NORTHERN PLAINS
RESOURCE COUNCIL

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Danette L. Guy, Project Manager
U.S. Army Corps of Engineers, Seattle District
2108 Grand Boulevard
Vancouver, WA 98661

November 28, 2016

RE: Millennium Bulk Terminals—Longview LLC, Application No. NWS-2010-1225: Comments on draft environmental impact statement and permit application

Dear Ms. Guy:

On behalf of the members of Northern Plains Resource Council (Northern Plains) and the Western Organization of Resource Councils (WORC), we are submitting the following comments to the U.S. Army Corps of Engineers in response to the September 30, 2016, draft environmental impact statement (DEIS) on the application from Millennium Bulk Terminals – Longview, LLC (MBTL) to construct and operate a coal export facility. Please ensure that our comments are entered into the public record.

Northern Plains is a grassroots conservation and family agriculture non-profit organization based in Billings, Montana. Northern Plains organizes Montana citizens to protect our water quality, family farms and ranches, and unique quality of life. Northern Plains is dedicated to providing the information and tools necessary to give citizens an effective voice in decisions that affect their lives. These comments are also submitted on behalf of the Western Organization of Resource Councils (WORC), a regional network of eight grassroots community organizations that includes 12,200 members and 40 local chapters in seven states; Northern Plains is a member of WORC. WORC is committed to building sustainable environmental and economic communities that balance economic growth with the health of people and stewardship of their land, water, and air resources.

Northern Plains formed in 1972 over the issue of coal strip mining and its impacts on private surface owners who own the land over federal and state mineral reserves as well as the environmental and social impacts of mining and transporting coal. Many of our members own farms and ranches in areas that are strip mined for coal. Our members' livelihoods depend entirely on clean air and water, native soils and vegetation, and lands that remain intact. Many

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more of our members live along and near railroad lines that would be the conduit for the millions of tons of coal proposed for shipment to the Longview, Washington, coal export facility.

The MBTL applicant's financial backers have shifted substantially in the last year, bringing into question the stability of the applicant and its long-term ability to build, maintain, and manage the consequences of the project. Until May of 2016, the project was owned jointly by Arch Coal and Lighthouse Resources, both of which were facing questionable financial situations at the time. Since that time, Arch Coal has sold its share of MBTL to Lighthouse.

However, based on the recent management decisions of these two companies as well as recent statements made by them concerning the coal export market, one has ample reason to believe that the applicant may not be able meet all of the fiscal obligations this project would entail, if permitted. For example:

- Arch Coal, which until this year owned 38% of MBTL, filed for Chapter 11 bankruptcy on January 11, 2016, a bankruptcy from which Arch Coal has since emerged. In a filing[1] from that proceeding, Arch Coal sought to reject an existing contract for coal loading and unloading with Ridley Terminals, Inc. in British Columbia. Under that contract, Arch Coal is obligated to pay annual shortfall fees if shipments fall below a certain minimum amount. In the bankruptcy filing papers, Arch Coal stated " . . . given the continued weakness in demand for international seaborne coal, the shortfall fees in future periods would continue to be substantial."[2]
- The owner of the other 62% of the project was, originally, Ambre Energy North America. In order to avoid its own bankruptcy, Ambre Energy North America was purchased by Resource Capital Funds (RCF), a Cayman Islands hedge fund. RCF obtained a controlling interest in the company in November 2014 and rebranded it Lighthouse Resources. In the notice and explanatory statements for the directors and general shareholders meeting concerning the 2014 sale, Ambre Energy cited "what industry analyst firm Wood Mackenzie has described as a substantial oversupply of thermal coal in the seaborne market. . . ."[3]

Numerous professional economic analyses and projections point to a continuing decline in coal production and the use of coal as an energy source as well as weak coal export markets (see below for details). The financial and market analysis presented in the MBTL DEIS does not adequately examine the fiscal viability of the applicant or the strength of the Asian export market that the facility is planned to serve. Asian coal prices are unlikely to sustain coal exports from the United States over the long-term as Chinese domestic coal policy reins in recent price increases.[4]

If permitted and constructed, the MBTL facility would increase rail traffic that would have significant and deleterious consequences for Montanans. However, the analysis presented in

[1] United State Bankruptcy Court Eastern District of Missouri Eastern Division. Chapter 11. Case No. 16-40120. Doc 28. Files January 11, 2016.
[2] *Ibid 3.*
[3] "What Ambre Energy Says About Its Financial Collapse." Clark Williams-Derry, Sightline Institute. December 3, 2014. http://www.sightline.org/2014/12/03/what-ambre-says-about-its-financial-collapse/
[4] http://www.platts.com/latest-news/coal/singapore/thermal-coal-prices-losing-steam-as-china-output-27710872

the MBTL DEIS does *not* include the connected and cumulative impacts that this project would have on Montana (see below for details) communities crossed by the rail line. The DEIS entirely ignores Montana rail impacts.[5] All of the coal trains that would haul coal to the MBTL project, as well as all of the empty coal trains on the daily return journey, would originate in the Powder River Basin (PRB) of Wyoming and Montana. The agency should evaluate and make a clear, thorough, and sophisticated study of rail impacts in Montana, but it does not. The environmental analysis must include such a study. The study area for rail transportation impacts in the MBTL DEIS is too narrow and completely ignores impacts to Montana and Montanans.

If permitted and constructed, the MBTL facility would result in increased coal strip mining in Montana with significant and deleterious consequences for the land, air, water, wildlife, and people in those areas. However, the analysis presented in the MBTL DEIS does *not* include the connected and cumulative impacts this project would have on Montana (see below for details).

Coal is the world's most carbon-intensive fuel. The burning of coal has global impacts because of carbon emissions. It does not matter where coal is burned, the pollution found in the emissions ride the global air currents to every part of our earth. If permitted and constructed, the MBTL facility would ultimately result in more coal being burned, which would release more greenhouse gases (GHG) into the atmosphere. These GHG are causing global climate change, which is already affecting Montana. The analysis presented in the MBTL DEIS does *not* include the connected and cumulative impacts this project would have on Montana (see below for details).

