



September 5, 2017

ATTN: Bridger Mine Complex EA
C/O: Logan Sholar
Western Region Office
Office of Surface Mining Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, CO 80202
OSM-NEPA-WY@OSMRE.gov
By Electronic Mail

Re: Comments on the Environmental Assessment for Jim Bridger Coal Mine Complex Mining Plan Modification for Federal Coal Lease WYW-02727

Dear Mr. Sholar:

WildEarth Guardians (“Guardians”) submits the following comments on the Office of Surface Mining Reclamation and Enforcement – Western Region’s (“OSM’s”) Environmental Assessment (“EA”) for a proposed mining plan modification at Bridger Coal Company’s Jim Bridger coal mine in southwestern Wyoming. Bridger Coal Company is a subsidiary of PacifiCorp, which is the primary owner and operator of the adjacent Jim Bridger coal-fired power plant. The Jim Bridger mine is dedicated to fueling the Jim Bridger power plant and none of its coal is shipped anywhere else. The mining plan modification would authorize mining of 560 acres of publicly owned coal that is part of federal lease federal coal lease WYW-02727. The modification approval would allow the Bridger Coal Company to mine 4.5 million tons of additional federal coal and extend the life of the mine and connected Jim Bridger Power Plant.

We urge OSM to halt its review, or to disapprove of the mining plan modification. We are concerned first and foremost that there is no valid federal coal lease granting OSM authority to review and recommend whether the Secretary of the Interior should approve a mining plan modification for the Jim Bridger coal mine. We stated this concern in our June 30, 2016 scoping comments, and it has still not been addressed.

Under the Surface Mining Control and Reclamation Act (“SMCRA”) regulations, the Secretary of the Department of the Interior can only approve a mining plan where the federal coal involved has been leased. *See* 30 C.F.R. §§ 740.4(a)(1) and 746.11(a). Once the federal coal is leased, the Secretary may approve a mining plan, if appropriate. *Id.* In this case, there has not been any validly leased federal coal, as the lease was not approved by an official with delegated

authority. Here, U.S. Bureau of Land Management (“BLM”) Rock Springs Field Manager, Lance Porter, approved the modification of lease WYW-02727, which is the subject of OSM’s mining review. However, under BLM delegations of authority, Field Managers are not authorized to approve the sale and issuance of coal leases. *WildEarth Guardians*, 187 IBLA 353 (May 6, 2016). Any decision approved by an employee without delegated authority is “not properly considered a decision of the BLM.” *WildEarth Guardians*, 187 IBLA 349 (May 6, 2016). Because the decision to approve the modification of lease WYW-02727 was not approved by an authorized BLM official, the decision had “no legal effect.” *Id.*

OSM therefore has no authority to recommend whether to approve mining and cannot continue with its review. The agency must either refrain from offering any recommendations to the Secretary of the Interior or recommend that the Secretary disapprove of the mining plan modification due to a lack of leased federal coal.

Should OSM disregard the fact that there is no validly leased federal coal, the agency must still reject approval of the proposed mining. Furthermore, the agency must reject the preparation of an EA and move to conduct a full Environmental Impact Statement (“EIS”), consistent with section 102(2)(C) of the National Environmental Policy Act (“NEPA”). *See* 42 USC 4332(2)(C).

1. OSM Must Conduct a Full Environmental Impact Statement Analysis

We are extremely concerned that OSM has never prepared an independent analysis of the effects of coal mining at the Jim Bridger coal mine and connected Jim Bridger power plant to the human environment. In our prior comments, we pointed to the need for OSM to prepare an EIS. These comments do not appear to have been adequately addressed in the EA. The Jim Bridger coal mine is a major supplier to the nearby Jim Bridger power plant, the largest coal-fired power plant in Wyoming. U.S. Department of Energy, The Energy Information Administration (EIA) EIA-923 Monthly Generation and Fuel Consumption, Time Series File, December 2016, available at: <http://www.eia.gov/electricity/data/eia923/>. Together, these operations pose tremendous impacts to public lands in the region, air quality, climate change, water quality, and wildlife. Combined with the impacts of past, present, and reasonably foreseeable future impacts in the region, the proposed mining plan modification would appear to pose significant impacts, warranting the need for OSM to prepare an EIS pursuant to NEPA. The history of approvals during the life of the mine indicates only EAs have been undertaken, not a more rigorous EIS, which is wholly insufficient to allow continued operations at the Jim Bridger mine complex.

In similar circumstances, OSM enacted a full EIS process to analyze impacts of a mining plan modification related to federal coal lease NM-99144 at the San Juan Mine. Fed. Reg. 84,14745. In comparison, the San Juan Generating Station generates 1,848 megawatts of electricity; the larger Jim Bridger Power Plant generates 2,110 megawatts. *See*, San Juan Generating Station <http://www.pnm.com/systems/sj.htm>; *see also*, Jim Bridger Plant Fact Sheet http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/EnergyGeneration_Fact_Sheets/RMP_GFS_Bridger.pdf. The San Juan Generating Station emits 11,881,970 tons of CO₂; the Jim Bridger Power Plant emits even more at 14,732,724 tons of CO₂. North American Power Plant Air Emissions, Carbon Dioxide Emissions, available at:

<http://www2.cec.org/site/PPE/co2emissions>. These are only two comparison points among many, however, OSM previously determined that the impacts of a smaller complex that emits less CO₂ than the Jim Bridger Power Plant warranted an EIS. Thus, the decision to merely undergo an EA for the larger Jim Bridger complex, which emits higher levels of CO₂ and has more significant environmental implications, is seemingly arbitrary.

