NPDES PERMIT NO. TX0134088
STATEMENT OF BASIS

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:

October 16th, 2019

PERMIT ACTION:

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 February 1, 2019.

RECEIVING WATER – BASIN:

The four outfalls discharge into the Sabine-Neches Canal Tidal Waterway, part of the Neches-Trinity Coastal Basin (Segment No. 0703) in Jefferson County, Port Arthur, Texas.

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
DF	Dilution Factor
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
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)
Menu 05	TCEQ TexTox Model: Discharge is directly to a bay, estuary or tidal water body with no upstream flow information
MGD	Million gallons per day
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)
SWP3	Stormwater Pollution Prevention Plan
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 PREVIOUS PERMIT

Not applicable, this is a first-time permit.

II. APPLICANT LOCATION AND ACTIVITY

As described in the application, the facility is to be located at Oil Field Road, Port Arthur, TX 77642; Jefferson County. Under SIC code 4922, the applicant intends to operate a state-of-the-art natural gas liquefaction plant and export terminal near Port Arthur in Jefferson County, Texas. The coordinates provided for the outfalls are:

Outfall 001: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 002: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 003: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 004: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 101: Internal outfall, final discharge from Outfalls 001, 002, 003, and 004

Wastewater discharges from the facility are as follows:

Outfall 001, 002, 003, and 004 intermittently discharge facility process wastewater (natural gas cleanup system, servicing and cleaning of turbine drives and compressors), non-process wastewater (general utility water, irrigation, firefighting system tests, etc.), hydrostatic test wastewater, and stormwater. The four outfalls discharge directly into the Sabine-Neches Canal Tidal Waterway. There is additionally an internal outfall, Outfall 101, in order to characterize hydrostatic test wastewater before discharge from the other four outfalls.

III. PROCESS AND DISCHARGE DESCRIPTION

As described in the permit application, the Port Arthur LNG facility will be a natural gas liquefaction plant and export terminal situated near Port Arthur, Texas in Jefferson County. Two onsite liquefaction trains will process pipeline-quality natural gas into liquified natural gas (LNG). The LNG will be collected in two onsite storage tanks and loaded onto vessels for export at the facility's marine berthing terminal. Water for the facility's use will be drawn from the Port Arthur municipal water supply system. Water from the municipal system will be used as both potable water and as general utility water. A trailer-mounted system will produce demineralized water using a strainer, ultra filtration unit, reverse osmosis system, electro deionization system, and de-aerator. If necessary, the facility will be able to draw supplemental water from the canal using firewater pump stations in order to maintain adequate pressure and flow in the firewater distribution system.

Five separate outfalls are planned for the facility. Four outfalls that discharge directly into the Sabine-Neches Canal Tidal Waterway and one internal outfall. The application states that any process wastewater (natural gas cleanup system, servicing and cleaning of turbine drives and compressors) generated for discharge will flow through Outfall 001, apart from hydrostatic test wastewater. Hydrostatic tests will be conducted on both new and used pipes and containers. Hydrostatic test wastewater will be tested at the internal outfall (Outfall 101) before being

discharged from any of the four other outfalls and will be disposed of off-site should it fail to meet effluent limits.

Discharge from Outfalls 001, 002, 003, and 004 will otherwise consist of stormwater and multiple non-process wastewater sources, including emergency eyewash and safety shower testing and use, firefighting system testing and use, condensation on equipment, overflow from demineralized and potable water storage, equipment and building wash down, work surface cleaning, line and equipment flushing, dust control, landscaping drainage, and water pipeline leaks. The permittee anticipates the need for several water treatment additives which may become part of the effluent discharge of Outfall 001, including sodium hypochlorite (corrosion inhibitor), chlorine bleach (biological control), coagulant, citric acid (pH adjuster), sodium hydroxide (pH adjuster and water softener), sodium bisulfite (corrosion inhibitor), Avista RoClean® L211 or equivalent (RO membrane cleaning), Avista RoClean® L403 or equivalent (RO membrane cleaner), GE MDC or equivalent (RO membrane antiscalant), Nalco Elimin-OX® or equivalent (corrosion inhibitor), sulfuric acid (pH adjuster), and Simple Green Heavy Duty Cleaner and Degreaser (cleaning solution). The facility will also employ Ansul Jet-X foam concentrate or equivalent (firefighting foam) and AFFF/ATC-type low expansion foam concentrate or equivalent (firefighting foam) during firefighting response activities.

Sanitary wastewater will be managed by a third-party vendor and disposed of off-site. No wastewater of any kind will be accepted by the facility from visiting berthed ships (such as ship bilge, ballast, sanitary, etc.)

The facility is planned for construction and has not yet had any discharges. Effluent characteristics (see below) were estimated for the permit application by the permittee based on Best Professional Judgement (BPJ). However, should any discharge occur, the discharge shall be sampled within one hour of beginning for the pollutants listed at 40 CFR 122, Appendix D, Tables III and IV, plus pH, hardness, TDS, and TSS and the results submitted to EPA and RRC within 90 days of initiating discharge. Should the discharge continue for more than one day, additional samples and analysis results shall be submitted for each additional day. No more than four complete sets of analytical results are required to be submitted. If practicable for a given discharge, additional samples after the first should be collected at least seven days apart. After four sets of analytical results have been submitted to EPA, this permit provision is no longer required for the term of this permit.

