

NPDES PERMIT NO. TX0002887
STATEMENT OF BASIS

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

APPLICANT:

Targa Resources
Mont Belvieu Fractionation Plant
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ISSUING OFFICE:

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Region 6
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DATE PREPARED:

August 2, 2018

PERMIT ACTION:

EPA proposes to modify the NPDES permit for the current permit issued on December 18, 2015, with an effective date of February 1, 2016, and an expiration date of January 31, 2021.

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 July 30, 2018.

RECEIVING WATER – BASIN

Unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin; Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal 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
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 6	Narrow Tidal Water
Menu 9	Intermittent water body within 3 miles of a tidal water body
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 PREVIOUS PERMIT

1. Limitations and Monitoring requirements for total Aluminum is removed from Outfall 001 based on new information.
2. The reporting requirements for total zinc and total copper is removed from Outfall 002 based on new information.
3. The limitations and monitoring requirements for total copper is established while the reporting requirements for total aluminum is removed from Outfall 103.
4. Chronic biomonitoring as well as the WET limit for *Mysidopsis bahia* are continued in this permit for Outfall 002 to continue assessing compliance.
5. Biomonitoring requirements at the internal Outfall 103 are being transferred to Outfall 003 to capture all the discharges going through the external outfall, including discharges from Outfall 103.

II. APPLICANT LOCATION and ACTIVITY

Under the SIC Code 1321, the applicant operates a natural gas liquid plant.

As described in the application, the facility is located at 10319 Hwy 146 North, Mont Belvieu, Chambers County, Texas.

The permittee is requesting the removal of effluent water quality limitations for total aluminum at Outfall 001, which is scheduled to become effective December 1, 2018. The facility performed a site-specific Aluminum Bioavailability Study. In this study, the facility stated that process knowledge related to the on-site processing of natural gas Liquids (NGLs) indicates that aluminum is not a by-product of industrial activities performed on-site. The site-specific study demonstrated that the discharge of aluminum via Outfall 001 is primarily particulate. In addition, the facility has eliminated the discharge of process wastewater at Outfall 001. The facility also stated that the 48-hour acute WET testing confirmed that the bioavailable fraction of aluminum in effluent from Outfall 001 is not expected to cause in-stream toxic effects in the receiving water body – an unnamed tributary of Cedar Bayou.

Discharges from Outfall 001 consist of stormwater runoff and fire testing water flows into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin.

Discharges are located on that water at:

Outfall 001: Latitude 29° 50' 14.85"N; Longitude 94° 54' 15.91"W

Discharges from Outfall 002 consist of existing process wastewater, Cedar Bayou Fractionator (CBF) cooling tower blowdown, R.O. Reject, Boiler Blowdown, and Process wastewater (Train 4/LEPI) which flows directly into Cedar Bayou Tidal via a dedicated pipe in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin at the following:

Outfall 002: Latitude 29° 49' 44.84"N; Longitude 94° 54' 43.33"W

Process wastewater from Outfall 002 is currently sampled on-site near the Cedar Bayou Fractionator (CBF).

Discharges from internal Outfall 103 (discharges from Train 5 plus LEP2 as well as future train 6 (2019), R.O. Reject, Boiler Blowdown, and LEP2 Blowdown will flow to an existing stormwater diversion ditch and flows west through the proposed Outfall 003 toward the Union Pacific railroad right-of-way, prior to flowing into an unnamed tributary of Cedar Bayou in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin, at the following:

Outfall 103: Latitude 29° 50' 2.14"N; Longitude 94° 53' 59.54"W

Discharges from Outfall 003 consist of a stormwater runoff comingled with internal Outfall 103, Train 5/LEPS Blowdown (internal Outfall 103), and 2019 future Train 6 (internal outfall 103) which ultimately flows into Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin at the following:

Outfall 003: Latitude 29° 50' 1.82"N; Longitude 94° 54' 0.65"W

The facility anticipates that the quality and quantity of wastewater discharged from Train 5 and Train 6 respectively will be identical to that discharged from Train 4. The makeup water for processes in Train 5 will come from well water.

III. PROCESS AND DISCHARGE DESCRIPTION

The site receives natural gas liquids (NGLs) via pipeline and truck. The NGLs are separated via a conventional fractionation process into marketable fractions including ethane, ethane/propane mix, propane, normal butane, iso-butane, and natural gasoline (e.g. heavier hydrocarbon fractions).