Moreover, the current finding that impacts were not sufficiently significant to warrant an EIS is marred against the fact that an EIS was completed for the Jim Bridger Power Plant in 1972. Final Environmental Impact Statement for the Jim Bridger Thermal-Electric Generation Project. 7/26/1972, available at: <https://ia902707.us.archive.org/20/items/finalenvironment5103unit/finalenvironment5103unit.pdf>.¹ Put more pointedly, 45 years ago, the impacts of the Jim Bridger Power Plant were significant enough to warrant a full environmental analysis, signaling that those same impacts are significant enough to warrant an EIS now in analyzing the modification. Further, while the 1972 EIS analysis was current at the time, since then, significant environmental advances and legislation has been enacted. The 1972 EIS was signed before the Endangered Species Act (1973); SMCRA (1977); Clean Air Act amendments (1977, 1990); the invention of scrubber technology for removing air pollution (1979); and before climate change was widely accepted, among other events.

Even 45 years ago, the 1972 EIS stated that “The stack emissions [...] have by far the most significant impact on the high-altitude desert environment.” *Id.* at I-1. Since then, Wyoming’s coal companies have set new production records every year, levels which OSM could not have forecasted or accounted for in determining whether the cumulative impacts of nearby mine or power plants were significant at that time. In 1972, only 10.9 million tons of coal were mined from Wyoming. Thilenius, John & Glass, Gary. “Surface Coal Mining in Wyoming: Needs for Research and Management.” *Journal of Range Management* 27(5), September, 1974, available at: <https://journals.uair.arizona.edu/index.php/jrm/article/viewFile/6352/5962>. In 2015, production spiked to 375.7 million tons of coal mined from Wyoming. US Energy Information Administration. Annual Coal Report, created 11/3/2016, available at: <https://www.eia.gov/coal/data.php#production>. As another point of comparison, in 1972 the Jim Bridger Power Plant used an estimated 29,200 acre-feet of water per year. In 2016, the Jim Bridger Power Plant was permitted to use up to 34,320 acre-feet per year, and despite lower production in 2016, actually used 23,866 acre-feet per year. All that to say, if the agency determined that the water use and sheer amount of production was significant enough to warrant a full environmental evaluation, that determination is all the more necessary now, further scrutinized under today’s water shortages, climate change problems, and environmental legislation. Thus, OSM must analyze the environmental impacts as the 1972 EIS fails to address significant environmental impacts that should be weighed in determining whether to approve the modification.

Finally, OSM’s decision to issue an EA in order to avoid preparing its own EIS or a supplemental EIS, is not supported by Interior Department NEPA regulations at 43 C.F.R § 46.140. These regulations state that:

¹ We incorporate, by reference, this Final Environmental Impact Statement but also assert that it should be a part of the record for OSM’s mining plan review.

An environmental assessment may be prepared, and a finding of no significant impact reached, for a proposed action with significant effects, whether direct, indirect, or cumulative, if the environmental assessment is tiered to a broader environmental impact statement which fully analyzed those significant effects.

In this case, an EA is insufficient because a proper EIS has never been prepared. In fact, the EA prepared for the proposed mining plan modification does not even tier to an EIS. It is very concerning that for such a massive industrial operation with such an extensive footprint on the landscape of the United States of America, an EIS has never been prepared. Moreover, we have raised these issues several times surrounding different leases under Bridger Coal Mine. In a 2016 appeal of a different lease modification at Jim Bridger Mine, we reasoned that “the agency entirely failed to assess the significance of these emissions in the context of their climate impacts. This is a significant shortcoming and indicates there is no support, implicit or otherwise, that the impacts of the greenhouse gas emissions will not be significant and therefore justify a FONSI.” *WildEarth Guardians’ Statement of Reasons, Appeal of the Jim Bridger Lease Modification*, 6 IBLA No. 2016-0079. (Attached as Exhibit 1).

Expanded mining poses significant direct, indirect, and cumulative impact to air quality, water quality, and special status species in the region. The EA unfortunately falls short of adequately addressing a number of potentially significant impacts related to the mining of the Jim Bridger coal lease, including a number of potentially significant impacts that we flagged in earlier comments. *See*, WildEarth Guardians Scoping Comments. The Secretary of the Interior has discretion to disapprove mining plans pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act (“SMCRA”), 30 C.F.R. § 746, meaning rejection is wholly authorized.

If OSM decides to continue to process the proposed mining plan modification, despite the legal barriers, we request the Agency address the following issues:

2. OSM Must Fully Analyze and Assess the Direct and Indirect Impacts of Mining at the Bridger Mine

OSM did not present sufficient information to justify a finding of no significant impact. Therefore, OSM must fully analyze and assess the surface impacts of mining the proposed lease. We impress upon OSM to fully analyze and assess the impacts of mining to the following:

a. Impacts to Surface Water Quality and Quantity

The EA insufficiently analyzed water quality impacts. With regards to water quality, OSM must fully analyze and assess water quality impacts to ensure compliance with state water quality standards. OSM must identify all existing water quality problems in the area that will be directly, indirectly, and cumulatively affected by the proposed action and disclose any contribution the proposed action will make to those water quality problems. OSM must ensure that the reasonably foreseeable consequences of its actions ensure compliance with relevant water quality standards in accordance with the Clean Water Act.

