Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Monday, October 21, 2024 11:47 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

H

From: 13chachalacas@gmail.com <13chachalacas@gmail.com>
Sent: Thursday, October 17, 2024 5:05 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: DR. Christopher Basaldu

EMAIL: 13chachalacas@gmail.com

COMPANY: South Texas Environmental Justice Network

ADDRESS: 651 OLD PORT ISABEL RD 12C
BROWNSVILLE TX 78521-3440

PHONE: 5202713960

FAX:

COMMENTS: Please deny the wastewater permits for SpaceX. SpaceX has already violated the Clean Water Act. SpaceX should be punished and dismantled because it has already polluted the area, and SpaceX intends to continue polluting the land, water, and air. SpaceX has shown us historically that they disregard environmental rules and regulations. They must be held accountable, and TCEQ must be as strict as possible when dealing with SpaceX. Over time SpaceX will degrade the environment around

Boca Chica beach, the wildlife refuge, and the South Bay and turn it into a toxic waste dump. We cannot allow this to happen. I request a Contested Case Hearing regarding those permits. I am one of many affected persons. I live in and grew up in Brownsville, Texas. My dwelling is approximately 20 miles from Boca Chica Beach as the crow flies, and my dwelling is harmed by the noise pollution of SpaceX launches. I am Esto'k Gna, a member of the Esto'k Gna Tribal Nation, the original, autochthonous, Native people of the Rio Grande Valley area and Cameron County. Boca Chica Beach and the Mouth of the River and the surrounding land and environs of the area are sacred and ancestral lands of the original Indigenous people of the land. My parents first took me to Boca Chica Beach when I was a very young, small child. We went together as a family to celebrate together and to enjoy being alive. Esto'k Gna consider the land sacred and the other plant and animal species that are harmed by SpaceX are also our "relatives", and we consider their lives to be as sacred as our own. In poisoning and contaminating the land and water and air, SpaceX is also attempting to contaminate our Esto'k Gna prayers, offerings, ceremonies, and sacred stories and songs. They are poisoning our relatives that share the land with us, the plants and animals and threatened and endangered species in the area that are harmed and negatively affected. This also is "sacricide" and "religiocide" the killing or attempt to destroy sacred beings and things that are necessary for sacred lifeways, prayers, ceremonies, and/or rituals of Indigenous and/or Native, autochthonous peoples. Such destruction would also be violating Native rights to religious freedom and our human rights to live according to our own cosmovision, sacred lifeways, and religious/spiritual perception of our own universe and sacred lands. To destroy or damage the means and practice of Indigenous religion for Indigenous people is also "Genocide". For all these reasons we demand TCEQ reject the SpaceX wastewater permit application. I go to Boca Chica Beach for spiritual, ceremonial, recreational, and family reasons. Our ancestors have been living near and going to Boca Chica Beach since the first time human beings ever lived there, for 20,000 years. They were our ancestors. Continued contamination of the land and water and air by SpaceX will harm and hinder my access and ability to use Boca Chica beach to connect with life, to pray, to give ancestral offerings, to swim, and to tell our Native sacred stories to future generations. This is irreplaceable. For TCEQ to allow such destruction and contamination and pollution to occur and thus hinder or destroy Native people's land and sacred sites is a violation of Human Rights, of Indigenous Peoples' Rights, and most importantly would be an act of Genocide of the Esto'k Gna. SpaceX has already knowingly contaminated the area and refuses to stop contaminating and refuses to provide any solutions in cleaning up its contamination. SpaceX is purposely not even fully cognizant of what kinds of contamination it is committing. It will not voluntarily do so; they must me impelled. For many millennia, human families have lived and used the Boca Chica Beach area to live, give birth, to die, to bury their ancestors and placenta, to fish, to hunt, to gather, to pray, to dance, to swim, to share stories, to have ceremony, to dream of life, to communicate with our relatives who are other plant and animal and fish and bird species, to learn and to teach, to love and to be together with their loved ones. In a few short years, a narcissistic billionaire wishes to play with his life sized toy rockets and destroy land and life that does not belong to him. Why is Texas enabling this horrible man to destroy things that don't belong to him. The people who live here and who have lived here for hundreds of years and the Native people who have lived here for thousands upon thousands of years have more of a claim and connection to these lands than SpaceX. We demand to have our sacred lands and beach and river back. TCEQ must deny these permits. The permit application also has errors in it. For example, in the permit application, SpaceX mentions that the ethnicity of the surrounding communities of Cameron County are 96% white. This is incorrect. Brownsville is 96% "Hispanic/Latinx". Brownsville, TX is regarded as an environmental justice community due both to its overwhelming non-white ethnic makeup and due to the median household income of Cameron County is only $28,000 per year; way below the national median. SpaceX is not only polluting the water in our wildlife refuge and our public beaches but wishes to increase their pollution and contamination with no regard of the consequences. This means that environmental regulations and restrictions should be enforced with more intensity to

stop the ongoing environmental [illegible]ism that is targeting and preying upo[illegible]his area. TCEQ has already failed in its responsibilities to sa[illegible]uard Texas land and Water and Air a[illegible] Coastlines from pollution and contamination caused by SpaceX. TCEQ must reject these current permit applications by SpaceX. If SpaceX chooses to reapply, they must do a much more thorough and a better job than submitting such an incomplete and grossly inadequate application. I submit this comment on behalf of my self and wish these comments to be cumulative with any comments submitted by the South Texas Environmental Justice Network, and with the Carrizo/Comecrudo Tribal Nation (aka Esto'k Gna, Esto'k Gna Tribal Nation. I am a co-founder of the South Texas Environmental Justice Network and a member of the Esto'k Gna.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Monday, October 21, 2024 11:44 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

H

From: 13chachalacas@gmail.com <13chachalacas@gmail.com>
Sent: Thursday, October 17, 2024 4:57 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: DR. Christopher Basaldu

EMAIL: 13chachalacas@gmail.com

COMPANY: South Texas Environmental Justice Network

ADDRESS: 651 OLD PORT ISABEL RD 12C
BROWNSVILLE TX 78521-3440

PHONE: 5202713960

FAX:

COMMENTS: Please deny the wastewater permits for SpaceX. SpaceX has already violated the Clean Water Act. SpaceX should be punished and dismantled because it has already polluted the area, and SpaceX intends to continue polluting the land, water, and air. SpaceX has shown us historically that they disregard environmental rules and regulations. They must be held accountable, and TCEQ must be as strict as possible when dealing with SpaceX. Over time SpaceX will degrade the environment around

Boca Chica beach, the wildlife refuge, and the South Bay and turn it into a toxic waste dump. We cannot allow this to happen. I request a Contested Case Hearing regarding these permits. I am one of many affected persons. I live in and grew up in Brownsville, Texas. My dwelling is approximately 20 miles from Boca Chica Beach as the crow flies, and my dwelling is harmed by the noise pollution of SpaceX launches. I am Esto'k Gna, a member of the Esto'k Gna Tribal Nation, the original, autochthonous, Native people of the Rio Grande Valley area and Cameron County. Boca Chica Beach and the Mouth of the River and the surrounding land and environs of the area are sacred and ancestral lands of the original Indigenous people of the land. My parents first took me to Boca Chica Beach when I was a very young, small child. We went together as a family to celebrate together and to enjoy being alive. Esto'k Gna consider the land sacred and the other plant and animal species that are harmed by SpaceX are also our "relatives", and we consider their lives to be as sacred as our own. In poisoning and contaminating the land and water and air, SpaceX is also attempting to contaminate our Esto'k Gna prayers, offerings, ceremonies, and sacred stories and songs. They are poisoning our relatives that share the land with us, the plants and animals and threatened and endangered species in the area that are harmed and negatively affected. This also is "sacricide" and "religiocide" the killing or attempt to destroy sacred beings and things that are necessary for sacred lifeways, prayers, ceremonies, and/or rituals of Indigenous and/or Native, autochthonous peoples. Such destruction would also be violating Native rights to religious freedom and our human rights to live according to our own cosmovision, sacred lifeways, and religious/spiritual perception of our own universe and sacred lands. To destroy or damage the means and practice of Indigenous religion for Indigenous people is also "Genocide". For all these reasons we demand TCEQ reject the SpaceX wastewater permit application. I go to Boca Chica Beach for spiritual, ceremonial, recreational, and family reasons. Our ancestors have been living near and going to Boca Chica Beach since the first time human beings ever lived there, for 20,000 years. They were our ancestors. Continued contamination of the land and water and air by SpaceX will harm and hinder my access and ability to use Boca Chica beach to connect with life, to pray, to give ancestral offerings, to swim, and to tell our Native sacred stories to future generations. This is irreplaceable. For TCEQ to allow such destruction and contamination and pollution to occur and thus hinder or destroy Native people's land and sacred sites is a violation of Human Rights, of Indigenous Peoples' Rights, and most importantly would be an act of Genocide of the Esto'k Gna. SpaceX has already knowingly contaminated the area and refuses to stop contaminating and refuses to provide any solutions in cleaning up its contamination. SpaceX is purposely not even fully cognizant of what kinds of contamination it is committing. It will not voluntarily do so; they must me impelled. For many millennia, human families have lived and used the Boca Chica Beach area to live, give birth, to die, to bury their ancestors and placenta, to fish, to hunt, to gather, to pray, to dance, to swim, to share stories, to have ceremony, to dream of life, to communicate with our relatives who are other plant and animal and fish and bird species, to learn and to teach, to love and to be together with their loved ones. In a few short years, a narcissistic billionaire wishes to play with his life sized toy rockets and destroy land and life that does not belong to him. Why is Texas enabling this horrible man to destroy things that don't belong to him. The people who live here and who have lived here for hundreds of years and the Native people who have lived here for thousands upon thousands of years have more of a claim and connection to these lands than SpaceX. We demand to have our sacred lands and beach and river back. TCEQ must deny these permits. The permit application also has errors in it. For example, in the permit application, SpaceX mentions that the ethnicity of the surrounding communities of Cameron County are 96% white. This is incorrect. Brownsville is 96% "Hispanic/Latinx". Brownsville, TX is regarded as an environmental justice community due both to its overwhelming non-white ethnic makeup and due to the median household income of Cameron County is only $28,000 per year; way below the national median. SpaceX is not only polluting the water in our wildlife refuge and our public beaches but wishes to increase their pollution and contamination with no regard of the consequences. This means that environmental regulations and restrictions should be enforced with more intensity to

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(3)

TCEQ Registration Form

October 17, 2024

Space Exploration Technologies Corp.
Proposed TPDES Permit No. WQ0005462000

PLEASE PRINT

Name: Dr. Christopher Basaldú

Mailing Address: 651 Old Port Isabel Rd. #12C

Physical Address (if different): _____

City/State: Brownsville TX **Zip:** 78521

This information is subject to public disclosure under the Texas Public Information Act

Email: 13chachalacas@gmail.com

Phone Number: (520) 271-3960

- Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☒ No

  If yes, which one? _____

☒ **Please add me to the mailing list.**

☒ **I wish to provide formal *ORAL COMMENTS* at tonight's public meeting.**

☐ **I wish to provide formal *WRITTEN COMMENTS* at tonight's public meeting.**

(Written comments may be submitted at any time during the meeting)

Please give this form to the person at the information table. Thank you.

TCEQ Registration Form

October 17, 2024

Space Exploration Technologies Corp.
Proposed TPDES Permit No. WQ0005462000

PLEASE PRINT

Name: Dr Christopher Basaldú

Mailing Address: 651 Old Port Isabel Rd #12C

Physical Address (if different): _____

City/State: Brownsville TX **Zip:** 78521

This information is subject to public disclosure under the Texas Public Information Act

Email: 13chechalacas@gmail.com

Phone Number: (520) 271-3960

- Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☒ No

  If yes, which one? _____

RECEIVED
OCT 17 2024
AT PUBLIC MEETING

☒ **Please add me to the mailing list.**

☒ **I wish to provide formal *ORAL COMMENTS* at tonight's public meeting.**

☒ **I wish to provide formal *WRITTEN COMMENTS* at tonight's public meeting.**

(Written comments may be submitted at any time during the meeting)

This written comment is cumulative to my previous comment oral, eform, and cumulative to any comment made by the South Texas Environmental Justice Network and any comment made by the Carrizo Comecrudo Tribal Nation, Estolk Gua Tribal Nation.

Please give this form to the person at the information table. Thank you.

You are killing our ancestors buried near Boca Chica again. It is Native American Genocide again. SpaceX Polluted water is polluting our prayers

The wastewater permit application is based on only two samples when the Application requires at least 4 sample TCEQ should deny the permit application.

Water from the deluge system becomes steam and spreads airborne contaminates farther than the liquid water flows which SpaceX can't fully contain or control. SpaceX/TCEQ should also sample the Steam for contaminate analysis. TCEQ must deny these current permits,

TCEQ must account for full cumulative contamination over time related to the ~~a~~number of lalaunches Increased launch freaquency directly increases pollution and contamination. Over time and increased launch frequency there will be a toxic build up of contamination. This threatens human life, Plant life, and animal life.

Many migratory birds come through Cameron County and Coastal Texas. The wastewater will pollute the land and water and negatively impact migratory bird species as well. The Permit does not adequately account for these species & impacts; TCEQ must deny these permits,

By Polluting the land & Water and Boca Chica Beach and the flow of discharge Water goes to the Rio Grande River, Waters of the United States, Waters of Mexico too. This is a violation of international law. TCEQ must also seek input from the International Boundry Waters Commission to not violate International Treaties with Mexico

By polluting the land & water & air of this area which is Sacred to the Esto'k Gna, the Carrizo Comecrudo Tribal Nation, and our Ancestors who have been at Boca Chica for 20,000 years; SpaceX proposes to ~~pa~~pollute our prayers, our ancestors, our history because the Esto'k Gna are the land, SpaceX is polluting us, our history, our songs, our prayers, our dreams.

TCEQ must deny the Permits

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Thursday, October 3, 2024 1:20 PM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000

H

From: whzxkdtbm@mozmail.com <whzxkdtbm@mozmail.com>
Sent: Thursday, October 3, 2024 1:02 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Kalea Bridgemohan

EMAIL: whzxkdtbm@mozmail.com

COMPANY:

ADDRESS: 1980 HORAL ST
SAN ANTONIO TX 78227-3902

PHONE: 2542896429

FAX:

COMMENTS: The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. For this reason, I request a contested case hearing for the nearby affected

residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Thursday, September 12, 2024 6:11 PM
To:	PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject:	FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: sarachicad@duck.com <sarachicad@duck.com>
Sent: Thursday, September 12, 2024 1:57 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Sara Calderon

EMAIL: sarachicad@duck.com

COMPANY:

ADDRESS: PO BOX 152548
AUSTIN TX 78715-2548

PHONE: 5129311477

FAX:

COMMENTS: I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted by SpaceX's wastewater pollution and activities because as a former resident and ardent lover of Boca Chica Beach, I can no longer visit safely. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Mark Mendoza

From:	PUBCOMMENT-OCC
Sent:	Monday, December 30, 2024 12:16 PM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000
Attachments:	12.26.2024 STEJN Request For Contested Case Hearing re WQ0005462000.pdf

eComment = H
Attachment = H

From: pcamacho@trla.org <pcamacho@trla.org>
Sent: Thursday, December 26, 2024 10:52 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Paola Camacho

EMAIL: pcamacho@trla.org

COMPANY: Texas RioGrande Legal Aid

ADDRESS: 1331 Texas Ave
El Paso, TX 79901

PHONE: 9154226599

FAX:

COMMENTS: South Texas Environmental Justice Network submits this request for contested case hearing regarding Space Exploration Technologies Corporation's Application for Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0005462000 for the SpaceX Starbase Launch

Pad Site. Attached please find STEJN's complete comment letter, submitted by its counsel, Paola Camacho and Ilan Levin (Texas RioGrande Legal Aid).

TRLA
Texas RioGrande Legal Aid

1331 Texas Ave.
El Paso, TX 79901
Phone: 915-585-5100
Toll Free: 833-329-8752
Fax: 956-591-8752
www.trla.org

December 26, 2024

Submitted electronically via TCEQ's eComments
Office of the Chief Clerk
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: South Texas Environmental Justice Network's Contested Case Hearing Request for Permit No. WQ0005462000

Dear Chief Clerk Gharis:

South Texas Environmental Justice Network ("STEJN") submits this request for contested case hearing regarding Space Exploration Technologies Corporation's ("SpaceX" or "Applicant") Application for Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0005462000 ("Application") for the SpaceX Starbase Launch Pad Site (the "Facility"). The permit would authorize the discharge of industrial discharge water from SpaceX's deluge system (used for launch and return to launch site activities), facility washdown water, and stormwater to tidal wetlands south of the facility, thence to Rio Grande Tidal in Segment No. 2301 of the Rio Grande basin. The designated uses for Segment No. 2301 are primary contact recreation and exceptional aquatic life use.

Pursuant to 30 TAC 55.201, South Texas EJ Network may be contacted via its counsel, Texas RioGrande Legal Aid, Paola Camacho or Ilan Levin:

Paola Camacho,
pcamacho@trla.org
(915) 422-6599
1331 Texas Ave
El Paso, TX 79901

Ilan Levin,
ilevin@trla.org
(512) 619-7287
4920 N Interstate Hwy 35
Austin, TX 78751

Please direct all official communications regarding this matter to Paola Camacho or Ilan Levin.

Below, we identify STEJN's members' personal justiciable interests affected by the application, including a brief, but specific, written statement explaining in plain language the location and distance of the affected interests relative to SpaceX's launch site and the affected wetlands and waterbodies that are the subject of the application. STEJN's members' use and access to Boca Chica Beach and surrounding areas has been and will be impacted by SpaceX's launches. Unlike members of the general public, STEJN members frequent the Boca Chica area for work, educational, religious/spiritual services, and for recreation and enjoyment.

I. Background

Since July 28, 2023—nearly a year before even attempting to obtain a permit—SpaceX has been unlawfully discharging wastewater from its deluge system into surrounding waters,[1] with the water discharged through the activation of the deluge system reaching up to 0.6 miles across the local landscape.[2] To date, SpaceX has used the deluge system on at least 20 occasions, and SpaceX plans to double the frequency of its launches in Brownsville. With each launch, the Facility can impact several pristine natural habitats, including tidal wetlands, the Rio Grande, Boca Chica Beach, and the Boca Chica Wildlife Refuge and the South Bay.

SpaceX submitted the Application on July 1, 2024, and on July 8, 2024, it was declared administratively complete. Then, less than two months later, on September 5, 2024, the Application was declared technically complete. This unreasonably expeditious permit application review undermines the Clean Water Act's requirements, which demand a thorough and complete review by TCEQ staff, especially in light of the large environmental risks associated with each launch and SpaceX's repeated and flagrant disregard of the Clean Water Act.

STEJN members that reside in Brownsville have seen smoke from and heard previous explosions during launches; they have even heard debris falling on their apartment roofs. These experiences cause STEJN to question how well, and whether, TCEQ will force strict compliance and ensure the health and safety of STEJN members as they exercise their legal rights, duties, privileges, and other interests in and around Boca Chica Beach. Boca Chica Beach is sacred to several STEJN members, who practice religious/spiritual prayer and healing services by the ocean and along the Rio Grande River. These members also conduct education at the beach, and (for some members) access the road and beach and surrounding wetlands as part of their work. These members have witnessed degradation of the land and waters directly adjacent to SpaceX.

---

[1] In this separate but related case, STEJN, Carrizo/Comecrudo Nation of Texas, Inc., and Save RGV filed comments to TCEQ opposing the Agreed Order that dealt a mere slap on the hand to SpaceX for these violations, and filed a Petition for Review of the Final Order on December 16, 2024.

[2] "Addendum to the October 2021 Biological Assessment for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System" at 8-9. Federal Aviation Administration. October 2023. Available at: https://www.faa.gov/media/72826.

For these and the additional reasons detailed below, South Texas Environmental Justice Network requests a contested case hearing.

I. Contested Case Hearing Request

A. South Texas Environmental Justice Network requests a contested case hearing.

STEJN satisfies TCEQ's rules for requesting a contested case hearing on behalf of a group.[3] That is, one or more members of STEJN would have standing to request a hearing in their own right, because they are affected persons; the interests that STEJN seeks to protect are germane to the organization's purpose; and neither the claim asserted nor the relief requested requires the participation of the individual members in the case.

An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Members of STEJN have *interests*, detailed below, that are both *personal* to each of them, and *justiciable*. That is, a favorable outcome on the proposed Permit could alleviate the negative impacts on their interests. Moreover, these interests are related to legal rights, duties, privileges, powers and economic interests of these individuals.

The SpaceX facility is mere blocks from various natural areas that STEJN's members frequent, including Boca Chica Beach, Brazos Island Park, and Boca Chica Wildlife Refuge. The facility also impacts the Rio Grande, a river STEJN members frequently visit for its natural beauty and importance as the origin of life for the Estok'na, which means "the people" (and who Spanish and later Anglo-Texan colonizers dubbed Carrizo Comecrudo).

i. STEJN's mission and work is germane to the SpaceX water permit.

The interests STEJN seeks to protect are germane to its purpose, as illustrated by STEJN's purpose statement:

> The South Texas Environmental Justice Network was formed at the start of 2020 and includes numerous organizations, campaigns, individuals, and the Carrizo Comecrudo Tribal leadership from the South Texas region that challenge the status quo and corporate power to build a future aligned in values, principles, and praxis that centers on the social and environmental health of local Native and BIPOC communities living in reciprocal relationships with our shared natural home.
>
> Our network seeks to end the environmental, social, and economic injustices borne on the Latinx and Indigenous communities of South Texas. We aim to do this by building a community amongst regional advocates and empowering historically marginalized voices to speak up and be heard. By doing so, we want to radically change the oppressive systems that have harmed our communities and extracted wealth from the people and land of South Texas.

[3] 30 Tex. Admin. Code §§ 55.203, 55.205.

Indeed, STEJN works to protect the same health, aesthetic, recreational, and religious interests of its members that it seeks to protect here. For example, STEJN has previously challenged federal agency action on LNG development projects in the region. STEJN has worked internationally, advocating for French banks to divest from LNG terminals due to climate and human rights concerns. At home, STEJN has pursued legal and administrative actions to defend the environment of South Texas. One example involves a case against Texas Parks & Wildlife Department and the Texas Parks and Wildlife Commission to block a land swap that would have granted SpaceX 43 acres of public land.

Finally, the relief requested is prospective, and neither the claim asserted nor the relief requested—modification or denial of Permit No. WQ0005462000—requires participation of the individual members of STEJN.

ii. STEJN's members are affected persons.

Members of STEJN are affected persons based on the adverse impacts to their health, aesthetic, recreational, economic and religious interests. Members of STEJN recreate and practice their religion in close proximity to the SpaceX facility and will continue to be impacted by the facility and its discharges into the adjacent wetlands, which flow into the Rio Grande River. STEJN members' interest are not common to the general public due to their close proximity to the Facility and areas close to the discharge; and because STEJN's members frequent the impacted areas. In particular, STEJN members' interest in visiting the beach, wildlife viewing, swimming, and engaging in their work, education, lifeways, and prayers and purification rituals are distinguishable by the regularity and particularity of their recreational and religious use of natural areas that will continue to be impacted by this Facility.

B. Harms to STEJN members from SpaceX's discharges.

South Texas EJ Network members' interests are injured by the SpaceX launches and the associated discharges. The proposed Permit will authorize the discharges that will continue to harm the members' legally protected rights, privileges, and duties, including their health, recreational, aesthetic, economic, and spiritual/religious interests in areas directly adjacent to and downstream of the discharge route. STEJN's members' rights to access and use the beach have been and will be negatively affected by the launches, and a contested case hearing to ensure strict compliance with clean water laws would mitigate these injuries.

