NPDES PERMIT NO. TX0134080
STATEMENT OF BASIS

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

APPLICANT:

Enterprise Products Operating LLC
P.O. Box 4324 / ENV
Houston, TX 77210

ISSUING OFFICE:

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

PREPARED BY:

Matias C. Fernandez
Life Scientist
Permitting & Water Quality Branch (6WD-PE)
Phone: (214) 665-2754
Email: fernandez.matias@epa.gov

DATE PREPARED:

June 14th, 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

Discharges from Outfall 001 flow into an unnamed intermittent tributary leading towards Dark Slough/Sixmile Creek and freshwater forested/shrub wetlands, ultimately reaching Texas Segment 0505 of the Sabine River Above Toledo Bend Reservoir.

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 2	Intermittent water body within three miles of a perennial freshwater
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)
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

Under the SIC Code 1321, the applicant operates a natural gas processing facility.

As described in the permit application, the facility is located at 480 PR 8015, Carthage, Panola County, Texas.

Wastewater discharges from the facility are as follows:

Reverse osmosis (RO) reject water is comingled with non-contact stormwater in a manmade drainage swale prior to being discharged from a single outfall (Outfall 001). Outfall 001 discharges into an unnamed intermittent tributary leading to Dark Slough and freshwater forested/shrub wetlands before joining the perennial Sixmile Creek and ultimately Texas Segment 0505 (Sabine River Above Toledo Bend Reservoir).

Discharges are located at:

Outfall 001: 32° 8’ 51” N; 94° 16’ 8” W

III. PROCESS AND DISCHARGE DESCRIPTION

The facility consists of a gas processing plant, wherein raw natural gas will be processed through an amine treater, then dehydrated and separated into usable natural gas liquids and residue natural gas. Well water, drawn on-site, will be treated using reverse osmosis in order to provide the facility’s processing system with 9.2 gallons of purified water per minute. This water treatment will generate 6.2 gallons per minute of “RO Reject” water, containing impurities removed during the reverse osmosis process. The RO Reject water (proposed maximum of 8,298 gpd) will flow into a manmade drainage swale and comingle with non-contact stormwater (variable; estimated 853,010 gallons per year) before being discharged from Outfall 001.

The facility is under construction and has not yet had any discharges. Effluent characteristics (Table 1) were estimated for the permit application by the permitee based on sampling data from a comparable facility, as seen in a laboratory analysis supplement provided with the application. 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, Chloride, and TSS and the results submitted to EPA and RRC. 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. 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 Outfall 001

Values based on data from Enterprise Products - Yoakum RO Reject Water.
Estimated Maximum Discharge Flow: 0.008298 MGD

Parameter	Max. Daily Value (mg/L)
BOD	2
COD	49
TSS	3
Oil & Grease	<5
pH, s.u	7.51
TOC	1
Ammonia (as N)	0.07
TDS	1220
Chloride	287
Sulfate, IC	74
Sulfide	<0.05
Chromium, Trivalent	<0.002
Chromium	<0.002
TKN-Kjeldahl-N-T	1
Phosphorous, Total	0.33
Phenols, Total	<0.0099
Aluminum	<0.01
Calcium	181 (DF 20)
Barium	0.351
Dissolved Oxygen	6.29
Cyanide, Total	<0.01
Benzene	<0.0002
Arsenic	0.0102
Nickel	<0.003
Magnesium	29.6 (DF 20)
Barium	0.351
Cadmium	<0.0003
Chromium, Hexavalent	<0.003
Silver	<0.001
Sodium	254 (DF 20)
Iron	0.426
Lead	0.00545
Mercury, Total	<0.00008
Selenium	<0.002
Zinc	0.0752
Copper	0.00288
Manganese	0.014
Potassium	12.1

IV. REGULATORY AUTHORITY/PERMIT ACTION

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

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 (Form 1 & 2E) was received on April 5, 2019. The application as deemed administratively complete on April 30, 2019, with a letter notifying the permitee of completeness sent on May 9th, 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. Water quality-based effluent limitations are established in the draft permit for pH.

