No. 18-60102

IN THE UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

CENTER FOR BIOLOGICAL DIVERSITY; GULF RESTORATION NETWORK; LOUISIANA BUCKET BRIGADE,

Petitioners

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; SCOTT PRUITT, Administrator, United States Environmental Protection Agency; ANNE IDSAL, Region 6 Administrator,

Respondents

On Petition for Review of Final Action of the
United States Environmental Protection Agency

OPENING BRIEF OF PETITIONERS CENTER FOR BIOLOGICAL DIVERSITY, GULF RESTORATION NETWORK, AND LOUISIANA BUCKET BRIGADE

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CERTIFICATE OF INTERESTED PARTIES

The undersigned counsel of record for Petitioners certifies that the following listed persons and entities as described in the fourth sentence of Rule 28.2.1 have an interest in the outcome of this case. These representations are made in order that the judges of this court may evaluate possible disqualification or recusal. Interested persons and entities and their counsel:

1. Petitioners:

Center for Biological Diversity, a nonprofit organization with no parent companies, subsidiaries, or affiliates with any outstanding securities in the hands of the public.

Gulf Restoration Network, a nonprofit organization with no parent companies, subsidiaries, or affiliates with any outstanding securities in the hands of the public.

Louisiana Bucket Brigade, a nonprofit organization with no parent companies, subsidiaries, or affiliates with any outstanding securities in the hands of the public.

2. Respondents:

U.S. Environmental Protection Agency, Respondent

Scott Pruitt, Administrator of the U.S. Environmental Protection Agency, Respondent

Anne Idsal, Region 6 Administrator of the U.S. Environmental Protection Agency, Respondent

American Petroleum Institute, Intervenor-Respondent

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June 6, 2018

/s/ *Kristen Monsell*
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Center for Biological Diversity,
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STATEMENT REGARDING ORAL ARGUMENT

Petitioners Center for Biological Diversity, Gulf Restoration Network, and Louisiana Bucket Brigade respectfully request oral argument. This case will require the Court to determine whether the Environmental Protection Agency complied with its legal obligations under the National Environmental Policy Act and Clean Water Act to carefully evaluate the harmful impacts of chemical-laden waste fluid on public health and the environment before allowing oil and gas facilities to discharge these wastes into the Gulf of Mexico. Oral argument may assist the Court in resolving the legal questions at issue in this case.

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STATEMENT OF JURSIDICTION

Petitioners Center for Biological Diversity, Gulf Restoration Network, and Louisiana Bucket Brigade ("Petitioners") seek review of the National Pollutant Discharge Elimination System ("NPDES") General Permit for New and Existing Sources and New Dischargers in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (Permit No. GMG290000) (the "General Permit). This Court has original jurisdiction over this case pursuant to section 509(b) of the Clean Water Act because it seeks review of a permit issued by the Environmental Protection Agency ("EPA") under section 402. 33 U.S.C. § 1369(b)(1)(F).

Petitions for review of such permits must be filed within 120 days of EPA's issuance of the permit. *Id*. § 1369(b)(1). EPA issued the permit for purposes of judicial review on October 16, 2017. GMG0002959. Petitioners filed the Petition for Review on February 13, 2018. Dkt. #1. The Petition is therefore timely.[1]

Standing

[1] Petitioners have contemporaneously filed a Motion for Leave to File Standing Declarations, and have appended thereto six standing declarations (Exhibits 1–6) that establish Petitioners' standing in this case. Parties have Article III standing if they are under threat of suffering an injury-in-fact that is concrete and particularized; the threat is actual and imminent; the injury is fairly traceable to the challenged action; and it is likely that a favorable decision will redress the injury. *Friends of Earth, Inc. v. Laidlaw Envtl. Serv. (TOC), Inc*., 528 U.S. 167, 180-81 (2000). Public interest organizations like Petitioners here have representational standing "when its members would otherwise have standing to sue in their own right, the interests it seeks to protect are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343 (1977). EPA's challenged action threatens to directly injure Petitioners' members' recreational, aesthetic, vocational, scientific, and other interests. *See* Exhs. 1-6; *see also Laidlaw*, 528 U.S. at 183 ("[w]e have held that environmental plaintiffs

STATEMENT OF THE ISSUES

Whether EPA's issuance of the General Permit was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law. Specifically:

1. Whether EPA violated the National Environmental Policy Act by permitting oil and gas facilities to discharge huge volumes of chemical-laden waste fluids, including chemicals used in hydraulic fracturing ("fracking") and other well stimulation techniques, into the Gulf of Mexico without analyzing alternatives to authorizing such discharges, or the impacts of such discharges on the marine environment.

2. Whether EPA failed to examine relevant data or provide a rational basis for its determination that the discharges allowed under the General Permit will not degrade the marine environment where its evaluation did not describe or analyze the quantity or composition of wastes to be discharged and ignored available information regarding fracking and other well stimulation techniques.

3. Whether EPA failed to establish adequate monitoring of the fracking and other well stimulation pollution to be discharged under the General Permit.

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adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity.'" (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)); *see also Sierra Club v. Cedar Point Oil Co.*, 73 F.3d 546, 557 (5th Cir. 1996) ("harm to aesthetic, environmental, or recreational interests is sufficient to confer standing, provided that the party seeking review is among the injured") (citation omitted). Petitioners' injuries are caused by EPA's failure to properly study and regulate the discharge of pollution from offshore oil and gas facilities in the Gulf of Mexico, and such injuries could be redressed, at least in part, by a favorable decision from this Court. *See* Exhs. 1-6; *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992).

STATEMENT OF THE CASE

This case concerns EPA's failure to comply with the National Environmental Policy Act, 42 U.S.C. §§ 4321–4370f, and Clean Water Act, 33 U.S.C. §§ 1251–1387, in authorizing offshore oil and gas facilities to discharge massive quantities of polluted wastewater into the Gulf of Mexico. Specifically, EPA issued a General Permit that allows oil and gas facilities to discharge an unlimited volume of chemical-laden waste fluid, including chemicals used in offshore fracking and other well stimulation techniques, without adequately studying the potential impacts of those discharges on the marine environment and without requiring facilities to monitor and report such discharges. EPA allowed these discharges despite admitting that it does not know what chemicals are currently used in fracking and other well stimulations, does not know the chemical composition of the waste fluids from such procedures, and that it does not have any information regarding the impacts of fracking chemicals on the marine environment.

Both the National Environmental Policy Act and the Clean Water Act prohibit such uniformed decisionmaking. EPA's failure to comply with its legal obligations place public health, wildlife, and the marine resources of the Gulf of Mexico at risk from the dangerous pollution generated by offshore oil and gas drilling activities.

I. Legal Background

A. The National Environmental Policy Act

The National Environmental Policy Act ("NEPA") is our nation's "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The statute has two primary goals. First, it helps ensure that federal agencies, "in reaching [] decision[s], will have available, and will carefully consider, detailed information concerning significant environmental impacts." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). Second, it seeks to "guarantee[] that the relevant information will be made available to the [public] that may also play a role in both the decisionmaking process and the implementation of that decision." *Id.*

To meet these goals, NEPA establishes "action-forcing" procedures that require all federal agencies to take a "hard look" at all the potential environmental impacts of their proposed actions and all reasonable alternatives to reduce such impacts. *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371, 374 (1989). Chief among these procedures is the requirement that all federal agencies prepare an environmental impact statement ("EIS") for actions that might have a significant environmental impact. 42 U.S.C. § 4332(C); *Louisiana v. Lee*, 758 F.2d 1081, 1084 (5th Cir. 1985) (agency action that "*may* cause a significant degradation of some human environmental factor" requires an environmental impact statement).

The EIS must identify the "purpose and need" of the proposed action. 40 C.F.R. §§ 1502.13, 1502.14. An EIS must also analyze the direct, indirect, and cumulative impacts of a proposed action. 42 U.S.C. § 4332(C); 40 C.F.R §§ 1502.16, 1508.7, 1508.8. Further, an EIS must examine a reasonable range of alternatives to the proposed agency action. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.14.

The Council on Environmental Quality has promulgated regulations that "tell federal agencies what they must do to comply with the procedures and achieve the goals of [NEPA]." 40 C.F.R. § 1500.1(a). These regulations are binding on all federal agencies. *Sierra Club v. Sigler*, 695 F.2d 957, 972 (5th Cir. 1983). The regulations instruct that in analyzing alternatives, an agency must "[r]igorously explore and objectively evaluate all reasonable alternatives," including a "no action" alternative. 40 C.F.R. §§ 1502.14(a), (d). The agency must "[d]evote substantial treatment to each alternative considered in detail . . . so that reviewers may evaluate their comparative merits." *Id*. § 1502.14(b). The purpose of this analysis is to "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public." *Id*. § 1502.14.