The following STEJN members would be impacted in ways that are not common to the general public:

Rebekah Hinojosa is a co-founder and member of STEJN. Ms. Hinojosa has been visiting Boca Chica beach since she was a child. She has been visiting Boca Chica often since 2014. She moved to Brownsville in 2017 specifically to be closer to Boca Chica Beach. She enjoys hiking around Boca Chica Beach because she enjoys observing the coastal habitat and the unique ecosystem of the Boca Chica area. Ms. Hinojosa regularly leads tours to Boca Chica Beach and the surrounding area for guests (e.g., STEJN members, community members, reporters, students, public officials, etc.) to experience wildlife and the pristine environment, and

to document the area. As part of the tours, Ms. Hinojosa educates the guests about the value of and long history of sacred sites, threatened and endangered species, pristine lands, and coastlines. To conduct the tours, Ms. Hinojosa drives east on Boca Chica Highway to its terminus and conducts the tours in the area from the terminus all the way south to the Rio Grande River.

Ms. Hinojosa has given tours of this area since 2015. She does so approximately three to six times per year, and she visits this area specifically because it has historically looked pristine and wild, with an abundance of wildlife and foliage. Ms. Hinojosa reports seeing Aplomado falcons, roseate spoonbills, blue herons, and other birds. Before rocket launches began, wildlife was more abundant, but now she sees less wildlife on her tours. She is concerned that this reduction in wildlife will only be exacerbated by the discharge of industrial wastewater from the Facility. She has seen singed flora on the side of the road. In recent years, with SpaceX launches, she has experienced road closures, and has experienced traffic and parking difficulty due to SpaceX super-fans and campers along the road.

Christopher Basaldu is a co-founder and member of STEJN. Christopher is also a member of the Esto'k Gna, commonly known as the Carrizo/Comecrudo Nation. Christopher grew up in Brownsville and would go to the beach with his family since childhood, and now visits Boca Chica beach about eight times a year on average. Christopher enjoyed visiting the beach since childhood to enjoy what he saw as a vast paradise and green. Christopher visits the area to swim, view wildlife, and enjoy stargazing. Christopher also goes to Boca Chica Beach to practice the lifeways of the Esto'k Gna, such as by performing spiritual cleansing and prayers in the waters of the ocean and mouth of the Rio Grande. This is because Christpher's deeply held religious beliefs include practicing the prayer and healing practices, and lifeways of his indigenous ancestors. For the Carrizo Comecrudo, the term *lifeways* roughly encompasses the English values of education, prayer, and spiritual renewal.

Christopher also regularly visits Boca Chica Beach to teach the public about the history of Boca Chica and the Esto'k Gna's longstanding history protecting the natural environment. Christopher carries on the lessons of his elders to teach stewardship and connection to natural environments that have been sacred and protected for generations. For example, it is customary to always leave an offering because Boca Chica is considered a sacred site.

Christopher's legally justiciable interests – his legal rights and privileges to access the beach, to practice his religious services, to do his work, and to continue to enjoy his recreation free from what he calls the "ugliness" of SpaceX and the launches that threaten the area which Christpher uses – have been and will be injured by SpaceX's launches.

Juan Mancias is a member of STEJN. Juan Macias is also a member and an elder of the Esto'k Gna, or Carrizo/Comecrudo Nation. For decades, Mr. Mancias has regularly visited the mouth of the Rio Grande River. To get there, Mr. Mancias drives east to the terminus of the Boca Chica Highway, and then drives approximately two miles south to the River. Mr. Mancias estimates he visits the mouth of the River at least eight times per year on average. Before SpaceX built its Facility, Mr. Mancias would observe plants, birds, and other wildlife that are culturally

important to him, and which brought him spiritual fulfillment in making the visit. Some of the bird species Mr. Mancias has seen in that area and that are culturally significant include pelicans, sandhill cranes, great blue herons, kingfishers, anhingas, black hawks, kiskadees, orioles, and scissor tails. Mr. Mancias finds spiritual fulfillment in knowing that the coastline where his ancestors are buried is protected.

After SpaceX began launching rockets from the Facility, Mr. Mancias has noticed a decline in birds he once observed, and he is worried that the discharge of industrial deluge water pursuant to SpaceX's TPDES permit will cause further decline. Mr. Mancias is also concerned that the discharge of industrial deluge water will degrade the water in the Rio Grande River, which injures his spiritual practices: bathing in the water of the Rio Grande where it enters the Gulf, and at Boca Chica. These are important religious ceremonies for the Carrizo Comecrudo, because that is the site of their Creation Story. Additionally, Mr. Mancias's visits to the area are impaired by the pollution and destruction of the natural habitat he used to enjoy and witness. His personal interests are harmed by SpaceX launches and the activities that have destroyed ancestral sites he and his tribe use in their practice of lifeways. He is concerned that the discharge of industrial deluge water will further harm the area and will extend the harm to areas downstream of the discharge.

Josette Hinojosa is co-founder and a member of STEJN. Ms. Josette Hinojosa is also a member of the Esto'k Gna, or Carrizo/Comecrudo Nation. Josette grew up in Brownsville and has been visiting Boca Chica Beach with her family since she was a child. Ms. Hinojosa estimates she visits the beach about once a month. She also enjoys visiting the beach with family and community members to enjoy the natural areas, bond over barbeques together, and to walk in the water and swim in the ocean. Ever since the SpaceX Facility was built, however, Ms. Hinojosa is concerned about the quality of the water and about stepping over debris from the rocket launches.

Ms. Josette Hinojosa has led educational tours at Boca Chica Beach and near SpaceX, teaching students and members of the public about the natural area and the history of the Esto'k Gna. Ms. Hinojosa also visits Boca Chica Beach and Mouth of the Rio Grande for Esto'k Gna ceremonies, but has been turned away due to SpaceX-related beach closures on several occasions. Ms. Hinojosa has noticed a decline in the quality of the environment around Boca Chica Beach and is concerned that continued SpaceX discharges will further degrade the quality of the environment at Boca Chica and the Rio Grande River.

Emma Guevara is a member of STEJN. Ms. Guevara visits her family near Boca Chica beach at least six times a year, and attempts to visit Boca Chica Beach and nearby natural areas during each visit. Ms. Guevara grew up in Brownsville, and enjoys visiting Boca Chica Beach and the mouth of the Rio Grande River. To get there, Ms. Guevara goes with her dad's truck and drives east to the terminus of the Boca Chica Highway, and then drives approximately two miles south to the River. Ms. Guevara enjoys spending time with her family at the beach and the river, and picks seashells along the beach.

Ms. Guevara worked for Sierra Club as a Field Organizer between July 2021 and July 2024 to help preserve and protect natural areas in Brownsville like Boca Chica Beach. Ms. Guevara spent the time fighting the ongoing development of SpaceX that has degraded the pristine habitat at Boca Chica. Ms. Guevara continues to make trips to Boca Chica Beach at least six times a year but has had limited access due to SpaceX beach closures. On visits where she is not able to access Boca Chica Beach, Ms. Guevara visits Boca Chica Wildlife Refuge and Boca Chica Bay near SpaceX, as well as Brazos Island Park.

i. Health harms.

STEJN members visiting the natural areas around the SpaceX facility would be exposed to threat to their overall health and well-being if the permit is granted as written. These threats will compound existing harms that STEJN already faces from the ongoing development impacts around Boca Chica Beach. In addition to the impacts on STEJN members from increased light pollution, noise, and traffic, STEJN members have been hindered by beach closures for the SpaceX facility and been unable to visit the area for recreation and educational purposes. Now, STEJN members face threats to their health from activities they have enjoyed at Boca Chica and surrounding natural areas, including swimming.

The SpaceX facility has the capacity to discharge 358,000 gallons of untreated industrial wastewater after a single rocket launch. This is on top of an unknown quantity of discharges from facility washdowns and storm events.[4] TCEQ improperly conflates the Facility's ability to retain and reuse some of the deluge water before discharge as a treatment mechanism that reduces the impact of the Facility to the receiving waters. However, the potential delay of industrial discharges does not equate to pollution reduction. The quantity of pollutants present in the deluge water will only amalgamate over time as the water is reused, and once discharged, receiving waters face heightened concentrations of dangerous pollutants.

Discharges from the deluge system are expected to contain numerous dangerous pollutants, including total dissolved solids, nitrate-nitrogen, phosphorus, sulfate, chloride, fluoride, aluminum, cadmium, chromium, copper, cyanide, zinc, arsenic, barium, lead, mercury, nickel, and selenium. Arsenic, cadmium, chromium, lead, and nickel are known carcinogens in humans,[5] and are also, in addition to copper, mercury, selenium, and zinc, highly toxic and can result in carcinogenicity and mutagenicity in fish.[6]

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[4] The possibility of more severe storm events from climate change only threatens further discharges from stormwater buildup in the retention basins. Single rain events in Brownsville can amount to over 3 inches of precipitation, and these severe rain events are expected to increase in rainfall amounts due to climate change over the years.

[5] American Cancer Society, Known and Probable Human Carcinogens (last revised August 1, 2024), https://www.cancer.org/cancer/risk-prevention/understanding-cancer-risk/known-and-probable-human-carcinogens.html.

[6] Farhan Jamil Emon et. Al., *Bioaccumulation and Bioremediation of Heavy Metals in Fishes—A Review*, 11(6) TOXICS 510 (June 2023), https://pmc.ncbi.nlm.nih.gov/articles/PMC10302055/#:~:text=Moreover%2C%20some%20of%20the%20metals,32%2C33%2C34%5D.

ii. Recreational and aesthetic harms.

Harms to water quality and aquatic life from the Facility would also negatively impact recreational activities such as swimming and bird or wildlife watching in Boca Chica Beach, along the Rio Grande, and in areas around the SpaceX Facility. Already, STEJN members have noticed a significant decline in the wildlife populations they enjoyed viewing at and around Boca Chica Beach, as well as the degradation and loss of plant life. Moreover, STEJN members that have enjoyed swimming in the ocean and Rio Grande River may understandably find the impacts to water quality from the industrial discharges too great to allow for continued recreational use of the areas.

iii. Harms to Religious Practice

Among STEJN's purposes is to educate its members and the public about the historic erasure of the Carrizo/Comecrudo Nation of Texas (the "Tribe"). STEJN advocates for environmental stewardship to protect the economic, social and justice interests of its members, including its Carrizo/Comecrudo members. The preservation of the environment is quintessential not only to STEJN's broad purpose to promote environmental justice, but also to its more specific purpose to preserve the Tribe's cultural and religious practices.

STEJN members have a constitutional right to religious freedom under both the U.S. and Texas State Constitution. In addition, the Texas constitution specifically provides that the state and its political subdivisions (such as TCEQ), "may not enact, adopt, or issue a statute, order, proclamation, decision, or rule that prohibits or limits religious services, including religious services conducted in churches, congregations, and places of worship, in this state by a religious organization established to support and serve the propagation of a sincerely held religious belief."[7]

C. STEJN satisfies TCEQ and federal standing requirements.

STEJN satisfies TCEQ's affected person standards, which are consistent with federal Article III standing according to the Texas Attorney General:

> The criteria regarding determination of affected persons in the TCEQ's rules comport with the standing requirements in Article III of the United States Constitution for judicial review under the state statutes applicable to federal permit programs being implemented by the TCEQ, including the TPDES program. There is no material difference between the TCEQ's standards and the standards the federal courts apply when deciding judicial standing, which are based on the United States Supreme court decision in Lujan v. Defenders of Wildlife, et al., 504 U.S. 555 (1992).[8]

In *Lujan*, the United States Supreme Court established that standing involves three elements: (1) an injury in fact, which is a concrete and particularized invasion of a legally

[7] Tex. Const. art. I, § 6-a.

[8] Statement of Legal Authority to Regulate Oil and Gas Discharges under the Texas Pollutant Discharge Elimination System Program, Texas Attorney General Ken Paxton, at 12, September 18, 2020.

protected interest that is actual or imminent, not conjectural or hypothetical; (2) a fairly traceable causal connection between the injury and the conduct complained of; and (3) it must be likely as opposed to speculative that the asserted injury will be redressed by a favorable decision.[9]

Further, the United States Supreme Court clarified the standing inquiry and explained that "plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity."[10]

Consistent with the standards set forth in *Lujan* and *Laidlaw*, individual STEJN members satisfy the standing requirements for purposes of this Application. For example, Ms. Rebekah Hinojosa's, Mr. Basaldu's, Mr. Mancias, Ms. Josette Hinojosa's, and Ms. Guevara's recreational interests are injured; in some instances, these interests are more than recreational and include spiritual and religious practice if the application is granted. These STEJN members regularly use the waters impacted by the industrial discharge, and would be particularly impacted by the discharge in a way distinct from the general public by virtue of their regular and particular use of the waters, dating back decades. Their reasonably held concerns formed from their own experiences will be redressed by participation in a contested case hearing to ensure a strict and protective Final Permit if a permit is issued. A contested case hearing will ensure a determination of whether the permit is sufficiently protective of the recreational and aquatic life uses of the downstream waters, including the Rio Grande River where Ms. Hinojosa, Mr. Basaldu, Mr. Mancias, and Ms. Josette Hinojosa regularly visit to recreate or observe religious ceremony. Further, a contested case hearing would allow STEJN to vet SpaceX's Application and Permit to determine whether they include adequate measures to protect the health, quality of life, and well-being of STEJN's members.

This permit would be issued pursuant to federally delegated authority from EPA, and therefore, the applicable considerations relevant to STEJN's hearing request are different from those at issue in non-federal programs. In obtaining delegated authority to issue TPDES Permits for discharges associated with oil and gas activities, the Texas Attorney General stated that, "the TCEQ does not consider discretionary factors in 30 Tex. Admin. Code § 55.203(d) that may not be consistent with the determination of Article III standing, such as the merits of the underlying TPDES permit application, in evaluating whether a hearing requester is an affected person."[11] Thus, TCEQ may not deny STEJN's request based upon a finding on the merits that the conditions of the permit will be adequately protected of downstream waters so as to prevent the potential impacts of concern that STEJN raised because TCEQ's conclusions in the Final Permit about impacts to water quality and aquatic life and compliance with applicable laws are the exact merits issues STEJN disputes and seeks to resolve in a contested case hearing. To the degree that

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[9] *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992).

[10] *Friends of the Earth v. Laidlaw Env't Serv.s (TOC), Inc., 528 U.S. 167, 181–182 (2000)* (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)).

[11] Statement of Legal Authority to Regulate Oil and Gas Discharges under the Texas Pollutant Discharge Elimination System Program, Texas Attorney General Ken Paxton, at 22, September 18, 2020.

Senate Bill 709, or state caselaw[12] indicate otherwise, they have no applicability to this hearing request by virtue of the distinct federal context.

D. Beach Access and practicing one's religion are protected interests under the Texas Constitution.

Members of STEJN that visit Boca Chica Beach, as well as those who regularly fish in impacted waters or practice religious ceremonies in and around those waters, have legally justiciable interests related to legal rights and privileges granted special protection by the Texas Constitution. The Texas Constitution guarantees the right to freedom of religion and mode of worship.[13] The Bill of Rights of the Texas Constitution, by amendment in 2009, guarantees the right of public beach access to state-owned beaches.[14] In the case of *Texas Department of State Health Services v. Crown Distribution LLC*, Justice Young, joined by Chief Justice Hecht, Justice Devine, and Justice Blacklock wrote that these are some of the interests that Texas courts must enforce under the Due Course of Law provision of the Texas Constitution.[15]

II. Deficiencies in Permit Application and Final Permit

A. Significant information was missing in the Application materials available to TCEQ and the public, violating public notice and comment requirements.

Despite SpaceX's intentional disregard for this Agency's regulatory authority, the Draft Permit was prepared hastily and without requisite information or protections for Texas waters. An application was submitted on July 1, 2024 and on July 8, 2024—one week later—it was declared administratively complete, and public notice was published on July 12-13, 2024, even though the TCEQ website for Pending TPDES Applications shows the first public notice was not provided until August 14, 2024.

Then, less than two months later, on September 5, 2024, the Application was declared technically complete. A public meeting was scheduled for October 17, 2024, marking the end of the public comment period. This means that despite more than one year of ongoing and willful violations, SpaceX's permit application was processed at a rapid speed that gave the public only a few weeks from first notice to final public comment. Further, the public has not had any opportunity to review any additional testing that should have occurred since the release of the Draft permit. Not only does this unreasonably expeditious timeline undermine a thorough and complete review by Agency staff, it sends the message to other polluters that flagrant violations and disregard for regulatory authority will be rewarded with favoritism.

The public has been filing complaints with TCEQ for more than one year, yet the TCEQ repeatedly failed to act. According to publicly available information, between August 2023 and June 2024, TCEQ received at least fourteen complaints from members of the public regarding

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[12] *See, e.g., Texas Comm'n on Env't Quality v. Sierra Club*, 455 S.W.3d 228 (Tex. App.–Austin, 2014).
[13] Tex. Const. art. I, § 6.
[14] Tex. Const. art. I, § 33.
[15] 647 S.W.3d 648, 677 (Tex. 2022).

the deluge system operating without a permit. In fact, in an email on August 3, 2023, Cari-Michel La Caille, Director of TCEQ's Office of Water, acknowledged that TCEQ was aware of SpaceX activities regarding deluge water from the rocket launch facility. On August 30, 2024, TCEQ filed a Proposed Enforcement Order against SpaceX, conveniently resolving the Facility's repeated violations by granting SpaceX a carte blanche to discharge industrial wastewater without a TPDES Permit. After TCEQ finalized this legally dubious Enforcement Order on November 14, 2024, the Carrizo/Comecrudo Tribe and other groups petitioned for review of the TCEQ's Order. This pattern of favoritism has also prejudiced the rights of the public to participate in the decision-making process.

Because there was significant information missing from the permit application, the public was denied a chance to meaningfully comment on the draft permit. The failure to inform the public, as well as TCEQ's improperly rushed technical review and actions condoning SpaceX to operate without a TPDES permit demanded a re-opening or extension of the public comment period.

B. The Application and Permit fail to demonstrate the facility's high heavy metal discharges will comply with Texas' water quality standards. Additional testing is needed to evaluate the facility's impacts to water quality.

The Statement of Basis indicates that the effluent limitations for chemical oxygen demand, oil & grease, and pH are based on the standard limitations normally applied to instantaneous industrial stormwater discharges. But discharges from a rocket launching deluge system are decisively NOT stormwater discharges. Furthermore, a "general" stormwater permit is not a proxy for the necessary individual permit, which must be written to reflect site-specific conditions of SpaceX based on information about the proposed discharge.

The minimal (and deficient) sampling results included with the Application indicate that metals, including copper, zinc, nickel, thallium, and hexavalent chromium, a known carcinogen, will be in the SpaceX industrial wastewater. And yet, there is no information about how those samples were collected, how much water passed through the deluge system or through the outfall at the time the samples were collected, or whether it had been diluted by any other water source. There was certainly no attempt to analyze water quality from the discharge that was not collected by the retention pond, as indicated in SpaceX's own figure included in the Application which makes it clear that even under the most conservative approach, the deluge system is designed–at both launch sites—to overspray the retention basins. This means that polluted wastewater will be discharged directly into the tidal flats without going through the retention basin first. There has been no effort to analyze or limit the adverse impacts from hot water being discharged directly into the tidal flats, which can cause significant impacts to the benthic community locally.

C. The permit does not authorize discharges outside of the outfalls despite the deluge system's ability to discharge to other waters.

By design, with each activation of the deluge system, up to 358,000 gallons of water would be pushed up from ground tanks to rapidly cool the launch pad and rocket. After being

discharged from the deluge system, deluge water enters "waters of the United States" in a variety of ways, including, flowing into retention basins and through their outfalls, flowing around retention basins off the edge of the launch area, being pushed out over the launch area and retention basins by force of the system, and as water vapor and condensation. According to documents filed with the Federal Aviation Administration, the deluge system has the ability to disperse deluge water up to 0.6 miles across the local landscape, due to the vapor cloud and subsequent condensation.[16]

The Application and materials submitted to the Federal Aviation Administration ("FAA") and TCEQ acknowledges that the deluge system causes overspray and a vapor cloud that will be dispersed outside the area of the retention basins, into the tidal flats, to Boca Chica Beach, and even as far as the South Bay. Yet, only discharges at the point of the outfalls from the retention basin are proposed to be regulated. The result of this serious deficiency is that not all pollutants have been properly identified or quantified, and the permit is not designed to regulate the discharges of all pollutants, as is required by the Clean Water Act.

As previously explained, SpaceX has been on notice of its violations for more than one year as it repeatedly activated the deluge system for launches and tests. Yet, with its application, it only provided two sets of sampling. This is unacceptable. Additionally, in documents on file with FAA, SpaceX indicated it provided TCEQ with samples from at least four dates, none of which are the same dates included in the Application. And as previously mentioned, SpaceX conducted additional static fire tests and a launch in October. It is counter to the Clean Water Act to exclude this effluent data from consideration. This data should have been reported as a part of the publicly available application package. SpaceX should not have been permitted to fulfill the requirement of four effluent tests as later condition on its permit, because this information will was not available for the public to review and comment on.

Furthermore, the Application does not demonstrate that the sampling that was provided was representative of the discharge effluent. For one, the sampling was not necessarily conducted immediately following the discharge event. For example, the second set of samples was apparently collected at 1:30 PM, though the launch was reported to have taken place at 7:30 AM on that day. Second, due to anticipated overspray, much of the discharge likely missed the retention basin, meaning there should be sampling locations designated in placed designed to capture these discharges, not only those through the designated outfall of the retention basins. If the retention basins are full of stormwater or other water, then the results would not be representative of all discharges or the need for stricter effluent limits—particularly because nothing indicates that SpaceX is required to continuously monitor or actually measure flow.

[16] "Addendum to the October 2021 Biological Assessment for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System" at 8-9. Federal Aviation Administration. October 2023. Available at: https://www.faa.gov/media/72826.

D. The Draft Permit does not contain specific terms and conditions and as a result it is unenforceable and risks SpaceX evading compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The Permit proposes several unclear terms and conditions that make it unenforceable. For example, the Permit authorizes the volume of wastewater at a volume of "intermittent and flow-variable." SpaceX has information about the size of its existing water storage tanks and the maximum amount of wastewater those tanks can hold. SpaceX is currently authorized to launch 5-10 times per year, although it is planning to double the number of launches it conducts at its Boca Chica site. Deluge events are planned. The amount of discharge from deluge water can easily be predicted and limited. Instead, the Permit has granted SpaceX a blank check. The Permit authorizes an infinite amount of deluge water to be discharged into tidal wetlands and the local environment. This amounts to a violation of Texas Surface Water Quality Standards.

It also amounts to an intentional deprivation of public participation rights. Normally, when a permitted total volume is limited to a particular flow based on the uses and needs described in the permit application, as well as the amount of pollutants to be released and their potential impacts on the receiving waters, any increase from that amount, would require a major amendment to the permit and the opportunity for public notice, comment, and a contested case hearing. By permitting a limitless volume of discharge with the initial permit, TCEQ proposes to bypass public participation requirements, which is a violation of the Clean Water Act.

Another example of an unclear and unenforceable condition, is the one that requires "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." TCEQ has not clarified whether this means that sampling must be conducted within the hour. Indeed, this provision suggests that SpaceX has the discretion to determine when it is "safe" for sampling personnel to enter the space, and this could lead to prolonged delays and non-representative samples with absolutely no mechanisms for TCEQ to say otherwise. This is especially alarming since there are alternative sampling methods that could be employed to capture wastewater immediately, and those could be employed to also capture samples in locations of anticipated overspray.

E. The Permit fails to include permit effluent limits.

The Permit needs to be revised to prohibit discharge of pollutants not specifically identified in the Application, and to set strict numerical limits on all constituents that are used at the facility or that may be found in the wastewaters and that could affect the marine environment, including but not limited to any heavy metals and chemicals in the discharge. TCEQ claims that "[n]o sources of hazardous chemicals or materials have been identified in the application associated with the activities resulting in discharge of wastewater," relying on a deficient amount of water testing samples conducted in conditions that is not representative of potential future discharges from launches and heavy stormwater events.

