

**NPDES PERMIT NO. TX0030279**  
**STATEMENT OF BASIS**

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

**APPLICANT:**

King Ranch Gas Plant  
P.O. Box 4358  
Houston, TX 77210

**ISSUING OFFICE:**

U.S. Environmental Protection Agency  
Region 6  
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**DATE PREPARED:**

March 9, 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 February 27, 2015.

**RECEIVING WATER – BASIN**

Escondido Creek, then to Borregos Lake, waterbody Segment 2492A of Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada

**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 <sub>5</sub>	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)
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. TRC limit of 33µg/L is changed to a limit of 11µg/L, which is EPA's chronic chlorine criterion.
2. Updates have been made to the Class I and Class II penalty amounts in Part III.E.3 of the final permit.
3. Electronic DMR reporting requirements have been included in the draft permit.
4. WET limit has been established in the draft permit based on new application, past WET test data and a critical dilution of 100%.
5. Biomonitoring frequency is changed from semiannually to quarterly.

## 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 14 miles from Kingsville, west on Highway 141, Kingsville in Kleburg County, Texas. Wastewater discharges from the facility flows into an unnamed ditch, to Escondido Creek, then to Borregos Lake, waterbody Segment 2492A of Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada of the Bays and Estuaries.

Discharges are located on that water at:

Outfall 001: Latitude 27° 28' 24"N; Longitude 98° 03' 21"W

## III. PROCESS AND DISCHARGE DESCRIPTION

The plant receives raw field gas from several production sources. Raw field gas goes through inlet separation for liquid removal. A portion of the gas is compressed, dehydrated and further processed. The recovered gas is sold, used for gas lift, or used for fuel. The produced liquids go through fractionation where additional natural gas are recovered and sent to sales.

The noncontact cooling water from each cooling tower is comingled and pumped to a Vibratory Shear Enhanced Process (VSEP) which is a batch reverse osmosis process that removes free chlorine, chromium, copper, and selenium from the water prior to being routed to the drainage ditch within the plant. Discharges from the facility are from cooling tower blowdown, reverse osmosis reject water, and stormwater. These discharges enter the plant drainage system and is routed to the skim pit prior to surface discharge. At the skimmer pit, the water is treated with sulfuric acid for pH control. The pit allows for temporary retention/settling of the effluent and affords an opportunity to skim oil from the surface, if needed. The VSEP reject stream is routed to the plant's saltwater disposal system for subsurface injection. The following analytical sample results are listed below:

### Table 1: Discharge Characteristics

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

#### Outfall 001:

Parameter	Max. Daily Value (mg/l)	Average Daily Value (mg/l)
Flow	0.83 MGD	0.19 MGD

Parameter	Max. Daily Value (mg/l)	Average Daily Value (mg/l)
BOD	14	7
TSS	NA	3
TRC	0.01	0.004
Oil & Grease	NA	1.3
COD	NA	29
TOC	NA	12
Ammonia (as N)	NA	0
Discharge Flow	0.83 MGD	0.19 MGD
pH range		7.4 to 8.9 s.u.
Chromium	0.005	0.005
Nickel	ND	ND
Lead	0.0069	0.0067
Zinc	0.063	0.059
Copper	0.02	0.018
Mercury	ND	ND
Aluminum	0.24	0.235
Arsenic	0.0056	0.0053
Chloride	260	222.26
Calcium	35	28.37
Magnesium	13	10.88
Hardness	140	115.33

#### IV. REGULATORY AUTHORITY

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.

#### 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 and TRC.

## B. REASON FOR PERMIT ISSUANCE

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 & 2E) was received on April 24, 2014, and was deemed administratively incomplete on August 11, 2014. Additional permit application information was received via email on January 20, 2015, and was deemed administratively complete on February 11, 2015.

## 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.

There are no published ELG's for this type of activity. Final effluent requirements are based on 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. 2492A. Limitations for Biochemical Oxygen Demand (BOD<sub>5</sub>) 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 is 30 mg/l maximum and 20 mg/l average. The effluent loadings, lbs/day, were calculated using the treatment facility's maximum flow of 0.83 MGD reported in the application, the respective pollutant's daily maximum concentration (mg/l), and the conversion factor of 8.34.

$$\text{Loading, lbs/day} = \text{Flow (MGD)} * 8.34 \text{ lb/gal} * 30 \text{ mg/l}$$

$$\text{Daily Max. (lbs/day) BOD} = 0.83 \text{ MGD} * 8.34 \text{ lb/day} * 30 \text{ mg/l} = 207.67 \text{ lbs/day}$$

The daily average or monthly average values were calculated by dividing the daily maximum by 1.5.

$$\text{Daily Average} = 207.67 \text{ lbs/day} / 1.5 = 138.45 \text{ lbs/day}$$

Stormwater has been identified by the permittee as a component of the discharge through Outfall No. 001. 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. 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 2492 are primary contact recreation, high aquatic life, and oyster waters.