If multiple agencies have jurisdiction over a proposed action or group of related actions, a "lead" agency can take primary responsibility for the preparation of the EIS, and other "cooperating" agencies can collaborate in and rely upon that

analysis. 40 C.F.R. §§ 1501.5, 1501.6, 1506.3. Cooperating agencies have an independent duty to comply with NEPA. 42 U.S.C. § 4332; 46 Fed. Reg. 18,026, 18,035 (Mar. 23, 1981). Accordingly, NEPA regulations allow a cooperating agency to adopt an EIS prepared by a lead agency, but only if the cooperating agency independently determines that the EIS is legally adequate for the particular action at issue. 40 C.F.R § 1506.3; *Davis Mts. Trans-Pecos Heritage Ass'n v. Fed. Aviation Admin.*, 116 Fed. Appx. 3, 13 (5th Cir. 2004). Otherwise, the cooperating agency "must prepare a supplement to the EIS, replacing or adding any needed information, and must circulate the supplement as a draft for public and agency review and comment." 46 Fed. Reg. at 18,035.

At the "time of its decision" on a proposed action, "each agency shall prepare a concise public record of decision." 40 C.F.R. § 1505.2. The Record of Decision must "[s]tate what the decision was" and "[i]dentify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable." *Id*. §§ 1505.2(a), (b).

EPA has also promulgated regulations implementing NEPA. EPA's regulations require the agency to "[c]onsider the alternatives analyzed in an . . . EIS before rendering a decision on [an] action" and "[e]nsure that the decision on the action is to implement an alternative analyzed or is within the range of

alternatives analyzed in the . . . EIS." *Id.* §§ 6.200(e)(3), (4). The regulations expressly state that the issuance of discharge permits for new offshore oil and gas facilities in federal waters typically require the preparation of an EIS. *Id.* § 6.207(a)(1)(iv). The regulations further instruct that EPA must "[a]nalyze all reasonable alternatives," including a no-action alternative, "even when the proposed action is specifically required by legislation or court order." *Id.* § 6.207(d)(2).

As NEPA regulations explain:

> NEPA's purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

40 C.F.R. § 1500.1(c). Accordingly, an agency's NEPA analysis must be "prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *see also Robertson*, 490 U.S. at 350 (observing that while NEPA does not mandate particular results, "[NEPA's] procedures are almost certain to affect the agency's substantive decision").

B. The Clean Water Act and the Ocean Discharge Criteria

Congress enacted the Clean Water Act ("CWA") "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." 33 U.S.C.

§ 1251(a). The CWA seeks to not just reduce water pollution, but to *eliminate* it. *Id.* § 1251(a)(1); *Texas Oil & Gas Ass'n v. Envtl. Prot. Agency*, 161 F.3d 923, 927 (5th Cir. 1998).

To achieve this goal, the CWA prohibits the "discharge of any pollutant" from a point source — "any discernible, confined and discrete conveyance" — to navigable waters "except in compliance with law." 33 U.S.C. §§ 1311, 1362. Discharges of polluted water from offshore oil and gas exploration, development, and production activities are "point source" discharges subject to the CWA's general prohibition. *Texas Oil & Gas Ass'n*, 161 F.3d at 929.

The main way to achieve compliance with the CWA's general pollutant discharge prohibition is by obtaining an NPDES permit. 33 U.S.C §§ 1311(a), 1342. As the Fifth Circuit has explained, "NPDES permits may be either individual or general; that is, either site-specific or generally applicable to a whole category or subcategory of point sources." *Texas Oil & Gas Ass'n*, 161 F.3d at 929. A discharge may be allowed under a general NPDES permit where the point sources within a given geographical region all involve the same or similar types of operations, discharge the same types of wastes, and require the same or similar monitoring. *Id.*; 40 C.F.R. § 122.28. After a general permit has been issued, an entity that believes it is covered by the general permit submits a "notice of intent" to discharge pursuant to the general permit. 40 C.F.R. § 122.28(b)(2).

The waste fluid discharges from offshore oil and gas facilities (and all point sources) are commonly called "effluents." Every NPDES permit must establish "effluent limitations" for the pollutants being discharged to both restore and maintain the receiving water body. *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 102 (2004); 33 U.S.C. § 1342(a)(1). In particular, the CWA requires EPA to set increasingly stringent technology-based effluent limits that reflect the ability of available technologies to reduce and ultimately eliminate pollution discharges. 33 U.S.C. § 1311; *see also id.* § 1316(a)(1) (mandating "where practicable, a standard [for new point sources] permitting no discharge of pollutants"). All sources and all pollutants must be subject to technology-based effluent limits, unless more protective water quality-based effluent limits are required to avoid exceedances of water quality standards. 33 U.S.C. §§ 1311(b)(2)(A), (b)(1)(C), 1342(a)(2).

Additionally, to provide enhanced protections for marine waters, section 403 of the CWA prohibits discharges into the ocean, unless those discharges comply with the ocean discharge criteria. 33 U.S.C. § 1343. Congress directed EPA to publish regulations and guidelines for determining degradation of the "waters of the territorial sea, the contiguous zone, and oceans." *Id*. § 1343(c)(1).

Under the ocean discharge criteria, EPA cannot issue a permit authorizing a discharge into the ocean where the discharge would cause "unreasonable

degradation of the marine environment," 40 C.F.R. § 125.123, or where EPA lacks sufficient information on the impacts of a proposed discharge on the ocean environment. 33 U.S.C. § 1343(c)(2); *Am. Petroleum Inst. v. Envtl. Prot. Agency*, 787 F.2d 965, 981 (5th Cir. 1986).

EPA defines "unreasonable degradation" as:

> (1) Significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities;
>
> (2) Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or
>
> (3) Loss of esthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

40 C.F.R. § 125.121(e).

EPA's regulations articulate ten factors the agency must consider in determining whether a proposed discharge would result in "unreasonable degradation of the marine environment." *Id.* § 125.122(a). The factors include the "quantities, composition and potential for bioaccumulation or persistence of the pollutants to be discharged;" the potential effects on species listed under the Endangered Species Act; the "potential impacts on human health through direct and indirect pathways;" and "[m]arine water quality criteria," among others. *Id.* § 125.122(a)(1), (3), (6), (10).

In addition to effluent limitations, all NPDES permits must contain conditions requiring both monitoring and reporting of monitoring results. 33 U.S.C. § 1342(a)(2); 40 C.F.R. §§ 122.44(i)(1), (2). EPA's regulations specify that permits shall include conditions requiring monitoring "[t]o assure compliance with permit limitations." 40 C.F.R. § 122.44(i)(1). Specifically, a permit must include "requirements to monitor . . . each pollutant limited in the permit" and "the volume of effluent discharged from each outfall." *Id*. at § 122.44(i)(1)(i). Such conditions are necessary to verify compliance with effluent limitations and facilitate permit enforcement. *Nat. Res. Def. Council v. Envtl. Prot. Agency*, 808 F.3d 556, 583 (2nd Cir. 2015) ("*NRDC v. EPA*").

II. Factual Background

A. Offshore Oil and Gas Drilling in the Gulf of Mexico

The Gulf of Mexico is an incredibly productive, biologically diverse marine ecosystem that supports a wide array of marine life. *See, e.g.*, GMG0000027-34 (describing resources found in the Gulf of Mexico). The Gulf of Mexico is home to thousands of marine species, ranging from simple invertebrates such as slugs and sponges to complex and highly evolved fish and marine mammals. *Id*.

Many of the species that are found in the Gulf of Mexico are listed as threatened or endangered under the Endangered Species Act. For example, the Gulf is home to endangered sperm whales, five threatened and endangered sea

turtle species, five threatened coral species, and threatened Gulf sturgeon. GMG0000666-67, GMG0000715, GMG0000758-60. The Gulf of Mexico is also home to many species of marine mammals protected under the Marine Mammal Protection Act, including the Gulf of Mexico bryde's whale, killer whales, dwarf and pygmy sperm whales, several species of beaked whales, bottlenose dolphins, striped dolphins, Risso's dolphins, and melon-headed whales, among others. GMG0000674.

The biological diversity of the Gulf of Mexico represents an important contribution to the Gulf coast economy, including fisheries and tourism. Some of the most economically important commercial fisheries in the Gulf are white and brown shrimp, eastern oysters, blue crab, and tunas. GMG0000765. In total, 2014 saw over $1 billion worth of finfish and shellfish landings in the Gulf of Mexico. *Id*. And one study estimates that wildlife tourism along the Gulf coast supports over $19 billion in spending and generates over $5 billion in federal, state, and local taxes each year. GMG0000792.

The Gulf of Mexico is also home to the largest concentration of offshore oil and gas activities in the country. The federal government estimates that nearly 54,000 wells have been drilled in federal waters since 1950 and that there were more than 2,640 active production platforms in federal waters in 2013. GMG0000317.

New information reveals that these oil and gas operations are using well treatment and stimulation techniques such as fracking and acidizing. *E.g.*, GMG0003165. Fracking involves injecting a mixture of water, a proppant (typically sand or ceramic materials), and chemicals into a wellbore at high pressure to break open rock to improve the flow of hydrocarbon into the well and enhance oil and gas production. GMG0000179. Acidizing is a process in which hydrochloric acid and other acids are mixed with other chemicals and injected into a wellbore to dissolve oil bearing rock to enhance production of oil and gas. *Id.*

The federal government has authorized oil companies to frack hundreds of wells of the Gulf of Mexico in recent years, GMG0002566, and has stated that acidizing is a commonly used well treatment procedure in the Gulf. *E.g.*, GMG0000179. The use of well stimulation has changed in practice and frequency across the United States. GMG0002562-07 at 1040, GMG0002562-09 at 3.

