations. *See* AFPM comments on Docket No. DOT-OST-2017-0069, "Notification of Regulatory Review" pages 11-15 submitted December 1, 2017, https://www.afpm.org/uploadedFiles/Content/Policy_Positions/Agency_Comments/AFPM_Comments_DOT_Reg_Review_12.1.17.pdf; AFPM comments on Docket No. PHMSA-2016-0077, "Advance Notice of Proposed Rulemaking, Hazardous Materials: Volatility of Unrefined Petroleum Products and Class 3 Materials" https://www.afpm.org/uploadedFiles/Content/Policy_Positions/Agency_Comments/AFPM%20Comments%20on%20PHMSA%20ANPRM%20for%20CBR%20Volatility_19%20May%202017.pdf.

Cherry Point, WA) to 1,837 miles (Epping, ND to Houston, TX),[105] necessitate additional handling (*i.e.*, transloading) of hazardous materials, add the risk associated with the marine transportation leg of the trip, and would result in a significant amount of additional time that the crude oil is in transportation. As such, the Washington Law stands as an obstacle to the primary purpose of the HMTA—reducing the risk of a hazardous materials transportation incident. PHMSA has consistently held that increased mileage, transit time, and delay conflicts with the HMRs, which state that "[a]ll shipments of hazardous materials must be transported without unnecessary delay, from and including the time of commencement of the loading of the hazardous material until its final unloading at destination."[106]

Another option potentially available to Washington refineries would be to transport crude oil by truck. Under this alternative scenario, a hypothetical refinery that utilizes 65,000 barrels of Bakken crude each day, would require approximately 430 truck shipments to replace the crude oil it currently receives by rail. In addition to the risk profile associated with this modal shift, significant delays would result, as refineries do not have the infrastructure necessary to stage and offload large numbers of tank trucks each day.

In several instances, PHMSA has invalidated laws that have delayed the process of getting hazardous materials to their destination. In PD-28, Smithtown, New York mandated that all trucks delivering liquified petroleum gas in the town obtain permits and certificates of fitness from the town based on passing a full safety inspection of the vehicle and approval of the Fire Marshal.[107] Appointments for inspection were made one month in advance and no more than four trucks could be scheduled within a 30-minute time frame.[108] Inspections usually took 15 to 20 minutes for bulk carriers.[109]

Despite this rather short delay, PHMSA invalidated the local law as applied to out-of-state carriers, stating that "[t]he impracticability of scheduling an inspection in advance of knowing whether a particular truck will be needed to make a delivery within the inspecting jurisdiction creates unnecessary delay - not the time that the inspection actually takes to be conducted."[110] Furthermore, PHMSA held that a state's annual inspection requirement, as applied to vehicles operating within the state exclusively, is "presumptively valid" because "it

---

[105] *See* PC Miler Rail.

[106] 49 C.F.R. § 177.800(d); *see* Preemption Determination No. PD-22(R); New Mexico Requirements for the Transportation of Liquified Petroleum Gas, 67 Fed. Reg. 59,396, 59,400 (Sept. 20, 2002) ("The State cannot require a permit or inspection for trucks that are not based within the local jurisdiction if the truck must interrupt its transportation of hazardous materials for several hours in order for an inspection to be conducted."); Preemption Determination No. PD-4(R) California Requirements Applicable to Cargo Tanks Transporting Flammable and Combustible Liquids, 58 Fed. Reg. 48,933, 48,941 (Sept. 20, 1993) (holding that even delays of hours are "unnecessary, because it substantially increases the time [hazardous materials] are in transportation, increasing exposure to the risks of hazardous materials."); State of Rhode Island Rules and Regulations Governing the Transportation of Liquefied Natural Gas and Propane Gas Intended To Be Used By a Public Utility; Inconsistency Ruling (IR-2), 44 Fed. Reg. 75,566, 75,571 (Dec. 20, 1979) ("Delay is incongruous with safe transportation and safe transportation is "[t]he manifest purpose of the HMTA.").

[107] *See* Preemption Determination No. PD-28(R); Town of Smithtown, New York Ordinance on Transportation of Liquefied Petroleum Gas, 67 Fed. Reg. 15,276, 15,277-78 (Mar. 29, 2002).

[108] *See id.* at 15,278.

[109] *See id.*

[110] *Id.* at 15,279.

would not create the potential for delays associated with entering the State or *being rerouted around the State*."[111] However, the potential for rerouting vehicles and the associated delays was enough to invalidate the permitting scheme as applied to out-of-state vehicles.

