

Brooke T. Paup, *Chairman*  
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Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

January 23, 2025

VIA ELECTRONIC FILING

Ms. Laurie Gharis  
Office of the Chief Clerk  
Texas Commission on Environmental Quality  
Post Office Box 13087, MC-105  
Austin, Texas 78711-3087

Re: Executive Director's Backup Documents Filed for Consideration of Hearing  
Requests and Requests for Reconsideration at Agenda for Application by Space  
Exploration Technologies Corp. for TPDES Permit No. WQ0005462000; TCEQ  
Docket No. 2024-1821-IWD

Dear Ms. Gharis:

Enclosed please find a copy of the following documents for inclusion in the  
background material for this permit application. If you have any questions or comments,  
please call me at 512-239-1439 or email me at [Harrison.malley@tceq.texas.gov](mailto:Harrison.malley@tceq.texas.gov).

- Fact Sheet and ED's Preliminary Decision
- Draft Permit
- Compliance History Report

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in cursive script, reading "Harrison Cole Malley".

Harrison Cole Malley, *Staff Attorney*  
Environmental Law Division

STATEMENT OF BASIS/TECHNICAL SUMMARY AND  
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

**DESCRIPTION OF APPLICATION**

Applicant: Space Exploration Technologies Corp.; Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005462000 (EPA I.D. No. TX0146251)

Regulated activity: Industrial wastewater permit

Type of application: New permit

Request: New permit

Authority: Federal Clean Water Act (CWA) §402; Texas Water Code (TWC) §26.027; 30 Texas Administrative Code (TAC) Chapter 305, Subchapters C-F, and Chapters 307 and 319; commission policies; and Environmental Protection Agency (EPA) guidelines

**EXECUTIVE DIRECTOR RECOMMENDATION**

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit will expire at midnight, five years from the date of permit issuance according to the requirements of 30 TAC §305.127(1)(C)(i).

**REASON FOR PROJECT PROPOSED**

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit.

**PROJECT DESCRIPTION AND LOCATION**

The applicant currently operates the Starbase Launch Pad Site, a site for rocket launch activity of SpaceX Starship-Super Heavy launch vehicles.

The wastewater system consists of two (2) above-ground containment basins that capture deluge water used during vehicle launch and return to launch site activities. The captured water is stored and reused for various purposes at the facility. Discharge consists of excess deluge water not captured due to overspray, facility washdown water during maintenance events, and stormwater.

The facility is located on the south side of the eastern terminus of State Highway 4, near the City of Brownsville, Cameron County, Texas 78521.

**Discharge Route and Designated Uses**

The effluent is discharged to tidal wetlands, thence to Rio Grande Tidal in Segment No. 2301 of the Rio Grande Basin. The unclassified receiving water uses are high aquatic life use for the tidal wetlands. The designated uses for Segment No. 2301 are primary contact recreation and exceptional aquatic life use. The effluent limits in the draft permit will maintain and protect the existing instream uses. All determinations are preliminary and subject to additional review and revisions.

**Antidegradation Review**

In accordance with 30 TAC §307.5 and TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water

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quality is expected in tidal wetlands, which has been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

### Endangered Species Review

The discharge from this permit is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only consider aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. Though the piping plover, *Charadrius melodus* Ord, can occur in Cameron County, the discharge is not to a watershed of high priority per Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

### Impaired Water Bodies

Segment No. 2301 is not currently listed on the state's inventory of impaired and threatened waters, the 2022 CWA §303(d) list.

### Completed Total Maximum Daily Loads (TMDLs)

There are no completed TMDLs for Segment No. 2301.

### Dissolved Oxygen

As summarized in the TCEQ Interoffice Memorandum dated July 23, 2024, due to intermittent nature of the discharge and the low levels of oxygen-demanding substances expected in the wastewaters from this facility, no significant dissolved oxygen depletion is anticipated in the receiving waters as a result of this discharge.

### SUMMARY OF EFFLUENT DATA

Self-reporting data is not available because this is a new permit application.

### DRAFT PERMIT CONDITIONS

The draft permit authorizes the discharge of deluge water (used for launch and return to launch site activities), facility washdown water, and stormwater on an intermittent and flow-variable basis via Outfalls 001 and 002.

Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average	Daily Maximum
001 & 002	Flow	Report MGD	Report MGD
	Chemical Oxygen Demand	Report mg/L	200 mg/L
	Oil & Grease	Report mg/L	15 mg/L
	Temperature <sup>1</sup>	n/a	Report °F
	Total Copper <sup>1</sup>	n/a	Report mg/L
	Total Mercury <sup>1</sup>	n/a	Report mg/L

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Outfall	Pollutant	Daily Average	Daily Maximum
001 & 002	Total Thallium <sup>1</sup>	n/a	Report mg/L
	Total Zinc <sup>1</sup>	n/a	Report mg/L
	pH	6.0 SU (min)	9.0 SU

<sup>1</sup> Effective beginning upon date of permit issuance and lasting for a period of 58 months.

#### OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	25.996058 N	97.155238 W
002	25.996186 N	97.158220 W

#### **Technology-Based Effluent Limitations**

Regulations in Title 40 of the Code of Federal Regulations (40 CFR) require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines.

Effluent limitations for chemical oxygen demand, oil & grease, and pH are based on the standard limitations normally applied to instantaneous industrial stormwater discharges. These are indicator parameters of the quality of the discharge. Based on the presumption of the quality of the other contributing wastestreams being consistent with the quality of stormwater runoff of the facility, these limitations are imposed on the discharge of the commingled wastestreams via the designated outfalls. The monitoring/reporting requirement for flow is based on 40 CFR 122.44(i)(1)(ii).

#### **Water Quality-Based Effluent Limitations**

Calculations of water quality-based effluent limitations for the protection of aquatic life and human health are presented in Appendix A. Aquatic life criteria established in Table 1 and human health criteria established in Table 2 of 30 TAC Chapter 307 are incorporated into the calculations, as are recommendations in the Water Quality Assessment Team's memorandum dated July 16, 2024. TCEQ practice for determining significant potential is to compare the reported analytical data from the facility against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

Data reported in Worksheet 2.0 of the application was incomplete because only two (2) rounds of sampling was submitted, and Worksheet 2.0 requires four (4) rounds of representative samples. A retest requirement (Other Requirement No. 12) is included in the draft permit that requires submittal of the complete four (4) rounds of sampling.