#### 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

Information obtained from the application indicates that the pH of the discharges from boiler blowdown, reverse osmosis reject water, and stormwater are adjusted and controlled with sulfuric acids. Wastewater discharges from the facility flows into an unnamed ditch, to Escondido Creek, then to Borregos Lake, waterbody Segment 2492A of Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada. Since the immediate receiving is an intermittent stream, and there is no mixing established for this discharge. Therefore, the limitation of pH in the discharge shall be limited to the standards for waterbody Segment 2492, Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada to the range 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 following narrative limitations in the draft 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.”

Monitoring shall continue to be conducted weekly using, using the visual sheen method.

### 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 discharges to a ditch 2 miles upstream from Borregos Lake on Escondido Creek, an intermittent water body. Escondido Creek is a tributary of Santa Gertrudis Creek which flows into San Fernando Creek/Cayo Del Grullo, TCEQ Segment 2492A. TEXTOC menu 8 (Discharge is to an intermittent water body within 3 miles of a lake or a water body that acts like a lake.) was used to calculate reasonable potential for toxics criteria using the following information: mixing zone = 15%, Zone of initial dilution = 60 %; & human health = 8%. In addition, ITWQS, table 5, segment specific values for pH, TSS, total hardness, TDS, chloride, and sulfate values were also used in menu 8 to calculate reasonable potential. See attachment for TEXTOC spreadsheet calculation of reasonable potential for toxics.

USGS Gage 08210300, Ramirena Creek, is used as a reference gage for determination of critical flows. The critical low flow, 7Q2 is 0.0 cubic feet per second, Harmonic Mean (HM) = 0.0 cubic feet per second. There are no outfalls contributing to flow upstream from this facility.

Information obtained from the application shows that none of the pollutants showed potential to violate Texas WQS.

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 King Ranch Gas plant is 4µg/l, and the maximum concentration is 10µg/l. 19µg/L is EPA's acute chlorine criteria and 11µg/L is EPA's chronic chlorine criteria. Limits must be protective of WQS per 40 CFR 122.4(d) and 122.44(d). Since the acute conditions do not allow dilution; the limit must be met at end-of-pipe but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit.

The critical dilution is calculated as follows:

$$\begin{aligned} \text{Critical Dilution} &= \frac{\text{Effluent Flow}}{\text{Effluent flow} + 7Q2} \\ &= \frac{0.19}{0.19 + 0} \\ &= 100 \% \end{aligned}$$

The in-stream TRC concentration after allowing for dilution is:  $11\mu\text{g/L} \div 1 = 11\mu\text{g/L}$ . Since this value is less than the  $19\mu\text{g/L}$  end-of-pipe acute standard, the  $11\mu\text{g/L}$  is more stringent and will be more protective. In addition, since discharge is to an intermittent waterbody within 3 miles of a lake, chronic criterion applies. As a result, TRC limit is changed to  $11\mu\text{g/L}$  which is EPA's chronic chlorine criteria. The draft permit shall establish the  $11\mu\text{g/L}$  limit. However TRC is toxic at measurable amounts, so in addition to the  $11\mu\text{g/L}$  chemical specific limitation, the narrative limit for TRC shall be "No Measurable." Hence, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no quantifiable level of TRC as determined by any approved method established in 40 CFR 136 that is greater than the established MQL. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. In addition, EPA has established a MQL for TRC at  $33\mu\text{g/l}$ . Values less than  $33\mu\text{g/L}$  can be reported as zero. The previous permit established a TRC limit of  $33\mu\text{g/L}$ .

#### 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.

BOD5 and pH shall be monitored twice per month by grab samples. Flow and total residual chlorine shall also be monitored twice per month. Biomonitoring testing shall be performed quarterly using 24-hour composite sample.

#### F. 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 previous permit requires that discharge to outfall 001 be monitored by a 7-day chronic toxicity test, with semiannual monitoring according to the provisions indicated in Parts I and II of this permit.

A review of the DMR reveals that the facility failed WET test for *C. Dubia* in August 2011. Retesting completed over the next three months showed no evidence of sub-lethal effects. Reasonable potential analysis performed showed that reasonable potential exists (See attached spreadsheet). As a result, the draft permit includes limitation, monitoring requirements and compliance schedules for WET.