Table 1: Discharge Characteristics for Outfalls 001 and 101 (Form 2D)

	Outfall 101	**Outfall 001**
Parameter	**Max. Daily Value (mg/l)**	**Max. Daily Value (mg/l)**
Max. Flow	0.01 MGD	0.01 MGD
Avg. Flow	0.00003 MGD	0.0008 MGD
BOD_5	10	34
COD	50	238
TOC	50	50
TSS	90	100
Ammonia (as N)	0.5	0.5
Temp. (winter)	32°C	32°C
Temp. (summer)	32°C	32°C
pH (min.)	6.0 s.u.	6.0 s.u.
pH (max.)	9.0 s.u.	9.0 s.u.
Oil & Grease	15	15
Nitrate-nitrite		5

Phosphorus (total)		2.5
Sulfate (as SO4)		100
Chromium (total)		10 ug/l
Copper (total)		3 ug/l
Lead (total)		2 ug/l
Nickel (total)		5 ug/l
Zinc (total)		20 ug/l
Cyanide (total)		10 ug/l *
Acrylonitrile		20 ug/l
Benzene		10 ug/l
Carbon tetrachloride		2 ug/l
Chlorobenzene		10 ug/l
Chloroethane		50 ug/l *
Chloroform		10 ug/l
1,1-dichloroethane		10 ug/l *
1,2-dichloroethane		10 ug/l
1,1-dichloroethylene		10 ug/l
1,2-dichloropropane		10 ug/l
1,3-dichloropropylene		10 ug/l
Ethylbenzene		10 ug/l
Methyl chloride		50 ug/l *
Methylene chloride		20 ug/l
Tetrachloroethylene		10 ug/l
Toluene		10 ug/l
1,2-trans-dichloroethylene		10 ug/l *
1,1,1-trichloroethane		10 ug/l
1,1,2-trichloroethane		10 ug/l
Trichloroethylene		10 ug/l
Vinyl chloride		10 ug/l
2-chlorophenol		10 ug/l *
2,4-dichlorophenol		10 ug/l *
2,4-dimethylphenol		10 ug/l
4,6-dinitro-o-cresol		50 ug/l *
2,4-dinitrophenol		50 ug/l *
2-nitrophenol		20 ug/l *
4-nitrophenol		50 ug/l *
Phenol		10 ug/l *
Acenaphthene		10 ug/l *
Acenaphthylene		10 ug/l *
Anthracene		10 ug/l
Benzo (a) anthracene		5 ug/l
Benzo (a) pyrene		5 ug/l
3,4-benzofluoranthene		10 ug/l *
Benzo (k) fluoranthene		5 ug/l *
Bis (2-ethylhexyl) phthalate		10 ug/l
Chrysene		5 ug/l
1,2-dichlorobenzene		10 ug/l
1,3-dichlorobenzene		10 ug/l
1,4-dichlorobenzene		10 ug/l
Diethyl phthalate		10 ug/l *
Dimethyl phthalate		10 ug/l *
Di-n-butyl phthalate		10 ug/l
Fluoranthene		10 ug/l *
Fluorene		10 ug/l *
Hexachlorobenzene		5 ug/l
Hexachlorobutadiene		10 ug/l
Hexachloroethane		20 ug/l
Naphthalene		10 ug/l *
Nitrobenzene		10 ug/l
Phenanthrene		10 ug/l
Pyrene		10 ug/l *
1,2,4-trichlorobenzene		10 ug/l *

* Toxic pollutants provided in Form 2D that do not have state criteria monitored by TCEQ TexTox Modeling.

Table 2: Discharge Characteristics for Outfalls 002, 003, and 004 (Form 2F)

	Outfall 002	Outfall 003	Outfall 004
Parameter	**Max. Daily Value (mg/l)**	**Max. Daily Value (mg/l)**	**Max. Daily Value (mg/l)**
Max. Flow	18.72 MGD	9.9 MGD	13.96 MGD
Avg. Flow	1.46 MGD	0.77 MGD	1.09 MGD
Oil & Grease	15	15	15
BOD_5	10	10	10
COD	50	50	50
TSS	100	100	100
Total Phosphorus	2.5	2.5	2.5
TKN	5	5	5
Total Nitrogen (as N)	5	5	5
pH (min.)	6.0 s.u.	6.0 s.u.	6.0 s.u.
pH (max.)	9.0 s.u.	9.0 s.u.	9.0 s.u.

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 the 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.

It is proposed that the permit be issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). This is a first-time permit issuance. An NPDES Application for a Permit to Discharge (Forms 1, 2D, & 2F, and supporting information) was received on 07/25/2019. The application as deemed administratively complete on 11/14/2019.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITION 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

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 pursuant to 40 CFR 125.3(c)(2). 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

The facility will discharge LNG and hydrostatic process water, facility general-use non-process water, and stormwater. There are no published ELG's for this type of activity. Permit limits are proposed based on BPJ. Since discharges are batch discharges of short-term duration, limits in this permit will be expressed in terms of daily maximum concentrations rather than in terms of mass limitations, as allowed by 40 CFR 122.45(e) and (f).

Limitations for Oil & Grease, TSS, TOC, and pH are proposed in the permit. The proposed limitation for TSS is 45 mg/l maximum for internal outfall 101 and 100 mg/l for outfalls 001, 002, 003, and 004. TOC is an indicator of the total amount of organically bound carbon. A daily maximum TOC limitation of 50 ug/L is proposed in the draft permit. A technology-based limit of 15 mg/l for Oil and Grease should assure that the narrative criterion is maintained.

Stormwater has been identified by the permittee as a component of the discharge through Outfalls 001, 002, 003, and 004. A requirement to develop a Stormwater Pollution Prevention Plan (SWP3) is proposed in the draft permit. It is proposed that the facility conduct an annual inspection of the facility to identify areas contributing to the storm water discharge and identify potential sources of pollution which may affect the quality of storm water discharges from the facility.

