March 14, 2016

Via Hand Delivery

Ruth Welch
State Director
U.S. Bureau of Land Management
Colorado State Office
2850 Youngfield St.
Lakewood, CO 80215

Re: Protest of May 2016 Competitive Oil and Gas Lease Sale

Dear Ms. Welch:

Pursuant to 43 C.F.R. § 3120.1-3, WildEarth Guardians hereby protests the Bureau of Land Management's ("BLM's") proposal to offer six publicly owned oil and gas lease parcels covering 6,960.48 acres of land in the Little Snake Field Office and the Tres Rios Field Office of Colorado for competitive sale on May 12, 2016. The specific parcels being protested include the following, as identified by the BLM's in its Final May 2016 Oil and Gas Sale List:[1]

Lease Serial Number	Acres	County	Field Office
COC77676	641.44	Routt	Little Snake
COC77677	171.63	Moffat	Little Snake
COC77678	1920.00	Archuleta/La Plata	Tres Rios
COC77679	1448.08	Archuleta/La Plata	Tres Rios
COC77680	2560.00	Archuleta/La Plata	Tres Rios
COC77681	219.33	La Plata	Tres Rios

In support of its proposed leasing, the agency prepared a Environmental Assessment ("EA") for leasing in the Little Snake Field Office, DOI-BLM-CO-N050-2015-0092-EA, and a Determination of Adequacy Under the National Environmental Policy Act ("DNA"), DOI-BLM-CO-S010-2016-0012-DNA for leasing in the Tres Rios Field Office.

[1] This list, which was made available on February 12, 2016, is on the BLM's website at http://www.blm.gov/style/medialib/blm/co/programs/oil_and_gas/Lease_Sale/2016/may.Par.37366.File.dat/May_2016_Final_Sale_Notice.pdf.

As will be explained, the BLM's proposal to lease falls short of ensuring compliance with NEPA, 42 U.S.C. § 4331, *et seq*. The BLM's reliance on the EA and the DNA fails to satisfy the agency's obligations to analyze and assess the reasonably foreseeable impacts of oil and gas leasing.[2]

STATEMENT OF INTEREST

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. WildEarth Guardians is headquartered in Santa Fe, New Mexico, but has offices and staff throughout the western United States, including in Denver. On behalf of our members, Guardians has an interest in ensuring the BLM fully protects public lands and resources as it conveys the right for the oil and gas industry to develop publicly owned minerals. More specifically, Guardians has an interest in ensuring the BLM meaningfully and genuinely takes into account the climate implications of its oil and gas leasing decisions and objectively and robustly weighs the costs and benefits of authorizing the release of more greenhouse gas emissions that are known to contribute to global warming. WildEarth Guardians submitted comments on the BLM's proposed leasing on December 18, 2015.

The mailing address for WildEarth Guardians to which correspondence regarding this protest should be directed is as follows:

WildEarth Guardians
2590 Walnut St.
Denver, CO 80205

STATEMENT OF REASONS

WildEarth Guardians protests the BLM's May 12, 2016 oil and gas lease sale over the agency's failure to adequately analyze and assess the climate impacts of the reasonably foreseeable oil and gas development that will result in accordance NEPA, 42 U.S.C. § 4331, *et seq*., and regulations promulgated thereunder by the White House Council on Environmental Quality ("CEQ"), 40 C.F.R. § 1500, *et seq*.

NEPA is our "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The law requires federal agencies to fully consider the environmental implications of their actions, taking into account "high quality" information, "accurate scientific analysis," "expert agency comments," and "public scrutiny," prior to making decisions. *Id*. at 1500.1(b). This consideration is meant to "foster excellent action," meaning decisions that are well informed and that "protect, restore, and enhance the environment." *Id*. at 1500.1(c).

[2] For purposes of this protest, we hereby incorporate by reference comments on the BLM's EA and DNA and attachments thereto submitted by WildEarth Guardians on December 18, 2015. These documents should be a part of the BLM's record in support of its proposed leasing.

