STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF PROPOSED AMENDMENTS TO THE COMMISSION'S RULES ON PRODUCED WATER, 19.15.2, 19.15.16, and 19.15.34 NMAC

CASE NO. 21281

PRE-HEARING STATEMENT OF NEW ENERGY ECONOMY

This Pre-Hearing Statement is submitted on behalf of New Energy Economy ("NEE") through its undersigned counsel, as required by NMAC 19.15.3.11.B.

I. Introduction

On behalf of thousands of New Mexicans New Energy Economy submits its opposition to the Commission's amendments specifically, and most importantly, but not exclusively to 19.15.34.8 (7):

> Any discharge, handling, transport, storage, recycling or treatment for the disposition of treated produced water, including disposition in road construction maintenance, roadway ice or dust control or other construction, or in the application of treated produced water to land, for activities unrelated to the exploration, drilling, production, treatment and refinement of oil or gas is subject to rules adopted by the water quality control commission."

Before Energy Minerals Natural Resource Department ("EMNRD") and Oil Conservation Division ("OCD") (collectively "governmental agencies") promulgate any new rules it is incumbent upon these governmental agencies to take a "hard look" at the existing science that warns against allowing the use of wastewater from oil and gas ("O&G") wells to be used *at all* outside the oil fields. For instance, spreading fracked wastewater on unpaved roads to control dust which contains high levels of the carcinogenic element radium, inorganic salts, and

oil and gas hydrocarbons, is a threat to human health and the environment. Consequently, Pennsylvania and four other states have banned road spreading of wastewater from hydraulically fractured wells. A study shows that these harmful components are likely leaching off roads into surrounding soils and water (*Environ. Sci. Technol.* 2018, DOI: 10.1021/acs.est.8b00716).

Analyses of O&G wastewaters spread on roads in the northeastern U.S. show that these wastewaters have salt, radioactivity, and organic contaminant concentrations often many times above drinking water standards. Bioassays also indicated that these wastewaters contain organic micropollutants that affected signaling pathways consistent with xenobiotic metabolism and caused toxicity to aquatic organisms. The potential toxicity of these wastewaters is a concern as lab experiments have demonstrated that nearly all of the metals from these wastewaters leach from roads after rain events, likely reaching ground and surface water. In Pennsylvania, from 2008 to 2014, spreading O&G wastewaters released over four times more radium, a known carcinogen, to the environment (320 millicuries) than O&G wastewater treatment facilities and 200 times more radium than spill events.

This hard look is aimed at ensuring that governmental agencies consider every significant aspect of the environmental impact and assure the public that the regulatory bodies have indeed considered environmental and health concerns. All foreseeable direct and indirect impacts as well as cumulative impacts of a proposed action must be analyzed. All “high-quality” information and accurate scientific analysis must be used, including accurate scientific interpretations of laboratory analysis, data and studies. Speculation is implicit but that doesn’t allow agencies to shirk their regulatory responsibilities by labeling any and all discussion of

future environmental effects as "crystal ball inquiry."[1] The governmental entities must consider reasonably foreseeable significant adverse affects' associated with the use of O&G wastewater outside the O&G fields.

Given the current shameful history of widespread contamination by the O&G industry and the careless and/or willful actions and/or inactions and the failures of these governmental agencies to adequately oversee, regulate, penalize, impose violations to address and prevent spills and releases of toxic waste already occurring on a regular basis in the O&G fields, it would be a violation of the New Mexico Constitution and our laws to consider expanding the use of O&G wastewater outside the O&G fields.

II. Responsibilities of Governmental Agencies

1. The STATE OF NEW MEXICO is a sovereign State of the United States and, as trustee, holds all natural resources within the State's borders in public trust for the benefit of the people of New Mexico. If State of New Mexico permits the use of O&G wastewater outside the O&G fields it will have failed in its fiduciary duty to recognize and prevent substantial impairment to the environment, control of pollution and control despoilment of the air, water, and other natural resources in violation of its Constitutional and statutory duties, thereby injuring these Plaintiffs. New Mexico Constitution Art. 20, § 21.

2. The New Mexico Environment Department ("NMED"), Cabinet Secretary James Kenney, is vested with the responsibility to execute the mission of NMED, to protect and restore the environment and to foster a healthy and prosperous New Mexico for present and future generations, shall take care that the laws be faithfully executed and implement the rules of NMED, pursuant to Air Quality Control Act, NMSA 1978, §§74-2-1 *et seq*., Environmental

[1] *Selkirk Conservation All. v. Forsgren*, 336 F.3d 944, 962 (9th Cir. 2003) (quoting *Kern v. U.S. Bureauof Land Mgmt.*, 284 F.3d 1062, 1072 (9th Cir. 2002)).