Process water is generated from cooling tower blowdown, boiler blowdown, reverse osmosis flush water, emergency water/plant service water and stormwater runoff.

The current NPDES Permit includes aluminum effluent limitations for discharges of safety/fire testing water and intermittent stormwater discharged from facility Outfall 001. The current permit also included a 34-month compliance period to attain effluent limitations for aluminum, but the permittee determined that compliance with aluminum effluent limitations at Outfall 001 would be problematic due to the intermittent nature and volume of the stormwater discharges and the suspected ambient source of aluminum associated with suspended solids in the stormwater.

The TSWQS and its IP provide an exclusion from a water quality-standards based aluminum limitation when process wastewater is not the source of aluminum and aluminum in the stormwater is primarily particulate. Therefore, TSWQS support removal of aluminum limitation in the NPDES permit for Outfall 001. The current effluent limitation for aluminum is based on the fact that 100% of aluminum present in the effluent is bioavailable. To further support the removal of aluminum, the permittee developed a site-specific sampling plan to evaluate the site-specific dissolved aluminum ratio to determine the bioavailability of aluminum in effluent and support removal of the limitation.

Since process wastewater is not discharged via Outfall 001, the primary objectives of the site-specific study included:

- 1) Determining if the presence of aluminum is primarily particulate-related;
- 2) Collecting enough representative storm event data to determine the site-specific bioavailable fraction of aluminum in stormwater and calculate water quality based

effluent limitations using a partitioning coefficient, in the event the dissolved portion constitutes greater than 50 percent of the total aluminum concentration; and

- 3) Conduct 48-hour acute WET of stormwater to determine the no observed effects concentration (NOEC) for total aluminum-spiked effluent.

The average flow from Outfall 001 over the past 2 years is 0.161 MGD, with a maximum 30 day value of 0.533 MGD. Similarly, the updated combined flow (Outfall 002 and Train 4) for Outfall 002, are the average flow of 0.271 MGD, with a maximum 30-day value of 0.445 MGD. The estimated average flow from Outfall 103 is 0.081 MGD, with a maximum 30-day value of 0.133 MGD.

Table 1: Discharge Characteristics

The table below shows facility's pollutant concentrations contained in the NPDES application.

Outfall 001:

Parameter	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	0.533	0.161
pH, su	7.17 min – 8.94 max	
TSS	NA	NA
TOC	NA	NA
BOD	262.2	27.49
Aluminum	7.87	1.16
Zinc	0.26	0.08
Copper	0.0241	0.0081

Outfall 002:

	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	0.445	0.271
pH, su	7.09 min – 8.37 max	
BOD	6.4	3.43
Copper	0.0625	0.02
Zinc	2.002	0.16
Aluminum	0.35	0.09
Arsenic	0.017	0.01

Outfall 103:

Parameter	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	0.133	0.081
pH, su I	7.08 min – 8.06 max	
BOD	6.7	2.66
Copper	0.09	0.02
Zinc	0.54	0.15

Parameter	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Nickel	0.0035	0.002
Aluminum	0.915	0.27
Arsenic	0.0102	0.01

Outfall 003:

	Max Concentration, mg/L unless noted	Average Concentration, mg/L unless noted
Flow, MGD	1.759	0.1823
pH, su I	7.3 min – 8.19 max	

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. Technology-based effluent limitations are established in the proposed draft permit for BOD₅. Water quality-based effluent limitations are established in the proposed draft permit for pH, zinc and copper.

B. REASON FOR PERMIT ISSUANCE

EPA proposes to modify the NPDES permit for the current permit issued on December 18, 2015, with an effective date of February 1, 2016, and an expiration date of January 31, 2021. It is proposed that the permit be modified for the removal of aluminum effluent limitations based on a request from Targa Resources, Mont Belvieu.

An NPDES Application for a Permit to Discharge (Form 1 & 2C) dated March 19, 2018, and additional application information dated June 28, 2018, was received via email on June 28, 2018, and July 24, 2018. The application was deemed administratively complete on August 2, 2018.

C. 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.

Previously established limitations for BOD₅ of 30 mg/l maximum and 20 mg/l average at Outfalls 001, 002 and 103 are continued in the modified permit.