The proposed permit requires the permittee to develop a site map. The site map shall include all areas where storm water may contact potential pollutants or substances which can cause pollution. It is also proposed that all spilled product and other spilled wastes be immediately cleaned up and properly disposed. The permit prohibits the use of any detergents, surfactants or other chemicals from being used to clean up spilled product. Additionally, the permit requires all

waste fuel, lubricants, coolants, solvents or other fluids used in the repair or maintenance of vehicles or equipment be recycled or contained for proper disposal. All diked areas surrounding storage tank(s) or stormwater collection basin(s) shall be free of residual oil or other contaminants so as to prevent the accidental discharge of these materials in the event of flooding, dike failure, or improper draining of the diked area. The permittee shall amend the SWP3 whenever there is a change in the facility or change in operation of the facility.

Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day if feasible. The discharges are intermittent; so the mass limits are not applicable to this facility.

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.

2. Implementation

The NPDES permits contain 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. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The Clean Water Act in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR 122.44(d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant. If the discharge poses the reasonable potential to cause an in-stream violation of narrative standards, the permit must contain prohibitions to protect that standard. Additionally, the TWQS found at 30 TAC Chapter 307 states that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" (IP) is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater which: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

The IP document is not a state water quality standard, but rather, a non-binding, non-regulatory guidance document. See IP at page 2 stating that "this is a guidance document and should not be interpreted as a replacement to the rules. The TWQS may be found in 30 TAC Sections (§§) 307.1-.10."). EPA does not consider the IP to be a new or revised water quality standard and has never approved it as such. EPA did comment on and conditionally "approve" the IP as part of the Continuing Planning Process (CPP) required under 40 CFR §130.5(c) and the Memorandum of Agreement between TCEQ and EPA, but this does not constitute approval of the IP as a water quality standard under CWA section 303(c). Therefore, EPA is not bound by the IP in establishing limits in this permit – but rather, must ensure that the limits are consistent with the EPA-approved state WQS. However, EPA has made an effort, where we believe the IP procedures are consistent with all applicable State and Federal regulations, to use those procedures.

The general criteria and numerical criteria which make up the stream standards are provided in the 2018 Texas Surface Water Quality Standards, Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.10, which EPA partially approved on November 2, 2018.

The designated uses of the nearest classified Texas water segment connected to Outfalls 101, 001, 002, 003 & 004, Segment 0703 (Sabine-Neches Canal Tidal), are primary contact recreation and high aquatic life.

4. Reasonable Potential - Procedures

EPA develops draft permits to comply with State WQS and, for consistency, attempts to follow the IP where appropriate. However, EPA is bound by the State's WQS, not State guidance, including the IP, in determining permit decisions. EPA performs its own technical and legal review for permit issuance, to assure compliance with all applicable State and Federal requirements, including State WQS, and makes its determination based on that review. Waste load allocations (WLA's) are calculated using estimated effluent dilutions, criteria outlined in the TWQS, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentrations that can be discharged and still meet instream criteria after mixing with the receiving stream. From the WLA, a long-term average (LTA) is calculated, for both chronic and acute toxicity, using a log normal probability distribution, a given coefficient of variation (0.6), and either a 90th or a 99th percentile confidence level. The 90th percentile confidence level is for discharges to rivers, freshwater streams and narrow tidal rivers with upstream flow data, and the 99th percentile confidence level is for the remainder of cases. For facilities that discharge into receiving streams that have human health standards, a separate LTA will be calculated. The implementation procedures for determining the human health LTA use a 99th percentile confidence level, along with a given coefficient of variation (0.6). The lowest of the calculated LTA; acute, chronic and/or human health, is used to calculate the daily average and daily maximum permit limits.

Procedures found in the IP for determining significant potential are to compare the reported analytical data either from the DMR history and/or the application information, against percentages of the calculated daily average water quality-based effluent limitation. If the average of the effluent data equals or exceeds 70% but is less than 85% of the calculated daily average limit, monitoring for the toxic pollutant will usually be included as a condition in the permit. If

the average of the effluent data is equal to or greater than 85% of the calculated daily average limit, the permit will generally contain effluent limits for the toxic pollutant. The permit may specify a compliance period to achieve this limit if necessary.

Procedures found in the IP require review of the immediate receiving stream and effected downstream receiving waters. Further, if the discharge reaches a perennial stream or an intermittent stream with perennial pools within three-miles, chronic toxicity criteria apply at that confluence.

5. 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

Criteria for pH is between 6.5 and 9.0 s.u. for the water segment 0703 pursuant to 30 TAC 307.10.

b. Benzene

Studies show that benzene is an appropriate BAT parameter representing the toxic hydrocarbons which may be present in hydrostatic test water discharges from existing natural gas pipelines. Studies also show that the daily maximum level of benzene representing BAT is selected as 50 µg/L. The TCEQ WQS standard for Benzene is 0.005 mg/l (5 µg/l). Since the TCEQ WQS is more stringent than the BAT, a benzene limit of 5 µg/l is proposed in the draft permit for Outfall 101.

c. BTEX

Benzene, toluene, ethylbenzene, and xylene are among the hydrocarbons typically found in water contaminated by liquid or gaseous petroleum hydrocarbons. Hydrocarbon condensates left by the natural gas are the major source of toxic pollutants in hydrostatic test water discharges from existing natural gas pipelines. The daily maximum level of BTEX representing BAT is 100µg/l. The TCEQ does not have a BTEX standard. As a result, a BTEX daily maximum limit of 100µg/l is proposed in the draft permit for Outfall 101.

d. Narrative Limitations

Narrative protection for aesthetic standards will propose that surface waters shall be maintained so that oil, grease, or related residue will not produce a visible film or globules of grease on the surface or coat the banks or bottoms of the watercourse; or cause toxicity to man, aquatic life, or terrestrial life pursuant to 30 TAC 307.4(b).