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

Since there is no published ELG for this type of activity, final effluent limitation is based on BPJ. The facility will discharge RO reject water. No treatment system will be employed, and the water will not come in contact with gas processing.

BOD_5 and/or COD limits are not included due to the nature of the discharge and the lack of any water treatment chemicals.

The narrative limitation for Oil & Grease is established in the proposed permit based on the TCEQ narrative standard to limit Oil & Grease.

Stormwater has been identified by the permittee as a component of the discharge through Outfall 001. Stormwater pollution prevention plan (SWP3) requirements are established in the proposed 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 tanks or stormwater collection basins 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.

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 assigned Texas water segment connected to Outfall 001, Segment 0505 (Sabine River Above Toledo Bend Reservoir), are primary contact recreation, high aquatic life and public water supply.

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

Wastewater discharges from Outfall 001 into an unnamed intermittent tributary leading towards Dark Slough/Sixmile Creek and freshwater forested/shrub wetlands before ultimately reaching the Sabine River, Texas Segment 0505. Criteria for pH is between 6.0 and 8.5 s.u. for the water segment pursuant to 30 TAC 307.10.

b. 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.

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."

c. 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.

Outfall 001 discharges to an unnamed intermittent tributary leading towards Dark Slough and freshwater forest/shrub wetlands, eventually flowing into the perennial Sixmile Creek within approximately 2.5 miles. The discharge ultimately reaches the Sabine River Above Toledo Bend Reservoir (Texas Segment No. 0505). TCEQ'S TEXTOX Menu 2 (Discharge is to an intermittent water body within three miles of a perennial freshwater ditch, stream or river) is appropriate for evaluating this discharge. 7Q2 and harmonic mean (HM) flow values are calculated for the perennial water body. The critical low flow, site specific 7Q2 and HM for the perennial receiving stream is 0.72 cfs and 3.37 cfs, respectively, calculated based on a representative drainage-area ratio calculation of USGS Gage 08020980. Since the perennial receiving water is a second order stream human health criteria apply for Incidental Freshwater 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 assigned water segment. Discharges from Outfall 001 consist of reverse osmosis reject water comingled with stormwater. Specific values for receiving water pH, TSS, total hardness, TDS, chloride, and sulphate values were obtained from table D-5 of the IP. For Segment 0505, values for pH, TSS, total hardness, TDS, chloride and sulfate are listed as 6.7, 16 mg/L, 42 mg/L as CaCO3, 237 mg/L, 39 mg/L, and 26 mg/L respectively. These values were used to calculate reasonable potential with Menu 2. No submitted effluent parameter is equal to or greater than 70% of the calculated daily average limits (see attached TEXTOX Menu 2 for detail). No toxic monitoring is required.

Since the facility obtains its water from a well, TRC limits are not proposed for Outfall 001.

d. TDS, Chloride (Cl), and Sulfate (SO_4)

TDS is screened using the method for "Unclassified Intermittent Stream within 3 Miles of a Perennial Freshwater Body" specified in Figure 7 (page 186) in the IP. Freshwater bodies more than 3 miles downstream of the discharge may be evaluated if they contain a drinking water supply. The discharge ultimately (>3 miles from outfall) flows into Segment 0505 (Sabine River Above Toledo Bend Reservoir), which includes public water supply as a use.

Equation 1a (IP, page 176); Unnamed Intermittent Water Body:

$$Ctds = \frac{Cc * 2{,}500\ mg/l}{500\ mg/l} = 2{,}000\ mg/l$$

Where,
C_C = Segment 0505 TDS criterion = 400 mg/l
C_{SV} = 2,500 mg/l because the IP states $C_{SV} = C_{TDS}$, to a minimum value of 2,500 mg/l
C_E = Effluent TDS concentration = 1,220 mg/l (representative laboratory analysis)
Thus, $C_E < C_{SV}$

Equation 2 (IP, page 177); Sixmile Creek:

$$\frac{QsCa + QeCe}{Qe + Qs} = 241\ mg/l$$

Where,
C_C = Segment 0505 TDS criterion = 400 mg/l
Q_S = Sixmile Creek (Unassigned) Harmonic mean flow = 3.37 cfs
C_A = Ambient TDS concentration for first downstream segment = 237 mg/l
Q_E = Effluent flow average = 0.01286 cfs
C_E = Effluent TDS concentration = 1,220 mg/l (representative laboratory analysis)
Thus, Cc ≥ 241 mg/l