Since flow is continuous, mass limits were also established and will be established in the modified draft permit as follows:

Outfall 001:

The draft permit established limitations and monitoring requirements for BOD₅ of 20 mg/l monthly average and 30 mg/l daily maximum at Outfall 001. The loading limits are calculated below:

lbs/day = Concentration of pollutant (mg/l) multiplied by 8.34 multiplied by Flow (MGD)
BOD₅ monthly average: 20 mg/l x 8.34 x 0.161 MGD = 26.85 lbs/day

EPA calculates the daily maximum values by multiplying the daily average by 1.5.

BOD₅ daily maximum = 40.28 lbs/day

Outfall 002:

lbs/day = Concentration of pollutant (mg/l) multiplied by 8.34 multiplied by Flow (MGD)
BOD₅ monthly average: 20 mg/l x 8.34 x 0.271 MGD = 45.20 lbs/day

EPA calculates the daily maximum values by multiplying the daily average by 1.5.

BOD₅ daily maximum: = 67.80 lbs/day

Internal Outfall 103:

The draft permit established a new internal Outfall 103 with limitations and monitoring requirements for BOD₅ of 20 mg/l monthly average and 30 mg/l daily maximum. The respective loading limits are 13.51 lbs/day and 20.27 lbs/day

lbs/day = Concentration of pollutant (mg/l) multiplied by 8.34 multiplied by Flow (MGD)
BOD₅ monthly average: 20 mg/l x 8.34 x 0.081 MGD = 13.51 lbs/day
BOD₅ daily maximum: = 20.27 lbs/day.

Stormwater has been identified by the permittee as a component of the discharge through Outfall Nos. 001 and 003. A requirement to develop a Stormwater Pollution Prevention Plan (SWP3) is continued in the 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 draft 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.

D. WATER QUALITY BASED LIMITATIONS

1. 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 the facility flow into Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity-San Jacinto Coastal Basin. The designated uses of Segment 0901, Cedar Bayou Tidal are primary contact recreation and high aquatic life. The instream pH standards for the Cedar Bayou Tidal, waterbody Segment 0901 is in the range of 6.5 to 9.0 su's. The current permit established pH limits of 6.5 - 9 at Outfalls 001 and 002, and is also continued in the modified draft permit. A pH limits of 6.5 – 9 is also established in the draft permit for Outfall 003.

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 draft permit represent protection of water quality for Outfalls 001, 002 and 003:

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

The current permit established the rationale that the discharge via Outfall 001 enters a freshwater streambed, and then within three-miles, enters an estuarine system. As a result, the discharge via Outfall 001 and 003 must first protect freshwater acute WQS, and human health and chronic protection shall be based on estuarine WQS. TSS, pH, hardness, and chlorides data for the freshwater Segment 0902, Cedar Bayou above Tidal, will be used for the freshwater acute conditions. These values are 3 mg/l, 7.1 s.u., 40 mg/l, and 83 mg/l respectively for Segment 0902, Cedar Bayou above Tidal.

For Outfall 001, the facility discharges into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity- San Jacinto Coastal Basin. The critical low flow, 7Q2 for Segment 0901, Cedar Bayou Tidal is 4.30 cfs (2.77 MGD), while the harmonic mean is 18.58 cfs (11.99 MGD). TCEQ'S TEXTOX Menu 9 (Discharge to an intermittent water body within 3 miles of a tidal water body (< 400 ft) with upstream flow information), is appropriate for evaluating the discharge.

For Outfall 002, discharge is directly to a tidal water body, Cedar Bayou Tidal in Segment 0901. The segment specific values for Cedar Bayou Tidal, Segment 0901 are TSS of 18 mg/l, hardness is 930 mg/l, pH is 7.4 s.u., and chloride is 2875 mg/l. The critical low flow, 7Q2 for Segment 0901, Cedar Bayou Tidal is 4.13 cfs (2.66 MGD), while the harmonic mean is 18.42 cfs (11.88 MGD). TCEQ'S TEXTOX Menu 6 (Discharge is directly to a tidal water body (<400 ft) with upstream flow information) is appropriate for evaluating the discharge.