For all of these reasons, we believe that the MBTL DEIS does not fully disclose or analyze the issues, costs, consequences, or connected and cumulative impacts of permitting and building the proposed export facility. By ignoring the connected and cumulative impacts to Montana and Montanans, this DEIS does not clearly and concisely convey to the public and to government officials the environmental impacts of the proposed project. Thus, the MBTL DEIS fails to provide the public and agency decision makers with sufficient information to make an informed decision. We urge the decision makers of the U.S. Army Corps of Engineers to choose the "no-action" alternative and to deny issuance of any permits and authorizations under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, necessary for construction and operation of the Millennium Bulk Terminals – Longview.

Coal Economics, Coal Markets, and the Future of Coal Exports

According to the DEIS, "the Applicant has determined there is sufficient Asian market demand for western U.S. low-sulfur subbituminous coal to warrant the development of an export terminal on the west coast of the United States to export coal." This need is supported by the following observations made by the Applicant:

- Asia's demand for coal has increased significantly in recent years.
- The heat value of subbituminous coal produced in the Powder River Basin is desired by certain Asian countries, such as Japan, South Korea, and Taiwan.

[5] See Table 6.0-4. Summary of Direct Impacts and Indirect Impacts Study Areas by Resource. Millennium Bulk Terminals—Longview NEPA Draft Environmental Impact Statement. Chapter 6. pp. 6.0-4.

- The cost to export Powder River Basin coal from the Pacific Northwest region of the United States to Asia is competitive with coal exports from countries such as Australia and Indonesia."

Although coal companies want to believe that coal markets will improve, that appears highly unlikely for both domestic and export markets over the long-term.[6] This negative outlook for the coal industry is shared by the world's leading investment banks and coal consultants. Since 2013 major U.S. financial institutions from Goldman Sachs[7] to Bank of America[8] as well as the World Bank have been pulling back from and entirely divesting from coal. Additionally, non-profits such as the Rockefeller Brothers Fund and public institutions like Stanford University have also removed coal from their portfolios, as has the Norwegian government's pension fund.[9] Other financial institutions and analysts, including Deutsche Bank[10], Sanford Bernstein & Co.,[11] Morningstar,[12] Goldman Sachs,[13] and others, are predicting that the coal market bubble has burst and production numbers and prices will remain low, and even decline, for many years to come.

It is particularly notable that Goldman Sachs went from being a significant investor in the proposed Gateway Pacific Terminal coal export facility near Bellingham, Washington, to divesting all of its shares in that project in January 2014.[14] The investment company later stated that "we believe that new investment in large-scale projects requiring new infrastructure is unlikely to earn a return; the window for profitable investment in new mining and infrastructure capacity has closed."[15] [NOTE: On May 9, 2016, the U.S. Army Corps of Engineers denied a permit for the Gateway Pacific Terminal.]

Until recent years, Western U.S. coal was produced almost entirely for domestic consumption. In 2011, as domestic coal sales were beginning to flatten for a variety of reasons (including, but not limited to industry transition to natural gas, increased energy efficiency, increased use of renewable energy sources, and increasingly difficult geologic conditions [the easily mined coal had already been extracted] for all coal producers), the PRB coal companies began to focus on the potential of the Asian coal export market. International coal sales from the PRB had grown from 3.8 million tons in 2009 to 20 million tons in 2011. The MBTL applicants (as well as other coal companies) envisioned a growing and profitable export market for their coal and proposed various coal export facilities, including MBTL. However, by 2012, the international coal export markets in Asia, especially China, were beginning to show signs of

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[6] http://ieefa.org/rally-coal-prices-unsustainable/
[7] http://thinkprogress.org/wp-content/uploads/2013/08/GS_Rocks__Ores_-_Thermal_Coal_July_2013.pdf
[8] http://about.bankofamerica.com/assets/pdf/COAL_POLICY.pdf
[9] http://www.nytimes.com/2015/06/06/science/norway-in-push-against-climate-change-will-divest-from-coal.html
[10] "Thermal Coal: Coal at a Crossroads," Deutsche Bank Markets Research, May 2013
[11] "Asian Coal & Power: Less, Less, Less . . . The Beginning and the End of Coal," Bernstein Research, June 2013
[12] "Burned Out: China's Rebalancing Heralds the End of Coal's Growth Story," Morningstar, April 2014
[13] "The Window for Thermal Coal Investment is Closing," Goldman Sachs, July 2013, http://thinkprogress.org/wp-content/uploads/2013/08/GS_Rocks__Ores_-_Thermal_Coal_July_2013.pdf **and** "The Thermal Coal Paradox," Goldman Sachs, May 2014, http://www.eenews.net/assets/2014/05/28/document_gw_02.pdf
[14] "Wall Street Giant Backs Away From Washington Coal Export Project," Oregon Public Broadcasting, January 2014, http://opb.org/news/article/wall-street-giant-backs-away-from-washington-coal/
[15] "The Window for Thermal Coal Investment is Closing," Goldman Sachs, July 2013, http://thinkprogress.org/wp-content/uploads/2013/08/GS_Rocks__Ores_-_Thermal_Coal_July_2013.pdf

decline. While 31 million tons of coal were exported in 2014, this tonnage was below the U.S. Energy Information Administration (EIA) forecast, and EIA downgraded its 2015 and 2016 export outlook by 30% from its 2014 export outlook.[16]

During 2015, benchmark prices for thermal coal (which are based on the price of Australia's Newcastle coal) fell lower than they have been in 9 years. At its peak in January 2011, the price was $141.94/ton; by mid-March 2015, the price was $59.50/ton; by December 2015 it was $43/ton. This is below the profitability level that existing coal mines in the PRB have stated they need to participate in the export market (*e.g.*, in 2010/2011, both Peabody Energy and Arch Coal said they needed the price of coal to be in the $90/ton range to make it worthwhile to export coal, and, in 2014, Cloud Peak Energy said it needed the Newcastle price to be between $80 and $90/ton for it to export coal at a profit).[17]

During 2016, coal benchmark prices rose dramatically due to weather-related demand spikes in China and India during a contraction in coal production in those countries, leading to unexpected demand for imported coal. Chinese authorities have moved to undercut coal imports by relaxing certain production restrictions and curtailing price speculators. Financial analysts expect that these reforms will lower prices substantially, erasing the profit opportunity of exporting PRB coal to Asian customers.[18]

