

Andrea Zaccardi
Center for Biological Diversity
P.O. Box 469
Victor, ID 83455
(303) 854-7748
azaccardi@biologicaldiversity.org

Ragan Whitlock (*Pro Hac Vice pending*)
Center for Biological Diversity
P.O. Box 2155
St. Petersburg, FL 33731
(727) 426-3653
rwhitlock@biologicaldiversity.org

Attorneys for the Amici Curiae

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO

SHOSHONE-BANNOCK TRIBES OF)
THE FORT HALL RESERVATION,)

Plaintiff,)

v.)

LAURA DANIEL-DAVIS, Principal)
Deputy Assistant Secretary for Land and)
Mineral Management, UNITED STATES)
DEPARTMENT OF THE INTERIOR)
and UNITED STATES BUREAU OF)
LAND MANAGEMENT,)

Defendants,)

and

J.R. SIMPLOT COMPANY,

Defendant-Intervenor.

Case No.: 4:20-cv-00553

**AMICI CURIAE BRIEF IN SUPPORT
OF PLAINTIFF'S MOTION FOR
SUMMARY JUDGMENT**

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INTRODUCTION

The Bureau of Land Management (BLM), through the United States Department of the Interior (DOI), unlawfully approved a public lands exchange enabling the J.R. Simplot Company (Simplot) to grow its polluting fertilizer-production operations at a Superfund site, as well as its inextricably linked and destructive phosphate mining operations, also at a Superfund site. The decision is unlawful because: 1) the private use of public lands to extend phosphate processing operations¹ and to increase the attendant eternal storage of radioactive, toxic waste documented to harm human health and the environment is not in the public interest under the Federal Land Policy and Management Act (FLPMA); and 2) the action agency did not adequately analyze the indirect and cumulative effects of increased and extended phosphate processing and toxic waste generation, including the effects of upstream open-pit phosphate mining and downstream synthetic fertilizer production and ammonia production, as required under the National Environmental Policy Act (NEPA). Conservation and public health organizations Bayou City Waterkeeper, Center for Biological Diversity, Healthy Gulf, ManaSota-88, People for Protecting Peace River, Portneuf Resource Council, RISE St. James, Snake River Waterkeeper, Waterkeeper Alliance, Western Watersheds Project, and WildEarth Guardians (Amici) respectfully request the Court to hold that the BLM's land exchange was unlawful under FLPMA and NEPA.

¹ Mined phosphate rock is processed in a chemical reaction with sulfuric acid that produces phosphogypsum as waste and phosphoric acid as product, the latter of which is then used primarily as a feedstock component of ammoniated phosphate fertilizer production.

BACKGROUND

DON PLANT FERTILIZER FACILITY, EASTERN MICHAUD FLATS SUPERFUND SITE, AND SMOKY CANYON MINE SUPERFUND SITE

The land exchange at issue in this case would facilitate the expansion of operations and the pollution footprint of Simplot's Don Plant Fertilizer Facility near Pocatello, Idaho, and the interdependent expansion of phosphate mining operations within the Caribou-Targhee National Forest at Simplot's Smoky Canyon Phosphate Mine. While Simplot's Don Plant is considered a single facility, it is a complex of multiple chemical plants generating and processing various chemicals within the fertilizer production supply chain. While Simplot's Don Plant is considered a single facility, it is actually a complex of multiple chemical plants generating and processing various chemicals within the fertilizer production supply chain, and includes, among other things: 1) a mined and beneficiated phosphate ore (rock)² calciner; 2) two sulfuric acid plants, which are directly upstream in the phosphate fertilizer production process from a wet-process phosphoric acid plant; 3) the wet-process phosphoric acid plant, which uses the sulfuric acid as a feedstock to acidulate the calcined phosphate rock into phosphoric acid—a reaction that also creates the radioactive, hazardous constituent-containing phosphogypsum waste to be stored on the selected lands at issue in this case; and 4) synthetic phosphate fertilizer plants directly downstream from the phosphoric acid plant, which use the phosphoric acid, ammonia produced at and transported from another Simplot facility in Rock Springs, Wyoming³, and other inputs to

² The rock ore is also produced by Simplot upstream, at its Smoky Canyon mine an hour away.