The following narrative limitations in the proposed permit represent protection of water quality for all Outfalls: "The effluent shall contain no visible film of oil or globules of grease on the surface or coat the banks or bottoms of the watercourse."

e. Total Residual Chlorine (TRC)

TRC shall be limited to 0.019 mg/l in Outfalls 101, 001, 002, 003, and 004 due to the use of municipal water supply and sodium hypochlorite. The EPA chlorine criteria are 19 µg/L for acute exposure and 11µg/L for chronic exposure. Limits must be protective of WQS per 40 CFR 122.4(d) and 122.44(d). Since the acute conditions do not allow dilution that limit must be met at end-of-pipe, though chronic standards do allow dilution. The permit shall use the most stringent WQS for the permit limit.

Chronic critical dilution is 8%. The in-stream TRC concentration after allowing for dilution is: 11 µg/L ÷ 0.08 = 137.5 µg/L. Since this value is more than the 19 µg/L end-of-pipe acute standard, the 19 µg/L is more stringent and will be more protective. The draft permit shall establish the 19 µg/L limit. 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 a MQL for TRC at 33 µg/L. Values less than 33 µg/L can be reported as zero.

f. Dissolved Oxygen (DO)

A limit for dissolved oxygen is proposed for Outfall 001 due to the use of oxygen scavenger additives in the facility's water treatment system. Based on the high aquatic life use classified for the receiving stream, the proposed permit establishes the minimum dissolved oxygen limit of 3.0 mg/L, with a mean dissolved oxygen of 5.0 mg/L. In the spring, the minimum dissolved oxygen limit shall be 4.0 mg/L, with a mean dissolved oxygen of 5.0 mg/L. The spring months are defined here as March through June. To avoid issues related to monthly averaging with two different limits in the same month, while remaining protective of state WQS, the spring dissolved oxygen limits will be applied for all of March through June.

g. Toxics

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant.

Effluent from Outfall 001 discharges directly to Sabine-Neches Canal Tidal, Texas Segment 0703, which is characterized as a bay, estuary or tidal water body with no upstream flow

information. TCEQ'S TexTox Menu 05 (Discharge is directly to a bay, estuary or tidal water body with no upstream flow information) is appropriate for evaluating this discharge.

The Sabine-Neches Canal Tidal is greater than 400 feet wide at the point of discharge, with average permitted flow from each outfall being less than 10 Million Gallons per Day. Therefore, the TCEQ IP states chronic toxic criteria may apply at 8% (Mixing Zone), acute criteria at 30% (Zone of Initial Dilution), and human health criteria at 4% (MZ = 8%; ZID = 30%; HH = 4%). Human health criteria apply for Saltwater Fish Tissue.

The reasonable potential calculations (IP, page 168) were performed based on data obtained from the permit application and data collected from the nearest classified water segment. Specific values for receiving water pH, TSS, total hardness, TDS, chloride, and sulfate values were obtained from table D-7 of the IP. For Texas Segment 0703, values for pH, TSS, total hardness, TDS, chloride and sulfate are listed as 6.6 s.u., 11 mg/L, 288 mg/L as CaCO3, 9000 mg/L, 4780 mg/L, and 650 mg/L, respectively. These values were used to calculate reasonable potential with TexTox Menu 05.

The permittee listed values, determined via BPJ, for 61 toxic pollutants which they believe will be present in the facility's Outfall 001 effluent discharge. Out of these 61 pollutants, 38 have state water criteria monitored by TCEQ TexTox Modeling.

The result of the TexTox Menu 05 model run revealed that phenanthrene, benzo(*a*)anthracene, benzo(*a*)pyrene, hexachlorobenzene, and hexachlorobutadiene showed reasonable potential to violate TSWQS based on the values provided. The average concentration of phenanthrene was reported as 10 µg/L. This value exceeded 70% of the calculated daily average limit (8.45 µg/L) and, as a result, the final permit established monitoring requirements for phenanthrene. The average concentration of benzo(*a*)anthracene was reported as 5 µg/L (85% of limit: 0.726 ug/L), benzo(*a*)pyrene as 5 µg/L (85% of limit: 0.073 ug/L), hexachlorobenzene as 5 µg/L (85% of limit: 0.020 ug/L), hexachlorobutadiene as 10 µg/L (85% of limit: 6.39 ug/L). These values exceed 85% of their calculated daily average limits and, as a result, the final permit established limitations and monitoring requirements for these pollutants. See the attached Outfall 001 TexTox Menu 5 for details.

The facility is planned for construction and has not yet had any discharges. Effluent characteristics were estimated for the permit application by the permittee based on Best Professional Judgement (BPJ). A review of the effluent characteristics contained in the permit application is not a true representation of the facility's discharges. However, should any discharge occur, the discharge shall be sampled within one hour of beginning for the pollutants listed at 40 CFR 122, Appendix D, Tables III and IV, plus pH, hardness, TDS, and TSS and the results submitted to EPA and RRC within 90 days of initiating discharge. Should the discharge continue for more than one day, additional samples and analysis results shall be submitted for each additional day. No more than four complete sets of analytical results are required to be submitted. If practicable for a given discharge, additional samples after the first should be collected at least seven days apart. After four sets of analytical results have been submitted to EPA, this permit provision is no longer required for the term of this permit. Reasonable potential calculations shall be revisited based on the updated effluent characteristics.

