

STATEMENT OF BASIS

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

APPLICANT:

Corpus Christi Liquefaction, LLC
P.O. Box 162
Gregory, TX 78359

ISSUING OFFICE:

U.S. Environmental Protection Agency
Region 6
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PREPARED BY:

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DATE PREPARED:

June 8, 2020

PERMIT ACTION

Under regulations at 40 CFR 124.5, this is a proposed modification of an existing permit issued on April 16, 2020, with an effective date of June 1, 2020 and an expiration date of May 31, 2025. Only those conditions of the permit being modified are being reopened and are available for review and comment.

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 June 5, 2020.

RECEIVING WATER – BASIN

La Quinta Channel to Corpus Christi Bay, Water Body Segment Code No. 2481 of the Bays and Estuaries.

DOCUMENT ABBREVIATIONS

For brevity, Region 6 used acronyms and abbreviated terminology in this Statement of Basis document whenever possible. The following acronyms were used frequently in this document:

BAT	Best Available Technology Economically Achievable)
BOD ₅	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
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
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
F&WS	United States Fish and Wildlife Service
GPD	Gallon per day
HT	Hydrostatic Testing
IP	Procedures to Implement the Texas Surface Water Quality Standards
µg/l	Micrograms per liter (one part per billion)
mg/l	Milligrams per liter (one part per million)
MGD	Million gallons per day
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
RRC	Railroad Commission of Texas
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TDS	Total dissolved solids
TMDL	Total maximum daily load
TOC	Total Organic Carbon
TRC	Total residual chlorine
TSS	Total suspended solids
TSWQS	Texas Surface Water Quality Standards
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan
WQS	Water Quality Standards

I. PROPOSED CHANGES FROM CURRENT PERMIT

1. Addition of two new outfall locations:
 - o Outfall 009: Lat. 27° 52' 50" N, Long. 97° 16' 12" W
 - o Outfall 010: Lat. 27° 52' 48" N, Long. 97° 15' 57" W
2. The facility mailing address has been changed.

II. APPLICANT LOCATION and ACTIVITY

Under the Standard Industrial Classification (SIC) Code No. 4925, the applicant operates natural gas liquefaction and export plant. The Corpus Christi Liquefaction (CCL) Project is in San Patricio County, Texas.

As described in the application, the facility is located at No. 2822 La Quinta Rd (at La Quinta Channel), Gregory, San Patricio County, Texas.

Wastewater discharges flow into La Quinta Channel to Corpus Christi Bay, Water Body Segment Code No. 2481 of the Bays and Estuaries.

The discharge point showing Outfall number, discharge coordinates: latitude and longitude, county, average flow rate in million gallons per day (MGD), receiving water, and the waterbody identification numbers are shown in the following table:

Outfall Reference Number	Discharge Coordinates Latitude Deg° Min' Sec" Longitude Deg° Min' Sec"	Average Flow MGD	Wastewater Discharge	Receiving Water	Segment #
101	27° 53' 7" N 97° 16' 27" W	0.019	Sanitary treatment plant	Outfall 001, thence to La Quinta Channel to Corpus Christi Bay	2481
001	27° 52' 57" N 97° 16' 3" W	0.719	Reverse Osmosis Reject water, Inlet Air chillers, Incidental utility wastewater/stormwater, sanitary treatment plant	La Quinta Channel to Corpus Christi Bay	2481
201	27° 53' 23.58" N 97° 16' 21.39" W	0.2	Inlet Air Chillers	Outfall 002, thence to La Quinta Channel to Corpus Christi Bay	2481
202	27° 53' 25.48" N 97° 16' 14.52" W	0.2	Inlet Air Chillers	Outfall 002, thence to La Quinta Channel to Corpus Christi Bay	2481