Improvement Act,[2] NMSA 1978, §§74-1-1 *et seq*., Ground Water Protection Act, NMSA 1978, §§74-6B-1 *et seq*., Radiation Protection Act, NMSA 1978, §§74-3-1 *et seq*., and New Mexico Water Quality Act, NMSA 1978, §§74-6-1 *et seq*. NMED is the department responsible for maintaining, developing, and enforcing New Mexico's air and water quality management regulations and if the NMED permits the use of O&G wastewater outside the O&G fields it will have failed in that responsibility causing injury to New Mexicans and future generations.

3. Energy Minerals Natural Resource Department ("EMNRD") and Cabinet Secretary Sarah Cottrell Propst is vested with the responsibility to execute the mission of EMNRD, shall take care that the laws be faithfully executed and implement the rules of EMNRD, pursuant to the New Mexico Oil and Gas Act, NMSA 1978, §§70-2-1, *et seq*., including but not limited to the Surface Owners Protection Act, NMSA 1978, §§70-12-1, *et seq*.; New Mexico Water Quality Act, NMSA 1978, §§74-6-1 *et seq*.; and 19.15.1, 19.15.2 and 19.15.5 NMAC *et seq*. EMNRD is obligated to monitor, regulate, control, and enforce against oil and gas pollution: "To protect human health and the environment from the effects of development of the state's oil [and] gas … resources"[3]. EMNRD "develops and enforces all of the environmental regulations and programs in the oil and gas industry for the prevention of ground water contamination"[4]; and "ensures oil and gas development is conducted in a way that protects human health and the environment and the lands of New Mexico are protected and

[2] §74-2-2: The purpose of the Environmental Improvement Act is to create a department that will be responsible for environmental management and consumer protection in this state in order to ensure an environment that in the greatest possible measure will confer optimum health, safety, comfort and economic and social well-being on its inhabitants; will protect this generation as well as those yet unborn from health threats posed by the environment; and will maximize the economic and cultural benefits of a healthy people.
[3] http://www.emnrd.state.nm.us/OCD/envbureau.html
[4] *Id*.

responsibly restored."[5] However, despite the fiduciary duty of EMNRD to protect human health and the environment, if it permits the use of O&G wastewater outside the O&G fields it will have failed in that responsibility causing injury to New Mexicans and future generations.

4. The New Mexico Oil Conservation Division, Oil Conservation Division Director, Adrienne Sandoval, is vested with the responsibility to execute the mission of OCD, shall take care that the laws be faithfully executed and implement the rules of OCD, pursuant to the New Mexico Oil and Gas Act, NMSA 1978, §§70-2-1, *et seq*., including but not limited to the Surface Owners Protection Act, NMSA 1978, §§70-12-1, *et seq*.; New Mexico Water Quality Act, NMSA 1978, §§74-6-1 *et seq*.; and 19.15.1, 19.15.2 and 19.15.5 NMAC *et seq*. OCD is obligated to monitor, regulate, control, and enforce against oil and gas pollution: "To protect human health and the environment from the effects of development of the state's oil [and] gas … resources"[6]. OCD "develops and enforces all of the environmental regulations and programs in the oil and gas industry for the prevention of ground water contamination"[7]; and "ensures oil and gas development is conducted in a way that protects human health and the environment and the lands of New Mexico are protected and responsibly restored."[8] However, despite the fiduciary duty of OCD to protect human health and the environment, if it permits the use of O&G wastewater outside the O&G fields it will have failed in that responsibility causing injury to New Mexicans and future generations.

III. Policy and Practices by New Mexico State Agencies and Governmental Officials, through Actions or Inactions Ignore or Condone the Oil & Gas Industry to Contaminate Water and Land by failing to conduct thorough and comprehensive

[5] http://www.emnrd.state.nm.us/OCD/education.html#OGProd4

[6] http://www.emnrd.state.nm.us/OCD/envbureau.html
[7] *Id*.
[8] http://www.emnrd.state.nm.us/OCD/education.html#OGProd4

investigations of pollution occurrences and hold the industry accountable through penalties

5. Environmental contamination and polluting events are currently at an extremely hazardous level. The O&G industry cause releases, spills, and discharges of combustible gases, hazardous chemicals, and industrial wastes from their oil and gas drilling facilities. These releases, spills, and discharges cause New Mexicans and their properties to be exposed to hazardous gases, chemicals, and industrial wastes, and caused damage to the natural resources of the environment. This causes loss of use and enjoyment of their properties, loss of quality of life, emotional distress, and other damages.

6. The State of New Mexico, New Mexico Environment Department ("NMED"), Energy Minerals Natural Resource Department ("EMNRD"), and Oil Conservation Division ("NMOCD" or "OCD") are obligated to monitor, supervise, regulate, control, and enforce against oil and gas pollution but have failed in their fiduciary responsibility to do so. Because these governmental entities, have failed to issue compliance actions; require remediation plan(s) and complete remediation, restoration and reclamation requirement(s); assess penalties; suspend or terminate permits; have failed to commence civil actions or criminal actions for negligent incidents perpetrated by the oil and gas industry, it has caused a general atmosphere of impunity for the oil and gas industry, and has proximately caused the harm to New Mexicans, including the contamination of water and land and caused imminent and substantial danger to their health and animals, and to the health and welfare of the public.

