NPDES PERMIT NO. TX0007587
STATEMENT OF BASIS

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

APPLICANT:

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ISSUING OFFICE:

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DATE PREPARED:

April 18, 2016

PERMIT ACTION

It is proposed that the facility be reissued 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 March 17, 2016

RECEIVING WATER – BASIN

San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin.
Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos 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
IP	Procedures to Implement the Texas Surface Water Quality Standards
µg/l	Micrograms per litter (one part per billion)
mg/l	Milligrams per liter (one part per million)
Menu 6	Narrow Tidal Water
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. Language on the Sufficiently Sensitive Methods has been established in the proposed permit.
2. Electronic DMR reporting requirements have been included in the modified permit.
3. Water quality-based effluent limitations established at Outfall 001 as a result of RP to exceed the applicable WQS for mercury, benzidine and thallium. (Analyses provided did not meet the MQL for mercury and benzidine.)
4. Water quality-based effluent limitations established at Outfall 004 as a result of RP to exceed the applicable WQS for mercury, benzidine, copper and thallium. (Analyses provided did not meet the MQL for mercury, benzidine and copper.)
5. A 36 month compliance schedule for WET has been included for *Mysidopsis bahia* at Outfall 001 with a limit of 5%.

II. APPLICANT LOCATION and ACTIVITY

Under the SIC Code 5171, the applicant operates a salt dome storage facility for light hydrocarbons.

As described in the application, the facility is located at 2611 County Road 314, Brazoria, Brazoria County, Texas. Wastewater discharges from the facility flow from Outfall 001 into San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos – Colorado Basin. The facility also discharges from outfall 004 into the Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos River Basin.

Discharges are located on that water at:

Outfall 001: Latitude 28º 59’ 01”; Longitude 95º 34’ 03”

Outfall 004: Latitude 28º 56’ 30”; Longitude 95º 22’ 50”

Stormwater is discharged through Outfall 002 and 003; however it is permitted under TPDES Multi-Sector General Permit for Industrial Activity. Because the facility is under the jurisdiction of the RRC, the permittee is in the process of applying for coverage under EPA’s Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity.

Outfall 002: Latitude 28º 59’ 04”; Longitude 95º 34’ 07”
Outfall 003: Latitude 28º 59’ 11”; Longitude 95º 34’ 06”

III. PROCESS AND DISCHARGE DESCRIPTION

The permittees operates an underground storage facility for finished products. The underground storage caverns are used for storage by displacement of the hydrocarbons using brine. Brine is stored in a series of aboveground ponds. Water is pumped from the San Bernard River into a brine production cavern, when additional brine is needed. It is then pumped into either of the product storage caverns or one of the brine storage ponds. Brine from the caverns or the storage cavern is treated to remove entrained gases prior to being routed to a brine storage pond. Brine is then transferred from the brine storage ponds to the final pond prior to being discharged to the San Bernard River via Outfall 001. Due to severity of drought conditions, flows in the San Bernard River have decreased such that the facility is not able to discharge from the terminal. As a result, Chevron Phillips has tied into ConocoPhillips pipeline at a point where it passes through

Clemens terminal. The pipeline is used to carry excess brine with the refinery effluent to the Brazos River. Discharges occur only when the facility has excess brine. The Conoco Phillips Company operates a petroleum refinery in Sweeny, Texas. The Sweeny complex pumps its' treated effluent through a 26 mile, 2 inch pipeline that discharges to the tidally-influenced zone of the Brazos River approximately 1.25 miles south of the State Highway 36 river crossing. The route of the existing pipeline from the Sweeny Complex to the Brazos River passes through the Clemens Terminal property.

Products stored in the underground storage caverns include the following: normal Butane, iso-Butane, iso-Pentane, Hydrogen, Fuel Gas, Propane, Ethane-Propane mix, Butanes-Butylenes mix, Natural Gas Liquids (NGL), Propylene and Ethylene. The facility also treats Ethylene, Propylene, Propane and normal- and iso-Butane for sales. These four products are treated through a molecular sieve bed for the removal of carry-over water resulting during storage. Propylene is also treated for the removal of Carbon Dioxide (CO_2), Carbonyl Sulfide (COS), and Arsine.