B. The Dangerous Water Pollution from Offshore Drilling, Fracking, and Acidizing

Offshore oil and gas operations produce huge amounts of waste, including drilling fluids, drill cuttings, produced water,[2] and well treatment, completion, and

[2] Produced water is the brine brought back up from an underground reservoir along with produced oil and gas and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process. GMG0002075.

workover fluids,[3] among others. GMG0003148-51. For example, the federal government estimates that oil and gas operations in federal waters in the Gulf of Mexico generated more than 587 million barrels, or 24.6 billion gallons, of produced wastewater in a single year. GMG0000223-24. Of this, roughly 48.6 million barrels were used for enhanced recovery, 1.3 million barrels were reinjected into the seafloor, and more than 537 million barrels, or more than 22.5 billion gallons, were discharged into the Gulf. GMG0000223. The vast majority of these discharges occurred in waters only 0-60 meters deep. GMG0000224.

The wastes produced by offshore oil and gas activity contain dangerous pollutants, many of which are toxic to both people and wildlife. For example, chemicals in produced water include petroleum hydrocarbons, heavy metals, biocides, corrosion inhibitors, emulsion breakers, and coagulants, among others. GMG3773. "Among the toxic pollutants found in it are phenol, benzene, naphthalene, ethylbenzene, and toluene." *Texas Oil & Gas Ass'n*, 161 F.3d at 929. Metals in produced water include arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. GMG0002562-01 at 155. The chemicals in produced wastewater can have numerous harmful environment impacts. For example,

[3] Well treatment fluids are fluids used to restore or improve productivity by chemically or physically altering the reservoir after a well has been drilled. GMG0003150. Well completion fluids are salt solutions, brines, polymers, and various additives used to prevent damage to wellbore during operations which prepare the drilled well for production. *Id.* Well workover fluids are salt solutions, brines, polymers, or other specialty additives used in producing a well to allow for maintenance, repair, or abandonment procedures. *Id.*

studies show that produced water can cause liver damage, deformities, damage to reproductive capacity, and larval mortality in fish. GMG0002562-03 at 2-3.

Produced wastewater can also contain chemicals used in fracking and acidizing. There are critical data gaps regarding the environmental impacts of these well stimulation techniques. For example, a scientific report of chemicals used in well stimulations in California determined that toxicity data was lacking for 31 of the 48 chemicals used, that there is little information on the toxic interactions between chemicals in stimulation fluids, and very little data available on the chronic impacts of these chemicals in the marine environment. GMG0002562-05 at 95. Another study found many data gaps regarding the chemicals used in acidizing. GMG0002562-06 at 7. This is because many chemicals "have no toxicological or even basic chemical property information available." *Id.* Moreover, the high acidity of the chemicals "creates uncertainties as to how chemicals will transform." *Id*. And EPA itself admitted that it does not have sufficient data on the chemicals oil companies are using to frack and acidize wells. GMG0003165.

However, new information about the health and environmental effects of fracking pollution has emerged in recent years. What is now known about the chemicals used in well stimulation practices, and the waste fluids they generate, raises several significant concerns. Studies have found that more than 75% of the

chemicals used in oil and gas drilling and fracking can affect the skin, eyes, and other sensory organs, and the respiratory and gastrointestinal systems; roughly 40-50% could affect the nervous, immune, and cardiovascular systems and the kidneys; 37% could affect the endocrine system; and 25% could cause cancer and mutations. GMG0002562-07 at 1039. Recent studies have documented the potentially harmful effects that use of these chemicals in drilling operations can have. For example, one study found increased arsenic and heavy metals in groundwater near fracking sites in Texas, GMG0002562-08 at 2, while another found that birth defects are more common in babies born to mothers living near wells where fracking was frequently used. GMG0002562-09 at 2, 16.

Studies have also shown that more than 40% of the chemicals used in fracking can harm aquatic animals and other wildlife. GMG0002562-07 at 1046. For example, some of the chemicals used in fracking can break down into nonylphenol, a very toxic substance with a wide range of harmful effects that include the development of intersex fish and altered sex ratios at the population level. GMG0002562-10 at 490-96. Nonylphenol can also inhibit the growth, development, and survival of marine invertebrates, and has been shown to bioaccumulate in marine mammals. *Id.* at 493. And one recent study found that exposure to fracking wastewater may case adverse developmental and reproductive health outcomes in both humans and animals. GMG0002562-11 at 4458.

Additionally, recent studies using waste streams produced by fracking to examine their impact on aquatic animals found that the waste streams can have significant negative effects on rainbow trout, even when highly diluted. GMG0002562-12 at 940, 943-45. These toxic effects include significant tissue damage, impaired ability to eliminate toxins, and endocrine disruption that could affect reproduction. *Id.* A similar study analyzed the impacts of fracking wastewater on water fleas, and found exposure to these fluids caused a significant decline in reproduction and increased mortality. GMG0002562-13 at 1, 4. And a different study found acute toxicity of zebrafish embryos from fracking wastewater. GMG0002562-14 at 78, 83.

Another recent study found that oil companies use dozens of extremely hazardous chemicals to acidize wells. Specifically, the study found that almost 200 different chemicals have been used and that at least 28 of these substances are F-graded hazardous chemicals — carcinogens, mutagens, reproductive toxins, developmental toxins, endocrine disruptors or high acute toxicity chemicals. GMG0002562-06 at 10. For example, according to scientists, hydrofluoric acid, a commonly used chemical in acidizing, "is of great concern because of its very high acute mammalian toxicity and neurotoxicity." *Id.*

Each acidizing treatment can use as much as hundreds of thousands of pounds of some chemicals and create high toxic loads. *Id.* at 7, 10. Studies have

found that the waste fluid from acidizing can be highly acidic, with a pH of 0 to 3, *id.* at 13-14, which is upwards of 12,600,000% more acidic than seawater. *See* GMG000221 (pH of seawater). And another study found chemical concentrations in waste fluids from acidizing that would exceed acute or chronic toxicity values even after the typical dilution factor. GMG0002562-05 at 94. In addition to its direct environmental impacts, scientists have also expressed concerns that the types and quantity of the chemicals used in acidizing can have a corrosive effect on flow lines and other drilling equipment. GMG0002562-06 at 10.

C. The General Permit for Oil and Gas Operations in the Western Gulf of Mexico

Region 6 of EPA announced issuance of the final General Permit at issue in this case in the Federal Register on October 2, 2017. 82 Fed. Reg. 45,845 (Oct. 2, 2017). The permit became effective on October 1, 2017 and will expire on September 30, 2022. *Id.* The General Permit authorizes discharges from oil and gas facilities operating in federal waters in the Western and Central portions of the Gulf of Mexico (i.e., waters off the coasts of Texas and Louisiana). Roughly 95% of offshore drilling operations in federal waters in the Gulf of Mexico occur in this region. GMG0000214. The other five percent occurs in federal waters off the coasts of Mississippi, Alabama, and Florida, which are under the jurisdiction of Region 4 of EPA. *Id.*

1. Discharges Authorized by EPA Under the General Permit

The General Permit covers facilities engaged in oil and gas production, exploration, developmental drilling, facility installation, well completion, well treatment, well workover, and abandonment/decommissioning operations. GMG0002005.[4] The General Permit allows the discharge of drilling fluids, drill cuttings, produced water, and well treatment, workover, and completion fluids, among other wastes. *See, e.g.*, GMG0003149-51. The General Permit also allows the discharge of produced water discharges from oil and gas operations in Texas and Louisiana state waters sent to facilities in federal waters. GMG0002005, GMG0003148.

EPA issued the first general permit for these facilities in 1981 and has reissued it several times since then. GMG0003146. The current General Permit contains effluent limitations for some of the waste streams generated by these facilities based on the national effluent limitation guidelines for the offshore subcategory of the oil and gas point source category that EPA established in 1993 and modified in 2001. *Id*.

With the exception of oil and grease, the General Permit does not contain numerical effluent limitations for any chemicals found in produced water.

[4] The General Permit defines a "facility" as "a platform, rig, ship, and any surface/sub-surface fixed or mobile structure from where exploration, development, or production operations are performed." GMG0003148.

GMG0002020-21. Instead, the General Permit requires facilities that discharge less than 4,599 barrels per day of produced water to test the toxicity of their produced water once per calendar year. GMG0002021-22. Facilities that discharge 4,600 barrels per day or more of produced water are required to test the toxicity of their produced water once per quarter until it has been compliant with toxicity limits for four consecutive quarters. GMG0002021. At that point, the permit allows the facility to reduce its toxicity testing to once per calendar year. *Id*. The majority of facilities in the Gulf of Mexico are required to test produced water only once per year. GMG0003110-11.

The toxicity tests must be performed using a "whole effluent toxicity" or "WET" test. GMG0002021. The test involves exposing living aquatic organisms in a laboratory to the water sample and measuring biological responses as compared to a control sample. *See* 67 Fed. Reg. 69,952, 69,953 (Nov. 19, 2002) (describing test). To be compliant with the toxicity limit, the results of the test must meet a "No Observable Effect Concentration" on the organism. GMG0002021.

