

NPDES PERMIT NO. TX0086720
STATEMENT OF BASIS

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

APPLICANT:

Regency Field Services, L.L.C
Fashing Gas Plant
1880 FM2924
Karnes City, TX 78118

ISSUING OFFICE:

U.S. Environmental Protection Agency
Region 6
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Dallas, Texas 75202-2733

PREPARED BY:

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DATE PREPARED:

January 20, 2015

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 January 16, 2015.

RECEIVING WATER – BASIN:

Unnamed tributary of Water Creek, which is an intermittent Waterbody (Water Creek is a tributary of Lipan Creek), thence to Lipan Creek, which empties into Atascosa River in Segment No. 2107, Lower Atascosa River of the Nueces 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)
BOD5	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
DO	Dissolved Oxygen
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 7	Intermittent stream with perennial pools
MMCFD	Million cubic feet per day
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. Electronic DMR reporting requirements have been included in the proposed permit.
2. Total Residual Chlorine limit is established in the permit based on data contained in the application.
3. WET limit is established in the proposed permit based on a critical dilution of 100%.
4. A minimum DO concentration should be maintained to ensure compliance with the dissolved oxygen standard. The proposed permit limits DO concentration to the DO criteria for segment 2107 as 4.0 mg/l since the receiving stream is impaired for DO.
5. Biomonitoring frequency is changed from semiannually to quarterly.

II. APPLICANT LOCATION and ACTIVITY

Under the SIC Code 1321, the applicant processes natural gas. As described in the application, the facility is located two miles north of Fashing, and West of Karnes City, Atascosa County, Texas.

Wastewater discharges from the facility flows into an unnamed Creek, about 460 feet from the western edge of the plant boundary, to Water Creek, which flows to Lipan Creek, which empties into the Atascosa River. The waterbody segment is Segment No. 2107, Lower Atascosa River of the Nueces River Basin.

Discharges are located on that water at:

Outfall 001: Latitude 98° 10' 54"; Longitude 28° 48' 6"

III. PROCESS AND DISCHARGE DESCRIPTION

Three separate sour gas streams enter the plant. Two gas streams are compressed and are not processed at the site. The remaining sour gas stream passes through a 2-phase inlet separator to remove liquids before entering the amine unit for sulfur removal. Sweet natural gas exiting the amine contactor enters the glycol dehydrator. Rich glycol exiting the dehydrator is regenerated with heat provided by a natural gas-fired glycol reboiler. Condensate from surrounding area sources is unloaded at the plant and combined with the liquids from the 2-phase inlet separator prior to stabilization. The combined condensate enters a pressurized separator where water is removed. The condensate stream is stabilized to remove lighter hydrocarbons before being put into a pipeline or stored in pressurized bullet tanks before being trucked offsite.

Water separated from the stabilization process enters the gun barrel tank where the liquid is flashed and further separated. Condensate from the gun barrel is stored in the pressurized condensate storage tanks and the produced water is stored in the saltwater tanks.

The facility also has two natural gas-fired 408-hp and one 382-hp generators which supply electrical power. A cooling tower supplies cooling water to the amine unit. Blow-down water from the cooling towers is mixed with reject water from the plant's reverse osmosis unit to form the wastewater discharged from the plant's Outfall 001. Various chemicals are added to condition the cooling tower make-up water during the process cycle to minimize corrosion, scaling, and biological growth.

Cooling tower blowdown and reverse osmosis reject water are routed through Outfall 001, which discharges into an unnamed tributary of Water Creek, which flows into Lipan Creek which empties into the Atascosa River in Segment 2107, Lower Atascosa River of the Nueces River Basin.

The following analytical sample results are listed below:

Outfall 001 – 0.013625 MGD

Parameter	Max. Daily Value (mg/l)	Average Daily Value (mg/l)
BOD	84	11.14
TSS	4.8	4.3
TRC	0.1	0.1
COD	43	38.5
TOC	9.7	9.5
Ammonia (as N)	0.81	0.074
Nitrate-Nitrite	0.36	0.199
Nitrogen, Total Organic	1.3	1.2
Oil & Grease	2.0	2.0
Temperature, °C	63.5° winter; 68° summer	
Discharge Flow, MGD	0.027	0.013625
pH	6.72 – 8.08 su	
Total Phosphorus	7.9	7.4
Aluminum	0.24	0.225
Total Arsenic	0.0044	0.004
Total Barium	0.0089	0.0875
Total Cadmium	0.0004	0.0004
Total Chromium	0.0081	0.0081
Total Phenol	0.0044	0.0036
Total Copper	0.015	0.014
Total Cyanide	0.0072	0.0054
Total Lead	0.0029	0.0029
Total Mercury	0.000082	0.000082
Total Nickel	0.0035	0.00285
Total Selenium	0.0042	0.0042
Total Silver	0.0013	0.0013
Total Zinc	0.0051	0.046
Total Iron	1.3	1.085
Manganese	0.05	0.0365
Sulfates	1900	1600
sulfide	0.63	0.63
Chloride	400	350
Total Dissolved Solids	3000	2800

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 June 6, 2014, and was deemed administratively complete on December 1, 2014. Additional permit application information dated October 08, 2014, was received on October 20, 2014.

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 BOD. Water quality-based effluent limitations are established in the proposed draft permit for pH, total residual chlorine and dissolved oxygen.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. 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 narrative limitation for Oil & Grease is also continued in the draft permit based on the TCEQ narrative standard to limit Oil & Grease. Oil and grease is also limited based on use of an oil/water separator, based on Best Professional Judgment (BPJ), and similar treatment technology as representing best conventional pollutant control technology (BCT).

Technology requirements in the previous permit and are based on Best Available Technology Economically Achievable (BAT) and/or TCEQ water quality standards for Segment No. 2107, of the Nueces River Basin.

Limitations for BOD₅ are proposed in the permit and are expressed in terms of both mass and concentration. This is consistent with both EPA and TCEQ permits for similar facilities and is also consistent with 40 CFR 122.45(f). The proposed limitation for BOD₅ at Outfall 001 is 30 mg/l maximum and 20 mg/l average. The effluent loadings, lbs/day, were calculated using the treatment facility's average flow of 0.013625 MGD reported in the permit application package, the respective pollutant's daily average concentration (mg/l), and the conversion factor of 8.34.

Loading, lbs/day = Flow (MGD) * 8.34 lb/gal * 20 mg/l

Daily average (Lbs/day) BOD = 0.013625 MGD * 8.34 lb/day * 20 mg/L = 2.273 lbs/day

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

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 Segment 2107 are public 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 flows into Outfall 001. Wastewater discharges from the facility flows into an unnamed Creek, about 460 feet from the western edge of the plant boundary, to Water Creek, which flows to Lipan Creek, which empties into the Atascosa River. The limitation of pH in the discharge shall be limited to the standards for waterbody Segment 2107 of the Nueces River Basin to the range of 6.5 to 9.0 su's.

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 discharge shall not present a hazard to humans, wildlife, or livestock.

The following narrative limitations in the proposed permit represent protection of water quality for Outfall 001:

“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 discharge is to an unnamed tributary of Water Creek. The tributary flows year-round. Water Creek is a perennial creek. As a result, TEXTOX Menu 1 (Discharge is to an intermittent water body that does not enter any perennial water bodies within 3 miles) is appropriate for evaluating the discharge. It discharges into an unnamed tributary of Water Creek, which is an intermittent water body. Water Creek is a tributary of Lipan Creek, which flows in the Atascosa River, Texas Segment 2107. The 7Q2 is 0 CFS and the harmonic mean is 0.02 CFS. Since 7Q2 is 0.00 CFS and HM is 0.02 CFS, Chronic Toxic Criteria apply for 100% at the point of discharge.

In addition, IP, table 5, segment specific values for pH, TSS, total hardness, TDS, chloride, and sulphate values were used in Menu 3 to calculate reasonable potential. For Segment 2107, specific values for pH, TSS, total hardness, TDS, chloride, and sulfate are 7.5, 12 mg/L, 130 mg/L as CaCO₃, 988 mg/L, 245 mg/L, and 206 mg/L respectively. None of the reported parameters showed reasonable potential to violate TWQS (see attached spreadsheet).