We are further concerned that the EA fails to adequately analyze and assess water quantity impacts. The EA states that annual water usage for dust suppression at the Jim Bridger Mine Complex ranges between 70 million and 170 million gallons of water per year. *See*, Jim Bridger Mine Environmental Assessment, § 2.2.1.2.7 (hereinafter “EA”). Additionally, the EA states that underground facilities are estimated to require 105 million gallons per year. EA § 2.1.1.8. What is missing from these recitations of data is whether these amounts are significant, and how the Agency determined the threshold of significance. A second example of inadequate analysis is the single mention of the Green River Pipeline in the EA, without any context as to how it will be impacted, or what the significance of the pipeline is. *Id.* Further, the EA demonstrates that the total acres of past, present, and reasonably foreseeable future actions causing surface disturbance in the groundwater is approximately 61,106 acres. EA § 5.2.3.9.2. What is left to be examined is the level of significance, and the threshold of that determination. These are only a handful of examples in which OSM merely enumerated current figures, and left the public to guess at their context, and therefore how the Agency determined their significance. Under NEPA, agencies are tasked with the independent obligation to assess significance, not pass the duty off to some undefined entity. In this particular case, OSM has not fully accounted for the water use at the Jim Bridger Complex as a whole. Therefore, OSM has not met its burden in providing sufficient evidence that the impacts of the modification would not be significant, warranting an EA.

b. Impacts to Air Quality

The EA fails to analyze and address impacts to air quality related to the combustion of coal from the Jim Bridger Mine. OSM must fully analyze and assess direct, indirect, and cumulative impacts to air quality, including impacts to air quality in the context of all NAAQS, prevention of significant deterioration (“PSD”) increments for Class I and II areas, and visibility impacts to Class I areas.

We are particularly concerned over the impacts of the mining to NAAQS for ozone, particulate matter, and nitrogen dioxide (which is produced during blasting, as well as emitted from engines). OSM must specifically address all emissions sources, particularly those that are not explicitly permitted by the State of Wyoming (including blasting emissions). We request that OSM further address the impacts of fugitive emissions, including fugitive volatile organic compound and nitrogen dioxide emissions associated with blasting and stripping of overburden. OSM must quantify emissions from the mine to ensure an accurate and adequate analysis and assessment of air quality impacts.

While OSM may claim that it is appropriate to presume there will be no significant impacts by virtue of the mine and the Jim Bridger Power Plant being subject to air quality permitting, this claim is belied by the fact that the Jim Bridger Power Plant is currently out of compliance with the Clean Air Act. According to the U.S. Environmental Protection Agency’s (“EPA’s”) Enforcement and Compliance History Online Database, the Power Plant is a High Priority Violator and has been out of compliance since at least 2014, if not earlier. (*see* Exhibit 2). OSM must analyze and assess air quality impacts taking into account this noncompliance.

We are also concerned that current monitoring for the area is not even occurring. While the EA states that emissions from the mine are not contributing to ozone exceedances, this statement does not represent an accurate assessment when monitoring stations are not even in the area. One nearby air quality monitoring station, at Moxa Arch, is over 80 miles away, the second, in Wamsutter, Wyoming, is 50 miles away. What's more, the EA did not contain any expression of whether the mileage of the air quality monitoring system to the mine would cause an impact to the monitoring results. In order to correct this flawed assessment, OSM must prepare a modeling analysis. Additionally, OSM did not analyze quantified fugitive emissions from particulate matter from excavation, hauling, and reclamation activities. Further, a recent study found a new toxin existing in coal combustion emissions. *Nature Communications* 8, Article number: 194(2017) doi:10.1038/s41467-017-00276-2, available at: <https://www.nature.com/articles/s41467-017-00276-2>. The study suspected that in the U.S., scrubbers capture the material, reducing its prevalence, however, there is no monitoring of this particular harmful toxin, which contributes to the estimated 3 million air-pollution related deaths worldwide. Roston, Eric. "Coal Plants Might be More Toxic Than We Thought." Bloomberg News. 8/8/2017, <https://www.bloomberg.com/news/articles/2017-08-08/coal-plants-might-be-even-more-toxic-than-we-thought>. Thus, OSM must include an analysis of this particular new toxin's prevalence in the effects of coal combustion.

Until the Agency has corrected these deficiencies in monitoring data and analyses, the Agency cannot come to the conclusion that the impacts will not be significant.

c. Climate Change Impacts

OSM has failed to analyze and assess the full climate change impacts of approving the modification. OSM must analyze and assess the full extent of climate change impacts of approving the proposed mining plan. The Proposed Action would result in a continuation of existing mining levels at the Bridger Mine Complex through 2037; therefore, direct effects on greenhouse gases (GHG) would also continue at current levels. By not approving the mining permit, the production levels would decrease from 3% to 5% after 2025, as opposed to the proposed action. To this end, we request OSM quantify the direct, indirect, and cumulative greenhouse gas emissions that would result from approving the proposed mining plan, which would maintain production levels, including emissions of methane (including from mining activities), carbon dioxide, and other greenhouse gases that have been found to harm public health.

