

COAL TRAINS THREATEN ENVIRONMENT AND PUBLIC HEALTH

By Nick Gier, Professor Emeritus, University of Idaho

Plumes of coal dust can often be seen from passing coal trains. I have often had to avert my face when a coal train passes to avoid being pelted with coal particles.

— William Van Hook, Assistant V-P, Burlington Northern Santa Fe

There is no coal dust landing on us.

—Dan Thompson, railroad engineer, Spokane EIS Hearing

My land is beautiful. The river is clean. I would like to see it stay that way.

Alaina Buffalo Spirit, Northern Cheyenne, Colstrip, Montana

A friend of mine just bought a condo overlooking Bellingham Bay, and she knew full well that the Burlington Northern Santa Fe (BNSF) tracks were 70 feet below her balcony. Later she discovered that each day three to four coal trains—125 cars, two locomotives in front and two in back—pass by with ear splitting horns sounding at every crossing. They are headed for Roberts Bank, B. C., where huge coal freighters are loaded for shipment to Asia. The empty trains—just as noisy and still shedding coal dust—trundle back from the border.

If the coal industry and SSA Marine have their way, the nation's largest coal terminal will be built at Cherry Point, just north of Bellingham, where 225,000 barrels of oil are already refined each day. Over the next decade the coal industry wants to run up to 68 additional trains from southeastern Montana and northeastern Wyoming through the rail "funnel" at Sandpoint, Idaho and Spokane, Washington.

Nine trains a day will be redirected to Bellingham, and the remainder will be sent to other proposed ports through a rail system that is already at 80 percent capacity. Nearly 150 million tons of additional coal will sent to Asia from Coos Bay, Boardman, Longview, St. Helens, or Bellingham each year. The developers are no doubt casting a wide net of proposals in anticipation of activist backlash.

The Environmental Impact Hearings

The Army Corps of Engineers has been holding hearings in cities along the rail route. The hearings have been billed as the "biggest experiment in environmental

democracy the Northwest has ever seen.” Whereas the developers are arguing for “site specific” investigations, those against want a “comprehensive, cumulative, programmatic” survey that will cover every point of the way from mines to ports—or as some climate activists insist—all the way to Asia. The Environmental Protection Agency supports a regional impact study, and the Army Corps of Engineers has already received 30,000 letters.

The first hearings were held in Bellingham and Mount Vernon where over 3,000 citizens attended and 980 people spoke out or wrote comments. About 90 percent of the presenters were against the coal trains. It was reported that “opposition speakers ranged from Native American leaders to retired scientists, organic farmers, commercial fishermen and birders.” One birder testified that at least two bird species may be threatened by increased rail traffic. The Lummi Tribe warned that further development at Cherry Point will threaten the spawning grounds of herring, the main staple of salmon and orca whales. SSA Marine has said that they would build longer piers but they promise only “less impact” on the spawning fish.

A hearing was also held on San Juan Island where 250 people turned out. They were concerned about the dramatic increase in ship traffic through the narrow passageways of one of the most beautiful maritime regions of the country. The coal ships are so large that they cannot pass through either the Panama or Suez canals. Unlike oil tankers they are single hulled and do not require tugboat escorts. If the Cherry Point coal port is built, 950 of these behemoths will clog these narrow waterways each year. Coal pollutes the water just as badly as oil does, fouling shorelines, killing fish and sea birds. Biologists are worried that increased propeller noise would drive the beloved Puget Sound orcas completely out of the area.

The next hearing was held in Ferndale, a town just 10 southeast of Cherry Point. The red-shirted opponents outnumbered the green-shirted proponents among the 1,000 gathered. SSA Marine had hired 62 day laborers from Seattle to serve as place holders for their speakers. As a result, the first opponent was 63rd out of the 120 allowed to speak. Those testifying against the coal port finally had a chance to express their views.

At the Spokane hearing on December 4, I drew card 86 but the 3-hour period ended after 85 speakers. Again place holders had been hired by the Northwest Alliance for Jobs and Exports, so union members and industry spokesmen dominated the first hour of the hearing. By the end, opponents outnumbered proponents 53 to 32. Ordinary citizens dominated the discussion, and the vote from them was 26 to 6 against more coal exports.

Most union members testified for the coal ports, but 4 of 23 spoke out against, including the first female engineer on the Burlington Northern Santa Fe. Three city council members from Spokane and Sandpoint, plus seven conservation organization spokesmen, testified about adverse effects to their cities, waterways, and forests. Two city planners, four nurses and doctors, and two Montana ranchers testified against the coal ports. A busload of Montanans had come to protest the trains, and also complain about the lack of hearings in their state—the very source of this dirtiest of all fossil fuels.

The most moving speeches came from members of the Northern Cheyenne, Crow, Spokane, and Yakima Indian tribes. A total of 54 Northwest Indian tribes have come out against additional coal exports to Asia. A Northern Cheyenne man said that he once made good money in the mines, but now he regrets the scars he and others have left on their sacred land. This country was of course once theirs, and most of western coal is now on federal land—our land to preserve for our descendants.