Chinese thermal coal imports are declining dramatically (Chinese imports peaked in 2013), and its coal consumption fell 3% in 2014 despite an increase in energy demand; that trend continued in 2015 with thermal coal imports down 39.1% in January to July over the same period in 2014.[19] A recent report from BMI Research states that Chinese coal consumption has already peaked. BMI forecast that Chinese coal imports will grow for a few months, followed by a gradual decline in coal imports from 2017 to 2020, due primarily to a poor outlook for coal demand within China.[20] While China is not the only coal consumer in the Pacific Rim, that country is such a comparatively large consumer of coal that it serves as the market indicator for all Asia Pacific coal demand. Simply put, if China is purchasing large quantities of coal, then there is a large demand to fill. If China is reducing its consumption of coal, then the entire Pacific Rim coal market is likely oversupplied. At least five major Chinese coal-fired power plants have or are being shut down as that country deals with dramatic air pollution issues and industrial overproduction—issues that are significantly affecting China's gross domestic product. More than 7,000 coal mines have already been closed in China. The Chinese government has announced plans to limit its annual coal consumption to 4.2 billion tons by the end of this decade – and its current production capacity is beyond 4 billion tons so it is unlikely that coal imports will increase.[21]

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[16] Verified Statement of Thomas Sanzillo, 25 March 2015, submitted by Northern Plains to the STB as part of their petition to revoke the December 2012 TRR application.
[17] *Ibid.* **and** http://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/planet3/PDFs/Coal%20Market%20Report%20Q1%202015.pdf
[18] https://www.bloomberg.com/news/articles/2016-11-20/china-seen-pulling-coal-u-turn-to-reverse-self-inflicted-rally
[19] http://www.businessinsider.com.au/chinese-coal-imports-are-collapsing-2015-9
[20] http://www.bmiresearch.com/news-and-views/thermal-coal-lower-forecasts-on-china-revisions
[21] "Asian Coal & Power: Less, Less, Less . . . The Beginning and the End of Coal," Bernstein Research, June 2013; "Burned Out: China's Rebalancing Heralds the End of Coal's Growth Story," Morningstar, April 2014;

While Asian countries are still importing some coal, it is closer and cheaper to import coal from Australia and Indonesia as well as either Russia or South Africa rather than from the PRB of the United States, despite the claims made by the Applicant in the DEIS. Indonesia is the world's largest exporter of coal and Australia is second. Australia has plans to increase its port capacity. Should that happen, there would be a significant impact on market prices for coal in Pacific Rim countries. Even if that doesn't happen, there are still problems for the viability and growth in tonnage of PRB coal into the international coal market.

Even the coal industry's own analysts have boldly denounced the financial viability of proposed Pacific Northwest coal export facilities, including the MBTL. Wood MacKenzie, the premier mining industry consulting firm, stated on its website in February of 2016 that Northwest coal ports are "nothing more than a risky long-term bet" because "future demand in Asia will continue growing less robustly than in the past. Negative netback PRB margins will persist. PRB coal simply will not compete in Asia until well after 2020."[22]

The global coal market is oversupplied. In Europe, coal use (both production and imports) has been declining significantly in recent years. In 2014, South Korea imposed a significant carbon tax on imported coal, which specifically prejudices against certain grades of sub-bituminous coal found in the PRB mines that propose to fill capacity at MBTL. In fact, the tax itself (on a per metric ton basis) is larger than the cost of a metric ton of coal at the mine mouth of some PRB coal mines.[23] As explained above, China's imports of thermal coal fell dramatically from 2014 to 2015, and coal consumption at its electricity-generating power plants fell 10% in the same time period. China has a 6% coal tariff on U.S. coal, but it has no tariff on coal imported from Indonesia, which is closer to China and with which China has a free-trade agreement.

While it is recognized that coal will not disappear from the energy stream immediately, market forces do indicate that coal is increasingly going to have a smaller and smaller share of the energy market, domestically as well as internationally. Solar power now accounts for more installed capacity than any other form of electricity generation.[24] There is an explosion of renewable energy options for countries such as China and India. Citizens in these and other countries are demanding that pollution problems associated with burning of fossil fuels be cleaned up. Major cities in both China and India have experienced severe air pollution problems caused by the burning of fossil fuels, which has led to significant changes to those governments' energy policies and priorities. China is the world's biggest investor in renewable energy sources, spending a total of $400 billion on clean energy in the past 10 years. China has already installed more wind power than any other country in the world (it added an additional 19.8 gigawatts of

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http://www.newsweek.com/beijing-shuts-down-coal-power-plants-air-pollution-costs-economy-316829; http://www.mcclatchydc.com/2015/03/11/259356/chinas-push-to-cut-coal-use-may.html

[22] "Planned US coal ports: a swift trip from vital to irrelevant." Andy Roberts, Wood MacKenzie. February 10, 2016. http://www.woodmac.com/blog/planned-us-coal-ports-a-swift-trip-from-vital-to-irrelevant/

[23] "South Korea's All New Tax on Imported Coal," Clark Williams-Derry, Sightline Institute, July 2014, http://daily.sightline.org/2014/07/01/south-koreas-all-new-tax-on-coal-exports/ **and** http://carbunion.com/panel/infoprecios/uploads/MCR%20327.pdf

[24] http://www.iea.org/bookshop/734-Medium-Term_Renewable_Energy_Market_Report_2016

wind turbines to its grid last year), and it installed more solar capacity than any other nation in 2014.[25]

As noted above, many financial institutions and investment analysts are advising that the export market for U.S. coal is oversupplied, under severe stress, and likely to remain in this condition for the foreseeable future. Chinese coal imports drive the U.S. export market. The decline in the international market for coal affects PRB coal company plans for a vibrant export market to make up for the lack of a domestic market for coal. Consequently, there is little likelihood that a major, new, multi-million dollar coal export terminal would ever pay for itself, much less bring any sort of benefit to the people of Longview or Washington State, given the realities of today's – and tomorrow's – coal markets.