Even more, despite repeated concerns echoed by numerous members of the public and STEJN, TCEQ incorrectly claims that it is only required to set effluent limits for pollutants with

specific criteria. This contravenes the entire purpose of the Clean Water Act[17] and the Memorandum of Agreement between the EPA and TCEQ.[18] In delegating NPDES authority to TCEQ, EPA specifically noted that "[p]ermit requirements will be considered on a case-by-case basis and on best professional judgment in accordance with 40 CFR §125.3 as adopted by 308.1,[19] when specific regulations do not apply to a particular discharge."[20] 40 CFR §125.3 imposes technology-based treatment requirements ("TBELs"), which represent the "minimum level of control that must be imposed" in a TPDES permit.[21]

There are two critical things to note about TBELs. First, when EPA has not issued national effluent limitations guidelines for particular pollutant(s)—as it has yet to do for several pollutants known to be harmful to human health and the environment—TCEQ is not absolved from setting TBELs for the pollutant(s). To the contrary, TCEQ "shall" set such TBELs on a "case-by-case" using its "best professional judgment."[22] TCEQ's plan to hold off on TBELs until there are federal or state criteria is illegal and jeopardizes public health for the lengthy federal rulemaking to enact such criteria.

Second, TBELs are not restricted to pollutants designated as "toxic" or "conventional" under the Clean Water Act or listed in TCEQ's application forms. TBELs expressly apply to "all pollutants…which are neither toxic nor conventional," and "shall" be set on a case-by-case basis for such pollutants.[23]

Thus, TCEQ cannot refuse to set strict and enforceable effluent limits for disclosed pollutants on the basis of its fundamental misunderstanding of the Clean Water Act's clear demand. TCEQ must set limits that are protective of water quality for all disclosed pollutants that threaten to harm wildlife and human health.

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[17] The Clean Water Act prohibits the discharge of "any pollutant" into waters of the United States. 33 U.S.C. §1311(a). The term "pollutant" is defined broadly to encompass unlisted pollutants, and the NPDES/TPDES permitting program is a limited exception to the prohibition on pollutant discharges. Id. §1342(a).

[18] The MOU was originally agreed upon between EPA and the Texas Natural Resource conservation Commission ("TNRCC"), but TCEQ superseded the TNRCC and is now responsible for administering the TPDES program pursuant to the Agreement.

[19] In 2022, §308.1 was repealed, and §305.544 was enacted, adopting 40 CFR § 125 by reference. 2022 TX REG TEXT 595891 (NS), 2022 TX REG TEXT 595891 (NS).

[20] Memorandum of Agreement between EPA and TCEQ at 20.

[21] 40 C.F.R. § 125.3(a).

[22] 40 C.F.R. § 125.3(a)(2)(i)–(v); *accord NRDC v. EPA*, 859 F.2d 156, 183 (D.C. Cir. 1988) ("Section 1342(a)(1) requires EPA, in approving permits in the absence of formally promulgated effluent limitations guidelines, to exercise its best professional judgment (BPJ) as to proper effluent limits. . . . States are [also] required to compel adherence to the Act's technology-based standards regardless of whether EPA has specified their content . . ."); *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998) ("In situations where the EPA has not yet promulgated any [effluent limitations guidelines] . . . . EPA must determine on a case-by-case basis what effluent limitations represent the BAT level . . .").

[23] C.F.R. § 125.3(a)(2)(v).

F. The monitoring provisions in the Permit are inadequate to demonstrate compliance with water quality standards.

The Application does not include an accurate depiction of the wastewater generating procedure, the location of where contaminants will end up from the discharges or the discharge route, or identification of the possible contaminants, meaning the monitoring and reporting requirements included are grossly deficient. But even those that propose additional analytical testing as an additional requirement (no. 12) are not enough to bring the permit into compliance or informative enough to help achieve compliance with future revisions to the permit.

G. The proposed discharge will threaten endangered species.

The Application and the ED's Statement of Basis are deficient in considering the impacts on federal and state-listed endangered and threatened species. As explained at length, due to a grossly deficient Application and review, all the possible contaminants have not been identified, quantified, or limited in any way. Federal species with critical habitat in the receiving waters include the piping plover. The discharge area could also impact water quality and listed species downstream in the Gulf of Mexico, which is designated as critical habitat for loggerhead sea turtle and proposed critical habitat for green sea turtle.

H. The Permit is not consistent with the Texas Coastal Management Program.

Finally, the Application and the review fails to demonstrate that the SpaceX facility and, more specifically, the proposed discharge from this deluge system, as proposed, will be protective of our Texas coastal communities and resources. Therefore, it is not consistent with the goals and policies of the Texas Coastal Management Program.

III. Conclusion

For the reasons stated above, STEJN respectfully requests that TCEQ grant STEJN's request for a full contested case hearing on the deficiencies raised.

Respectfully submitted,

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December 26, 2024

Submitted electronically via TCEQ's eComments
Office of the Chief Clerk
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: South Texas Environmental Justice Network's Contested Case Hearing Request for Permit No. WQ0005462000

Dear Chief Clerk Gharis:

South Texas Environmental Justice Network ("STEJN") submits this request for contested case hearing regarding Space Exploration Technologies Corporation's ("SpaceX" or "Applicant") Application for Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0005462000 ("Application") for the SpaceX Starbase Launch Pad Site (the "Facility"). The permit would authorize the discharge of industrial discharge water from SpaceX's deluge system (used for launch and return to launch site activities), facility washdown water, and stormwater to tidal wetlands south of the facility, thence to Rio Grande Tidal in Segment No. 2301 of the Rio Grande basin. The designated uses for Segment No. 2301 are primary contact recreation and exceptional aquatic life use.

Pursuant to 30 TAC 55.201, South Texas EJ Network may be contacted via its counsel, Texas RioGrande Legal Aid, Paola Camacho or Ilan Levin:

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Please direct all official communications regarding this matter to Paola Camacho or Ilan Levin.

Below, we identify STEJN's members' personal justiciable interests affected by the application, including a brief, but specific, written statement explaining in plain language the location and distance of the affected interests relative to SpaceX's launch site and the affected wetlands and waterbodies that are the subject of the application. STEJN's members' use and access to Boca Chica Beach and surrounding areas has been and will be impacted by SpaceX's launches. Unlike members of the general public, STEJN members frequent the Boca Chica area for work, educational, religious/spiritual services, and for recreation and enjoyment.

I. Background

Since July 28, 2023—nearly a year before even attempting to obtain a permit—SpaceX has been unlawfully discharging wastewater from its deluge system into surrounding waters,[1] with the water discharged through the activation of the deluge system reaching up to 0.6 miles across the local landscape.[2] To date, SpaceX has used the deluge system on at least 20 occasions, and SpaceX plans to double the frequency of its launches in Brownsville. With each launch, the Facility can impact several pristine natural habitats, including tidal wetlands, the Rio Grande, Boca Chica Beach, and the Boca Chica Wildlife Refuge and the South Bay.

SpaceX submitted the Application on July 1, 2024, and on July 8, 2024, it was declared administratively complete. Then, less than two months later, on September 5, 2024, the Application was declared technically complete. This unreasonably expeditious permit application review undermines the Clean Water Act's requirements, which demand a thorough and complete review by TCEQ staff, especially in light of the large environmental risks associated with each launch and SpaceX's repeated and flagrant disregard of the Clean Water Act.

STEJN members that reside in Brownsville have seen smoke from and heard previous explosions during launches; they have even heard debris falling on their apartment roofs. These experiences cause STEJN to question how well, and whether, TCEQ will force strict compliance and ensure the health and safety of STEJN members as they exercise their legal rights, duties, privileges, and other interests in and around Boca Chica Beach. Boca Chica Beach is sacred to several STEJN members, who practice religious/spiritual prayer and healing services by the ocean and along the Rio Grande River. These members also conduct education at the beach, and (for some members) access the road and beach and surrounding wetlands as part of their work. These members have witnessed degradation of the land and waters directly adjacent to SpaceX.

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[1] In this separate but related case, STEJN, Carrizo/Comecrudo Nation of Texas, Inc., and Save RGV filed comments to TCEQ opposing the Agreed Order that dealt a mere slap on the hand to SpaceX for these violations, and filed a Petition for Review of the Final Order on December 16, 2024.

[2] "Addendum to the October 2021 Biological Assessment for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System" at 8-9. Federal Aviation Administration. October 2023. Available at: https://www.faa.gov/media/72826.

For these and the additional reasons detailed below, South Texas Environmental Justice Network requests a contested case hearing.

I. Contested Case Hearing Request

A. South Texas Environmental Justice Network requests a contested case hearing.

STEJN satisfies TCEQ's rules for requesting a contested case hearing on behalf of a group.[3] That is, one or more members of STEJN would have standing to request a hearing in their own right, because they are affected persons; the interests that STEJN seeks to protect are germane to the organization's purpose; and neither the claim asserted nor the relief requested requires the participation of the individual members in the case.

An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Members of STEJN have *interests*, detailed below, that are both *personal* to each of them, and *justiciable*. That is, a favorable outcome on the proposed Permit could alleviate the negative impacts on their interests. Moreover, these interests are related to legal rights, duties, privileges, powers and economic interests of these individuals.

The SpaceX facility is mere blocks from various natural areas that STEJN's members frequent, including Boca Chica Beach, Brazos Island Park, and Boca Chica Wildlife Refuge. The facility also impacts the Rio Grande, a river STEJN members frequently visit for its natural beauty and importance as the origin of life for the Estok'na, which means "the people" (and who Spanish and later Anglo-Texan colonizers dubbed Carrizo Comecrudo).

i. STEJN's mission and work is germane to the SpaceX water permit.

The interests STEJN seeks to protect are germane to its purpose, as illustrated by STEJN's purpose statement:

> The South Texas Environmental Justice Network was formed at the start of 2020 and includes numerous organizations, campaigns, individuals, and the Carrizo Comecrudo Tribal leadership from the South Texas region that challenge the status quo and corporate power to build a future aligned in values, principles, and praxis that centers on the social and environmental health of local Native and BIPOC communities living in reciprocal relationships with our shared natural home.
>
> Our network seeks to end the environmental, social, and economic injustices borne on the Latinx and Indigenous communities of South Texas. We aim to do this by building a community amongst regional advocates and empowering historically marginalized voices to speak up and be heard. By doing so, we want to radically change the oppressive systems that have harmed our communities and extracted wealth from the people and land of South Texas.

[3] 30 Tex. Admin. Code §§ 55.203, 55.205.

Indeed, STEJN works to protect the same health, aesthetic, recreational, and religious interests of its members that it seeks to protect here. For example, STEJN has previously challenged federal agency action on LNG development projects in the region. STEJN has worked internationally, advocating for French banks to divest from LNG terminals due to climate and human rights concerns. At home, STEJN has pursued legal and administrative actions to defend the environment of South Texas. One example involves a case against Texas Parks & Wildlife Department and the Texas Parks and Wildlife Commission to block a land swap that would have granted SpaceX 43 acres of public land.

Finally, the relief requested is prospective, and neither the claim asserted nor the relief requested—modification or denial of Permit No. WQ0005462000—requires participation of the individual members of STEJN.

ii. STEJN's members are affected persons.

Members of STEJN are affected persons based on the adverse impacts to their health, aesthetic, recreational, economic and religious interests. Members of STEJN recreate and practice their religion in close proximity to the SpaceX facility and will continue to be impacted by the facility and its discharges into the adjacent wetlands, which flow into the Rio Grande River. STEJN members' interest are not common to the general public due to their close proximity to the Facility and areas close to the discharge; and because STEJN's members frequent the impacted areas. In particular, STEJN members' interest in visiting the beach, wildlife viewing, swimming, and engaging in their work, education, lifeways, and prayers and purification rituals are distinguishable by the regularity and particularity of their recreational and religious use of natural areas that will continue to be impacted by this Facility.

B. Harms to STEJN members from SpaceX's discharges.

South Texas EJ Network members' interests are injured by the SpaceX launches and the associated discharges. The proposed Permit will authorize the discharges that will continue to harm the members' legally protected rights, privileges, and duties, including their health, recreational, aesthetic, economic, and spiritual/religious interests in areas directly adjacent to and downstream of the discharge route. STEJN's members' rights to access and use the beach have been and will be negatively affected by the launches, and a contested case hearing to ensure strict compliance with clean water laws would mitigate these injuries.

The following STEJN members would be impacted in ways that are not common to the general public:

Rebekah Hinojosa is a co-founder and member of STEJN. Ms. Hinojosa has been visiting Boca Chica beach since she was a child. She has been visiting Boca Chica often since 2014. She moved to Brownsville in 2017 specifically to be closer to Boca Chica Beach. She enjoys hiking around Boca Chica Beach because she enjoys observing the coastal habitat and the unique ecosystem of the Boca Chica area. Ms. Hinojosa regularly leads tours to Boca Chica Beach and the surrounding area for guests (e.g., STEJN members, community members, reporters, students, public officials, etc.) to experience wildlife and the pristine environment, and

to document the area. As part of the tours, Ms. Hinojosa educates the guests about the value of and long history of sacred sites, threatened and endangered species, pristine lands, and coastlines. To conduct the tours, Ms. Hinojosa drives east on Boca Chica Highway to its terminus and conducts the tours in the area from the terminus all the way south to the Rio Grande River.

Ms. Hinojosa has given tours of this area since 2015. She does so approximately three to six times per year, and she visits this area specifically because it has historically looked pristine and wild, with an abundance of wildlife and foliage. Ms. Hinojosa reports seeing Aplomado falcons, roseate spoonbills, blue herons, and other birds. Before rocket launches began, wildlife was more abundant, but now she sees less wildlife on her tours. She is concerned that this reduction in wildlife will only be exacerbated by the discharge of industrial wastewater from the Facility. She has seen singed flora on the side of the road. In recent years, with SpaceX launches, she has experienced road closures, and has experienced traffic and parking difficulty due to SpaceX super-fans and campers along the road.

Christopher Basaldu is a co-founder and member of STEJN. Christopher is also a member of the Esto'k Gna, commonly known as the Carrizo/Comecrudo Nation. Christopher grew up in Brownsville and would go to the beach with his family since childhood, and now visits Boca Chica beach about eight times a year on average. Christopher enjoyed visiting the beach since childhood to enjoy what he saw as a vast paradise and green. Christopher visits the area to swim, view wildlife, and enjoy stargazing. Christopher also goes to Boca Chica Beach to practice the lifeways of the Esto'k Gna, such as by performing spiritual cleansing and prayers in the waters of the ocean and mouth of the Rio Grande. This is because Christpher's deeply held religious beliefs include practicing the prayer and healing practices, and lifeways of his indigenous ancestors. For the Carrizo Comecrudo, the term *lifeways* roughly encompasses the English values of education, prayer, and spiritual renewal.

Christopher also regularly visits Boca Chica Beach to teach the public about the history of Boca Chica and the Esto'k Gna's longstanding history protecting the natural environment. Christopher carries on the lessons of his elders to teach stewardship and connection to natural environments that have been sacred and protected for generations. For example, it is customary to always leave an offering because Boca Chica is considered a sacred site.

Christopher's legally justiciable interests – his legal rights and privileges to access the beach, to practice his religious services, to do his work, and to continue to enjoy his recreation free from what he calls the "ugliness" of SpaceX and the launches that threaten the area which Christpher uses – have been and will be injured by SpaceX's launches.

Juan Mancias is a member of STEJN. Juan Macias is also a member and an elder of the Esto'k Gna, or Carrizo/Comecrudo Nation. For decades, Mr. Mancias has regularly visited the mouth of the Rio Grande River. To get there, Mr. Mancias drives east to the terminus of the Boca Chica Highway, and then drives approximately two miles south to the River. Mr. Mancias estimates he visits the mouth of the River at least eight times per year on average. Before SpaceX built its Facility, Mr. Mancias would observe plants, birds, and other wildlife that are culturally

important to him, and which brought him spiritual fulfillment in making the visit. Some of the bird species Mr. Mancias has seen in that area and that are culturally significant include pelicans, sandhill cranes, great blue herons, kingfishers, anhingas, black hawks, kiskadees, orioles, and scissor tails. Mr. Mancias finds spiritual fulfillment in knowing that the coastline where his ancestors are buried is protected.

After SpaceX began launching rockets from the Facility, Mr. Mancias has noticed a decline in birds he once observed, and he is worried that the discharge of industrial deluge water pursuant to SpaceX's TPDES permit will cause further decline. Mr. Mancias is also concerned that the discharge of industrial deluge water will degrade the water in the Rio Grande River, which injures his spiritual practices: bathing in the water of the Rio Grande where it enters the Gulf, and at Boca Chica. These are important religious ceremonies for the Carrizo Comecrudo, because that is the site of their Creation Story. Additionally, Mr. Mancias's visits to the area are impaired by the pollution and destruction of the natural habitat he used to enjoy and witness. His personal interests are harmed by SpaceX launches and the activities that have destroyed ancestral sites he and his tribe use in their practice of lifeways. He is concerned that the discharge of industrial deluge water will further harm the area and will extend the harm to areas downstream of the discharge.

Josette Hinojosa is co-founder and a member of STEJN. Ms. Josette Hinojosa is also a member of the Esto'k Gna, or Carrizo/Comecrudo Nation. Josette grew up in Brownsville and has been visiting Boca Chica Beach with her family since she was a child. Ms. Hinojosa estimates she visits the beach about once a month. She also enjoys visiting the beach with family and community members to enjoy the natural areas, bond over barbeques together, and to walk in the water and swim in the ocean. Ever since the SpaceX Facility was built, however, Ms. Hinojosa is concerned about the quality of the water and about stepping over debris from the rocket launches.

Ms. Josette Hinojosa has led educational tours at Boca Chica Beach and near SpaceX, teaching students and members of the public about the natural area and the history of the Esto'k Gna. Ms. Hinojosa also visits Boca Chica Beach and Mouth of the Rio Grande for Esto'k Gna ceremonies, but has been turned away due to SpaceX-related beach closures on several occasions. Ms. Hinojosa has noticed a decline in the quality of the environment around Boca Chica Beach and is concerned that continued SpaceX discharges will further degrade the quality of the environment at Boca Chica and the Rio Grande River.

Emma Guevara is a member of STEJN. Ms. Guevara visits her family near Boca Chica beach at least six times a year, and attempts to visit Boca Chica Beach and nearby natural areas during each visit. Ms. Guevara grew up in Brownsville, and enjoys visiting Boca Chica Beach and the mouth of the Rio Grande River. To get there, Ms. Guevara goes with her dad's truck and drives east to the terminus of the Boca Chica Highway, and then drives approximately two miles south to the River. Ms. Guevara enjoys spending time with her family at the beach and the river, and picks seashells along the beach.

Ms. Guevara worked for Sierra Club as a Field Organizer between July 2021 and July 2024 to help preserve and protect natural areas in Brownsville like Boca Chica Beach. Ms. Guevara spent the time fighting the ongoing development of SpaceX that has degraded the pristine habitat at Boca Chica. Ms. Guevara continues to make trips to Boca Chica Beach at least six times a year but has had limited access due to SpaceX beach closures. On visits where she is not able to access Boca Chica Beach, Ms. Guevara visits Boca Chica Wildlife Refuge and Boca Chica Bay near SpaceX, as well as Brazos Island Park.

i. Health harms.

STEJN members visiting the natural areas around the SpaceX facility would be exposed to threat to their overall health and well-being if the permit is granted as written. These threats will compound existing harms that STEJN already faces from the ongoing development impacts around Boca Chica Beach. In addition to the impacts on STEJN members from increased light pollution, noise, and traffic, STEJN members have been hindered by beach closures for the SpaceX facility and been unable to visit the area for recreation and educational purposes. Now, STEJN members face threats to their health from activities they have enjoyed at Boca Chica and surrounding natural areas, including swimming.

The SpaceX facility has the capacity to discharge 358,000 gallons of untreated industrial wastewater after a single rocket launch. This is on top of an unknown quantity of discharges from facility washdowns and storm events.[4] TCEQ improperly conflates the Facility's ability to retain and reuse some of the deluge water before discharge as a treatment mechanism that reduces the impact of the Facility to the receiving waters. However, the potential delay of industrial discharges does not equate to pollution reduction. The quantity of pollutants present in the deluge water will only amalgamate over time as the water is reused, and once discharged, receiving waters face heightened concentrations of dangerous pollutants.

Discharges from the deluge system are expected to contain numerous dangerous pollutants, including total dissolved solids, nitrate-nitrogen, phosphorus, sulfate, chloride, fluoride, aluminum, cadmium, chromium, copper, cyanide, zinc, arsenic, barium, lead, mercury, nickel, and selenium. Arsenic, cadmium, chromium, lead, and nickel are known carcinogens in humans,[5] and are also, in addition to copper, mercury, selenium, and zinc, highly toxic and can result in carcinogenicity and mutagenicity in fish.[6]

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[4] The possibility of more severe storm events from climate change only threatens further discharges from stormwater buildup in the retention basins. Single rain events in Brownsville can amount to over 3 inches of precipitation, and these severe rain events are expected to increase in rainfall amounts due to climate change over the years.

[5] American Cancer Society, Known and Probable Human Carcinogens (last revised August 1, 2024), https://www.cancer.org/cancer/risk-prevention/understanding-cancer-risk/known-and-probable-human-carcinogens.html.

[6] Farhan Jamil Emon et. Al., *Bioaccumulation and Bioremediation of Heavy Metals in Fishes—A Review*, 11(6) TOXICS 510 (June 2023), https://pmc.ncbi.nlm.nih.gov/articles/PMC10302055/#:~:text=Moreover%2C%20some%20of%20the%20metals,32%2C33%2C34%5D.

ii. Recreational and aesthetic harms.

Harms to water quality and aquatic life from the Facility would also negatively impact recreational activities such as swimming and bird or wildlife watching in Boca Chica Beach, along the Rio Grande, and in areas around the SpaceX Facility. Already, STEJN members have noticed a significant decline in the wildlife populations they enjoyed viewing at and around Boca Chica Beach, as well as the degradation and loss of plant life. Moreover, STEJN members that have enjoyed swimming in the ocean and Rio Grande River may understandably find the impacts to water quality from the industrial discharges too great to allow for continued recreational use of the areas.

iii. Harms to Religious Practice

Among STEJN's purposes is to educate its members and the public about the historic erasure of the Carrizo/Comecrudo Nation of Texas (the "Tribe"). STEJN advocates for environmental stewardship to protect the economic, social and justice interests of its members, including its Carrizo/Comecrudo members. The preservation of the environment is quintessential not only to STEJN's broad purpose to promote environmental justice, but also to its more specific purpose to preserve the Tribe's cultural and religious practices.

STEJN members have a constitutional right to religious freedom under both the U.S. and Texas State Constitution. In addition, the Texas constitution specifically provides that the state and its political subdivisions (such as TCEQ), "may not enact, adopt, or issue a statute, order, proclamation, decision, or rule that prohibits or limits religious services, including religious services conducted in churches, congregations, and places of worship, in this state by a religious organization established to support and serve the propagation of a sincerely held religious belief."[7]

C. STEJN satisfies TCEQ and federal standing requirements.

STEJN satisfies TCEQ's affected person standards, which are consistent with federal Article III standing according to the Texas Attorney General:

> The criteria regarding determination of affected persons in the TCEQ's rules comport with the standing requirements in Article III of the United States Constitution for judicial review under the state statutes applicable to federal permit programs being implemented by the TCEQ, including the TPDES program. There is no material difference between the TCEQ's standards and the standards the federal courts apply when deciding judicial standing, which are based on the United States Supreme court decision in Lujan v. Defenders of Wildlife, et al., 504 U.S. 555 (1992).[8]

In *Lujan*, the United States Supreme Court established that standing involves three elements: (1) an injury in fact, which is a concrete and particularized invasion of a legally

[7] Tex. Const. art. I, § 6-a.