Here, as in PD-28 and PD-37, there is huge potential for delay as producers of Bakken crude are forced to divert petroleum crude to avoid the prohibited unloading at a facility located in Washington state. The *potential* for delay was enough to invalidate state regulations as applied to out-of-state carriers in both of those instances. But here, delay is inevitable. Washington has essentially given Bakken producers two options: reroute their crude oil to facilities outside of the state where it can then be sent to Washington by barge or send it elsewhere, likely the gulf coast.[112] Not only would this require more time spent in transit, but it entails more distance travelled, a concern that HMTA sought to remedy by requiring the uniform regulation of hazardous materials transportation.

AFPM represents the oil refineries in Washington state that are directly impacted by the Washington Law. These refineries have begun investigating potential alternatives to receiving Bakken crude by rail. Each of these alternatives result in an increase in the mileage and time hazardous materials are in transportation. In addition to the risk associated with the changes to rail routes, additional risk would be created by transloading and barge or truck shipments. Washington has not quantified the potential risks associated with increased time, increased distance, and different modes of transport, indicating only a superficial interest in the actual safety implications of its preempted law and revealing the true purpose and motive: to restrict Bakken and other types of crude oil from being brought to market.

III. Washington's Regulations are Not Substantively the Same as the HMTA and the HMRs.

The HMTA also preempts State laws or regulations that are not "substantively the same" as the HMTA and the HMRs in five "covered subjects" of § 5125(b).[113] If the state law or

---

[111] Preemption Determination No. PD-37(R); Hazardous Materials: New York City Permit Requirements for Transportation of Certain Hazardous Materials, 82 Fed. Reg. 31,394 (July 6, 2017) (invalidating a New York City permitting program as applied to out of state vehicles on the same basis) (emphasis added).

[112] *Note* if Bakken crude oil producers can no longer ship to Washington by rail, they may choose to export their product. This would entail rerouting the hazardous material to either the east coast or gulf coast and then transloading it to a vessel for shipment overseas. If Bakken crude is no longer available to the Washington refineries, those refineries may have to import oil from overseas and unload it at a marine terminal. The circular nature of North Dakota or Montana exporting their crude overseas and then Washington state refineries replacing that with crude imported into Washington state from overseas would represent an unnecessary direct increase in hazardous materials transportation.

[113] 49 U.S.C. §5125(b). These five covered subjects, as listed in § 5125(b)(1) are as follows: (A) the designation, description, and classification of hazardous material; (B) the packing, repacking, handling, labeling, marking, and placarding of hazardous material; (C) the preparation, execution, and use of shipping documents related to hazardous material and requirements related to the number, contents, and placement of those documents; (D) the written notification, recording, and reporting of the unintentional release in transportation of hazardous material and other written hazardous materials transportation incident reporting involving State or local emergency responders in the initial response to the incident; (E) the designing, manufacturing, fabricating, inspecting, marking, maintaining,

regulation "does not conform in every significant respect to the federal regulatory scheme" as it relates to these covered subjects, it is preempted.[114] Plainly, if a regulation imposes "different requirements than the federal regulation, [it] is not 'substantively the same.'"[115] As the Third Circuit observed, § 5125(b) is "a robust preemption provision that leaves little, if any, room for non-federal regulation."[116]

PHMSA has stated the standard even more clearly. For the covered subjects of §5125(b), "uniformity is paramount, and no material deviation is permitted."[117] Likewise, PHMSA has held that for a regulation to be "substantively the same" as a federal regulation, the only allowable changes are those that are "editorial" or "de minimis."[118]

Congress addressed the five covered subjects during its deliberation on amendments to the HMTA. The statutory text and legislative history confirm Congress's clear purpose to "draw the Federal Government's now-fragmented regulatory and enforcement power over the movement of hazardous materials in commerce into one consolidated and coordinated effort under the direction of the Secretary of Transportation."[119] As stated on the House floor:

> Consistency in regulations pertaining to [packing, repacking, handling, labeling, marking and placarding] are [sic] needed to promote safety at all stages of hazardous materials transportation. Conflicting requirements for any of these subjects will confuse all who come into contact with hazardous materials, including shippers, carriers, and other handlers of such materials in transit.[120]

The concern persisted, and in 2005 Congress readopted the HMTA's strict preemption standards for these five covered subjects.[121]

Courts have taken a strict approach to HMTA preemption involving these covered subjects. For example, in *Southern Pacific Transportation Co. v. Public Service Commission of Nevada*, the Ninth Circuit invalidated Nevada's regulations requiring carriers of hazardous materials to obtain annual state permits before loading, unloading, shipping, and storage of their materials.[122] To obtain a permit, carriers had to submit numerous details related to loading and

---

reconditioning, repairing, or testing a package, container, or packaging component that is represented, marked, certified, or sold as qualified for use in transporting hazardous material in commerce.