Average concentration of TDS obtained from the permit application was screened using the procedures found on page 87 of the ITWQS. Using these procedures, the daily average effluent concentration of TDS obtained from the permit application (2,520 mg/L) was compared to the screening value to determine whether a TDS permit limit is needed. The screening procedure follows:

$$C_{TDS} = (C_c / 500 \text{ mg/L}) * 2,500 \text{ mg/L}$$

where: C_{TDS} = TDS concentration (mg/L) used to determine the TDS screening value

C_c = TDS criterion (mg/L) at the first downstream Segment = 1,650 mg/L

$$C_{TDS} = (1,650 / 500 \text{ mg/L}) * 2,500 \text{ mg/L} = 8,250 \text{ mg/L}$$

According page 88 of ITWQS, if C_{TDS} is greater than 6,000 mg/L, then 6,000 mg/L is used as the screening value. Hence, $C_{SV} = C_{TDS} = 6,000 \text{ mg/L}$, where C_{SV} is the TDS screening value. Since the effluent concentration (2800 mg/L) is less than the TDS screening value (8,250 mg/L), TDS limitations and monitoring requirements are not established in the proposed permit.

Similarly, sulfate and chloride concentrations were also screened as shown below.

$$C_{SO_4} = (300 / 500 \text{ mg/L}) * 2,500 \text{ mg/L} = 1,500 \text{ mg/L};$$

$$C_{Cl} = (400 / 500 \text{ mg/L}) * 2,500 \text{ mg/L} = 2,000 \text{ mg/L}$$

According page 88 of ITWQS, the values of 1,500 mg/L and 2,000 mg/L are less than 2,500 mg/L, then 2,500 mg/l is their respective screening value. But their respective effluent

concentrations of 1,600 mg/L for SO₄ and 350 mg/L Cl are less than their respective screening values of 2,500 mg/L. As a result, the proposed permit did not establish limitation and monitoring requirements for sulfate and chloride.

In addition, sample results contained in the application show that Total Residual Chlorine is present in discharges through Outfall 001. The average daily discharge of TRC at Fashing Gas plant is 100 µg/l, and the maximum concentration is also 100 µg/l. 19 µg/L is EPA's acute chlorine criteria and 11 µg/L is EPA's chronic chlorine criteria. Limits must be protective of WQS per 40 CFR 122.4(d) and 122.44(d). Since the acute conditions do not allow dilution; the limit must be met at end-of-pipe but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit.

The critical dilution is calculated as follows:

$$\begin{aligned} \text{Critical Dilution} &= \frac{\text{Effluent Flow}}{\text{Effluent flow} + 7Q_2} \\ &= \frac{0.013625}{0.013625 + 0} \\ &= 100\% \end{aligned}$$

The in-stream TRC concentration after allowing for dilution is: 11 µg/L ÷ 1 = 11 µg/L. Since this value is less than the 19 µg/L end-of-pipe acute standard, the 11 µg/L is more stringent and will be more protective. The draft permit shall establish the 11 µg/L limit. However TRC is toxic at measurable amounts, so in addition to the 11 µg/L chemical specific limitation, the narrative limit for TRC shall be "No Measurable." Hence, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no quantifiable level of TRC as determined by any approved method established in 40 CFR 136 that is greater than the established MQL. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. In addition, EPA has established a MQL for TRC at 33 µg/l. Values less than 33 µg/L can be reported as zero.

d. Whole Effluent Toxicity Testing

Biomonitoring is continued in the proposed permit because water treatment chemicals are added to the water to minimize corrosion, scaling, biological growth, and other problems. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

According to IP, permittees that discharge directly into intermittent stream with perennial pools with a designated or significant aquatic life use will conduct chronic testing at a critical dilution of 100%.

OUTFALL 001

In Section V.C.5.c. above; “Toxics”, it was stated that the critical dilution, CD, for the facility is 100%. Based on the nature of the discharge; industrial, the estimated average flow; 0.013625 MGD, the nature of the receiving water; intermittent water body with perennial pools; and the critical dilution of 100%, the 2003 TCEQ IP directs the WET test to be a 7 day chronic test using chronic test species *Ceriodaphnia dubia* and *Pimephales promelas* at a quarterly frequency for the first year of the permit. If all WET tests pass during the first year, the permittee may request a monitoring frequency reduction for the either or both of the test species for the following 2-5 years of the permit. The invertebrate species (*Ceriodaphnia dubia*) may be reduced to twice per year and the vertebrate species (*Pimephales promelas*) may be reduced to once per year. If any tests fail during that time, the frequency will revert back to the once per three months frequency for the remainder of the permit term. The both test species shall resume monitoring at a quarterly frequency on the last day of the permit.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%.