The partial submittal was screened against the calculated water quality-based effluent limitations as a preliminary review. With the following exceptions, reported analytical data from the preliminary review does not exceed 70 percent of the calculated daily average water quality based effluent limitation for aquatic life protection or human health protection.

- In the cases of total copper, total thallium, and total zinc two (2) analytical results were submitted for each parameter in Worksheet 2.0 of the application. In all cases, the result for one sample was below the screening level to not require any action in the permit, and the result

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for the other sample exceeded the screening criteria to require effluent limitations to be placed in the permit.

- In the case of total mercury two (2) analytical results were submitted in Worksheet 2.0 of the application. The result of the first sample is listed as "113 ug/L" in the original Table 2 of Worksheet 2.0, however, a review of the submitted lab reports included the result of "<0.113 ug/L" which was corrected in the subsequently submitted updated Worksheet 2.0 of the application. The result of the second sample is listed as "0.139 ug/L" in both versions of Table 2 of Worksheet 2.0, however, a review of the submitted lab reports indicates that the result includes a "J flag" which denotes the analyte was detected below quantitation limit and makes the reported value unreliable. The level of detection for both samples were above the requirement minimum analytical level of 0.005 ug/L as listed in Appendix E of IPs.
- Worksheet 2.0 of the application included two measurements for temperature of 28.1 °C and 38 °C, which were inadvertently listed with the units of measure of °F. These measurements convert to 82.6 °F and 100.4 °F, respectively. Self-expiring monitoring/reporting requirement for temperature is included at Outfalls 001 and 002 for the purpose of gathering more data during the term of the permit to determine if any further action regarding temperature will be required during the next permit renewal action.

In all cases above, after a sufficient number of samples are collected and reviewed, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

#### **Total Dissolved Solids (TDS), Chloride, and Sulfate Screening**

Segment No. 2301, which receives the discharges from this facility, does not have criteria established for TDS, chloride, or sulfate in 30 TAC Chapter 307; therefore, no screening was performed for TDS, chloride, or sulfate in the effluent.

#### **pH Screening**

The draft permit proposes pH limits of 6.0 – 9.0 SU at Outfall 001 and 002, which discharge into unclassified water bodies. Consistent with the procedures for pH screening that were submitted to EPA with a letter dated May 28, 2014, and approved by EPA in a letter dated June 2, 2014, requiring a discharge to an unclassified water body to meet pH limits of 6.0 – 9.0 standard units reasonably ensures instream compliance with *Texas Surface Water Quality Standards* pH criteria. These limits are being proposed in the draft permit.

#### **316(b) Cooling Water Intake Structures**

The facility obtains water from Brownsville Public Utilities Board, a public water system (PWS No. TX0310001), for cooling purposes. The use of water obtained from a public water system for cooling purposes does not constitute the use of a cooling water intake structure; therefore, the facility is not subject to Section 316(b) of the CWA or 40 CFR Part 125, Subpart J.

The facility may also utilize reclaimed effluent (TCEQ authorization No. 2E0000327) and reclaimed water from internal operations, as additional sources of water for cooling purposes. According to the rules applicable to cooling water intake structures (40 CFR § 125.91(c)), the use of reclaimed water (TCEQ authorization No. 2E0000327 and reclaimed water from internal operations) does not constitute the use of a cooling water intake structure; therefore, the facility is not subject to Section 316(b) of the CWA or 40 CFR Part 125, Subpart J.

A provision, Other Requirement No. 7, is included in the draft permit and it requires the permittee to notify the TCEQ of any changes in the method by which cooling water is obtained. Upon receipt of

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such notification, the TCEQ may reopen the permit to include additional terms and conditions as necessary.

**Whole Effluent Toxicity Testing (Biomonitoring)**

Biomonitoring requirements are not included in the draft permit.

The discharges authorized by this permit do not meet the threshold established in the *Procedures to Implement the Texas Surface Water Quality Standards* (RG-194) to impose biomonitoring requirements.

**SUMMARY OF CHANGES FROM APPLICATION**

No changes were made from the application.

**SUMMARY OF CHANGES FROM EXISTING PERMIT**

This an application for a new permit.

**BASIS FOR DRAFT PERMIT**

The following items were considered in developing the draft permit:

1. Application received on July 1, 2024, and additional information received on August 8, 2024.
2. TCEQ Rules.
3. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 1, 2018, as approved by EPA Region 6.
4. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.
5. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not approved by EPA Region 6.
6. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not approved by EPA Region 6.
7. *Procedures to Implement the Texas Surface Water Quality Standards* (IPs), Texas Commission on Environmental Quality, June 2010, as approved by EPA Region 6.
8. *Procedures to Implement the Texas Surface Water Quality Standards*, Texas Commission on Environmental Quality, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.
9. Memos from the Standards Implementation Team and Water Quality Assessment Team of the Water Quality Assessment Section of the TCEQ.
10. *Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits*, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.
11. EPA Effluent Guidelines: N/A.
12. Consistency with the Coastal Management Plan: The executive director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office and has determined that the action is consistent with the applicable CMP goals and policies.
13. Letter dated May 28, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for pH evaluation procedures).

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14. Letter dated June 2, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for pH evaluation procedures).
15. Letter dated April 29, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for thermal evaluation procedures)
16. Letter dated May 12, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for thermal evaluation procedures).
17. General Guidance – Industrial Permits: Uncontaminated Stormwater Runoff, EPA, January 1997.

## **PROCEDURES FOR FINAL DECISION**

When an application is declared administratively complete, the chief clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for reviewing and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent to the Chief Clerk, along with the Executive Director's preliminary decision contained in the technical summary or fact sheet. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case hearing.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ commissioners for their consideration at a scheduled commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the commission grants a contested case hearing as described above, the commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the commission will consider all public

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comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Michael Sunderlin at (512) 239-4523.