³ Simplot previously synthesized ammonia at an ammonia plant located within the Don Plant facility, but Simplot's ammonia plant at its Rock Springs facility has been supplying both fertilizer facilities with ammonia since 2016.

manufacture monoammonium phosphate (MAP), diammonium phosphate (DAP), and NPK (Nitrogen-Phosphorous-Potash) as finished synthetic fertilizer products, among others.

The Idaho Department of Health and Welfare first detected arsenic, lead, and cadmium contamination of groundwater at the site housing the Don Plant in 1976, AR_0002972, and phosphorous, mercury, chloride, chromium, copper, fluoride, and selenium were later detected in impounded wastewater used in the production process (process wastewater), phosphogypsum waste, and soil samples, *Id.* In 1990, the Environmental Protection Agency (EPA) placed the site on the National Priorities List—a list the EPA uses to prioritize sites with known or suspected releases of hazardous pollutants that might require remediation. AR_0002976.

Portions of the Superfund site known as Eastern Michaud Flats are within the boundaries of the Fort Hall Indian Reservation, home to the environmental justice community of the Plaintiff in this action. AR_0002970. The Simplot operable unit⁴ of the site spans about 1,025 acres and includes the Simplot Don Plant Facility and its phosphate rock processing plant, which cogenerates phosphoric acid and radioactive, toxic phosphogypsum waste containing hazardous chemicals. The facility is a source of nearby soil, forage, groundwater, and surface water contamination. This phosphogypsum is pipelined in a slurry with process wastewater from the phosphoric acid plant to a mountainous heap called a gypstack abutting Howard Mountain, which currently stands more than 460 feet tall and 500 acres wide. The shallow groundwater below the stack flows north from the site toward the Portneuf River. AR_0002970. The EPA report for the Eastern Michaud Flats Superfund site explains that ecological exposure pathways that could result in unacceptable risks are still not under control and the remedy at the Simplot

⁴ The FMC Corporation's Elemental Phosphorous Plant contributed to pollution on the site and shuttered operations in 2001.

operable unit within the Superfund site, which includes installation of the same type of HDPE liner planned for the gypstack expansion on the selected public lands, is not protective.

AR_0002963.



AR_0002984.

ARGUMENT

I. BLM's exchange of public lands, which enables Simplot's production and storage of radioactive, hazardous waste, does not serve the public interest within the meaning of FLPMA.

The BLM's "organic act"—FLPMA—declares United States policy that public lands be managed to "protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." 43 U.S.C. § 1701(a)(8). It requires that federal agencies retain public lands unless they determine that disposal "will serve the national interest." *Id.* § 1701(a)(1). Therefore, it limits the DOI's authority to swap public lands with private lands to those exchanges the Secretary determines are in the public's interest. 43 U.S.C. § 1716(a). Specifically, the statute requires the DOI determine that "the public interest will be well served by making that exchange" giving "full consideration" to "the needs of State and local people" and must find "that the values and the objectives which Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the values of the non-Federal lands or interests of the public objectives they could serve if acquired." *Id.*

Given that the Blackrock land exchange will expand the operational life of the facility by 65 years, enabling the creation of additional radioactive, hazardous waste⁵ that existing regulatory mechanisms are inadequate to mitigate these harms, the conclusion that the exchange serves the public's interest is arbitrary and capricious.

⁵ Neither the FEIS nor the ROD discloses how many additional tons of phosphogypsum the facility will produce over that additional 65 years, just that the expansion will convert 290 acres of natural landscape to industrial landscape, with radioactive gypsum waste, AR_0039171, and that the total BLM disturbance area for the new phosphogypsum stacks will be 188.5 acres. AR_0004933.

- A. *Phosphogypsum is the radioactive, toxic, direct consequence of producing phosphoric acid from mined phosphate ore, and its extended production and expanded storage does not serve the public's interest.*

The Blackrock land exchange will directly lead to the expanded production and storage of phosphogypsum on federal lands. Phosphogypsum poses adverse impacts to groundwater, surface water, and soils. Phosphogypsum also exposes nearby communities to increased levels of radon gas, and poses an inhalation pathway for arsenic, chromium, and radionuclides.