Coal industry officials have told the Spokane City Council that over the next decade up to 68 additional trains would be needed to haul the coal destined for Asia. Without exception the railway engineers, however, said that would be impossible, because the rail corridor is already near capacity. The BNSF has been silent on plans to lay more track, build overpasses over highly trafficked roads, and improve crossing gates so that warning horns are unnecessary.

The locomotive drivers were not entirely in agreement about how much coal dust their trains lose along the way. Most said none and another said “not that much.” Their employer, however, has been very honest about coal dust shedding. BNSF Assistant Vice-President William Van Hook has said that coal particles have hit him in the face. (See epigraph above.) BNSF tests have revealed that as much as 15 tons of coal dust can escape from an uncovered train after a 567-mile haul. A spokesman added that most of the loss happens during the first 100 miles.

A former railway executive who once raised concerns about the environmental dangers of shipping coal is now a vintner on the Oregon side of the Columbia River. A video shows him at the bottom of his property digging up handfuls of coal near the rails, 700 miles from the mines. He is afraid that, if coal train traffic increases significantly, his grapes will start tasting like tar. See video at www.youtube.com/watch?v=O_ufBje5oio.

Federal law requires that railroads carry coal as cargo, but they cannot insist that the cars be covered. A closed canopy would increase the risk of spontaneous combustion, and shippers claim that ventilated tops are too expensive. Some of the trains have their cars coated with surfactant, sometimes called “coal car” hairspray. One

can test the effectiveness of this solution with a simple experiment shown in the video cited above. Place the treated coal in a glass jar and shake it to simulate a moving coal car. If the lid is removed, fumes containing methane steams out of the jar giving the distinct impression that they will explode. It has been determined that the soft coal from the Powder River Basin is particularly inclined to disintegrate and produce dust. See Roderick J. Hossfeld, “PBR Coal Degradation – Causes and Concerns.”

Several railway workers testified that there is no difference to public health between shipping coal versus grains or potash. Grain and potash, however, are hauled in covered hoppers and the hazards in producing and storing them are far less. Wheat dust is combustible and can affect the respiratory system, but these are not dangers to general public health. This is also the case for potash mining. Here is a summary of a medical study of Canadian potash miners: there were “symptoms of grade I chronic phlegm production, and mild shortness of breath and chronic cough were more common in the higher exposure groups, but episodes of chest illness were not. Severe respiratory symptoms were rare.”

Adverse Health Effects of Diesel Exhaust and Coal Dust

Residents along the tracks in Spokane already have higher mortality rates, partially because of the diesel exhaust and coal dust that already pollute their neighborhoods. A Spokane physician submitted evidence about a “cancer cluster” near the tracks, and another resident informed the panel that diesel exhaust has now been officially declared a carcinogen. Coal dust contains mercury, lead, arsenic, cadmium, barium, selenium, and other toxic elements.

A group of 180 doctors in Whatcom County, just across the border from British Columbia, has done an exhaustive study of the health effects of noise and air pollution from additional coal trains. Here is a short summary of their results: (1) “diesel particulate matter is associated with impaired pulmonary development in adolescents; increased cardiopulmonary mortality and all-cause mortality; measurable pulmonary inflammation; increased severity and frequency of asthma attacks; and increased risk of cancer.” (2) “Coal dust is associated with chronic bronchitis; emphysema; and pulmonary fibrosis (pneumoconiosis).” See www.coaltrainfacts.org/key-facts#health.

Once the coal reaches the ports it is dumped in huge piles where it sits for months while the coal freighters are loaded. The Cherry Point facility will include an 80 acre open storage site, which will be subject to high winds during the winter months. Even on windless days the coal has to be constantly stirred in order to prevent spontaneous combustion. Developers at the Longview terminal have proposed a “nearly enclosed” facility for handling the coal, but critics are highly skeptical of such a plan. Water is

constantly sprayed on coal piles and the toxins of course are leached into the soil and water drainage.

Piles of coal stored at Roberts Bank grow to 60-80 feet and storms of coal dust sometimes blacken the western horizon. According to scientists at the University of British Columbia, coal dust doubled between 1977 and 1999. Nearby residents are furious as they clean their homes and boats on a regular basis and come into contact with the toxic waste. (More information at <http://daily.sightline.org/2011/03/15/are-coal-export-terminals-good-neighbors/>.) Citizens near the coal port at Seward, Alaska have filed suit, arguing that the operators are violating the Clean Water Act. The conservative state government has already assessed fines of \$220,000 because the bay has been fouled by coal dust. The Seward facility has enclosed its conveyor belt systems, just as SSA Marine and others plan to do in the Northwest, but fugitive dust is still a major problem.