Additionally, we find it concerning that OSM touted the benefit of employing 230 people through the depreciable life of the mine, 2037, without also considering the costs of continued combustion and extraction through that same period. The EA stated: "The Proposed Action represents an estimated economic benefit to this area through 2037 of wages, goods and services related to the mining operation, and payment of federal, state, and local taxes. The socioeconomic benefits are derived from payroll, insurance, retirement contributions, local expenditures, taxes, and federal coal royalty payments." Jim Bridger Coal Mine Complex, Federal Coal Lease WYW-02727, Mining Plan Modification, Finding of No Significant Impact, p. 3. This type of one-sided analysis is a principal example of the inadequate evaluation engaged in by OSM. To that end, a federal district court in Montana recently ruled that a NEPA analysis

that included the economic benefits of a project was incomplete without an assessment of the carbon costs that would result from the development. *Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM (D. Mont. Aug. 14, 2017) (Attached as Exhibit 3).

We also request that OSM analyze and assess the extent to which these emissions are likely to contribute to global climate change. In this case, it appears that any level of extended carbon dioxide emissions would pose significant impacts. However, at a minimum, to properly assess climate impacts under NEPA, OSM must analyze and assess the cost of carbon emissions using the social cost of carbon protocol.

OSM must analyze and assess the climate impacts of mining the Jim Bridger Mine using the social cost of carbon protocol. The social cost of carbon protocol for assessing climate impacts is a method for “estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO₂) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO₂ reduction).” EPA, “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1 (Attached as Exhibit 4). The protocol was developed by a working group consisting of several federal agencies, including the U.S. Department of Agriculture, EPA, CEQ, and others, with the primary aim of implementing Executive Order 12866, which requires that the costs of proposed regulations be taken into account.

In 2009, an Interagency Working Group (“IWG”) was formed to develop the protocol and issued final estimates of carbon costs in 2010. Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (Feb. 2010) (Attached as Exhibit 5). These estimates were then revised in 2013 by the IWG. Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (May 2013) (Attached as Exhibit 6). In July 2014, the U.S. Government Accountability Office (“GAO”) confirmed that the Interagency Working Group’s estimates were based on sound procedures and methodology. GAO, “Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates,” GAO-14-663 (July 2014) (Attached as Exhibit 7). The social cost of carbon estimates were again revised in 2015. Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (modified July 2015) (Attached as Exhibit 8).

IWG’s most recent estimate was \$50 in global damages per ton of carbon dioxide, based on year 2020 emissions, converted from 2007 to 2017 dollars. Interagency Working Group on the Social Cost of Greenhouse Gases (IWG), “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (2016) (Attached as Exhibit 9).

While Trump’s Executive Order 13783 technically disbanded the IWG in March, 2017, in a recent letter published in the journal, *Science*, scholars urged the government and private sector to continue using IWG’s the estimate of \$50 per ton of carbon dioxide, as it is the “best estimate of the social cost of greenhouse gases”. “Best Cost Estimate of Greenhouse Gases.”

Revesz, R. *Science* 357 (6352), 655. DOI: 10.1126/science.aao4322 (Attached as Exhibit 10). In the letter, scholars reasoned that IWG’s estimated “already are the product of the most widely peer-reviewed models and best available data.” *Id.* Thus, OSM’s statement that “the science used in the models lags behind the most recent research,” is false, based on the recent letter published in *Science*, indicating that it is still current and the best model.

The social cost of carbon provides decision makers and the public with an informative, accessible mechanism for both analyzing and understanding the climate impacts of a proposed decision. Although agencies such as OSM and the Forest Service often quantify the *amount* of carbon dioxide or CO₂-e (carbon dioxide equivalent) emissions from mining and burning coal from federal leases, these agencies have not yet taken the next step of consistently employing the social cost of carbon to tell the public about the *impact* of those emissions. An isolated calculation of the amount of carbon emissions that would result from a particular project does not provide any meaningful insight as to the effect that those emissions will have on our climate. By contrast, the social cost of carbon offers an actual estimate of the damage caused by each incremental ton of carbon emissions.

A primary reason OSM gave for not completing a social cost of carbon analysis is that without a “thorough cost-benefit analysis incorporating the social benefits of energy production, the inclusion of an SCC analysis in this EA would present only part of the necessary data.” EA at 79. The social cost of carbon describes those damage estimates in monetary terms, which are far easier for decision makers and the public to comprehend and contextualize than tons of CO₂-e. In doing so, the social cost of carbon provides a concrete assessment of a project’s social and environmental impacts and provides a tangible sense of the scale of damage that both the public and decision makers can readily understand. As explained by one legal commentator, the social cost of carbon “allow[s] agencies to consider those GHG emissions . . . in a meaningful way,” and that “assigning a price to carbon emissions – even a conservative price – makes the cost of those emissions concrete for agency decision makers.” Squillace, Mark & Hood, Alexander, *NEPA, Climate Change, and Public Land Decision Making*, 42 ENVTL. L. 469, 510, 517 (2012). Thus, OSM’s decision not to complete a social cost of carbon analysis because it does not present all the data is flawed in a major way as indicated, *supra*, OSM calculated the economic benefits in estimating the modification would provide 230 jobs, thus only showing one side.