In its record of decision (ROD), BLM explains that “[t]he Federal lands have lower resource values since they are located directly adjacent to the Simplot’s Don Plant and are within the off-site operable unit of the Eastern Michaud Flats Superfund Site.” AR_0039172. That is because “[p]ast and present actions associated with the Don Plant have resulted in adverse impacts to groundwater and surface water in close proximity to the plant.” AR_0039173. The ROD explains that “expansion within the Federal lands would result in incremental additions to phosphorous and arsenic loading.” *Id.*

The general waste-to-product ratio at phosphoric acid plants, including the one at the Simplot Don Plant Facility, is obscene: Facilities generate about 5.2 tons of phosphogypsum for every 1 ton of phosphoric acid created. *Id.* The majority of the gypstacks that store phosphogypsum in the U.S. are situated near low-wealth and communities of color, and many are characterized by “extensive groundwater contamination, dike breaches, leakage, unexplained seepage, sinkholes, instability that threatens outright collapse, and excess process water balances in the event of a plant shutdown or abandonment necessitating intentional large-volume releases of process water to prevent further catastrophe.” Jaclyn Lopez, *EPA’s Opportunity to Reverse the Fertilizer Industry’s Environmental Injustices*, 52 Environmental Law Report 10125, 10126 (2022).

In the case of Simplot's Don Plant fertilizer facility near Pocatello, Idaho, the Smoky Canyon Mine about an hour south is its sole supplier of phosphate ore. Once that rock is processed and the phosphogypsum created, the slurry is pumped into a settling pond impoundment atop the phosphogypsum stack. This process wastewater includes phosphogypsum stack runoff, wastewater generated from the uranium recovery step of phosphoric acid production, process wastewater from animal feed production, and process wastewater from superphosphate production. *Mining Waste Exclusion, Final Rule*, 55 Fed Reg. 2322, 2328 (Jan. 23, 1990). There the phosphogypsum settles, and as more waste is added, the stack grows. Lopez at 10126. The process wastewater is kept in vast ponds at or below grade along the perimeter of the stack. *Id.*

The Simplot plant's phosphogypsum stack was originally constructed directly on the ground with no liner, so the process wastewater percolates down through the phosphogypsum stack and into the groundwater. AR_0002971. This fact combined with incidental releases from the plant have introduced contaminants of concern into the groundwater. *Id.* The groundwater services agricultural, industrial, and domestic uses. AR_0002970. The Portneuf River, and the American Falls Reservoir it flows into, are used for recreation, including fishing. AR_0002972. The Shoshone-Bannock Tribes heavily use this area and a large wetland downgradient from the site. *Id.*

Toxic heavy metals, fluoride, and ammonia are generally found in phosphogypsum and process wastewater. Lopez at 10126. Process wastewater is also highly acidic and corrosive, with pH measurements as low as 0.5. *Id.* Simplot reports its phosphogypsum stack slurry has a pH of 2. AR_0039251. In addition, radionuclides from uranium, thorium, and radium are generally found in phosphogypsum and process wastewater. Lopez at 10126. The radionuclides decay into

radon gas, a leading cause of lung cancer second only to smoking. Lopez at 10145. In fact, the harm from phosphogypsum's radon is so significant that in reevaluating the need for radionuclide emission standards under the Clean Air Act, the EPA determined the individual lifetime risks of cancer from exposure to radon from phosphogypsum stacks were as high as eight in 10,000 with the risk of one fatal cancer per year. *Id.* Given radium-226's 1,600-year half-life, and that there is no known safe level of exposure to radon, *Id.*, EPA was concerned phosphogypsum could be reused in other products and present an unacceptable risk to public health, so it promulgated a national emissions standard for hazardous air pollutants rule requiring all phosphogypsum be kept in stacks or old phosphate mines in perpetuity. National Emission Standards for Hazardous Air Pollutants; Radionuclides; Final Rule and notice of reconsideration, 54 Fed. Reg. 51654, 51675 (Dec. 15, 1989).