Solids and Foam:

The prohibition of the discharge of floating solids or visible foam in other than trace amounts is proposed in the draft permit. In addition, there shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

h. Total Dissolved Solids (TDS)

Information included with the application shows that TDS is expected to be present in the discharge for outfall 001. TDS was screened using the method for "Bay or Wide Tidal River" specified in Figure 7 (page 186) in the IP. The effluent TDS concentration is compared to the segment TDS median and maximum. Tidal waters will be protected from the adverse effects of excessively high or excessively low salinities (compared to the normal salinity range of the receiving water). The absence of numerical criteria will not preclude evaluations and regulatory actions to protect estuarine salinity. Using these procedures, the TDS effluent concentration for the permit application is 150 mg/l. The permittee stated in its application that the receiving stream for Port Arthur LNG is Sabine-Neches Canal Tidal, Texas Segment 0703. According to Table D-24, Appendix D of the IP document, the segment TDS median concentration is 9,000 mg/L. Since the effluent TDS concentration is less than the segment TDS median, TDS limitations and monitoring requirements are not established in the proposed permit.

D. MONITORING FREQUENCY FOR 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, considering the nature of the facility, the previous permit, and past compliance history. Grab sample type is appropriate for intermittent discharge at the outfalls, except for TRC and pH, which must be analyzed within 15 minutes of sample collection. For any monitoring event, the first sample of any event shall be collected at least seven (7) days from the first sample of the previous monitoring event.

For Outfall 101: Monitoring for flow, TSS, TOC, TRC, Benzene, BTEX, Oil & Grease, and pH shall be daily by grab sample, when discharging.

For Outfall 001: Flow shall be recorded continuously, effluent discharge will be monitored for a visible oil sheen daily, and pH, DO, O&G, TSS, TRC, TOC, phenanthrene, benzo(*a*)anthracene, benzo(*a*)pyrene, hexachlorobenzene, and hexachlorobutadiene monitored weekly.

For Outfalls 002, 003, and 004: Flow shall be recorded continuously, effluent discharge will be monitored for a visible oil sheen daily, and pH, O&G, TSS, TRC, and TOC monitored weekly.

Parameter	Frequency at Outfall 001*	Frequency at Outfall 101*	Frequency at Outfall 002*	Frequency at Outfall 003*	Frequency at Outfall 004*
Flow	Continuous/Daily	Continuous/Daily	Continuous/Daily	Continuous/Daily	Continuous/Daily
pH	Weekly	Daily	Weekly	Weekly	Weekly
O&G	Weekly	Daily	Weekly	Weekly	Weekly
TSS	Weekly	Daily	Weekly	Weekly	Weekly
TRC	Weekly	Daily	Weekly	Weekly	Weekly
TOC	Weekly	Daily	Weekly	Weekly	Weekly
Visible Oil Sheen	Daily		Daily	Daily	Daily

Benzene		Daily			
BTEX		Daily			
DO	Weekly				
Phenanthrene	Weekly				
Benzo(*a*)anthracene	Weekly				
Benzo(*a*)pyrene	Weekly				
Hexachlorobenzene	Weekly				
Hexachlorobutadiene	Weekly				

* When discharge occurs.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity resulting from water additives and residual contamination of hydrostatic testing wastewater by previously used pipes and containers. Based on the Texas Implementation procedures, permittees that discharge into bays, estuaries, and wide tidal rivers (≥ 400 feet across) will normally conduct chronic WET tests with a critical dilution of 8% if the effluent flow is less than or equal to 10 MGD. EPA will not perform reasonable potential analysis because no test data are available at this time.

OUTFALLS 001, 002, 003, & 004

The outfalls are of a minor industrial nature with an estimated average flow of 0.0008 MGD (Outfall 001), 1.46 MGD (Outfall 002), 0.77 MGD (Outfall 003), and 1.09 MGD (Outfall 004). The outfalls discharge into a Menu 05, bay, estuary, or tidal water body with no upstream flow information. They discharge directly to the Sabine-Neches Canal Tidal, Texas Segment 0703. As stated above, the critical dilution for the facility is 8%.

Since the facility is a new discharger, there is no WET data; as a result, the EPA will not perform reasonable potential analysis. The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 3%, 5%, 6%, 8%, and 11%.

The TCEQ Implementation Plan directs the WET test to be a 7-day chronic test using vertebrate *Menidia beryllina* and invertebrate *Americamysis bahia* survival and growth tests at a quarterly (once per three month) frequency for the first year of the permit. If all WET tests pass during the first year, the permittee may request a monitoring frequency reduction for the either or both of the test species for the following 2-5 years of the permit. The invertebrate species (*Americamysis bahia*) may be reduced to twice per year and the vertebrate species (*Menidia beryllina*) may be reduced to once per year. If any tests fail during that time the frequency will revert to the quarterly frequency for the remainder of the permit term. Both test species shall resume monitoring at a quarterly frequency on the last day of the permit.

During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge natural gas liquefaction plant and export terminal process, non-process, and stormwater from Outfalls 001, 002, 003, and 004 – Discharge is to a bay, estuary, or tidal water body with no upstream flow information (Texas

Water Segment 0703; Sabine-Neches Canal Tidal). Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY (7-Day Static Renewal) (*1)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Americamysis bahia	Report	Once/Quarter	24-Hr Composite
Menidia beryllina	Report	Once/Quarter	24-Hr Composite

FOOTNOTES
1. Monitoring and reporting requirements begin on the effective date of this permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

F. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

VI. FACILITY OPERATIONAL PRACTICES

A. WASTE WATER 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.

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.