To fulfill the goals of NEPA, federal agencies are required to analyze the "effects," or impacts, of their actions to the human environment prior to undertaking their actions. 40 C.F.R. § 1502.16(d). To this end, the agency must analyze the "direct," "indirect," and "cumulative" effects of its actions, and assess their significance. 40 C.F.R. §§ 1502.16(a), (b), and (d). Direct effects include all impacts that are "caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Indirect effects are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id*. at § 1508.8(b). Cumulative effects include the impacts of all past, present, and reasonably foreseeable actions, regardless of what entity or entities undertake the actions. 40 C.F.R. § 1508.7.

An agency may prepare an environmental assessment ("EA") to analyze the effects of its actions and assess the significance of impacts. *See* 40 C.F.R. § 1508.9; *see also* 43 C.F.R. § 46.300. Where effects are significant, an Environmental Impact Statement ("EIS") must be prepared. *See* 40 C.F.R. § 1502.3. Where significant impacts are not significant, an agency may issue a Finding of No Significant Impact ("FONSI") and implement its action. *See* 40 C.F.R. § 1508.13; *see also* 43 C.F.R. § 46.325(2).

Here, the BLM fell short of complying with NEPA with regards to analyzing and assessing the potentially significant climate impacts of oil and gas leasing. In the EA prepared for parcels in the Little Snake Field Office, the agency prepared no analysis of reasonably foreseeable greenhouse gas emissions and climate impacts. In support of proposed leasing in the Tres Rios Field Office, the agency did not actually prepare any NEPA analysis, but rather relied on a programmatic FEIS prepared in 2013 for the Tres Rios Field Office, San Juan National Forest Land and Resources Management Plan. This FEIS, however, fails to analyze the reasonably foreseeable greenhouse gas emissions that would result from selling and producing oil and gas from the oil and gas lease parcels, as well as failed to assess the significance of any emissions, particularly in terms of carbon costs.

In response to comments, the BLM acknowledged that climate change is a very serious issue and that proper analysis and assessment under NEPA is necessary. *See* EA at 21. In spite of this, the BLM made no effort to analyze the reasonably foreseeable greenhouse gas emissions that would result from development of the proposed leases. Instead of using readily available information and methods, including analyses that other BLM offices have been perfectly capable of preparing, the agency instead seems to imply that it is simply impossible to estimate such emissions. The issue, however, is not that it is impossible to estimate emissions, but that BLM believes it cannot estimate emissions as precisely as it prefers to. This is not allowed under NEPA.

Although the agency may believe that without definitive development proposals, it cannot project impacts, the whole point of leasing oil and gas is to facilitate development. The BLM cannot claim that the act of leasing carries with it no intention to foster future development, particularly where, as here, the BLM does acknowledge that leasing will facilitate reasonably foreseeable development in the Little Snake Field Office that cumulatively is expected to lead to millions of metric tons of carbon emissions. *See* EA at 24-25. Although the DNA does not actually address greenhouse gas emissions, the Colorado Air Resources

Management Modeling Study relied on by the BLM for the Little Snake EA indicates cumulative emissions in the Tres Rios Field Office will be similarly high.

Regardless, because leasing conveys a right to develop, absent any stipulations that provide the agency with authority to constrain and even prevent future development to limit greenhouse gas or climate impacts, the BLM has no basis to assert that it is appropriate to wait to conduct its legally required analysis under NEPA, or worse, assert that there would be no reasonably foreseeable emissions associated with its proposed action. Here, no such stipulations have been proposed, rendering invalid BLM's assertion that the proposed leasing would pose no significant impacts to the human environment.

In any case, the BLM has completely failed to provide information and analysis, even brief information and analysis, supporting its determination that no NEPA analysis is necessary for the proposed leases. Either the BLM must prepare an EIS or it cannot proceed with the lease sale as proposed. Below, we detail how BLM's proposal fails to comply with NEPA.

1. The BLM Failed to Analyze and Assess the Direct, Indirect, and Cumulative Impacts of Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Parcels

The BLM completely rejected analyzing and assessing the potential direct and indirect greenhouse gas emissions, including carbon dioxide and methane, that would result from the reasonably foreseeable development of the proposed leases and emissions that would result from consumption of oil and gas produced from the leases. Although acknowledging that development of the lease parcels would occur and that greenhouse gas emissions would be produced, no analysis of these emissions was actually prepared.