An additional reason that OSM gave for not engaging in a social cost of carbon analysis is that the estimates do not include all of the important physical, ecological, and economic impacts of climate change due to lack of precise data. EA at 79. Of course, we do not imply that the impacts of climate change can be fully captured by a dollar figure. Droughts, floods, extreme weather events, rising sea levels, and other phenomena related to climate change present threats to our planet that extend far beyond economic harms. Agencies must analyze not only the quantitative (and monetizable) climate impacts of proposed actions, but the qualitative and non-monetizable impacts as well. Nevertheless, to the extent that a project’s impacts can be quantified, the social cost of carbon is the best and most rigorous tool currently available for understanding the damages linked to carbon emissions, rather than simply the extent of the emissions themselves. Thus, OSM must at least attempt to quantify the costs of its impacts, even with a disclaimer that there could be many more impacts that are not quantified.

OSM stated that the Social Cost of Carbon was designed for rulemakings and not for project-level analyses. *Id.* This is false; although often utilized in the context of agency rulemakings, the protocol has been recommended for use and has been used in project-level decisions. For instance, the EPA recommended that an EIS prepared by the U.S. Department of State for the proposed Keystone XL oil pipeline include “an estimate of the ‘social cost of carbon’ associated with potential increases of GHG emissions.” EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011) (Attached as Exhibit 11). Furthermore, although it was initially developed to help agencies develop regulatory impact assessments of proposed rules, the social cost of carbon need not and should not be limited to this application. As CEQ has confirmed, statements that a particular agency decision will result in only a small fraction of global GHG concentrations should not be used to avoid analyzing the impact of those emissions. Consideration of Greenhouse Gas Emissions and Climate Change Effects in NEPA Reviews, 79 Fed. Reg. at 77,825. Such statements, according to CEQ, reflect the nature of climate change rather than the impact of any particular project. *Id.*

NEPA requires OSM to use the social cost of carbon because it is the best tool available to analyze the economic and environmental impact of increased carbon dioxide emissions. NEPA specifically requires federal agencies to analyze and disclose the environmental effects of their actions, including “ecological . . . aesthetic, historic, cultural, economic [and] health” impacts. 40 C.F.R. § 1508.8. Where “information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known,” NEPA regulations direct agencies to evaluate a project’s impacts “based upon theoretical approaches or research methods generally accepted in the scientific community.” 40 C.F.R. § 1502.22(b)(4).

Agencies cannot ignore the effects of GHG emissions from mining operations or coal combustion. *High County Consrv. Advocates v. US Forest Service*, 52 F. Supp. 3d 1174, 1190 (2014). Nor can they “completely [] ignore a tool in which an interagency group of experts invested time and expertise.” *Id.* at 1193. NEPA requires agencies to engage in “a reasonable, good faith, objective presentation of the topics,” such that it “foster[s] both informed decision-making and informed public participation.” *Custer Cnty Action Ass’n v. Garvey*, 256 F.3d 1024, 1035 (10th Cir. 2001) (citations omitted). The social cost of carbon is based on generally accepted research methods and years of peer-reviewed scientific and economic studies. It was developed by experts at a dozen federal agencies and offices, and it is both widely used and generally accepted in the scientific community. As such, it is the best tool now available for agencies to use in predicting and analyzing the climate impacts of proposed federal actions.

OSM additionally stated that it would not undertake a social cost of carbon analysis because it was “no longer governmental policy.” EA at 79. While the IWG is no longer collected, agencies are still obligated to analyze the costs of GHG emissions. Specifically, federal agencies’ obligation to use the social cost of carbon to analyze the costs associated with GHG emissions through NEPA was directly affirmed by the court in *High Country*. 52 F. Supp. 3d 1174. In his decision, Judge Jackson identified the IWG’s social cost of carbon protocol as a tool to “quantify a project’s contribution to costs associated with global climate change.” *Id.* at 1190. “The critical importance of [climate change] . . . tells me that a ‘hard look’ has to include a

‘hard look’ at whether this tool, however imprecise it might be, would contribute to a more informed assessment of the impacts than if it were simply ignored.” *Id.* at 1193. To fulfill this mandate, they agency must use the social cost of carbon to disclose the “ecological[,] . . . economic, [and] social” impacts of the proposed action. 40 C.F.R. § 1508.8(b).

Importantly, other agencies within the Interior Department, have already utilized the social cost of carbon protocol in the context of analyzing the impacts of fossil fuel development under NEPA. In recent Environmental Assessments for oil and gas leasing in Colorado, the BLM estimated “the annual SCC [social cost of carbon] associated with potential development on lease sale parcels.” BLM, “Environmental Assessment for October 21, 2014 Oil and Gas Lease Sale,” DOI-BLM-MT-0010-2014- 0011-EA (May 19, 2014) at 76, available at: [http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct_21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale_Post%20with%20Sale%20\(1\).pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct_21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale_Post%20with%20Sale%20(1).pdf). In conducting its analysis, the BLM used a “3 percent average discount rate and year 2020 values,” presuming social costs of carbon to be \$46 per metric ton. *Id.* Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be “\$38,499 (in 2011 dollars).” *Id.* In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be \$51 per ton of annual CO₂e increase. BLM, “Little Willow Creek Protective Oil and Gas Leasing,” EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81 (Attached as Exhibit 12). Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be \$3,689,442 annually. *Id.* at 83.