EPA has determined the radon emissions from phosphogypsum stacks pose a considerable air pathway cancer risk. Lopez at 10137, 10140. Construction vehicles driving over the stacks and wind erosion cause fugitive dust emissions also pose an inhalation pathway for arsenic, chromium, and radionuclides, especially in Idaho where phosphogypsum stacks do not crust and do not receive the same level of natural dust suppression from rainfall that other parts of the country with phosphogypsum stacks receive. Lopez at 10137, 10140. EPA calculates this total air pathway lifetime maximally exposed individual cancer risk at approximately 9 in 10,000. *Id.*

A 2014 study published in the Journal of Radiation Research and Applied Sciences concluded phosphogypsum stacks contribute to enhanced levels of natural radionuclides and heavy metals in the environment, and contaminate soil, water, and the atmosphere through gypstack erosion and the release of heavy metals, sulphates, fluorosilicates, hydrogen fluorides,

phosphorus, cadmium, and radium-226. Lopez at 10143.⁶ Al Attar et al. detected elevated levels of fluoride in air and soil sampling near phosphogypsum stacks. Lopez at 10144.⁷ Another study found elevated levels of metals like lead, zinc, nickel, and iron in plants near phosphogypsum stacks posing a health risk to the local population who may consume the vegetables. Lopez at 10143.⁸ And yet another study surmised that heavy rainfall may cause infiltration of radionuclides from phosphogypsum stacks to nearby soils and waterways after finding elevated levels of polonium and lead in soil near a phosphogypsum stack. *Id.*⁹ Da Silva determined that cadmium was enriched 105-208 times and uranium was enriched 18-44 times where phosphate was mined and phosphogypsum created—with increasing heavy metal content and decreasing particle size. Lopez at 10144.¹⁰

The ROD claims that modeling indicates that despite the incremental addition of phosphorous and arsenic loading from stack expansion, there would be a declining trend, but then concedes that even with the declining trend, the required phosphorous limit of 0.075 mg/L in the Portneuf River would not be achieved. AR_0039173. Furthermore, the EPA has determined that even with the Superfund remedial actions at the site, a plume of pollution from

⁶ Citing S.K. Sahu et al., *Natural Radioactivity Assessment of a Phosphate Fertilizer Plant Area*, 7 Journal of Radiation Research and Applied Sciences 123 (2014).

⁷ Citing L. Al Attar et al., *Case Study: Heavy Metals and Fluoride Contents in the Materials of Syrian Phosphate Industry and in the Vicinity of Phosphogypsum Piles*, 33 Env't Tech. 143 (2012).

⁸ Citing Alicja Boryło A & Bogdan Skwarzec, *Bioaccumulation of Polonium (²¹⁰Po) and Uranium (²³⁴U, ²³⁸U) in Plants Around Phosphogypsum Waste Heap in Wiślinka (Northern Poland)*, 99 Radiochimica Acta 719 (2011).

⁹ Citing Alicja Boryło et al., *A Study on Lead (²¹⁰Pb) and Polonium (²¹⁰Po) Contamination From Phosphogypsum in the Environment of Wiślinka (Northern Poland)*, 15 Env't Sci: Processes & Impacts 1622 (2013).

¹⁰ Citing Da Silva, E.F. et al. 2010. *Heavy elements in the phosphorite from Kalaat Khasba mine (North-western Tunisia): Potential implications on the environment and human health*, Journal of Hazardous Materials 182 (2010).

the site into groundwater continues to discharge into the Portneuf River and “additional source control is needed to meaningfully reduce the risks to the ecological community living in the river and to meet RAOs for the [s]ite.” AR_0003005.

BLM cannot conclude that a phosphogypsum stack and fertilizer facility that has already degraded the environment and threatened nearby communities will serve the public’s interest in its expansion of operations and hazardous waste production. *See Ctr. for Biol. Diversity v. U.S. Dep’t of Interior*, 623 F.3d 633, 647 (9th Cir. 2010).

B. Phosphogypsum and process wastewater are not adequately regulated by other regulatory mechanisms.

The ROD suggests that other agencies adequately regulate the site in an apparent effort to either discharge its regulatory responsibility or to portray the foreseeable harms of phosphogypsum stack expansion as mitigated by other agencies. AR_0039174-0039175.