[8] Statement of Legal Authority to Regulate Oil and Gas Discharges under the Texas Pollutant Discharge Elimination System Program, Texas Attorney General Ken Paxton, at 12, September 18, 2020.

protected interest that is actual or imminent, not conjectural or hypothetical; (2) a fairly traceable causal connection between the injury and the conduct complained of; and (3) it must be likely as opposed to speculative that the asserted injury will be redressed by a favorable decision.[9]

Further, the United States Supreme Court clarified the standing inquiry and explained that "plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity."[10]

Consistent with the standards set forth in *Lujan* and *Laidlaw*, individual STEJN members satisfy the standing requirements for purposes of this Application. For example, Ms. Rebekah Hinojosa's, Mr. Basaldu's, Mr. Mancias, Ms. Josette Hinojosa's, and Ms. Guevara's recreational interests are injured; in some instances, these interests are more than recreational and include spiritual and religious practice if the application is granted. These STEJN members regularly use the waters impacted by the industrial discharge, and would be particularly impacted by the discharge in a way distinct from the general public by virtue of their regular and particular use of the waters, dating back decades. Their reasonably held concerns formed from their own experiences will be redressed by participation in a contested case hearing to ensure a strict and protective Final Permit if a permit is issued. A contested case hearing will ensure a determination of whether the permit is sufficiently protective of the recreational and aquatic life uses of the downstream waters, including the Rio Grande River where Ms. Hinojosa, Mr. Basaldu, Mr. Mancias, and Ms. Josette Hinojosa regularly visit to recreate or observe religious ceremony. Further, a contested case hearing would allow STEJN to vet SpaceX's Application and Permit to determine whether they include adequate measures to protect the health, quality of life, and well-being of STEJN's members.

This permit would be issued pursuant to federally delegated authority from EPA, and therefore, the applicable considerations relevant to STEJN's hearing request are different from those at issue in non-federal programs. In obtaining delegated authority to issue TPDES Permits for discharges associated with oil and gas activities, the Texas Attorney General stated that, "the TCEQ does not consider discretionary factors in 30 Tex. Admin. Code § 55.203(d) that may not be consistent with the determination of Article III standing, such as the merits of the underlying TPDES permit application, in evaluating whether a hearing requester is an affected person."[11] Thus, TCEQ may not deny STEJN's request based upon a finding on the merits that the conditions of the permit will be adequately protected of downstream waters so as to prevent the potential impacts of concern that STEJN raised because TCEQ's conclusions in the Final Permit about impacts to water quality and aquatic life and compliance with applicable laws are the exact merits issues STEJN disputes and seeks to resolve in a contested case hearing. To the degree that

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[9] *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992).
[10] *Friends of the Earth v. Laidlaw Env't Serv.s (TOC), Inc., 528 U.S. 167, 181–182 (2000)* (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)).
[11] Statement of Legal Authority to Regulate Oil and Gas Discharges under the Texas Pollutant Discharge Elimination System Program, Texas Attorney General Ken Paxton, at 22, September 18, 2020.

Senate Bill 709, or state caselaw[12] indicate otherwise, they have no applicability to this hearing request by virtue of the distinct federal context.

D. Beach Access and practicing one's religion are protected interests under the Texas Constitution.

Members of STEJN that visit Boca Chica Beach, as well as those who regularly fish in impacted waters or practice religious ceremonies in and around those waters, have legally justiciable interests related to legal rights and privileges granted special protection by the Texas Constitution. The Texas Constitution guarantees the right to freedom of religion and mode of worship.[13] The Bill of Rights of the Texas Constitution, by amendment in 2009, guarantees the right of public beach access to state-owned beaches.[14] In the case of *Texas Department of State Health Services v. Crown Distribution LLC*, Justice Young, joined by Chief Justice Hecht, Justice Devine, and Justice Blacklock wrote that these are some of the interests that Texas courts must enforce under the Due Course of Law provision of the Texas Constitution.[15]

II. Deficiencies in Permit Application and Final Permit

A. Significant information was missing in the Application materials available to TCEQ and the public, violating public notice and comment requirements.

Despite SpaceX's intentional disregard for this Agency's regulatory authority, the Draft Permit was prepared hastily and without requisite information or protections for Texas waters. An application was submitted on July 1, 2024 and on July 8, 2024—one week later—it was declared administratively complete, and public notice was published on July 12-13, 2024, even though the TCEQ website for Pending TPDES Applications shows the first public notice was not provided until August 14, 2024.

Then, less than two months later, on September 5, 2024, the Application was declared technically complete. A public meeting was scheduled for October 17, 2024, marking the end of the public comment period. This means that despite more than one year of ongoing and willful violations, SpaceX's permit application was processed at a rapid speed that gave the public only a few weeks from first notice to final public comment. Further, the public has not had any opportunity to review any additional testing that should have occurred since the release of the Draft permit. Not only does this unreasonably expeditious timeline undermine a thorough and complete review by Agency staff, it sends the message to other polluters that flagrant violations and disregard for regulatory authority will be rewarded with favoritism.

The public has been filing complaints with TCEQ for more than one year, yet the TCEQ repeatedly failed to act. According to publicly available information, between August 2023 and June 2024, TCEQ received at least fourteen complaints from members of the public regarding

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[12] *See, e.g., Texas Comm'n on Env't Quality v. Sierra Club*, 455 S.W.3d 228 (Tex. App.–Austin, 2014).
[13] Tex. Const. art. I, § 6.
[14] Tex. Const. art. I, § 33.
[15] 647 S.W.3d 648, 677 (Tex. 2022).

the deluge system operating without a permit. In fact, in an email on August 3, 2023, Cari-Michel La Caille, Director of TCEQ's Office of Water, acknowledged that TCEQ was aware of SpaceX activities regarding deluge water from the rocket launch facility. On August 30, 2024, TCEQ filed a Proposed Enforcement Order against SpaceX, conveniently resolving the Facility's repeated violations by granting SpaceX a carte blanche to discharge industrial wastewater without a TPDES Permit. After TCEQ finalized this legally dubious Enforcement Order on November 14, 2024, the Carrizo/Comecrudo Tribe and other groups petitioned for review of the TCEQ's Order. This pattern of favoritism has also prejudiced the rights of the public to participate in the decision-making process.

Because there was significant information missing from the permit application, the public was denied a chance to meaningfully comment on the draft permit. The failure to inform the public, as well as TCEQ's improperly rushed technical review and actions condoning SpaceX to operate without a TPDES permit demanded a re-opening or extension of the public comment period.

B. The Application and Permit fail to demonstrate the facility's high heavy metal discharges will comply with Texas' water quality standards. Additional testing is needed to evaluate the facility's impacts to water quality.

The Statement of Basis indicates that the effluent limitations for chemical oxygen demand, oil & grease, and pH are based on the standard limitations normally applied to instantaneous industrial stormwater discharges. But discharges from a rocket launching deluge system are decisively NOT stormwater discharges. Furthermore, a "general" stormwater permit is not a proxy for the necessary individual permit, which must be written to reflect site-specific conditions of SpaceX based on information about the proposed discharge.

The minimal (and deficient) sampling results included with the Application indicate that metals, including copper, zinc, nickel, thallium, and hexavalent chromium, a known carcinogen, will be in the SpaceX industrial wastewater. And yet, there is no information about how those samples were collected, how much water passed through the deluge system or through the outfall at the time the samples were collected, or whether it had been diluted by any other water source. There was certainly no attempt to analyze water quality from the discharge that was not collected by the retention pond, as indicated in SpaceX's own figure included in the Application which makes it clear that even under the most conservative approach, the deluge system is designed–at both launch sites—to overspray the retention basins. This means that polluted wastewater will be discharged directly into the tidal flats without going through the retention basin first. There has been no effort to analyze or limit the adverse impacts from hot water being discharged directly into the tidal flats, which can cause significant impacts to the benthic community locally.

C. The permit does not authorize discharges outside of the outfalls despite the deluge system's ability to discharge to other waters.

By design, with each activation of the deluge system, up to 358,000 gallons of water would be pushed up from ground tanks to rapidly cool the launch pad and rocket. After being

discharged from the deluge system, deluge water enters "waters of the United States" in a variety of ways, including, flowing into retention basins and through their outfalls, flowing around retention basins off the edge of the launch area, being pushed out over the launch area and retention basins by force of the system, and as water vapor and condensation. According to documents filed with the Federal Aviation Administration, the deluge system has the ability to disperse deluge water up to 0.6 miles across the local landscape, due to the vapor cloud and subsequent condensation.[16]

The Application and materials submitted to the Federal Aviation Administration ("FAA") and TCEQ acknowledges that the deluge system causes overspray and a vapor cloud that will be dispersed outside the area of the retention basins, into the tidal flats, to Boca Chica Beach, and even as far as the South Bay. Yet, only discharges at the point of the outfalls from the retention basin are proposed to be regulated. The result of this serious deficiency is that not all pollutants have been properly identified or quantified, and the permit is not designed to regulate the discharges of all pollutants, as is required by the Clean Water Act.

As previously explained, SpaceX has been on notice of its violations for more than one year as it repeatedly activated the deluge system for launches and tests. Yet, with its application, it only provided two sets of sampling. This is unacceptable. Additionally, in documents on file with FAA, SpaceX indicated it provided TCEQ with samples from at least four dates, none of which are the same dates included in the Application. And as previously mentioned, SpaceX conducted additional static fire tests and a launch in October. It is counter to the Clean Water Act to exclude this effluent data from consideration. This data should have been reported as a part of the publicly available application package. SpaceX should not have been permitted to fulfill the requirement of four effluent tests as later condition on its permit, because this information will was not available for the public to review and comment on.

Furthermore, the Application does not demonstrate that the sampling that was provided was representative of the discharge effluent. For one, the sampling was not necessarily conducted immediately following the discharge event. For example, the second set of samples was apparently collected at 1:30 PM, though the launch was reported to have taken place at 7:30 AM on that day. Second, due to anticipated overspray, much of the discharge likely missed the retention basin, meaning there should be sampling locations designated in placed designed to capture these discharges, not only those through the designated outfall of the retention basins. If the retention basins are full of stormwater or other water, then the results would not be representative of all discharges or the need for stricter effluent limits—particularly because nothing indicates that SpaceX is required to continuously monitor or actually measure flow.

[16] "Addendum to the October 2021 Biological Assessment for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System" at 8-9. Federal Aviation Administration. October 2023. Available at: https://www.faa.gov/media/72826.

D. The Draft Permit does not contain specific terms and conditions and as a result it is unenforceable and risks SpaceX evading compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The Permit proposes several unclear terms and conditions that make it unenforceable. For example, the Permit authorizes the volume of wastewater at a volume of "intermittent and flow-variable." SpaceX has information about the size of its existing water storage tanks and the maximum amount of wastewater those tanks can hold. SpaceX is currently authorized to launch 5-10 times per year, although it is planning to double the number of launches it conducts at its Boca Chica site. Deluge events are planned. The amount of discharge from deluge water can easily be predicted and limited. Instead, the Permit has granted SpaceX a blank check. The Permit authorizes an infinite amount of deluge water to be discharged into tidal wetlands and the local environment. This amounts to a violation of Texas Surface Water Quality Standards.

It also amounts to an intentional deprivation of public participation rights. Normally, when a permitted total volume is limited to a particular flow based on the uses and needs described in the permit application, as well as the amount of pollutants to be released and their potential impacts on the receiving waters, any increase from that amount, would require a major amendment to the permit and the opportunity for public notice, comment, and a contested case hearing. By permitting a limitless volume of discharge with the initial permit, TCEQ proposes to bypass public participation requirements, which is a violation of the Clean Water Act.

Another example of an unclear and unenforceable condition, is the one that requires "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." TCEQ has not clarified whether this means that sampling must be conducted within the hour. Indeed, this provision suggests that SpaceX has the discretion to determine when it is "safe" for sampling personnel to enter the space, and this could lead to prolonged delays and non-representative samples with absolutely no mechanisms for TCEQ to say otherwise. This is especially alarming since there are alternative sampling methods that could be employed to capture wastewater immediately, and those could be employed to also capture samples in locations of anticipated overspray.

E. The Permit fails to include permit effluent limits.

The Permit needs to be revised to prohibit discharge of pollutants not specifically identified in the Application, and to set strict numerical limits on all constituents that are used at the facility or that may be found in the wastewaters and that could affect the marine environment, including but not limited to any heavy metals and chemicals in the discharge. TCEQ claims that "[n]o sources of hazardous chemicals or materials have been identified in the application associated with the activities resulting in discharge of wastewater," relying on a deficient amount of water testing samples conducted in conditions that is not representative of potential future discharges from launches and heavy stormwater events.

Even more, despite repeated concerns echoed by numerous members of the public and STEJN, TCEQ incorrectly claims that it is only required to set effluent limits for pollutants with

specific criteria. This contravenes the entire purpose of the Clean Water Act[17] and the Memorandum of Agreement between the EPA and TCEQ.[18] In delegating NPDES authority to TCEQ, EPA specifically noted that "[p]ermit requirements will be considered on a case-by-case basis and on best professional judgment in accordance with 40 CFR §125.3 as adopted by 308.1,[19] when specific regulations do not apply to a particular discharge."[20] 40 CFR §125.3 imposes technology-based treatment requirements ("TBELs"), which represent the "minimum level of control that must be imposed" in a TPDES permit.[21]

There are two critical things to note about TBELs. First, when EPA has not issued national effluent limitations guidelines for particular pollutant(s)—as it has yet to do for several pollutants known to be harmful to human health and the environment—TCEQ is not absolved from setting TBELs for the pollutant(s). To the contrary, TCEQ "shall" set such TBELs on a "case-by-case" using its "best professional judgment."[22] TCEQ's plan to hold off on TBELs until there are federal or state criteria is illegal and jeopardizes public health for the lengthy federal rulemaking to enact such criteria.

Second, TBELs are not restricted to pollutants designated as "toxic" or "conventional" under the Clean Water Act or listed in TCEQ's application forms. TBELs expressly apply to "all pollutants…which are neither toxic nor conventional," and "shall" be set on a case-by-case basis for such pollutants.[23]

Thus, TCEQ cannot refuse to set strict and enforceable effluent limits for disclosed pollutants on the basis of its fundamental misunderstanding of the Clean Water Act's clear demand. TCEQ must set limits that are protective of water quality for all disclosed pollutants that threaten to harm wildlife and human health.

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[17] The Clean Water Act prohibits the discharge of "any pollutant" into waters of the United States. 33 U.S.C. §1311(a). The term "pollutant" is defined broadly to encompass unlisted pollutants, and the NPDES/TPDES permitting program is a limited exception to the prohibition on pollutant discharges. Id. §1342(a).

[18] The MOU was originally agreed upon between EPA and the Texas Natural Resource conservation Commission ("TNRCC"), but TCEQ superseded the TNRCC and is now responsible for administering the TPDES program pursuant to the Agreement.

[19] In 2022, §308.1 was repealed, and §305.544 was enacted, adopting 40 CFR § 125 by reference. 2022 TX REG TEXT 595891 (NS), 2022 TX REG TEXT 595891 (NS).

[20] Memorandum of Agreement between EPA and TCEQ at 20.

[21] 40 C.F.R. § 125.3(a).

[22] 40 C.F.R. § 125.3(a)(2)(i)–(v); *accord NRDC v. EPA*, 859 F.2d 156, 183 (D.C. Cir. 1988) ("Section 1342(a)(1) requires EPA, in approving permits in the absence of formally promulgated effluent limitations guidelines, to exercise its best professional judgment (BPJ) as to proper effluent limits. . . . States are [also] required to compel adherence to the Act's technology-based standards regardless of whether EPA has specified their content . . ."); *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998) ("In situations where the EPA has not yet promulgated any [effluent limitations guidelines] . . . . EPA must determine on a case-by-case basis what effluent limitations represent the BAT level . . .").

[23] C.F.R. § 125.3(a)(2)(v).

F. The monitoring provisions in the Permit are inadequate to demonstrate compliance with water quality standards.

The Application does not include an accurate depiction of the wastewater generating procedure, the location of where contaminants will end up from the discharges or the discharge route, or identification of the possible contaminants, meaning the monitoring and reporting requirements included are grossly deficient. But even those that propose additional analytical testing as an additional requirement (no. 12) are not enough to bring the permit into compliance or informative enough to help achieve compliance with future revisions to the permit.

G. The proposed discharge will threaten endangered species.

The Application and the ED's Statement of Basis are deficient in considering the impacts on federal and state-listed endangered and threatened species. As explained at length, due to a grossly deficient Application and review, all the possible contaminants have not been identified, quantified, or limited in any way. Federal species with critical habitat in the receiving waters include the piping plover. The discharge area could also impact water quality and listed species downstream in the Gulf of Mexico, which is designated as critical habitat for loggerhead sea turtle and proposed critical habitat for green sea turtle.

H. The Permit is not consistent with the Texas Coastal Management Program.

Finally, the Application and the review fails to demonstrate that the SpaceX facility and, more specifically, the proposed discharge from this deluge system, as proposed, will be protective of our Texas coastal communities and resources. Therefore, it is not consistent with the goals and policies of the Texas Coastal Management Program.

III. Conclusion

For the reasons stated above, STEJN respectfully requests that TCEQ grant STEJN's request for a full contested case hearing on the deficiencies raised.

Respectfully submitted,

/s/Paola Camacho
Texas RioGrande Legal Aid
1331 Texas Ave
El Paso, TX 79901
pcamacho@trla.org
(915) 422-6599

/s/Ilan Levin
Texas RioGrande Legal Aid
4920 N Interstate Hwy 35
Austin, TX 78751
ilevin@trla.org
(512) 374-2703

Attorneys for South Texas Environmental Justice Network

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Monday, October 21, 2024 1:21 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

RFR

From: mance.mapex94@gmail.com <mance.mapex94@gmail.com>
Sent: Friday, October 18, 2024 6:54 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: MR JOSE MANUEL M CEPEDA

EMAIL: mance.mapex94@gmail.com

COMPANY:

ADDRESS: 115 W BLUE JAY AVE
PHARR TX 78577-9008

PHONE: 9562896160

FAX:

COMMENTS: It has come to my attention that the approval of permit number WQ0005462000 will allow SpaceX to dispose of contaminated water into our South Bay, Boca Chica Beach and South Padre Island water bodies. Allowing such pollution to our local beaches will not only contaminate our beaches, but our local water supply as well, ultimately. Please reconsider allowing this permit to pass, as it is highly hazardous to our water life and our environment. Thank you for your time.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Thursday, October 10, 2024 2:45 PM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

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www.tceq.texas.gov/customersurvey

From: crassvs@gmail.com <crassvs@gmail.com>
Sent: Thursday, October 10, 2024 11:25 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Theresa De Salvo

EMAIL: crassvs@gmail.com

COMPANY:

ADDRESS: 200 W SUNNY ISLE ST
SOUTH PADRE ISLAND TX 78597-6719

PHONE: 8166864550

FAX:

COMMENTS: The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted by SpaceX's wastewater pollution and activities because I live and work on South Padre Island, and these types of pollution have an impact on human health. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, September 10, 2024 3:31 PM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: crassvs@gmail.com <crassvs@gmail.com>
Sent: Monday, September 9, 2024 6:29 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Theresa De Salvo

EMAIL: crassvs@gmail.com

COMPANY:

ADDRESS: 200 W SUNNY ISLE ST
SOUTH PADRE ISLAND TX 78597-6719

PHONE: 8166864550

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. In addition to the health of people who visit South Padre Island. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted by SpaceX's wastewater pollution and activities because I live on South Padre Island also work for McKesson and there is scientific proof on how this type of pollutants leads to cancer. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site. Sincerely, Theresa De Salvo

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Thursday, October 3, 2024 11:20 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

H

From: forensicirulan@gmail.com <forensicirulan@gmail.com>
Sent: Wednesday, October 2, 2024 2:46 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Reka Gal

EMAIL: forensicirulan@gmail.com

COMPANY:

ADDRESS: Bahnhofstraße 49
Munich TX 82041

PHONE: 4162000445

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and

threatened species, especially migratory birds. While I do not live in the region, I strongly encourage you to take the harms this waste water dump would cause seriously. SpaceX's wastewater pollution and activities have both wide ranging global impacts through their harm and destruction of the local environment. The ecological health of the region is necessary for the migratory birds that travel along the coast as well as the locals that depend on the health of this environment for their lifeways and health. This issue is both a local concern and a concern for the global community, as the ways companies are destructing the environment and are not being held responsible for mitigating these harms is a major contributor to the increased extreme weather events that we are experiencing globally. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Mark Mendoza

From: PUBCOMMENT-OCC
Sent: Monday, December 30, 2024 11:59 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: 2024.12.27_Requestors RFR and Hearing Request (no attach).pdf

RFR
H

From: gwyneth@txenvirolaw.com <gwyneth@txenvirolaw.com>
Sent: Friday, December 27, 2024 4:47 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX: 5124829346

COMMENTS: Please see the attached Request for Reconsideration and Request for Contested Case Hearing submitted on behalf of the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV. Attachments 1-11 will be filed separately and in several batches due to their size.

PERALES, ALLMON & ICE, P.C.
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Of Counsel:
David Frederick
Richard Lowerre
Vic McWherter

December 27, 2024

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

Via TCEQ Online Comment Form

Re: Request for Reconsideration and Request for Contested Case Hearing Regarding the Application of Space Exploration Technologies Corp. for TPDES Permit No. WQ0005462000; TCEQ Docket No. 2024-1821-IWD.

Dear Ms. Gharis:

We are submitting the following request for reconsideration and request for a contested case hearing on behalf of the Carrizo/Comecrudo Nation of Texas, Inc. (the "Tribe") and Save RGV (together, "Requestors") regarding the Application of Space Exploration Technologies Corp. ("SpaceX" or "Applicant") for Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0005462000 (the "Application"). We respectfully request that the Commission reconsider the Executive Director's ("ED") preliminary decision, and as a result, deny the Application. Should the Commission decline to deny the Application, the Tribe and Save RGV request a contested case hearing.

I. PROCEDURAL BACKGROUND

A. The Application

According to the ED's Response to Comments ("RTC"), the Application was submitted on July 1, 2024 and declared administratively complete on July 8, 2024. The Notice of Receipt and Intent to Obtain a Water Quality Permit ("NORI") was published on July 12 and 13, 2024, and the Combined Notice of Public Meeting and NORI and Notice of Preliminary Decision ("NAPD") was published on September 11 and 13, 2024.

Meanwhile, the TCEQ Standards Implementation Team prepared an Interoffice Memorandum regarding the Antidegradation Review and the Endangered Species Review dated July 3, 2024. On July 12, 2024, the TCEQ Water Quality Assessment Team prepared an Interoffice Memorandum regarding the Dissolved Oxygen ("DO") analysis and on July 23, 2024, supplemented this memo. These two memos serve as the basis for the Draft Permit, as explained

in the Statement of Basis / Technical Summary and Executive Director's Preliminary Decision, which was prepared on August 28, 2024.

A public meeting was held on October 17, 2024, in Brownsville, Texas, and the public comment period ended at the close of the public meeting. In a letter dated November 27, 2024—the day before the Thanksgiving holiday—the ED provided the public with the Response to Comments, which set the deadline to file a request for reconsideration or a contested case hearing as Friday December 27, 2024—the Friday following the Christmas holiday (State of Texas agency offices are closed December 24-26, 2024).

The ED did not make any changes to the Draft Permit in response to public comments, but based on EPA's oversight review, the Draft Permit was amended to include Other Requirement 13, which would require a new temperature monitoring study.

B. Public Information

On December 2, 2024—the Monday following the Thanksgiving holiday—our office received the mailed copy of the NAPD. On the same day our office, our Legal Assistant Gwyneth Lonergan, submitted a Public Information Act request ("PIR") on our behalf to TCEQ for information related to the Application that was not already available online. The PIR was submitted by e-mail and clearly indicated that the responsive information was necessary for the December 27, 2024 deadline to request a contested case hearing. TCEQ confirmed receipt of the request on December 3 and assigned it Reference No. PIR 25-99629.