7. The composition of "produced water," "hydraulic fracturing fluid" and/or "drilling mud" includes hazardous chemicals that are carcinogenic and toxic.

8. Diesel fuel and lubricating materials, also consisting of hazardous chemicals, are

utilized during drilling and well operations.

9. At all times herein, and upon information and belief, the O&G industry is grossly negligent in the drilling, construction and operation of wells and pipelines such that pollutants and industrial and/or residual waste, including drilling fluids, slick water solutions, hydraulic fracturing fluids, production waters, and/or other liquid waste products are caused to be discharged into the ground and/or into the waters, including homes and water wells.

10. New Mexicans continue to be exposed to dangerous carcinogenic chemicals, like benzene[9] and methane,[10] and other volatile organic compounds with little to no oversight by the governmental agencies. New Mexicans suffer from rashes, nose bleeds, persistent allergy-type symptoms, inability to perform daily tasks, including being outside. People live in constant fear of future physical illness; As a result of exposure to environmental contaminants people are experiencing neurological development, immune system suppression, increased risk of cancer, as well as quality of life losses due to hindrance of normal activities. The relentless exposure to odors, dust, noise, and chemicals, which were not in evidence prior to despoliation by the oil and gas industry has caused headaches, nosebleeds, trouble breathing, fits of choking, rashes, disorientation, unusual growths (polyp), and the reduction in clarity of thinking. On certain occasions the chemicals from flaring and the overpowering gas odor prohibited being outside (cooking in the summer) and generally interfered with normal

[9] "*Monitoring for Benzene at Refinery Fencelines*," Environmental Integrity Project, February 6, 2020, https://www.environmentalintegrity.org/wp-content/uploads/2020/02/Benzene-Report-2.6.20.pdf; https://www.currentargus.com/story/news/local/2020/02/07/navajo-refinery-artesia-new-mexico-top-benzene-polluting-oil-gas-sites/4678057002/

[10] "*Oil and Gas Methane Emissions in New Mexico*," Environmental Defense Fund, 3/2020 (New Mexico's oil and gas operators are emitting 570,000 tons of methane every year -- equivalent to the climate impact of approximately 12 coal fired power plants.)

residential activities. At certain times people complain that the chemicals and odor and dust caused them to be sheltered inside with windows sealed.

A. Background of HB 546, "Fluid Oil & Gas Waste Act"

11. New Mexico Governor Michelle Lujan Grisham addressed the New Mexico Oil and Gas Association at the Association's annual meeting in Santa Fe on October 8, 2019, and praised the oil industry and solicited its help in developing new state regulations for methane emissions.[11]

12. Marathon Oil was the primary author of HB 546, "Fluid Oil & Gas Waste Act," also known as "the Produced Water Act," during the 2019 Legislature, with input from the New Mexico Environment Department[12] that allows treated "produced water" also known as waste water resulting from hydraulic fracturing that may contain radiation, carcinogens and other toxic substances to be used for "road construction maintenance, roadway ice or dust control, or other construction or in the application of treated produced water to land, for activities unrelated to the exploration, drilling, production, treatment and refinement of oil or gas."[13] The Legislature passed HB 546 and Governor Lujan Grisham signed the Fluid Oil & Gas Waste Act, despite the fact the U.S. Environmental Protection Agency (EPA) banned the disposal of hydraulic

[11] "*New Mexico governor praises oil industry for opportunities*," Associated Press, October 8, 2019, https://apnews.com/dbf61f2de6b84667931b32f95bbde2e5 ("New Mexico Gov. Michelle Lujan Grisham professed her full-throttled support for the oil sector on Tuesday, telling industry leaders that her Cabinet secretaries work for them and that she hopes the state can overtake North Dakota as the No. 2 oil producer among states.")

[12] Environmental Defense Fund (EDF) and Sierra Club were also partially involved in the development of this dangerous legislation.

[13] HB 546, "Fluid Oil & Gas Waste Act," sponsored by Representatives Nathan P. Small, Brian Egolf, and Rod Montoya, §11 P.

fracturing wastewater at public sewage treatment plants in 2016.[14] The EPA said that fracking wastewater contains contaminants such as total dissolved solids, organic and inorganic chemicals, and technologically enhanced naturally occurring radioactive material (TENORM), all of which can be harmful to human health.[15] A 2018 Duke University study published in a peer-reviewed policy paper Jan. 4, 2018 in *Environmental Science and Technology*,[16] "concluded that recent disposal of treated conventional (oil and gas waste) is the source of high (radium concentrations) in stream sediments at (waste) facility disposal sites". The study found high levels of radium, a naturally occurring, radioactive material, in river and stream sediment at levels up to 650 times those found upstream of three industrial waste treatment plants that handle fluid produced by conventional oil and gas wells.

