

NPDES PERMIT NO. TX0134015
STATEMENT OF BASIS

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

APPLICANT:

Magellan East Houston Terminal
One William Center, OTC-8
Tulsa, OK 74172

ISSUING OFFICE:

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

PREPARED BY:

Maria E. Okpala
Environmental Engineer
NPDES Permits Branch (6WQ-PP)
Water Quality Protection Division
Voice: 214-665-3152
Email: okpala.maria@epa.gov

DATE PREPARED:

February 10, 2020

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 7, 2020.

RECEIVING WATER – BASIN

Hunting Bayou, Water Body Segment No. 1007R, Houston Ship Channel/Buffalo Bayou Tidal of the San Jacinto River Basin

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. Electronic DMR reporting requirements have been updated in the draft permit.
2. MQL requirements in Part II of the draft permit have been updated to reflect sufficiently sensitive EPA-approved analytical methods have been updated.

II. APPLICANT LOCATION and ACTIVITY

The proposed permit allows only the hydrostatic test discharge water from tanks and piping associated with transporting crude oil. Existing tanks at the site are used to store crude petroleum products. Magellan East Houston Terminal is located at 7901 Wallisville Road, Harris County, Texas.

Under the SIC code 4612, Crude Petroleum Pipelines, the facility is an existing “for hire” bulk storage terminal for refined petroleum products. The facility plans to construct new tanks and pipelines at the site for the storage and conveyance of crude oil. Both new and existing tanks and pipelines shall be hydrostatically tested using municipal water. The hydrostatic test water from other Magellan terminals will either be piped to the Magellan East Houston terminal or hauled via tanker truck for discharge.

The facility proposes to use carbon filtration to treat waste water that is suspected of being contaminated. The use of carbon filtration is optional and will not necessarily be used to treat each individual discharge. The facility may also treat the wastewater with acid or sodium bisulphite, if required. The source water is from the municipal water supply, which contains chloramines. If necessary, chemical treatment will be performed to remove chloramines from the source water.

III. DISCHARGE LOCATION

The discharge points showing Outfall number, discharge coordinates: latitude and longitude, county, average flow rate in millions 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''	County	Max Flow MGD	Receiving Water	Segment #
001	29° 47' 43.905" N 95° 17' 4.699" W	Harris	0.72	Hunting Bayou	Segment No. 1007
002	29° 47' 46.723" N 95° 16' 59.554" W	Harris	0.72	Hunting Bayou	Segment No. 1007
003	29° 47' 52.263" N 95° 16' 54.416" W	Harris	0.72	Hunting Bayou	Segment No. 1007
004	29° 47' 56.396" N 95° 16' 49.741" W	Harris	0.72	Hunting Bayou	Segment No. 1007
005	29° 47' 57.770" N 95° 16' 44.400" W	Harris	0.72	Hunting Bayou	Segment No. 1007
006	29° 47' 58.451" N 95° 16' 42.168" W	Harris	0.72	Hunting Bayou	Segment No. 1007
007	29° 47' 49.692" N 95° 16' 59.097" W	Harris	0.72	Hunting Bayou	Segment No. 1007
008	29° 47' 54.637" N 95° 16' 54.136" W	Harris	0.72	Hunting Bayou	Segment No. 1007

IV. DISCHARGE DESCRIPTION

The terminal is an existing “for hire” bulk storage terminal. The facility proposes to construct new tanks and pipelines at the site for storage and conveyance of crude oil. The facility provided estimate for the following parameters:

Parameter	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	0.79 (1.22 cfs)	0.79 (1.22 cfs)
pH, su	6.62 – 6.95	
BOD	N/A	
Oil & Grease	2.5	<2.0
TSS	2.95	2.19
Ammonia	NA	NA

The designated uses of for Segment No. 1007 are navigation, and industrial water supply.

V. 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.

It is proposed that the permit be re-issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). This is a renewal of an existing permit. An NPDES Application for a Permit to Discharge (Form 1 & 2E) dated November 20, 2019, was received on November 26, 2019. The permit application was deemed administratively complete on January 15, 2020.

VI. 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

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. Since hydrostatic test water 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, and pH are continued in the proposed permit. The proposed limitations for TSS are 30mg/l average, 45 mg/l maximum; and Oil & Grease is 15 mg/l maximum. The draft permit will not propose mass limits since the flow is variable and intermittent. Concentration limits will be protective of the stream uses.

Since an existing tanks and pipelines will be hydrostatically tested, limitations for TOC is proposed to be limited under Best Available Technology Economically Achievable based on Best Professional Judgment. TOC is an indicator of the total amount of organically bound carbon. A daily maximum limitation of 50mg/L is proposed in the draft permit.

