

# **NPDES PERMIT NO. GM0000008**

## **FACT SHEET**

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

### **APPLICANT**

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### **ISSUING OFFICE**

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### **DATE PREPARED**

April 12, 2023

### **PERMIT ACTION**

This is a first time permit. It is proposed that the facility be issued an NPDES permit for a 5-year term in accordance with regulations contained in 40 Code of Federal Regulations (CFR) 122.46(a). 40 CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of April 12, 2023

### **RECEIVING WATER – BASIN**

Gulf of Mexico – Gulf of Mexico

## DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BOD	Biochemical oxygen demand (5-day)
BPT	Best practicable control technology currently available
BMP	Best management plan
BPJ	Best professional judgment
° C	Celsius, degrees
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
EA	Environmental Assessment
EIS	Environmental Impact Statement
ELG	Effluent limitation guidelines
EFH	Essential fish habitat
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
° F	Fahrenheit, degrees
FCB	Fecal coliform bacteria
GOM	Gulf of Mexico
gpm	Gallons per minute
LNG	Liquefied natural gas
mg/l	Milligrams per liter (part per million)
ug/l	Micrograms per liter (part per billion)
MARAD	United States Maritime Administration
MGD	Million gallons per day
SQL	Minimum quantification level
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
ODC	Ocean Discharge Criteria
O&G	Oil and grease
ppt	parts per thousand
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TDS	Total dissolved solids
TMDL	Total maximum daily load
TOC	Total organic carbon
TRC	Total residual chlorine
TSS	Total suspended solids
USCG	U.S. Coast Guard
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan

## **I. CHANGES FROM THE PREVIOUS PERMIT**

The facility is a new discharger.

## **II. APPLICANT LOCATION AND ACTIVITY**

### **A. FACILITY LOCATION**

The location of the discharge will be located in federal waters, approximately 100 miles off the Louisiana Coast, in the GOM between 1,000 and 2,000 feet depth. The known uses of the GOM are marine water, propagation of fish and wildlife, shipping and contact recreation.

### **B. FACILITY DESCRIPTION**

This is a first time permit. Natural Ocean Well Co proposes testing its innovative desalination technology. A pilot desalination unit will be tested from a vessel in the Gulf of Mexico. The unit will intake seawater and have two outfalls. It will produce freshwater which will be sampled for later onshore testing, and the remainder will be discharged. The byproduct from the desalination process, a brine with increased salinity, will also be discharged. The testing would include a range of freshwater recovery rates up to 50% (i.e., two parts seawater yields one part freshwater and one part brine). The maximum salinity of the brine would occur at its minimum flow, but, for brevity, Table 2 only shows the maximums expected during testing. The range of testing parameters and expected maximums are based on experimental data from a “proof-of-concept” test performed by NOWCo in a hyperbaric chamber with simulated seawater.

### **C. OUTFALL DESCRIPTIONS AND CURRENT OPERATIONS**

The Reverse Osmosis unit will be tested with discharges lasting up to one month, with maximum discharge rates of freshwater and brine of approximately 15,000 GPD and 250,000 GPD, respectively. Although only one test location will be required per test, multiple locations were selected to de-risk the operation. Multiple locations will provide alternatives to guard against day-of-testing risks such as currents, weather, sea state, vessel drift, hazards to navigation, and environmental concerns. A maximum of twelve tests will occur. See Table 1 for latitude and longitude of possible test locations.

#### **List of Proposed Outfalls**

Outfall 001 - Freshwater

Outfall 002 - Brine

#### **Outfall 001 – Freshwater**

Outfall 001 will likely be discharged underwater. This would be the easiest place to discharge the freshwater, however Natural Ocean Well Co. may decide to bring the freshwater up to the boat using a hose and discharge it on the surface. Salinity of influent seawater will be approximately 35 ppt (based on data from the nearest oil and gas platforms participating in the Gulf of Mexico Coastal Observing System). Effluent is estimated to have maximum salinity of 0.50 ppt.

Maximum influent and effluent flow is 265,000 GPD and 15,000 GPD respectively. Temperature will remain unchanged.