However, despite the fact that phosphogypsum and process wastewater meet the statutory and regulatory definitions of hazardous waste under the Resource Conservation and Recovery Act, 40 C.F.R. § 261, an antiquated regulatory loophole has allowed the fertilizer industry to avoid the law’s cradle-to-grave hazardous waste regulation. Special Wastes From Mineral Processing (Mining Waste Exclusion); Final Regulatory Determination and Final Rule, 56 Fed. Reg. 27300, 27316 (June 13, 1991).

Congress determined that land is “too valuable a national resource to be needlessly polluted by discarded materials,” 42 U.S.C. § 6901(b), and passed the Resource Conservation and Recovery Act (RCRA) in 1976 to address industrial and municipal waste. The purpose of RCRA is to reduce the amount of solid waste generated and ensure it is managed to protect human health and the environment. Unfortunately, phosphogypsum and process wastewater are not managed as hazardous waste under RCRA. Instead, phosphate mining, beneficiation, and ore

processing are considered “special wastes,” and in 1980, the Bevill Amendment to RCRA suspended EPA’s authority to regulate these wastes until EPA’s completion of a study on the human health and environmental effects and a “Bevill determination.” EPA’s study found widespread groundwater contamination from phosphogypsum stacks, including off-site wells, drinking water sources, and an increased air pathway cancer risk for those living near stacks. Special Wastes From Mineral Processing (Mining Waste Exclusion); Final Regulatory Determination and Final Rule, 56 Fed. Reg. 27300 (June 13, 1991). It also found varied and inadequate state regulation and predicted an increased hazard and contaminant release potential with industry expansion absent Subtitle C regulation. *Id.* Nonetheless, citing concerns about costs to the regulated industry, EPA decided to not regulate phosphogypsum as hazardous waste under Subtitle C, opting for Subtitle D regulation, which encourages states to develop their own plans to manage non-hazardous waste.

As a result, regulation of phosphogypsum occurs on a state-by-state basis and been met with disastrous results across the nation. Making matters worse, phosphogypsum stacks have largely been abused as a repository for illegal dumping of other hazardous wastes. Lopez 2022 at 10126-27. For example, Simplot recently agreed to pay a civil penalty of \$775,000 for placing unreported hazardous wastes in its phosphogypsum stack system following an EPA lawsuit. *United States v. J.R. Simplot Co. & Simplot Phosphates, LLC*, No. 20-CV-125-F (D. Wyo. July 9, 2020).

While the EPA does not regulate phosphogypsum as hazardous waste under RCRA, it does monitor emissions under the Clean Air Act. The EPA describes the Simplot Don Plant as a “significant noncomplier” under the RCRA and a “high priority violation” under the Clean Air Act. EPA, *Enforcement and Compliance History Online: Detailed Facility Report—JR Simplot*

Don Plant, <https://echo.epa.gov/detailed-facility-report?fid=110000600421> (last accessed June 28, 2022).¹¹ The Simplot Don Plant has chronically been in “high priority violation” since at least 2019. *Id.* Therefore, it is arbitrary and capricious for BLM to conclude that the harms from the expansion of the phosphogypsum stack and fertilizer facility operations enabled by the land swap are mitigated by the adequacy of other regulatory mechanisms and therefore in the public’s interest. *See Center for Biological Diversity*, 623 F.3d at 647 (finding BLM’s public interest analysis under FLPMA was arbitrary and capricious where there was not an accurate picture of the environmental consequences of the land exchange).

II. BLM failed to analyze the indirect and cumulative effects of fertilizer production and phosphate mining.

The production of ammonia, including the amount used to make ammoniated phosphate fertilizers, results in vast greenhouse gas emissions, yet the BLM does not appear to have disclosed or analyzed the climate impacts that would result from enabling phosphoric acid production and downstream ammonia production to continue at the Simplot fertilizer facility. Moreover, Simplot’s Smoky Canyon Mine is the sole supplier of phosphate ore to its Don Plant fertilizer facility,¹² yet the BLM failed to consider this interdependent relationship and analyze indirect and cumulative effects both in its approval of the land swap and in its approval of the mine plan for the Smoky Canyon Mine.