Outfall Reference Number	Discharge Coordinates Latitude Deg° Min' Sec" Longitude Deg° Min' Sec"	Average Flow MGD	Wastewater Discharge	Receiving Water	Segment #
203	27° 53' 27.62" N 97° 16' 07.28" W	0.2	Inlet Air Chillers	Outfall 002, thence to La Quinta Channel to Corpus Christi Bay	2481
002	27° 53' 29" N 97° 16' 34" W	6	Hydrostatic test/flush water, Fire Hydrant flush water, Fin fan wash water, Amine system flush water, Inlet Air Chillers	La Quinta Channel to Corpus Christi Bay	2481
003	27° 53' 10" N 97° 16' 29" W	6	Hydrostatic test/flush water, Fire hydrant flush water, Fin fan wash water	La Quinta Channel to Corpus Christi Bay	2481
004	27° 52' 54" N 97° 16' 30" W	Varies	Hydrostatic test/flush water, Fire hydrant flush water, Vehicle wash water	La Quinta Channel to Corpus Christi Bay	2481
005	27° 52' 56" N 97° 16' 12" W	Varies	Hydrostatic test/flush water, Fire hydrant flush water	Corpus Christi Bay via on-site ditch	2481
006	27° 52' 55" N 97° 16' 1" W	Varies	Hydrostatic test/flush water, Fire hydrant flush water	Corpus Christi Bay via on-site ditch	2481
007	27° 52' 54" N 97° 15' 59" W	Varies	Hydrostatic test/flush water, Fire hydrant flush water	Corpus Christi Bay via on-site ditch	2481
008	27° 53' 6" N 97° 16' 28" W	0.019	Sanitary treatment plant	Corpus Christi Bay via on-site ditch or plant sump	2481
009	27° 52' 50" N, 97° 16' 12" W	<0.1	Fire water system flush water	Corpus Christi Bay	2481
010	27° 52' 48" N, 97° 15' 57" W	<0.1	Fire water system flush water	Corpus Christi Bay	2481

III. PROCESS AND DISCHARGE DESCRIPTION

The facility liquefies natural gas from a pipeline system for export as Liquefied Natural Gas (LNG). Construction related discharges from the facility include hydrostatic test water and flush

water generated during commissioning of piping systems, LNG storage tanks, ancillary tanks, and vessels prior to placing these systems in service. Operational related discharge will include reverse osmosis (RO) water treatment system, amine system flush water, fin fan wash water, inlet air chilling (IAC) system, vehicle wash bay, and sanitary treatment plant effluent.

CCL will also discharge fire hydrant flush water using non-chlorinated water.

CCL is requesting that this permit modification include the addition of Outfalls 009 and 010 for the discharge of fire hydrant flush water at the marine area docks. Outfalls 009 and 010 are considered substantially similar outfalls.

Fire water system water is stored at the facility in two aboveground storage tanks (600,000 gallons each). A pump station located adjacent to the storage tanks is used to deliver water to fire hydrants at the marine area docks via a common pipe header.

Outfalls 009 and 010 are approximately 475 yards apart at the West Berth and East Berth and each outfall consists of multiple fire system discharge points within feet of each other and consider to be a single discharge point since they are feed by the same firefighting water line leading to that part of the dock. Although Outfalls 009 and 010 are identical outfalls, flow from each Outfall is independent of the others and the possibility that 009 may not be discharging while outfall 010 are discharging. As a result, flow will be monitored at the respective outfalls. All the other parameters (pH and TRC) will be monitored at the fire water station. The sampling point for both Outfalls 009 and 010 (pH and TRC) is located at the pump station at the following coordinates:

Latitude 27° 53' 29" N and Longitude 97° 16' 00" W

Table 1: Discharge Characteristics for Outfall 009 and 010

This is an existing facility. The facility provided estimate for the following parameters:

Outfalls 009 and 010

Parameter	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	<0.1	<0.1
pH, su	7.77	7.77
BOD	<2	<2
TSS	8.5	8.5
Ammonia	0.43	0.43
Temp	29 °C	29 °C

The designated uses of Corpus Christi Bay, Segment No. 2481 are primary contact recreation, exceptional aquatic life use and Oyster waters.

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 modification to an existing permit issued on April 16, 2020, with an expiration date of May 31, 2025. An NPDES Application for a Permit to Discharge (Form 1 and Form 2E) was received on May 29, 2020. The application was deemed administratively complete on June 4, 2020.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS FOR PERMIT ISSUANCE

Regulations contained in 40 CFR §122.44 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, on best professional judgment (BPJ) in the absence of guidelines, and/or requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

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.

There are no technology-based parameters proposed in this permit modification. All the technology-based effluent limitations in the current permit remains the same for the other Outfalls already established in the current permit.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained.

The general criteria and numerical criteria which make up the stream standards are provided in the 2010 EPA-approved Texas Water Quality Standards, Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.9, effective May 19, 2020.

The designated uses of Segment 2481, Corpus Christi Bay are primary contact recreation, exceptional aquatic life use and Oyster waters.