Equation 2 (IP, page 177); Sabine River:

$$\frac{QsCa + QeCe}{Qe + Qs} = 237\ mg/l$$

Where,
C_C = Segment 0505 TDS criterion = 400 mg/l
Q_S = Sabine River (Segment 0505) Harmonic mean flow = 262 cfs
C_A = Ambient TDS concentration for first downstream segment = 237 mg/l
Q_E = Effluent flow average = 0.01286 cfs
C_E = Effluent TDS concentration = 1,220 mg/l (sample laboratory analysis)
Thus, Cc ≥ 237 mg/l

Since $C_E < C_{SV}$, Cc ≥ 241 mg/l (Sixmile Creek), and Cc ≥ 237 mg/l (Sabine River), a TDS limit is not required in the draft permit. TDS monitoring[1] at the outfall is still required monthly when discharge occurs. Collected data will be re-evaluated in the next permit renewal.

[1] Due to potential high level of TDS in the concentrate/backflush water generated from RO unit.

TDS screening guidelines for intermittent streams are intended to protect livestock, wildlife, shoreline vegetation, and aquatic life during periods when the stream is flowing; the screening is also intended to preclude excessive TDS loading in watersheds that could eventually impact distant downstream perennial waters.

Similarly, sulfate (SO_4) and chloride (Cl) concentrations were screened using Equation 1b found on page 177 of the IP.

$$Cl\ or\ SO4\ Csv = \frac{TDS\ Csv}{TDS\ criterion}\ x\ Cl\ or\ SO4\ criterion$$

Where:
TDS C_{SV} = 2,500 mg/L (see above), TDS criterion = 400 mg/L

	Cl criterion (175 mg/l)	**SO_4 criterion (100 mg/l)**
Calculated C_{SV}, mg/l	1,094	625
Effluent concentration, mg/l	287	74

Sulfate and chloride limits are not established in this draft permit since both estimated effluent concentrations are less than their calculated screening values (Chloride: 287 mg/l < 1,094 mg/l; Sulfate: 74 mg/l < 625 mg/l).

Solids and Foam:

The prohibition of the discharge of floating solids or visible foam in other than trace amounts is continued in the proposed 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, the previous permit, and past compliance history. pH must be analyzed within 15 minutes after sample is collected.

Parameter	**Frequency at Outfall 001**	**Sample Type**
Flow	Continuous/Daily*	Measured
pH	Monthly*	Instantaneous Grab (Analyzed within 15 minutes)
TDS	Monthly*	Grab

* 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. Based on the nature of this RO treatment unit, the TDS screening analysis, and the lack of

chemical treatments or chemical specific limitations, EPA does not propose any biomonitoring for Outfall 001.

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 2014 Texas 303(d) List, which the EPA approved on November 19, 2015, does not list the first receiving stream for Outfall 001 with an assigned water segment, Segment 0505, as impaired. If the waterbody is listed at a later date for additional pollutants, and a total maximum discharge loading determined for the segment, the standard reopener clause would allow the permit to be revised and additional pollutants and/or limits added. No additional requirements beyond the already proposed technology-based and/or water quality-based requirements are needed in the proposed permit

The draft 2016 and draft 2018 Texas 303(d) Lists include Segment 0505 as impaired for bacteria. However, the permitee does not plan to discharge bacteria.

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).

Reverse osmosis reject water 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, four species are listed as endangered or threatened in Panola county. These species include three bird species: Least Tern (*Sterna antillarum*; Endangered), Piping Plover (*Charadrius melodus*; Threatened), and Red Knot (*Calidris canutus rufa*; Threatened), and one plant species: Geocarpon (*Geocarpon minimum*; Threatened).

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

LEAST TERN (*Sterna Antillarum*; Endangered)

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.

PIPING PLOVER (*Charadrius melodus*; Threatened)

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' 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.