¹¹ To the extent necessary, this citation is judicially noticeable as information “necessary to determine whether the agency has considered all relevant factors” namely, the environmental impacts of phosphate mining and processing. *See Yellowstone v. Bolling*, No. 4:20-cv-00192-DCN, 2021 U.S. Dist. LEXIS 231235, at *34 (D. Idaho Dec. 1, 2021).

¹² Simplot Agribusiness, *Smoky Canyon Mine*, https://www.simplot.com/pdf/us_operations/SmokyCanyon.pdf, (necessary to explain technical and complex subject matter)

A. *BLM failed to consider the indirect effects of fertilizer production on climate change.*

In analyzing the environmental impacts of projects significantly affecting the quality of the human environment, the BLM is required to take a “hard look” at indirect effects. 40 C.F.R. § 1508.8(a); *see, e.g., N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1077-79 (9th Cir. 2011) (finding an environmental impact statement (EIS) for a railroad line failed to review cumulative impacts from a coal mine that would utilize the rail line); *Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1090-99 (D. Mont. 2017) (finding an environmental assessment for the expansion of a coal mine failed to take a hard look at the indirect and cumulative effects of coal transportation, coal combustion, and foreseeable greenhouse gas emissions).

Indirect effects are “caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). The agency must consider those impacts that “a person or ordinary prudence would take [] into account in reaching a decision.” *EarthReports, Inc. v. FERC*, 828 F.3d 949, 955 (D.C. Cir. 2016). The Ninth Circuit Court of Appeals in *South Fork Band Council of West Shoshone of Nevada v. U.S. Department of the Interior*, explained that “[t]he air quality impacts associated with transport and off-site processing of the five million tons of refractory ore are prime examples of indirect effects that NEPA requires be considered.” 588 F.3d 718, 725 (9th Cir. 2009) (finding the BLM failed to evaluate the environmental impacts of transporting and processing ore at a facility seventy miles away); *see also Save Our Sonoran v. Flowers*, 408 F.3d 1113, 1122 (9th Cir. 2005) (“[I]t is the impact of the permit on the environment at large that determines the Corps’ NEPA responsibility.”); *WildEarth Guardians v. Office of Surface Mining, Reclamation & Enfr’t*, No. 14-103-BLG-SPW, 2015 U.S. Dist. LEXIS 145149, at *19-20

(D. Mont. Oct. 23, 2015) (finding the Office of Surface Mining failed to take a hard look at environmental impacts including downstream greenhouse gas emissions from federal coal leasing); *Wildearth Guardians v. United States Office of Surface Mining*, CV 14-13-BLG-SPW; CV 14-103-BLG-SPW, 2016 U.S. Dist. LEXIS 7223 (D. Mont. Jan. 21, 2016) (same); *WildEarth Guardians v. Bernhardt*, CV 17-80-BLG-SPW, 2021 U.S. Dist. LEXIS 20792 (D. Mont. Feb. 3, 2021) (same).

The ammonia fertilizer industry uses approximately 88% of the ammonia produced globally. Venkat Pattabathula & Jim Richardson, *Introduction to Ammonia Production*, Aiche (Sept. 2016). The ammonia fertilizer industry is a major consumer of methane, which is used as a source of hydrogen for the HB process. Zhou et al., *Estimation of Methane Emissions from the U.S. Ammonia Fertilizer Industry Using Mobile Sensing Approach*, 7 Elem. Sci. Anth. (2019). It takes about 8.3-8.6 tons of natural gas to produce 1 ton of anhydrous ammonia fertilizer. Fielden, J., *Fertile Prospects for Natural Gas – Can Ammonia Soak Up Bakken Gas Surplus?*, RBN ENERGY (Sept. 29, 2012); Wen-yuan Huang, *Impact of Rising Natural Gas Prices on U.S. Ammonia Supply*, United States Department of Agriculture (Aug. 2007). The Simplot plant produces anhydrous ammonia fertilizer, and its nearby Rock Springs ammonia plant produces 600 tons of ammonia a day.¹³ In 2021, the United States consumed 19.5 million metric tons of ammonia, 88% (17.2 million metric tons) was for fertilizer use. Apodaca, L. *Mineral Commodities Summaries 2022- Nitrogen*, United States Geological Survey (Jan. 2022). Ammonia production is a carbon-intensive process producing substantial greenhouse gas emissions because 98% of ammonia plants use fossil fuels as a feedstock and energy source to