2. Permit-Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. pH

TAC 307.10 states, "The pH criteria are listed as minimum and maximum values expressed in standard units at any site within the segment."

Wastewater discharges from the facility flow into La Quinta Channel of Corpus Christi Bay, Water Body Segment No. 2481, which has Texas WQS of 6.5 – 9.0 s.u. pH for Outfalls 009 and 010 shall be limited to 6.5 – 9.0 s.u., the criteria listed for Segment 2481.

b. Total Residual Chlorine

The permittee had stated in its permit modification that fire system water is microfiltered water obtained from the San Patricio Municipal Water District (SPMWD) and does not contain chlorine or other disinfectants. The permittee also stated that there is no treatment of fire system water by the facility prior to discharge. Anticipated discharge of fire hydrant flush water will be intermittent and variable during testing/flushing of the fire water system.

The permittee also stated in its permit modification application that sampling point for both Outfalls 009 and 010 is located at the pump station. Effluent data at the fire tank monitor, Outfall 009 and 010, submitted by the permittee showed non-detectable concentration of Total Residual Chlorine. TRC requirements shall only apply when potable water is used and/or chlorine is added.

TRC shall be limited to 0.019 mg/l in Outfall 009 and 010 because the source water is from a municipal source. 0.019 mg/L is EPA's acute chlorine criteria and 0.011mg/L is EPA's chronic chlorine criteria. Limits must be protective of WQS per 40 CFR 122.4(d) and 122.44(d). Since the acute conditions do not allow dilution; the limit must be met at end-of-pipe, but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit.

Recognizing the limitations of analytical test methods, the permit also allows reporting of values of less than the MQL as zero.

However, TRC is toxic at measurable amounts, so in addition to the 19 µg/L chemical specific limitation, the narrative limit for TRC shall be "No Measurable." Hence, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no quantifiable level of TRC as determined by any approved method established in 40 CFR 136 that is greater than the established MQL. The effluent limitation for TRC is the instantaneous

maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. In addition, EPA has established an MQL for TRC at 33 μ g/l. Values less than 33 μ g/L can be reported as zero.

D. 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 Outfalls 009 and 010, flow may be estimated daily when discharging. Flow shall be monitored at the respective Outfalls 009 and 010. pH shall be daily by grab sample, when discharging. TRC shall be daily by grab sample when potable water is used, or chlorine added. pH and TRC shall be monitored at the pump station.

E. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

VI. FACILITY OPERATIONAL PRACTICES

A. WASTEWATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

B. 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.

VII. IMPAIRED WATER - 303(d) LIST AND TMDL

According to the 2014 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs), the receiving stream for Outfall 001, La Quinta Channel then to Corpus Christi Bay, Water Body Segment No. 2481 is listed as impaired for bacteria (Category 5a), in the 2014 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs). Category 5a implies that a TMDL is underway, scheduled, or will be scheduled. The facility does not plan to discharge bacteria. If the waterbody is listed at a later date for additional pollutants, and a total maximum discharge loading determined for the segment, the standard reopener clause would allow the permit to be revised and additional pollutants and/or limits added. No additional requirements beyond the already proposed technology-based and/or water-quality based requirements are needed in the proposed permit.

VIII. ANTIDEGRADATION

The Texas Commission on Environmental Quality, Texas Surface Water Quality Standards, Antidegradation, Title 30, Part 1, Chapter 307, Rule §307.5 sets forth the requirements to protect designated uses through implementation of the State WQS. The limitations and monitoring requirements set forth in the proposed permit are developed from the State WQS and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water.

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements and exemption to meet Antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR Part 122.44(i)(B), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance. The permit maintains the requirement of the existing permit, in addition to additional permit requirements for new Outfall locations.

X. ENDANGERED SPECIES

The permittee has committed certain measures to protect sensitive species in their Federal Energy Regulatory Commission (FERC) application dated August 30, 2012. The FERC designated Corpus Christi Liquefaction as its non-federal representative in an email dated May 1, 2013. In a letter dated September 6, 2013, the Service stated that no Section 7 consultation is necessary for these species and believes that the agency has complied with Section 7 (a)(2) of the ESA by making the determination. Furthermore, the Service stated that with the incorporation and implementation of the conservation measures outlined in the facility's August 22, 2013, letter, the Service believes impacts will be insignificant and discountable; therefore, the Service concur with the determinations of may affect, not likely to adversely affect the whooping crane and the piping plover.