Michael Sunderlin

Michael Sunderlin

August 28, 2024

Date



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**Appendix A**  
**Calculated Water Quality-Based Effluent Limits**

**TEXTOX MENU #5 - BAY OR WIDE TIDAL RIVER**

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Saltwater Aquatic Life  
Table 2, 2018 Texas Surface Water Quality Standards for Human Health  
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

**PERMIT INFORMATION**

Permittee Name:	SPACE-X
TPDES Permit No:	WQ0005462000
Outfall No:	001
Prepared by:	SUNDERLIN
Date:	July 26, 2024

**DISCHARGE INFORMATION**

Receiving Waterbody:	Tidal Wetland
Segment No:	2301
TSS (mg/L):	24
Effluent Flow for Aquatic Life (MGD)	variable
% Effluent for Chronic Aquatic Life (Mixing Zone):	100
% Effluent for Acute Aquatic Life (ZID):	100
Oyster Waters?	no
Effluent Flow for Human Health (MGD):	variable
% Effluent for Human Health:	100

**CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):**

<i>Estuarine Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (total)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (trivalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	4.85	-0.72	7182	0.853		1.00	Assumed
Lead	6.06	-0.85	77058	0.351		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	5.86	-0.74	68967	0.377		1.00	Assumed
Zinc	5.36	-0.52	43882	0.487		1.00	Assumed

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AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>SW Acute Criterion (µg/L)</i>	<i>SW Chronic Criterion (µg/L)</i>	<i>WLA<sub>a</sub> (µg/L)</i>	<i>WLA<sub>c</sub> (µg/L)</i>	<i>LTA<sub>a</sub> (µg/L)</i>	<i>LTA<sub>c</sub> (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrolein	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aldrin	1.3	N/A	1.30	N/A	0.416	N/A	0.611	1.29
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	149	78.0	47.7	47.6	69.9	147
Cadmium	40.0	8.75	40.0	8.75	12.8	5.34	7.84	16.5
Carbaryl	613	N/A	613	N/A	196	N/A	288	610
Chlordane	0.09	0.004	0.0900	0.00400	0.0288	0.00244	0.00358	0.00758
Chlorpyrifos	0.011	0.006	0.0110	0.00600	0.00352	0.00366	0.00517	0.0109
Chromium (trivalent)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (hexavalent)	1090	49.6	1090	49.6	349	30.3	44.4	94.0
Copper	13.5	3.6	15.8	4.22	5.06	2.57	3.78	8.00
Copper (oyster waters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide (free)	5.6	5.6	5.60	5.60	1.79	3.42	2.63	5.57
4,4'-DDT	0.13	0.001	0.130	0.00100	0.0416	0.000610	0.000896	0.00189
Demeton	N/A	0.1	N/A	0.100	N/A	0.0610	0.0896	0.189
Diazinon	0.819	0.819	0.819	0.819	0.262	0.500	0.385	0.815
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	0.710	0.00200	0.227	0.00122	0.00179	0.00379
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I ( <i>alpha</i> )	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endosulfan II ( <i>beta</i> )	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endosulfan sulfate	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endrin	0.037	0.002	0.0370	0.00200	0.0118	0.00122	0.00179	0.00379
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Heptachlor	0.053	0.004	0.0530	0.00400	0.0170	0.00244	0.00358	0.00758
Hexachlorocyclohexane ( <i>gamma</i> ) [Lindane]	0.16	N/A	0.160	N/A	0.0512	N/A	0.0752	0.159
Lead	133	5.3	379	15.1	121	9.21	13.5	28.6
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Mercury	2.1	1.1	2.10	1.10	0.672	0.671	0.986	2.08
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0183	0.0269	0.0569
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000610	0.000896	0.00189
Nickel	118	13.1	118	13.1	37.8	7.99	11.7	24.8
Nonylphenol	7	1.7	7.00	1.70	2.24	1.04	1.52	3.22
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	15.1	9.60	4.83	5.86	7.10	15.0
Phenanthrene	7.7	4.6	7.70	4.60	2.46	2.81	3.62	7.66
Polychlorinated Biphenyls [PCBs]	10	0.03	10.0	0.0300	3.20	0.0183	0.0269	0.0569
Selenium	564	136	564	136	180	83.0	121	258
Silver	2	N/A	5.31	N/A	1.70	N/A	2.49	5.28
Toxaphene	0.21	0.0002	0.210	0.000200	0.0672	0.000122	0.000179	0.000379
Tributyltin [TBT]	0.24	0.0074	0.240	0.00740	0.0768	0.00451	0.00663	0.0140
2,4,5 Trichlorophenol	259	12	259	12.0	82.9	7.32	10.7	22.7
Zinc	92.7	84.2	190	173	60.9	105	89.5	189

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**HUMAN HEALTH**

**CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:**

<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrylonitrile	115	115	107	157	332
Aldrin	1.147E-05	0.0000115	0.0000107	0.0000156	0.0000331
Anthracene	1317	1317	1225	1800	3809
Antimony	1071	1071	996	1464	3097
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	581	540	794	1680
Benzidine	0.107	0.107	0.0995	0.146	0.309
Benzo(a)anthracene	0.025	0.0250	0.0233	0.0341	0.0723
Benzo(a)pyrene	0.0025	0.00250	0.00233	0.00341	0.00723
Bis(chloromethyl)ether	0.2745	0.275	0.255	0.375	0.793
Bis(2-chloroethyl)ether	42.83	42.8	39.8	58.5	123
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	7.55	7.02	10.3	21.8
Bromodichloromethane [Dichlorobromomethane]	275	275	256	375	795
Bromoform [Tribromomethane]	1060	1060	986	1449	3065
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	46.0	42.8	62.8	133
Chlordane	0.0025	0.00250	0.00233	0.00341	0.00723
Chlorobenzene	2737	2737	2545	3741	7916
Chlorodibromomethane [Dibromochloromethane]	183	183	170	250	529
Chloroform [Trichloromethane]	7697	7697	7158	10522	22262
Chromium (hexavalent)	502	502	467	686	1451
Chrysene	2.52	2.52	2.34	3.44	7.28
Cresols [Methylphenols]	9301	9301	8650	12715	26901
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.00200	0.00186	0.00273	0.00578
4,4'-DDE	0.00013	0.000130	0.000121	0.000177	0.000375
4,4'-DDT	0.0004	0.000400	0.000372	0.000546	0.00115
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	473	473	440	646	1368
1,2-Dibromoethane [Ethylene Dibromide]	4.24	4.24	3.94	5.79	12.2
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	595	553	813	1720
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	3299	3068	4510	9541
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	2.24	2.08	3.06	6.47
1,2-Dichloroethane	364	364	339	497	1052
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	55114	51256	75346	159406
Dichloromethane [Methylene Chloride]	13333	13333	12400	18227	38563
1,2-Dichloropropane	259	259	241	354	749
1,3-Dichloropropene [1,3-Dichloropropylene]	119	119	111	162	344
Dicofol [Kelthane]	0.30	0.300	0.279	0.410	0.867
Dieldrin	2.0E-05	0.0000200	0.0000186	0.0000273	0.0000578
2,4-Dimethylphenol	8436	8436	7845	11532	24399
Di-n-Butyl Phthalate	92.4	92.4	85.9	126	267
Dioxins/Furans [TCDD Equivalents]	7.97E-08	7.97E-08	7.41E-08	1.08E-07	2.30E-07
Endrin	0.02	0.0200	0.0186	0.0273	0.0578
Epichlorohydrin	2013	2013	1872	2751	5822