For Outfalls 003 & 103, the facility discharges into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity- San Jacinto Coastal Basin. The critical low flow, 7Q2 for Segment 0901, Cedar Bayou above Tidal is 4.14 cfs (2.67 MGD), while the harmonic mean is 18.42 cfs (11.88 MGD). TCEQ'S TEXTOX Menu 9 (Discharge to an intermittent water body within 3 miles of a tidal water body (< 400 ft) with upstream flow information), is appropriate for evaluating the discharge.

For Outfall 001, the reasonable potential calculations were performed based on data obtained from the permit application using Menu 9 model run. The reasonable potential calculations performed for Outfall 001 show that total aluminum is less than 70% of the calculated daily average limit. As a result, total aluminum limitations and monitoring requirements at Outfall 001 is removed from the draft permit. The permit shall continue to monitor for total zinc at Outfall 001 based on the BPJ of the permit writer.

The reasonable potential calculations were also performed for Outfall 002, discharges into the Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity-San Jacinto Coastal using TCEQ'S TEXTOX Menu 6. Results of the model run for Outfall 002 reveal that none of the pollutants show reasonable potential to violate TSWQS. Also, the reporting requirements for total zinc and total copper is removed from Outfall 002 based on new information.

For internal Outfall 103, results of the model run reveals that total Zinc show reasonable potential to violate TSWQS. Limitation for total zinc is continued in the draft permit. Also, total copper showed reasonable potential to violate TSWQS, hence limitations and monitoring requirements is established in the draft permit. Total aluminum did not show reasonable potential to violate TSWQS and is removed from the draft permit.

Solids and Foam

The prohibition of the discharge of floating solids or visible foam in other than trace amount is continued 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.

E. 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.

For all Outfalls, flow shall be monitored continuously using a recording flow meter. For Outfalls 001, 002, and 003, pH shall be measured and recorded once per two weeks, using grab samples. For Outfalls 001, 002, and internal Outfall 103, BOD₅ shall be measured and reported once per two weeks, using grab sample. For Outfall 001 and 103, total zinc shall be measured and reported once per two weeks using grab sample. Also for Outfall 103, total copper shall also be measured and reported once per two weeks. For any reporting period, copper, zinc, pH and BOD₅ samples shall be taken at least seven (7) days from the first sample of the previous reporting period.

F. WHOLE EFFLUENT TOXICITY

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.

Because of the potential for toxicity, WET is continued at Outfalls 001 and 002. The previous requirements for Outfall 103 are being transferred to Outfall 003 to capture all the discharges going through the outfall (which include discharges from Outfall 103).

OUTFALL 001

The 2010 TCEQ Implementation Plan directs the WET test to be a 7-day chronic test using *Mysidopsis bahia* and *Menidia beryllina* 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 test species for the following 2-5 years of the permit. The vertebrate species (*Menidia beryllina*) may be reduced to once per year. The invertebrate species (*Mysidopsis bahia*) may be reduced to twice per year. If any tests fail during that time, the frequency will revert to quarterly frequency for the remainder of the permit term. Both species shall resume quarterly monitoring on the last day of the permit.

The permitted average flow from the facility is 0.161 MGD (0.25 cfs) and the bayou is approximately 53 feet wide at the Discharge point (which is less than 400 feet and considered narrow tidal). Critical Conditions are calculated for these values as follows:

% effluent, Mixing Zone (MZ) = $Q_{eff}/(Q_{eff}+7Q_2) * 100 = 0.25/(0.25+4.30) * 100 = 5.49 \%$;

Since MZ cannot be below 8, therefore MZ = 8.00 %

% effluent, Zone of Initial Dilution (ZID) = $Q_{eff}/(Q_{eff}+0.25(7Q_2)) * 100 = 0.25/(0.25+0.25(4.30)) * 100 = 18.87\%$; ZID = 30.00 %

% effluent, Human Health (HH) = $Q_{eff}/(Q_{eff}+HM) * 100 = 0.25/(0.25+18.58)*100 = 1.33 \%$, HH = 4.00 %.

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 low-flow effluent concentration (critical low-flow dilution) is defined as 8% effluent.

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 an unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY (7-Day Chronic NOEC) (*1)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Menidia beryllina</i>	Report	Once/Quarter	24-Hr Composite
<i>Mysidopsis bahia</i>	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. Grab samples are allowed per method, if necessary.