Benzene, toluene, ethylbenzene, and xylenes (BTEX) are among the hydrocarbons typically found in water contaminated by liquid or gaseous petroleum hydrocarbons. The daily maximum level of BTEX representing BAT is 100µg/l. As a result, a BTEX daily maximum limit of 100µg/l is proposed in the draft 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.

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 2014 EPA-approved Texas Water Quality Standards, Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.9, effective November 2, 2018.

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.

For all Outfalls, the hydrostatic test water will be treated municipal water and be discharged into the Hunting Bayou, Segment No. 1007. Intake credits are not allowed for all Outfalls, since the source water will be obtained from treated municipal water supply and be discharged into Hunting Bayou.

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

Daily minimum and daily maximum permit limits of 6.0 standard units to 9.0 standard units are typically used on hydrostatic test general permits developed by other EPA Regions and States. TAC 307.10 states, "The pH criteria are listed as minimum and maximum values expressed in standard units at any site within the segment."

However, wastewater discharges from the facility will flow into Hunting Bayou, Segment No. 1007, which has Texas WQS of 6.5 – 9.0 s.u. pH shall be limited to 6.5 – 9.0 s.u., the criteria listed for Segment 1007.

b. Total Residual Chlorine

TRC shall be limited to 0.019 mg/l in Outfall 001 because the source water is from municipal water supply. 19µg/L is EPA's acute chlorine criteria and 11µg/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.

The critical dilution is calculated as follows:

$$\begin{aligned}\text{Critical Dilution} &= \frac{\text{Effluent Flow}}{\text{Effluent flow} + 7Q2} \\ &= \frac{1.22 \text{ CFS}}{1.22 \text{ CFS} + 2.75 \text{ CFS}}\end{aligned}$$

$$= 0.307 = 30.7\%$$

The effluent TRC concentration after allowing for dilution is: $11\mu\text{g/L} \div 0.307 = 35.83\mu\text{g/L}$. Since this value is more than the $19\mu\text{g/L}$ end-of-pipe acute standard, the $19\mu\text{g/L}$ is more stringent and will be more protective. The draft permit shall establish $19\mu\text{g/L}$ limit. However TRC is toxic at measurable amounts, so in addition to the $19\mu\text{g/L}$ 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 $33\mu\text{g/L}$. Values less than $33\mu\text{g/L}$ can be reported as zero

c. Narrative Limitations

Narrative protection for aesthetic standards will require 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.

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."

d. 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 criteria, the permit must contain an effluent limit for that pollutant.

The applicant proposes to draw water from a municipal water supply, to conduct its hydrostatic testing. Hydrostatic test water will contact both new and existing tanks and pipelines. The facility is planning to add chemical treatment to treat for chloramines that are present in the potable water the facility receives from the City of Houston. The facility may also use carbon filtration to treat any contaminated wastewater. In addition to carbon filtration, the facility may also treat the waste wastewater with acid to adjust the pH as needed.

Based on the TCEQ's implementation procedure, Outfall 001 is MENU 3 (Discharge is directly to a perennial freshwater ditch, stream or river). The Outfall discharges into Hunting Bayou above Tidal. This is TCEQ Segment 1007R. The critical low flow, 7Q2 is 2.75 cfs and the harmonic mean is 6.17 cfs.

The permitted average flow from the facility is 0.79 MGD (1.22 cfs) and the Bayou is approximately 21 feet wide at the Discharge point. Critical Conditions are calculated for these values as follows:

Mixing Zone = $100 \times \text{Average Flow} / (7Q2 + \text{Avg Flow}) = 100 \times 1.22 / (2.75 + 1.22) = 30.7\%$

Zone of Initial Dilution = $100 \times \text{Avg Flow} / (0.25 \times 7Q2 + \text{Avg Flow}) = 100 \times 1.22 / (1.22 + 0.25 \times 2.75) = 63.96\%$.

Human Health = $100 \times \text{Average Flow} / (\text{HM} + \text{Avg Flow}) = 100 \times 1.22 / (6.17 + 1.22) = 16.51\%$ Human Health criteria apply for incidental freshwater fish tissue.

CRITICAL FLOWS:

USGS Gage 08067500 is located approximately 1.3 miles downstream from the outfall and is used as a reference gage for critical flow calculations. The Harmonic Mean and 7Q2 Low Flow for the gage are as follows:

Harmonic Mean (HM) = 6.57 cubic feet per second (cfs), 7Q2 = 2.93 cfs,

Contributing Area (CA) = 17.9 Square Miles (sq mi)

Outfall 001 has a CA= 16.8 sq mi and critical flows are calculated in the following way:

HARMONIC MEAN = Gage HM * (Outfall CA/Gage Ca) + Permit HM = $6.57 \times 16.8 / 17.9$
= 6.17 Cubic Feet per Second

7Q2 = Gage 7Q2 * (Outfall CA/Gage Ca) + Permit 7Q2 = $2.93 \times 16.8 / 17.9$
= 2.75 Cubic Feet per Second.

