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Organization: Missoula Air Quality Advisory Council

State: Montana

Agency: Surface Transportation Board

Initiative: Tongue River Railroad

Submission Text

Please see the attached letter from the Missoula Air Quality Advisory Council commenting on the Tongue River Railroad Draft EIS.



Missoula City-County Health Department

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Ken Blodgett
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423-2001
ATTN: Office of Environmental Analysis
Docket No. 30186

July 2, 2015

Re: The Tongue River Railroad Draft Environmental Impact Statement and the Rationale for Considering Air Quality Impacts on Missoula City and County.

Dear Mr. Blodgett:

The Surface Transportation Board's (STB) Office of Environmental Analysis (OEA) recently published a Draft Environmental Impact Statement (DEIS) for construction and operation of the proposed Tongue River Railroad (TRR) in southeastern Montana. We believe that construction and operation of the TRR may have significant impacts to air quality in the City of Missoula and Missoula County. By inappropriately assuming there will be no increase in western train traffic, the DEIS for this proposed construction inadequately considers these impacts. On behalf of the people of the County of Missoula, the Missoula City-County Air Quality Advisory Council respectfully requests that the OEA consider our questions and concerns regarding possible air quality impacts to Missoula from the construction of the TRR.

The Missoula Air Quality Advisory Council represents a broad array of technical experts, business and industry professionals and citizens-at-large and is charged with providing consultation to the Missoula City-County Air Pollution Control Board on matters pertaining to the Missoula City-County Air Pollution Control Program for the purpose of improving air quality in the City and County.

1.0 BACKGROUND

Missoula (2013 city population: 69,122) lies approximately 650 rail miles north and west of the proposed TRR construction. The Burlington Northern Santa Fe Railroad (BNSF), via its local carrier, Montana Rail Link (MRL), bisects Missoula City and County with an east-west rail line, reconnecting with BNSF at Sandpoint, Idaho, and continuing west to Puget Sound and the Pacific Ocean. The route cuts through several Missoula County communities, including Clinton, Donovan Creek, Turah, Milltown, East Missoula, the City of Missoula, Frenchtown, Huson and Alberton.

North of the Clark Fork River abutting the Missoula downtown, a large rail and switching yard services about 16.9 trains per day (personal communication, Jim Lewis, Chief Sales/Marketing and Information Officer, MRL, Missoula). The City of Missoula has two at-grade crossings and two rail overpasses. Outside of the city, there are 10 additional at-grade crossings bisecting communities along the rail line.

Air quality in Missoula is a matter of concern. Missoula is located in a bowl surrounded by hills and mountains, and has frequent winter air inversions that trap pollutants near the ground. This buildup of pollutants can result in air quality that becomes hazardous for human health - particularly sensitive groups. Missoula was designated non-attainment for PM₁₀ upon the promulgation of the Clean Air Act Amendments in 1990 and has not yet been removed from the list of PM₁₀ non-attainment areas. In addition, fine particulate (PM_{2.5}) levels in Missoula have come very close to exceeding the PM_{2.5} National Ambient Air Quality Standard (NAAQS). The 24-hour PM_{2.5} NAAQS is 35 µg/m³. In 2007, Missoula's 24-hour design value for PM_{2.5} was 35.2 µg/m³. Missoula avoided being designated a nonattainment area for PM_{2.5} by rounding down and has a limited capacity to assimilate additional PM_{2.5} emissions. Because of the precarious situation concerning air pollution in Missoula, we are concerned about the damaging effects of the increased coal train traffic that could be caused by construction and operation of the TRR.

Note: Where used, "Tongue River coal" refers to Otter Creek coal plus two possible "induced" mines, Poker Jim/O'Dell and Canyon Creek.

2.0 TRR COAL TRAINS ARE LIKELY TO COME THROUGH MISSOULA

According to Appendix C of the draft EIS (DEIS) there are very few scenarios in which coal trains from the Tongue River Railroad will travel through Missoula, and even fewer in which those coal trains are considered "additional" train traffic. Despite this assertion, there is compelling evidence that TRR coal trains are likely to pass through Missoula.