13. According to the OCD web site, since Governor Lujan Grisham and her administration took office on January 1, 2019, there have been the following releases, mostly of produced water, natural gas, or crude oil for some of the top ten O&G producing companies. In most instances, governmental entities took little to no action to supervise, monitor, control, or penalize the companies, even for "major" incidents. In a minority of the self-reported incidents by the O&G industry the governmental entities accepted the "remediation plan" by the respective companies, which was to collect dirt and send company-selected soil samples to a laboratory for analysis. In an even smaller sub set of instances the governmental entities required follow-up by scraping up the contaminated soil (in amounts defined by the company) and disposing it into a

[14] 40 CFR Part 435;
https://www.epa.gov/eg/unconventional-oil-and-gas-extraction-effluent-guidelines
[15] https://www.epa.gov/uog
[16] https://pubs.acs.org/doi/10.1021/acs.est.7b04952

hazardous waste landfill. The incidents occurred on private, state, and federal lands. Many of the incidents occurred in Eddy County.

O&G	Number of Incidents	OCD web cite
WPX	64	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=WPX&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&County=Eddy&Section=00
EOG Resources	49	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=EOG%20Resources&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Oxy USA	153	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Oxy%20USA&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Devon Energy	165	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Devon%20Energy&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Mewbourne Oil Co.	6	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=

		Mewbourne&OperatorSearchClause=BeginsWith&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Chevron USA	56	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Chevron&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Marathon Oil	61	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Marathon&OperatorSearchClause=BeginsWith&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Matador Production Company	9	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Matador&OperatorSearchClause=BeginsWith&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
XTO Energy	280	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=XTO%20Energy&OperatorSearchClause=BeginsWith&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
ConocoPhillips	58	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=ConocoPhillips&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=B

		eginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00
Cimarex Energy	46	https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Spills/SpillSearchResults.aspx?IncidentIdSearchClause=BeginsWith&Severity=All&Ogrid_Name=Cimarex&OperatorSearchClause=Contains&FacilityIdSearchClause=BeginsWith&FacilityNameSearchClause=BeginsWith&WellNameSearchClause=BeginsWith&Incident_DateRangeStart=01/01/2019&Incident_DateRangeEnd=03/23/2020&Section=00

14. While the O&G companies that own these facilities are responsible for the accidents and poor management that led to these disasters, it is undeniable that New Mexico has not been a leader on proper oversight of these facilities. Limited inspections[17] and enforcement are common.

15. The number of well inspections has decreased by 28% between the administrations of Governor Martinez (42,880 inspections in 2018) and Governor Lujan Grisham (31,043 inspections in 2019).[18]

16. Indeed many of these companies are repeat violators of basic environmental regulations and were allowed to continue to operate. For instance, shortly after the fracked waste water explosion and secondary release on January 21, 2020,[19] WPX illegally dumped at least 13

[17] "Well inspections were down in FY 2019 due to high vacancy rates in OCD field offices." Energy Minerals Natural Resource Department annual report, 2019, http://www.emnrd.state.nm.us/documents/EMNRD_AnnualReport_2019_nm.pdf, p. 63. "In calendar year 2019 the OCD inspected 27,756 oil and gas wells and facilities out of 65,062 total facilities." p. 60. "Timely approval of [application] permits [to drill] in conjunctions with the OCD's inspection program ensures that the oil an gas industry can thrive [.]" pp. 60-61. In 2016 a total of 49,624 were inspected; in 2017 a total of 37,928 were inspected; in 2018 a total of 42,880 were inspected; and in 2019 a total of 31,043 were inspected. p. 63.

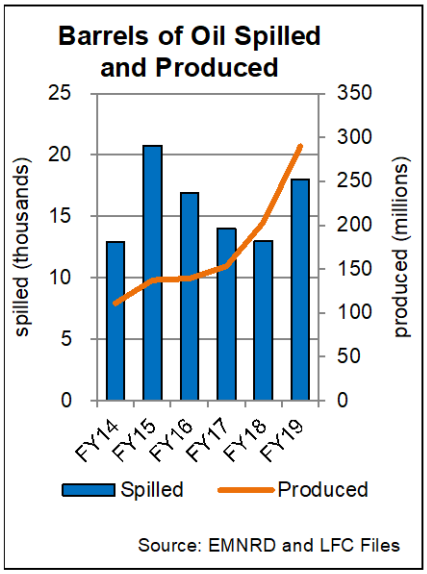
[18] *Id*.

[19] https://nmpoliticalreport.com/2020/01/24/it-was-raining-on-us-family-awoken-by-produced-water-pipe-burst-near-carlsbad/; https://www.currentargus.com/story/news/local/2020/01/21/produced-water-pipeline-explosion-fracking-leaves-carlsbad-family-seeking-answers/4532022002/

bbls of produced fracked waste water on land causing a saturation depth approximately 3 inches; Incident ID NRM2006956859. Similar to past violations, WPX and other industrial facilities receive limited or no punishment for their violations, are allowed to continue to operate, leading to the occurrence of major accidents. WPX and the other O&G industries' deplorable record of spills make the risk of damage even more likely. Governmental entities do not engender confidence in its ability to 1) prevent incidents from occurring; 2) notify impacted landowners and/or community members of the damage caused; and 3) remediate the problem. Governmental entities knew or should have known that the carelessness repeatedly demonstrated by this high-risk industry has caused and will continue to cause injury and harm to environmental resources and the community.