The critical dilution is changed from 5.9% (during the last permit cycle) to the proposed critical dilution of 100% based on the assumption that Water Creek was perennial in the last permit cycle. Based on the current stream data, Water Creek is intermittent until it reaches Atascosa River. The reasonable potential performed with the proposed critical dilution shows that there is reasonable potential for the vertebrate specie, *Pimephales promelas* and the invertebrate species, *Ceriodaphnia dubia*. As a result, the draft permit requires WET monitoring and WET Limit in the proposed permit for both test species. A 3-year compliance schedule is established in the proposed permit.

EPA notes that during the last permit cycle, Menu 3 (discharge to a perennial stream (Water Creek) was used to evaluate reasonable potential. Based on the most recent data, the facility discharges to Water Creek, which is now an intermittent waterbody. Menu 1 ((Discharge is to an intermittent water body that does not enter any perennial water bodies within 3 miles) is appropriate for evaluating the discharge.

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 unnamed tributary of Water Creek to Water Creek, thence to Lipan Creek, which empties into Atascosa River in Segment No. 2107 of the Nueces River Basin. Discharges shall be monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations	
	30-Day Average Minimum	7-Day Minimum
Whole Effluent Toxicity Limits (PSC 22414) (7-Day NOEC) <u>1/</u>	100%	100%

<i>Ceriodaphnia dubia</i>	Report	Report
<i>Pimephales promelas</i>	Report	Report
Effluent Characteristics	Monitoring Requirements	
Whole Effluent Toxicity Limits (7-Day NOEC) ^{1/}	Frequency	Type
<i>Ceriodaphnia dubia</i>	1/ 3 months	24-Hr. Composite
<i>Pimephales promelas</i>	1/3 months	24-Hr. Composite

FOOTNOTES

^{1/} Monitoring and reporting requirements begin on the effective date of this permit. Compliance with the Whole Effluent Toxicity limitations is required after 3 years from the permit effective date. See PART I, Compliance Schedules, and PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

D. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

E. MONITORING FREQUENCY

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 discharge.

Flow shall continue to be monitored daily. The permittee shall continue to monitor for pH and BOD5 at Outfall 001, twice per month, using grab samples. Biomonitoring testing shall be performed quarterly.

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

The receiving stream is listed for bacteria, depressed Dissolved Oxygen, impaired fish community & impaired macrobenthic community on the 2012 State of Texas 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs). This impairment is under TCEQ's category 5b. Category 5b implies that a review of the standards for one or more parameters will be conducted before a management strategy is selected, including the possible revision to the water quality standards. The facility does not discharge bacteria. The average Dissolved Oxygen (DO) concentration reported in the supplemental application information is 6.67 mg/L. The receiving stream was modeled at the temperature standard with conservative parameters. The discharge was modeled at the temperature standard with the approximate permitted BOD wasteloads. As shown in the model output, the dissolved oxygen standard is maintained with the parameterization used. A minimum dissolved oxygen concentration should be maintained to ensure compliance with the dissolved oxygen standard. The proposed permit limits DO concentration to the DO criteria for segment 2107 as 4.0 mg/l. Since the facility discharge TRC, controls for TRC and toxicity test requirements have been established 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 pH and BOD.

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/wizard/chooseLocation!prepare.action>, six species are listed as endangered or threatened in Atascosa County. These species include: Gulf Coast Jaguarundi (*Herpailurus yagouaroundi cacomitli*), Ocelot (*Leopardus pardalis*), Whooping crane (*Grus Americana*), Least tern (*Sterna antillarum*), and Red Knot (*Calidris canutus*). A description of the species and its effects to the proposed permit follows:

JAGUARUNDI, GULF COAST (*Herpailurus Yagouaroundi Cacomitli*)

The Jaguarundi is a small weasel-like wild cat with short rounded ears. It is also called Otter cats because of their shot legs, slender elongated bodies, and small flattened heads, giving them an otter-like appearance. They prefer lowland brush areas close to water or dense tropical areas as their habitat. They are good tree climbers and swimmers. Jaguarundis eat fish that they catch from streams and rivers. Mating occurs from September to November. The cat is suffering decline due to loss of habitat.

EPA has determined that the re-issuance of the permit will have “no effect” on the Gulf Coast Jaguarundi based on the limited information available on the species which indicates that in Texas, any current presence of jaguarundi apparently is confined to the southernmost four counties of Cameron, Willacy, Hidalgo and Starr.