STATEMENT OF BASIS / TECHNICAL SUMMARY AND  
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<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Ethylbenzene	1867	1867	1736	2552	5399
Ethylene Glycol	1.68E+07	16800000	15624000	22967280	48590640
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.000100	0.0000930	0.000136	0.000289
Heptachlor Epoxide	0.00029	0.000290	0.000270	0.000396	0.000838
Hexachlorobenzene	0.00068	0.000680	0.000632	0.000929	0.00196
Hexachlorobutadiene	0.22	0.220	0.205	0.300	0.636
Hexachlorocyclohexane ( <i>alpha</i> )	0.0084	0.00840	0.00781	0.0114	0.0242
Hexachlorocyclohexane ( <i>beta</i> )	0.26	0.260	0.242	0.355	0.751
Hexachlorocyclohexane ( <i>gamma</i> ) [Lindane]	0.341	0.341	0.317	0.466	0.986
Hexachlorocyclopentadiene	11.6	11.6	10.8	15.8	33.5
Hexachloroethane	2.33	2.33	2.17	3.18	6.73
Hexachlorophene	2.90	2.90	2.70	3.96	8.38
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	15982	14863	21848	46224
Lead	3.83	10.9	10.1	14.9	31.5
Mercury	0.0250	0.0250	0.0233	0.0341	0.0723
Methoxychlor	3.0	3.00	2.79	4.10	8.67
Methyl Ethyl Ketone	9.92E+05	992000	922560	1356163	2869161
Methyl <i>tert</i> -butyl ether [MTBE]	10482	10482	9748	14329	30317
Nickel	1140	1140	1060	1558	3297
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	1873	1742	2560	5417
N-Nitrosodiethylamine	2.1	2.10	1.95	2.87	6.07
N-Nitroso-di- <i>n</i> -Butylamine	4.2	4.20	3.91	5.74	12.1
Pentachlorobenzene	0.355	0.355	0.330	0.485	1.02
Pentachlorophenol	0.29	0.290	0.270	0.396	0.838
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.000640	0.000595	0.000874	0.00185
Pyridine	947	947	881	1294	2739
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	0.240	0.223	0.328	0.694
1,1,2,2-Tetrachloroethane	26.35	26.4	24.5	36.0	76.2
Tetrachloroethylene [Tetrachloroethylene]	280	280	260	382	809
Thallium	0.23	0.230	0.214	0.314	0.665
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.0110	0.0102	0.0150	0.0318
2,4,5-TP [Silvex]	369	369	343	504	1067
1,1,1-Trichloroethane	784354	784354	729449	1072290	2268587
1,1,2-Trichloroethane	166	166	154	226	480
Trichloroethylene [Trichloroethene]	71.9	71.9	66.9	98.2	207
2,4,5-Trichlorophenol	1867	1867	1736	2552	5399
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	16.5	15.3	22.5	47.7

STATEMENT OF BASIS / TECHNICAL SUMMARY AND  
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**CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:**

<b>Aquatic Life Parameter</b>	<b>70% of Daily Avg. (µg/L)</b>	<b>85% of Daily Avg. (µg/L)</b>
Acrolein	N/A	N/A
Aldrin	0.428	0.519
Aluminum	N/A	N/A
Arsenic	48.9	59.4
Cadmium	5.49	6.66
Carbaryl	201	245
Chlordane	0.00251	0.00304
Chlorpyrifos	0.00362	0.00439
Chromium (trivalent)	N/A	N/A
Chromium (hexavalent)	31.1	37.8
Copper	2.64	3.21
Copper (oyster waters)	N/A	N/A
Cyanide (free)	1.84	2.23
4,4'-DDT	0.000627	0.000762
Demeton	0.0627	0.0762
Diazinon	0.269	0.327
Dicofol [Kelthane]	N/A	N/A
Dieldrin	0.00125	0.00152
Diuron	N/A	N/A
Endosulfan I ( <i>alpha</i> )	0.00564	0.00685
Endosulfan II ( <i>beta</i> )	0.00564	0.00685
Endosulfan sulfate	0.00564	0.00685
Endrin	0.00125	0.00152
Guthion [Azinphos Methyl]	0.00627	0.00762
Heptachlor	0.00251	0.00304
Hexachlorocyclohexane ( <i>gamma</i> ) [Lindane]	0.0526	0.0639
Lead	9.47	11.5
Malathion	0.00627	0.00762
Mercury	0.690	0.838
Methoxychlor	0.0188	0.0228
Mirex	0.000627	0.000762
Nickel	8.22	9.98
Nonylphenol	1.06	1.29
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	4.97	6.03
Phenanthrene	2.53	3.07
Polychlorinated Biphenyls [PCBs]	0.0188	0.0228
Selenium	85.3	103
Silver	1.74	2.12
Toxaphene	0.000125	0.000152
Tributyltin [TBT]	0.00464	0.00564
2,4,5 Trichlorophenol	7.53	9.14
Zinc	62.6	76.1