Recently, Michael Greenstone, the former chief economist for the President’s Council of Economic Advisers, confirmed that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. *See* Greenstone, M., “There’s a Formula for Deciding When to Extract Fossil Fuels,” *New York Times* (Dec. 1, 2015). To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published in 2015 found that current estimates for the social cost of carbon should be increased six times for a mid-range value of \$220 per ton. Moore, C.F. & Delvane, B.D., “Temperature Impacts on Economic Growth Warrant Stringent Mitigation Policy,” *Nature Climate Change* (January 12, 2015) at 2 (Attached as Exhibit 13). In spite of uncertainty and likely underestimation of carbon costs, nevertheless, the SCC is a useful measure to assess the benefits of CO₂ reductions, and costs of not reducing CO₂.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decision-making, is emphasized by a 2014 White House report, which warned that delaying carbon reductions would yield significant economic costs. *See* Executive Office of the President of the United States, “The Cost of Delaying Action to Stem Climate Change” (July 2014) (Attached as Exhibit 14). As the report states:

[D]elaying action to limit the effects of climate change is costly. Because CO2 accumulates in the atmosphere, delaying action increases CO2 concentrations. Thus, if a policy delay leads to higher ultimate CO2 concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO2 concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO2 concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.

Id. at 1.

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and supported in federal case law. As explained, NEPA requires agencies to analyze the consequences of proposed agency actions and consider include direct, indirect, and cumulative consequences.

To this end, courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id.* at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id.* at 1200. The court found this argument to be arbitrary and capricious. *Id.* The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id.* at 1202.

More recently, a federal court has done likewise for a federally approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. *See*, 52 F.Supp.3d 1174, citing 40 C.F.R. § 1502.23. However, when an agency prepares a cost-benefit analysis, “it cannot be misleading.” *Id.* at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project. However, the quantification of the social cost of carbon, although included in earlier analyses, was omitted in the final NEPA analysis. *Id.* at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id.* Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id.* Recently, a federal district court in Montana reaffirmed the reasoning in *High Country*, indicating that a NEPA analysis that included the economic benefits of a project was incomplete without an assessment of the carbon costs that would result from the development. *Mont. Env'tl. Info. Ctr.*, CV 15-106-M-DWM. In agreeing with the Plaintiffs, the Court specifically mentioned the Social Cost of Carbon Protocol

as one tool to use to quantify the costs associated with the mine expansion. *Id.* at 35. Further, a D.C. Circuit Court ruled that an agency’s assessment of the environmental impact of pipelines was inadequate, reasoning that it did not contain enough information on the greenhouse-gas emissions resulting from burning the gas that the pipelines carry. *Sierra Club, et al., v. Federal Energy Regulatory Commission*, No. 16-1329 (D.C. Cir. Aug. 22, 2017) (Attached as Exhibit 15). Thus, the most recent rulings indicate a robust analysis of GHG is necessary.

Using any of the Interagency Working Group’s social cost of carbon values demonstrates that the combustion of coal from the proposed expansion will likely result in massive economic damages associated with climate change. The total climate impacts from the proposal will reach into the hundreds of millions of dollars, and this must be disclosed to the public and decision makers.

To this end, OSM must fully analyze and disclose the carbon costs of authorizing the proposed mining plan modification.

3. OSM Must Address Impacts of Similar and Cumulative Actions

OSM must analyze and assess the impacts of similar and cumulative mining and coal leasing approvals that are under consideration by the U.S. Department of the Interior in the same area. Under NEPA, an agency must analyze the impacts of “similar” and “cumulative” actions in the same NEPA document in order to adequately disclose impacts in an EIS or provide sufficient justification for a FONSI in an EA. *See* 40 C.F.R. §§ 1508.25(a)(2) and (3). Similar actions include actions that, “when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together.” 40 C.F.R. § 1508.25(a)(3). Key indicators of similarities between actions include “common timing or geography.” *Id.*

The significance of these impacts is based on the “context” and “intensity” of the impacts. 40 C.F.R. § 1508.27. Context of the impacts is determined by the impacts to, among other factors, the affected region, locality, whether the action “affects public health or safety,” the “[u]nique characteristics of the geographic area,” the degree to which impacts are likely to be “highly controversial” or “highly uncertain,” and whether the action may be cumulatively significant. 40 C.F.R. § 1508.27(b). An agency may prepare an environmental assessment (“EA”) to analyze the effects of its actions and assess their significance. *See* 40 C.F.R. § 1508.9; *see also* 43 C.F.R. § 46.300.

We are primarily concerned by the potentially significant cumulative impacts posed by nearby coal mines and associated power plants in the area. Sweetwater county is home to the Jim Bridger Power Plant, the Jim Bridger Coal Mine, as well as the Black Butte Coal Mine. Here, the U.S. Department of the Interior is currently weighing numerous coal decisions, similar to the proposed action at hand, which pose similar and cumulative impacts in terms of greenhouse gas emissions, climate, and other impacts, particularly in terms of carbon costs. In fact, PacifiCorp recently submitted a new application for a federal coal lease to expand the Jim Bridger Coal Mine. This lease application, which has been assigned serial number WYW-185637, would add 1,721 acres and 19.8 million tons of coal to the mine (Attached as Exhibit 16). Furthermore,

PacifiCorp recently applied for a new coal exploration license, indicating the possibility of even more mining. Fed. Reg. 18505 September 1, 2017. Additionally, more coal mining was also just approved at Black Butte mine, which also contributes fuel to the Jim Bridger power plant (Attached as Exhibit 17).

OSM cannot justify a FONSI unless and until it fully accounts for the cumulative impacts of past, present, and reasonably foreseeable mining at the Jim Bridger mine and the nearby Black Butte mine. An EIS must fully analyze and assess these impacts.