OCELOT (*Leopardus Pardalis*)

The ocelot is a small cat, ranging from 15 to 30 pounds and measuring an average 3 feet 9 inches in length. Its coat has black spots, bars, and stripes on a rich tan to gray background, with irregular black dots on a white underside and dark bars on the tail. While the ocelot originally ranged over much of Texas, the cat has not been sited in Atascosa County in recent times, nor does the Service appear to have habitat conservation intent for this county in Texas. The ocelot is listed endangered due to habitat alteration and loss (primarily due to brush clearing), and predator control activities. EPA has determined that the re-issuance of the permit will have “no effect” on the Ocelot.

WHOOPING CRANE (*Grus Americana*)

The tallest bird in North America, the Whooping Crane breeds in the wetlands of Wood Buffalo National Park in northern Canada and spends the winter on the Texas coast at Arkansas National Wildlife Refuge near Rockport. Cranes live in family groups made up of the parents and 1 or 2 offspring. In the spring, Whooping Cranes perform courtship displays (loud calling, wing flapping, and leaps in the air) as they get ready to migrate to their breeding grounds. Whooping Cranes are endangered because much of their wetland habitat has been drained for farmland and pasture. Whooping Cranes are nearly 5 feet tall. They eat Blue crabs, clams, frogs, minnows, rodents, small birds, and berries. They are found in large wetland areas. Cranes are considered sacred in many parts of the world. In China, they are a symbol of long life. EPA has determined that the re-issuance of the permit will have “no effect” on the whooping crane.

LEAST TERN (*Sterna Antillarum*)

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

RED KNOT (*Calidris canutus*)

Red Knot is a medium-sized shorebird and the largest of the "peeps" in North America, and one of the most colorful. It makes one of the longest yearly migrations of any bird, traveling 15,000

km (9,300 mile) from its Arctic breeding grounds to Tierra del Fuego in southern South America.

Their diet varies according to season; arthropods and larvae are the preferred food items at the breeding grounds, while various hard-shelled molluscs are consumed at other feeding sites at other times. The Red Knot nests on the ground, near water, and usually inland. The nest is a shallow scrape lined with leaves, lichens and moss. Males construct three to five nest scrapes in their territories prior to the arrival of the females. The female lays three or more usually four eggs, apparently laid over the course of six days. Both parents incubate the eggs, sharing the duties equally. The incubation period last around 22 days.

The birds have become threatened as a result of commercial harvesting of horseshoe crabs in the Delaware Bay which began in the early 1990s. Delaware Bay is a critical stopover point during spring migration; the birds refuel by eating the eggs laid by these crabs (with little else to eat in the Delaware Bay).

Determination

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 issuance of this permit will have “*no effect*” on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. No pollutants are identified by the permittee-submitted application at levels which might affect species habitat or prey species. Issuance of this permit is found to have no impact on the habitats of these species.
2. Based on information described above, EPA Region 6 has determined that discharges proposed to be authorized by the proposed permit will have no effect on the listed species in Atascosa 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.

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 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 with a December 1, 2009, effective date. Five years of Discharge Monitoring Report data has been reviewed and the facility was in violation with its pH limits during the quarter beginning October 1, 2012 to December 31, 2012. The facility also had significant non-compliance with its BOD limits during the period January 1 to March 31, 2013. The facility also performed a Toxicity Reduction Evaluation following a failed toxicity test.

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 May 29, 2014. Supplemental Application information dated October 08, 2014.

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, January 2003.

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

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

D. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

E. MISCELLANEOUS CORRESPONDENCE

Model Results from Taimur Shaikh, EPA, to Maria Okpala, EPA, dated January 20, 2015, on Dissolved Oxygen Model inputs and results.

Letter from Dorothy Brown, EPA, to Mr. John Michael Millican, P.E., Apex Titan, Inc. dated December 1, 2014, informing applicant that its NPDES application received June 6, 2014, is administratively complete.

Letter from Mr. John Michael Millican, P.E., dated October 08, 2014, to Ms. Dorothy Brown, EPA, submitting additional permit application information.

Letter from Dorothy Brown, EPA, to Mr. Matthew McNeely, Regency Field Services, Inc. dated October 14, 2014, informing applicant that its NPDES application received June 6, 2014, is administratively incomplete.

Email from Robert Kirkland, EPA, to Maria Okpala, EPA, dated September 08, 2014, on critical conditions information.