Arch Coal intends to export coal from Otter Creek mine to the Asian market. Arch Coal, through its wholly-owned subsidiary, Ark Land Company, owns the lease for the Otter Creek coal tracts and, through another wholly-owned subsidiary, Otter Creek Coal, LLC, is applying for a permit to open the mine at Otter Creek. Arch also owns 34.68% of the Tongue River Railroad Company (TRCC) and a 38% interest in a proposed export terminal at Longview, Washington. Upon obtaining its ownership interest in the Longview coal export terminal, Arch Coal made the following statement in a 2011 news release: "With our superior operating position in the Powder River Basin (meaning Otter Creek)...we have the capability to service growing coal demand in Asia, the world's fastest-growing coal market." (Arch Coal news release: *Arch Coal Acquires Entity Interest in West Coast Coal Terminal*. January 12, 2011)

Aside from Arch's own statements and activities related to the export of Otter Creek coal, the weak domestic market for Otter Creek coal is additional evidence that coal

shipped by the TRR will travel through Missoula and Missoula County. The domestic market is quickly contracting, while international coal demand is growing. According to the Energy Information Administration, coal has declined from 49.7% of U.S. electricity generation in November 2008 to just 36.7% in January 2015. Based on this evidence, it is reasonable to assume that not only will the western route be used, but there will also be a substantial increase in coal export via this route.

The DEIS for the Tongue River Railroad assumes robust demand for Otter Creek coal in the United States but ignores the fact that Otter Creek coal is particularly high in sodium. High-sodium coal causes buildup in power plant boilers (slagging) which makes high-sodium coal less domestically marketable than its low-sodium counterparts. A report written by Tom Power for Northern Plains Resource Council detailed the limited market for Otter Creek coal in the Upper Midwest. At the time, only 10 plants within the competitive area for Otter Creek could take their high-sodium coal. Today, one of those plants is slated for closure, and three are converting to natural gas electricity generation, leaving only six that might choose to buy Otter Creek coal.

The Office of Environmental Assessment (OEA) "cannot predict the exact level of Tongue River coal production and rail traffic due to economic, regulatory and access uncertainties. However, the OEA concluded that annual coal production of at least 20 million tons is likely and rail traffic of 7.4 trains per day or more can be expected if the TRR is constructed." (DEIS, Appendix C-16) Because Arch coal can send this west for export if it chooses, those 7.4 trains per day or more could be passing through Missoula. Furthermore, if additional mines are developed in the project area and if new export terminals in the Pacific Northwest are constructed, then OEA predicted that rail traffic could be as high as 18.6 trains per day (for build alternatives going north) or 26.7 trains per day (for build alternatives going south) by the year 2030 (DEIS, Q&A-3).

Question 2.0(a): Considering the above statements that underscore the high probability that TRR coal trains will take the western route toward export terminals in the Pacific Northwest, when will the STB hold public hearings for the project along the western route? More specifically, when will STB hold a public hearing in Missoula County?

Question 2.0(b): The DEIS assumes there will be zero additional coal trains going west. Does this also assume zero additional tonnage of coal freight and/or zero additional railcars carrying coal along the western route?

Comment 2.0(a): The maximum production/utilization scenario presented in the DEIS assumes the development and use of the proposed export terminals on the Pacific Coast and the Otter Creek Mine. This scenario also assumes there will be TRR traffic along the western route to deliver Otter Creek coal to the terminals. The connected actions between the mine, TRR and the Pacific Coast ports should therefore be comprehensively addressed in the final EIS.

3.0 THE MISSOULA PM10 NONATTAINMENT AREA TRIGGERS ANALYSIS

DEIS Q&A-4 states that any segment along the ultimate path of shipment (main haul lines) with more than eight new trains per day in attainment areas, or three trains per day in non-attainment areas, must be analyzed for environmental impacts that would occur due to increased rail traffic. As a non-attainment area, Missoula qualifies for such an analysis.

4.0 PUBLIC CONVENIENCE AND NECESSITY

Section 10901 c is a permissive licensing standard. It now directs the STB to grant construction proposals unless the STB finds the proposal “inconsistent with the public convenience and necessity.” The related footnote states: “Historically, a three-part test has been used to evaluate that term: whether an applicant is financially fit to undertake proposed construction and provide the proposed service, whether there is public demand or need for the proposed service, and whether the proposal is in the public interest and will not unduly harm existing services.” (DEIS p. S-1)

This proposal fails the three part test:

1. **Financial fitness.** Arch is experiencing serious financial difficulties and so may not meet the financial fitness test. Arch Coal Inc. received notice Friday, May 22, 2015, from the New York Stock Exchange that it is out of compliance with the market’s continued listing rule requiring at least \$1 per share averaged for 30 consecutive trading days. (St. Louis Business Journal, May 22, 2015). On May 26, 2015, a share price was \$0.66.
2. **Public demand.** Another reason Arch Coal might choose to export rather than ship to the Midwest is competition for the dwindling market for domestic coal. Some coal-fired power plants are converting to natural gas. More than 150 coal-fired power plants have closed or plan to close in the near future. No new domestic coal-fired power plants are planned.