[114] *Roth*, 651 F.3d at 377 (quoting 49 C.F.R. § 107.202(d)); *see Chlorine Inst.*, 29 F.3d at 496 (concluding that state regulation was "not substantively the same as" the relevant HMR requirement when it imposed a condition not required by federal regulation).

[115] *Harmon*, 952 F.2d at 1578.

[116] *Roth*, 651 F.3d at 379.

[117] Preemption Determination No. PD-7(R) Maryland Certification Requirements for Transporters of Oil or Controlled Hazardous Substances, 59 Fed. Reg. 28,913 (June 3, 1994); Preemption Determination No. PD-6(R), Michigan Marking Requirements for Vehicles Transporting Hazardous and Liquid Industrial Wastes, 59 Fed. Reg. 6,186 (Feb. 9, 1994) ("In prescribing the 'substantively the same' standard, Congress has concluded as a matter of law that in the area of covered subjects, uniformity is paramount and Federal regulation shall prevail.").

[118] PD-28(R), 67 Fed. Reg. at 15,2777.

[119] S. Rep. 93-1192, at 1; H.R. Rep. No. 444, 101st Cong., 2d Sess. at 34.

[120] H.R. Rep. No. 444, 101st Cong., 2d Sess. at 34.

[121] *See Roth*, 651 F.3d at 371; Hazardous Materials Transportation Safety and Security Reauthorization Act of 2005, Pub. L. No. 109-59, § 7101, 119 Stat. 1144, 1891 (2005).

[122] 909 F.2d at 354.

unloading the hazardous materials, such as a map of the proposed site for loading and unloading, a report identifying "each switch, siding, spur or branch of track at the site," and an outline of the procedures to be used in the loading and unloading of the material.[123] The court, enumerating the already existing regulations as they related to loading and unloading, stated that the Nevada regulations, by adding additional requirements, created a "separate regulatory regime" that confused the uniform, national regulatory scheme.[124]

Hazardous materials classification and hazardous materials handling restrictions are also listed as "covered subjects" that leave no room for state regulation. The Washington law imposes crude oil volatility standards that affect both the classification and handling of petroleum crude oil, making it subject to heightened preemption standards as both are covered subjects under § 5125(b)(1).[125] Only additional state requirements that strictly conform with the "substantively the same" standard will be upheld. This burden is substantial, as the Ninth Circuit has recognized that "the extent of federal regulation in the area of transportation, loading, unloading and storage of hazardous materials is comprehensive."[126]

But the Washington vapor pressure standard is not substantively the same as the HMRs' requirements. The HMRs classify crude oil as a Class 3 flammable liquid, and specify the labeling, packing, handling, and other requirements that apply to its transportation.[127] Where transportation is forbidden because shipment would be too dangerous and "may not be offered for transportation or transported," column 3 of the Hazardous Materials Table indicates the material is "forbidden."[128] The Washington Law effectively reclassifies crude oil with a vapor pressure greater than 9 psi as forbidden, yet the HMRs permit the transportation of such crude oil and the HMRs do not impose different requirements on crude oil based on its vapor pressure, even though PHMSA clearly could have made such classifications. Therefore, the Washington Law, which imposes different classifications on crude oil, is preempted because it is not substantively the same as the HMRs' classification.

Similarly, the HMRs address the handling of crude oil in transportation.[129] Nowhere do these federal regulations restrict handling such as loading or unloading based on the crude oil's vapor pressure.[130] Likewise, the HMRs' instructions for unloading hazardous materials—a list of specific, detailed requirements covering nearly every aspect of the unloading process—are equally devoid of vapor pressure standards.[131] Therefore, the Washington Law goes well beyond the requirements set in the HMRs by imposing different handling standards than those prescribed