The MBTL coal export facility is, frankly and simply, a risky long-term bet. The U.S. Army Corps of Engineers must consider the real possibility that if the MBTL facility is permitted and construction begins, fiscal and market conditions could lead to abandonment of the project. What assurances would the residents of the community have that the area would be cleaned up and not left as an eyesore with possible environmental liabilities to their community? The facts about the viability of coal as shown by the current and future market analyses, including the export market, must be recognized and evaluated in the environmental analysis. Given a declining (some would say, lack of) market for coal that would be processed through MBTL, there is little purpose or need for MBTL. Thus, it is our opinion that these facts provide the U.S. Army Corps of Engineers ample reason to recommend the no-action alternative and deny approval for what we believe is a speculative project.

Increased Train Traffic in Montana Due to MBTL

While we believe, based on the evidence thoroughly presented above, that the MBTL project is speculative and is based on a seaborne coal market that will not materialize, if the U.S. Army Corps of Engineers decides differently, it must be under the assumption that the Asian coal market is – or at least will become – strong. Under this assumption of a strong market that makes use of the Proposed Action, there will be a dramatic increase in coal train traffic through many communities in Montana. Any action alternative must fully assess the impacts of increased coal train traffic through Montana – from the coal mines in the PRB to the proposed MBTL port and back again.

While the DEIS examines increased train traffic *in the Longview industrial area*, those trains do not simply appear in Cowlitz County; they come from somewhere. In fact, those trains originate at PRB coal mines in Wyoming and Montana and traverse Montana on their way to the proposed facility as well as on the way back to the PRB. The DEIS states that there will be 16 additional trains each day traveling the rails if MBTL is approved. There would be numerous impacts to Montanans and Montana communities from this increase in the number of trains – and those impacts are not just "inconveniences." There would be health, safety, quality of life, as well

[25] "Longyuan First-Half Profit Climbs on Stronger Wind Output." Bloomberg News. August 18, 2015. http://www.bloomberg.com/news/articles/2015-08-18/longyuan-first-half-profit-climbs-on-stronger-wind-output **and** "China's Climate Goal Calls For Aggressive Push on Solar, Wind. Bloomberg News. July 1, 2015. http://www.bloomberg.com/news/articles/2015-07-01/china-s-climate-goal-calls-for-aggressive-push-on-solar-wind

as actual financial costs to Montana citizens and communities as well as to our rural areas that would result from this increase in coal train traffic.

An increase in the number of trains would mean more frequent and longer traffic delays at rail crossings. This would disrupt the business and commerce of all Montana communities bisected by the rail line. Delays due to increased coal train traffic would also disrupt residents and businesses in rural areas where at-grade, private crossings connect farms and ranches with public roads and highways. Already, idled trains that block rural private crossings are a major complaint of rural residents.

An increase in the number of trains would also result in a greater potential for vehicle collisions with trains and for pedestrian accidents. While the MBTL DEIS analyzes rail safety impacts from the proposed action in the project area and the rail corridor through the Longview industrial area,[26] it ignores rail safety impacts in Montana. Coal train traffic to and from MBTL would negatively impact Montana rail routes and the communities they bisect equally as that traffic affects those routes and communities in Washington.

Importantly, for all communities and rural areas, an increase in the number of trains decreases access across the train tracks. This is especially problematic for emergency services such as fire trucks and ambulances. With an additional 16 full-length coal trains on the rails, emergency responders and other emergency services would be further delayed in reaching residents when there is a medical emergency, a fire, or the need for police. Several medical emergency conditions are time-sensitive. In certain stroke patients, five minutes may make the difference between being able to treat the patient with a thrombolytic or not (in certain stroke patients, a thrombolytic can reverse devastating neurological effects of a stroke). In heart attack victims, a delay of minutes can result in heart muscle death. And, in major traumas, time delays can result in increased blood loss and organ failure.[27] These impacts are a connected and cumulative impact of the proposed MBTL project and must be recognized and thoroughly examined in the environmental analysis. These connected and cumulative issues must be considered by permitting officials at the U.S. Army Corps of Engineers.

Sixteen additional full-length coal trains in Montana means an increase in the amount of airborne pollutants (particulate matter) from diesel engines as well as from coal dust. Additionally, more trains would mean more vehicles idling at train crossings when trains are passing – adding their exhaust (containing particulate matter and other pollutants) into the air. Particulate matter is solid matter suspended in air. Particles 10 microns in diameter or smaller are directly linked to health concerns. Diesel fumes contain particles that are 2.5 microns in diameter.

Medical studies have shown a clear link between both diesel air pollutants and coal dust and disease. Increased exposure to diesel fumes can lead to impaired pulmonary development in adolescents; increased severity and frequency of asthma attacks, ER visits, and hospital

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[26] Millennium Bulk Terminals—Longview NEPA Draft Environmental Impact Statement. Section 6.2 Rail Safety. pp. 6.2-1.

[27] Dr. Eric Schultz in "Health concerns about coal export in the Northwest," Power Past Coal, 2013. http://powerpastcoal.org/wp-content/uploads/2013/12/health-impacts-03.pdf

admissions of children; increased rates of heart attacks in adults; increased and measurable pulmonary inflammation; and an increased risk of cancer. Increased exposure to coal dust is associated with chronic bronchitis, emphysema, and pulmonary fibrosis. (Coal dust also results in increased environmental contamination through the leaching of toxic heavy metals, including mercury.) While those with chronic disease, the elderly, young children, and pregnant women are most at risk, the health effects from particulate matter exposure may occur years later, so even healthy individuals need to be concerned.

Section 6.6 of the MBTL DEIS addresses air quality impacts of the proposed action, and Section 6.7 assesses coal dust and its impacts. However, Montana is once again excluded from the review and analysis. Air quality implications of the proposed action in some Montana rail communities may be even more serious than in Washington communities. Both Missoula and Helena, Montana (which are crossed by the rail line that would be used by the coal trains traveling both directions between the PRB mines and MBTL) experience air quality inversion events and are regularly unable to meet National Ambient Air Quality Standards (NAAQS) for certain pollutants, including particulate matter (PM_{10} and $PM_{2.5}$). The proposed action could have severe impacts to these communities, and the agency preparing the environmental analysis must take these cumulative and connected impacts into consideration in the review.