17. According to the New Mexico Oil Conservation Division, there were 1,523 reported spills in New Mexico in 2018. That's roughly 4.2 spills per day. That means on an average each day there are 252 bbls of produced water spilled; 44 barrels of crude oil spilled; 677,000 cubic feet of natural gas leaked.[20]

18. In 2019, the state produced an estimated 300 million barrels of oil, and 1.2 billion barrels of produced water. Drilling a single well in the Permian Basin requires more than 11 million gallons of water per day in 2016, enough to fill 17 Olympic size swimming pools, up from 1.3 million gallons in 2011— a 770%



[20] https://westernpriorities.org/2018-new-mexico-oil-and-gas-toxic-release-tracker/

increase.[21] For every barrel of oil produced in the Permian Basin, about four barrels of "produced water" come out of the earth along with it.[22] In 2018, New Mexico's share of the Permian Basin generated 42 billion gallons of oil and gas wastewater, according to the New Mexico Environment Department.[23] For scale, this amount of water could cover over 8,000 football fields with a foot of water, each and every day.[24]

19. The spike in production before the COVID pandemic led to a spike in spills, too. Most of those spills occurred in the counties of Eddy and Lea.

20. As part of its regular duties, the New Mexico Legislative Finance Committee (LFC) creates a "Performance Report Card for various regulatory agencies seeking financing from the Legislature. In its first quarter, fiscal year 2020, the LFC had this to report about EMNRD:

> The Oil and Gas Conservation Division (OCD) attributes fewer inspections and a lack of compliance with permits and regulations to compliance officer vacancies; currently half of OCD's compliance officer positions are vacant. These positions are located in the department's various field offices, which increases the difficulty of hiring. OCD is engaged in a reorganization effort that will move most compliance officers to Albuquerque with the goal of increasing the applicant pool. However, the effectiveness of this centralization has yet to be determined.
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> The division continues to process most approved drilling permits within 10 business days, exceeding its target but falling short of FY18 actuals. The division issued 1,620 violations in FY19, 78 percent of the number issued in FY18 despite significantly increased oil and gas production activity this year. OCD reports that this reduction is related to the decrease in number of inspections and is also attributable to vacancies in compliance officer and environmental tech positions.[25]

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[21] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6093634/
[22] https://www.env.nm.gov/new-mexico-produced-water/wp-content/uploads/sites/16/2019/11/Produced-Water-Public-Meeting-Presentation_ENGLISH_FINAL-191114.pdf
[23] *Id.*
[24] *Id.*
[25] https://www.nmlegis.gov/Entity/LFC/Documents/Agency_Report_Cards/521%20-%20EMNRD%20FY20%20Q1.pdf

21. Volatile organic compounds (VOCs), such as benzene, toluene, ethylbenzene, and xylenes, dissolve readily in water and "can have acutely toxic effects."[26] Mid-weight organic compounds, such as polycyclic aromatic hydrocarbons, "tend to pose the greatest risk in the environment" because they persist for longer periods of time.[27] People exposed to hydrocarbons can suffer various health problems, including growth reduction, endocrine alteration, cancer, and birth defects.[28] Long-term health effects include leukemia, life threatening anemia, immune system suppression, and possible fetal abnormalities. Very high levels of the toxic carcinogen, benzene, result in coma, seizures, irregular heart rhythms, fluid in the lungs, and death.[29] The EPA has set 5 ppb as the maximum permissible level of benzene in drinking water. EPA has set a goal of 0 ppb for benzene in drinking water and in water such as rivers and lakes because benzene can cause leukemia. Failing to adequately clean up oil spills, thus, would exacerbate an existing environmental and public health problem.[30]

22. Oil and gas (O&G) facilities emit air pollutants that are a major health risk for nearby populations. Researchers have found that air pollutant concentrations increased with proximity to an O&G facility, as did health risks.[31] Acute hazard indices for neurological,

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[26] BOEM, CATASTROPHIC SPILL EVENT ANALYSIS: HIGH-VOLUME, EXTENDED-DURATION OIL SPILL RESULTING FROM
LOSS OF WELL CONTROL ON THE GULF OF MEXICO OUTER CONTINENTAL SHELF 29 (2017), available at https://www.boem.gov/Catastrophic-Spill-Event-Analysis
At p. 30.

[27] *Id*.

[28] Id. at p. 171.

[29] Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological profile for Benzene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, https://www.atsdr.cdc.gov/ToxProfiles/tp3.pdf

[30] https://www.atsdr.cdc.gov/ToxProfiles/tp3.pdf, p. 9.