The discharges did not show potential to violate Texas WQS.

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.

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 all Outfalls, monitoring for flow, TSS, Oil & Grease, BTEX, TOC, total residual chlorine and pH shall be daily by grab sample, when discharging.

E. WHOLE EFFLUENT TOXICITY TESTING

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. The facility indicated that it is planning to add chemical treatment to treat for chloroamines, in addition to treating the wastewater with acid to adjust the pH. There appear that the discharge will have a potential for toxicity. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

OUTFALL 001

According to TCEQ implementation procedures, permittees that discharge directly into perennial freshwater streams or rivers with a designated or limited, intermediate, high, or exceptional aquatic life use will conduct chronic testing. In Section V.C.5.d. above; "Toxics", it was stated that the critical dilution, CD, for the facility is 30.7% (including a mixing zone). Based on the nature of the discharge; industrial, the estimated average flow; 0.79 MGD (1.22 cfs), the nature of the receiving water; perennial freshwater; the 2010 TCEQ IP directs the WET test to be a 7-day chronic test using chronic test species *Ceriodaphnia dubia* and *Pimephales promelas* at a quarterly 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 (*Ceriodaphnia dubia*) may be reduced to twice per year and the vertebrate species (*Pimephales promelas*) may be reduced to once per year. If any tests fail during that time the frequency will revert back to the once per three months 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.

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 12.09%, 16.12%, 23.03%, 30.7%, and 40.93%.

This is a renewal of an existing permit issued April 24, 2015. A review of the DMR reveals that the permittee had not performed biomonitoring during the last permit term. It is pertinent to note that there have been several non-discharges recorded in the DMR and WET monitoring are to be performed only during periods of discharge. As a result, there are no biomonitoring DMR reports to review. EPA concludes based on the nature of the discharge described as hydrostatic test wastewater, this effluent will not cause or contribute to an exceedance of the State water quality standards. Therefore, WET limits will not be established in the proposed permit. The permittee, however, will continue to perform biomonitoring during periods of discharge.

During the period beginning on the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to Hunting Bayou, Water Body Segment No. 1007R, Houston Ship Channel/Buffalo Bayou Tidal of the San Jacinto River Basin.

Discharges shall be monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE MONITORING</u>	
	<u>30-DAY AVG MINIMUM</u>	<u>7-DAY MINIMUM</u>
Whole Effluent Toxicity Testing (7 Day Static Renewal) <u>1</u> /		
<i>Ceriodaphnia dubia</i>	REPORT	REPORT
<i>Pimephales promelas</i>	REPORT	REPORT

EFFLUENT CHARACTERISTICMONITORING REQUIREMENTS

	<u>FREQUENCY</u>	<u>TYPE</u>
Whole Effluent Toxicity Testing (7 Day Static Renewal) <u>1/</u>		
<i>Ceriodaphnia dubia</i>	1/Quarter	24-Hr. Composite
<i>Pimephales promelas</i>	1/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.

EPA notes that 24-hour acute test is required for discharges from a few hours to 3 days, at a minimum of once per six months. If discharges from the facility should exceed 3 consecutive days, discharges will now be considered continuous and the facility shall perform 7-day chronic test, at a minimum of once ever quarter. This end-of pipe test measures compliance with 30 TAC §307.6(e)(2)(B) of the TSWQS, which requires that greater than 50% of the test organisms survive exposure to 100% effluent for 24 hours. This provision is designed to ensure that water in the state will not be acutely toxic to aquatic life.

The test shall be a 24-Hour, LC-50 at 100% critical dilution. This test shall be protective of the direct end-of-pipe discharge. The frequency for this test shall be once/six months when discharging.

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 from Outfalls 001 through 008. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (*1) (TX 24-Hr. LC50)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Ceriodaphnia dubia</i>	Report	Once/6 Months	Grab
<i>Pimephales promelas</i>	Report	Once/6 Months	Grab

F. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

VII. 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.

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

According to the 2016 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs), the receiving stream for Outfall 001, Hunting Bayou, Segment No. 1007R is listed for depressed dissolved Oxygen (DO). Depressed DO is under TCEQ's category 5c, which implies that additional data or information will be collected and/or evaluated for one or more parameters before a management strategy is selected.