In a paper titled, "PRB Coal Degradation, Causes and Cures," Roderick J. Hossfeld and Rod Hatt explain that "PRB coal is extremely friable [crumbly] and will break down into smaller particles virtually independent of how the coal is transported or handled." The authors go on to say that "once PRB coal is exposed by mining, the degradation process begins – the majority of the damage can occur in a very short time, even as short as a few days. The extent of the degradation that occurs depends in large part on . . . how long the coal is exposed to the atmosphere during transportation."[28]

Another study by Daniel A. Jaffe et al.[29] measured particulate matter (PM) emissions at two rail sites in Washington State. The "measurements demonstrate that rail traffic emits substantial quantities of diesel exhaust and that $PM_{2.5}$ concentrations are significantly enhanced for residents living close to the rail lines. . . . after passage of coal trains there was a statistically significant enhancement in large particles . . . [that] most likely consist of aerosolized coal dust." the Jaffe study goes on to state that "the enhancement in $PM_{2.5}$ is not only due to the [emission] spikes that occur as a train passes, but also the residual that accumulates in the local airshed."

Additionally, a report by Dr. Alan Lockwood,[30] found that coal trains are responsible for releasing coal dust particles and diesel fumes "into the air, degrading air quality and exposing nearby communities to dust inhalation," and the report specifically noted that "railroad engines and trucks release over 600,000 tons of nitrogen and 50,000 tons of particulate matter into the air every year in the process of hauling coal, largely through diesel exhaust. Diesel engines currently

[28] "PRB Coal Degradation – Causes and Cures." Roderick J. Hossfeld, Jenike & Johanson, Inc., and Rod Hatt, Coal Combustion Inc. http://krtcommodities.com/files/PRB%20COAL%20DEGRADATION.pdf
[29] "Diesel Particulate Matter Emission Factors and Air Quality Implications from In-Service Rail in Washington State, USA" January 2014. http://www.atmos.washington.edu/jaffegroup/uploads/Jaffe_2014_trains_final.pdf
[30] "Coal's Assault on Human Health," Dr. Alan Lockwood, et al., November 2009. http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf

produce approximately 1.8 million tons of NO_x [nitrogen oxides] and 63,000 tons of small particles (less than 2.5 microns in diameter) each year. These emissions adversely affect many organ systems." It is worth noting that children often face the most severe health risks from coal dust pollution, with Dr. Lockwood noting that children and infants are the most vulnerable population in five of eleven enumerated diseases caused by coal dust pollution.

The air pollution associated with a dramatic increase of 16 additional coal trains per day through Montana communities and rural areas along the rail lines would have serious public health impacts for local residents. Cumulatively, thousands of Montanans live near the rail lines and would experience these increased health risks. The health impacts associated with this project should be included in the MBTL DEIS; however, it is our understanding that a health impact assessment (HIA) for MBTL's proposed action has not been conducted in conjunction with this DEIS.

It seems to us irregular to publish a DEIS that lacks a HIA. We consider this a major deficiency with the DEIS. The lack of a HIA limits the public's ability to comment on one of the most important aspects of this proposed project's impacts: public health. What Northern Plains finds additionally concerning is that without a HIA, impacts to Montanans will neither be assessed nor made available for public comment. We respectfully request that the U.S. Army Corps of Engineers conduct a HIA and allow the public to provide comments before any decision on the DEIS is issued.

Trains are noisy; more trains means more noise. Medical literature links noise to significant human health issues including cardiovascular disease, hypertension, arrhythmia, stroke, and ischemic heart disease; sleep disturbance and resultant fatigue; an increased rate of accident and injuries; cognitive impairment in children; and exacerbation of mental health disorders such as depression, stress and anxiety, and psychosis. Not only does noise impact humans, but it would impact wildlife and livestock. Noise impacts to livestock can include loss of weight, which would affect the rancher's profitability when the livestock is sold at market.

Because the proposed action would result in more rail traffic on Burlington Northern Santa Fe (BNSF) main line routes, average noise levels would increase. The DEIS ignores train volumes and increases in noise pollution for all scenarios on rail lines in Montana. As is stated above in these comments, the trains that would traverse Washington on their way to and from the proposed facility would also traverse Montana. Noise pollution impacts and train volume increases along the rail line in Montana are a cumulative and connected impact of the proposed action and must be considered – but were not – in the DEIS.

These significant health issues are connected and cumulative impacts of the proposed MBTL project and must be recognized and thoroughly examined in the environmental analysis. These connected and cumulative effects must be considered by the decision makers.

Increased coal train traffic from the PRB mines to the proposed MBTL would directly lead to increased financial costs to Montana communities and taxpayers. For example, federal law requires train engines to blow when approaching a crossing, whether that crossing has guard arms that come down or not. There is a process that communities can go through to establish

“Quiet Zones” in order to eliminate the sound of train horns. But, the citizens of any Montana community wanting a Quiet Zone generally will have to pay for the infrastructure upgrades required that allow trains to not blow their horns.

It is understood that if a rail company needs to upgrade its track or a bridge or a tunnel or a crossing in order to facilitate current or increased train traffic, they will do so and they will pay for it. However, if a city or county wants to have a particular crossing in their community upgraded to deal with local impacts and the rail company doesn't want to do this, under existing law the railroads do not have to respond to the local government concerns.

Billings would be significantly affected by this increase in the number of coal trains as it is a bottleneck for rail traffic – all outgoing coal trains from the PRB headed for MBTL pass through that community. Billings taxpayers would need to fund the construction of an underpass downtown (between Montana Avenue and Minnesota Avenue) at the cost of at least $19 million to relieve traffic congestion. Helena taxpayers would need to pay around $13 million for an overpass at Montana Avenue in the middle of town as well as more than $1 million to facilitate a Quiet Zone. Missoula taxpayers would need to fund a yet-to-be-estimated multi-million dollar underpass or overpass to connect the populous Rattlesnake Creek area with downtown. Smaller Montana communities would similarly be affected.

These significant costs to Montana taxpayers are connected and cumulative impacts of the proposed MBTL project and must be recognized and thoroughly examined in the environmental analysis. The connected and cumulative effects of this project to Montana taxpayers must be considered by the decision makers.