Wastewater discharge from the facility, 1.26 MGD, is to San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin and to the Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos River Basin.

Table 1: Discharge Characteristics

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

Parameter	**Max. Daily Value, mg/L unless noted**	**Max. 30 Day Value, mg/L unless noted**	**Long Term Average Value, mg/L unless noted**
Flow, MGD	1.52	.85	.03
pH, su I	7.0-7.27	7.0-7.27	
TSS	77.2		
TOC	1.6	1.5	<1.25
TRC	N/A		
BOD_5	<2.4		
Oil & grease	<3.2	<3.2	<3.2
Chromium	.0042		
Ammonia (as Nitrogen)	<.067		
Bromide	75		
Flouride	<6.0		
Nitrogen, Total Organic	<.432		
Sulfate	2000		
Sulfide	<1.009		
Boron	.423		
Cobalt	.0013		
Molybdenum	.0022		
Surfactants	164		
Tin	.0036		
Titanium	.162		
Antimony	<.004		

Parameter	Max. Daily Value, mg/L unless noted	Max. 30 Day Value, mg/L unless noted	Long Term Average Value, mg/L unless noted
Beryllium	.0006		
Cadmium	.0006		
Iron	.331		
Magnesium	65		
Phosphorus	0.028		
Aluminum	.201		
Arsenic	<.002		
Barium	.0947		
Copper	.0215		
Lead	<0.011		
Mercury	<0.082		
Nickel	<0.0014		
Selenium	<0.0038		
Silver	<0.001		
Thallium	.0062		
Manganese	0.227		
Zinc	<0.081		
Benzene, ug/l	<5		

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 renewal of an existing permit. An NPDES Application for a Permit to Discharge (Form 1 & 2C) was received on March 17, 2016 and was deemed administratively complete on March 18, 2016.

At Outfall 001, sampling will be taken at the discharge from the final treatment unit prior to the receiving stream. At Outfall 004, sampling will be taken prior to the tie-in point on the pipeline and prior to the discharge co-mingling with the ConocoPhillips pipeline.

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 TOC and oil & grease. Water quality-based effluent limitations are established in the proposed draft permit for pH, mercury, benzidine, thallium and copper.

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. 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.

The previous permit established limitations for TOC, Oil and grease as well as pH. The proposed limitation for TOC at Outfall 001 is 30 mg/l maximum and 20 mg/l average; Oil & grease limitation is proposed at 10 mg/l monthly average and 15 mg/l daily maximum; and pH limits at 6.5 -9. Limits are expressed in terms of concentration since flow is variable and intermittent. Concentration limits will be protective of the stream uses. This is consistent with both EPA and TCEQ permits for similar facilities and is also consistent with 40 CFR 122.45(e) and 122.45(f).

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 September 23, 2014.

The designated uses of San Bernard River Tidal in Segment 1301 are primary contact recreation and high aquatic life. The designated uses of Segment 1201, Brazos River Tidal 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 the facility flow into San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin. The designated uses of Segment 1301, San Bernard Tidal, are contact recreation and high aquatic life. The facility also discharges into the Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos River Basin.

The designated uses of segment are primary contact recreation, high aquatic life and public water supply. The instream pH standards for the San Bernard River Tidal, waterbody Segment 1301, and the Brazos River Tidal, waterbody Segment 1201, is in the range of 6.5 to 9.0 su's. The dilution afforded the discharge by the low-flow is sufficient enough that the technology-based limitations for pH of 6.5-9 su's will be protective of applicable segment specific WQS. As a result, pH of 6.5-9 su's is continued in the proposed permit.

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 Outfall 001 and 004:

"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.

Outfall 001

The critical low flow, 7Q2 for the receiving stream is 15.01 cfs, while the harmonic mean is 45.05 cfs. The facility discharges into San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin. TCEQ'S TEXTOX Menu 6 – Narrow Tidal River is appropriate for evaluating the discharge.