¹³ Simplot Agribusiness, *Press Release: J.R. Simplot Company to Build New Ammonia Plant in Rock Springs, Wyoming* (2014) https://www.simplot.com/pdf/Rock_Springs_Ammonia_Plant_Release_FINAL_10-6-14.pdf, (necessary to determine whether agency has considered all relevant factors)

create ammonia (pulling the nitrogen from the methane), with ammonia production accounting for 6.5% of all U.S. industrial gas consumption in 2020.¹⁴

“Anthropogenic ammonia emissions lead to a loss of plant species and habitat diversity, algal blooms and hypoxia, as well as increased pulmonary and cardiac disorders.” Pinder et al, *Environmental Impact of Atmospheric NH₃ Emissions Under Present and Future Conditions in the Eastern United States*, 35 Geophysical Research Letters L12808 (2008). Excessive amounts of ammonia fertilizer in the environment lead to loss of biodiversity, increased green house gas emissions, and increased ozone-induced injury to ecosystems. *Id.* The indirect climate change effects of phosphoric acid production that are the foreseeable result of the land swap are not analyzed by BLM, in contravention of NEPA.

B. BLM failed to consider phosphate mining as an indirect effect of phosphoric acid production.

In taking a “hard look” at the effects of a project, BLM must also analyze the cumulative effects, which encompasses “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7

The Simplot fertilizer facility can only operate if it has (1) phosphate ore to process; and (2) space to put the new phosphogypsum and process wastewater it generates. The land exchange will enable the continued operation of the fertilizer facility by giving Simplot the space to grow its toxic gypstack. The fertilizer facility will need phosphate ore, and Simplot’s Smoky Canyon mine, also on

¹⁴ The International Plant Nutrition Institute, *Fertilizer Product Factsheet Ammonia*, <https://www.tfi.org/sites/default/files/documents/ammoniafactsheet.pdf> (necessary to explain technical and complex subject matter).

public lands within a Superfund site, is where Simplot will get that ore if the facility continues operations.

This type of growth-inducing effect is an indirect impact that must be considered. 40 C.F.R. § 1508.8(b). Growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems are all examples of indirect effects. *Id.*; *see, e.g., N. Plains Res. Council, Inc.*, 668 F.3d at 1081-82 (finding that NEPA review must consider induced coal production at mines, which was a reasonably foreseeable effect of a project to expand a railway line that would carry coal, especially where company proposing the railway line anticipated induced coal production in justifying its proposal).

Indeed, numerous cases in recent years dictate that agencies must consider in their indirect effects analysis both the upstream effects (e.g., induced growth in minerals extraction) and downstream effects (e.g., combustion effects of oil and gas). *See Wildearth Guardians v. United States BLM*, 870 F.3d 1222, 1235 (10th Cir. 2017) (faulting EIS for assuming that proposed coal leasing alternative and no-leasing alternative would have the same greenhouse gas emissions from coal combustion, on the unsupported basis that coal leasing’s effect on price and demand for coal would be “inconsequential”); *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 740 (9th Cir. 2020) (explaining EIS “cannot ignore basic economics principles and state—without citations or discussion—that the impact of the [oil drilling] project on foreign oil consumption will be negligible”).

Respectfully submitted this 5th Day of July, 2022.

/s/ Andrea Zaccardi

Andrea Zaccardi
(Idaho Bar No. 8818)
Center for Biological Diversity
P.O. Box 469
Victor, ID 83455
Tel: (303) 854-7748
azaccardi@biologicaldiversity.org

/s/ Ragan Whitlock

Ragan Whitlock (*Pro hac vice pending*)
FL1034177
Center for Biological Diversity
P.O. Box 2155
St. Petersburg, FL 33731
Tel: (727) 426-3653
rwhitlock@biologicaldiversity.org

Attorneys for Amici Curiae

CERTIFICATE OF SERVICE

I hereby certify that on July 5, 2022, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification to all attorneys of record.

/s/ Andrea Zaccardi

Andrea Zaccardi