[31] "Ambient Nonmethane Hydrocarbon Levels Along Colorado's Northern Front Range: Acute and Chronic Health Risks," Lisa M. McKenzie**,** Benjamin Blair, John Hughes, William B.

hematological, and developmental health effects indicate that populations living within 500 feet of an O&G facility could experience these health effects from inhalation exposures to benzene and alkanes. Lifetime excess cancer risks exceeded 1 in a million for all scenarios. The cancer risk estimate of 8.3 per 10,000 for populations living within 500 ft. of an O&G facility exceeded the United States Environmental Protection Agency's 1 in 10,000 upper threshold. These findings indicate that state policies may not be protective of health for populations residing near O&G facilities.

23. Among U.S. children ages 0–14, acute lymphocytic leukemia (ALL) is the most commonly diagnosed cancer, and non-Hodgkin lymphoma (NHL) is the most common lymphoma. Populations living in areas with oil and gas development may be at an increased risk for health effects, including cancers such as ALL and NHL. Children ages 5-24 with ALL were 4.3 times more likely to live in highest tertile of O&G well density compared to controls. Risk of ALL increased with each tertile of increasing well density.[32]

24. Public health concerns should be of utmost importance during the COVID-19 pandemic. Coronavirus patients in areas that had high levels of air pollution before the pandemic are more likely to die from the infection than patients in cleaner parts of the country, according to a new nationwide study that offers the first clear link between long-term exposure to pollution and experiencing the most severe COVID-19 outcomes including death. The April 2020 Harvard

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Allshouse, Nicola J. Blake, Detlev Helmig, Pam Milmoe, Hannah Halliday, Donald R. Blake, John L. Adgate, *Environ. Sci. Technol.* 2018, 52, 8, 4514-4525, March 27, 2018, https://doi.org/10.1021/acs.est.7b05983

[32] McKenzie LM, Allshouse WB, Byers TE, Bedrick EJ, Serdar B, Adgate JL (2017) "Childhood hematologic cancer and residential proximity to oil and gas development." PLoS ONE 12(2): e0170423. https://doi.org/10.1371/journal.pone.0170423

study[33] shows a statistical link between a small increase in long-term exposure to fine particulate matter, $PM_{2.5}$ revealing a large increase in COVID-19 death rate, with the magnitude of increase 20 times that observed for $PM_{2.5}$ and all-cause mortality. Multiple studies[34] have found that exposure to fine particulate matter puts people at heightened risk for lung cancer, heart attacks, strokes and even premature death. The results underscore the importance of air pollution regulation enforcement to protect human health both during and after the COVID-19 crisis, and reinforce the particular vulnerability faced by Plaintiffs.

25. Another compounding public health threat is climate change. An overwhelming body of scientific work demonstrates that anthropogenic climate change is causing immediate, devastating impacts to communities across the country, and that these harms will worsen as greenhouse gas pollution continues to rise. Scientific research has established that greenhouse gas emissions are making the earth's climate hotter and more extreme; climate change and ocean acidification are harming biodiversity, ecosystems services, and public lands; and climate change is now affecting human health and morbidity, the U.S. economy and national security. In addition to detailing the causes and scope of the climate crisis, recent scientific reports also make it absolutely clear that GHG emissions must be drastically reduced in the next several decades to avoid the worst impacts of climate change.[35] For example, the IPCC Special Report provides overwhelming and compelling evidence that climate hazards are more urgent and more severe than previously thought and shows precisely why aggressive reductions in emissions are critical

[33] Exposure to air pollution and COVID-19 mortality in the United States. Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici. medRxiv 2020.04.05.20054502; doi: https://doi.org/10.1101/2020.04.05.20054502
[34] https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution
[35] IPCC Special Report, "Headline Statements from the Summary for Policymaker," at 2, available at https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/sr15_headline_statements.pdf.

within the coming few decades.

More specifically, the IPCC Report concludes that pathways to limit warming to 1.5°C with little or no overshoot require "a rapid phase out of CO_2 emissions and deep emissions reductions in other GHGs and climate forcers."[36] The governmental entities have not factored in any additional regulations to address climate change, in fact, they have blatantly ignored the contribution of WPX and other O&G companies to the disastrous rise in greenhouse gas emissions. If WPX and other O&G companies were regulated environmental and climate benefits will accrue that will save lives. We could avoid significant environmental impacts, such as:

- Reduction in large volumes of direct and reasonably foreseeable conventional air pollution, greenhouse gas emissions,[37] and water pollution from the production, transport, refining, and consumption of the oil;[38]
- Reduction in damage to desert riparian ecosystem, other sensitive ecosystems and protected areas, and wildlife that would have been impacted by the production, transport, refining, and consumption of the oil;

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[36] 2018 at Chapter 2, 2-28.