Finally, an increase in the number of trains could increase the number of wildfires in Montana. The dry, windy conditions found in southeastern and central Montana can favor fire risk and its spread. Worn brakes, sparks from brake shoes or wheels, arcing from traction motors, failed wheel bearings, dripping oil, sparks smoldering on old creosoted cross-ties, and thrown rods from locomotives all have the potential to start fires. Because of reduced employee numbers on trains, a train-caused fire might not be detected until it is burning more intensely. The potential for more wildfires that are the result of increased train traffic is a connected and cumulative impact of the proposed MBTL project and must be recognized and thoroughly examined in the environmental analysis and considered by the decision makers.

Since 2012, many city governments, county governments, and elected Boards of Health in Montana have taken advantage of multiple public comment opportunities to weigh in with their concerns about the impacts of increased coal train traffic that would result from constructing additional coal export infrastructure. The various public comment opportunities have come in the form of NEPA [National Environmental Policy Act] scoping comment periods and draft EISs from a variety of agencies, including the Washington Department of Ecology, Cowlitz County, the U.S. Army Corps of Engineers, and the Surface Transportation Board. The various letters and resolutions expressing concern over the economic, public health, and infrastructure impacts of coal export-related increases in coal train traffic include those from: The City of Livingston, Gallatin City-County Board of Health, City of Helena, Lewis & Clark City-County Board of Health, City of Missoula, Bonner-Milltown Community Council,

Missoula County, Missoula City-County Board of Health, Missoula City-County Air Pollution Control Board, and the City of Whitefish. A sampling of these letters and resolutions are included as addenda to this letter. The concerns of these local governments should be considered by the U.S. Army Corps of Engineers in their final environmental analysis of this proposed project.

Increased Coal Strip and Longwall Mining Due to MBTL

If the proposed MBTL coal export facility is approved, it would mean more coal strip mines and mining in the PRB with more impacts to the land, air, water, wildlife, and people in those areas. There is no mention in the DEIS of mining impacts induced by MBTL. Respectfully, we do not believe that the U.S. Army Corps of Engineers can adequately complete a thorough and accurate environmental analysis for MBTL without considering the cumulative and connected impacts of additional coal mining induced by the proposed action. The final EIS should include this consideration of mining impacts.

Coal strip mining industrializes ecologically important areas that are also home to vibrant and economically important agricultural communities. Strip mining completely destroys the land, which is often productive agricultural land. Topography is obliterated, vegetation is scraped away, aquifers and other water sources are destroyed, livestock must be moved, and quiet areas become filled with noise. These changes can and do affect the profitability of any ranch near the coal strip mine.

The air quality at coal strip mine sites is often degraded. Coal mining operations include scraping off overburden soils, digging, drilling, blasting, dragline operation, and loading and unloading coal. In the dry and windy environment of the PRB, mining activities that denude the soil will eventually lead to blowing dust, dirt, and debris. As a result of both blasting and mine operations, particulate matter and coal dust are in the air at any coal strip mine. Coal dust not only affects the health of the mine workers but has a negative effect on the surrounding environment. There is also the potential for emissions of nitrogen oxides ("orange clouds") as a result of blasting operations. Nitrogen oxides can rise into the air and present a health threat to people at the mine and those living nearby.

Water is a precious resource in the semi-arid region of the PRB in Montana where coal is strip mined. Coal seams are filled with water and function as vital aquifers in this region. Coal strip mines sever and destroy these aquifers. The impacts of this severance can be seen many miles from the mine. Not only do down-gradient wells and springs dry up when the aquifer is severed, but springs and seeps above the mine that are hydrologically tied to the coal-seam aquifers will be drained and will dry up. Many of these springs are important sources of water for livestock (as well as wildlife) and require no electricity for pumping and, thus, are a valued resource. These springs also provide runoff for intermittent and ephemeral streams and pools that support riparian vegetation, which is important if not critical habitat for numerous wildlife species, including amphibians, migratory birds, and a diversity of aquatic life especially adapted to these environments.

Ranchers and other residents who live in the area rely on surface waters for irrigation and agricultural production. Shallow aquifers provide water for domestic and livestock use as well as sub-irrigate the agricultural land. Those who live farther from surface water sources rely principally on groundwater wells for their water. Often there are many maintenance-free springs and seeps in the area that are used by both wildlife and livestock. The quality of water greatly affects the operation of a ranch. In the arid western United States, good quality water is a scarce commodity. Poor quality water can rob producers via decreased performance (growth, reproduction) and has resulted in acute illness and death in livestock (and wildlife). Soils surrounding coal seams and the underground aquifers in coal seams are highly laden with sodium salts. Improper discharge of these sediments and waters will impact the surface water quality and can sterilize the soil.

Coal strip mines notoriously have large footprints beyond the actual area where coal is being blasted and dug out of the ground. Many miles of roads, rail lines, tipples and conveyor systems, utility lines, buildings, storage areas, fencing, and sewage disposal areas as well as noise, lights, and a myriad of traffic and machinery will be part of the landscape of a coal strip mine. All of this development has environmental consequences for the wildlife that inhabit the relatively quiet, rural, undeveloped area. Construction activity, mine operation, increased human presence, increased traffic, noise, disruption of water resources, fencing, and many other factors that a strip mine entails have negative impacts on a variety of species. Wildlife does not just move to adjacent areas or even distant areas when development occurs. Therefore, wildlife conflicts increase when coal strip mining expands, and wildlife deaths are the most common result of these conflicts. Historic game migration corridors are disrupted not only by the coal strip mine but also by fences put in to keep wildlife out of mine areas. Wildlife access to water is often blocked. Biologists have documented dramatic decreases in some wildlife populations in areas of the PRB developed for coal strip mines.