STATEMENT OF BASIS / TECHNICAL SUMMARY AND  
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<b>Human Health Parameter</b>	<b>70% of Daily Avg. (µg/L)</b>	<b>85% of Daily Avg. (µg/L)</b>
Acrylonitrile	110	133
Aldrin	0.0000109	0.0000133
Anthracene	1260	1530
Antimony	1024	1244
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	555	675
Benzidine	0.102	0.124
Benzo(a)anthracene	0.0239	0.0290
Benzo(a)pyrene	0.00239	0.00290
Bis(chloromethyl)ether	0.262	0.318
Bis(2-chloroethyl)ether	40.9	49.7
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.22	8.77
Bromodichloromethane [Dichlorobromomethane]	263	319
Bromoform [Tribromomethane]	1014	1231
Cadmium	N/A	N/A
Carbon Tetrachloride	44.0	53.4
Chlordane	0.00239	0.00290
Chlorobenzene	2619	3180
Chlorodibromomethane [Dibromochloromethane]	175	212
Chloroform [Trichloromethane]	7365	8944
Chromium (hexavalent)	480	583
Chrysene	2.41	2.92
Cresols [Methylphenols]	8900	10808
Cyanide (free)	N/A	N/A
4,4'-DDD	0.00191	0.00232
4,4'-DDE	0.000124	0.000151
4,4'-DDT	0.000382	0.000464
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	452	549
1,2-Dibromoethane [Ethylene Dibromide]	4.05	4.92
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	569	691
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	3157	3833
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	2.14	2.60
1,2-Dichloroethane	348	422
1,1-Dichloroethylene [1,1-Dichloroethene]	52742	64044
Dichloromethane [Methylene Chloride]	12759	15493
1,2-Dichloropropane	247	300
1,3-Dichloropropene [1,3-Dichloropropylene]	113	138
Dicofol [Kelthane]	0.287	0.348
Dieldrin	0.0000191	0.0000232
2,4-Dimethylphenol	8072	9802
Di- <i>n</i> -Butyl Phthalate	88.4	107
Dioxins/Furans [TCDD Equivalents]	7.62E-08	9.26E-08
Endrin	0.0191	0.0232
Epichlorohydrin	1926	2339
Ethylbenzene	1786	2169
Ethylene Glycol	16077096	19522188
Fluoride	N/A	N/A

STATEMENT OF BASIS / TECHNICAL SUMMARY AND  
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION  
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<b>Human Health Parameter</b>	<b>70% of Daily Avg. (µg/L)</b>	<b>85% of Daily Avg. (µg/L)</b>
Heptachlor	0.0000956	0.000116
Heptachlor Epoxide	0.000277	0.000336
Hexachlorobenzene	0.000650	0.000790
Hexachlorobutadiene	0.210	0.255
Hexachlorocyclohexane ( <i>alpha</i> )	0.00803	0.00976
Hexachlorocyclohexane ( <i>beta</i> )	0.248	0.302
Hexachlorocyclohexane ( <i>gamma</i> ) [Lindane]	0.326	0.396
Hexachlorocyclopentadiene	11.1	13.4
Hexachloroethane	2.22	2.70
Hexachlorophene	2.77	3.36
4,4'-Isopropylidenediphenol [Bisphenol A]	15294	18571
Lead	10.4	12.6
Mercury	0.0239	0.0290
Methoxychlor	2.87	3.48
Methyl Ethyl Ketone	949314	1152738
Methyl <i>tert</i> -butyl ether [MTBE]	10030	12180
Nickel	1090	1324
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	1792	2176
N-Nitrosodiethylamine	2.00	2.44
N-Nitroso-di- <i>n</i> -Butylamine	4.01	4.88
Pentachlorobenzene	0.339	0.412
Pentachlorophenol	0.277	0.336
Polychlorinated Biphenyls [PCBs]	0.000612	0.000743
Pyridine	906	1100
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.229	0.278
1,1,2,2-Tetrachloroethane	25.2	30.6
Tetrachloroethylene [Tetrachloroethylene]	267	325
Thallium	0.220	0.267
Toluene	N/A	N/A
Toxaphene	0.0105	0.0127
2,4,5-TP [Silvex]	353	428
1,1,1-Trichloroethane	750603	911446
1,1,2-Trichloroethane	158	192
Trichloroethylene [Trichloroethene]	68.8	83.5
2,4,5-Trichlorophenol	1786	2169
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	15.7	19.1



TPDES PERMIT NO.  
WQ0005462000  
*[For TCEQ office use only -  
EPA I.D. No. TX0146251]*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

P.O. Box 13087  
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Space Exploration Technologies Corp.

whose mailing address is

1 Rocket Road  
Brownsville, Texas 78521

is authorized to treat and discharge wastes from Starbase Launch Pad Site, serves as site for rocket launch activity of SpaceX Starship-Super Heavy launch vehicles (SIC 3761)

located on the south side of the eastern terminus of State Highway 4, near the City of Brownsville, Cameron County, Texas 78521

to tidal wetlands, thence to Rio Grande Tidal in Segment No. 2301 of the Rio Grande Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, five years from the date of permit issuance.

ISSUED DATE:

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For the Commission



EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Numbers 001 and 002

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge deluge water (used for launch and return to launch site activities), facility washdown water, and stormwater <sup>1</sup> subject to the following effluent limitations:

Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report MGD	Report MGD	N/A	1/day <sup>2</sup>	Estimate
Chemical Oxygen Demand	Report	200	200	1/day <sup>2</sup>	Grab
Oil & Grease	Report	15	15	1/day <sup>2</sup>	Grab
Temperature <sup>3</sup>	N/A	Report °F	N/A	1/month <sup>2, 4</sup>	Instantaneous
Total Copper <sup>3</sup>	N/A	Report	N/A	1/quarter <sup>2, 5</sup>	Grab
Total Mercury <sup>3</sup>	N/A	Report	N/A	1/quarter <sup>2, 5</sup>	Grab
Total Thallium <sup>3</sup>	N/A	Report	N/A	1/quarter <sup>2, 5</sup>	Grab
Total Zinc <sup>3</sup>	N/A	Report	N/A	1/quarter <sup>2, 5</sup>	Grab

<sup>1</sup> Includes specific non-stormwater wastestreams. See Other Requirement No. 6.

<sup>2</sup> When discharge via outfall occurs.

<sup>3</sup> Effective beginning upon date of permit issuance and lasting for a period of 58 months.

<sup>4</sup> In months that a launch event occurs, sampling shall be conducted within one (1) hour following the conclusion of the launch event and after it is deemed safe for sampling personnel to enter the sampling location.

<sup>5</sup> In quarters that a launch event occurs, sampling shall be conducted within one (1) hour following the conclusion of the launch event and after it is deemed safe for sampling personnel to enter the sampling location. See Other Requirement No. 11.

## EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

## Outfall Numbers 001 and 002

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per day, by grab sample, when discharge via outfall occurs.
3. There must be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples must be taken at the following locations.
  - Outfall 001: from Launch Tower 1 (east) to mudflats located immediately outside of the containment area and approximately 290 feet southwest of the Launch Tower 1, at the bottom southern edge of the containment wall and retention pond; and
  - Outfall 002: from Launch Tower 2 (west) to tidal wetlands located immediately outside of the containment area and approximately 100 feet southwest of Launch Tower 2, at the southern edge of the launch pad.

**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Texas Water Code §26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder, and limited to major domestic wastewater discharge facilities with a one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.
  - ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total

mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the sampling day.

The “daily discharge” determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the “daily discharge” determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (Fecal coliform, *E. coli*, or Enterococci) – the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
- f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as  $(\text{Flow, MGD} \times \text{Concentration, mg/L} \times 8.34)$ .
- g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

### 3. Sample Type

- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9(a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9(c).
  - b. Grab sample - an individual sample collected in less than 15 minutes.
- 4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
  - 5. The term “sewage sludge” is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
  - 6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## MONITORING AND REPORTING REQUIREMENTS

### 1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge that is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act; TWC Chapters 26, 27, and 28; and THSC Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

## 2. Test Procedures

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

## 3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR §264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time, and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement;
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

## 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

## 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site or shall be readily available for review by a TCEQ representative for a period of three years.

## 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the regional office and the Enforcement Division (MC 224).

## 7. Noncompliance Notification

- a. In accordance with 30 TAC §305.125(9) any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the regional office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the regional office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
  - i. unauthorized discharges as defined in Permit Condition 2(g).
  - ii. any unanticipated bypass that exceeds any effluent limitation in the permit.
  - iii. violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
- c. In addition to the above, any effluent violation that deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the regional office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
- d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

8. In accordance with the procedures described in 30 TAC §§35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

## 9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the regional office, orally or by facsimile transmission within 24 hours, and both the regional office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. one hundred micrograms per liter (100 µg/L);
  - ii. two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. the level established by the TCEQ.

- b. That any activity has occurred or will occur that would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. five hundred micrograms per liter (500 µg/L);
  - ii. one milligram per liter (1 mg/L) for antimony;
  - iii. ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. the level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA §301 or §306 if it were directly discharging those pollutants;
- b. any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. for the purpose of this paragraph, adequate notice shall include information on:
  - i. the quality and quantity of effluent introduced into the POTW; and
  - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

### PERMIT CONDITIONS

#### 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. violation of any terms or conditions of this permit;
  - ii. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending, or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

#### 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment,

revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§305.62 and 305.66 and TWC §7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC §305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility that does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA §402, or any requirement imposed in a pretreatment program approved under the CWA §§402(a)(3) or 402(b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC §7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.



#### 4. Permit Amendment or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. the alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC §305.534 (relating to New Sources and New Dischargers); or
  - ii. the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. the alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes that are not described in the permit application or that would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC §26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA §307(a) for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA §307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §50.133 (relating to Executive Director Action on Application or WQMP update).

#### 6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

#### 7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to Texas Water Code Chapter 11.

#### 8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

#### 9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

#### 10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

#### 11. Notice of Bankruptcy.

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, §101(15)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee;
  - ii. the permit number(s);
  - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iv. the date of filing of the petition.

### **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion or upgrading of the domestic wastewater treatment or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment or collection facilities. In the case of a domestic wastewater treatment facility that reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
  - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC §335.1 shall comply with these provisions:
- a. Any solid waste, as defined in 30 TAC §335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC §335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
  - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
    - i. volume of waste and date(s) generated from treatment process;
    - ii. volume of waste disposed of on-site or shipped off-site;
    - iii. date(s) of disposal;

- iv. identity of hauler or transporter;
- v. location of disposal site; and
- vi. method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

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**OTHER REQUIREMENTS**

1. The Executive Director reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office and determined that the action is consistent with the applicable CMP goals and policies.
2. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 15 within 24 hours from the time the permittee becomes aware of the violation, followed by a written report within five working days to TCEQ Region 15 and Compliance Monitoring Team (MC 224): None.
3. **MINIMUM ANALYTICAL LEVELS (MALs)**

Test methods used must be sufficiently sensitive enough to achieve a level of detection equal to or more sensitive than the specified MALs for the following parameter.

<b><u>Pollutant</u></b>	<b><u>MAL (mg/L)</u></b>
Copper (Total)	0.002
Mercury (Total)	0.000005
Thallium (Total)	0.0005
Zinc (Total)	0.005

When an analysis of an effluent sample for a pollutant listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero shall be used for that measurement when making calculations for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form:

“The reported value(s) of zero for       [list pollutant(s)]       on the self-reporting form for       [monitoring period date range]       is based on the following conditions: (1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit, and (2) the analytical results contained no detectable levels above the specified MAL.”

When an analysis of an effluent sample for a pollutant indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that pollutant, the level of detection achieved shall be used for that measurement when making calculations for the self-reporting form. A zero may not be used.

4. This permit does not authorize the discharge of domestic wastewater. All domestic wastewater must be disposed of in an approved manner, such as routing to an approved on-site septic tank and drainfield system or to an authorized third party for treatment and disposal.
5. There is no mixing zone for these discharges to a tidal wetland. Chronic toxic criteria apply at the point of discharge.
6. **ALLOWABLE NON-STORMWATER DISCHARGES**

Allowable non-stormwater discharges authorized for discharge are limited to the following, unless specific waste streams are identified on Page 2 of this permit:

- A. discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);
- B. uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);
- C. water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;
- D. uncontaminated water used to control dust;
- E. potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;
- F. uncontaminated air conditioning condensate;
- G. uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and
- H. lawn watering and similar irrigation drainage.

#### 7. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC 148) and Region 15 Office of any changes in the method by which the facility obtains water for cooling purposes. This notification must be submitted 30 days prior to any such change and must include a description of the planned changes. The TCEQ may, upon review of the notification, reopen the permit to include additional terms and conditions as necessary.

#### 8. ABOVE GROUND CONTAINMENT BASINS

The permittee shall maintain the above ground containment basins to prevent the unauthorized discharge of wastewater into or adjacent to water in the state.

- A. The permittee shall inspect each above ground containment basins at least once per month. Evidence of damage or unauthorized discharge must be evaluated by a Texas-licensed professional engineer within 30 days. The permittee is not required to drain an operating containment basin during these routine inspections. A Texas-licensed professional engineer must evaluate damage to the above ground containment basin(s), including evidence of an unauthorized discharge without visible damage.