Further, an EIS must fully analyze and assess the impacts of similar federal coal leasing and mining approvals being undertaken throughout the region in order to properly account for the climate impacts of mining and the reasonably foreseeable impacts of coal combustion. This is especially necessary given that OSM acknowledges that when it comes to greenhouse gas emissions, emissions at both a national and statewide scale are relevant for analyzing and assessing impacts. *See* EA at 41 (disclosing national greenhouse gas emissions from fossil fuel combustion and coal mining, as well as state-wide energy-related carbon dioxide emissions). As the agency explicitly states, the analysis area for consideration of climate impacts includes the states of Montana, Wyoming, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. *Id.* at 29. This is due to the fact that, as OSM acknowledges, “climate change and global warming are regional and global phenomena.” *Id.*

In addition to past, present, and future mining proposals, the U.S. Department of the Interior and its agencies, including OSM and BLM, are presently considering numerous new coal leasing proposals and mining plans. These proposals are being undertaken in the same region, i.e., the western United States, and all under the oversight of the U.S. Department of the Interior. These proposals include, but are not limited to:

- The BLM’s proposal to offer for sale and issuance the Spring Creek II coal lease (MTM-105485), a 198-million-ton coal lease containing 1,602 acres in the Powder River Basin of Montana. The lease is currently under review by the BLM and was applied for in 2013.²
- The BLM’s proposal to issue a lease modification to expand the nearby Black Butte coal mine, which also fuels the Jim Bridger power plant. The lease modification would add 450 acres to the Black butte mine.³
- OSMRE’s proposal to approve mining plan modifications for the Spring Creek coal mine in the Powder River Basin of southeastern Montana. OSMRE is currently reviewing whether to approve the Spring Creek TR1 modification, which would add 48.1million tons of coal to the mine.⁴

² *See* Cloud Peak Energy, “Lease by Application,” available at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/coal.Par.60997.File.dat/CPE%20File%201%20Application.pdf; *see also* <http://thecoalfields.com/claims/mtm----105485>.

³ *See* BLM, “BLM Rock Springs Seeks Public Input on the Modification of Federal Coal Lease,” website available at http://www.blm.gov/wy/st/en/info/news_room/2014/november/10rsfo-BlackButteCoal.html.

⁴ *See* OSMRE, “Spring Creek TR1 Outreach Letter,” available at http://www.wrcc.osmre.gov/initiatives/SpringcreekMineTR1/documents/Public_Outreach_Letter.pdf and OSMRE, “Spring Creek Mine, MTM 94378, Mining Plan Modification Environmental Assessment,” available at <http://www.wrcc.osmre.gov/initiatives/SpringcreekMineLBA1/documents/EA0616.pdf>.

- Cordero Rojo in Wyoming, a mining plan modification (WYW174407), adding 569.1 acres, amounting 55.7 million tons of coal, extending the life of the mine by three years.⁵
- West Antelope III in Wyoming, a lease by application (WYW184599) for 3,508 acres, totaling 441M tons of coal.⁶
- King II Mine in Colorado, a lease modification (COC62920) for 950 acres, totaling 6.3M tons of coal.⁷
- West Elk Mine in Colorado, a lease modification (COC1362 & COC67232), for 800 and 920 acres, totaling 10.1M tons of coal.⁸

These are just a handful of the coal decisions pending before Interior that pose potentially significant climate impacts. Given past approvals, the cumulative impacts could be even more significant. It is imperative that OSM analyze the impacts of mining at the Bridger Mine consistent with the scope required under NEPA in order to ensure that impacts of cumulative and similar are fully analyzed and assessed consistent with 40 C.F.R. § 1508.25(a).

Moreover, due to the checkerboard nature of the federal lease ownership in that region, this modification of the mining plan would represent not only an increase of potential coal in the future of a stated 4.5 million tons, but potentially a full development of the tract.

Additionally, OSM must analyze and assess the entire Jim Bridger Complex, including the power plant and the coal mine. Federal coal lease WYW-02727 was originally issued in 1969 and has grown to 14,279 acres. The additional expansions have never been assessed alongside the impacts stemming from the combustion of the additional coal that has been mined. The Bridger Mine complex (including both the surface and underground mining operations) and the Jim Bridger Power Plant are interdependent, connected operations. Jim Bridger mine is a major supplier of coal to the Jim Bridger Power Plant. OSM did not consider the impacts of additional CO₂, methane, and other emissions from both the mining and the combustion of the coal.

4. OSM's Reasoning for Not Exploring Alternatives is Flawed

In our scoping comments, we stated that OSM must analyze a range of reasonable alternatives. In addition to the No Action Alternative, we requested that the OSM consider in detail all or portions of the following alternatives either as alternative mitigation measures or as alternatives to the proposed actions.

a. Alternative Mining Levels

We requested the OSM consider in detail an alternative that limits the amount of coal

⁵ Availability of an Environmental Assessment for Public Review and Comment Cordero Rojo Mine Federal Mining Plan Modification. Attached as Exhibit 18.

⁶ Department of the Interior Bureau of Land Management; Notice of Intent to Prepare an Environmental Impact Statement. Fed. Reg. 35,237 (July 28, 2017). Attached as Exhibit 19.

⁷ Notice of Opportunity to Comment for King II Coal Mine. Attached as Exhibit 20.