The reasonable potential calculations were performed based on data obtained from the permit application using Model 6 model run (narrow River Tidal). Segment (1301) specific values were obtained from table D-13 of the Procedures to Implement the Texas Surface Water Quality Standards. Mercury and Benzidine concentrations reported on the permittees analyses were not measured to the prescribed MQLs, therefore the concentrations, reported as less than, were assumed at the whole value reported for RP analysis. The following results are pollutants exceeding the 70% and/or 85% of the calculated daily average limits (see attached TEXTOX Menu 6 for detail):

Parameter	**70% Calculated Daily Avg. (ug/l)**	**85% Calculated Daily Avg. (ug/l)**	**Effluent data at Outfall 001 (ug/l)**
Mercury	0.598	0.726	<82
Benzidine	0.048	.058	<53.3
Thallium	5.503	6.682	6.2

* More stringent value is selected to protect against chronic toxicity and human health.

Effluent data demonstrated the discharge has RP to exceed the applicable WQS for mercury, benzidine and thallium. Therefore, effluent limitations and monitoring requirements for mercury and benzidine are proposed at Outfall 001. Because thallium only showed the RP to exceed 70% of the calculated daily average, monitoring requirements are proposed for thallium. A compliance schedule of 36 months is provided for water quality-based limits for mercury, and benzidine. The permittee only submitted one analyses for consideration in the reasonable potential analysis. EPA requests that the permittee submit two additional sample results for mercury, benzidine and thallium, taken at least one week apart. The reasonable potential analysis and permit limits will be re-evaluated if the permittee submits the additional sample results during the public comment period.

Outfall 004

The critical low flow, 7Q2 for the receiving stream is 580 cfs, while the harmonic mean is 1300 cfs. The facility discharges into Brazos River, Segment Code No. 1201 of the Brazos River Basin. TCEQ'S TEXTOX Menu 5– Wide Tidal River is appropriate for evaluating the discharge. Acute criteria are applied at the edge of the zone of initial dilution (ZID); chronic criteria are applied at the edge of the aquatic life mixing zone. Based on TCEQ implementation procedures, the minimum estimated effluent percentages are established at the edges of the ZID as well as the aquatic life mixing zone for dischargers that are 10 MGD or less into bays, estuaries, or wide tidal rivers that are at least 400 feet wide. These critical effluent percentages are 30% for acute effluent (ZID), 8% for chronic effluent (mixing zone), and 4% for human health.

The reasonable potential calculations were performed based on data obtained from the permit application using Model 5 model run (Wide River Tidal). TCEQ'S TEXTOX Menu 5– Wide Tidal River is appropriate for evaluating the discharge.

The reasonable potential calculations were performed based on data obtained from the permit application using Model 5 model run (Wide River Tidal). Segment (1201) specific values were obtained from table D-12 of the Procedures to Implement the Texas Surface Water Quality Standards. Mercury, benzidine and copper concentrations reported on the permittees analyses were not measured to the prescribed MQLs, therefore the concentrations, reported as less than, were assumed as the whole value reported for RP analysis. The following results are pollutants exceeding the 70% and/or 85% of the calculated daily average limits (see attached TEXTOX Menu 6 for detail):

Parameter	**70% Calculated Daily Avg. (ug/l)**	**85% Calculated Daily Avg. (ug/l)**	**Effluent data at Outfall 001 (ug/l)**
Mercury	0.598	0.726	<82
Benzidine	0.048	0.058	<53.3
Thallium	5.503	6.682	6.2
Copper	16.816	20.420	21.5

* More stringent value is selected to protect against chronic toxicity and human health.