The Danger of Train Derailments: 731 nation-wide in 2011

The U. S. has some of the most obsolescent railway infrastructure in the world. Whereas Amtrak derailments are a frequent occurrence, the much faster Japanese “bullet trains” have never had a major accident (except during earthquakes) since they started running for the 1960 Olympic Games. In August of this year there were two derailments near Sandpoint on Lake Pend Oreille, one of the nation’s most pristine lakes. At the Spokane hearing members of the Pend Oreille Waterkeepers reminded the audience that the railway line runs for 30 miles along the lake’s north shore crossing many bridges. The Clark Fork River feeds Lake Pend Oreille, and on November 13, 2006, 25 coal cars derailed and four dumped their loads into the river. It is now an EPA Superfund Site.

Encrusted coal dust on the tracks is known to cause cars to jump the rails. In July of this year 31 cars of a Burlington Northern coal train turned over near Mesa, Washington, sending up “a towering cloud of” coal dust. In August of this year 21 coal cars tipped over in Elliot City, Maryland killing two teenage girls. It was reported that coal dust “rose like smoke” around the entire area. Across the nation another 31 coal trains have derailed in the past six years. In response to traffic congestion at railway crossings, BNSF officials have proposed, incredibly enough, that the trains speed up through crossings, thereby increasing the risk of derailments.

From Coal to Gas, Wind, and Solar

About 100 coal fired power plants are scheduled to be closed across the nation, primarily because they are too dirty and too expensive to retrofit. Cleaner gas fired plants, plus wind and solar facilities, will take their place. The coal-fired facility at Longview, Washington will also be closed down, but the loss of electricity there, as well as at Boardman, Oregon, will be replaced by wind turbines with hydropower providing continuous base load.

The coal power plant at Boardman has been closed, but now the coal that would have been burned there, according to coal industry plans, would be shipped by covered barge and loaded onto coal freighters at St. Helens farther down the Columbia River. There would be far less coal dust released on the river voyage, but the trains would still shed tons of it on the way from the Powder Basin. The 1,257 coal barges would double the tonnage on the river and they would compete with grain barges at the various locks. This would impact salmon breeding and fishing, as well as wildly popular windsurfing and kiteboarding powered by the best fresh water winds in the nation. For the most detailed critique of shipping coal on the Columbia River see <http://columbiariverkeeper.org/wp-content/uploads/2011/09/2012-5-3-FINAL-Columbia-Riverkeeper-et-al-RHA-Comments-on-Morrow-Pacific.pdf>.

More and Cleaner Jobs at these Industrial Sites

Coal industry spokesmen boast about the new jobs that would be created at the new terminals. An estimated 250 jobs would be created at Cherry Point and 70 jobs at the proposed Longview terminal, but only 50 at Boardman and St. Helens combined. Critics say that more, cleaner jobs can be created on less land on these sites. Data from the Sightline Institute indicates that a coal port would produce only .2 jobs per acre, whereas a FedEx distribution site would create 1.1 jobs per acre. Another facility at Longview brings in wind turbines and other cargo and generates 3.4 jobs per acre. These uses are obviously much cleaner than huge piles of coal kicking up tons of toxic dust.

Supporters of expanded coal export argue that if we don't send our coal to the Asians, they will simply mine more of their dirtier coal or increase their imports from Australia and Indonesia. (Ironically, the Australia's Ambre Energy has just bought the Decker Mine in Montana where 400 miners are employed. Ambre also has majority interest in the proposed terminal at Longview.) American coal will depress prices and will simply prolong the day—now even past due—that the world must stop burning fossil fuels. The coal industry will continue to make good profits as it produces fuel for the remaining coal-fired plants in the U. S. These officials should face the reality of global

climate change and invest in alternative energy, and they should retrain their workers for cleaner high-paying jobs.

At the ports of Los Angeles and Long Beach hundreds of container ships unload every month. Most of them are filled with manufactured goods from Asia—much of them destined for Wal-Mart stores. An NPR reporter on site once asked what was going back on these ships. The answer was: lots of scrap iron and recycled cardboard. Only Third World nations do this, as they also continue to exporting natural resources with no value added.

The Pacific Northwest Speaks Out

Over 160 elected officials – including both Washington Senators Patti Murray and Marie Cantwell, Oregon’s governor, and Seattle’s mayor—and over 600 health professionals, over 400 local businesses, 220 faith leaders, 30 municipalities, and 54 Northwest Tribes have either voiced concern or come out against additional coal exports. This tally came before the Spokane and Boardman hearings held on December 4.

The U. S. simply should not export additional coal to Asia. In addition to fueling China’s bad habits, the prevailing winds bring much of the pollutants right back on us in 10 days. The coal trains would dramatically increase railway crossing wait time, impact economic activity, hinder emergency vehicles, cause hearing loss, and produce dangerous air pollution. This is not what most of the people of the Northwest want.

Dana Lyons is a singer, songwriter, and environmental activist from Bellingham. Over the past six months he has been traveling from town to town along the rail route singing his protest songs. He has been called the new Pete Seeger. In between songs he informs his audiences with the same information that I’ve presented here. One of his best lines is: “With both the Indians and the Cowboys with us, we’ve really got them surrounded!”

Nick Gier taught philosophy at the University of Idaho for 31 years. Read his columns on climate change and the environment at www.NickGier.com/columns.htm