[37] As researchers at the University of Texas, Austin, recently explained, the "boom in oil production in this region and elsewhere is likely to increase GHG emissions both indirectly, if it puts downward pressure on global oil prices, and directly due to emissions from the upstream, midstream, and downstream activities." A. Waxman et al., "Emissions in the Stream: Estimating the Greenhouse Gas Impacts of an Oil and Gas Boom," 2020 ENVIRO. RESEARCH LETTERS 15:014004, at p. 2 (Jan. 14, 2020), available at https://iopscience.iop.org/article/10.1088/1748-9326/ab5e6f/pdf. The researchers also explain that "[b]ecause of the path dependency of industrial development and high adjustment costs of fuel switching, further transition toward oil and gas may mean larger future use of fossil fuels relative to renewables." *Id.*

[38] Shale oil and gas development poses risks to water quality from contamination of surface water and groundwater as a result of erosion from ground disturbances, spills and releases of chemicals and other fluids, or underground migration of gases and chemicals. GAO, "Information on Shale Resources, Development, and Environmental and Public Health Risks" (Sept. 2012), available at https://www.gao.gov/assets/650/647791.pdf.

- Reduction in the risk of spills, explosions, accidents and consequent threats to human welfare and the environment;
- Reduction in the risk of harm to important commercial and subsistence resources like agriculture (particularly large pecan farms) and hunting areas, as well as industries dependent on tourism and outdoor recreation; and
- Reduction in production, venting, and flaring of methane gas, natural gas liquids, and liquid petroleum gases associated with unconventional production of crude oil, and consequent environmental impacts.

26. Methane is the main component of fossil gas extraction and production. Its warming effect is 87 times greater than CO_2 over a 20-year period and 36 times greater over a 100-year period.[39] Between 2017 and 2025, U.S. gas production is on track to increase by 40 billion cubic feet per day (cf/d), peaking at close to 100 billion cf/d.[40] Under the current trajectory, the Permian Basin could be the source of nearly 40 percent of the emissions enabled by the production of currently undeveloped oil and gas in the United States between now and 2050.[41] According to a U.S. Government Accountability Office ("GAO") report, oil and gas development poses risks to air quality, generally as the result of (1) engine exhaust from increased truck traffic, (2) emissions from diesel-powered pumps used to power equipment, (3) gas that is flared (burned) or vented (released directly into the atmosphere), (4) emissions of pollutants from faulty equipment and/or impoundment, and temporary storage areas and/or intentional and unintentional releases. The drilling and extraction of natural gas from wells and

[39] Kelly Trout and Lorne Stockman, "Drilling Toward Disaster," (January 2019), Oil Change International, at p. 12.
[40] "Drilling Toward Disaster," http://priceofoil.org/content/uploads/2019/01/Drilling-Towards-Disaster-Web-v2.pdf, at p. 18.
[41] *Id* p. 26.

its transportation in pipelines results in the leakage of methane, a primary component of natural gas. Preliminary studies and field measurements show that these so-called "fugitive" methane emissions range from 1 to 9 percent of total life cycle emissions.[42] One recent study found that methane losses must be kept below 3.2 percent for natural gas power plants to have lower life cycle emissions than new coal plants over short time frames of 20 years or fewer.[43] According to April 2020 initial findings released by the Environmental Defense Fund (EDF) regarding air pollution in the Permian Basin, as a result of O&G extraction activities, methane and other volatile organic compounds were generated three times what was reported nationally by the federal Environmental Protection Agency (EPA).[44] The EDF estimated a leak rate of about 3.5 percent, about 15 times higher than the goal of 0.25 percent by the Oil and gas Climate Initiative, a national coalition of oil and gas companies formed to address climate issues in the industry.[45]

27. There is undeniable evidence that emissions of GHGs are linked to climate change.[46] "Climate change and the costs that may be associated with its impacts and the regulation of GHGs have the potential to affect our business in many ways, including negatively

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[42] "Environmental Impacts of Natural Gas," *Union of Concerned Scientists* (Jun. 19, 2014), available at https://www.ucsusa.org/resources/environmental-impacts-natural-gas.

[43] Alvarez, R.A., S.W. Pacala, J.J. Winebrake, W.L. Chameides, and S.P. Hamburg, "Greater focus needed on methane leakage from natural gas infrastructure," *Proceedings of the National Academy of Sciences* 109:6435–6440 (2012).

[44] https://www.currentargus.com/story/news/local/2020/04/07/oil-and-gas-emissions-could-more-concerning-amid-covid-19-pandemic/2954198001/?utm_source=currentargus-Daily%20Briefing&utm_medium=email&utm_campaign=daily_briefing&utm_term=hero

[45] *Id*.

[46] IPCC Report, 2014, Climate Change 2014 Synthesis Report summary for Policymakers, "Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems. … Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks." https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf

impacting the costs we incur in providing our products and services, the demand for and consumption of our products and services (due to change in both costs and weather patterns), and the economic health of the regions in which we operate, all of which can create financial risks."[47]

28. The greenhouse gases currently in the atmosphere commit the planet to long-lasting climate change that is irreversible on a multi-century to millennial time scale.