VI. IMPAIRED WATER – 303(d) LIST AND TMDL REQUIREMENTS

The receiving water (Sabine-Neches Canal Tidal, Segment 0703) of the Neches-Trinity Coastal Basin, is listed in 2016 Texas 303(d) List (EPA approved August 06, 2019) as impaired for bacteria under category 5c. As this facility does not anticipate discharging bacteria as part of its effluent discharge, no additional requirements beyond the already proposed technology-based and/or water-quality based requirements are needed in the proposed permit. Note also that 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.

VII. 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 new information is available which was not available at the time of permit issuance. Since this is a first time NPDES Permit for this discharge, antibacksliding does not apply.

VIII. ENDANGERED SPECIES CONSIDERATIONS

The effects of EPA's permitting action are considered in the context of the environmental baseline. The environmental baseline is established by the past and present impacts of all Federal, State, or private actions and other human activities in an action area; the anticipated impacts of all proposed Federal projects in an action area that have already undergone formal or early ESA §7 consultation; and the impact of State or private actions that are contemporaneous with the consultation in process (50 CFR §402.02).

Wastewater discharges will occur after the facility has been completed, which itself needed to have received the appropriate federal, state, and local authorizations, putting the construction into the environmental baseline. The scope of the evaluation of the effects of the discharge authorized by this permit were therefore limited to the effects related to the authorized discharge.

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, at http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action, there are 5 threatened species: West Indian Manatee, Piping Plover, Red Knot, Green sea turtle, Loggerhead sea turtle and 3 endangered species: Hawksbill sea turtle, Leatherback sea turtle, Kemp's Ridley sea turtle for Jefferson County as of October 30, 2019.

A description of the species and their effects to the proposed permit follows:

WEST INDIAN MANATEE (*Trichechus manatus*; Threatened)

The West Indian manatee is protected by the Marine Mammal Protection Act, prohibiting the harassment, hunting, capturing, or killing of all marine mammals. It is believed that the species will likely become endangered in most or all its range. Jefferson county is not designated as critical habitat. West Indian manatees are large, gray aquatic mammals with bodies that taper to a flat, paddle-shaped tail. They have two forelimbs, called flippers, with three to four nails on each flipper. Their head and face are wrinkled with whiskers on the snout. The manatee's closest relatives are the elephant and the hyrax. Manatees are believed to have evolved from a wading, plant-eating animal. The average adult manatee is about 10 feet long and weighs between 800 and 1,200 pounds. Manatees can be found in shallow, slow-moving rivers, estuaries, saltwater bays, canals, and coastal areas — particularly where seagrass beds or freshwater vegetation flourish. Manatees are a migratory species. Manatees are gentle and slow-moving animals. Most of their time is spent eating, resting, and traveling. Manatee are mostly herbivorous, however small fish and invertebrates can sometimes be ingested along with a manatee's normal vegetation diet. West Indian manatees have no natural enemies, and it is believed they can live 60 years or more. As with all wild animal populations, a certain percentage of manatee mortality is attributed to natural causes of death such as cold stress, gastrointestinal disease, pneumonia, and other diseases. A high number of additional fatalities are from human-related causes. Most human related manatee fatalities occur from collisions with watercraft. Other causes of human-related manatee mortality include being crushed and/or drowned in canal locks and flood control structures; ingestion of fish hooks, litter, and monofilament line; and entanglement in crab trap lines. Ultimately, loss of habitat is the most serious threat facing manatees in the United States today.

PIPING PLOVER (*Charadrius melodus*; Threatened)

Piping Plover is listed in Brazoria County as threatened. A small plover has wings approximately 117 mm; tail 51 mm; weight 46-64 g (average 55 g); length averages about 17-18 cm. Inland birds have more complete breast band than Atlantic coast birds. The non-breeding plovers lose the dark bands. The breeding season begins when the adults reach the breeding grounds in mid- to late April or in mid-May in northern parts of the range. The adult males arrive earliest, select beach habitats, and defend established territories against other males. When adult females arrive at the breeding grounds several weeks later, the males conduct elaborate courtship rituals including aerial displays of circles and figure eights, whistling song, posturing with spread tail and wings, and rapid drumming of feet. The plovers defend territory during breeding season and at some winter sites. Nesting territory may or may not contain the foraging area. Home range during the breeding season generally is confined to the vicinity of the nest. Plovers are usually found in sandy beaches, especially where scattered grass tufts are present, and sparsely vegetated shores and islands of shallow lakes, ponds, rivers, and impoundments. Food consists of worms, fly larvae, beetles, crustaceans, mollusks, and other invertebrates. The plovers prefer open shoreline areas, and vegetated beaches are avoided. It also eats various small invertebrates. It obtains food from surface of substrate, or occasionally probes into sand or mud. Destruction of habitat, disturbance and increased predation rates due to elevated predator densities in piping plover habitat are described as the main reasons for this species' endangered status and continue to be the primary threats to its recovery. The remaining populations, whether on the breeding or

wintering grounds, mostly inhabit public or undeveloped beaches. These populations are vulnerable to predation and disturbance. Research of available material finds that the primary cause for the population decreases leading to threatened or endangered status for these species is destruction of habitat.