---

[123] *Id.*
[124] *Id.* at 358. *See also Roth*, 651 F.3d 367 (rejecting a claim that a tank car manufacturer should have incorporated a different pressure relief valve in its tank car design).
[125] *Roth*, 651 F.3d at 375; *see* Engrossed Substitute Senate Bill 5579, 66th Leg., 2019 Reg. Sess. (Wash. 2019).
[126] *S. Pacific*, 909 F.2d at 257 (9th Cir. 1990) (quoting *Consolidated Rail Corp. v. Bayonne*, 724 F. Supp. 320, 330 (D. N.J. 1989)).
[127] 49 C.F.R. § 172.101, Hazardous Materials Table.
[128] 49 C.F.R. § 172.101(d)(1).
[129] *See* 49 U.S.C. § 174.300.
[130] *See id.*
[131] *See* 49 U.S.C. § 174.67.

by the HMTA or HMRs. To reiterate, if a regulation imposes "different requirements than the federal regulation, [it] is not 'substantively the same."[132]

Establishing classification and handling requirements for crude oil based on its vapor pressure is the exclusive domain of PHMSA. Indeed, prior to 1990, 49 C.F.R. § 173.119 distinguished between flammable liquids based on flash point, boiling point, and *vapor pressure*. § 173.119(d) through (f) set standards for shipments of flammable liquids based on the vapor pressure at 100°F.[133] Packaging requirements differed based on whether the flammable liquids were (a) at or below 16psi; (b) above 16 and no higher than 27 psi; or (c) above 27 but below 40 psi.[134] Flammable liquids in the latter two categories each had specific tank car requirements, with the third category only authorized for transport in certain pressure cars.[135] But today, the HMTA and HMRs prescribe different means to distinguish between flammable liquids regarding their classification, handling, and other transportation requirements. That decision should not be upset by the unilateral actions of a state.

The Washington Law, like the Nevada permitting scheme in *Southern Pacific*, establishes a secondary regulatory regime that bifurcates compliance standards – once compliance with federal requirements is achieved, transporters of Bakken crude then face the task of complying with the heightened Washington Law requirements. These requirements are by no means "de minimis" or "editorial" because they require that Bakken crude producers engage in costly and inefficient pretreatment processes or rerouting schemes to comply.[136] The Washington Law "create[s] a separate regulatory regime for [loading and unloading Bakken crude oil], fostering confusion and frustrating Congress's goal of developing a uniform, national scheme of regulation."[137] The "patchwork" of conflicting jurisdictional mandates feared by Congress will become a reality if the Washington Law is allowed to stand.[138]

IV. The Washington Law is a De Facto Prohibition of Bakken Crude Oil.

Two points demonstrate conclusively that Washington's law is not in fact designed to reduce the number of combustion events within its borders and increase safety, as is claimed, but is instead a backdoor attempt to prohibit Bakken crude from being refined within the state.

First, that this law is meant to prohibit Bakken crude from entering Washington refineries or marine terminals for export is evident by the simple fact that the law prohibits *unloading* crude oil with an RVP above 9.0 psi within the state—restrictions that will not prevent derailments of crude oil trains or mitigate the damage that such derailments cause. Serious,

---

[132] *Harmon*, 952 F.2d at 1578.
[133] *See* 49 C.F.R. § 173.119(c) (1989) ("Flammable liquids for which other special packing requirements are not prescribed in this part, must be shipped, depending upon their *Reid vapor pressures* as described in paragraphs (d) to (i) of this section." (emphasis added)).
[134] *See* 49 C.F.R. § 173.119(d)-(f) (1989).
[135] *See* 49 C.F.R. § 173.119(d)-(f) (1989); *see also* Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains, 79 Fed. Reg. 45,015, 45,026 (Sept. 30, 2014).
[136] PD-28(R), 67 Fed. Reg. at 15,277.
[137] *Chlorine Inst.*, 29 F.3d at 498 (quoting *S. Pacific*, 909 F.2d at 358)).
[138] *Roth*, 651 F.3d at 377.

large-scale harm related to the transportation of hazardous materials by rail typically does not occur during the loading or unloading phase of the materials' journey. Indeed, the factual predicate underlying the Washington Law was to address multicar derailments. That the Washington Law only regulates unloading and exempts *transportation* of high-vapor pressure crude through its jurisdiction shows the true motivation of this law is to prohibit the use of Bakken crude in Washington refineries.

Second, the Washington Law singles out Bakken crude for regulation while ignoring that there are ample Class 3 liquids with low vapor pressures that present similar ignition risks.[139] In some cases, the vapor pressure of Class 3 flammable liquids is very low (*e.g.*, 2.0 psi), yet, like every other flammable liquid, they will burn. That other commonly used flammable liquids with lower vapor pressures present similar ignition risks, yet are unregulated by the Washington Law, further suggests that vapor pressure is a red herring.