Fracking and acidizing chemicals are considered well treatment fluids. GMG0003165. For well treatment, well completion, and well workover fluids, the General Permit contains an effluent limitation for oil and gas and prohibits the discharge of priority pollutants except in trace amounts. GMG0002025.

Because EPA does not have sufficient data on the chemicals currently used in fracking, the General Permit requires facilities to conduct character assessments of well treatment, well completion, and well workover fluids. GMG0003165. These assessments must contain the volume of well fluids, the name, volume, and concentration of any additive, and the results of a toxicity test for well treatment fluids discharged separately from produced water. GMG0002025-26. However, as an alternative to this requirement, the General Permit allows facilities to participate in an industry study that would "provide a characterization of well treatment, completion, and workover fluids used in a representative number of wells" discharging these fluids. GMG0002026. The General Permit gives industry eighteen months to develop a plan for the study before it is incorporated into the permit. *Id*.

When well treatment, completion, or workover fluids are mixed and discharged with produced water, the General Permit considers the discharges to be produced water and the produced water provisions apply rather than the requirements for well treatment fluids. GMG0002025. The General Permit does not require toxicity tests to be performed in conjunction with the discharge of chemicals used in fracking or other well stimulation techniques. GMG0003157.

2. Public Comments on the Draft General Permit

EPA held a sixty-day public comment period on a draft of the General

Permit from May 11, 2017 to July 10, 2017. 82 Fed. Reg. 21,995 (May 11, 2017). Public comments submitted on the draft permit highlighted the dangerous pollutants present in the discharges from oil and gas facilities, and the ecological risks that discharging such pollutants into the marine environment can have. GMG0002562.

For example, comments described the substantial data gaps regarding the impacts of discharging chemicals used in offshore fracking and other well stimulations on the marine environment, and studies indicating that such discharges could cause substantial harm on marine resources. GMG0002566, GMG0002571-72. The comments urged EPA to adopt stricter effluent limitations, including a zero-discharge requirement for chemicals used in offshore fracking and other well stimulations. GMG0002576, GMG0002577, GMG0002585. EPA acknowledged that it lacked information regarding the chemicals used in offshore fracking and acidizing, GMG0003165, but permitted the discharges of waste streams from these procedures regardless.

Comments also urged the agency to prepare an EIS or environmental assessment under NEPA given the numerous significant impacts that could result from the discharges EPA proposed to authorize, and the need to analyze reasonable alternatives to such discharges. GMG0002579-86. EPA did not do so. Instead, three weeks prior to issuing the final permit, EPA signed a record of decision that

adopts an EIS prepared by the Bureau of Ocean Energy Management. GMG0003079. The Bureau's EIS analyzes the environmental impacts of another regulatory action — holding new oil and gas lease sales in the Gulf of Mexico from 2017 to 2022. GMG0000013-14. The Bureau's EIS does not consider any alternatives to the discharges allowed under the General Permit or the cumulative impacts of those discharges. GMG0000015-19.

Also just weeks prior to issuing the final permit, EPA prepared an ocean discharge criteria evaluation that purports to examine the impacts of the authorized discharges on the marine environment based on the ten ocean discharge criteria. GMG0003771. The evaluation largely copies from documents prepared in 1986, 1991, and 2001. *See* GMG0003771-92. The evaluation does not describe the number of facilities to be covered under the permit, quantify the volume of pollutants authorized under the permit, describe the composition of the discharges, or analyze the cumulative impacts of such discharges on the marine environment. *See id*. Nor does the evaluation analyze the impacts of discharges of well treatment fluids. *See* GMG0003781, GMG0003789-93.

In the final permit, EPA did not adopt several of the increased monitoring requirements it had proposed. For example, in the draft permit, EPA proposed to eliminate the provision that allowed facilities discharging 4,600 barrels per day or more to reduce the frequency of their produced water toxicity tests to one test per

year if the facility was in compliance with toxicity test limits for four quarters. GMG0002668. EPA stated that the Bureau of Safety and Environmental Enforcement, which conducts General Permit inspections on behalf of EPA, felt that the frequency reduction allowance made enforcement difficult and did not provide for representative samples because produced water discharges are continuous. *Id.* Accordingly, EPA proposed requiring all facilities to test produced water twice per year. *Id.* But EPA did not finalize this change at the request of industry. GMG0003156.

In the draft permit, EPA also proposed requiring all facilities to conduct a new toxicity test of produced water after the use of a well stimulation technique if the sample used for the prior test did not represent application of well treatment fluid. GMG0003157. But EPA did not finalize this requirement based on complaints from industry that such a requirement would be overly burdensome. *Id.* Despite acknowledging more monitoring was needed, EPA substantially relied on the monitoring requirements in the old permit in authorizing the new permit. GMG0003771.

SUMMARY OF THE ARGUMENT

The General Permit authorizes the discharge of massive quantities of polluted wastewater into the Gulf of Mexico, including waste streams generated by offshore fracking and other oil and gas well stimulation techniques. Available

information indicates that these discharges may have myriad negative impacts on Gulf water quality, wildlife, and other Gulf resources. Accordingly, in issuing the General Permit, EPA was required to: (1) take a hard look at the environmental impacts of the discharges authorized under the permit as required by NEPA; (2) ensure that the discharges will not cause an unreasonable degradation of the marine environment as required by the CWA; and (3) include monitoring and reporting requirements that enable permittees, EPA, and the public to ensure compliance with permit conditions, as required by the CWA. EPA violated each of these important legal duties in issuing the General Permit.

First, EPA issued the General Permit without analyzing reasonable alternatives to the massive quantities of dangerous waste fluids it allowed or the cumulative impacts of those discharge on the marine environment. In fact, despite acknowledging that there are critical information gaps regarding the environmental impacts of discharging chemicals used in fracking and acidizing into the ocean, that several chemicals present in the authorized discharges can have harmful impacts on water quality and marine life, and the existence of several technologically available alternatives, EPA did not examine *any* alternatives to the discharges allowed under the permit. Nor did EPA attempt to analyze the combined impacts from the billions of gallons of wastewater it was allowing to be discharged from thousands of different facilities. Instead, EPA adopted an EIS that

only considers the impacts of pollution from an individual discharge point and wholly ignores cumulative impacts.

Second, EPA's ocean discharge criteria evaluation is unreasonable. EPA has repeatedly acknowledged that it does not know what types of chemicals oil companies are using to frack and acidize wells, or the effects that discharging the chemicals used in these wells stimulation techniques might have on the marine environment. Nevertheless, EPA's evaluation concludes that the discharges authorized under the permit would not degrade the marine environment. The hastily prepared evaluation relies on decades-old information while ignoring several recent studies demonstrating that the discharge of chemicals used in fracking and acidizing can have numerous significant negative impacts. The evaluation also fails to analyze the quantity and composition of the discharges authorized under the General Permit and ignores substantial, relevant data gaps.

Third, EPA failed to include adequate monitoring and reporting requirements for fracking and acidizing waste fluids in the General Permit. At the draft permit stage, EPA proposed increased monitoring requirements for the discharge of fracking and acidizing waste fluids because of the significant information gaps regarding the impacts of such discharges on the marine environment. But, following complaints from industry, EPA declined to include these monitoring requirements in the final permit or explain its change in position.

Such failures render several permit terms effectively unenforceable and place the Gulf environment at further risk of toxic discharges, contrary to the clear requirements of the CWA.

Because of these errors, Petitioners respectfully request that the Court remand the General Permit to Region 6 of EPA for further proceedings.[5]

ARGUMENT

I. Standard of Review

The Administrative Procedure Act ("APA") provides the standard of review for challenges to EPA's issuance of a permit under section 402 of the CWA. 33 U.S.C. § 1342. *Am. Petroleum Inst. v. Envtl. Prot. Agency*, 661 F.2d 340, 348-49 (5th Cir. 1981). Under the APA, the Court determines whether EPA's decision is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). The same standard of review applies to claims alleging noncompliance with NEPA. *O'Reilly v. U.S. Army Corps of Eng'rs*, 477 F.3d 225, 230 (5th Cir. 2007).

Although the APA standard of review is deferential, "it does not turn judicial review into a rubber stamp." *Id.* Rather, the Court's review "is to be searching and careful" and "must be based on something more than trust and faith in

[5] Petitioners are mindful of the rule of law that vacatur is the normal remedy under the Administrative Procedure Act. *Fed. Communications Comm'n v. Nextwave Personal Commc'ns*, 537 U.S. 293, 300 (2003). Petitioners, however, request the more limited remedy of remand in this case in order to prevent against harm to the environment that might result from vacatur. *Idaho Farm Bureau v. Babbitt*, 58 F.3d 1392, 1405–06 (9th Cir. 1995).