The critical dilution is 100% and the dilution series are 32%, 42%, 56%, 75%, and 100%. A 7-day chronic No Observed Effect Concentration (NOEC) freshwater criterion applies at the point of discharge. The previous permit had a critical dilution of 50% with dilution series of 21%, 28%, 38%, 50%, & 67%.

#### OUTFALL 001

Based on the nature of the discharge; industrial, the estimated average flow; 0.19 MGD, the nature of the receiving water; an intermittent water body within 3 miles of a lake or a water body that acts like a lake; and the critical dilution; 100%, the TCEQ IP directs the WET test to be a 7-day chronic toxicity testing using *Ceriodaphnia dubia* and *Pimephales promelas*. Monitoring frequency shall be performed quarterly for both the vertebrate and the invertebrate test.

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 32%, 42%, 56%, 75%, and 100%.

During the period beginning on the effective date of the permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 001 – cooling tower blowdown, boiler blowdown, and reverse osmosis reject water from outfall number 001 to an unnamed ditch, which flows into Escondido Creek, then to Borregos Lake, waterbody Segment 2492A of the Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada of the Bays and Estuaries. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS	
	30-DAY AVG MINIMUM	7-DAY MINIMUM
Whole Effluent Lethality (PCS 22414) (7-Day NOEC) <u>1/</u>	100 %	100%
<u>Ceriodaphnia dubia</u>	REPORT	REPORT
<u>Pimephales promelas</u>	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	FREQUENCY	TYPE
Whole Effluent Lethality (7-Day NOEC) <u>1/</u>		
<u>Ceriodaphnia dubia</u>	Once/ 3 Months	24-Hr. Composite
<u>Pimephales promelas</u>	Once/ 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 on the effective date of the 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 a ditch 2 miles upstream from Borregos Lake on Escondido Creek, an intermittent water body. Escondido Creek is a tributary of Santa Gertrudis Creek which flows into San Fernando Creek/Cayo Del Grullo, TCEQ Segment 2492A. The receiving stream is listed as impaired for bacteria (Category 5a) on the Texas 2012 Clean

Water Act Section 303(d) List, approved by EPA. Category 5a implies that a TMDL is underway, scheduled, or will be scheduled. The facility does not discharge bacteria. 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 draft 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, TRC, and pH.

## 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>, sixteen species in Kleburg County are listed as Endangered or Threatened. The listed species are the Least Tern, black lace cactus, whooping Crane, Gulf Coast Jaguarundi, hawksbill sea turtle, Kemp's ridley sea turtle, leatherback sea turtle, northern aplomado falcon, ocelot, slender rush-pea, south Texas ambrosia, and West Indian Manatee. The threatened species are green sea turtle, loggerhead sea turtle, green sea turtle, and piping plover.

### Determination

The permit renewal reflected here does not change the nature or volume of the pollutants from the current. EPA is unaware, at this time, of any service concerns regarding this discharge. The permit has retained the limitations and conditions of the expiring permit. EPA believes these limitations are adequate to protect the listed species for Kleburg County.

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 July 17, 2009, 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.

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.

## **XI. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS**

The reissuance of the permit 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. DMR reports reveal failing WET test for *C. Dubia* in August 2011. Retesting completed over the next three months showed no evidence of sub-lethal effects. The WET EPA Reasonable Potential Analyzer (See Appendix) indicates that RP exists. EPA concludes that this effluent has and will cause or contribute to an exceedance of the State water quality standards. Therefore WET limits have been established in the draft permit.

Copies of the Discharge Monitoring Report (DMR) reviewed also indicated that this facility had several exceedances of TRC limits. A stringent TRC criteria has been established in the draft permit based on EPA's chronic chlorine criteria.

## **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 & 2E, dated April 23, 2014, was received on April 24, 2014. Supplemental application information were received via email on January 20, 2015, and was deemed administratively complete on February 11, 2015.

### **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/wizard/chooseLocation!prepare.action>

### **C. 40 CFR CITATIONS**

Sections 122, 124, 125, 133, and 136

### **D. MISCELLANEOUS CORRESPONDENCE**

Letter from Dorothy Brown, EPA, to Mr. Nathan Miller, Exxon Mobil dated February 11, 2015, informing applicant that its NPDES application received April 24, 2014, is administratively complete.

Letter from Dorothy Brown, EPA, to Mr. Shelby Pennington, Exxon Mobil, dated August 11, 2014, informing applicant that its NPDES application received April 24, 2014, is administratively incomplete.

Email from Robert Kirkland, EPA, to Maria Okpala, EPA, dated August 6, 2014, on critical conditions information.