### Outfall 002 – Brine

Outfall 002 will be underwater. The brine will be discharged directly from the underwater pod. Max salinity of influent seawater will be 35 ppt (based on data from the nearest oil and gas platforms participating in the Gulf of Mexico Coastal Observing System). Effluent is estimated to have maximum salinity of 70 ppt, with diffusion of salinity being less than 1% above natural background salinity within approximately 25 feet of the outfall. Maximum influent and effluent flow is 265,000 GPD and 250,000 GPD respectively. Temperature will remain unchanged.

Table 1. Proposed Test Locations. Note only one location will be used per test.

Test Location No.	Latitude	Longitude	Test Location No.	Latitude	Longitude
1	27° 58' 12.0" N	90° 03' 14.4" W	30	27° 51' 21.6" N	91° 00' 32.4" W
2	27° 58' 33.6" N	90° 02' 56.4" W	31	27° 51' 00.0" N	91° 02' 27.6" W
3	27° 58' 51.6" N	90° 02' 38.4" W	32	27° 51' 00.0" N	91° 01' 55.2" W
4	27° 59' 13.2" N	90° 02' 13.2" W	33	27° 51' 00.0" N	91° 01' 30.0" W
5	27° 59' 31.2" N	90° 01' 55.2" W	34	27° 50' 56.4" N	91° 01' 01.2" W
6	27° 58' 01.2" N	90° 02' 52.8" W	35	27° 50' 56.4" N	91° 00' 32.4" W
7	27° 58' 19.2" N	90° 02' 31.2" W	36	27° 50' 31.2" N	91° 02' 31.2" W
8	27° 58' 37.2" N	90° 02' 13.2" W	37	27° 50' 31.2" N	91° 01' 58.8" W
9	27° 58' 58.8" N	90° 01' 55.2" W	38	27° 50' 31.2" N	91° 01' 30.0" W
10	27° 59' 16.8" N	90° 01' 33.6" W	39	27° 50' 31.2" N	91° 01' 01.2" W
11	27° 57' 46.8" N	90° 02' 27.6" W	40	27° 50' 27.6" N	91° 00' 32.4" W
12	27° 58' 08.4" N	90° 02' 13.2" W	41	27° 50' 06.0" N	91° 02' 31.2" W
13	27° 58' 26.4" N	90° 01' 51.6" W	42	27° 50' 06.0" N	91° 01' 58.8" W
14	27° 58' 44.4" N	90° 01' 30.0" W	43	27° 50' 06.0" N	91° 01' 30.0" W
15	27° 59' 02.4" N	90° 01' 12.0" W	44	27° 50' 02.4" N	91° 01' 04.8" W
16	27° 57' 28.8" N	90° 02' 09.6" W	45	27° 50' 02.4" N	91° 00' 36.0" W
17	27° 57' 50.4" N	90° 01' 51.6" W	46	27° 49' 40.8" N	91° 02' 31.2" W
18	27° 58' 12.0" N	90° 01' 30.0" W	47	27° 49' 37.2" N	91° 02' 02.4" W
19	27° 58' 30.0" N	90° 01' 08.4" W	48	27° 49' 37.2" N	91° 01' 33.6" W
20	27° 58' 48.0" N	90° 00' 50.4" W	49	27° 49' 37.2" N	91° 01' 04.8" W
21	27° 57' 14.4" N	90° 01' 48.0" W	50	27° 49' 33.6" N	91° 00' 36.0" W
22	27° 57' 36.0" N	90° 01' 30.0" W	51	27° 44' 31.2" N	91° 50' 20.4" W
23	27° 57' 54.0" N	90° 01' 08.4" W	52	27° 44' 24.0" N	91° 49' 51.6" W
24	27° 58' 12.0" N	90° 00' 46.8" W	53	27° 44' 16.8" N	91° 49' 19.2" W
25	27° 58' 30.0" N	90° 00' 28.8" W	54	27° 44' 13.2" N	91° 48' 54.0" W
26	27° 51' 25.2" N	91° 02' 24.0" W	55	27° 44' 09.6" N	91° 48' 25.2" W
27	27° 51' 21.6" N	91° 01' 55.2" W	56	27° 44' 06.0" N	91° 50' 24.0" W
28	27° 51' 21.6" N	91° 01' 26.4" W	57	27° 43' 58.8" N	91° 49' 55.2" W
29	27° 51' 21.6" N	91° 01' 01.2" W	58	27° 43' 51.6" N	91° 49' 22.8" W