EPA[].”*Am. Petroleum Inst.*, 661 F.2d at 348-49 (citations omitted). An agency’s decision is arbitrary and capricious:

> if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (“*State Farm*”). The Court “may not supply a reasoned basis for the agency’s action that the agency itself has not given.” *Id.* (citation omitted). Notably, the Court owes no deference to EPA in its interpretation of NEPA. *Grand Canyon Trust v. Fed. Aviation Admin.*, 290 F.3d 339, 342 (D.C. Cir. 2002).

II. EPA Violated the National Environmental Policy Act by Issuing the General Permit Without Taking a Hard Look at Reasonable Alternatives or the Impacts of the Discharges on Gulf Resources

EPA failed to comply with NEPA in issuing the General Permit. EPA’s decision to allow thousands of oil and gas facilities to discharge massive quantities of chemical-laden waste fluids into the Gulf of Mexico has several potentially harmful impacts. *Supra* pp. 13-18. Accordingly, EPA was required to comply with NEPA prior to issuing the General Permit. Indeed, in issuing the final General Permit, EPA agreed with comments that issuance of the General Permit constituted a major federal action requiring compliance with NEPA. GMG0003144.

But EPA did not complete an EIS or environmental assessment analyzing the impacts of the General Permit on the biologically and economically important resources in the Gulf of Mexico. Instead, EPA adopted the EIS of another agency that purports to analyze the impacts of a different agency action.

But that document wholly fails to take a hard look at the environmental impacts of the specific action proposed and taken by EPA — issuance of the General Permit. Specifically, the document fails to examine any alternatives to the discharges allowed under the General Permit, including a "no action" alternative, and fails to properly examine the cumulative impacts of such discharges on the Gulf environment. *See Sigler*, 695 F.2d at 965 (test for determining the adequacy of an EIS).

EPA's Record of Decision is arbitrary and capricious. The agency's reliance on and adoption of the Bureau's EIS and its attendant failure to examine a reasonable range of alternatives to, or the impacts of, its separate, distinct action renders EPA's issuance of the General Permit unlawful.

A. EPA Failed to Examine a Reasonable Range of Alternatives to Discharges Allowed Under the General Permit

In issuing the General Permit, EPA failed to examine any alternative that would reduce the volume or types of dangerous pollution discharged into the Gulf of Mexico, including the legally mandated "no action" alternative. EPA's failure is particularly glaring here, where the agency acknowledged the potentially

harmful impacts of the discharges it was authorizing and where the primary goal of the statute under which EPA issued the permit — the CWA — is the reduction and elimination of water pollution. *See* 33 U.S.C. § 1251(a)(1). EPA's failure to examine a reasonable range of alternatives renders issuance of the General Permit unlawful. *See Davis Mts. Trans-Pecos Heritage Ass'n*, 116 Fed. Appx. at 8.

1. The Alternatives Analysis Is the Heart of an EIS

NEPA requires all federal agencies, including EPA, to "rigorously explore and objectively evaluate all reasonable alternatives" to their proposed actions. 40 C.F.R. § 1502.14. The alternatives analysis is "'the heart of the environmental impact statement.'" *City of Shoreacres v. Waterworth*, 420 F.3d 440, 450 (5th Cir. 2005) (citing 40 C.F.R. § 1502.14).

The alternatives analysis is critical because it ensures "that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. Corps of Eng'rs of U.S. Army*, 492 F.2d 1123, 1135 (5th Cir. 1974); *see also Calvert Cliffs' Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971) (the alternatives requirement "seeks to ensure that each agency decision maker has before him and takes into proper account all

possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact").

As the Fifth Circuit has explained, "the importance of the alternatives analysis is reflected in [the court's] three-part test for evaluating an EIS, which requires, *inter alia*, determining 'whether the agency in good faith objectively has taken a hard look at the environmental consequences of a proposed action and alternatives.'" *City of Shoreacres*, 420 F.3d at 450 (citations omitted). The test also considers "whether the EIS explanation of alternatives is sufficient to permit a reasoned choice among different courses of action." *Sigler*, 695 F.2d at 965.

2. EPA Failed to Consider Reasonable Alternatives

In issuing the General Permit, EPA did not "in good faith objectively" take a hard look at alternatives or provide for "a reasoned choice among different courses of action." *Id*. In fact, EPA failed to examine *any* alternatives to the activities authorized under the permit. Rather, EPA issued a five-page record of decision adopting an EIS prepared by the Bureau of Ocean Energy Management. *See* GMG0003079 (EPA's record of decision).

The Bureau prepared its EIS to evaluate the potential environmental impacts of its proposal to hold ten oil and gas leases in the Gulf of Mexico from 2017 through 2022 under the Outer Continental Shelf Lands Act, 43 U.S.C. §§ 1331, *et seq*. GMG0000082. Accordingly, the alternatives examined in the Bureau's EIS

involve what waters within the Gulf of Mexico to include in a future lease sale. Specifically, the Bureau's EIS analyzed five alternatives:

> (a) holding a region-wide oil and gas lease that would offer all available unleased blocks in the Gulf (the proposed action);
> (b) holding an oil and gas lease that would offer all available unleased blocks within the Central Planning Area and Eastern Planning Area only;
> (c) holding an oil and gas lease that would offer all available unleased blocks within the Western Planning Area only;
> (d) holding an oil and gas lease that would offer all available blocks under either Alternatives A, B, or C, but exclude certain portions; and
> (e) the cancellation of the proposed Gulf of Mexico region-wide lease sale (the no-action alternative).

GMG0000015-19, GMG0003080-81.[6] None of these options analyze alternatives to the particular action taken by EPA — authorizing the discharge of pollution from new and existing oil and gas point sources in the Western Gulf of Mexico. GMG0003080. EPA's Record of Decision does not do so either, but merely restates the Bureau's five alternatives. GMG0003080-81.[7]

In adopting only these alternatives, EPA failed to put forth any comparison of the benefits and environmental costs of various alternatives for further reducing water pollution from offshore oil and gas operations, which is how NEPA is

[6] The Bureau and EPA divide the Gulf of Mexico into different areas for management purposes. The General Permit at issue in this case covers all of what the Bureau considers the Western Planning Area and all of the Central Planning Area, except for a small portion of waters off eastern Mississippi and Alabama under the jurisdiction of Region 4 of EPA. GMG0000214-15.

[7] In contrast, Region 4 of EPA prepared an environmental assessment to analyze the impacts of, and alternatives to, its General Permit for offshore oil and gas facilities in the Eastern Gulf of Mexico. *E.g*, GMG0002562-15 at 1 to 2, 1-1, 2-16 to 2-17.

supposed to facilitate environmentally sound decisionmaking. *See, e.g.*, *Union Neighbors United, Inc. v. Jewell*, 831 F.3d 564, 577 (D.C. Cir. 2016) (explaining that comparing alternatives to a proposed project "'inform[s] both the public and the decisionmaker'[] by 'sharply defining the issues and providing a clear basis for choice among options'") (quoting *Citizens Against Burlington v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991) and 40 C.F.R. § 1502.14). Indeed, with respect to the impacts of discharges from offshore oil and gas drilling activities on marine resources, there was *no* basis — much less a "clear" one — for EPA's choice among options because EPA did not examine any options at all.

For example, EPA failed to examine a no action alternative. The "no action alternative" assumes that the proposed action "does not go forward." *City of Shoreacres*, 420 F.3d at 450 (citing 40 C.F.R. § 1502.14). This alternative is mandated to "provide[] a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives." 46 Fed. Reg. at 18,027. Here, EPA's proposed action was issuing the General Permit. Accordingly, NEPA and EPA's own regulations required EPA to examine an alternative that involved *not* issuing the General Permit. 40 C.F.R. § 1502.14(a), (d); 40 C.F.R. § 6.207(d)(2). Presumably, in the absence the General Permit, oil and gas facilities would modify their activities to avoid violating the CWA. EPA was required to evaluate the environmental impacts of that alternative.

But EPA failed to do so. Instead, EPA simply adopted the Bureau's no action Alternative E: cancellation of future oil and gas lease sales. GMG0003081. By its terms, this alternative does not apply to oil and gas activities, including water pollution, on the 16 million acres *already leased* at the time of the EIS,[8] let alone constitute a rigorous examination of the impacts of not issuing the General Permit to new and existing dischargers within the leased areas. EPA's failure to examine a no action alternative to issuing the General Permit renders its decision unlawful. *See, e.g.*, *Conservation Northwest v. Sherman*, 715 F.3d 1181, 1188 (9th Cir. 2013) ("[a]nalysis of the 'no-action alternative' is at the heart of the NEPA process; thus, failure to provide a valid one casts a shadow over the process as a whole"); *Conserv. Council for Hawaii v. Nat'l Marine Fisheries Serv.*, 97 F. Supp. 3d 1210, 1236 (D. Haw. 2015) (neglecting to consider what would be a true "no action" alternative violates NEPA).

Additionally, EPA failed to examine any alternative that would further limit the quantity or types of pollution that EPA permitted oil and gas facilities to discharge into the Gulf of Mexico. For example, EPA failed to consider an alternative that would prohibit the discharge of waste streams containing chemicals used in offshore fracking and acidizing, despite other permit conditions that prohibit the discharge of particular types of waste and therefore indicate that such

[8] Bureau of Ocean Energy Management, Combined Leasing Report (2017) at 3, https://www.boem.gov/2017-Combined-Annual-Lease-Statistic-Archive/.

requirement would be technologically feasible. *See, e.g.*, GMG0002024 (General Permit prohibition on discharge of produced sand); 61 Fed. Reg. 66,086, 66,088 (Dec. 16, 1996) (establishing zero-discharge requirement for drilling cuttings and fluids in coastal waters).