Because the Washington Law is designed to prohibit the rail transportation of Bakken crude oil, the law will likely affect shipping routes and modes, as we've explained above, which would lead to lengthened transportation routes, duration, and delays. This decreases safety and increases the risk of incident *during transportation*, which is squarely within the domain of the HMRs as a transportation function.[140] Furthermore, the HMRs apply to pre-transportation functions, which include "[d]etermining the hazard class of a hazardous material,"[141] yet the Washington Law reclassifies crude oil into prohibited and permitted classes for rail transportation by enacting its de facto ban on Bakken crude oil. Therefore, the effect of the Washington Law provides multiple grounds for finding that the law must be preempted.

V. The Washington Law is Based on Incorrect Assumptions.

PHMSA has previously confronted the issue of imposing a nationwide vapor pressure standard and has not implemented vapor pressure requirements, which should not be surprising given the lack of scientific support for a 9.0 psi vapor pressure limit. In 2017, PHMSA published an advance notice of proposed rulemaking soliciting comments on a petition by the New York Attorney General that PHMSA implement an RVP limit of 9.0 psi or less for all crude oil transported by rail, the standard that Washington now seeks to impose within its

---

[139] American Fuel & Petrochemical Manufacturers, Comment on the Pipeline and Hazardous Materials Safety Administration's Advance Notice of Proposed Rulemaking, "Hazardous Materials: Volatility of Unrefined Petroleum Products and Class 3 Materials" at 3-4 (May 19, 2017), https://www.regulations.gov/document?D=PHMSA-2016-0077-0071.

[140] 49 C.F.R. § 171.1 ("Regulations prescribed in accordance with Federal hazardous materials transportation law shall govern safety aspects, including security, of the transportation of hazardous materials."); *id.* at § 171.1(c) ("Transportation of a hazardous material in commerce includes the following: (1) Movement. Movement of a hazardous material by rail car."). Even if the regulation, contrary to fact, did not regulate movement, it regulates loading and unloading incidental to movement of a hazardous material, which is also squarely within the HMRs. 49 C.F.R. § 171.1(2)-(3). While § 171.1(d) excludes "unloading of a hazardous material" from a rail car by the consignee's personnel after the carrier's personnel leave, Washington's law still regulates unloading performed by or in the presence of carrier personnel, which is explicitly included as "[u]nloading incidental to movement" under § 171.1(c)(3), and goes beyond merely regulating unloading because the law prohibits unloading based on the vapor pressure of crude oil, which necessarily regulates the handling of hazardous materials during transportation.

[141] 49 C.F.R. § 171.1(b)(1).

jurisdiction.[142] Proponents of the regulatory amendment cited the high vapor pressure of Bakken crude oil, but were unable to establish that its vapor pressure increases the likelihood or severity of crude oil releases during a derailment.[143]

Washington erroneously claims that its regulation is necessary to enhance safety; however, its decision to regulate only those trains that load or unload within the state exempts the lion's share of the "problem" it purports to address and is not supported by data or research. On August 23, 2019, the DOE, in coordination with DOT and Transport Canada, released a technical report of recent research on the thermal characteristics of different types of crude oil.[144] This study performed by Sandia National Laboratories ("Sandia Study") was required by Congress under the Fixing America's Surface Transportation Act or FAST Act and provides a number of findings related to the vapor pressure of crude oil.

While it is well known that the RVP of petroleum crude oil in transportation has no impact on the frequency of derailments, the Sandia Study assessed the consequences of derailments by researching the physical, chemical, and combustion characteristics of crude oils with varying vapor pressures. Specifically, the Sandia Study examined how crude oils with varying vapor pressures behave in pool fires and fireball testing. The study concluded "vapor pressure is not a statistically significant factor" affecting the outcomes of a pool fire or fireball test. Therefore, the results of the Sandia Study do not support "creating a distinction for crude oils based on vapor pressure with regards to combustion events." Put simply, the Sandia Study finds that RVP does not have a statistically significant impact on the consequences of a derailment and that delineating requirements based on the RVP of flammable liquid is not supported by data or research.