RED KNOT (*Calidris Canutus rufa*; Threatened)

Red Knot is a medium-sized shorebird and the largest of the "peeps" in North America, and one of the most colorful. It makes one of the longest yearly migrations of any bird, traveling 15,000 km (9,300 mile) from its Arctic breeding grounds to Tierra del Fuego in southern South America. Their diet varies according to season; arthropods and larvae are the preferred food items at the breeding grounds, while various hard-shelled mollusks are consumed at other feeding sites at other times. The Red Knot nests on the ground, near water, and usually inland. The nest is a shallow scrape lined with leaves, lichens and moss. Males construct three to five nest scrapes in their territories prior to the arrival of the females. The female lays three or more usually four eggs, apparently laid over the course of six days. Both parents incubate the eggs, sharing the duties equally. The incubation period last around 22 days. The birds have become threatened as a result of commercial harvesting of horseshoe crabs in the Delaware Bay which began in the early 1990s. Delaware Bay is a critical stopover point during spring migration; the birds refuel by eating the eggs laid by these crabs (with little else to eat in the Delaware Bay). Causes for habitat loss in Red Knot populations include climate change, development and other effects (e.g., ocean acidification; warming coastal waters; marine diseases, parasites, and invasive species; sediment placement; recreation; and fisheries).

GREEN SEA TURTLE (*Chelonia mydas*; Threatened)

It is believed that the Green sea turtle will likely become endangered in most or all its range. Jefferson county is not designated as critical habitat. The species is generally found in the shallow waters of reefs, bays, and inlets. Green sea turtles nest on open beaches with minimal disturbance and often repeatedly return to nest on the same beaches. Human 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, underwater explosions, ingestion of marine debris, entanglement in marine debris, and poaching.

LOGGERHEAD SEA TURTLE (*Caretta caretta*; Threatened)

Though considered ‘threatened’ in Jefferson County, the Loggerhead sea turtle has populations in other areas that are endangered. Jefferson county is not designated as critical habitat. The species is generally found in the shallow waters of reefs, bays, and inlets. Loggerheads are the most abundant species in U.S. coastal waters and are often captured incidental to shrimp trawling. Shrimping is thought to have played a significant role in the population declines observed for the loggerhead. Maturity is reached at between 16-40 years. Mating takes place in late March-early June, and eggs are laid throughout the summer. Loggerheads are circumglobal, inhabiting continental shelves, bays, estuaries, and lagoons in temperate, subtropical, and tropical waters. In the United States, killing of nesting loggerheads is infrequent. However, in a number of areas, egg poaching is common. Erosion of nesting beaches can result in loss of nesting habitat. Loggerhead turtles eat a wide variety of marine debris such as plastic bags,

plastic and styrofoam pieces, tar balls, balloons and raw plastic pellets. Effects of consumption include interference in metabolism or gut function, even at low levels of ingestion, as well as absorption of toxic byproducts. Turtles are taken by gillnet fisheries in the Atlantic and Gulf of Mexico. Several thousand vessels are involved in hook and line fishing for various coastal species. Sea turtles are at risk when encountering an oil spill. Respiration, skin, blood chemistry and salt gland functions are affected. Pesticides, heavy metals and PCB's have been detected in turtles and eggs, but the effect on them is unknown. Turtles have been caught in saltwater intake systems of coastal power plants. The mortality rate is estimated at 2%. Underwater explosions can kill or injure turtles and may destroy or damage habitat. The effects of offshore lights are not known. They may attract hatchlings and interfere with proper offshore orientation, increasing the risk from predators. Turtles get caught in discarded fishing gear. The number affected is unknown, but potentially significant.

HAWKSBILL SEA TURTLE (*Eretmochelys imbricata*; Endangered)

The Hawksbill sea turtle is at risk of extinction in most or all of its range. Jefferson county is not designated as critical habitat. Hawksbill is a small to medium-sized sea turtle averaging approximately 2.8 feet in curved carapace length with a weight of approximately 176 pounds. Hawksbills reenter coastal waters when they reach approximately 20-25 cm carapace length. Coral reefs are widely recognized as the resident foraging habitat of juveniles, sub-adults and adults. This habitat association is undoubtedly related to their diet of sponges, which need solid substrate for attachment. The ledges and caves of the reef provide shelter for resting both during the day and night. Hawksbills are also found around rocky outcrops and high energy shoals, which are also optimum sites for sponge growth. Hawksbills are also known to inhabit mangrove-fringed bays and estuaries, particularly along the eastern shore of continents where coral reefs are absent. In Texas, juvenile hawksbills are associated with stone jetties. Hawksbills utilize both low- and high-energy nesting beaches in tropical oceans of the world. Both insular and mainland nesting sites are known. Hawksbills will nest on small pocket beaches and, because of their small body size and great agility can traverse fringing reefs that limit access by other species. They exhibit a wide tolerance for nesting substrate type. Nests are typically placed under vegetation. Threats to this species include: poaching, oil spills, vessel anchoring and groundings, artificial lighting at nesting sites, mechanical beach cleaning, increased human presence, beach vehicular driving, entanglement at sea, ingestion of marine debris, commercial and recreational fisheries, water craft collisions, sedimentation and siltation, and agricultural and industrial pollution.