Public interest and harm to existing services. In a diminishing market, competition between suppliers would likely drive down the price of coal, which is bad for producers. Also, under Section 10901 (Public Convenience and Necessity, OEA p. S-1) they are told not to “unduly harm existing services,” which may include suppliers. In addition, this project goes against public interest via the significant health and environmental concerns with the transport and burning of coal. The majority opinion is that there is a link between the greenhouse gases released by coal combustion and climate change (Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Stocker, T. F. et. al, (eds) IPCC, 2013). Climate change repercussions include increased wildfire severity and longer wildfire seasons. Severe wildfires harm the public by degrading air quality through smoke pollution, and in the case of Missoula and similar communities, threatening the watershed that serves as the public water supply.

Comment 4.0(a): The transport and burning of coal is inconsistent with the public convenience and necessity and threatens Missoula's air quality and water supply.

5.0 PROBLEMS WITH DISCLOSURE AND TRANSPARENCY

The public does not have access to the model that was used to determine coal market conditions, and therefore cannot thoroughly analyze the rail traffic conclusions. The "Integrated Planning Model" (IPM) used to inform the DEIS is proprietary and the agency fails to disclose the assumptions used in the model. The purpose of an EIS is to disclose a project's potential environmental impacts, but the public cannot confirm the validity of the projected outcome if it doesn't have access to the workings and assumptions that went into the model. The IPM predicted that this coal would be transported to power plants in the Midwest. It should be noted that the TRRC preferred northern alternative through Colstrip is a more direct and shorter route to Pacific terminals than the northern alternatives along the Tongue River toward Miles City. These alternatives would be closer to markets in the Midwest. Increased transport along the western route to proposed export terminals was dismissed in the DEIS, though the document mentions that exports (to Asia) are "reasonably foreseeable." (DEIS p. S-9) In Appendix C, p-14, the DEIS states that "Arch Coal might choose to export rather than sell domestically when there are opportunities to maximize profits over the suite of assets that include mines, railroads and export terminals." Exporting would mean passing through Missoula, and thus our concerns.

Question 5.0(a): What were the assumptions for the model and how were they used?

Question 5.0(b): How did the model reach the outcome that there will be no additional coal trains along the western route?

Comment 5.0(a): The final EIS for this project should include a sensitivity analysis that illustrates how assumptions used in the model affect the outcomes.

6.0 GENERAL HEALTH IMPACTS OF TONGUE RIVER RAILROAD CONSTRUCTION AND SHIPMENTS THROUGH MISSOULA.

The OEA has studied in detail the downline impacts on communities east of the Tongue River Railroad. It does not take into account the health impacts to Missoula City and County if the TRR is built and additional coal trains (loaded and empty) travel through the area. There are many concerns, including coal dust air pollution, airborne pollutants including diesel particulate matter, vehicle idling at on-grade crossings, potential delays of emergency vehicles, and railroad crossing accidents.

6.1 Crossing the threshold of three additional trains.

As mentioned earlier in this letter, the DEIS states that for non-attainment areas, the addition of three or more trains as a result of the project requires that the areas be

analyzed for health and environmental quality impacts of the project. (DEIS Q&A-4) Based on the information presented in Section 2.0, we believe it's highly likely that the TRR project will result in more than three additional trains passing through Missoula. The current DEIS is therefore incomplete because it does not include Missoula in its analysis.

Comment 6.1(a): The TRR EIS needs to include Missoula in its analysis for health and environmental impacts of the project.

Question 6.1(a): When will the Missoula analysis be conducted?

6.2 Coal Dust Air Pollution from Coal Trains.

The DEIS has detailed descriptions of the various forms of fugitive coal from coal cars, nuisance impacts and use of surfactants to bind the dust to the coal so that it doesn't blow away during transport. The DEIS found that in the project area, coal dust will not affect human health, though trace elements in coal of mercury, lead and arsenic are present (DEIS, Chapter 4, 14-18). The DEIS acknowledges this conclusion is not based on adequate research.

The lack of research should not lead to a conclusion of no impact to human health. Others have voiced their concerns about the dearth of research regarding coal shipment's health impacts. One hundred and sixty physicians in Whatcom County, Washington, near the proposed Cherry Point export terminal, published their heavily researched "Position Statement on Coal Shipments to Cherry Point, 2014" (attached) which covers many health impacts of coal shipments. In terms of coal dust, they wrote, "The epidemiological effects of respirable coal dust in lower concentrations (as opposed to those of coal miners), or exposure for short periods as can occur for individuals living in close proximity to transport lines are not well studied." They continue that BNSF has performed studies of fugitive dust emissions along their own rail lines but these data have not been made public. (Cornell Hatch Queensland Rail Study 2008, part of the Position Statement commentary).