29. Climatic changes that are caused by CO_2 emissions, such as ocean warming, sea level rise, and ocean acidification are long-lasting and irreversible on human timescales.[48]

30. The National Research Council cautions that "emission reduction choices made today matter in determining impacts that will be experienced not just over the next few decades, but also into the coming centuries and millennia."[49]

NEE submits that EMNRD and OCD have not established appropriate regulatory procedures and have failed to enforce the ones they have — to comply with the constitutional mandated public trust doctrine "expressed" in Article XX, Section 21 of the New Mexico Constitution, that reads:

> The protection of the state's beautiful and healthful environment is hereby declared to be of fundamental importance to the public interest, health, safety [,] and the general welfare. The [L]egislature shall provide for control of pollution and control of despoilment of the air, water[,] and other natural resources of this state, consistent with the use and development of these resources for the maximum benefit of the people.

Article XX, Section 21 of our state constitution recognizes that a public trust duty exists

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[47] WPX Energy, Inc., Form 10K, to the Securities and Exchange Commission, for the fiscal year ended December 31, 2015, https://www.sec.gov/Archives/edgar/data/1518832/000151883216000018/wpx20151231-10xk.htm, p. 35-36.

[48] Archer, David & Victor Brovkin, The millennial atmospheric lifetime of anthropogenic CO2, 90 CLIMATIC CHANGE 283 (2008); Solomon, Susan et al., Irreversible climate change due to carbon dioxide emissions, 106 PROC. NAT'L ACAD. SCI. 1704 (2009).

[49] NAT'L RESEARCH COUNCIL (NRC), WARMING WORLD: IMPACTS BY DEGREE (2011).

for the protection of New Mexico's natural resources, including the atmosphere, for the benefit of the people of this state.[50]

Governmental agencies have already failed to protect human health and the environment from the effects of development of the state's oil and gas resources.

Official policy is responsible for a deprivation of rights protected by the New Mexico Constitution, local governments and agencies, and every other "person," by the very terms of our statutes, and may be sued for New Mexico constitutional deprivations visited pursuant to governmental "custom" even though such a custom has not received formal approval through the body's official decision-making channels. That custom is governmental entities' refusal to hold oil and gas companies accountable for their blatant and reckless abuse of nature and utter disregard for the health and welfare of people and animals that has led and continues to lead to an environment of impunity, a code of silence, and becomes encouragement for disregard and destruction in the name of profit and short-term windfall spending.[51]

The persistent and widespread discriminatory practices of state officials, action and inaction, has led to the policy and practice current repeat oil and gas offending companies knew that their abuse of people and the land would be ignored, or perhaps ticketed, but rarely if ever penalized in any serious way that would cause them to cease those environmental and climate offenses or mistreatment to people, animals or the Earth. This extremely unfortunate permanent and well settled custom and practice caused a constitutional tort and violations of the rights, privileges, or immunities secured by the Constitution of New Mexico.

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[50] *Sanders-Reed ex rel. Sanders-Reed v. Martinez*, NMCA-063, ¶15, 350 P.3d 1221 (2015).
[51] "It's beyond our wildest expectations from a budgetary perspective," House Speaker Brian Egolf told the Journal. https://www.abqjournal.com/1399236/nm-lawmakers-wrestle-with-a-budget-bonanza.html

After this encyclopedic review:

https://www.health.ny.gov/press/reports/docs/high_volume_hydraulic_fracturing.pdf

the State of New York banned fracking. Before governmental entities allow the use of fracked wastewater to be used outside the O&G fields it should carefully review this and other scientific data.

WHEREFORE, New Energy Economy seek the following relief from State of New Mexico, New Mexico Environment Department, Energy Minerals Natural Resource Department, and Oil Conservation Division:

Establishment of regulatory standards for the following contaminants: Ethyl benzene, Toulene, Xylenes, Methylene Chloride, Formaldehyde, Polycyclic Aromatic Hydrocarbons, Radon and other volatile organic compounds based on science;

Establishment of regulatory standards for radiation poisoning and monitoring and enforcement in the O& G industry;

A Requirement to Increase Monitoring and Actual Enforcement of oil and gas companies, especially those who repeatedly offend and violate regulations, and to increase penalties for repeat contamination offenses, including the threat of allowing *any* further well permits;

Injunctive relief requiring the suspension of well permits until there are enough inspectors and efficient and effective inspections.

Delay in amendments to the Produced Water Rule until a thorough and adequate review of scientific data has been completed.

NEE does not intend to present testimony from any technical witnesses at the hearing. Pursuant to 19.15.3.11.B.(1) NMAC, 19.15.3.12.A.2(b), (e) NMAC, and 19.15.3.12.B(3)

NMAC, NEE does request an opportunity to provide an opening statement (10 minutes) and closing statement (10 minutes), and to cross-examine witnesses at the hearing (time required dependent upon witnesses).

Respectfully submitted this 17th day of July, 2020,

New Energy Economy

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