The PIR requested the following information:

- All communications (including but not limited to emails and associated attachments) between EPA and TCEQ regarding the Application;
- All application materials, including all revisions or supplements, submitted by or on behalf of the Applicant (not including those available on TCEQ's webpage of Pending TPDES Application Information (https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications));
- All Notices of Deficiency, Requests for Information, or any other request for information or clarification from TCEQ to the Applicant, and any responses by the Applicant;
- All other communications (including but not limited to emails and associated attachments) between the Applicant and TCEQ regarding the Application;
- All technical and interoffice memoranda regarding the Application; and
- All worksheets and review documents prepared by TCEQ staff regarding the Application.

On December 9, at 3:47 PM Ms. Lonergan received a request for clarification by e-mail from Marcus Taylor (CIA Team Lead, Water Quality Division Support Section).[1] Ms. Lonergan responded by e-mail on the same day at 4:51 PM and reiterated that the requested information was necessary for the December 27 deadline.

[1] Attachment 1 (Clarification).

On December 13, our office received one set of documents in response to the PIR. Three files were sent via e-mail to Ms. Lonergan with a message indicating the documents were being produced incrementally as the full PIR continues to be processed.

Then, on December 20 at 1:21 PM, Stacey Platz (Legal Assistant, Office of Legal Services) sent a copy of correspondence from TCEQ to the Attorney General of Texas requesting a decision on TCEQ's decision to withhold certain public documents responsive to our PIR from disclosure.[2] On the same day, our office received the second set of documents in response to this request. Files were shared using TCEQ's file sharing system and Ms. Lonergan again received an e-mail notifying her that the documents were being produced incrementally as the full PIR continues to be processed.

In the December 20 request for an OAG decision, TCEQ indicates it will submit its briefing indicating which exceptions apply to the documents it has chosen to withhold no later than January 6, 2025. As of the day of this filing, the TCEQ has not provided Requestors with an explanation as to what type of information it is withholding and under which exceptions of the Texas Public Information Act.

II. REQUEST FOR RECONSIDERATION

Pursuant to 30 Tex. Admin. Code §§ 55.201(a) and (e), the Tribe and Save RGV timely request reconsideration of the Executive Director's decision and provide the following reasons why the decision should be reconsidered and the Draft Permit denied. These issues were raised by Requestors during the comment period and also serve as the basis for their request for a contested case hearing, should the Commission decline to reconsider the ED's decision.

A. Requestors' rights to participate in the permitting process have been prejudiced.

Public information in possession of TCEQ has not been disclosed by the hearing request deadline and in violation of the Texas Public Information Act. Furthermore, based on the pattern of events, this nondisclosure appears to be an intentional abuse of the Public Information Act.

For example, on December 2, 2024—the same day we received a copy of the NAPD—our office requested information related entirely to the TCEQ's review of the Application and in time to be used before the deadline to file a hearing request (in general, the Public Information Act requires the agency make public information available "promptly" though it is a common misconception that a governmental body may wait ten business days before releasing the information).

On December 9, 2024, TCEQ sought "clarification" asking that we "clarify whether the scope of [our] request is limited to records related to the technical review phase of the application, or if the scope includes records related to the preparation of the draft permit?" This Agency cannot reasonably expect us to believe that there is a distinction between "technical review" and "preparing a draft permit," because there would be no point in conducting technical review if not

[2] Attachment 2 (Request for OAG Ruling).

to prepare a draft permit. The only reason for such a clarification request is an attempt to "restart" the clock by which TCEQ must respond.

Relatedly, the TCEQ has indicated that it is withholding public information in order to request a decision from the Texas Attorney General. But there is no information that would not be publicly available, since the request pertains only to information related to the TCEQ's review of the Application, and this information is expressly NOT confidential under TCEQ's own rules: "For Texas pollutant discharge elimination system applications, information required for the permit application will not be considered confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms." 30 Tex. Admin. Code § 1.5(d)(7).

Rather than amounting to a good faith implementation of the Act, the request for an OAG decision appears to be an abuse of the Public Information Act in order to avoid timely disclosing public information that may be relevant to hearing requests or requests for reconsideration. To illustrate, in addition to requesting the clarification (in order to restart the clock), in the request to the OAG, the TCEQ misrepresents the date on which Ms. Lonergan responded to the request for clarification. The TCEQ's request states that TCEQ sought clarification on December 9 and that Ms. Lonergan did not provide the clarification until December 10—but this is not true. Ms. Lonergan responded at 4:51 PM on December 9.

By calculating its deadline from December 10, the TCEQ is now claiming it has until January 6, 2025 to file a brief explaining under what exception in the Public Information Act it is claiming it may continue to withhold information. Had TCEQ calculated its deadlines based on the original December 2 date of the request, as it must, its brief explaining its reasons for withholding public information would have been due December 23, 2024, before the deadline to file hearing requests. The request is not a good faith attempt to implement the Public Information Act, but an attempt to shield responsive information from public.

Requestors have other reasons to believe that withholding information is not in good faith and is an attempt to prejudice their rights. For example, based on documents that were made publicly available, on July 2, 2024, TCEQ sent SpaceX a Notice of Deficiency ("NOD"). On July 3, 2024, at 3:20 PM, Carolyn Wood responded on behalf of SpaceX via email to provide information responsive to the NOD, namely an "affected landowners" map. However, the map she provided in this email response to the first NOD is not the same map that was ultimately included in the "technically complete" application package, meaning, there was likely additional correspondence between SpaceX and TCEQ on this subject. It does not stand to reason that some correspondence would be public, while other correspondence on this same subject would not.

Finally, the Applicant has been afforded a "priority" or "expedited" permit review, which is affecting the ability of the public to participate in the permitting process. In an email dated July 9, 2024, Jenna Lueg, Aquatic Scientist for the Standards Implementation, the team member who would have performed the antidegradation review, communicated that "[t]his is a high priority permit to be expedited."[3] Likewise, in an email from Michael Sunderlin dated December 10, 2024,

[3] Attachment 3 (July 9, 2024 Email by Jenna Lueg).

he called the application "a management designation priority project."[4] There have been no documents produced or information made publicly available as to how this Application (or any application) is deemed a priority. Nor is there any rule that provides for an expedited TPDES permit application processing. This is apparently a decision that was made by management but without any written documentation of it. Regardless, the TCEQ has no authority to bypass applicable permitting requirements, and yet, the record indicates that is exactly what has occurred.

And while the Applicant has been afforded "priority" status, the public has not been shown the same courtesy. In addition to notices and deadlines that have been cut short by the TCEQ's timing around holidays and public information related to the Application being improperly withheld, it also worth noting that at the time of this filing, the TCEQ still has not replaced the initial draft permit in the online technically complete package with the December 10 version (adding Other Requirement 13 requiring a new temperature monitoring study).[5]

Because all this—and much more—public information related to this Application has not been made publicly available—in direct contradiction to TCEQ's own rules, and in favor of the Applicant—the Commission should reconsider the ED's preliminary decision, and upon reconsideration, return the Application.

B. The ED has not properly considered Applicant's compliance history in preparing the Draft Permit.

Requestors raised Applicant's ongoing and continuing discharges without a permit, as well as the enforcement actions instituted by the EPA and TCEQ as a reason the Commission should deny the Application, or, at the very least, demand a rigorous review and strict enforceable permit limits. As explained elsewhere, the Application was instead subjected to an expedited review and the Draft Permit includes contradictory and unenforceable permit terms. The ED's RTC does not address these issues or the fact that SpaceX continued to discharge without a permit, but simply provides SpaceX's compliance history rating, according to TCEQ. But the RTC is flawed on this point.

The RTC correctly notes that the compliance history for CN602867657 yields a company rating classification of "Satisfactory" and a score of 1.65, and for RN111606745 yields a site rating classification of "Satisfactory" and a score of 6.43.[6] However, according to the TCEQ Compliance History Search online,[7] the compliance history ratings were calculated on September 1, 2024. This was prior to the TCEQ Agreed Order being approved on November 6, 2024 and EPA's compliance order becoming final later in November 2024.

Operating without required authorization or using a facility that does not possess required authorization amounts to a "major violation" under TCEQ rules. 30 Tex. Admin. Code § 60.2(d)(1)(B). Furthermore, a person is a "repeat violator" at a site when the site had major violations on at least two to three occasions. *Id.* at § 60.2(f)(1). The number of major violations

[4] Attachment 4 (December 10, 2024 Emails by Michael Sunderlin).
[5] https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.
[6] Attachment 5 (TCEQ Compliance Reports).
[7] Available at: https://www2.tceq.texas.gov/oce/ch/index.cfm.

contained in any agreed final enforcement orders containing a denial of liability shall be multiplied by 80, and if a person is a repeat violator, then 500 points shall be added. *Id.* at § 60.2(g)(1). The TCEQ Agreed Order contained four dates on which SpaceX discharged industrial wastewater without a permit.

There is not enough information publicly-available at this time, to determine whether the compliance rating was calculated accurately, but neither the ED's RTC or the technically complete permit package demonstrate that it was done correctly, let alone that the correct compliance history was considered when preparing the Draft Permit. Therefore, the Commission should reconsider the ED's decision and return the Application.

C. The Application has not demonstrated that the Texas Surface Water Quality Standards will be met, that water quality will not be impaired beyond a *de minimis* amount under the antidegradation policy, or that existing uses will be maintained.

1. The Antidegradation review is wholly deficient.

Of the documents produced, none show that an antidegradation analysis was performed on the pollutants of most concern in the industrial deluge wastewater. In fact, the (unsigned) worksheet demonstrates that Jenna Lueg's antidegradation analysis consisted of her deciding whether to perform a nutrient screen, whether to perform a TDS screen, and whether the wastewater would be a significant source of bacteria:

> Antidegradation Review: Application states that domestic wastewater will not be discharged via this permit, and effluent analysis indicates that nitrate and total phosphorus levels are relatively low. Flow will be intermittent and flow variable and will likely to be relatively small. Therefore, a nutrient screening is unwarranted at this time, and nutrient limits are unlikely. Discharge to tidal wetlands, then to a tidal segment; therefore, dissolved solids screening does not apply. Based on effluent analysis, effluent dissolved solids levels should not be a water quality concern in this area. Since there are no plans to discharge domestic wastewater, this facility should not be a significant source of bacteria. So, this discharge should not contribute to the segment water quality concerns for bacteria."

Having answered "no" to each of those three questions, Ms. Lueg concludes the review. There is no mention of temperature, mercury, copper, zinc, thallium, or any of the other industrial deluge pollutants present in the Applicant's water quality samples. Though Ms. Lueg prepared her worksheet and the corresponding memo before the Application was declared administratively complete, there is no authority for failing to consider industrial pollutants during the antidegradation review.

Furthermore, the ED's RTC does not attempt to address comments that the Draft Permit is deficient because the effluent limits are based on stormwater discharges and do not take into account site-specific conditions. Though the ED's RTC claims that the "antidegradation review involves a series of rigorous technical reviews by various subject matter experts to ensure the

effluent limits in the draft permit are set to maintain and protect the existing instream uses and not cause degradation of the receiving waters," there is no evidence of this.

Because the antidegradation review is wholly deficient, the Commission should reconsider the ED's decision and return the Application.

2. *TCEQ did not otherwise follow the Agency's procedures in conducting a technical review or preparing the Draft Permit.*

TCEQ's procedures for determining potential for degradation of water quality by more than a *de minimis* amount is to compare the reported analytical data from the discharge against percentages of the calculated daily average water quality-based effluent limitation. According to TCEQ's own procedures, "Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation."

During technical review of SpaceX's Application, TCEQ considered only the two sets of sampling results included in Tables 1 & 2 of the Pollutant Analysis Worksheet—nowhere near the 32 sampling results SpaceX has submitted to a Federal judge in a separate but related legal matter.[8] In fact, in a sworn Declaration, Carolyn Wood[9] (a former employee of TCEQ) and Katy Groom,[10] the Director of Environmental Regulatory Affairs responsible for overseeing environmental management at SpaceX's Boca Chica, Texas, launch facility, stated that since July 2023, Ms. Wood has routinely provided to TCEQ sample results from when the deluge system is activated for tests and launches. Attached to their sworn statements is a spreadsheet with the 32 sampling results from 15 events—14 of those events occurred prior to July 1, 2024, the date SpaceX submitted its application. The 15th event occurred on July 15, 2024, and additional events have occurred since.

However, nothing in the Application or publicly available information would indicate TCEQ reviewed these sampling results. Had they, pursuant to its stated procedures, the ED would have proposed additional limits.

For example, of the 32 samples, 22 exceeded the 85-percent threshold for zinc, and all of them—except one—exceeded the 85-percent threshold for copper. Interestingly, the one sample that did not exceed the threshold for copper was one of the two included in the Application.

According to Dr. Lauren Ross, averages of measured toxic metal concentrations exceed 85% of the average daily effluent limits for copper, mercury, thallium, and zinc, and these exceedances are not minor.[11] "The average copper concentration, based on the average of 15 samples from the retention pond is 3.4 times the comparative value for establishing an effluent limit in the permit. The average mercury concentration, based on the average of 15 "off pad" samples is more than 1,400 times the comparative value for establishing an effluent limit in the

[8] *Save RGV v. Space Exploration Technologies, Corp.*, No. 1:24-cv-00148 (S.D. Tex. filed Oct. 9, 2024).
[9] Attachment 6 (Wood Declaration and Exhibit).
[10] Attachment 7 (Groom Declaration and Exhibit).
[11] Attachment 8 (Ross Report).

permit. The average thallium concentration, based on the average of 6 samples from the retention pond is 1.7 times the comparative value for establishing an effluent limit in the permit." Table 2 in her report presents a comparison of the average of toxic metal concentrations reported by SpaceX.

In sum, this data (which is not necessarily representative, as explained below) indicates the discharges are already lowering water quality by more than a *de minimis* amount. The failure by TCEQ to follow its own procedures and to set effluent limits necessary to protect aquatic life and human health amounts to a violation of the Clean Water Act, the Texas Surface Water Quality Standards, and the antidegradation policy. For these reasons, the Commission should reconsider the ED's decision and return the Application.

In addition to the inexplicable failure by SpaceX to provide more sampling results with the Application, according to Dr. Ross, anomalies within the reported results also raise questions regarding their reliability.[12]

D. The proposed discharge and the nature of the discharge route has not been accurately characterized, nor is the wastewater generating process accurately described.

The Application acknowledges that not all of the deluge water will be contained by the retention ponds. And information submitted to other agencies, such as the FAA, more honestly describe how the system will cause overspray and a vapor cloud that will be dispersed outside the area of the retention basins, into the tidal flats, to Boca Chica Beach, and even as far as the South Bay. Though the ED's RTC indicates that the Draft Permit does not regulate the operation of the deluge system, only the discharge of pollutants, this explanation fails to account for the fact that the point source is the deluge system itself and the Draft Permit, though it requires sampling at the outfalls, does not purport to only authorize discharge at the outfalls. At best, the Draft Permit language is confusing and prone to abuse; at worst, it would authorize a discharge not contemplated by the ED. Regardless, because the Application and the Draft Permit fail to properly describe the discharge location, route, and wastewater generating process accurately, the Commission should reconsider the ED's decision and return the Application.

E. The Draft Permit does not contain specific terms and conditions and as a result it is unenforceable and risks SpaceX evading compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The RTC does not address concerns raised in comments that the Draft Permit is unenforceable. The RTC merely recites the Draft Permit provision that "sampling shall be conducted within one hour following the conclusion of the launch event and after it is deemed safe for sampling personnel to enter the sampling location," but fails to acknowledge or address the inherent confusion in this language.

The RTC acknowledges draft permit specifies the method for determining flow as estimate, due to the unique factors involved in the determination of the actual volume discharged in a launch

[12] Attachment 8 (Ross Report) at 4.

event. However, Attachment J to the application contains no water balance information—though this information is required to quantify flow. In fact, the Application lacks any flow quantification, without which, it is not possible to analyze the potential impacts on the receiving waters.

F. The Draft Permit does not include sufficient monitoring and reporting requirements, including operational requirements, to ensure compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The ED's RTC defends the Draft Permit's monitoring and reporting requirements by explaining that with only two rounds of sampling, the ED chose to deviate from the monitoring and reporting that is normally required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation. This explanation fails in several ways: First, it fails to explain why those samples that were provided with the application and exceeded 70 percent of the calculated daily average water quality-based effluent limitation did not trigger an effluent limit. Second, it is no longer defensible now that 32 samples have been provided instead of only two. Finally, the ED's RTC assumes, but without any bases, that the overspray and the effluent discharged and monitored through Outfalls 001 and 002 will be representative of the quality of the overspray.

According to Barry Sulkin, an experience consultant on NPDES permitting, the fact that the samples that are included in the Application are not taken immediately following the activation of the deluge system calls into question whether the samples taken from the outfall are representative of the pollutants expected to be present in the discharge.[13] This is because pollutants, particularly metals, in the retention pond may have settled prior to the sample being collected, meaning sampling results could show lower concentrations than were present in the discharge. In other words, the samples included in the outfall are possibly under-reporting pollutants that are in the deluge water. Even if those pollutants settle in the retention basins, there is no basis to assume that those samples are representative of the overspray water. In fact, the Draft Permit almost appears to be premised on the assumption that the wastewater discharged through the outfalls will be comingled with stormwater. But this is simply not true for the overspray.

G. The proposed discharge will harm threatened and endangered species.

The ED's RTC reveals that the wrong analysis was applied to the endangered species review. First, the RTC states: "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 1998 USFWS biological opinion." However, review of Appendix A of the 1998 USFWS BiOp actually indicates that Cameron County is within a watershed of high priority for the piping plover.[14] This means, despite this being a watershed of high priority for the piping plover, the endangered species review relied entirely on the (erroneous) antidegradation review. For these reasons, the Draft Permit has failed to show that the discharge will not lead to the unlawful take of endangered species. The Commission should grant the request for reconsideration and return the Application.

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[13] Attachment 9 (Sulkin Report) at 3.

[14] Attachment 10 (USFWS Biological Opinion Excerpt).

H. The Draft Permit is not consistent with the goals and policies of the Texas Coastal Management Program.

The ED's RTC fails entirely to address Requestors' comments that the proposed discharge is not consistent with the goals and policies of the Texas Coastal Management Program. Under that program, discharge of industrial wastewater in the coastal zone shall comply with several policies: (1) Discharges shall comply with water-quality-based effluent limits; (2) Discharges that increase pollutant loadings to coastal waters shall not impair designated uses of coastal waters and shall not significantly degrade coastal water quality unless necessary for important economic or social development; and (3) To the greatest extent practicable, new wastewater outfalls shall be located where they will not adversely affect critical areas.

For the reasons previously provided, neither the Application nor the Draft Permit have demonstrated that the proposed discharge will comply with CMP. In addition, despite our PIR, we are aware of no information that exists that supports the ED's determination that the action is consistent with the applicable CMP goals and policies. Mere conclusory statements are unreliable and should not be the basis of the Draft Permit. Therefore, the Commission should grant the request for reconsideration and return the Application.

III. REQUEST FOR CONTESTED CASE HEARING

Should the request for reconsideration be denied, then, on behalf of the "Tribe" and Save RGV, we request a contested case hearing. All prior statements are incorporated herein for all purposes. The hearing request should be granted because the Tribe and Save RGV are affected persons.

A. Requestors are "Affected Persons."

1. The Tribe

The Carrizo/Comecrudo Nation of Texas, Inc. is a Texas non-profit membership organization. Among the Tribe's purposes is to serve the cultural, social, educational, spiritual, linguistic, economic, health, and traditional needs of its members and descendants of the Carrizo/Comecrudo Nation of Texas and other indigenous or Native American groups. The Tribe members live by their mission of preserving, maintaining, protecting, and offering services that will better their tribal communities to overcome the erasure of the Original People of Texas. The Tribe promotes wellness and health by providing services in times of crisis. The Tribe seeks to protect ancestral lands and relatives and to honor their ancestors. The Tribe serves as a steward for plants and animals and their habitats, because of their significance to the Tribe.

The Tribe's members participate in activities organized by the Tribe, and their interests would be harmed by the Draft Permit. One area of historical and cultural significance to the Tribe is the mouth of the Rio Grande River and the coastline in the surrounding area known as Boca Chica. This is because the mouth of the Rio Grande River is the location of the Tribe's Creation Story, and relevant to the Creation Story are the animals living upstream and quality of the water in the Rio Grande River that the Creator used to create First Woman. Members of the Tribe regularly travel to the mouth of the Rio Grande River, just as their ancestors did, to perform

religious ceremonies in honor of the Creation Story, to find spiritual fulfillment in the historic and culturally significant place, to bathe in the area where the River empties into the Gulf of Mexico, and to educate future generations about the Tribe's history and traditional practices.

One such member is Juan Mancias. For decades, Mr. Mancias has regularly visited the mouth of Rio Grande River. To get there, Mr. Mancias drives east to the terminus of Boca Chica Highway, and then drives approximately two miles south to the River. Mr. Mancias estimates he visits the mouth of the River at least eight times per year—on quarter markers (i.e., each solstice and equinox) and cross-quarter markers (i.e., four days that fall between the quarter days), because these days are culturally significant. Mr. Mancias also travels to the River on additional days throughout the year. Before SpaceX built its Facility, Mr. Mancias would observe plants, birds, and other wildlife that are culturally important to him and the Tribe and which brought him spiritual fulfillment in making the visit. Some of the bird species Mr. Mancia has seen in that area and that are culturally significant include pelicans, sandhill cranes, great blue herons, kingfishers, anhingas, black hawks, kiskadees, orioles, and scissor tails. Mr. Mancias would also find spiritual fulfillment in knowing that the coastline where his ancestors were buried was protected.

After SpaceX began launching rockets from the Facility, Mr. Mancias noticed that these species of birds he once observed declined, and he is worried that the discharge of industrial deluge water pursuant to the Draft Permit will cause further decline. Additionally, Kenneth Teague, a coastal ecologist, has explained that the tidal wetlands and mudflats south of the SpaceX launch pad are used by a large number of shorebirds who forage on the invertebrates that live on the surface (epibenthic) or within the substrate (benthic) of the flats.[15] Deluge water with high concentrations of heavy metals could cause significant acute toxicity to the epibenthic and benthic communities. As a result, shorebirds who forage there would be forced to forage elsewhere or experience unnecessary stress searching for food where it once existed but is no longer. Mr. Sulkin confirms that tidal wetlands are a unique aquatic habitat and known foraging habitat for shorebirds. Pollutants of the type proposed with the Draft Permit may harm the aquatic habitat and aquatic life, and as a result, may impact aquatic-dependent species, such as shorebirds. This decline in the shorebird population in this area would negatively impact Mr. Mancias's ability observe birds important to him spiritually and which help him find connection with his ancestors.

2. Save RGV

Save RGV is a Texas non-profit membership corporation. Save RGV advocates for environmental justice and sustainability and the health and well-being of the Rio Grande Valley community. Save RGV also promotes the conservation and protection of wildlife habitat and the natural areas of the Rio Grande Valley. Save RGV has members who regularly boat, recreate, fish, or use the area surrounding the Facility. Their members include fishing guides, bird watchers, conservationists, and Their ability to recreate, fish for pleasure and as a part of their business, bird watch, and generally use the area will be harmed by the Draft Permit.

One such member is Mary Angela Branch. Ms. Branch regularly takes a boat from Port Isabel to go bird watching in the Laguna Madre, including in the South Bay. Ms. Branch makes these trips about three to four times per month on average throughout the year, weather permitting.

[15] Attachment 11 (Teague Declaration).