Comment 6.2(a): A lack of research is not the same as a lack of concern. More research is necessary before STB can issue a conclusion of "no impact to human health."

In January 2015, Guy Melonas, a BNSF public relations specialist spoke at an Idaho Conservation League forum in Sandpoint, Idaho. He said a station to re-apply surfactant at the railyard in Tri-Cities, WA, is being built so surfactant can be applied before the coal train travels through the (very windy) Gorge.

Missoula County continues to have concerns regarding air pollution from coal dust and would like the following questions to be addressed in the final EIS:

Question 6.2(a): What percentage of surfactant effectiveness is lost in 400 or 600 miles after its application to coal at the loading site?

Question 6.2(b): How do different weather conditions (wind, rain) affect its effectiveness over time and distance?

Question 6.2(c): Is there a definitive, independent study on the presence of coal dust at various locations along rail lines for coal carriers?

Question 6.2(d): How does train speed affect coal dust fugitive emissions along the various populated sections of rail line in Missoula County?

6.3 Airborne pollutants, including diesel particulate matter.

The DEIS inadequately addresses the health concerns of cumulative exposure to particulate matter. The DEIS dismisses air quality health concerns because there are no projected National Ambient Air Quality Standard (NAAQS) exceedances associated with the project. However, particulate matter negatively impacts human health at concentrations lower than the NAAQS

Airborne particulate matter, especially the tiny PM_{2.5} or smaller, has been associated with decreased pulmonary function, increased childhood asthma attacks and hospitalizations and decreased life expectancy. (Gauderman, W., et al., 2004, The effect of air pollution on lung development from 10 to 18 years of age, New England J. Med 351(11): 1057-1067; Pope, C.A. et al., 2009. Fine-particulate matter air pollution and life expectancy in the United States. New England J. Med. 360 (4): 376-386.; Ostro, B. et al., 2009. The effects of fine particulate components on respiratory hospital admissions in children. Environ. Health Perspective 117 (3); 475-480.)

The national rate of childhood asthma has risen to one in twelve, even in Montana, and the tiny particulates in air pollution make asthma worse. In addition, prenatal exposure to fine and coarse particulate matter (PM_{2.5} and PM₁₀) has been linked to low birth weight, smaller lungs and worse lung function in the children of mothers so exposed. Studies show the damage is caused by inflammatory chemicals from the mother that cross to the fetus or changes in the placental blood flow. (Dadvand, P. et al., 2013, Maternal exposure to particulate air pollution and term birth weight: A multi-county evaluation of effect and heterogeneity. Environ Health Perspect 121 (3); Wieslaw, A. et al., 2010, Effect of prenatal exposure to fine particulate matter on ventilator lung function of preschool children of non-smoking mothers. Paediatr Perinat Epidemiol. 24(5) 492-501.)

The "Health Risk Study for the BNSF Railroad Spokane Railyard," (prepared by Spokane Regional Clean Air Agency, Charles E. Studer, Environmental Engineer, 2011) is a study of the approximate diesel PM_{2.5} cancer risk that populations in the vicinity of the railyard might experience, using a model developed in Stockton, CA. On page 1 of the Executive Summary, the study found that "the Hillyard area which is adjacent to the BNSF railyard, experienced a statistically significant 40% increase in lung cancer incidence when compared with Washington State's expected cases of

lung cancer from 1992-2006.” As of 2012, approximately 50 trains a day were passing through the Spokane rail yard (personal communication, BNSF)

Comment 6.3(a): It is incorrect to assume there are no health impacts from particulate matter because there are no NAAQS exceedances.

Comment 6.3(b): The final EIS should address the health effects of increases in air pollution even in the absence of a NAAQS exceedance.

6.4 Climate Change and the Impacts of Burning Tongue River Coal in Asia.

The DEIS studied all alternative scenarios and concluded that greenhouse gas emission from TRR coal would range from a reduction of 1.7 million metric tons of carbon dioxide equivalent (MMTCO₂e) to an annual increase of 81 MMTCO₂e (DEIS S-11). The reduction scenario is surprising, as it seems unlikely that coal mines will shut down or reduce production because of Tongue River coal competing for their markets.