The above ground containment basin(s) must be repaired at the recommendation of a Texas-licensed professional engineer if the damage is significant or could result in an unauthorized discharge, then the repair must be documented and certified by a Texas-licensed professional engineer. Within 60 days after a repair is completed, the repair certification must be provided to the TCEQ Region 15 office. A copy of the repair certification must be maintained at the

facility or in a reasonably accessible location and made available to the executive director upon request.

A release determination and subsequent corrective action will be based on 40 CFR Part 257 or the Texas Risk Reduction Program (30 TAC Chapter 350), as applicable. If evidence indicates that an unauthorized discharge occurred, the matter may also be referred to the TCEQ Enforcement Division to ensure the protection of the public and the environment.

- B. The permittee shall maintain at least 2.0 feet of freeboard in the above ground containment basins except when:
- (1) the freeboard requirement temporarily cannot be maintained due to a large storm event that requires the additional retention capacity to be used for a limited period of time;
  - (2) the freeboard requirement temporarily cannot be maintained due to upset plant conditions that require the additional retention capacity for a limited period of time; or
  - (3) the above ground containment basin was not required to have at least 2.0 feet of freeboard according to normal operational requirements.

9. 100-YEAR FLOOD PROTECTION

All wastewater treatment and containment structures must be designed, constructed, and managed to protect against inundation from a 100-year frequency flood event.

10. Water sources for the facility operations include, but are not limited to, water from Brownsville Public Utilities Board, a public water system (PWS No. TX0310001). Additionally, it is acknowledged that wastewater and stormwater from facility operations are captured and stored in the two (2) above-ground water storage basins to be re-used for facility operations including, but not limited to, vehicle launch and return to launch site activities prior to discharge via Outfalls 001 and 002 and/or recaptured and routed to the two (2) above-ground water storage basins to be future reuse.
11. Monitoring results must be provided at the intervals specified in this permit. For pollutants which are monitored quarterly (four times per year), the first effluent report must be submitted three months after the date of permit issuance, and subsequent reports every three months thereafter.

12. RETEST REQUIREMENTS

Wastewater discharged via Outfalls 001 and 002 must be sampled and analyzed as directed below for those parameters listed in Tables 1, 2, and 3 of Attachment A of this permit. Analytical testing must be completed, as directed, for discharges resulting from four (4) launch events.

Results of the analytical testing must be submitted within 90 days of the latter of permit issuance or of the fourth (4<sup>th</sup>) qualified discharge event to the TCEQ Industrial Permits Team (MC 148) and Region 15 Office. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

Table 1: Analysis is required for all pollutants in Table 1. Wastewater must be sampled and analyzed for those parameters listed in Table 1 for a minimum of four sampling events that are each at least one week apart and within one (1) hour after the conclusion of a launch event.



Table 2: Analysis is required for all pollutants in Table 2. Wastewater must be sampled and analyzed for those parameters listed in Table 2 for a minimum of four sampling events that are each at least one week apart and within one (1) hour after the conclusion of a launch event.

Table 3: For all pollutants listed in Table 3, the permittee shall indicate whether each pollutant is believed to be present or absent in the discharge. Sampling and analysis must be conducted for each pollutant believed present for a minimum of one sampling event within one (1) hour after the conclusion of a launch event.

The permittee shall report the flow at the respective outfall in MGD in the attachment. The permittee shall indicate on each table whether the samples are composite (C) or grab (G) by checking the appropriate box. Samples collected after July 1, 2023, may be used to satisfy this requirement.

### 13. ADDITIONAL TEMPERATURE MONITORING REQUIREMENTS

This provision is effective beginning upon date of permit issuance and expires 12 months or after 3 launches, whichever comes first following the date of permit issuance.

#### A. TEMPERATURE MONITORING SCHEDULE

The following schedule of monitoring launch events applies:

- (1) Beginning upon date of permit issuance and lasting for a period of one (1) year or after 3 launches, whichever comes first, every launch is subject to the requirements in 13.B. and 13.C. below.

#### B. PRE-LAUNCH TEMPERATURE MONITORING PLAN

The permittee shall develop a monitoring plan for temperature of the effluent and the receiving waters to be conducted for representative launch events per the schedule above. A monitoring plan shall be made available to the TCEQ, as directed below, for review for scheduled launch and/or return to launch events. At a minimum, the monitoring plan must include the following elements.

- (1) Monitoring of temperature shall take place at the following locations beginning one hour prior to launch and lasting until 24 hours following the initiation of the launch:
  - a. the retention basin;
  - b. a minimum of three pools of standing water in the tidal flats, if present, that are located between the launch pad at a distance of 150 feet and 300 feet).
- (2) Use of calibrated temperature monitoring equipment capable of measuring and recording in situ water temperatures at intervals not greater than one minute apart.

#### C. POST-LAUNCH TEMPERATURE MONITORING REPORTS

A post-launch temperature monitoring data must be made available to the TCEQ, as directed below, within 60 days following the conclusion of a launch event and must include the following information:

- (1) A tabulation of all temperature measurements obtained associated with the launch event that denotes the date, time, and location each measurement was obtained.
- (2) The date and times of the initial ignition of the rocket and the completion of the return to launch event.
- (3) A map denoting the location of each temperature monitoring device.
- (4) An explanation of any deviations from the final submitted plan.
- (5) A copy of any thermal plume monitoring report submitted to the Federal Aviation Administration for the respective launch event.

A compilation of all post-launch reports must be submitted as an attachment to the next TPDES permit renewal application. Based on a technical review of the submitted post-launch temperature monitoring reports, an amendment to the permit may be initiated by TCEQ staff to include additional effluent limitations and/or monitoring requirements at any time during the term of the permit, as deemed necessary for the protection of applicable temperature criteria in 30 TAC Chapter 307.

In addition to the requirements above, the permittee may execute analysis to differentiate between the thermal characteristics of the wastewater during and resulting from a launch event as compared to the thermal characteristics of the rocket plume during a launch event.