When in South Bay, Ms. Branch regularly sees roseate spoonbills, great blue herons, and other shorebirds that are wading and foraging in the shallow waters and among the mangroves. She also regularly observes dolphins in the South Bay, though not as often as she once did. She enjoys regularly watching people fish, because she has been concerns about the health of South Bay since the dolphin population declined. Seeing people fish gives her hope that the sensitive aquatic ecosystem in the South Bay will survive.

Ms. Branch also regularly drives out Boca Chica Highway to visit Boca Chica Beach and to enjoy the natural beach scenery and experience and view the wildlife present at that location. Ms. Branch used to visit about twelve times per year, weather permitting. However, she visits less frequently now because of construction, traffic, and long and regular beach closures associated with the Facility. She now goes to Boca Chica Beach about six times per year, weather permitting.

To get to the beach, Ms. Branch drives to the terminus of Boca Chica Highway and then travels south, stopping approximately one-quarter to one-half mile south of the Facility. Ms. Branch enjoys looking out at the ocean and looking back at the dunes, but the enjoyment she once found observing the dunes has been impaired because of the rocket launching infrastructure and because she observes noticeably less wildlife there now than she used to. For example, vegetative cover, pollinators, and shorebirds were numerous on and behind the dunes—with the shorebirds specifically foraging in the wetland area south of the Facility. Since SpaceX launches began, Ms. Branch has noticed a decline in both the vegetative cover and the numbers of birds and pollinators.

Ms. Branch is concerned that the discharge of industrial deluge water pursuant to the Draft Permit will contaminate the shallow waters and tidal flats where she has observed birds wading and foraging. She is concerned that the discharge contains metals, hazardous substances, heat, or other pollutants, which could cause the food source of the birds and other wildlife to disappear, which would also lead to the decline in the birds and wildlife that depend on the area.[16]

B. The ED's Response to Comments did not resolve comments.

Requestors raised several issues during the comment period that have not been resolved by the ED's Response to Comments ("RTC") and serve as the basis for this request for a contested case hearing. These issues are listed below, with reference to each of the ED's RTC that remain in dispute. The factual and legal basis of the dispute are described above.

A) Whether the Draft Permit should be denied or altered based on Applicant's compliance history (RTC 7);

B) Whether the discharge has been properly characterized (RTC 2, 4, 11, 19);

C) Whether the Draft Permit would violate Texas Surface Water Quality Standards and TCEQ's Antidegradation Policy, including whether it would impair designated uses (RTC 1, 8, 9, 10, 12, 13, 14, 15, 17, 20);

D) Whether the Draft Permit is enforceable (RTC 20);

[16] *See* Attachment 11 (Teague Declaration) at 1-2, and Attachment 9 (Sulkin Report) at 4.

E) Whether the Draft Permit includes adequate monitoring and reporting requirements, including necessary operational requirements (RTC 16);

F) Whether the Draft Permit would harm endangered species (RTC 10, 12); and

G) Whether the Draft Permit is consistent with the goals and policies of the Texas Coastal Management Program (not addressed in RTC).

IV. CONCLUSION

For the reasons described above, the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV ask that the Commission reconsider the ED's decision to approve SpaceX's Application for TPDES Permit No. WQ0005462000 and issue the Draft Permit, and, upon reconsideration, that the Commission reverse the ED's decision and deny SpaceX's Application. In the alternative, the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV request a contested case hearing with regard to the Application.

Please contact us with any questions.

Respectfully submitted,

/s/ Lauren Ice
Marisa Perales
State Bar No. 24002750
marisa@txenvirolaw.com
Lauren Ice
State Bar No. 24092560
lauren@txenvirolaw.com

PERALES, ALLMON & ICE, P.C.
1206 San Antonio St.
Austin, Texas 78701
Tel: (512) 469-6000
Fax: (512) 482-9346

Mark Mendoza

From: PUBCOMMENT-OCC
Sent: Monday, December 30, 2024 11:59 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: Attachments 1-5.pdf

RFR
H

From: gwyneth@txenvirolaw.com <gwyneth@txenvirolaw.com>
Sent: Friday, December 27, 2024 4:51 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX: 5124829346

COMMENTS: Attached are Attachments 1-5 to the Request filed by the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

ATTACHMENT 1

Gmail

TCEQ Official Request for Clarification for PIR 99629

2 messages

Marcus Taylor <Marcus.Taylor@tceq.texas.gov> Mon, Dec 9, 2024 at 3:47 PM
To: Gwyneth Lonergan <gwyneth@txenvirolaw.com>

Good afternoon,

We received your Public Information Request (PIR 25-99629) on December 2, 2024, requesting certain information related to Space Exploration Technologies Corp.'s application for TPDES Permit No. WQ0005462000. As permitted under Texas Government Code § 552.222, can you please clarify whether the scope of your request is limited to records related to the technical review phase of the application, or if the scope includes records related to the preparation of the draft permit?

Please be advised that, pursuant to Texas Government Code § 552.222(d), your request for information will be considered to be withdrawn if you do not respond in writing to this request for clarification within 61 calendar days.

Thank you in advance for your assistance with this request for clarification. Please feel free to contact me if you have questions.

Best wishes,

Marcus Taylor – CIA TEAM LEAD

WATER QUALITY DIVISION SUPPORT SECTION

WATER QUALITY DIVISION

☎: 512-239-4708

✉: Marcus.Taylor@tceq.texas.gov

""The greatest glory in living lies not in never falling, but in rising every time we fall." -*Nelson Mandela*."

Gwyneth Lonergan <gwyneth@txenvirolaw.com> Mon, Dec 9, 2024 at 4:51 PM
To: Marcus Taylor <Marcus.Taylor@tceq.texas.gov>

Cc: WQDPIR <wqdpir@tceq.texas.gov>, Marisa Perales <marisa@txenvirolaw.com>, Lauren Ice <lauren@txenvirolaw.com>

Mr. Taylor,

Thank you for your email. The scope of our request includes both records related to the technical review and records related to the preparation of the draft permit--to the extent there is a distinction between the two. Please contact me with any other questions. As noted in the initial request, this information is being requested and is necessary for the December 27, 2024 deadline to request a contested case hearing on this Application. Accordingly, we request that the agency respond promptly.

Best,
Gwyneth
--
Gwyneth Lonergan
Legal Assistant at Perales, Allmon & Ice, P.C.
1206 San Antonio Street, Austin, Texas 78701
O: 512-469-6000 | F: 512-482-9346
[Quoted text hidden]

ATTACHMENT 2

Gmail

TCEQ PIR No. 25-99629

2 messages

Stacey Platz <Stacey.Platz@tceq.texas.gov> Fri, Dec 20, 2024 at 1:21 PM
To: "gwyneth@txenvirolaw.com" <gwyneth@txenvirolaw.com>

Dear Gwyneth Lonergan:

Please see the attached correspondence regarding your public information request to the Texas Commission on Environmental Quality, PIR #25-99629.

Sincerely,

Stacey Platz

Legal Assistant III

Texas Commission on Environmental Quality

Office of Legal Services General Law Division

512-239-0619

Stacey.Platz@tceq.texas.gov

25-99629 10-Day Letter Requestors Copy.pdf
229K

Gwyneth Lonergan <gwyneth@txenvirolaw.com> Mon, Dec 23, 2024 at 10:31 AM
To: Stacey Platz <Stacey.Platz@tceq.texas.gov>

Received, thank you.

Sincerely,
Gwyneth
--
Gwyneth Lonergan
Legal Assistant at Perales, Allmon & Ice, P.C.
1206 San Antonio Street, Austin, Texas 78701
O: 512-469-6000 | F: 512-482-9346

[Quoted text hidden]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 20, 2024

The Honorable Ken Paxton
Office of the Attorney General
Open Records Division
Price Daniel Sr. Building, 6th Floor
209 W. 14th Street
Austin, Texas 78701

Attention: Tamara Smith, Division Chief, Open Records Division

Re: Request for Attorney General Decision
Public Information Act Request Regarding SpaceX's Texas Pollutant Discharge Elimination System Permit No. WQ0005462000
TCEQ PIR No. 25-99629

Dear Attorney General Paxton:

The Texas Commission on Environmental Quality (TCEQ) received a Public Information Act (PIA) request for information regarding SpaceX's Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005462000 (Attachment A). This PIA request (PIR) was made by Gwyneth Lonergan on December 2, 2024, and was received by TCEQ the same day. On December 9, 2024, TCEQ sought clarification from the requestor, and the requestor clarified the scope of the request on December 10, 2024 (*see* Attachment A). TCEQ will be closed on December 24, 25, and 26, 2024 in observance of the Christmas holiday. Therefore, the tenth business day after receipt of the request is December 27, 2024.

TCEQ has withheld responsive information it believes to be excepted from disclosure under the PIA. Pursuant to Tex. Gov't Code § 552.301(d)(1), the requestor was notified on this day by copy of this letter that TCEQ has withheld responsive information and requested an attorney general decision about whether the information is excepted from public disclosure (*see* courtesy copies listed in closing). In accordance with Tex. Gov't Code § 552.301, TCEQ requests a formal opinion on this matter.

TCEQ claims the following exceptions to disclosure: Tex. Gov't Code §§ 552.101-552.162.

TCEQ will be closed on January 1, 2025 in observance of the New Year. Therefore, the fifteenth business day from the date of receipt of the request is January 6, 2025. In accordance with Tex. Gov't Code § 552.301(e), TCEQ will submit to the Office of the Attorney General by January 6, 2025, a packet of information containing the following: (1) written comments stating the reasons why the exceptions stated in this letter apply; (2) a copy of the written request for information; and (3) copies or representative samples of the specific information requested, labeled to indicate which exceptions apply to which parts of the copy.

I appreciate your response to this request. If you have any questions about this matter, please contact Fernando Martinez, Staff Attorney, Environmental Law Division, Office of Legal Services, at Fernando.Martinex@tceq.texas.gov.

Sincerely,

Elizabeth Cater, Public Information Counsel
General Law Division, Office of Legal Services
Texas Commission on Environmental Quality
Elizabeth.Cater@tceq.texas.gov

Enclosures

cc: Gwyneth Lonergan, gwyneth@txenvirolaw.com, *via e-mail* (without attachments)

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this referral was sent, via the Office of the Attorney General's Public Information Act Electronic Filing System, on December 20, 2024, to:

The Honorable Ken Paxton
Office of the Attorney General
Open Records Division
Price Daniel, Sr. Building, 6th Floor
209 West 14th Street
Austin, Texas 78701

Attention: Tamara Smith, Division Chief, Open Records Division

Stacey Platz

Stacey Platz, Legal Assistant
General Law Division

ATTACHMENT 3

From: Xing Lu
To: Sarah Musgrove; Mike Lindner
Cc: Josi Robertson
Subject: RE: 05462-000, priority
Date: Monday, July 15, 2024 10:16:22 AM
Attachments: image001.png

Thank you Sara.

Mike,
I completed the permit review. I asked for technology based on limit when it's available. In case the permit writer provide the information during my vacation, I saved my checklist and memo under 05462.
Thank you.
Xing

From: Sarah Musgrove <Sarah.Musgrove@tceq.texas.gov>
Sent: Monday, July 15, 2024 9:47 AM
To: Xing Lu <Xing.Lu@tceq.texas.gov>
Cc: Josi Robertson <Josi.Robertson@tceq.texas.gov>
Subject: FW: 05462-000, priority
Importance: High

Xing,

I have completed the plotting of this permit. The link to the application is below.

Thank you,

Sarah

From: Jenna Lueg <Jenna.Lueg@tceq.texas.gov>
Sent: Tuesday, July 9, 2024 8:38 AM
To: Sarah Musgrove <Sarah.Musgrove@tceq.texas.gov>
Subject: 05462-000, priority
Importance: High

Hi Sarah,

I have finished my Standards review of this new permit and uploaded my memo to the Sharepoint file. This is a high priority permit to be expedited. The application link is below.
wq0005462000-application-original

Thanks,

Jenna R. Lueg
Aquatic Scientist
Standards Implementation Team
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087
(512) 239-4590
Jenna.lueg@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

ATTACHMENT 4

From: Michael Sunderlin
To: WQCIATEAM
Cc: Dania Grundmann; Matthew Kennington
Subject: wq0005462000 - Request to Forward Updates to the Permit File in the Office of the Chief Clerk (1 of 2)
Date: Tuesday, December 10, 2024 2:33:00 PM
Attachments: wq0005462000 CCO ADDITION IOM EPA REVIEW 12102024.pdf
TX0146251 Space Exploration noobj SIGNED 11212024.pdf

Attached is a *CCO Addition* Interoffice Memorandum and a No Objection letter from EPA for the above referenced draft TPDES permit. Please forward these to the Office of the Chief Clerk for addition to the permit file that is currently on file with the Office of the Chief Clerk. Please note that this is a management designation priority project and this is the first of two requests for this permit file. Please do not hesitate to contact me if there are any questions.

Thanks,

Michael Sunderlin
TCEQ – Wastewater Permitting Section
512-239-4523

From:	Michael Sunderlin
To:	WQCIATEAM
Cc:	Dania Grundmann; Matthew Kennington
Subject:	wq0005462000 - Request to Forward Updates to the Permit File in the Office of the Chief Clerk (2 of 2)
Date:	Tuesday, December 10, 2024 2:34:00 PM
Attachments:	wq0005462000 CCO_ADDITION_IOM_DRAFT_PERMIT_12102024.pdf wq0005462000-draft-permit-updated-11212024.pdf

Attached is a *CCO Addition* Interoffice Memorandum and an updated draft permit for the above referenced draft TPDES permit. Please forward these to the Office of the Chief Clerk for addition to the permit file that is currently on file with the Office of the Chief Clerk. Please note that this is a management designation priority project and this is the second of two requests for this permit file. Please do not hesitate to contact me if there are any questions.

Thanks,

Michael Sunderlin
TCEQ – Wastewater Permitting Section
512-239-4523

ATTACHMENT 5

TCEQ Compliance History Search

Your search returned 1 records. The Customer's overall compliance history is displayed below.

1-1 of 1 Records

CN ▲	Customer Name	Rating	Classification	Date Rated
CN602867657	SPACE EXPLORATION TECHNOLOGIES CORP	1.65	SATISFACTORY	09/01/2024

1-1 of 1 Records

Search Again

Search Criteria

CN: CN602867657

Questions or Comments >>

TCEQ Compliance History Search

Compliance History - RN111606745

Regulated Entity Information

RN: RN111606745
Name: STARBASE LAUNCH PAD SITE
Location: LOCATED ON S SIDE OF THE EASTERN TERMINUS OF SH 4 BROWNSVILLE TX 78521
County: CAMERON
Region: REGION 15 - HARLINGEN

Compliance History by Customer

There is 1 customer associated to this site. The Customer's compliance history for the site is displayed below.

1-1 of 1 Records

CN ▲	Customer Name	Related Program IDs	Rating	Classification	Date Rated
CN602867657	SPACE EXPLORATION TECHNOLOGIES CORP	ER R15111606745 IHW 98370 STORM TXR05GD61 STORM TXR1515PQ WWPERMIT TX0146251	6.43	SATISFACTORY	09/01/2024

1-1 of 1 Records

▲ Back to top

Mark Mendoza

From: PUBCOMMENT-OCC
Sent: Monday, December 30, 2024 11:59 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: Attachment 6.pdf

RFR
H

From: gwyneth@txenvirolaw.com <gwyneth@txenvirolaw.com>
Sent: Friday, December 27, 2024 4:54 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX:

COMMENTS: Attachment 6 to Request filed by Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

ATTACHMENT 6

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
BROWNSVILLE DIVISION

SAVE RGV, Plaintiff, v. SPACE EXPLORATION TECHNOLOGIES CORP., Defendant.	Civil Action No.1:24-cv-00148

DECLARATION OF CAROLYN WOOD

I, Carolyn Wood, declare as follows:

1. I am over the age of 18, of sound mind, and if called upon, could testify under oath as to the following.

2. I am a Senior Environmental Regulatory Engineer at Space Exploration Technologies Corporation ("SpaceX") at Starbase in Boca Chica, Texas. I've been working in this position since September 2023.

3. Before working at SpaceX, I worked at the Texas Commission on Environmental Quality ("TCEQ") for over 20 years, including 4 years as Work Leader of the Water Section in the Harlingen Region Office (from about 2016-2020). As Work Leader, one of my roles was being responsible for administering and supervising investigators and the enforcement of the Texas Multi-Sector General Permit ("Texas MSGP"). I am therefore familiar with the Texas MSGP, though I did not participate in TCEQ granting permit coverage to SpaceX.

4. As the Senior Environmental Regulatory Engineer, among other things I am familiar with and responsible for SpaceX's compliance with the Texas MSGP; preparation of,

along with our consultant GreenThink Consulting, compliance with, and updating SpaceX's Stormwater Pollution Prevention Plan ("SWPPP"); familiar with the operation of the deluge water system; responsible for conducting sampling of the deluge water system after each test and launch; responsible for arranging the samples to be tested at a certified lab and reviewing the results; and responsible for evaluating those results and communicating them to TCEQ, including regarding SpaceX's deluge water system and its compliance with all Texas MSGP effluent limits.

5. As the Senior Environmental Regulatory Engineer, and as I explain below, I am also familiar with SpaceX's application to TCEQ for *additional* permit coverage for the deluge water system. On July 1, 2024, SpaceX applied for an individual Texas Pollutant Discharge Elimination System ("TPDES") permit for the deluge water system. Since that time, SpaceX has, among other things, entered into an Agreed Order with TCEQ that states that SpaceX "may continue to operate the Facility…," meaning the deluge water system. *See* Exhibit A, Sept. 19, 2024 e-mail from TCEQ's S. Schar ("To answer your question: Yes…so long as SpaceX follows the ordering provisions of the agreed order, TCEQ will consider SpaceX to be in compliance with the agreed order for any future discharges from the water deluge system…); Exhibit B, August 13, 2024 Agreed Order at 3 ("the Respondent may continue to operate the Facility under the following conditions…"). In the Agreed Order, TCEQ also stated that it has conducted a technical review of SpaceX's permit application and determined that the use of the deluge water system does not cause adverse risk to the environment.

6. I am also familiar with the "Consent Agreement" that SpaceX entered into with EPA on or about September 5, 2024, which, like the TCEQ Agreed Order, resolved without any admission of wrongdoing all allegations that SpaceX had been discharging deluge water without a permit. *See* Exhibit C, Sept. 12, 2024 letter from EPA's C. Seager ("[T]he materials you

submitted have been determined to have satisfactory[ily] met the requirements in the above-referenced Administrative Order, and it is hereby closed."); Exhibit D, EPA Consent Agreement at 9, ¶ 28.b (memorializing that SpaceX "neither admits nor denies" the allegations of the Consent Agreement).

7. I make this Declaration in support of Plaintiff SpaceX's Opposition to Save RGV's Motion for Preliminary Injunction.

8. As I explain below, I created the spreadsheets attached as Exhibits E and F. The spreadsheets demonstrate the results of the laboratory testing of the deluge water after the system's operation for tests and launches. The results cover each of the system's usage between November 2023 to July 2024. The results show that the system complies with all effluent limitations in the Texas MSGP and the Agreed Order and has been communicated to TCEQ. SpaceX has also sampled the most recent use of the system on October 8, 2024. I submitted those samples to the lab. I expect to receive the results within 30 days. I expect that those results will be consistent with the other sample results, which comply with the limits of the Texas MSGP and the Agreed Order.

9. I have also discussed with TCEQ the deluge system, the system's coverage under and compliance with the Texas MSGP, the deluge water's status as a non-stormwater discharge under the Texas MSGP, and that the water is discharged at or near specific stormwater outfalls specified for that purpose in SpaceX's SWPPP as required by the Texas MSGP.

10. Based on my knowledge, training, and experience, including my work for TCEQ administering this permit, the deluge water complies with the Texas MSGP for dust suppression, fire suppression, and use of potable water. On behalf of SpaceX, I have expressed all of these

positions to TCEQ. In April 2024, TCEQ stated that SpaceX is properly managing these discharges.

11. As explained in more detail below, later TCEQ requested that SpaceX also apply for an individual TPDES permit for the deluge water system, which SpaceX promptly did. SpaceX currently expects that it will receive the individual permit in December 2024, through the permit could be delayed if an opponent of the permit filed a contested case, which may require a hearing, which could add an additional 6 months of delay.

I. SpaceX's MSGP Permit Coverage

12. Based on my knowledge, training, and experience, including my experience administering the Texas MSGP, SpaceX is permitted to discharge stormwater as well as certain types of non-stormwater under the Texas MSGP.

13. Based on my knowledge, training, and experience, including my knowledge of the MSGP and experience administering it, the Texas MSGP authorizes SpaceX's discharges from the deluge water system for (1) emergency firefighting activities; (2) uncontaminated water for dust suppression; and (3) discharges from potable water sources. If the system were not used, a fire emergency would likely occur. If the system were not used, dust and debris would likely be scattered around because of the thrust of the rockets. The system uses potable water from the Brownsville Public Utilities Board. On behalf of SpaceX, I have expressed all of these positions to TCEQ. TCEQ has never expressed disagreement with those positions. Based on my interactions with TCEQ, I believe that TCEQ agrees with these positions. Indeed, in April 2024 TCEQ told me that SpaceX is properly managing these discharges. TCEQ has also never revoked SpaceX's permit coverage under the Texas MSGP.

14. Additionally, the Texas MSGP "Fact Sheet," which members of the public and TCEQ use as a kind of "cheat sheet" for compliance with the Texas MSGP, states that "discharges that may occur during normal operations of an industrial facility or a commercial facility . . . do not require additional permit coverage." This reference, which I and my colleagues would use as a "cheat sheet" for the Texas MSGP, is also additional support for my confidence that the deluge water is covered by the Texas MSGP.

15. As part of SpaceX's compliance with the Texas MSGP, SpaceX maintains a stormwater pollution prevention plan (a "SWPPP," sometimes called a "SW3P").

16. As required by the Texas MSGP, Space X's SWPPP specifies the outfalls through and near which the deluge water may discharge. Based on my personal observations, the relatively small amount of deluge water that is discharged is actually discharged at and near those outfalls. For example, based on my personal observations, the deluge water is discharged 20-30' away from Outfall 010, as explained in the SWPPP:

> Outfall 010 and Outfall 011: Stormwater from the Southeastern portion of the site around the Orbital Stand (Drainage Areas 8 and 10) and the Northeastern portion of the site (Drainage Area 11) will flow to Outfall 010 (25.995866, -97.154466) and Outfall 011 (25.996255, -97.153919). The runoff will flow via sheet flow in times of heavy flow, expected to only be when the deluge system at the Orbital Stand is in use, and discharge as such near Outfalls 010 and 011 and may ultimately flow to Segment 2501 – Gulf of Mexico. The water released will be approved non-stormwater discharge (deluge water used for dust and fire suppression) when the deluge system at the Orbital stand is used.
>
> The outfalls described above are considered to have substantially similar discharge. Therefore, monitoring and sampling may be conducted at one of those outfalls and treated as representative for the others. Further details and identification of substantially similar outfalls are provided in Section 4.6.

17. The majority of the deluge water (90+%) is captured in retention ponds and disposed of off-site at McAllen Public Utilities Wastewater Treatment Plant No. 2.