RED KNOT (*Calidris Canutus rufa*; Threatened)

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). 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.

GEOCARPON (*Geocarpon minimum*; Threatened)

Geocarpon is found in Texas within isolated saline prairie sites. Per a 2016 5-year status review (Initiated 09/23/2014; Federal Register 79 FR 56821 56823), Geocarpon populations are listed as ‘stable’. Researchers believe that the species requires some degree of disturbance/soil development to maintain its preferred habitat, therefore the primary threat to the species consists of competition from other vegetation due to a lack of disturbance. There is evidence that excessive disturbance by feral hog rooting may also threaten Geocarpon populations.

Determination:

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:

1. Submitted data shows no pollutants at levels which might affect species habitats. Issuance of this permit is found to have no impact on the habitats of the species.

2. The draft permit is consistent with the States WQS and does not increase pollutant loadings. Issuance of this permit is found to have no impact on the habitats of the species.

3. There is no designated critical habitat designated in the project area.

4. 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 Panola 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.

IX. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The facility provided supplemental information in the form of a letter from the Texas Historical Commission, dated February 8, 2019, in which the State Historic Preservation Officer concurred that "no historic properties will be affected by this undertaking." 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 & 2E with supplemental flow diagram, location map, discharge map, and laboratory analysis dated 03/29/2019, received 04/05/2019. A concurrence letter from the Texas Historical Commission was later additionally supplied on 06/14/2019.

B. State of Texas References

2014 Texas Integrated Report - Texas 303(d) List

Draft 2016 Texas Integrated Report - Texas 303(d) List

Draft 2018 Texas Integrated Report - Texas 303(d) List

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10, EPA partially approved November 2, 2018.

"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

Email from Matias Fernandez, EPA, to Quang Nguyen, EPA, requesting critical conditions for the application on 4/22/2019. In addition, discussed nature of receiving waters described in the application. After critical conditions advice and training from Michael Daniel, EPA, critical conditions were completed by Matias Fernandez, EPA, on 05/15/2019.

Matias Fernandez, EPA, met with Lauren Poulos, EPA, for advice on wetlands delineation and effluent discharge flow patterns on 4/23/2019.

Email from Matias Fernandez, EPA, to James G. White, Enterprise Products Operating LLC, on 4/25/2019 requesting additional information about permit application TDS/Chloride values, stormwater comingling, outfall receiving waters, and the application’s Texas Historical Commission concurrence letter. Received an automated out-of-office notice, but no further response was received.

Matias Fernandez, EPA, designated the application as administratively complete on 04/30/2019.

Letter from Dorothy Brown, EPA, to Mr. Ivan W. Zirbes, Panola 3 Gas Processing Plant, on 05/09/2019 informing them that their permit application dated 03/29/2019 and received on 04/05/2019 was administratively complete.

Matias Fernandez, EPA, received hard copy of letter notifying permitee of application completeness from Dorothy Brown, EPA, on 05/22/2019.

Email from Matias Fernandez, EPA, to Michael P. Souliere, Enterprise Products Operating LLC, on 5/24/2019 requesting additional information about permit application TDS/Chloride values, stormwater comingling, and the application's Texas Historical Commission concurrence letter. No response was received from Mr. Souliere.

Attempted phone calls from Matias Fernandez, EPA, to both James G. White and Michael P. Souliere, Enterprise Products Operating LLC, on 5/31/2019 requesting additional information about permit application TDS/Chloride values, stormwater comingling, and the application's Texas Historical Commission concurrence letter. Unable to reach either contact, message left with Mr. Souliere requesting a callback.

Phone call from Matias Fernandez, EPA, to James G. White, Enterprise Products Operating LLC, on 06/03/2019 in response to a phone message left by Mr. White. Mr. White provided information on TDS/Chloride values, stormwater comingling, and the application's Texas Historical Commission concurrence letter. Matias Fernandez, EPA, sent follow-up email on 06/04/2019 reviewing the topics discussed and the information requested.

Email from James G. White, Enterprise Products Operating LLC, on 06/14/2019 providing Texas Historical Commission concurrence letter and estimate of stormwater runoff volume.