Effluent data demonstrated the discharge has RP to exceed the applicable WQS for copper, mercury, benzidine, and thallium. Therefore, effluent limitations and monitoring requirements for copper, mercury, and benzidine are proposed at Outfall 001. Because thallium only showed the RP to exceed 70% of the calculated daily average, monitoring requirements are proposed for thallium. A compliance schedule of 36 months is provided for water quality-based limits for copper, mercury, and benzidine. The permittee only submitted one analyses for consideration in

the reasonable potential analysis. EPA requests that the permittee submit two additional sample results for mercury, benzidine, copper and thallium, taken at least one week apart. The reasonable potential analysis and permit limits will be re-evaluated if the permittee submits the additional sample results during the public comment period.

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.

Flow shall continue to be measured daily when discharging. TOC, Oil & grease and pH shall continue to be monitored once a week, when discharging, using grab sample. Stream flow rate and discharge percent of stream flow shall continue to be measured daily even if there is no discharge from outfall 001. Similar monitoring requirements are also established for Outfall 004. Below are the proposed monitoring frequencies for the additional pollutants:

Parameter	Frequency at Outfall 001	Frequency at Outfall 004
Mercury	1/month	1/month
Benzidine	1/month	1/month
Thallium	1/month	1/month
Copper	N/A	1/month

* When discharges occur.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

The draft permit will not authorize monitoring frequency reductions for this permit cycle. The draft permit maintains the additional WET testing when the ratio of effluent discharge to stream flow exceeds 4%. If the ratio of discharge to stream flow is greater than 4%, the facility must conduct a 7-day chronic test for that month. Sampling for this monthly test must commence no later than 24-hours after the 4% ratio has been exceeded. EPA acknowledges that this 24-hour sampling initiating requirement may push this actual WET sampling event into the next calendar month, or even into the next quarterly reporting period, and in that event, the permittee shall report the WET sample results no later than the next month's DMR report (one-month later than the flow event that triggered the 4% test). The facility shall make note on the DMR form the month that the 4% exceedance occurred. Additionally, in the event that during the quarter such a monthly WET test has occurred, that WET test may be used to satisfy the required quarterly WET test. However, if the quarterly WET test has already been performed, and later during that same quarter an exceedance of the 4% rate occurs, then an additional WET test shall be required for each and every month that the flow exceeds the 4%. Once a 4% dilution WET test has been

performed, any additional discharges during that SAME calendar month that exceeds the 4% threshold do not need additional WET testing. A single monthly WET test is all that the permit requires, except in those occurrences when a WET test for the quarterly requirement has been performed, and then later in the same month a 4% WET test is required.

OUTFALL 001

Based on the critical dilution of 5%, the .75% dilution series for the biomonitoring shall be 2%, 4%, 5%, 7%, and 9% with 5% as the critical dilution

EPA has previously authorized the permittee to biomonitor using synthetic laboratory dilution water in lieu of receiving water, as a result of a TRE study showing that an ion imbalance related to the receiving water was causing toxicity. The facility failed multiple tests at lethal and sublethal endpoints of the chronic test. In April 2015, Outfall 001 exhibited sub lethal toxicity for *Mysidopsis bahia*. A chronic toxicity test was performed the three following months (May, June & July). In May 2015 Chronic Toxicity Testing demonstrated that the effluent was toxic to *Mysidopsis bahia*. The June and July 2015 test showed sub-lethal toxicity to *Mysidopsis bahia*. In a letter dated July 27, 2015 the facility stated that Chevron Phillips Chemical Company LP had initiated the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}). As a result of the ongoing TRE, a 36 month schedule of compliance is proposed in the permit for *Mysidopsis bahia*. The WET limit of not less than 5% effluent will become effective thirty-six months from the permit issue date.

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 001 - the discharge to San Bernard River. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE MONITORING	
	30-DAY AVG MINIMUM	7-DAY MINIMUM
Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/		
Mysidopsis bahia	5%	5%
Menidia beryllina	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	FREQUENCY	TYPE
Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/		
Mysidopsis bahia	1/Quarter	24-Hr. Composite
Menidia beryllina	1/Quarter	24-Hr. Composite

OUTFALL 004

According to TCEQ's Implementation Plan the percentage of effluent at the edge of the mixing zone is 8% for bays, estuaries, and wide tidal rivers. The Brazos River Tidal falls under this category. Permittees that discharge into bays, estuaries, and wide tidal rivers will normally conduct chronic WET tests with a critical dilution 8% if the effluent flow is less than or equal to 10 MGD in this case. The TCEQ IP directs WET test to be a 7 day chronic test using *Mysisopsis bahia* and *Menidia beryllina* at a quarterly (once per three-month) frequency for both the vertebrae and the invertebrate test.