59	27° 43' 48.0" N	91° 48' 57.6" W	80	27° 28' 15.6" N	93° 14' 13.2" W
60	27° 43' 44.4" N	91° 48' 28.8" W	81	27° 28' 40.8" N	93° 16' 12.0" W
61	27° 43' 40.8" N	91° 50' 27.6" W	82	27° 28' 30.0" N	93° 15' 43.2" W
62	27° 43' 33.6" N	91° 49' 58.8" W	83	27° 28' 19.2" N	93° 15' 18.0" W
63	27° 43' 30.0" N	91° 49' 26.4" W	84	27° 28' 04.8" N	93° 14' 49.2" W
64	27° 43' 22.8" N	91° 49' 01.2" W	85	27° 27' 54.0" N	93° 14' 24.0" W
65	27° 43' 15.6" N	91° 48' 36.0" W	86	27° 28' 19.2" N	93° 16' 22.8" W
66	27° 43' 19.2" N	91° 50' 31.2" W	87	27° 28' 04.8" N	93° 15' 57.6" W
67	27° 43' 08.4" N	91° 50' 02.4" W	88	27° 27' 54.0" N	93° 15' 32.4" W
68	27° 43' 01.2" N	91° 49' 33.6" W	89	27° 27' 39.6" N	93° 15' 07.2" W
69	27° 42' 57.6" N	91° 49' 04.8" W	90	27° 27' 28.8" N	93° 14' 38.4" W
70	27° 42' 50.4" N	91° 48' 39.6" W	91	27° 27' 54.0" N	93° 16' 37.2" W
71	27° 42' 54.0" N	91° 50' 34.8" W	92	27° 27' 43.2" N	93° 16' 12.0" W
72	27° 42' 43.2" N	91° 50' 09.6" W	93	27° 27' 28.8" N	93° 15' 46.8" W
73	27° 42' 36.0" N	91° 49' 40.8" W	94	27° 27' 18.0" N	93° 15' 18.0" W
74	27° 42' 28.8" N	91° 49' 12.0" W	95	27° 27' 07.2" N	93° 14' 56.4" W
75	27° 42' 21.6" N	91° 48' 43.2" W	96	27° 27' 32.4" N	93° 16' 55.2" W
76	27° 29' 02.4" N	93° 15' 57.6" W	97	27° 27' 18.0" N	93° 16' 26.4" W
77	27° 28' 51.6" N	93° 15' 32.4" W	98	27° 27' 07.2" N	93° 16' 01.2" W
78	27° 28' 44.4" N	93° 15' 03.6" W	99	27° 26' 56.4" N	93° 15' 36.0" W
79	27° 28' 30.0" N	93° 14' 42.0" W	100	27° 26' 42.0" N	93° 15' 07.2" W

### III. EFFLUENT CHARACTERISTICS

Natural Ocean Well Co. requested a waiver for Outfalls 001 and 002, from various Table A pollutants in form 2D (ie. biochemical oxygen demand, chemical oxygen demand, total organic carbon, total suspended solids, ammonia, and pH), stating that discharges will be the result of reverse osmosis (hyperfiltration), which is a physical/mechanical separation process. It was noted that there would be no chemical or thermal addition and that any pollutants that will be present in the discharge will be a result of their existence in the intake water. If present in the intake water, the pollutants would not pass through the RO membrane; rather, the pollutants' concentrations would be elevated in the brine proportional to the increase in salinity. The desalination unit will have onboard sensing for flow, temperature and salinity. Natural Ocean Well Co. studied the brine outfall using the the CORMIX Mixing Zone Model, and using the most conservative model (i.e., slowest subsea current and highest brine salinity), diffusion of salinity was less than 1% above natural background salinity within approximately 25 feet of the outfall. The maximum salinity of the brine would occur at its minimum flow. The range of testing parameters and expected maximums are based on experimental data from a "proof-of-concept" test performed in a hyperbaric chamber with simulated seawater. Based on this information, EPA approved the request for a waiver for biochemical oxygen demand, chemical oxygen demand, total organic carbon, total suspended solids, ammonia, and pH. Effluent information provided in the application, is below:

Table 2. Effluent Characteristics

	Influent Seawater	Outfall 001: Freshwater	Outfall 002: Brine
Max Salinity (ppt)	35.0*	0.50	70.0
Max Flow (GPD)	265,000	15,000	250,000

#### **IV. REGULATORY AUTHORITY/PERMIT ACTION**

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water,” more commonly known as the “swimmable, fishable” goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

This is a first time issuance. The EPA proposes that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

#### **V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS – TECHNOLOGY BASED LIMITATIONS**

##### **A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS**

Regulations contained in 40 CFR §122.44 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for no free oil, flow, and salinity. No water quality-based effluent limitations are established in the proposed draft permit.

##### **B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS**

###### **1. General Comments**

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

## 2. Effluent Limitation Guidelines

Technology-based effluent limitations are pollutant specific and vary depending on the type of pollutant and facility in question. See 40 CFR §125.3. 40 CFR §122.44 (a) requires inclusion of technology-based ELGs in NPDES permits based on ELGs where applicable, or on BPJ in the absence of guidelines. In the absence of promulgated guidelines for the discharger's category or subcategory, permit conditions may be established using BPJ procedures.

Limits in the draft permit will be established using BPJ from both of these sources for applicable activities consistent with the scope of each of the two abovementioned ELGs.

## 3. Outfall Limitations

### a. Flow

Outfall 001: Flow rate monitoring will be required. There shall be no discharge of free oil.

Outfall 002: In order to be protective of Gulf of Mexico water quality and control salinity, discharges will be limited to maximum discharge flow of 250,000 GPD. This flow rate is consistent with modeling performed on discharges, and as such will result in salinity that is within one percent of receiving water salinity within 25 meters of discharge.

Influent flow monitoring will be required.

### b. Salinity

Outfall 001: Salinity monitoring will be required.

Outfall 002: Salinity of brine discharge will be limited to 70 ppt (the maximum salinity provided by the "proof of concept" test previously mentioned).

### c. Free Oil

Outfall 001: Free oil monitoring shall be performed using the visual sheen test method, when discharging on the surface of the receiving water.

d. Narrative Limitations

For all permitted outfalls, the addition of chemical additives will be prohibited. Discharges must not cause substantial and persistent changes from ambient conditions of turbidity. Influent intake structures must minimize entrainment or impingement of fish. The proposed permit will also prohibit discharges in areas of biological concern, including marine sanctuaries.

C. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). The monitoring frequencies are based on BPJ, taking into account the nature of the facility.

For ALL outfalls, monitoring for flow and salinity, shall be daily, using flow/salinity meter when discharging. Flow rate may be estimated for influent, when use of flow meter is not available free oil monitoring shall be performed daily, when discharging to surface waters.

D. WHOLE EFFLUENT TOXICITY LIMITATIONS

The discharges will consist of a freshwater component and a brine component resulting from the reverse osmosis process which removes salinity and other constituents from seawater and produces fresh water and reject brine. The applicant stated that no chemical additives will be added to the test water, therefore pollutants in brine will be a concentrate of those present in the ambient seawater. Although there is potential for toxicity as Outfall 2 discharges brine, the discharge will be underwater, therefore the permittee does not have the ability to sample for biomonitoring. To address this concern both a flow and salinity limit has been included in the draft permit to protect against potential toxicity. As such, the draft permit does not propose any biomonitoring of the discharge.

E. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

**VI. WATER QUALITY BASED LIMITATIONS**

A. GENERAL COMMENTS

Pursuant to CWA §301(b)(1)(C), NPDES permits must contain water quality based limitations if technology-based limits are insufficient to maintain or achieve applicable federal or state water quality requirements. In this permit action, Ocean Discharge Criteria at 40 CFR §125, Subpart M imposes such requirements.