18. I have read the Complaint filed by Save RGV in this matter and, based on my personal observations, I disagree that deluge water is impacting any waterways such as the South

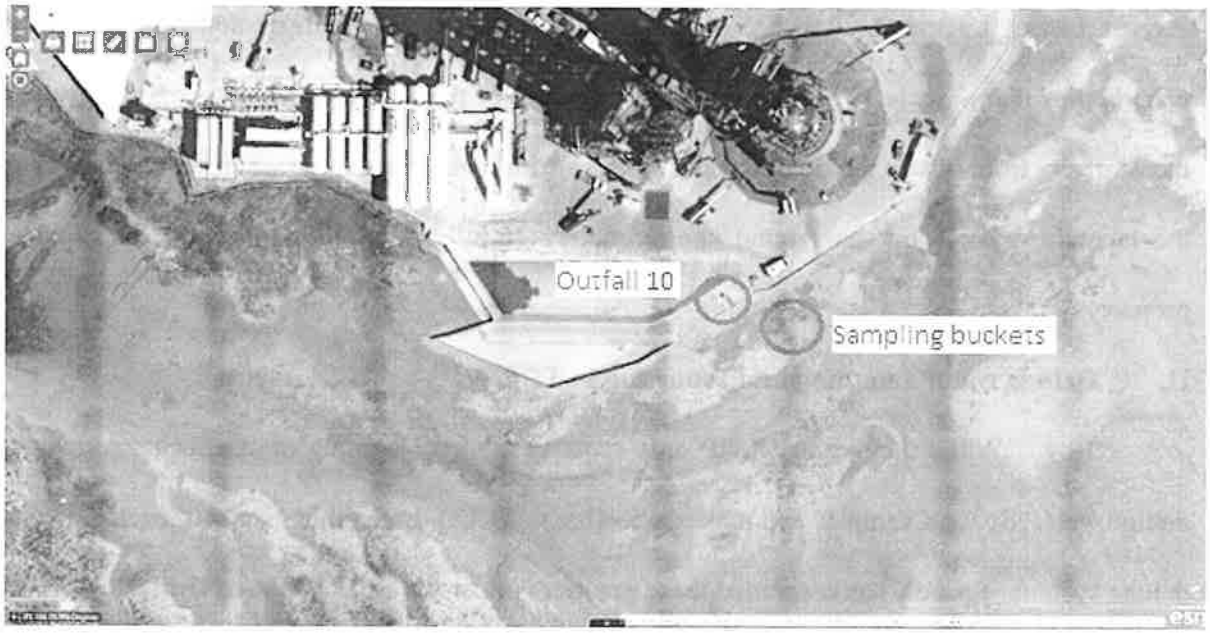
Bay of Lower Laguna Madre, are degrading water quality, or harming aquatic life. Those waterbodies that Save RGV describes are to the North of the Starbase, which is opposite side of the Starbase from where the deluge water sprays. Moreover, the deluge water that can spray off the launchpad lands on the ground approximately 20-30' off of the launchpad onto SpaceX property.

II. Deluge water sampling and reporting to TCEQ

19. While the Texas MSGP only requires annual sampling of stormwater, including deluge water, SpaceX samples and makes available to TCEQ the sample results of each use of the deluge system. SpaceX has continued these practices under the TCEQ Agreed Order.

20. I am personally involved with collecting the deluge water samples, sending those samples to a certified lab, receiving the results, analyzing those results, and reporting those results to TCEQ.

21. After each use of the deluge system, I collect samples from the retention ponds and from buckets located 20'-30' beyond Outfall 10, located south of the launch pad. Outfall 10 and the location of the buckets are circled in red in the photo below.



22. After operation of the deluge system, I collect the samples from the sample buckets. When working to collect the samples, the sample buckets usually contain an inch or less of water. I collect the water and send the samples to the lab for analysis. After I receive the results, I analyze them and send them to TCEQ.

23. Attached as Exhibit E is a spreadsheet that I made that summarizes all of the results from each of the times that the system has been used for tests and launches, except for the October 8, 2024 use of the system, because we have not yet received those sample results. The spreadsheet shows *no* exceedances of the Effluent Limitations in the Texas MSGP or the Agreed Order during any of the times the deluge system has been operated. I made available to TCEQ all of the underlying tests summarized in the spreadsheet. I also fully expect that the results of the October 8th use of the system will be consistent with the other results on the spreadsheet and will comply with the Agreed Order and the Texas MSGP.

24. For TCEQ's ease of understanding, I also prepared a separate spreadsheet that is attached as Exhibit F. That spreadsheet shows line graphs that summarizes the same results and

compares them to their applicable Effluent Limitations. In each line graph, the orange line depicts the Effluent Limitation. The blue line depicts the concentrations measured after each use of the deluge system. As one can easily see, there also are no exceedances of the Effluent Limitations in the Texas MSGP or the Agreed Order. I provided these line graphs to TCEQ.

III. SpaceX's BMP Compliance

25. The SWPPP also memorializes "Best Management Practices" ("BMPs") for preventing or effectively reducing pollution in discharges covered by the MSGP.

26. In accordance with the BMPs in SpaceX's SWPPP, SpaceX sweeps the launch pad before each use of the deluge system to prevent particulate matter contamination and clean ups oil and grease from vehicles or other equipment before each use of the deluge system.

27. I can confirm that SpaceX implements these BMPs prior to each use of the deluge system.

28. In accordance with the SWPPP, SpaceX maintains logs of the BMPs it implements. SpaceX's consultant Greenthink Consulting inspects SpaceX's compliance with the SWPPP quarterly. To my knowledge, SpaceX's consultant has never raised concern with SpaceX's implementation of BMPs to manage deluge water.

IV. Communications with TCEQ and the Agreed Order

29. As stated, I have been involved in discussions with TCEQ regarding the deluge system.

30. For example, I have spoken with TCEQ to explain how the deluge system works. I have explained that the deluge water uses potable water trucked in from the Brownsville Public Utilities Board; stored in clean, dedicated tanks; pumped through clean, dedicated pumps; and discharged off-site at or near outfalls permitted for this purpose and specified in the SpaceX

SWPPP. I have also made available the sampling results summarized in Exhibits E and presented in F. Also, in a conversation that took place around April 2024, TCEQ indicated to me that SpaceX was managing its deluge water discharges properly.

31. In connection with SpaceX's desire to use recycled water instead of potable water from the deluge system, and after receiving Save RGV's notice letter of June 4, 2024 that threatened to file suit against SpaceX, on July 1, 2024 SpaceX submitted to TCEQ an application for an individual TPDES permit for the deluge water system.

32. On August 2, 2024, TCEQ notified SpaceX that it had received at least one complaint from a member of the public about the deluge water system. For the first time, TCEQ characterized the deluge water being discharged as industrial wastewater. TCEQ recommended that SpaceX take corrective action by submitting an individual TPDES permit application for the deluge water system.

33. In order to resolve any other questions or complaints about the deluge water, SpaceX and TCEQ then negotiated an Agreed Order. From my past work at TCEQ, I am familiar with Agreed Orders. This Agreed Order, like many others I have seen, states that SpaceX does not admit to violating the Clean Water Act and denies all allegations. Exh B, I.¶ 3 ("The occurrence of any violation is in dispute and the entry of this Order shall not constitute an admission…of any violation…nor of any statute or rule"); *id.* at III (SpaceX "generally denies each allegation").

34. The Agreed Order also memorializes that:

a. That SpaceX has voluntarily submitted an administratively complete permit application for the deluge water (*id.* at I.¶ 9).

b. That TCEQ conducted a technical review of the application and determined that the use of the system does not cause adverse risk to the environment (*id.*).

c. That SpaceX may continue to operate the deluge water system so long as SpaceX continued to sample the deluge water and make those sample results available to TCEQ (*id.* at IV.2.a-d).

35. TCEQ has also independently confirmed in writing that SpaceX may continue to operate the deluge system so long as SpaceX complies with the Agreed Order. *See* Exhibit A, Sept. 19, 2024 e-mail from TCEQ's S. Schar ("To answer your question: Yes…so long as SpaceX follows the ordering provisions of the agreed order, TCEQ will consider SpaceX to be in compliance with the agreed order for any future discharges from the water deluge system…).

36. Based on my personal knowledge of SpaceX's operations and the requirements of the Agreed Order, SpaceX is complying with the Agreed Order, including but not limited to proceeding with the TPDES application process, sampling all deluge water in accordance with the Agreed Order, and making those sample results available for review by TCEQ. The Agreed Order will be finalized when signed by TCEQ, which I will expect will occur shortly.

37. Similarly, SpaceX also negotiated with EPA a "Consent Agreement" that was finalized on or about September 5, 2024. Like the TCEQ Agreed Order, SpaceX and EPA agreed that SpaceX would pay to EPA a civil penalty and that the Agreement would resolve without any admission of wrongdoing all allegations that SpaceX had been discharging deluge water without a permit from 2022-2024. *See* Exhibit D, EPA Consent Agreement at 11; *id.* at 9, ¶ 28.b (memorializing that SpaceX "neither admits nor denies" the allegations of the Consent Agreement). Based on my understanding from EPA's most recent letter to SpaceX, and my past experience working for TCEQ and with EPA, the Consent Agreement and SpaceX's application

for a TPDES permit closes out EPA's enforcement matter. Exhibit C, Sept. 12, 2024 letter from EPA's C. Seager ("[T]he materials you submitted have been determined to have satisfactory[ily] met the requirements in the above-referenced Administrative Order, and it is hereby closed.").

38. Attached are true and correct copies of all of the Exhibits referenced in this declaration.

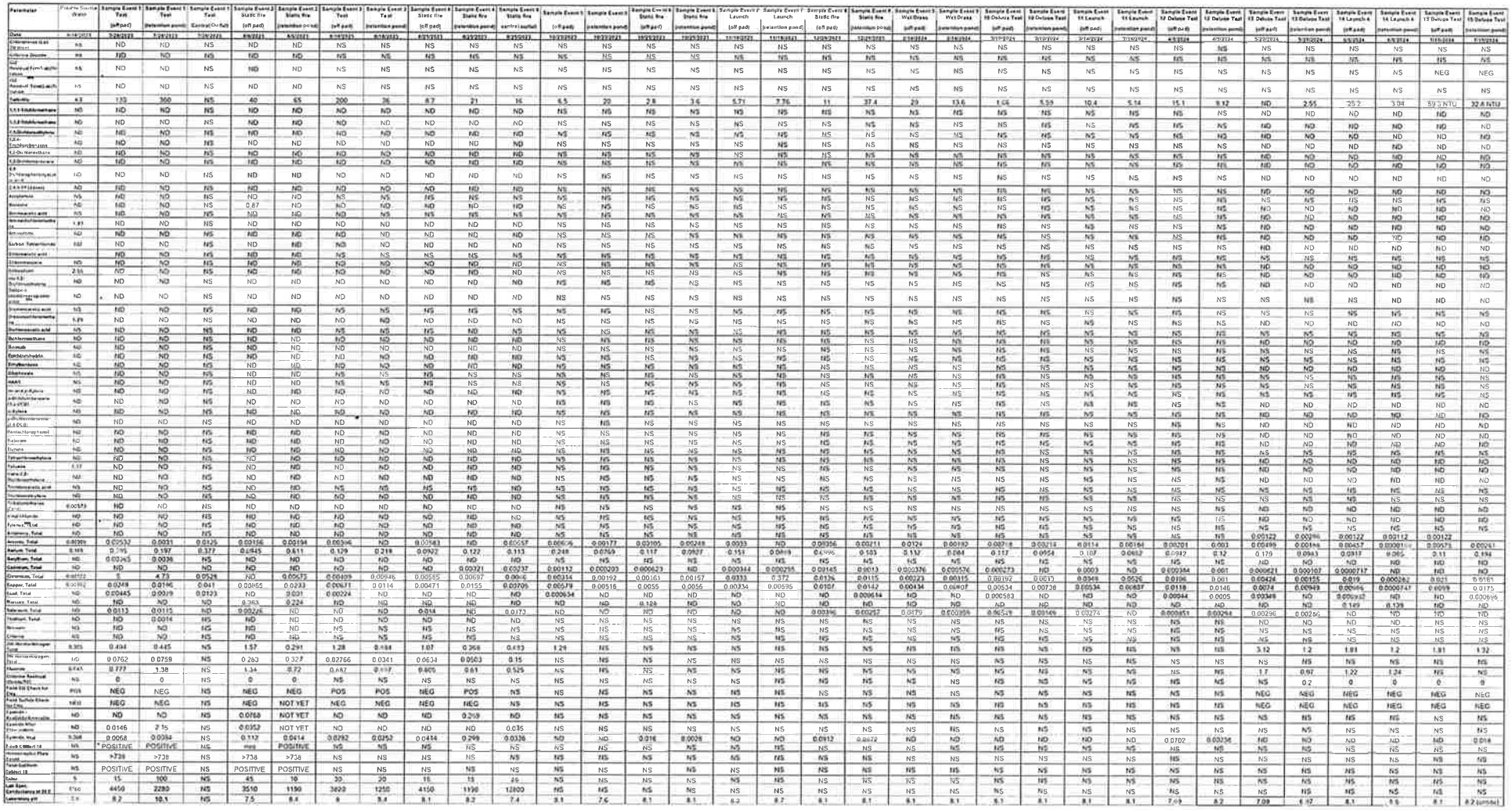
39. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 10th day of October 2024, in Boca Chica, Texas.

Carolyn G. Wood

Carolyn Wood

Exhibit E



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	0.00761	0.139	0.0909	0.346	0.178	0.163	0.0708	0.0465	0.0179	0.0262	0.0223	0.105	0.0561	0.0632	0.0207	0.0156	0.0137	0.0495	0.0428	0.015	0.0424	0.017	0.0247	0.0363	0.0119	0.074	0.0109	0.148	0.053	0.0354	0.0163	0.0364	0.071	
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	24.6	126	50.3	NS	ND	ND	53.2	24.5	21.7	ND	33.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	0.97	1.22	1.24	NS	NS	
	23.5	0.646	0.312	NS	0.172	0.0694	0.24	0.16	0.277	0.176	0.0973	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.963	0.0241	0.572	0.17	NS	NS	
	ND	ND	1.42	NS	1.45	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	0.97	1.22	1.24	NS	NS	
	ND	0.892	0.682	NS	2.55	0.838	ND	ND	0.912	ND	ND	1.29	0.567	1.77	0.695	1.71	0.824	1.15	1.13	0.754	1.63	1.08	1.61	2.24	1.42	4.42	1.79	NS	NS	NS	NS	NS	NS	
	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.2	ND	ND	ND	NS	NS	
	60	3970	223	NS	370	34	206	49	34.9	15.5	92.7	4.5	5.6	3.6	ND	5.1	7.8	3.6	ND	3.6	ND	3.6	ND	3.6	ND	73.3	17.8	48.9	7.5	724	7.1	724	19	
	1.28	2.83	1.92	NS	0.969	0.518	1.03	1.31	1.29	1.3	1.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.283	0.664	0.747	0.372	52.6	NS	
	3.13	ND	11.3	NS	8.21	4.39	9.17	12.8	4.85	4.82	7.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.33	8.49	10.5	3.56	NS	NS	
												0.00857	0.00354	0.00381	0.00238	0.00249	0.00339	0.00586	0.00846	0.00846	0.00719	0.00444	0.0034	0.00544	0.00349	0.00897	0.001	0.00903	0.00626	0.00287	0.0000224	0.00422	0.0116	
	139	3.723	2.602	NS	3.509	1.426	1.83	1.31	2.202	1.3	1.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	6.161	NS	NS	

Mark Mendoza

From: PUBCOMMENT-OCC
Sent: Monday, December 30, 2024 12:00 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: Attachment 7_Part1.pdf

RFR
H

From: gwyneth@txenvirolaw.com <gwyneth@txenvirolaw.com>
Sent: Friday, December 27, 2024 4:59 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX:

COMMENTS: Attachment 7 (part 1 of 3) to Request filed by the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

ATTACHMENT 7

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
BROWNSVILLE DIVISION

SAVE RGV, Plaintiff, v. SPACE EXPLORATION TECHNOLOGIES CORP., Defendant.	Civil Action No.1:24-cv-00148

DECLARATION OF KATY GROOM

I, Katy Groom, declare as follows:

1. I am over the age of 18, of sound mind, and if called upon, could testify under oath as to the following.

2. I am the Director of Environmental Regulatory Affairs at Space Exploration Technologies Corporation ("SpaceX"). I've been working in this position and other similar positions at SpaceX for over 6 years.

3. As the Director of Environmental Regulatory Affairs, I am responsible for overseeing environmental management at SpaceX's launch facility in Boca Chica, Texas, including SpaceX's compliance with applicable environmental laws, such as the Texas MSGP.

4. I make this Declaration in support of Plaintiff SpaceX's Opposition to Save RGV's Motion for a Preliminary Injunction. The facts stated herein are based on my personal knowledge.

5. Based on my knowledge, training, and experience, and based on my and my staff's interactions with TCEQ, the deluge water system complies with the Texas Pollution Discharge Elimination System Multi Sector General Permit ("Texas MSGP"). Based on my knowledge,

training, and experience, and based on my and my staff's interactions with TCEQ, the deluge water system discharges are permitted non-stormwater discharges under the Texas MSGP, as discussed in more detail below.

6. In July 2023, SpaceX hosted TCEQ on site at the Launch Pad for purposes of demonstrating coverage under the Texas MSGP. We explained the system, explained why we believed that the system complied with the Texas MSGP, demonstrated the system, and then walked the site with TCEQ following the launch. Following this walk through, my colleague Carolyn Wood routinely provides to TCEQ sample results from when the system was used with tests and launches. Those sample results show the water complies with all Texas MSGP effluent limits and, more recently, the Agreed Order between TCEQ and SpaceX that is described in more detail in Ms. Wood's declaration.

7. The discharges consist of potable water purchased from the Brownsville Public Utilities Board that is the same as the drinking water provided to neighboring residents. The deluge water is regularly monitored and tested and has been found to fall well within safe parameters. The system also reduces fires and prevented dust and debris from dispersing during engine ignitions, along with reducing vibration impacts. If the system cannot be used, then tests and launches cannot occur. This type of non-stormwater discharge is in my view allowed under the Texas MSGP. The system also serves to reduce fires and suppress the dispersal of dust during engine ignitions, along with reducing vibration impacts. If the system cannot be used, then tests and launches cannot occur.

8. I have recently read the Save RGV Complaint, which describes deluge water as "industrial wastewater." SpaceX disagrees with that characterization. Moreover, prior to Save RGV filing its Complaint, SpaceX resolved any wastewater issues regarding its deluge water operations with the relevant environmental regulators. These actions included the following:

a. SpaceX submitted an additional permit application for an additional permit for the deluge water system, called an individual Texas Pollutant Discharge Elimination System ("TPDES") permit. TCEQ has already conducted a technical review of SpaceX's permit application and determined that the use of the deluge water system does not cause adverse risk to the environment. SpaceX expects to receive that permit from TCEQ shortly.

b. SpaceX also agreed to an Agreed Order with TCEQ in which SpaceX paid a civil penalty, did not admit to violating the Clean Water Act, and denied all allegations.

c. SpaceX also agreed to a Consent Agreement with EPA in which SpaceX agreed to pay to EPA a civil penalty without any admission of wrongdoing all allegations that SpaceX had been discharging deluge water without a permit.

d. SpaceX continues to provide to other federal regulators relevant information about each use of the deluge system and SpaceX continues to receive authorizations for use of the system in connection with its flights.

9. Additionally, TCEQ has assured SpaceX that it may continue to operate the water deluge system so long as SpaceX complies with the terms of the Agreed Order, which SpaceX is doing.

I. SpaceX's commitment to environmental stewardship and sustainability

10. As relevant background, SpaceX is committed to environmental protection and sustainability, both on Earth and in space.[1] SpaceX was the first space technology company to reuse rocket boosters and is committed to developing additional reusable technology. By

[1] Although not the focus of this case, SpaceX has committed to ensuring a safe and sustainable orbital environment. SpaceX, *SpaceX's Approach to Space Sustainability and Safety*, https://www.spacex.com/updates/ (Feb. 22, 2022) (last visited May 24, 2022).

employing reusable technology, SpaceX reduces waste, saves energy, and thereby enables sustainable, cost-effective access to space.

11. SpaceX designed the Starship-Super Heavy launch vehicle at issue in this case to be fueled by liquid methane, which is significantly better for the environment when burned than kerosene used to fuel other rockets. Liquid methane fuel can also be produced from water on the moon and Mars while generating oxygen.

12. SpaceX undertakes numerous efforts in Boca Chica and the larger community to help preserve and enhance the environment and wildlife. For example, SpaceX performs quarterly beach cleanups, which improve the public's enjoyment of Boca Chica beach and reduce the risk of harm to species such as piping plovers, red knots, and sea turtles. During these events, SpaceX provides opportunities for agencies and organizations to teach the community about the importance of conservation and local wildlife preservation.

13. SpaceX also works extensively with Sea Turtle, Inc. to further that organization's efforts to monitor, conserve, and rehabilitate the sea turtle populations on and near Boca Chica beach. SpaceX provides vehicles, equipment, and dedicated space for monitoring activities, collaborates with Sea Turtle, Inc. biologists, and provides access to technology that allows Sea Turtle, Inc. to monitor sea turtle nesting remotely when needed.

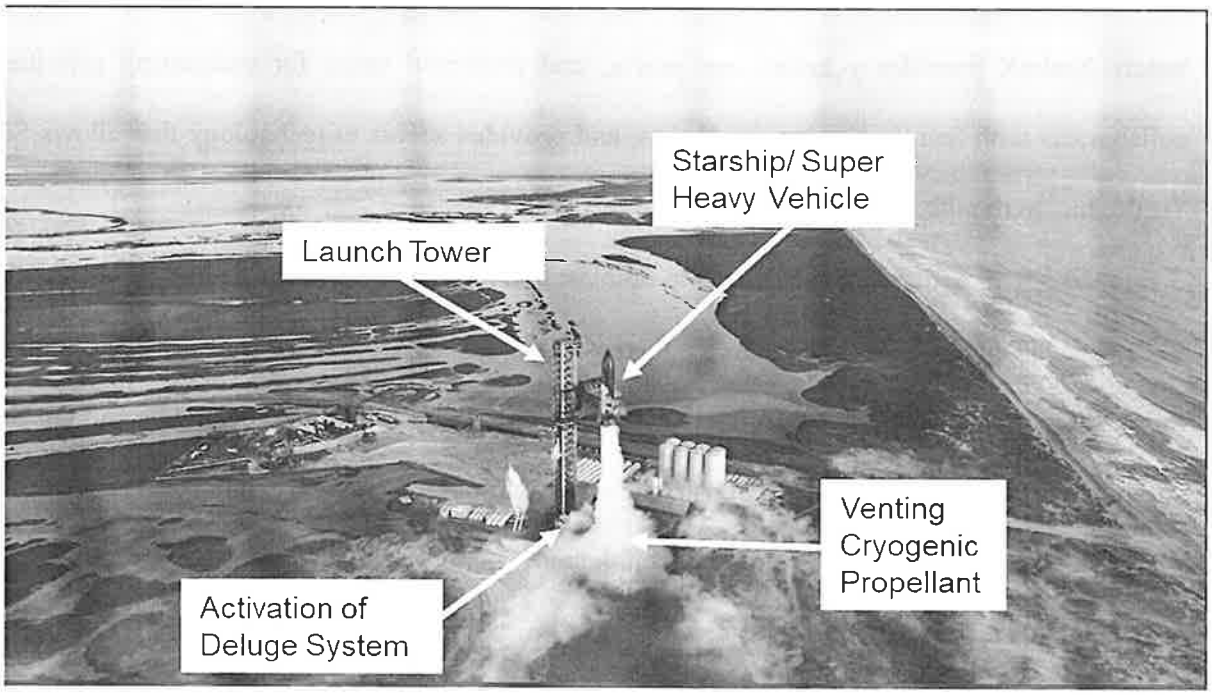
14. In addition, SpaceX acts to monitor and mitigate the effects of its activities at the Boca Chica launch site. SpaceX trains employees to identify environmental impacts—like spills—in real time, and SpaceX provides annual monitoring reports regarding vegetation and species around the Boca Chica launch site. Consistent with environmental review and licensing actions for the Boca Chica launch site, SpaceX also implements many mitigation measures to mitigate its environmental effects.