OUTFALL 002

Guidance in the ITWQS requires that a discharge to a narrow tidal river conduct chronic WET tests based on upstream flow data whenever flow information is available. The current permit established WET biomonitoring with CD= 10.9%. The CD for the proposed permit is 9% based on new flow information. The 2010 TCEQ Implementation Plan directs the WET test to be a 7-day chronic test for narrow tidal river using *Mysidopsis bahia* and *Menidia beryllina* at a quarterly frequency. The current permit granted the permittee one year to come into compliance with the Whole Effluent Toxicity limit for the *Mysidopsis bahia* test species which became effective in February of 2017. The chronic limit for the mysid with no frequency reduction option, is continued in this permit to continue assessing compliance for a full permit term. If all WET tests for *Menidia beryllina* pass during the first year, the permittee may request a monitoring frequency reduction for this test species for the following 2-5 years of the permit. The testing frequency using *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. Quarterly monitoring should be resumed on the last day of the permit.

The low-flow effluent concentration (critical low-flow dilution) is defined as 9 % effluent. The draft 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 4%, 5%, 7%, 9%, and 12%.

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 Outfall 002 - the discharge to Cedar Bayou Tidal in Waterbody Segment Code No. 00901 of the Trinity- San Jacinto Coastal Basin. Discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>	<u>MONITORING REQUIREMENTS</u>	
Whole Effluent Toxicity Limit (7-Day NOEC) (51713) * ²	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Mysidopsis bahia</i>	9%	Once/Quarter	24-Hr Composite

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE MONITORING</u>	<u>MONITORING REQUIREMENTS</u>	
Whole Effluent Toxicity Testing (7-Day NOEC) * ²	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Menidia beryllina</i>	REPORT	Once/ Quarter	24-Hr Composite

FOOTNOTES

- 2/ Monitoring and reporting requirements begin on the effective date of this permit. Compliance with the Whole Effluent Toxicity limitations is required on the effective date of the permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions. Grab samples are allowed per method, if necessary.

OUTFALL 003

The 2010 TCEQ Implementation Plan directs the WET test to be a 7-day chronic test using *Mysidopsis bahia* and *Menidia beryllina* 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 test species for the following 2-5 years of the permit. The vertebrate species (*Menidia beryllina*) may be reduced to once per year. The invertebrate species (*Mysidopsis bahia*) may be reduced to twice 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 species shall resume quarterly monitoring frequency on the last day of the permit.

The permitted average flow from the facility is 0.265 MGD (0.41 cfs) and the bayou is approximately 53 feet wide at the Discharge point (which is less than 400 feet and considered narrow tidal). Critical Conditions are calculated for these values as follows:

Mixing Zone (MZ) = $100 \times \text{Average Flow} / (7Q_2 + \text{Avg Flow}) = 100 \times 0.41 / (0.41 + 4.14) = 9.01\%$.
MZ (Critical dilution) = 9%.

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 4%, 5%, 7%, 9%, and 12%. The low-flow effluent concentration (critical low-flow dilution) is defined as 9% effluent.

There is no WET data for Outfall 003, since all biomonitoring was conducted at the internal Outfall 103. There were no failures during the current permit term for Outfall 103, however, biomonitoring requirements are being placed on Outfall 003 in order to capture discharges from the internal outfall as well as all other discharges.

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 003 which flows into Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY (7-Day Chronic NOEC) (*1)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Menidia beryllina</i>	Report	Once/Quarter	24-Hr Composite
<i>Mysidopsis bahia</i>	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.

G. 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.

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

Wastewater discharges from the facility flows into Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin. The receiving stream is listed as impaired for bacteria (Category 5c), dioxin in edible tissue (Category 5a), and PCBs in edible tissue (Category 5a) in the 2014 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs). These impairments are under TCEQ's category 5a and 5c. Category 5a implies that a TMDL is underway, scheduled, or will be scheduled while Category 5c implies that additional data and information will be collected before a TMDL is scheduled. The facility does not discharge bacteria, dioxin and PCBs. If the waterbody is listed at a later date for additional pollutants, and a total maximum discharge loading determined for the segment, the standard reopener clause would allow the permit to be revised and additional pollutants and/or limits added. No additional requirements beyond the already proposed technology-based and/or water-quality based requirements are needed in the proposed permit.