It is clear from the Sandia Study that Washington's attempts to regulate the transportation of petroleum crude oil based on its RVP would not enhance safety and therefore does not fulfill its stated purpose. This further supports North Dakota and Montana's claims that the Washington Law stands as an obstacle to the HMTA purposes and is preempted. The Sandia Study also confirms that DOT, specifically PHMSA, does not have the factual predicate to approve New York's petition to regulate the RVP of petroleum crude oil in transportation and PHMSA should move quickly to deny that petition and withdraw the advance notice of proposed rulemaking related to that petition.[145]

---

[142] *See* Hazardous Materials: Volatility of Unrefined Petroleum Products and Class 3 Materials, 82 Fed. Reg. 5499 (Jan. 18, 2017).

[143] *See* National Resources Defense Council, Comment Letter on Proposed Rule: Hazardous Materials: Volatility of Unrefined Petroleum Products and Class 3 Materials, at 6-7 (May 19, 2017), https://www.regulations.gov/document?D=PHMSA-2016-0077-0077; North Dakota Petroleum Council, Comment Letter at 4.

[144] *See* Luketa et al., Pool Fire and Fireball Experiments in Support of the US DOE/DOT/TC Crude Oil Characterization Research Study, Sandia Nat'l Labs. (Aug. 2019), https://www.osti.gov/servlets/purl/1557808.

[145] See Docket No. PHMSA-2016-0077, "Hazardous Materials: Volatility of Unrefined Petroleum Products and Class 3 Materials (HM-251D)", 82 Fed. Reg. 5499, published January 18, 2017, https://www.federalregister.gov/documents/2017/03/21/2017-05488/hazardous-materials-volatility-of-unrefinedpetroleum-products-and-class-3-materials.

Numerous other sources suggest that volatility, if relevant at all, is insignificant in increasing the harm that arises from fires involving the transportation of crude by rail. For example, National Transportation Safety Board Chairman Christopher Hart has stated that the amount of product released is the crucial factor in determining the extent of the damage and that "accident investigation experience … has not indicated that volatility is a significant issue."[146] Similarly, a DOE literature review found no link "between crude oil properties and the likelihood or severity of a fire caused by a derailment."[147]

In fact, there are a number of other Class 3 flammable liquids that Washington is not seeking to regulate that have vapor pressure lower than 9.0 psi and that can lead to severe consequences upon release.[148] A far superior indicator of the extent of a combustion event's harm is the flammability of the released substance.[149] Vapor pressure is, if not wholly irrelevant, insignificant to this determination.

VI. Conclusion

As AFPM has shown, the Washington Law results in the diversion and delay of hazardous materials in transportation and therefore constitutes an obstacle to the HMTA.

Furthermore, the Washington Law creates a unique state-based hazardous materials classification and directly regulates the handling of hazardous materials in transportation in ways that differ from the HMRs. These "covered subjects" leave no room for non-federal regulation except in "editorial" or "de minimis" ways. A law that forces producers to reroute their product through neighboring states or engage in uneconomical pretreatment processes cannot be considered "de minimis" or "editorial" and is therefore preempted.

On these bases, AFPM supports North Dakota and Montana's preemption determination Application. AFPM trusts that PHMSA will recognize the Washington Law's lack of conformity with federal law and urges the PHMSA to find the law preempted.

Respectfully submitted,

Richard Moskowitz
General Counsel

---

[146] *Id*. *See also* Patrick C. Miller, *NTSB Chairman: Bakken crude isn't more volatile*, North American Shale (Sept. 30, 2015), http://northamericanshalemagazine.com/articles/1311/ntsb-chairman-bakken-crude-isnundefinedt-more-volatile.

[147] David Lord et al., Literature Survey of Crude Oil Properties Relevant to Handling and Fire Safety in Transport: DOT/DOE Tight Crude Oil Flammability and Transportation Spill Safety Project, Sandia National Laboratories (Mar. 2015), https://prod-ng.sandia.gov/techlib-noauth/access-control.cgi/2015/151823.pdf.

[148] *Id*. at 10-11. Some of these liquids include ethanol, certain isomers of pentane, iso-octane, benzene, toluene, and the xylene isomers.

[149] *See id.* at 10.

I certify that copies of these comments have been sent to the Attorneys General listed below:

Wayne Stenehjem
Attorney General
The State of North Dakota
Office of the Attorney General
600 East Boulevard Avenue
Department 125
Bismarck, ND 58505-0040

Tim Fox
Attorney General
The State of Montana
Office of the Attorney General
Justice Building, Third Floor
215 North Sanders
Helena, MT 59620-1401

Richard Moskowitz