**Attachment A****Table 1 – Conventional and Non-conventionals**

<b>Outfall No.:</b>	<input type="checkbox"/> C <input type="checkbox"/> G	<b>Effluent Concentration (mg/L)</b>					
<b>Pollutant</b>		<b>Samp.</b>	<b>Samp.</b>	<b>Samp.</b>	<b>Samp.</b>	<b>Average</b>	
Flow (MGD)							
BOD (5-day)							
CBOD (5-day)							
Chemical Oxygen Demand							
Total Organic Carbon							
Dissolved Oxygen							
Ammonia Nitrogen							
Total Suspended Solids							
Nitrate Nitrogen							
Total Organic Nitrogen							
Total Phosphorus							
Oil and Grease							
Total Residual Chlorine							
Total Dissolved Solids							
Sulfate							
Chloride							
Fluoride							
Total Alkalinity (mg/L as CaCO <sub>3</sub> )							
Temperature (°F)							
pH (Standard Units; min/max)							

**Table 2 – Metals**

Pollutant	Effluent Concentration (µg/L) <sup>1</sup>					MAL <sup>2</sup> (µg/L)
	Samp.	Samp.	Samp.	Samp.	Average	
Aluminum, Total						2.5
Antimony, Total						5
Arsenic, Total						0.5
Barium, Total						3
Beryllium, Total						0.5
Cadmium, Total						1
Chromium, Total						3
Chromium, Hexavalent						3
Chromium, Trivalent						N/A
Copper, Total						2
Cyanide, Free						10
Lead, Total						0.5
Mercury, Total						0.005
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

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<sup>1</sup> Indicate units if different than µg/L.

<sup>2</sup> Minimum Analytical Level

**Table 3**

<b>Outfall No.</b>	<input type="checkbox"/> C <input type="checkbox"/> G	<b>Believed Present</b>	<b>Believed Absent</b>	<b>Average Concentration (mg/L)</b>	<b>Maximum Concentration (mg/L)</b>	<b>No. of Samples</b>	<b>MAL (mg/L)</b>
<b>Pollutant</b>							
Bromide							0.400
Color (PCU)							—
Nitrate-Nitrite (as N)							—
Sulfide (as S)							—
Sulfite (as SO <sub>3</sub> )							—
Surfactants							—
Boron, total							0.020
Cobalt, total							0.0003
Iron, total							0.007
Magnesium, total							0.020
Manganese, total							0.0005
Molybdenum, total							0.001
Tin, total							0.005
Titanium, total							0.030



# Compliance History Report

Compliance History Report for CN602867657, RN111606745, Rating Year 2024 which includes Compliance History (CH) components from September 1, 2019, through August 31, 2024.

<b>Customer, Respondent, or Owner/Operator:</b>	CN602867657, Space Exploration Technologies Corp.	<b>Classification:</b> SATISFACTORY	<b>Rating:</b> 1.65
<b>Regulated Entity:</b>	RN111606745, STARBASE LAUNCH PAD SITE	<b>Classification:</b> SATISFACTORY	<b>Rating:</b> 6.43
<b>Complexity Points:</b>	7	<b>Repeat Violator:</b>	NO
<b>CH Group:</b>	14 - Other		
<b>Location:</b>	LOCATED ON S SIDE OF THE EASTERN TERMINUS OF SH 4 BROWNSVILLE TX 78521 CAMERON, TX, CAMERON COUNTY		
<b>TCEQ Region:</b>	REGION 15 - HARLINGEN		

## ID Number(s):

**STORMWATER PERMIT** TXR05GD61

**WASTEWATER PERMIT** WQ0005462000

**EMERGENCY RESPONSE ID NUMBER** R15111606745

**INDUSTRIAL AND HAZARDOUS WASTE EPA ID**  
TXR000086156

**STORMWATER PERMIT** TXR1515PQ

**WASTEWATER EPA ID** TX0146251

**INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE**  
REGISTRATION # (SWR) 98370

**Compliance History Period:** September 01, 2019 to August 31, 2024 **Rating Year:** 2024 **Rating Date:** 09/01/2024

**Date Compliance History Report Prepared:** October 15, 2024

**Agency Decision Requiring Compliance History:** Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

**Component Period Selected:** July 31, 2019 to October 14, 2024

## TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

**Name:** MICHAEL SUNDERLIN

**Phone:** (512) 239-4523

## Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? NO
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

## Components (Multimedia) for the Site Are Listed in Sections A - J

### A. Final Orders, court judgments, and consent decrees:

See addendum for information regarding federal actions.

### B. Criminal convictions:

N/A

### C. Chronic excessive emissions events:

N/A

### D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1 February 01, 2024 (1904680)

### E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

**F. Environmental audits:**

N/A

**G. Type of environmental management systems (EMSs):**

N/A

**H. Voluntary on-site compliance assessment dates:**

N/A

**I. Participation in a voluntary pollution reduction program:**

N/A

**J. Early compliance:**

N/A

**Sites Outside of Texas:**

N/A

**From:** [brenda.kouri@tceq.texas.gov](mailto:brenda.kouri@tceq.texas.gov)  
**To:** [EFiling](#)  
**Subject:** Filing on Permit Number/Docket Number 2024-1821-IWD  
**Date:** Thursday, January 23, 2025 4:59:34 PM  
**Attachments:** [SpaceX Washdown Agenda Backup.pdf](#)

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**FILING CONFIRMATION NUMBER** 485611642025023

**REGULATED ENTY NAME** STARBASE LAUNCH PAD SITE

**RN NUMBER:** RN111606745

**PERMIT NUMBER:** WQ0005462000

**DOCKET NUMBER:** 2024-1821-IWD

**COUNTY:** CAMERON

**PRINCIPAL NAME:** SPACE EXPLORATION TECHNOLOGIES CORP, CN602867657

**FROM**

**FILED BY:**

**FILED FOR NAME:** Harrison Malley

**E-MAIL:** [brenda.kouri@tceq.texas.gov](mailto:brenda.kouri@tceq.texas.gov)

**PHONE:** 512-239-1439

**DOCUMENT NAME:** SpaceX Washdown Agenda Backup.pdf

*Based on 30 TAC Section 1.10(h), the TCEQ General Counsel has waived the filing requirements of Section 1.10(c) to allow the filing of documents using this online system. The General Counsel also has waived the requirements of Section 1.10(e) so that the time of filing your documents is the time this online system receives your filings. Filings are considered timely if received by close of business (usually 5:00 p.m. CST) on the deadline date unless otherwise ordered. If your document is for Commission consideration at an open meeting, General Counsel has also waived the requirement of Section 1.10(d) to file paper copies with the Office of the Chief Clerk.*