Oxygen is added to water by re-aeration i.e. Oxygen from air is dissolved in water at its surface, mostly through turbulence. The nature of the hydrostatic test and dewatering activity associated with the Project would simulate the natural turbulences or re-aeration that occurs instream by allowing surface water to come in contact with air. This action would likely increase dissolved oxygen levels and would not contribute to the depressed DO levels.

In light of the nature of the system, the discharger is not likely to contribute to DO. Therefore, no additional requirements beyond the previously described technology-based or water quality-based effluent limitations and monitoring requirements, are established in the proposed permit.

The discharge water will not be treated with biocides or other additives. Therefore, no additional requirements beyond the previously described technology-based or water quality-based effluent limitations and monitoring requirements, are established in the proposed permit.

IX. 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.

X. 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.

XI. ENDANGERED SPECIES

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). Hydrostatic test water discharges occur after a pipeline has already been put in place following earth disturbing activities that have had to have received appropriate federal, state, and local authorizations putting the construction of pipeline itself into the environmental baseline. 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.

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, <http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action>, five species are listed as endangered or threatened in Harris County. They are Texas Prairie dawn flower (*Hymenoxys texana*), West Indian Manatee (*Trichechus manatus*), Least tern (*Sterna antillarum*), Piping Plover (*Charadrius melodus*) and Red Knot (*Calidris*). The description of the species and its effect on the hydrostatic test discharge is described below.

TEXAS PRAIRIE DAWN FLOWER (*Hymenoxys texana*):

Texas Prairie Dawn is a delicate annual one to six inches tall. Its yellow flower heads, less than 1/2 inch in diameter, stand out brightly in the patches of dull gray barren sand in which the species is normally found.

Texas Prairie Dawn flowers in March - early April; disappear by mid-summer. It is known from about 50 sites, many within Addicks and Barker Reservoirs in western Harris County. However, habitat destruction by urban development continues to threaten this tiny plant. It grows in sparsely vegetated areas ("slick spots") at the base of mima mounds ("pimple mounds") or other nearly barren areas on slightly saline soils in coastal prairie grasslands. This wildflower is found in Fort Bend and Harris counties, southeast Texas. This species occurs within and on the outskirts of Houston.

WEST INDIAN MANATEE (*Trichechus manatus*)

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.

LEAST TERN (*Sterna Antillarum*)

The Least tern populations have declined due to habitat destruction by permanent inundation, destruction by reservoir releases, channelization projects, alterations of Natural River or lake dynamics resulting in vegetational succession of potential nesting sites, and recreational use of potential nesting sites. Issuance of this permit is found to have no impact on the habitat of this species, as none of the aforementioned listed activities is authorized by this permitting action.

PIPING PLOVER (*Charadrius melodus*)

Piping Plover is listed in Harris 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. Issuance of the permit will have no effect on this species, in that the discharge is not expected to lead to the destruction of habitat.

RED KNOT (*Calidris canutus*)

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 molluscs 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).

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 this 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 will have no effect on the listed species in Harris 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.

XII. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

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

XIII. 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.

XIV. VARIANCE REQUESTS

No variance requests have been received.

XV. COMPLIANCE HISTORY

This is a renewal of an existing permit issued April 24, 2015. Review of the compliance history reveals that the permittee had TSS violations during May and June 2019, and there was an Administrative Order (AO) as a result of the TSS violations. The permittee has performed some correction action to control TSS effluent violations. These corrective actions include replacing sediment control devices (silt fence and hay bales) around the project site, which is currently in the re-vegetative process, additional sediment control devices (silt fence and hay bales) were installed in the stormwater conveyance structure, as well as the permittee installing filter bags on the ends of discharge hoses. Following these corrective actions, the permittee has achieved compliance with permitted TSS effluent limits. There were also significant / category 1 non-compliance during the quarters July 1, 2017 through December 31, 2018. These non-compliances were as a result of failure to report DMR or the DMRs were not received.

XVI. 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.

XVII. FINAL DETERMINATION

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

XVIII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION

NPDES Application for Permit to Discharge, Form 1 & 2E, received on November 26, 2019.

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.

2014 EPA-approved Texas Water Quality Standards, Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.9, effective November 2, 2018.

C. Endangered Species References

<http://www.tpwd.state.tx.us/huntwild/wild/species/txprdawn/>

<http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action>

D. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

E. MISCELLANEOUS CORRESPONDENCE

Letter from Brent Larsen, Chief, Lashunda Brown, EPA, to Mr. Steve Moyer, Environmental Specialist, Magellan East Houston Terminal Pipeline Company dated January 15, 2020, informing applicant that its NPDES application received November 26, 2020, is administratively complete.