EPA also failed to consider an alternative that would limit the total quantity of waste a facility could discharge, such as a limit on the total volume of produced water. EPA failed to examine this alternative despite recognizing that produced water discharges could negatively impact marine life when discharged at high rates, GMG0003162-63, GMG0003137, and despite this limit being present in other CWA permits for offshore oil and gas facilities. GMG0002562-04 at 9. In fact, a previous iteration of the General Permit contained a limit on the total quantity of produced water allowed to be discharged, indicating that such a requirement is feasible. *See* GMG0003147 (stating that EPA removed the "maximum discharge rate limit for produced water" from the General Permit).

Had EPA examined these alternatives, it could have evaluated the environmental benefits of adopting these effluent limits in light of the data gaps regarding the impacts of the discharges of chemicals used in fracking and acidizing on the marine environment and available information indicating that discharges of such waste fluids could further negative impacts to the marine environment. *E.g.*,

GMG0002562-07 at 1046, GMG0002562-06 at 10, GMG0002562-12 at 940, 943-45, GMG0002562-13 at 1, 4, GMG0002562-14 at 78, 83. But EPA did not do so.

Courts regularly reject a NEPA analysis where, as here, the agency failed to consider alternatives that would reduce the scope of the permitted activity. For example, in *Union Neighbors United*, the D.C. Circuit held that the Fish and Wildlife Service failed to consider a reasonable range of alternatives when its EIS on a permit authorizing a wind farm to incidentally kill or harm (i.e., "take") endangered bats failed to examine an alternative that could potentially take fewer bats than the preferred alternative. 831 F.3d at 577; *see also Native Fish Soc'y v. Nat'l Marine Fisheries Serv.*, 992 F. Supp. 2d 1095, 1110 (D. Or. 2014) ("[g]iven the obvious difference between the release of approximately 1,000,000 smolts and zero smolts, it is not clear why it would not be meaningful to analyze a number somewhere in the middle . . ."); *N.M. ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 710-11 (10th Cir. 2009) (holding an agency's alternatives analysis improper where it failed to examine an alternative that would have reduced the amount of oil and gas development allowed under a land management plan).

EPA's failure to examine alternatives that would limit the quantity or types of discharges authorized under the permit is particularly troubling here given that the overall purpose of the CWA, the statute under which EPA issued the General Permit, is to reduce and eliminate water pollution. 33 U.S.C. § 1251(a); *see also*

Westlands Water Dist. v. U.S. Dept. of the Interior, 376 F.3d 853, 866 (9th Cir. 2004) ("[w]here an action is taken pursuant to a specific statute, the statutory objectives . . . serve as a guide by which to determine reasonableness"); *Citizens Against Burlington*, 938 F.2d at 196 ("an agency should always consider the views of Congress, expressed, to the extent that the agency can determine them, in the agency's statutory authorization to act, as well as in other congressional directives"). To achieve this goal, the CWA requires EPA to establish increasingly stringent, technology-based effluent limits in discharge permits, which are designed to spur industry to adopt new technologies for reducing, and ultimately eliminating, water pollution. 33 U.S.C. § 1311. EPA's failure to consider any alternative that would reduce the amount of water pollution allowed under the General Permit violates NEPA.

B. EPA Failed to Take a Hard Look at the Impacts of the Discharges Allowed Under the General Permit

EPA failed to properly disclose or analyze the direct, indirect, or cumulative impacts of the discharges authorized under the General Permit. As this Court has explained, "it is vitally important that the [EIS] relied on by the agency fully and accurately disclose the environmental, economic, and technical costs associated with the project." *Sigler*, 695 F.2d. at 978. Thus, EPA's issuance of the General Permit was unlawful.

1. NEPA Mandates that EPA Consider the Direct, Indirect, and Cumulative Impacts of a Proposed Action

NEPA requires that EPA fully consider all direct, indirect, and cumulative environmental impacts of a proposed action. 40 C.F.R. §§ 1502.16, 1508.8, 1508.25(c). Impacts that must be analyzed include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." *Id.* § 1508.8. Direct effects are caused by the action and occur at the same time and place as the proposed project. *Id.* § 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.* § 1508.8(b). Cumulative impacts are impacts that "result[] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency . . . undertakes such other actions." *Id.* § 1508.7. Importantly, cumulative impacts "can result from individually minor but collectively significant actions taking place over a period of time." *Id.*

A meaningful consideration of cumulative impacts requires analysis of: (1) the area in which effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other

actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate. *Fritiofson v. Alexander*, 772 F.2d 1225, 1245 (5th Cir. 1985), abrogated on other grounds by *Sabine River Auth. v. U.S. Dep't of the Interior*, 951 F.2d 669 (5th Cir. 1992). An analysis that "merely recites the potential cumulative effects of the project . . . but is supported by no real analysis or data" is invalid. *O'Reilly*, 477 F.3d at 235.

2. The EIS's Analysis of Discharges Authorized by EPA Is Inadequate

EPA failed to take a hard look at the impacts of the discharges authorized under the General Permit. Specifically, while the EIS admits that offshore oil and gas operations discharge a wide variety of chemicals, including highly toxic pollution, into the Gulf of Mexico, the EIS does not disclose or analyze the combined impacts of all the various discharges authorized under the General Permit.

Instead, the EIS compartmentalizes the discharges, only examining impacts waste fluid by waste fluid, discharge point by discharge point. The EIS does not quantify or describe the total amount of discharges authorized by the General Permit or the contaminants present in such discharges. Nor does the EIS disclose or analyze the cumulative effects of permitting thousands of facilities to discharge these contaminants into the Western Gulf of Mexico. Such failures are improper.

See, e.g., *Fritiofson*, 772 F.2d at 1244-45 (failure to examine cumulative impacts in NEPA analysis is unlawful).

For example, in its discussion of impacts on water quality, the EIS admits that studies on the impacts of produced water in coastal areas show contaminated sediments in areas up to 1,000 meters from a produced water discharge point and that produced water discharges will likely have moderate impacts on water quality within this area. GMG0000468. But the EIS does not describe what those impacts will be or analyze the impacts of the discharge of drilling muds, well treatment fluids, or any other wastes acting in combination with produced water discharges within this area. This is a problematic omission because each individual waste stream can have harmful impacts on water quality. *See*, *e.g.*, GMG0003789, GMG0003791 (discharge of drilling muds exceeds human health criterion for arsenic by a factor of 84 and 234 at edge of mixing zone and discharge of produced water exceeds human health criterion for arsenic by a factor of 80 at edge of mixing zone); GMG0002562-05 at 95 (scientific report noting potentially toxic interactions between chemicals in complex mixtures such as fracking fluids).

Further, in purporting to analyze the cumulative impacts of the discharge of produced water, the EIS states that its analysis only considers the potential effects within 1,000 meters from each waste discharge point because this is the maximum distance of known produced water impacts. GMG0000471. This piecemeal

approach effectively divides up the cumulative impacts analysis of waste discharges into a series of individual 1,000 meter circles. But EPA's General Permit does not authorize discharges from just one facility — it authorizes discharges from all new and existing facilities operating in the Western Gulf of Mexico, and the discharge of produced water from facilities operating in Texas and Louisiana state waters. GMG0002004, GMG0002005. The flawed piecemeal analysis ignores the cumulative effects of the combined discharges on the environment.

While EPA may consider the impacts of the discharges from an individual facility to be minor, that does not absolve the agency from its duty under NEPA to consider the combined impacts of all the discharges authorized under the General Permit on water quality or marine life. As one court has explained:

> the addition of a small amount of [pollution] to a [waterway] may have only a limited impact on [fish] survival, or perhaps no impact at all. But the addition of a small amount here, a small amount there, and still more at another point could add up to some-thing with a much greater impact, until there comes a point where even a marginal increase will mean that *no* [fish] survive.

Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt., 387 F.3d 989, 994 (9th Cir. 2004).

Yet the EIS does not consider the impacts of the combined discharges on water quality, fish, or other marine life. That is particularly problematic here, where available information indicates that produced water discharges, including

waste fluids from fracking and acidizing, can have substantial negative impacts on fish, GMG0002562-03 at 2-3, GMG0002562-02 at 1, GMG0002562-12 at 940, 943-45, GMG0002562-13 at 1, 4, GMG0002562-14 at 78, 83, and EPA itself acknowledged that discharges in areas with a high concentration of facilities could potentially impact finfish and shellfish populations. GMG0003781.

Likewise, splitting up the impacts analysis into individual areas also ignores potential impacts on species that migrate through those areas and are threatened by marine pollution, such as large fish, sea turtles and marine mammals, and thus could be repeatedly exposed to contaminated discharges at multiple locations. *See, e.g.*, GMG0000721, GMG0000724 (EIS noting that Kemp's ridley and loggerhead sea turtles are threatened by marine pollution); GMG0000691 (EIS noting that marine mammals are threatened by accumulation of heavy metals in tissue); GMG0002562-12 at 940, 943-45 (harmful effects to fish from fracking fluids).