In its DNA for the Tres Rios parcels, the BLM relies on the 2013 LRMP FEIS to argue that an appropriate analysis has been completed. The FEIS, however, contains no analysis of the reasonably foreseeable greenhouse gas emissions that would result from development and ultimate consumption of oil and gas from the leases. Furthermore, to the extent the FEIS does present a cumulative analysis of reasonably foreseeable greenhouse gas emissions associated with construction and production of oil and gas wells, this analysis fails to address the reasonably foreseeable impacts of oil and gas processing, refining, and ultimate consumption. Put another way, it fails to disclose the full life-cycle impacts of oil and gas that will be produced in the Tres Rios Field Office.

In the Little Snake EA, the BLM seems to argue that an analysis of reasonably foreseeable greenhouse gas emissions would be speculative and that such an analysis can only be completed when actual development proposals are received after leasing occurs. This assertion misses the mark. The BLM can estimate reasonably foreseeable emissions, the agency simply does not want to as it believes the results would not be as precise as the agency likes. NEPA, however, does not allow agencies to summarily refuse to analyze to the best of their abilities the reasonably foreseeable impacts of their actions. Further, the BLM does not get to avoid complying with NEPA because it cannot precisely analyze and assess impacts. In fact, CEQ regulations are clear that where the impacts of a proposed action are "highly uncertain," this is a

sign that an action poses significant impacts and therefore should be analyzed in an EIS. 40 C.F.R. § 1508.27(b)(4). Here, BLM appears to be using uncertainty to justify avoiding complying with NEPA.

The BLM's position is all the more egregious given that other BLM Field Offices, including, but not limited to, the Four Rivers Field Office in Idaho, the Billings Field Office in Montana, the Miles City Field Office in Montana, the Royal Gorge Field Office in Colorado, and others have not only estimated reasonably foreseeable greenhouse gas emissions associated with the development of oil and gas leases, but clearly do not believe that such information is speculative or not useful to analyze under NEPA.

In the Four Rivers Field Office of Idaho, the BLM utilized an emission calculator developed by air quality specialists at the BLM National Operations Center in Denver to estimate likely greenhouse gases that would result from leasing five parcels. *See* Exhibit 1, BLM, "Little Willow Creek Protective Oil and Gas Leasing," EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 41, available online at https://www.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf. Relying on a report prepared in 2013 for the BLM by Kleinfelder, the agency estimated that 2,893.7 tons of carbon dioxide equivalent ("CO_2e") would be released per well. *Id*. at 35. Based on the analyzed alternatives, which projected between 5 and 25 new wells, the BLM estimated that total greenhouse gas emissions would be between 14,468.5 tons and 72,342.5 tons annually. *Id*.

In both the Billings and Miles City Field Offices of Montana, the BLM estimated likely greenhouse gas emissions from development of oil and gas leases. To do so, the agency first calculated annual greenhouse gas emissions from oil and gas activity within the Field Offices. *See* Exhibit 2, BLM, "Environmental Assessment for October 21, 2014 Oil and Gas Lease Sale," DOI-BLM-MT-C020-2014-0091-EA (May 19, 2014) at 51, available online at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct__21_2014/july23posting.Par.88257.File.dat/BiFO%20Oct%202014%20EA.pdf (last accessed Dec. 11, 2015) and Exhibit 18 to Guardians' Sept. 11, 2015 Comments. The BLM then calculated total greenhouse gases by assuming that the percentage of acres to be leased within the federal mineral estate of the Field Offices would equal the percentage of emissions. *Id*. Although we have concerns over the validity of this approach to estimate emissions (an "acre-based" estimate of emissions is akin to estimating automobile emissions by including junked cars, which has the misleading effect of reducing the overall "per car" emissions), nevertheless it demonstrates that the BLM has the ability to estimate reasonably foreseeable greenhouse gas emissions associated with oil and gas leasing and that such estimates are valuable for ensuring a well-informed decision.