Since the Service has already concurred for the construction, operation and maintenance of the LNG, this puts the construction of the LNG terminal into the environmental baseline. Additionally, the scope of the evaluation of the effects of the discharge authorized by this permit was therefore limited to the effects related to the authorized discharge, EPA has determined that this permit modification issuance will have "*no effect*" on listed threatened and endangered species nor will it adversely modify designated critical habitat.

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), IPaC website,

<https://ecos.fws.gov/ipac/location/R6DLCDYKORHKTJXJ5I4YKT3VWA/resources>, thirteen species are listed as threatened or endangered in San Patricio County. They are 5 reptiles, 3 mammals, and 4 birds. Twelve species are listed as threatened or endangered in San Patricio County.

Determination

Many of the threats to listed threatened or endangered species are related to activities in coastal areas and will not be affected by the proposed discharges. Those threats include: oil spills, live bottom smothering with sediments and drilling fluids, dredging, coastal development, agricultural and industrial pollution, seagrass bed degradation, shrimp trawling and other fisheries, boat collisions, under water explosions, ingestion of marine debris, entanglement in marine debris, commercial and recreational fisheries, water craft collisions, sedimentation and siltation, commercial harvesting of horseshoe crabs, and occasional mowing or burning. The discharges proposed to be authorized by the permit issuance will not affect those threats to threatened or endangered turtle species.

The Environmental Protection Agency has evaluated the potential effects of issuance of this permit upon listed endangered or threatened species. After review, EPA has determined that the issuance of this permit will have “*no effect*” on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. No pollutants are identified by the permittee-submitted application at levels which might affect species habitat or prey species. Issuance of this permit is found to have no impact on the habitats of these species.
2. Based on information described above, EPA Region 6 has determined that discharges proposed to be authorized by the proposed permit modification will have no effect on the listed species in San Patricio County.

The standard reopener clause in the permit will allow EPA to reopen the permit and impose additional limitations if it is determined that changes in species or knowledge of the discharge would require different permit conditions.

Operators have an independent ESA obligation to ensure that any of their activities do not result in prohibited “take” of listed species. Section 9 of the ESA prohibits any person from “taking” a listed species, e.g., harassing or harming it, with limited exceptions. See ESA Sec 9; 16 U.S.C. §1538. This prohibition generally applies to “any person,” including private individuals, businesses and government entities. Operators who intend to undertake construction activities in areas that harbor endangered and threatened species may seek protection from potential “take” liability under ESA section 9 either by obtaining an ESA section 10 permit or by requesting coverage under an individual permit and participating in the section 7 consultation process with the appropriate FWS or NMFS office. Operators unsure of what is needed for such liability protection should confer with the appropriate Services.

XI. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no significant archeological deposits are encountered during construction and development of the property.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the Texas WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the WQS are either revised or promulgated. Should the State adopt a new WQS, and/or develop a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR §122.44(d). Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. COMPLIANCE HISTORY

This proposed permit is a modification of existing permit (for TX0134002) issued on April 16, 2020 and expires on May 31, 2025. The permit became effective on June 1, 2020. Since the permit just became effective, there are not enough data to determine permit compliance during the current permit cycle.

XV. CERTIFICATION

This permit is in the process of certification by the Texas Railroad Commission following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XVI. FINAL DETERMINATION

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

XVII. ADMINISTRATIVE RECORD

The following information was used to develop the modified permit:

A. APPLICATION

NPDES Application for Permit to Discharge, Form 1 & 2E, Permit modification Application received on May 29, 2020, and was deemed administratively on June 4, 2020.

B. State of Texas References

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

"Procedures to Implement the Texas Surface Water Quality Standards via Permitting," Texas Commission on Environmental Quality, June 2010.

2018 EPA-approved Texas Water Quality Standards, Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.9, effective May 19, 2020.

C. Endangered Species References

<https://ecos.fws.gov/ipac/location/R6DLCDYKORHKTJXJ5I4YKT3VWA/resources>

D. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

E. MISCELLANEOUS CORRESPONDENCE

Letter from Mr. Brent Larsen, EPA, to Mr. George Robinson, Corpus Christi Liquefaction, LLC, dated June 4, 2020, informing applicant that its NPDES permit is administratively complete.

Supplemental permit application information was received via email on June 8, 2020.