## B. IMPLEMENTATION

The permit contains technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. EPA narrative and numerical water quality standards are used in conjunction with other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

## C. OCEAN DISCHARGE CRITERIA

When issuing permits for discharges into waters of the territorial sea, contiguous zone, or oceans, CWA §403 requires EPA to consider guidelines for determining potential degradation of the marine environment. These Ocean Discharge Criteria (40 CFR §125, Subpart M) are intended to "prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition of discharge, if necessary, to ensure this goal. To make the determination of unreasonable degradation of the marine environment, the director shall determine whether a discharge will cause unreasonable degradation of the marine environment based on consideration of: (1) The potential for bioaccumulation or persistence of the pollutants to be discharged; (2) The potential transport of such pollutants by biological, physical or chemical processes; (3) The composition and vulnerability of the biological communities which may be exposed to such pollutants, including the presence of unique species or communities of species, the presence of species identified as endangered or threatened pursuant to the Endangered Species Act, or the presence of those species critical to the structure or function of the ecosystem, such as those important for the food chain; (4) The importance of the receiving water area to the surrounding biological community, including the presence of spawning sites, nursery/forage areas, migratory pathways, or areas necessary for other functions or critical stages in the life cycle of an organism; (5) The existence of special aquatic sites including, but not limited to marine sanctuaries and refuges, parks, national and historic monuments, national seashores, wilderness areas and coral reefs; (6) The potential impacts on human health through direct and indirect pathways; (7) Existing or potential recreational and commercial fishing, including fin fishing and shell fishing; (8) Any applicable requirements of an approved Coastal Zone Management plan; (9) Such other factors relating to the effects of the discharge as may be appropriate, and (10) Marine water quality criteria developed pursuant to section 304(a)(1).

The discharge authorized by this permit which may have potential to cause a short-term and localized environmental impact is the brine at Outfall 002. The permittee estimates that within 25 feet of outfalls, salinity will return to less than 1% above background. Because the estimated small discharge rates and short period of discharge duration, any impact caused by the brine discharge should be limited. Flow rate and salinity limitations have been included in the draft permit to mitigate these risks.

EPA has determined that discharges proposed to be authorized by this reissued permit will not cause unreasonable degradation of the marine environment. The proposed permit contains a

reopener clause that the permit may be modified or revoked at any time if on the basis of any new data the permitting authority determines that continued dischargers may cause unreasonable degradation of the marine environment.

## **VII. FACILITY OPERATIONAL PRACTICES**

### **A. OPERATION AND REPORTING**

The permittee must submit Discharge Monitoring Report's (DMR's) quarterly, beginning on the effective date of the permit, lasting through the expiration date of the permit or termination of the permit, to report on all limitations and monitoring requirements in the permit.

#### Electronic Reporting Rule

The EPA published the electronic reporting rule in the federal register (80 FR 64063) on October 22, 2015. The rule became effective on December 21, 2015. One year after the effective date of the final rule, NPDES regulated entities that are required to submit DMRs (including majors and non-majors, individually permitted facilities and facilities covered by general permits) must do so electronically. All DMRs shall be electronically reported effective December 21, 2016, per 40 CFR 127.16. To submit electronically, access the NetDMR website at [www.epa.gov/netdmr](http://www.epa.gov/netdmr) and contact the R6NetDMR@epa.gov in-box for further instructions. PA and authorized NPDES programs will begin electronically receiving these DMRs from all DMR filers and start sharing these data with each other.

#### Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

## **VIII. ENDANGERED SPECIES ACT, MARINE MAMMAL PROTECTION ACT, MARINE PROTECTION, RESEARCH, AND SANCTUARIES ACT, & MAGNUSON-STEVENSON FISHERY MANAGEMENT AND CONSERVATION ACT**

This NPDES permit action is subject to the environmental review of various federal laws, the Marine Mammal Protection Act, 33 U.S.C. §1401, et seq, the Endangered Species Act, 16 U.S.C. §1531, et seq, and the Magnuson-Stevens Fishery Management and Conservation Act, 16 U.S.C. §1801, et seq.

According to NOAA, there are 19 species listed as either endangered or threatened in the Gulf of Mexico: Green sea turtle (Threatened), Kemp's ridley sea turtle (Endangered), Leatherback sea turtle

(Endangered), Loggerhead sea turtle (Threatened), Hawksbill sea turtle (Endangered), Smalltooth sawfish (Endangered), Gulf sturgeon (Threatened), Nassau grouper (Threatened), Oceanic white tip shark (Threatened), Giant manta ray (Threatened), Elkhorn coral (Threatened), Staghorn coral (Threatened), Boulder star coral (Threatened), Mountainous star coral (Threatened), Lobed star coral (Threatened), Rough cactus coral (Threatened), Pillar coral (Threatened), Sperm whale (Endangered), and Rice's whale (Endangered, formerly known as the Bryde's Whale).