In the Royal Gorge Field Office of Colorado, the BLM contracted with URS Group Inc. to prepare an analysis of air emissions from the development of seven oil and gas lease parcels. *See* Exhibit 3, URS Group Inc., "Draft Oil and Gas Air Emissions Inventory Report for Seven Lease Parcels in the BLM Royal Gorge Field Office," Prepared for BLM, Colorado State Office and Royal Gorge Field Office (July 2013). This report estimated emissions of carbon dioxide and methane on a per-well basis and estimated the total number of wells that could be developed

in these seven parcels. *See* Exhibit 3 at 3 and 5. This report was later supplanted by the Colorado Air Resource Management Modeling Study, or CARMMS, which estimated reasonably foreseeable emissions of greenhouse gases, criteria pollutants, and hazardous air pollutants associated with oil and gas development throughout Colorado, as well as part of New Mexico, and modeled air quality impacts. *See* ENVIRON, "Colorado Air Resource Management Modeling Study (CARMMS) 2021 Modeling Results for the High, Low and Medium Oil and Gas Development Scenarios," Prepared for BLM Colorado State Office (January 2015), available online at http://www.blm.gov/style/medialib/blm/co/information/nepa/air_quality.Par.97516.File.dat/CARMMS_Final_Report_w-appendices_012015.pdf.[3] As part of the CARMMS report, the BLM estimated per well emissions, including greenhouse gas emissions, in tons per year, as follows:

Phase	PM_{10}	$PM_{2.5}$	VOC	CO	NO_X	SO_2	CO_2	CH_4	N_2O	HAP
Conventional Construction	5.21	0.64	0.05	0.23	0.72	0.02	108.1	0.00	0.00	0.01
CBM Construction	3.37	0.44	0.03	0.12	0.36	0.01	56.58	4.06	0.00	0.00
Conventional Production	1.15	0.15	6.67	1.30	0.73	0.00	251.9	17.14	0.00	0.43
CBM Production	2.25	0.25	13.10	1.13	0.62	0.00	181.6	19.05	0.00	1.31

Although the BLM may assert that analyzing the impacts of the proposed leases is impossible, this claim is undercut by the fact that the 2013 LRMP FEIS did provide some estimates of cumulative greenhouse gas emissions from oil and gas development, clearly indicating the possibility of a site-specific analysis of direct and indirect impacts.

The BLM finally attempts to argue that an analysis of greenhouse gas emissions is more appropriate at the drilling stage. We have yet to see the BLM actually prepare such a site-specific analysis in conjunction with an oil and gas lease development proposal. Recent analyses prepared for drilling in both the Little Snake and Tres Rios Field Offices confirms that no such analysis is conducted by the BLM. *See* Exhibit 4, BLM, "Environmental Assessment, for McIntyre Well #1 -10REBLM," DOI-BLM-CO-N010-2013-0001-EA (Oct. 2012); and Exhibit 5, BLM, "Environmental Assessment, D.J. Simmons, Inc. Two Pinto Wells Project, Pinto 1-7 and Pinto 3-17 Oil Wells, Dolores County, Colorado," DOI-BLM-CO-S010-2012-0036-EA (July 2013). What's more, this argument has no merit as the agency has proposed no stipulations that would grant the BLM discretion to limit, or outright prevent, development of the proposed leases on the basis of greenhouse gas emissions and/or climate concerns. The BLM is effectively proposing to make an irreversible commitment of resources, which is the hallmark of significance under NEPA. *See* 42 U.S.C. § 4332(c)(v) and 40 C.F.R. § 1502.16. The failure to

[3] The CARMMS report was cited by the BLM in the Little Snake EA, but not in its DNA or the underlying NEPA analysis that the BLM relies on for the Tres Rios leasing. Nevertheless, because it was cited by the BLM in supports of its leasing plans, we presume that this report is part of the record supporting its decision to offer all parcels for sale and issuance on May 12, 2016.

prepare an EIS—or any analysis for that matter—for the proposed leases is therefore contrary to NEPA.

2. The BLM Failed to Analyze the Costs of Reasonably Foreseeable Carbon Emissions Using Well-Accepted, Valid, Credible, GAO-Endorsed, Interagency Methods for Assessing Carbon Costs that are Supported by the White House

Compounding the failure of the BLM to make any effort to estimate the greenhouse gas emissions that would result from reasonably foreseeable oil and gas development is that the agency also rejected analyzing and assessing these emissions in the context of their costs to society. It is particularly disconcerting that the agency refused to analyze and assess costs using the social cost of carbon protocol, a valid, well-accepted, credible, and interagency endorsed method of calculating the costs of greenhouse gas emissions and understanding the potential significance of such emissions.