⁸ Supplement Draft Environmental Impact Statement for West Elk Coal Mine (executive summary, only). Attached as Exhibit 21.

tonnage and/or acreage to be mined to lower levels than are currently proposed. OSM stated that this alternative was not considered in detail because it would not meet the purpose and need and would be inconsistent with the MLA requirement to maximize recovery by achieving maximum economic recovery under 43 CFR 3480.0-5(21). EA at 25.

The general purpose of coal mining under SMCRA is to meet the Nation's energy needs. OSM may meet these goals by promoting renewable energy and energy conservation. Courts have long interpreted the mandate to consider reasonable alternatives to require agencies contemplating energy projects to consider reasonable alternative forms of energy generation and energy conservation. *NRDC v. Morton*, 458 F.2d 827, 833-38 (D.C. Cir. 1972); *Hodel*, 865 F.2d at 295-97 (agency required to consider conservation alternatives in analysis of decision to issue oil and gas leases); *Libby Rod & Gun Club v. Poteat*, 457 F. Supp. 1177, 1186-8 (D. Mont. 1978), *aff'd in part and rev'd in part on other grounds*, 59 F.2d 742 (9th Cir. 1979). This consideration may include lower alternative mining levels.

OSM's authority does not provide it a mandatory duty to approve coal leasing, but rather, it conveys full discretion upon the agency to reject coal leasing. As the courts have noted, Congress intended the MLA: "to provide for a more orderly procedure for the leasing and development" of coal the United States owns, while ensuring its development "in a manner compatible with the public interest." *Northern Cheyenne Tribe v. Hodel*, 851 F.2d 1152, 1156 (9th Cir. 1988) (citation omitted).

Further, maximum economic recovery under 43 CFR 3480.0-5(21) may be based on economically feasible equipment, and coal marketability. With the implementation of emissions-reducing retrofits, the recovery of this particular coal may become economically infeasible. Moreover, coal markets have been shown to be in decline.

b. Low or No Pollutant Emitting Equipment

We requested that, in order to limit air quality impacts, that OSM consider in detail an alternative that requires the use of equipment that produce less or no emissions, such as natural gas-fired vehicles and machinery and electric machinery powered by solar panels or other renewable energy sources. OSM stated that the cost to make the switch would be prohibitive for the minimal benefit to the regional air quality. EA at 26.

The assumption that a retrofitting of equipment will not reduce emissions is flawed. Mining at Jim Bridger occurs 24 hours a day, and runs equipment which emits pollution 24 hours a day. It is senseless that OSM would simply deny the possibility that pursuing less pollutant-emitting non-diesel equipment would not affect or reduce emissions, without explaining the threshold of what "limited effect on regional air emissions" would amount to.

c. Other Air Quality Mitigation Alternatives

We requested that OSM consider air quality mitigation of the proposed mining. OSM responded by stating that mitigation measures imposing more stringent emission limits were beyond its authority. EA at 26. This is flawed; OSM is required to consider alternatives that are

not within its jurisdiction under 40 C.F.R. § 1502.14(c). OSM may evaluate state regulated mining activities on federal lands.

d. An Alternative that Requires Bridger Coal Company to Undertake Actions to Limit or Reduce Other Greenhouse Gas Emissions

We requested that OSM consider mitigation of greenhouse gas emissions associated with the proposed mining. OSM rejected exploring this alternative because they stated they did not have the regulatory authority to require electricity-generating plants to reduce emissions because the emissions are regulated by the States or Counties where the plants are located.

Generally, SMCRA explicitly requires that surface coal mining operations, including the surface impacts of underground mining, be conducted so as “to protect the environment.” 30 U.S.C. § 1202(d). SMCRA does not delegate authority for states to review and take action on mining plans and does not allow Interior and OSM to relinquish their duty to make independent findings regarding SMCRA compliance when taking action on mining plans. While SMCRA may delegate authority to states to regulate coal mining on federal lands, such delegation does not strip the authority of Interior and OSM to find that state regulation is inadequate. Here, OSM may therefore consider alternatives in the context of whether that regulation would be adequate under the cooperative federalism scheme.

e. An Alternative that Requires Offsite Mitigation or Compensation for the Impacts in Other Ways

In our earlier comments, we stated that offsite mitigation, as well as mitigation that requires compensation, is explicitly authorized under NEPA. OSM stated that because no significant impacts are predicted from CO₂ emissions attributed to the Proposed Action, an alternative that requires compensatory mitigation is eliminated from detailed analysis. EA at 27.

Here, the EA did not fully analyze the significant impacts of leasing and mining the lease. The EA failed to address a number of potentially significant impacts, including the climate impacts related to the reasonably foreseeable consequence of coal combustion, and cumulative impacts related to additional federal coal management decisions, including additional leasing that had occurred since the original lease was granted. Put another way, the EA is insufficient to analyze these impacts, as only an EIS can be utilized to analyze and assess significant environmental impacts under NEPA. *See* 40 C.F.R. § 1502.3. Thus, OSM cannot possibly determine whether or not the impacts of emissions are significant, because its EA analysis was woefully insufficient. Therefore, it also cannot say whether it would not consider this particular alternative.

We appreciate the opportunity to comment. Thank you.

Sincerely,



Shannon Hughes
Climate Guardian
WildEarth Guardians
2590 Walnut St.
Denver, CO 80205
(630) 699-7165
shughes@wildearthguardians.org