LEATHERBACK SEA TURTLE (*Dermochelys coriacea*; Endangered)

The Leatherback sea turtle is at risk of extinction in most or all of its range. Jefferson county is not designated as critical habitat. Leatherback is the largest living turtle and is so distinctive as to be placed in a separate taxonomic family, Dermochelyidae. The carapace is distinguished by a rubber-like texture, about 4 cm thick, and made primarily of tough, oil-saturated connective tissue. No sharp angle is formed between the carapace and the plastron, resulting in the animal being somewhat barrel-shaped. The front flippers are proportionally longer than in any other sea turtle. Nesting occurs from February - July with sites located from Georgia to the U.S. Virgin Islands. During the summer, leatherbacks tend to be found along the east coast of the U.S. from the Gulf of Maine south to the middle of Florida. Leatherbacks become entangled in longlines, fish traps, buoy anchor lines and other ropes and cables. This can lead to serious injuries and/or death by drowning. Leatherback turtles eat a wide variety of marine debris such as plastic bags,

plastic and styrofoam pieces, tar balls, balloons and plastic pellets. Effects of consumption include interference in metabolism or gut function, even at low levels of ingestion, as well as absorption of toxic byproducts. Leatherbacks are vulnerable to boat collisions and strikes, particularly when in waters near shore. Marine turtles are at risk when encountering an oil spill. Respiration, skin, blood chemistry and salt gland functions are affected.

KEMP'S RIDLEY SEA TURTLE (*Lepidochelys kempii*; Endangered)

The Kemp's Ridley sea turtle is at risk of extinction in most or all of its range. There is proposed critical habitat for this species, it is not currently known whether Jefferson county would be designated as critical habitat. Kemp's ridley sea turtle is found in Brazoria County. Kemp's ridley sea turtles are the smallest of all extant sea turtles. Adult Kemp's ridleys' shells are almost as wide as long. Neonatal Kemp's ridleys feed on the available sargassum and associated infauna or other epipelagic species found in the Gulf of Mexico. In post-pelagic stages, the ridley is largely a crab-eater, with a preference for portunid crabs. Age at sexual maturity is not known, but is believed to be approximately 7-15 years, although other estimates of age at maturity range as high as 35 years. The major nesting beach for Kemp's ridleys is on the northeastern coast of Mexico. This location is near Rancho Nuevo in southern Tamaulipas. The species occurs mainly in coastal areas of the Gulf of Mexico and the northwestern Atlantic Ocean. Hunting of both turtles and eggs contributed to the decline of this species. Existing threats include: development and human encroachment of nesting beaches, erosion of beaches, vehicular traffic on beaches, fisheries, oil spills, floating debris, dredging, and explosive removal of old oil and gas platforms.

Determination:

The proposed permit establishes limits to meet the current state water quality standards for the area of discharge. The limits established in the proposed permit are protective and will have no impact on the habitats of this species. The permit includes limitations and/or monitoring requirements for flow, pH, DO, TRC, O&G, TSS, TOC, benzene, BTEX, phenanthrene, benzo(*a*)anthracene, benzo(*a*)pyrene, hexachlorobenzene, and hexachlorobutadiene. The proposed permit also includes biomonitoring requirements for *Menidia beryllina* and *Americamysis bahia* in a 7-day chronic toxicity test. These requirements are also consistent with the State of Texas implementation guidance.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. There is no information indicating the species are affected directly by the discharge. 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:

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.

IX. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

Based on supplemental information submitted by the facility dated 06/02/2015, the State Historic Preservation Officer concurred that "No historic properties affected - Project may proceed". Based on this, the issuance of the permit will have no impact on historical and/or archeological preservation.

X. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of 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.

XI. VARIANCE REQUESTS

None

XII. CERTIFICATION

This permit is in the process of certification by the State agency 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.

XIII. FINAL DETERMINATION

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

XIV. ADMINISTRATIVE RECORD

The following information was used to develop the draft permit:

A. Application

NPDES Application for Permit to Discharge, Form 1, 2D, & 2F with supplemental material dated 07/22/2019, received 07/25/2019. Maria Okpala determined the application to be incomplete in a letter sent to the applicant dated 09/16/2019. The applicant sent an updated application dated 10/17/2019, received by Matias Fernandez on 10/18/2019. Additional

supplemental materials were received on 11/14/2019. The application was determined to be complete on 11/14/2019.

B. State of Texas References

2016 Texas Integrated Report - Texas 303(d) List

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10

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

C. 40 CFR Citations

Sections 122, 124, 125, 133, and 136

D. Miscellaneous

Writing of draft permit passed over from Maria Okpala, EPA, to Matias Fernandez, EPA, on 10/16/2019.

Updated permit application received from permittee on 10/18/2019, modified to address information requests regarding the 'incomplete application' designation made by Maria Okpala.

Email from Matias Fernandez, EPA, to Monica Eues, CK Associates, on 10/24/2019 requesting additional information regarding the facility's hydrostatic wastewater disposal, oily water system, water additives, and Texas Historical Commission letter.

Received response from Monica Eues, CK Associates, on 10/28/2019 acknowledging receipt of the email.

Email from Matias Fernandez, EPA, to Monica Eues, CK Associates, on 11/07/2019 requesting additional information regarding the values of total dissolved solids (TDS) expected from the facility's outfalls.

Received response from Monica Eues, CK Associates, on 11/14/2019 clarifying the questions posed on 10/24/2019 and 11/07/2019 and providing a THC concurrence letter.

Email from Matias Fernandez, EPA, to Monica Eues, CK Associates, on 11/15/2019 again requesting the additive SDS sheets and further clarification on which outfall they discharge from.

Received response from Monica Eues, CK Associates, on 11/15/2019 clarifying the current state of acquiring the SDS sheets and clarifying the additive discharge route.

Email from Matias Fernandez, EPA, to Monica Eues, CD Associates, on 11/15/2019 notifying them of the approaching deadline SDS sheets needed for.

Received response from Monica Eues, CK Associates, on 11/15/2019 that she would attempt to hasten procurement of the SDS sheets.