Prairie bird species (both game birds and non-game resident and migratory species) are an important ecological component of the short-grass prairie where coal strip mines are generally located. Many of these species are struggling due to declines in this once wide-spread habitat. Raptors such as burrowing owls, short-eared owls, golden eagles, ferruginous hawks, and merlins often inhabit these areas before mines are built and decline after operations begin. Many neo-tropical migratory species rely on rural prairie habitats and are negatively affected by coal strip mines. The sagebrush steppe is one of the most severely threatened bird habitats in the Intermountain West. Brewer's sparrow, sage sparrow, sage thrasher, and sage grouse are particularly vulnerable as sagebrush declines, which is happening due to habitat destruction and human disturbance that are the result of coal strip mines. Small creeks and intermittent streams and ephemeral channels are extremely important in the PRB area. Some of these areas are part of the last remnants of a once widespread Great Plains riverine-prairie ecosystem. A significant body of research in the Great Plains indicates that not only do intermittent streams support fish, but they also play an important role in the biodiversity of the region. Coal strip mining is impacting this habitat.

And, then there is reclamation — or lack thereof. Despite federal and state laws that mandate reclamation following coal strip mining, it is not happening. There is a woeful lack of

evidence of contemporaneous reclamation and/or reclamation success as measured by bond release throughout the West, and this is a significant issue in Montana.

Coal strip mines have been operating in Montana for more than 40 years. But as of September 2015, of the 41,005 acres that have been disturbed by coal strip mining operations, only 20,290 acres have achieved Phase I reclamation and bond release, which means that a permittee has completed the backfilling, re-grading, topsoil replacement, re-contouring, and drainage control required for a bonded area. Of particular concern, during this time only 491 acres in all of Montana have achieved Phase IV bond release.[31] This bond release verifies that all surface coal mining and reclamation activities and all disturbed lands within any drainage basin have been reclaimed in accordance with Phase I, II, and III requirements (and includes successful restoration of the hydrologic balance that supports post-mining land use).

The financial backer of MBTL is Lighthouse Resources, which is wholly owned by Cayman Islands hedge fund RCF. Lighthouse also owns and operates the Decker coal mine in southeastern Montana. Of all of the major strip mines in Montana and Wyoming, the reclamation record at Decker is quite possibly the worst. Despite being in operation for more than 40 years, the Decker Mine has achieved exactly 0 acres of full reclamation out of 7,745 acres mined. This is according to data from the Office of Surface Mining Reclamation and Enforcement's surface mine reclamation tables for Evaluation Year 2015.

The Surface Mining Control and Reclamation Act (SMCRA) requires that coal companies complete "contemporaneous" reclamation, and the Decker Mine's poor reclamation record is both an indicator of Lighthouse Resources' poor stewardship of the land and natural resources entrusted to them via government permits as well as a legal liability for the company, which, as recently as January 27, 2016, testified to the BLM's Regional Coal Team for the PRB that it intends to expand its mining operations at the Decker Mine fivefold – to increase production from approximately 3 million tons of coal per year to 15 million tons of coal per year – for the sole purpose of export via MBTL. If the Proposed Action is permitted, the landowners, neighbors, and public land users at or near the Decker Mine face rapidly expanding impacts to the land and water of southeastern Montana with no promise of timely reclamation of the disturbance. This is a cumulative and connected impact of permitting the MBTL project, and this issue must be considered and analyzed in this environmental analysis.

The connected and cumulative impacts to the land, air, water, and wildlife in the PRB and Montana from strip mining the coal that will be moved through the MBTL coal export facility are significant and must be recognized and thoroughly examined in the environmental analysis. These connected and cumulative effects of the MBTL project must be considered by the decision makers.

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[31] "Undermined Promise II," Western Organization of Resource Councils, Natural Resources Defense Council, and National Wildlife Federation. 2015 (http://underminedpromise.org/UnderminedPromiseII.pdf) ***and*** *Cumulative Montana Reclamation Status Table EY-1999 to Present [September 2015]*. Personal communication from OSMRE Program Analyst Frank Bartlett, Sept. 23, 2015.

Increased Greenhouse Gases and Climate Change Due to MBTL

The sole purpose of the MBTL is to export coal. Coal is the world's most carbon-intensive fossil fuel. When coal is burned, carbon dioxide (CO_2) and other GHGs are released into the atmosphere (conversely, this CO_2 is trapped as carbon inside the coal in the ground and does not impact the earth's atmosphere). It is now well-established in the scientific community that the burning of coal and other fossil fuels is putting us on a dangerous path toward irreversible climate change.[32] According to the 2009 *U.S. Global Change Research Report*,[33] "The global warming observed over the past 50 years is due primarily to human-induced emissions of heat-trapping gases. These emissions come from the burning of fossil fuels (coal, oil, and gas), with additional contributions from the clearing of forests and agricultural activities." The potential climate impacts that would result from the proposed MBTL coal export terminals cannot be ignored. Full consideration must be given to the long-term, connected, direct, and indirect impacts that the proposed MBTL project would have on global climate change.

Construction and operation of the proposed MBTL would have direct climate impacts due to diesel combustion emissions both from transporting materials and operating equipment for the construction of the export terminals and from operation of the railroad bring coal to the MBTL. The principal climate impacts, however, would be indirect and would come from the combustion of the coal exported from MBTL, an undeniable cumulative and connected impact of the construction and operation of MBTL.

Virtually every ecological community and natural system in Montana, and, indeed, the world, is already being impacted by global climate change. These impacts will continue to become more and more severe unless the use of coal is dramatically curtailed and all nations make a concerted effort to develop other forms of energy. Wherever the PRB coal that is transported to the MBTL coal export facility is burned, the GHG emissions will eventually impact Montanans.

Within the last century, Montana has seen a 1.3°F increase in its average temperature.[34] The Intergovernmental Panel on Climate Change has projected that, within the 21st century, temperatures will increase 4°F in the spring and summer months and 5°F in fall and winter. In Montana, increasing temperatures are:

- leading to a loss of snowpack through earlier snowmelt with resulting effects on the water supply available for humans, livestock, crops, fish, and wildlife. Snowpack in Montana holds about 75 percent of the State's water supply. Less snowfall and earlier snowmelt affects aquifer recharge, stream flow, and stream temperature. Early snowmelt also produces an increase in stream flow in winter and spring but a reduction in summer and

[32] Fact Sheet: Social Cost of Carbon, EPA (Nov 2013), http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf. **and** http://climate.nasa.gov/scientific-consensus/
[33] http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf
[34] *Climate Change and Montana*, EPA, 1997, http://www.spatialsci.com/files/images/EPA_MT_climchange.pdf

fall flows. This is detrimental because the summer and fall flows are critical for irrigation, power generation, fishery protection, recreation, and other uses.