Regardless of where the coal is burned, it will affect air quality and climate. Dr. Steven Running, University of Montana and Regents Professor of Ecology and co-recipient of the Nobel Peace Prize for his work with the IPCC on climate change, spoke on April 13, 2014, on a panel discussion of coal exports. He said, “The pollution from coal burned in China comes back to us on worldwide air currents faster than the ships that took it there.” Among those air toxics are mercury, arsenic and lead. He further said, “If we want to stop climate change, we have to stop burning coal. Coal is the biggest contributor to climate change.”

Regarding the warming climate, many Missoulians are concerned about wildfires, air quality degradation due to wildfires, asthma rates and PM_{2.5} particulate levels and what they mean to health. To those people, an increase of 81 million metric tons of CO₂ from burning coal which could be shipped through Missoula is a major public concern.

7.0 SPECIFIC AIR QUALITY CONCERNS IN MISSOULA

Within the Missoula Valley, additional coal transport by long, multi-engine, diesel trains may impact local ability to reach and maintain PM₁₀ attainment (and to prevent becoming PM_{2.5} non-attainment).

Comment 7.0(a): We specifically request that the final EIS address the following potential Missoula air quality impacts that may result from the project:

7.1 Blocked crossing traffic delays issues

- Additional gas and diesel particulate from idling vehicles at blocked grade crossings
- Increased particulate in neighborhoods along alternate routes from non-grade level crossings, due to increased vehicle traffic and traffic backups

- Decreased ability to manage traffic flow through town, due to longer, more frequent and unpredictable crossing delays, and uneven traffic patterns
- Increased response times for emergency vehicles, such as firetrucks.
- Decreased ability to quickly evacuate populations during disasters such as wildfires, toxic spills, etc. (Missoula is bisected by the railroad, with both hospitals on the south of the tracks. There are only two non-grade crossings in the city. There are only four paved exit roads from the populous Missoula valley. Two of these exit routes (I-90 east and west) parallel the railroad.)

7.2 Increased numbers of diesel train engines:

- Increased diesel pollution in residential areas which abut the rail yard and in-town track
- Increased diesel particulate in the PM10 non-attainment area

7.3 Potential for increased derailments due to wear on rails and ballasts from coal dust and heavy trains:

- Increased chance of derailment of all trains, including toxic and combustible freight (i.e. Bakken crude, or toxic gases such as the Alberton chlorine tanker derailment disaster)
- Potential for windborne coal dust in case of coal train derailment

7.4 Coal dust fugitive emissions along tracks:

- Increased pulmonary health issues for vulnerable (and often low income) populations nearest to tracks and rail yard

7.5 Coal-burning particulate pollution from the project:

- Downwind airborne particulate, regional haze issues, heavy metal pollution from coal-burning in Asia

7.6 Increase in greenhouse gases and climate change:

- Increased risk of wildfires and associated smoke particulate due to earlier snowmelt and increase in forest pathogens related to the changing climate
- Increase in airborne molds and pollens, which can exacerbate respiratory diseases
- Unknown impacts on the seasonal weather patterns that modulate air quality in inversion-prone mountain valleys
- Erodes City of Missoula expense and staff time obligated for greenhouse gas reductions by the city Conservation and Climate Action Plan*

** In 2013 City of Missoula adopted a Conservation and Climate Action Plan with the goal of carbon neutrality by 2025. This is to be accomplished by fleet and facilities upgrades, internal policy changes, and renewable energy and carbon offset projects.*

8.0 CONCLUSION

We believe the OEA erred in not applying the same kind of analysis to cities along the western route as was performed for those east of the TRR, as use of the western route to export terminals is “reasonably foreseeable.” The DEIS does not address downline impacts of increased coal transport to communities west of the TRR. The DEIS does not meet the public convenience and necessity standard. The public does

not have access to the methodologies used to reach rail traffic conclusions. The STB did not hold public meetings in Missoula or other western communities. Based on these facts, the Missoula City-County Air Pollution Control Board respectfully requests that the Surface Transportation Board select the "No Action Option." If STB ultimately selects an action option, we request that public hearings on the final EIS be held in Missoula and other western communities.

In addition, we request that the final EIS for the Tongue River Railroad comprehensively address the connected actions among the proposed Otter Creek coal mine, the TRR and the proposed export terminals on the Pacific Coast, which all are considered part of the maximum production scenario for the TRR.

Sincerely,



Jan Hoem
Chair, Missoula City-County Air Quality Advisory Council

ATTACH: Whatcom Docs Position Statement on Coal Shipments to Cherry Point