All proposed test locations are located outside of NOAA fisheries designated Essential Fish Habitat, designated critical habitat areas, and Habitat Areas of Particular Concern with the exception of loggerhead sea turtle. There is a large area of the open water GOM designated as critical habitat due to the presence of Sargassum, an oceanic species of brown algae that occurs on the surface of the water and provides important habitat for young sea turtles. The area of the GOM in which Sargassum occurs is very large and the occurrence of Sargassum is highly variable. These areas will be avoided during testing. Rice's Whale core distribution area is located outside of any of the proposed testing locations. The proposed permit will prohibit discharges in areas of biological concern, including marine sanctuaries.

Based on information available to EPA and the proposed permit conditions, EPA concludes that the issuance of the draft permit will (1) have no effect on endangered species or their habitat; and (2) have no adverse effect on essential fish habitat.

## **IX. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS**

This NPDES permit action is subject to the environmental review of the National Historic Preservation Act, 16 U.S.C. §470, et seq. Testing locations will avoid registered historic places and known shipwrecks and similar obstructions. Additionally, BOEM's Gulf of Mexico Deepwater Bathymetry, which is accurate to 1.5 feet at the testing depth, was used to select flat areas that are free of anomalies. As a result, the issuance of the permit should not have any impact on historical and/or archeological sites.

## **X. ANTIBACKSLIDING**

This is a first time permit.

## **XI. ENVIRONMENTAL JUSTICE**

Executive Order 13985, Advancing Racial Equity and Supporting for Underserved Communities through the Federal Government signed on January 20, 2021, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high, and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low income, tribal, and indigenous populations, or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit <http://www.epa.gov/ejscreen>.

As part of the Permit development process, the EPA conducted a screening analysis to determine whether this Permit action could affect overburdened communities. The EPA used EJScreen 2.1 a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify Permits for which enhanced outreach may be warranted.

EJScreen data is not available in the GOM. On the coast of Louisiana, there is one federally recognized tribe, the Chitimacha Tribe of Louisiana, and three state-recognized tribes, the Biloxi-Chitimacha Confederation of Muskogee, the PointeAuChien Indian Tribe, and the United Houma Nation, all residing in Lafourche, Terrebonne, and Jefferson Parishes. These tribes are especially vulnerable to impacts from increasing shoreline erosion and saltwater intrusion due to their location on the coast. Additional geographic vulnerabilities for this area are increasing frequency of storms and storm surge as well as shoreline erosion and accretion.

Impacts to GOM populations are immeasurable for environmental justice since low-income and minority communities are located onshore, which is distance from any of the proposed testing location. As a result, Natural Ocean Well Co. is not considered to be discharging in a potential EJ community and no enhanced outreach is necessary at this time.

## **XII. PERMIT REOPENER**

The permit may be reopened and modified during the life of the permit if relevant portions of water quality requirements are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing such water quality requirements are revised or promulgated. Modification of the permit is subject to the provisions of 40 CFR §124.5.

## **XIII. CERTIFICATION**

EPA is the certifying authority because the permit authorizes discharges only to Federal waters. The draft permit will be provided to other resource agencies, including NOAA, NMFS, the USCG, and the State of Louisiana Department of Natural Resources, for review, however.

## **XIV. FINAL DETERMINATION**

The public notice describes the procedures for the formulation of final determinations.

## **XV. ADMINISTRATIVE RECORD**

The following information was used to develop the proposed permit:

### **A. APPLICATION(s)**

EPA Application Forms 1 and 2D received February 17, 2023.

**B. CWA/40 CFR /FEDERAL REGISTER CITATIONS and FEDERAL CRITERIA**

CWA §§'s 301, 304, 316, 402, 403, and 502

Citations to 40 CFR are as of April 13, 2023

Sections 122, 124, 125, and 136

Quality Criteria for Water, <http://www.epa.gov/waterscience/criteria/library/goldbook.pdf>

Outer Continental Shelf Oil and Gas Leasing Program: 2017–2022 Final Programmatic  
Environmental Impact Statement