- leading to extreme heat waves. In general, heat waves are already occurring at a more frequent rate, thereby increasing mortality and morbidity. EPA studies indicate that Montana is particularly susceptible to more heat waves since it already has irregular, intense heat waves as part of its weather pattern. Heat waves produce a variety of problems, including increased fatalities among the elderly and other vulnerable populations. They also increase the spread of pests and invasive species. In reference to pests, EPA has reported that mosquito populations having the potential to carry encephalitis already exist in Montana. As conditions become warmer, the habitat for disease-spreading insects and pathogens will likely expand and create a greater risk of infection for Montanans.
- increasing the danger of wildfires. Wildfires are already becoming more prevalent and destructive in Montana, especially during summer months. During the period from 2000 through 2007, three National Forests in Montana experienced a loss of more than 1,420,000 acres of land due to wildfires. Moreover, in fiscal year 2008 alone, Montana spent $84.3 million on fire and damage control. The 2012 fires in southeastern Montana alone burned 421,006 acres and cost $16.5 million to fight. These costs to the State will only increase as global warming escalates. Wildfires also release huge quantities of CO_2 thereby creating a feedback loop that drives global warming ever higher.

Climate change is expected to have significant impacts on water supplies and the productive capacity of agricultural lands. In Montana, agriculture is the state's largest industry and comprises 64% of the state's land area. Along with the problems for water supplies that result from climate change in Montana, increasing summer temperatures can negatively affect cattle and crops, reducing weights and yields, respectively. Climate change also results in more violent storms and other weather pattern changes during other seasons. Agricultural producers are greatly affected by these changes not only for how it affects their operations but also because these changes often result in economic losses. As Northern Plains member Mark Fix testified in the 2014 EPA hearings on the draft Clean Power Plan, climate change is resulting in more violent winds and hail storms during spring and summer, which harm and destroy cattle and crops. There are more cold temperatures for longer periods of time during some winters and, increasingly into spring. These changes particularly can negatively impact calf survival.[35]

According to Dr. Steven Running, a University of Montana climate scientist, 30 years ago snow melts in Montana occurred around the beginning of April. In recent years, they have occurred in mid-March, and this trend is only continuing. The growing season currently begins a month earlier than it did 30 years ago, and summers are longer, hotter, and drier with lower river flows and more wildfires.

Montana's second largest industry is travel and tourism, which relies heavily on outdoor recreation and winter sports. The impacts of climate change – namely depleted water supplies, longer summers, increasing summer temperatures, changing weather patterns, earlier snow melts,

[35] Testimony of Mark Fix on behalf of Northern Plains Resource Council at the Denver, Colorado, EPA hearings on the draft Clean Power Plan, July 29, 2014

lower river flows, and more wildfires – disrupt Montana's tourism industry, often resulting in economic losses.

In this DEIS, the U.S. Army Corps of Engineers fails to take into account the social cost of carbon. Under the leadership of the Office of Management and Budget (OMB), the social cost of carbon was developed by a dozen federal agencies and offices in 2010 (and updated in 2014); it is the best existing tool to help agencies and the public make decisions regarding projects that impact the climate. The social cost of carbon estimates the global financial cost of each ton of extra carbon pollution in the atmosphere and seeks to incorporate impacts as diverse as drought, fire, diminished agricultural productivity, and more.[36] The social cost of carbon is backed by years of peer-reviewed scientific and economic research and has already been used by agencies in both rulemaking and project-level NEPA [National Environmental Policy Act] review.

In June 2014, a U.S. District Court ruled against the federal government in *High Country Conservation Advocates, et al. v. U.S. Forest Service, et al.* citing, among other things, its failure to analyze the social cost of carbon.[37] After this decision, and in response to a letter from more than two dozen conservation organizations, the U.S. Department of Agriculture affirmed that the social cost of carbon is an "appropriate tool for measuring and disclosing the social and economic implications" of federal coal leasing decisions.[38] The U.S. Army Corps of Engineers' failure to examine the social cost of carbon associated with the Proposed Action is a significant deficiency and makes the GHG analysis of this DEIS inadequate.

These significant social and environmental costs of carbon to Montana and Montanans are connected and cumulative impacts of the proposed MBTL project and must be recognized and thoroughly examined in the environmental analysis. These connected and cumulative effects must be considered by the decision makers.

Conclusion

Coal company commercials and politicians tout "clean coal" ─ and tell us that coal is cheap. But there is no such thing as "clean coal" and if we honestly calculated the costs of coal to the land, to our health, and to our planet, we would find that coal is not cheap. What is happening now is that the significant costs of coal are shifted into the future and onto others while the coal, rail, and terminal corporations pocket any profits. The true costs of coal are being externalized.

We believe that the U.S. Army Corps of Engineers must fully consider the consequences of all the connected and cumulative impacts that would result to Montana and Montanans if a permit is granted for the proposed MBTL coal export terminals. These comments are submitted

[36] "Refining Estimates of the Social Cost of Carbon," Howard Shelanski, White House Blog. November 1, 2013. https://www.whitehouse.gov/blog/2013/11/01/refining-estimates-social-cost-carbon and "The Social Cost of Carbon," Environmental Protection Agency. retrieved June 10, 2016. https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html

[37] "Court Blocks Coal Mine Expansion for not Counting the Costs of Carbon Pollution," Nidhi Thakar, June 2014, http://thinkprogress.org/climate/2014/06/30/3454764/court-blocks-arch-mine-coal-expansion/

[38] Letter from Robert Bonnie, Under Secretary for Natural Resources and Environment, U.S. Department of Agriculture, to J. Nichols, WhildEarth Guardians (Mar. 6, 2015).

with the hope that the decision makers will recognize that the DEIS prepared for this project is grievously deficient with regard to the issues we raise and to our concerns.

Thank you for the opportunity to participate in this important public process.

Sincerely,

Kate French, Chairperson
Northern Plains Resource Council

Nancy Hartenhoff-Crooks, Chairperson
Western Organization of Resource Councils