Courts have found the failure to consider cumulative impacts to migratory species in similar situations unlawful. For example, in *Nat. Res. Def. Council v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988), the D.C. Circuit held an EIS on an offshore oil and gas leasing plan inadequate where it only evaluated impacts to whales and other migratory species in each individual planning region and failed to evaluate the impacts to these species exposed to oil and gas activity in multiple regions. *Id.* at 298-300; *see also Utahns v. U.S. Dep't of Transportation*, 305 F.3d 1152, 1180

(10th Cir. 2002) (EIS inadequate where it only evaluated impacts within 1,000 feet of proposed project because it limited analysis to smaller, less mobile species and ignored impacts to migratory species).

The closest the EIS comes to analyzing the combined effects of the discharges authorized under the General Permit is a table that lists the total amount of produced water discharged in the Gulf of Mexico from 2000-2015. GMG000224. But mere lists or tables are insufficient to constitute the hard look required by NEPA. For example, "[a] calculation of the total number of acres to be harvested in [a] watershed is a necessary component of a cumulative effects analysis, but it is not a sufficient description of the actual environmental effects that can be expected from logging those acres." *Klamath-Siskiyou*, 387 F.3d at 995. Similarly, a tally of the total road construction anticipated in [an area] is definitely a good start to an analysis [but] it is not a description of *actual* environmental effects." *Id*.

The same is true for the various discharges authorized by the General Permit and the contaminants present in such discharges. While tallying the total amount of produced water discharged in a given year is a necessary start to an analysis, it is no analysis in itself. Rather, the analysis must explain "how [] individual impacts might combine or synergistically interact with each other to affect the [] environment." *Klamath-Siskiyou*, 387 F.3d at 997; *see also Fritiofson*, 772 F.2d at

1245. In other words, the analysis must identify and explain how the combination of all produced water discharges, along with the combined effects from the discharge of drilling muds, well treatment fluids, and the numerous other wastes discharged under the General Permit from the thousands of facilities in the Gulf of Mexico is expected to affect the environment. But the EIS does not do so, rendering its impacts analysis inadequate.

III. EPA's Ocean Discharge Criteria Evaluation Is Arbitrary and Capricious

EPA's ocean discharge criteria evaluation for the General Permit is legally inadequate. The CWA requires EPA to ensure that any permit for discharges into the ocean comply with the ocean discharge criteria. 33 U.S.C. § 1343(a). EPA's regulations implementing this provision require the agency to consider ten factors in evaluating the impacts of an ocean discharge. 40 C.F.R. § 125.122(a). These factors include the quantities and composition of the pollutants to be discharged, the composition and vulnerability of the species to be exposed to the pollutants, and the potential impacts on human health through direct and indirect pathways, among others. *Id.* §§ 125.122(a)(1), (3), (6).

If EPA determines based on the available information that the discharge will not meet the criteria, EPA cannot issue the permit. *Id.* § 125.123(b). Additionally, the CWA expressly prohibits EPA from issuing such a permit "where insufficient information exists on any proposed discharge to make a reasonable judgment"

regarding the effects of the discharge. 33 U.S.C. § 1343(c)(2); *Am. Petroleum Inst.*, 787 F.2d at 981.

Here, EPA's ocean discharge criteria evaluation fails to examine relevant factors. Specifically, EPA's evaluation fails to examine the total quantity or composition of discharges authorized under the General Permit, and fails to consider the substantial data gaps and available information regarding the impacts of well stimulation waste fluids on the marine environment. EPA's evaluation is therefore improper. *See Davis Mts. Trans-Pecos Heritage Ass'n*, 116 Fed. Appx. at 8 (citing *State Farm*, 463 U.S. at 43).

A. The Evaluation Fails to Adequately Consider the Quantities and Compositions of Pollutants to Be Discharged

EPA's evaluation fails to properly consider the quantity of pollutants to be discharged under the General Permit. In its ocean discharge criteria evaluation, EPA must consider, "[t]he *quantities* [and] *compositions* . . . of the pollutants to be discharged." 40 C.F.R. § 125.122(a)(1) (emphasis added). Yet nowhere in its evaluation did EPA quantify the total amount of pollutants to be discharged under the General Permit or the composition of those discharges. In fact, the only waste streams EPA even evaluated were drilling fluids and produced water discharges; EPA's evaluation did not consider the discharge of well treatment fluids or other wastes. *See generally* GMG0003771-93; *see also* GMG0003781 (noting EPA only considered impacts of discharge of drilling fluids, cuttings, and produced water).

But the total quantity of the discharges allowed under the General Permit, and the contaminants present in these discharges, are clearly relevant to a proper evaluation of the effects of those discharges on the marine environment. *See Alaska Eskimo Whaling Comm'n v. U.S. Envtl. Prot. Agency*, 791 F.3d 1088, 1091 (9th Cir. 2015) (remanding permit to EPA to consider impact of the discharge of non-contact cooling water "alone or *in combination with other authorized discharges*") (emphasis added). That is why EPA, in issuing other permits to discharge into the ocean, routinely quantifies the estimated pollutant concentration of various discharges in its ocean discharge criteria evaluations. *See* GMG0002562-15 at 3-21 to 3-23, 3-27, 3-33 (ocean discharge criteria evaluation prepared by Region 4 of EPA in issuing proposed permit for Eastern Gulf describing and quantifying concentration of chemicals in drilling fluids, produced water, and fluids from acidizing well treatment).

Indeed, EPA cannot dispute that the discharges it did not consider in its evaluation "may have toxic effects" and that "further consideration may need to be given to these discharges in shallow areas or low energy areas or where there is a high concentration of facilities." GMG0003781. EPA's evaluation is arbitrary and capricious.

B. EPA Failed to Properly Consider the Impacts from Fracking and Acidizing Waste Fluid Discharges in its Ocean Discharge Criteria Evaluation

EPA's ocean discharge criteria evaluation fails to adequately consider the impacts of the discharge of fracking and acidizing waste fluids. In issuing the General Permit, EPA acknowledged that oil companies are using offshore fracking and acidizing to increase production and access previously inaccessible oil and gas resources. *E.g.*, GMG0003165. EPA also acknowledged that the General Permit allows facilities to discharge fracking and acidizing waste fluid into the Gulf. *Id.* Yet EPA's ocean discharge criteria evaluation is silent on fracking and acidizing pollution. It ignores the substantial data gaps about the types of chemicals used in fracking and acidizing and the impacts of these discharges on the marine environment. EPA's evaluation also omits available information indicating that the discharge of fracking and acidizing waste fluids can have negative impacts on the marine environment. EPA's failure to consider this relevant information in its evaluation is unlawful. *See State Farm*, 463 U.S. at 43.

Record evidence indicates that the impacts of discharging fracking and acidizing waste fluids on the marine environment are highly uncertain. EPA itself has repeatedly acknowledged the lack of information regarding fracking and acidizing waste fluids. For example, EPA acknowledged that it lacks basic information regarding fracking and acidizing, including the chemicals used in such

practices. GMG0002676. And under prior iterations of the General Permit, EPA's record on fracking pollution and its impacts was blank. In response to a 2016 request under the Freedom of Information Act seeking records mentioning, describing, or analyzing the marine impacts of chemicals used in offshore fracking in the Gulf of Mexico, Region 6 of EPA responded that it did not locate any such records. GMG0002562-01 at 1.

Additionally, an independent scientific review of offshore well stimulation by the California Council on Science and Technology, which attempted to evaluate the effects of well stimulation chemicals on marine ecotoxicity based on public disclosure reports required by state law, found significant data gaps on basic questions regarding the impacts of discharging well stimulation fluids into the marine environment. GMG0002562-05 at 94.

The study found that of the 48 chemicals used in well stimulation treatments, there was no toxicity data for 31 of the 48 chemicals used. *Id.* at 95. The study also noted that little information on the toxic interactions between chemicals in stimulation fluids existed and that there was very little data available on the chronic impacts of these chemicals in the marine environment. *Id.* It concluded that this lack of information "represent[s] critical data gaps in the analysis of potential impacts of offshore drilling to sensitive marine species." *Id.* Another study found data gaps regarding the toxicity and basic chemical property

information of the chemicals used in acidizing and noted that the high acidity of the chemicals "creates uncertainties as to how chemicals will transform." GMG0002562-06 at 7.

The CWA specifically instructs that in situations where EPA does not have sufficient information on a proposed discharge to make a reasonable determination about the impacts of such discharges on the environment, EPA cannot issue the permit. 33 U.S.C. § 1343(c)(2); *Am. Petroleum Inst.*, 787 F.2d at 981. But EPA's evaluation failed to acknowledge the lack of information regarding fracking and acidizing waste fluid discharges and failed to evaluate the ocean discharge criteria in light of that lack of information. Such failures are improper.