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)." Exhibit 13 to Guardians' Dec. 18, 2015 Comments. 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 was formed to develop the protocol and issued final estimates of carbon costs in 2010. These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies, including the Department of Agriculture. This report and the social cost of carbon estimates were again revised in 2015. *See* Exhibit 6, 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" (July 2015), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf.

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from $10 to $212 per metric ton of carbon dioxide. *See* Chart Below. 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. *See* Exhibit 19 to Guardians' Dec. 18, 2015 Comments.

Revised Social Cost of CO_2, 2010 – 2050 (in 2007 dollars per metric ton of CO_2)

Discount Rate	5.0%	3.0%	2.5%	3.0%
Year	Avg	Avg	Avg	95th
2010	10	31	50	86
2015	11	36	56	105
2020	12	42	62	123
2025	14	46	68	138
2030	16	50	73	152
2035	18	55	78	168
2040	21	60	84	183
2045	23	64	89	197
2050	26	69	95	212

Most recent social cost of carbon estimates presented by Interagency Working Group on Social Cost of Carbon. The 95th percentile value is meant to represent "higher-than-expected" impacts from climate change. *See* Exhibit 6 at 3.

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." Exhibit 17 to Guardians' Dec. 18, 2015 Comments.

More importantly, the BLM has also utilized the social cost of carbon protocol in the context of oil and gas leasing. In recent Environmental Assessments for oil and gas leasing in Montana, the agency estimated "the annual SCC [social cost of carbon] associated with potential development on lease sale parcels." Exhibit 2 at 71. 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*. 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 CO_2e increase. *See* Exhibit 1 at 81. 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.

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol "does not currently include all important [climate change] damages." Exhibit 13 to Guardians' Dec. 18, 2015 Comments. As explained:

> The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

Id. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be increased six times for a mid-range value of $220 per ton. *See* Exhibit 15 to Guardians' Dec. 18, 2015 Comments at 2. 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 thus a useful measure to assess the costs of CO2 increases. Exhibit 13 to Guardians' Dec. 18, 2015 Comments.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decisionmaking, is emphasized by a recent White House report, which warned that delaying carbon reductions would yield significant economic costs. *See* Exhibit 7, Executive Office of the President of the United States, "The Cost of Delaying Action to Stem Climate Change" (July 2014), available online at https://www.whitehouse.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf. As the report states:

> [D]elaying action to limit the effects of climate change is costly. Because CO_2 accumulates in the atmosphere, delaying action increases CO_2 concentrations. Thus, if a policy delay leads to higher ultimate CO_2 concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO_2 concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO_2 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.

Exhibit 7 at 1.

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA, specifically supported in federal case law, and by Executive Order 13,514. As explained, NEPA requires agencies to analyze the consequences of proposed agency actions and consider include direct, indirect, and cumulative consequences. In terms of oil and gas leasing, an analysis of site-specific impacts must take place at the lease stage and cannot be deferred until after receiving applications to drill. *See New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 717-18 (10th Cir. 2009); *Conner v. Burford,* 848 F.2d 1441 (9th Cir.1988); *Bob Marshall Alliance v. Hodel,* 852 F.2d 1223, 1227 (9th Cir.1988).

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 High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D. Colo. 2014), 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*.

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. *See* Exhibit 8, Greenstone, M., "There's a Formula for Deciding When to Extract Fossil Fuels," *New York Times* (Dec. 1, 2015), available online at http://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html?_r=0.

In light of all this, it appears more than reasonable to have expected the BLM to take into account carbon costs as part of its NEPA analyses. The agency did not. Instead, the BLM rejected the notion that a social cost of carbon analysis was appropriate, implicitly concluding that there would be no cost associated with the proposed oil and gas leasing.

In response to Guardians' comments, the BLM provided no explanation as to why a social cost of carbon analysis was not prepared. There is no direct response to our comments and no explanation as to why carbon costs, which are admittedly an easy and useful means of quantifying climate impacts, were not assessed. This failure to respond to our comment at all renders the agency's proposed FONSI wholly unsupported and makes reliance upon a DNA all the more inappropriate.

Sincerely,

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