VIII. ANTIDegradation

The Texas Commission on Environmental Quality, Texas Surface Water Quality Standards, Antidegradation, Title 30, Part 1, Chapter 307, Rule §307.5 sets forth the requirements to protect designated uses through implementation of the State WQS. The limitations and monitoring requirements set forth in the proposed permit are developed from the State WQS and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water. There are no increases of pollutants being discharged to the receiving waters authorized in the proposed permit.

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements and exemption to meet Antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR Part 122.44(i)(B), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance. The proposed permit maintains the limitation requirements of the current permit for BOD and pH. The limitations and monitoring requirements for total aluminum is removed from Outfall 001 based on new information. The reporting requirements for total zinc and total copper is removed from Outfall 002 based on new information. Also, the limitation and monitoring requirements for total copper is established while the reporting requirements for total aluminum at Outfall 103 is removed from the draft permit based on new application information.

X. ENDANGERED SPECIES

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/project/5BKUKGAGXVA7PPSHH4RAGZJQA4/resources>, eight species in Chambers County are listed as Endangered or Threatened. The listed species are the Green sea turtle (*Chelonia mydas*), the Hawksbill sea turtle (*Eretmochelys imbricate*), Kemp's ridley sea turtle (*Lepidochelys kempii*), Leatherback sea turtle (*Dermochelys coriacea*), Loggerhead sea turtle (*Caretta caretta*), West Indian Manatee (*Trichechus manatus*), Red Knot

(*Calidris canutus rufa*) and the Piping Plover (*Charadrius melodus*).

The Environmental Protection Agency has evaluated the potential effects of issuance of this permit upon listed endangered or threatened species. After review, EPA has determined that the reissuance 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. EPA has received no additional information since the current permit was issued December 18, 2015, which would lead to revision of its determinations.
3. EPA determines that Items 1, and 2 results in no change to the environmental baseline established by the current permit, therefore, EPA concludes that reissuance of this permit will have “no effect” on listed species and designated critical habitat.

XI. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

This permit modification should have no impact on historical and/or archeological preservation. The facility has consulted with the local historical and archeological preservation office and has concluded that its construction activities will not have any impact on historical and archeological preservation.

XII. PERMIT REOPENER

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

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. COMPLIANCE HISTORY

The effluent from the facility has been monitored under the conditions of the current permit. Limitations and Monitoring requirements for total Aluminum is removed from Outfall 001 based on new information. The reporting requirements for total zinc and total copper is removed from Outfall 002 based on new information. The limitations and monitoring requirements for total copper is established while the reporting requirements for total aluminum is removed from Outfall 103.

The WET limit for Outfall 002 will be continued since the limit went into effect in 2017 and since the WET implementation practice is to leave the limit in for 5 years. Also, biomonitoring requirement at internal Outfall 103 was moved to Outfall 003 to capture all the discharges.

XV. 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.

XVI. FINAL DETERMINATION

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

XVII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION

NPDES Application for Permit to Discharge, Form 1 & 2C, dated March 19, 2018, and additional application information dated June 28, 2018, was received via email on June 28, 2018, and July 24, 2018. Application was deemed administratively complete on August 2, 2018.

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.

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.9, effective September 23, 2014.

<http://ecos.fws.gov/ipac/project/5BKUKGAGXVA7PPSHH4RAGZJQA4/resources>

C. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

D. MISCELLANEOUS CORRESPONDENCE

Letter from Brent Larsen, EPA, to Mr. David McQuade, P. E., P.G., Targa Resources dated August 1, 2018, informing the applicant that its NPDES application dated March 19, 2018, and additional application information dated June 28, 2018, was received via email on June 28, 2018, and July 24, 2018, is administratively complete.

Email from Silvia Bogdan to Maria Okpala dated July 27, 2018, on biomonitoring requirements.

Letter from David McQuade to Brent Larsen dated June 28, 2018, on additional permit application information.

Email from Kate Magee to Maria Okpala, dated July 5, 2018, and June 28, 2018, on additional permit application information.

Email from Brian Thomas, P.E., Pastor, Behling & Wheeler, LLC to Michael Pfeil dated May 18, 2018, and February 8, 2018, on site-specific aluminum bioavailability study.

Email from David McQuade, Director Environmental, Targa Resources, to Maria Okpala, EPA dated May 15, 2018, on additional permit application information.

Email from Michael Daniel, EPA, to Maria Okpala, EPA, dated May 8, 2018, and April 3, 2018, on critical condition information.