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

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 004 - the discharge to Brazos River Tidal Segment No. 1201. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE MONITORING	
	30-DAY AVG MINIMUM	7-DAY MINIMUM
Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/		
Mysidopsis bahia	REPORT	REPORT
Menidia beryllina	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	FREQUENCY	TYPE
Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/		
Mysidopsis bahia	1/Quarter	24-Hr. Composite
Menidia beryllina	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.

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.

Electronic Reporting Rule

The EPA published the electronic reporting rule in the federal register (80 FR 64063) on October 22, 2015. The rule became effective on December 21, 2015. One year after the effective date of the final rule, NPDES regulated entities that are required to submit DMRs (including majors and non-majors, individually permitted facilities and facilities covered by general permits) must do so electronically. All DMRs shall be electronically reported effective December 21, 2016, per 40 CFR 127.16. If you are submitting on paper before December 21, 2016, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required. (See Part III.D.IV of the permit.). To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. PA and authorized NPDES programs will begin electronically receiving these DMRs from all DMR filers and start sharing these data with each other.

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.

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

Wastewater discharges from the facility flows into San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin. The receiving stream is listed as impaired for bacteria in the 2014 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs). This impairment is under TCEQ's category 5c, which implies that additional data and information will be collected before a TMDL is

scheduled. The facility does not discharge bacteria and are therefore not a pollutant of concern for the facility. As a result, 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 previous permit for TOC, oil & grease and pH.

X. ENDANGERED SPECIES

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://www.fws.gov/southwest/es/EndangeredSpecies/lists/, nine species in Brazoria County are listed as Endangered or Threatened. The listed species are the Green sea turtle *Chelonia mydas*, the Hawksbill sea turtle *Eretmochelys imbricata*, Kemp's ridley sea turtle *Lepidochelys kempii*, Leatherback sea turtle *Dermochelys coriacea*, Loggerhead sea turtle *Caretta caretta*, Whooping Crane *Grus Americana*, the Piping Plover *Charadrius melodus*, Red Knot *Calidris canutus rufa* and the West Indian manatee *Trichechus manatus.*

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. There has been no critical habitat designation in the area of the discharge since prior issuance of the permit.

2. EPA has received no additional information since the previous permit was issued November 1, 2012, which would lead to revision of its determinations.

3. EPA determines that Items 1, 2, and 3 result in no change to the environmental baseline established by the previous 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

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the New Mexico 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 with an August 1, 2011, effective date. EPA previously authorized the permittee to biomonitor using synthetic laboratory dilution water in lieu of receiving water in response to the permittee demonstrating ion imbalance related to the receiving water, through a TRE study. Five years of current Discharge Monitoring Report data has been reviewed and facility failed multiple tests at the sublethal and lethal endpoints of the chronic test at Outfall 001. Chevron Phillips has stated that it has initiated the Sub-Lethal Toxicity Reduction. As a result, a 36 month schedule of compliance is proposed in the permit for *Mysidopsis bahia*.

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, received on March 14, 2016.

B. State of Texas References

2014 Texas Integrated Report of Surface Water Quality, , Texas Commission on Environmental Quality, November 19,2015.

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

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.9, effective February 12, 2014.

http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

C. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

D. MISCELLANEOUS CORRESPONDENCE

Letter from Dorothy Brown, EPA, to Mr. Wayne McDowell, Chevron Phillips Chemical Company, L.P. dated March 28, 2016, informing applicant that its NPDES application received March 14, 2016, was administratively complete.

Email from Robert Kirkland, EPA, to Nichole Young, EPA, dated March 22, 2016, on critical conditions information.