EPA also failed to consider available information suggesting that the discharge of such wastes could have substantial negative effects. Several recent studies indicate that chemicals used in fracking are harmful to aquatic animals, GMG0002562-07 at 1046, and that the wastewater generating by well stimulation may have detrimental impacts when discharged.

For example, recent studies using wastewater generated by fracking to examine their impact on aquatic animals found that such wastewater can cause endocrine disruption in trout even when highly diluted, GMG0002562-12 at 940, 943-45, decreased reproduction and increased mortality in water fleas, GMG0002562-13 at 1, 4, and acute toxicity in zebrafish. GMG0002562-14 at 78,

83. And other studies found that waste fluids from acidizing are highly acidic and contain incredibly harmful chemicals, GMG0002562-06 at 10, 13-14, and would exceed acute or chronic toxicity values even after the typical dilution factor. GMG0002562-05 at 94.

But EPA's evaluation failed to consider the potentially harmful impacts of fracking and acidizing waste fluid discharges in light of these studies and other available information. Without considering the impacts of these discharges, EPA cannot properly determine the potential for the pollutants to bioaccumulate, the potential effects of the discharges on species listed under the Endangered Species Act, the "potential impacts on human health through direct and indirect pathways" from the authorized discharges, the impacts of the discharges on "[m]arine water quality criteria," or any of the other relevant factors. 40 C.F.R. §§ 125.122(a)(1), (3), (6), (10). EPA's ocean discharge criteria evaluation is therefore arbitrary and capricious, rendering the General Permit unlawful.

IV. EPA Failed to Establish Valid and Adequate Monitoring Requirements in the General Permit

The monitoring requirements in the General Permit are legally defective. Monitoring is central to the CWA's permitting framework that depends on reporting for oversight for compliance and enforcement of effluent limits. *NRDC v. EPA*, 808 F.3d at 565. These components are necessary to achieve the Act's goals of reducing and eliminating water pollution. 33 U.S.C. § 1251(a)(1);

Waterkeeper All., Inc. v. U.S. Envt'l Protection Agency, No. 03-4470, 2005 U.S. App. LEXIS 6533, at *4 (2nd Cir. 2005). But the General Permit lacks monitoring requirements for fracking and acidizing wastewater toxicity. Such failures violate the CWA's mandates that general permits include monitoring sufficient to ensure compliance with effluent limits. 33 U.S.C. § 1342(a)(2); 40 C.F.R. §§ 122.44(i)(1)-(2), 122.48(b).

In the final permit, EPA deleted the following requirement from the proposed permit that would have mandated monitoring fracking wastewater discharges for toxicity: "a 7-day toxicity test shall be conducted for produced water commingled with well treatment, completion, or workover fluids for monitoring and reporting purposes." GMG0001884 (proposed permit), *cf.* GMG0002025 (final permit). EPA also removed a requirement for "a new toxicity test if the sample used for the previous test did not represent an application of flow back of well completion fluids, workover fluids, well treatment fluids, or hydrate control fluids." GMG0001882.

EPA initially proposed this testing for two reasons: (1) to ensure compliance with toxicity limits to meet the ocean discharge criteria; and (2) to address the lack of information about the toxicity of these fluids. *See* GMG0002676 ("[b]ecause … EPA does not have extensive data showing currently used chemical additives chemical reporting and toxicity testing requirements are included in the proposed

permit"). Yet, in the final permit, EPA acquiesced to industry's request to remove the monitoring requirement. As EPA stated in its response to comments on the General Permit:

> The EPA agrees not to require additional toxicity testing targeting produced water discharges after application of TCW [well treatment, completion, and workover] fluids under routine toxicity testing for produced water because the TCW Study will provide more details on TCW impacts.

GMG0003133. EPA did not provide any additional rationale for removing this requirement it previously deemed necessary, or any other means to ensure fracking wastewater would meet the permit's toxicity limits.

EPA's omission of these requirements violates the CWA. The CWA mandates that permits have both monitoring of a discharge and a means to ensure compliance with effluent limits. *NRDC v. EPA*, 808 F.3d at 583. "[A]n NPDES permit is unlawful if a permittee is not required to effectively monitor its permit compliance." *Id.* (internal quotation omitted).

In *NRDC v. EPA*, the Second Circuit held that EPA's failure to require monitoring was arbitrary and capricious because there was otherwise no way to tell if the effluent limits were met. *Id.* at 584. The permit required reporting of *expected* ballast water discharges rather than *actual* volumes, locations, or composition of the discharges. *Id.* at 538. This left no way to determine if the vessel was exceeding limits, and the court concluded that "EPA's failure to include

monitoring for compliance with [water quality based effluent limitations] was inconsistent with regulations." *Id.* at 584.

Here, as in *NRDC v. EPA*, EPA's failure to require monitoring violates the CWA because it makes it impossible to know if discharges of well treatment fluids meet toxicity limits. Most well treatment fluids are discharged with produced water. GMG0002676. Because the permit does not require that produced water samples capture fracking wastewater, the discharges from this activity will go untested, like the ballast water in *NRDC v. EPA*. 808 F.3d at 584. Thus, even though "EPA agrees that the chemical compounds in produced water could have negative impacts to aquatic life when present at sufficiently high concentrations," GMG0002676, there is no way to know if a permittee's fracking wastewater discharges are meeting toxicity limits. This lack of monitoring is unlawful. 33 U.S.C. § 1342(a)(2); 40 C.F.R. §§ 122.44(i)(1)-(2), 122.48.

Additionally, the lack of monitoring is arbitrary and contrary to the evidence because the record demonstrates that testing of commingled well treatment fluids is necessary. EPA concedes that there is insufficient information about the toxicity of these fluids. GMG0002676. The California Council on Science and Technology also concluded that the lack of coordination between discharge of well treatment fluids and toxicity testing is a problem. *See* GMG0002562-05 at 103-04 ("[i]f well stimulation fluids are mixed with produced water for discharge,

samplings for contaminants are needed when this mixture of wastes is discharged."). And the information before EPA is that many of the chemicals in well treatment fluids are harmful to aquatic life, carcinogenic, endocrine disruptors, and toxic. *See supra* pp. 15-18 (describing harmful nature of chemicals). Therefore, the need to monitor the discharges is clear based on the record. Without monitoring it is impossible to know whether the "No Observable Effect Concentration" standard for toxicity is met when fracking wastewater is discharged. GMG0002021.

The General Permit allows companies to discharge fracking pollution through two waste-streams: (1) commingled with produced water or (2) directly discharged well treatment fluids. The monitoring requirements for each of these discharges are insufficient to monitor the toxicity of pollution from fracking.

First, the permit's requirement for produced water does not cure the monitoring defect with respect to fracking wastewater. The produced water monitoring is too infrequent to capture periodic fracking wastewater. The Bureau of Safety and Environmental Enforcement (the agency that conducts inspections under the General Permit on behalf of EPA) informed EPA that annual monitoring is too infrequent, GMG0002668, and Region 4 of EPA requires monitoring every six months for offshore oil and gas facilities in the Eastern Gulf of Mexico. GMG0000468. But, at industry's request, EPA back-tracked from its proposal to

increase produced water toxicity testing from once per year to twice-yearly. GMG0003156. As a result, this once-per-year produced water sampling need not be done concurrently with fracking wastewater discharges. *See* GMG0003105. Thus, fracking chemicals mixed with produced water discharge will go unmonitored.

Second, the permit's requirements for well treatment fluids allow companies to evade monitoring *actual* discharges. Specifically, those who opt to participate in a yet-to-be-defined study may discharge well treatment fluids without testing *actual* discharges, thus leaving no way to monitor their compliance with toxicity limits. GMG0002026-27 (allowing facilities to participate in industry study as alternative to monitoring discharge of well treatment fluids). This is impermissible. *See, e.g.*, *In re Gov't of the Dist. of Columbia Mun. Separate Storm Sewer Sys*., 2002 EPA App. LEXIS 1, 10 E.R.D. 323, 346 (EPA 2002) (concluding deferral of monitoring requirements until a report issued was improper).

EPA cannot omit requirements for companies to monitor actual discharges of fracking and acidizing waste discharges. *See NRDC v. EPA*, 808 F.3d at 584. Yet that is precisely what EPA did in the General Permit. EPA's monitoring provisions for well treatment fluids alone or when commingled with produced water are arbitrary and capricious and render the General Permit unlawful.

CONCLUSION

For the foregoing reasons, the General Permit is arbitrary, capricious, an abuse of discretion, and not in accordance with law. Petitioners respectfully request that the Court remand the General Permit for further proceedings consistent with the Court's opinion.

DATED: June 6, 2018

Respectfully submitted

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Fifth Circuit by using the appellate CM/ECF system on June 6, 2018.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

/s/ *Kristen Monsell*
Kristen Monsell

CERTTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitations of Fed. R. App. P. 27(d)(2)(A) because it contains 12,869 words, excluding the parts of the motion exempted by Fed. R. App. 32(f).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word and 14-point Times New Roman font.

DATED: June 6, 2018

/s/ *Kristen Monsell*
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General Information

Court	US Court of Appeals for the Fifth Circuit; US Court of Appeals for the Fifth Circuit
Docket Number	18-60102
Status	CLOSED