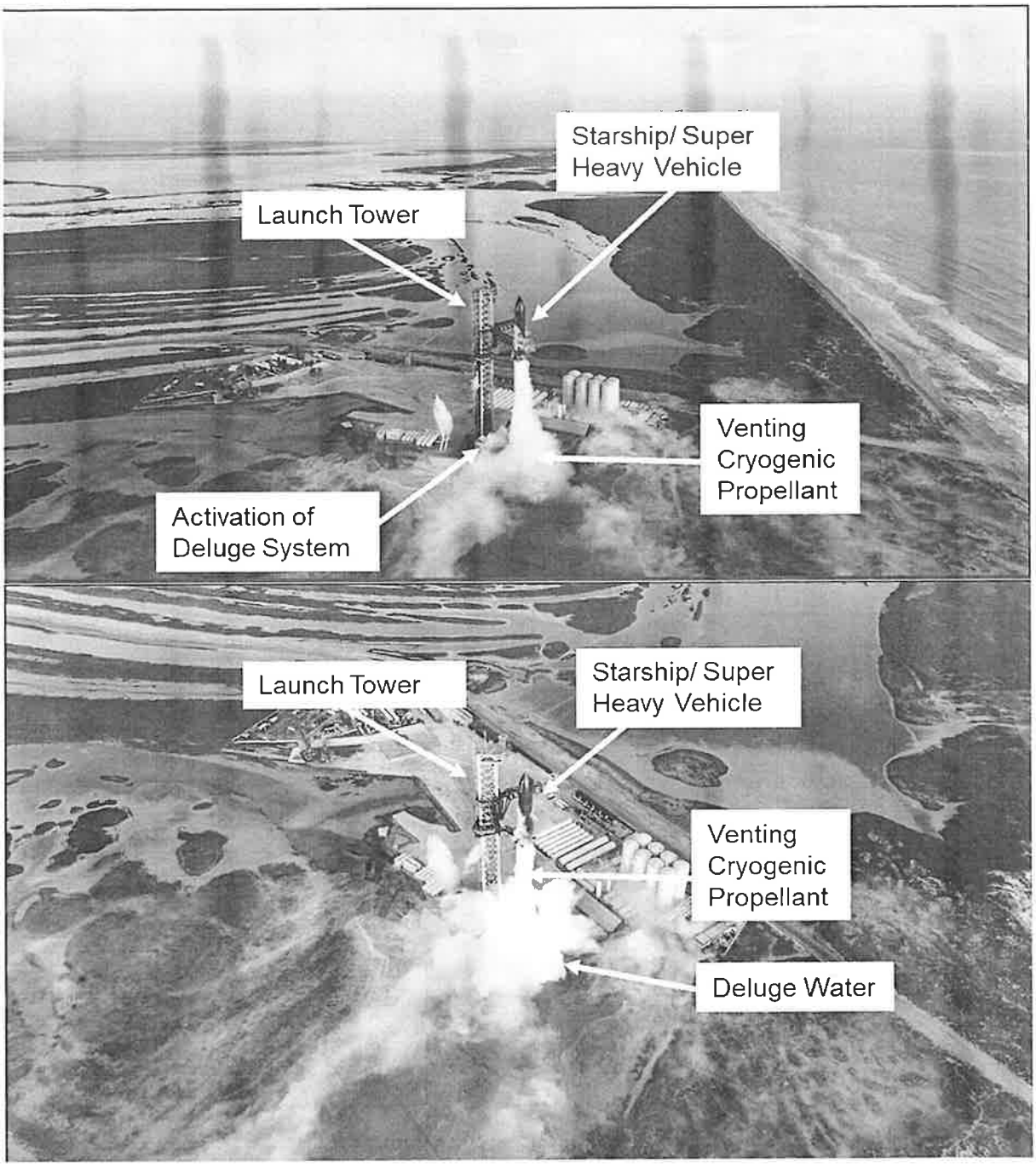
II. The deluge system

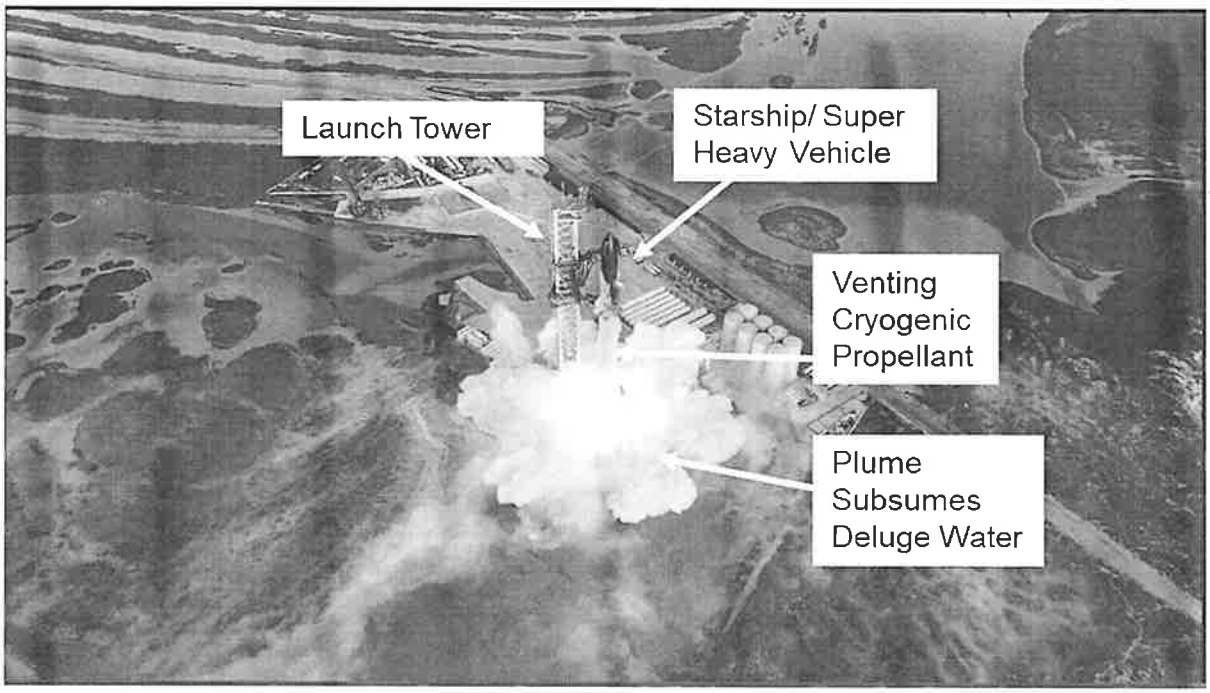
15. Deluge systems are critical to prevent and extinguish fires during rocket testing and launches; to prevent the spread of dust and other debris; and to thereby protect launch systems and surrounding areas. Other launch sites, including Kennedy Space Center and Cape Canaveral Space Force Stations in Florida, and Vandenburg Space Force Base in California, also use deluge systems.

16. SpaceX installed a deluge system after its April 20, 2023 test flight of Starship-Super Heavy resulted in fire and other damage to the launch site and the dispersal of dust and debris.

17. The deluge system expels a maximum of approximately 180,000 gallons of potable water on the launch pad during an ignition event to control fire and prevent the dispersal of dust and sand, thus protecting launch infrastructure and the surrounding environment. Time-lapse photos that depict what the deluge system looks like when activated are provided below:




Starship/ Super Heavy Vehicle
Launch Tower
Venting Cryogenic Propellant
Activation of Deluge System
Launch Tower
Starship/ Super Heavy Vehicle
Venting Cryogenic Propellant
Deluge Water

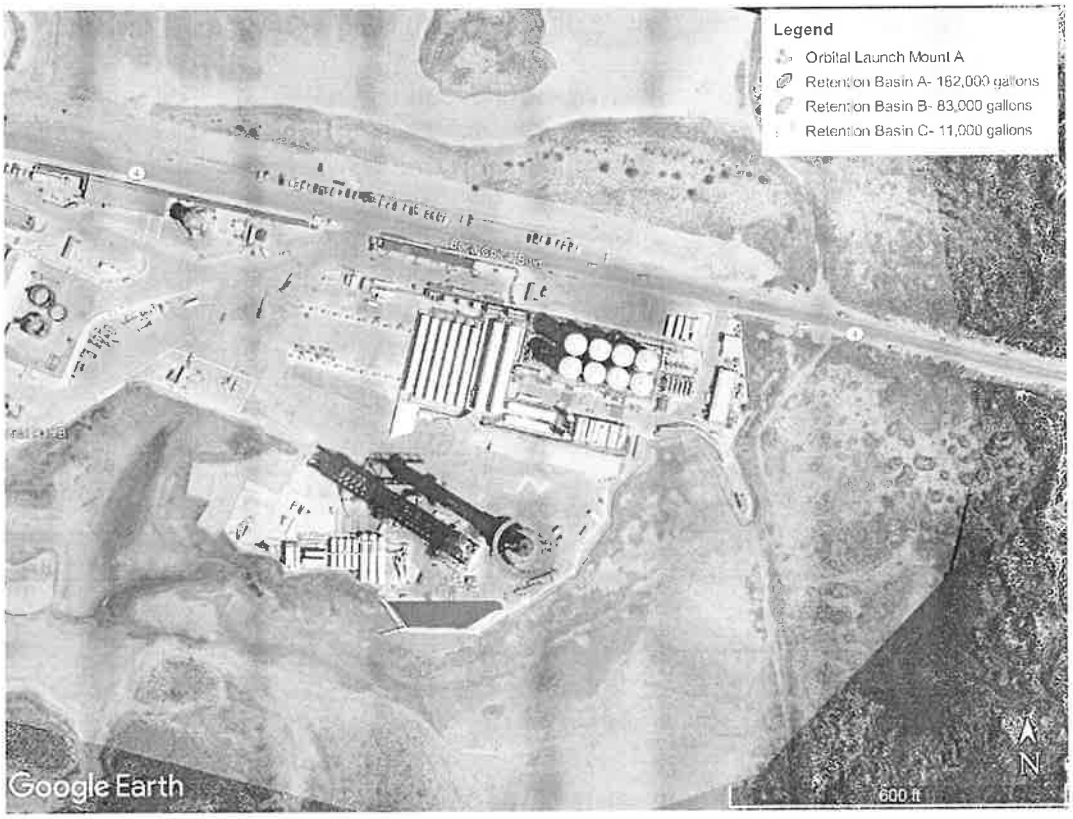


18. The water used in the deluge system is potable water trucked in from the Brownsville Public Utilities Board. The water is stored in clean, dedicated tanks and pumped to the system via clean, dedicated pipes installed for that purpose. No chemicals or substances are added to the water at any point.

19. Most deluge water vaporizes due to the heat when the rocket engines ignite and dissipates as a cloud of steam. Because the rocket engine exhaust contains only water vapor, gaseous carbon dioxide and heat, there is no change to the chemical makeup of the deluge water due to contact with the exhaust.

20. The deluge water is activated for a few seconds prior to the engines igniting. When the engines ignite, a small portion of the water can leave the pad as sheet flow or the water is "pushed out" beyond the pad as a result of the rocket's thrust. Deluge water continues to flow after the engines shut down or the vehicle launches. The water flows for approximately 40 seconds in total. Most of the water is contained within the Vertical Launch Area ("VLA") by the water

containment structures. These water containment structures have a total storage capacity of 276,000 gallons and are concrete lined to prevent percolation to groundwater. It is possible that some sheet flow will pass the containment structures and enter into the areas immediately adjacent to the developed area of the VLA. Deluge water that is pushed beyond the VLA extends just off the pad by approximately 20 – 30 feet into an area on SpaceX property through or near the outfalls specified in SpaceX's Texas MSGP and discussed in paragraphs below. The launch pad and containment structures (sometimes called retention basins) are depicted in this photo:



III. Permitting of the deluge water discharges

21. SpaceX's stormwater discharges and certain non-stormwater discharges, including deluge water, at the Boca Chica launch site are covered under Sector AB of the Texas MSGP, which applies to "Guided Missiles and Space Vehicles" and "Guided Missiles and Space Vehicle

Propulsion Units and Unit Parts." *See* Exhibit A (Texas MSGP TXR050000).[2]

22. SpaceX submitted a Notice of Intent to be covered by the Texas MSGP to the Texas Commission on Environmental Quality ("TCEQ") on July 12, 2023, and amended its authorization to include certain additional discharge points on September 29, 2023.

23. SpaceX coordinated closely with TCEQ in ensuring that the deluge system is properly permitted. For example, in July 2023, SpaceX hosted TCEQ at the Launch Pad. We explained the system, explained why we believed that the system complied with the Texas MSGP, demonstrated the system, and then walked the site with TCEQ following the launch. Following this walk through, my colleague Carolyn Wood has routinely provided to TCEQ sample results from when the system was used with tests and launches. Those sample results show the water complies with all Texas MSGP effluent limits and, even more recently, with the TCEQ Agreed Order described above.

24. TCEQ assigned the "Starbase Launch Pad Site" Permit Number TXR05GD61. This has been an active permit with TCEQ since July 12, 2023.[3] My understanding and belief is that the Texas MSGP remains in full force and effect.

25. Section 6.A of the MSGP authorizes, in pertinent part, the following non-stormwater discharges "through outfalls identified in" a facility's Stormwater Pollution Prevention Plan ("SWPPP"):

> (a) discharges from emergency firefighting 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);

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[2] *Available at* https://www.tceq.texas.gov/downloads/permitting/stormwater/general/multi-sector/txr050000-2021.pdf.

[3] *See* TCEQ Website, Water Quality General Permits Search, Summary of Authorization TXR05GD61, *available at* https://www2.tceq.texas.gov/wq_dpa/index.cfm.

> (c) potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life); . . .
> (i) uncontaminated water used for dust suppression; . . .
> (l) other discharges described in Part V of this permit that are subject to effluent guidelines and effluent limitations.

Exhibit A at 83-84.

26. The deluge water is covered by this list of non-stormwater discharges. It uses potable water that is purchased and trucked in from the Brownsville Public Utilities Board. This is the same water that local residents drink. As noted, the deluge system is used to reduce the fires caused by the thrust of the Starship–Super Heavy engine that ignites on the launch pad prior to launching. The deluge system also suppresses dust and debris that would otherwise be dispersed by the thrust of the launch.

27. SpaceX explained all these purposes of the deluge system to TCEQ.

28. In accordance with the Texas MSGP, the SpaceX SWPPP (Exhibit B) identifies the outfalls for the non-stormwater discharges associated with the deluge system. Specifically, the SpaceX SWPPP identifies Outfalls 003, 004, 005, 010, and 011 as the pertinent outfalls for "approved non-stormwater discharge (deluge water used for dust and fire suppression) when the deluge system at the Orbital stand is used." Exhibit B at 14.

29. The SpaceX SWPPP also states that, during deluge operations, the deluge water could discharge from outfalls 003, 004, and 005 and near outfalls 010 and 011. In pertinent part, the SWPPP states:

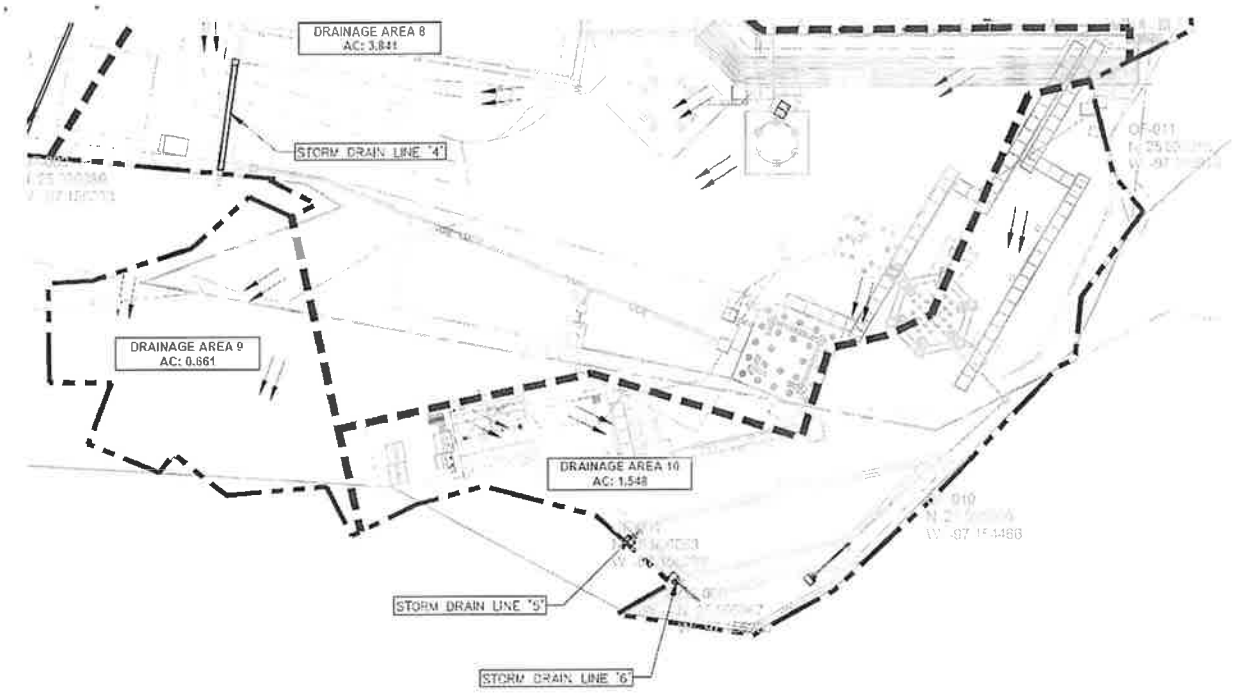
> Outfall 003: Stormwater from the Central portion of the site (Drainage Area 7), Western portion of the site (Drainage Area 3), and a portion of the Orbital Stand (Drainage Area 8) will flow to Outfall 003 (25.996886, -97.156233). The runoff will flow via sheet flow to connected storm drains which open at Outfall 003 and may ultimately flow to Segment 2501 – Gulf of Mexico. This Outfall may occasionally release approved non-stormwater discharge (deluge water used for dust and fire suppression from) when the deluge system at the Orbital stand is used.
>
> Outfall 004 and Outfall 005: Stormwater from the Southeastern portion of the site, including the Orbital Stand. (Drainage Areas 8, 9, and 10) will flow to Outfall 004 (25.996058, -97.155238) and Outfall 005 (25.995967, -97.155200). The runoff will flow via sheet flow to connected storm drains which open at Outfall 005 and 005 and may ultimately flow to Segment 2501 – Gulf of Mexico. This Outfall may occasionally release approved non-stormwater discharge (deluge water used for dust and fire suppression) when the deluge system at the Orbital stand is used.
>
> Outfall 010 and Outfall 011: Stormwater from the Southeastern portion of the site around the Orbital Stand (Drainage Areas 8 and 10) and the Northeastern portion of the site (Drainage Area 11) will flow to Outfall 010 (25.995866, -97.154466) and Outfall 011 (25.996255, -97.153919). The runoff will flow via sheet flow in times of heavy flow, expected to only be when the deluge system at the Orbital Stand is in use, and discharge as such near Outfalls 010 and 011 and may ultimately flow to Segment 2501 – Gulf of Mexico. The water released will be approved non-stormwater discharge (deluge water used for dust and fire suppression) when the deluge system at the Orbital stand is used.

Exhibit B at 13-14.

30. TCEQ's website lists all these outfalls as covered by the Texas MSGP.[4]

31. The SWPPP depicts the locations of outfalls 004, 005, 010, and 011, which are all arrayed around the launch pad:

[4] *See* https://www2.tceq.texas.gov/wq_dpa/index.cfm?fuseaction=home.permit_list_by_permit&permit_number=TXR05GD61.



32. Outfalls 003, 004, 005, 010, and 011 are the outfalls at or near where the deluge water flows beyond the VLA.

33. The SWPPP also memorializes that SpaceX and its environmental consultant, in accordance with the Texas MSGP, evaluated the deluge water as a source of non-stormwater discharge that is permitted by Texas MSGP and determined "*non-permitted, non-stormwater discharges do not occur at the site*." Exhibit B at 51 (emphasis added).

34. The SWPPP also memorializes that the "[d]eluge water used for dust suppression and fire suppression at the Orbital stand during both static fires and launches was further evaluated to ensure the water did not contain any contaminants. *The deluge water does not go through any industrial processes prior to its use*." Exhibit B at 51 (emphasis added).

35. The SWPPP also explains that the sampling was analyzed for compliance with "EPA Primary and Secondary Drinking Water," among other analyses. The SWPPP explains that the sampling results "demonstrated the deluge water is not expected to contain any pollutants of

concern in amounts exceeding amounts deemed to be hazardous," and that "[a] slide deck presenting the results to the TCEQ, as well as correspondence confirming their approval will be maintained with this SWPPP." Exhibit B at 51-52.

36. As discussed below, the deluge water has been sampled several times and found to be safe and well-within TCEQ Effluent Limitations, and, even more recently, the Agreed Order.

37. In accordance with the SWPPP, SpaceX has implemented Best Management Practices to control discharges. These include the lined concrete retention basins discussed above, as well as the installation of curbing to minimize water leaving the pad except to the retention basins. Before each use of the deluge system, SpaceX also inspects and sweeps the pad to remove particulates and cleans up oil or grease left behind by vehicles and other equipment. These measures all ensure that deluge water does not come into contact with pollutants. TCEQ has inspected the facility and has not found any issues with SpaceX's implementation of these measures.

38. As stated above, I read the Save RGV Complaint, which describes deluge water as "industrial wastewater." SpaceX disagrees with that characterization. As explained above, the deluge water falls under the Texas MSGP's listed categories of permitted non-stormwater discharges, including potable water discharges and water discharges to suppress fire and dust. The discharges of deluge water that occur at and/or near the outfalls are also directly addressed in the SWPPP, as required by the Texas MSGP. *See* Exhibit B at 51. Also, the deluge water is purchased potable water from the local public utility and is not subject to any industrial processes.

39. Moreover, prior to Save RGV filing its Complaint, SpaceX resolved any wastewater issues regarding its deluge water operations with the relevant environmental regulators. These actions included the following:

a. SpaceX submitted an additional permit application for an additional permit for the deluge water system, called an individual Texas Pollutant Discharge Elimination System ("TPDES") permit. TCEQ has already conducted a technical review of SpaceX's permit application and determined that the use of the deluge water system does not cause adverse risk to the environment. SpaceX expects to receive that permit from TCEQ shortly.

b. SpaceX also agreed to an Agreed Order with TCEQ in which SpaceX paid a civil penalty, did not admit to violating the Clean Water Act, and denied all allegations.

c. SpaceX also agreed to a Consent Agreement with EPA in which SpaceX agreed to pay to EPA a civil penalty without any admission of wrongdoing all allegations that SpaceX had been discharging deluge water without a permit.

40. TCEQ has assured SpaceX that it may continue to operate the water deluge system so long as SpaceX complies with the terms of the Agreed Order, which SpaceX is doing.

41. Additionally, SpaceX has provided, and continues to provide, to multiple federal regulators relevant information about each use of the deluge system.

IV. Environmental review of the deluge system

42. In addition to TCEQ's review that found that there was no adverse risk of environmental harm, multiple other agencies thoroughly studied the construction and use of the deluge system and reached the same conclusion.

43. The FAA first evaluated the use of a deluge system in its 2022 Programmatic Environmental Assessment ("PEA") for the Starship-Super Heavy Program at Boca Chica.[5]

[5] Available at https://www.faa.gov/sites/faa.gov/files/2022-06/PEA_for_SpaceX_Starship_Super_Heavy_at_Boca_Chica_FINAL.pdf.

Exhibit C. The U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Fish and Wildlife Service, National Park Service, and NASA served as cooperating agencies on the PEA. The PEA evaluated the impacts of a deluge system with a capacity of up to 350,000 gallons. Exhibit C at 162 (stating that SpaceX would discharge up to 350,000 gallons of deluge water per launch event). *The final PEA concluded that a deluge system, if used, would not significantly impact surface water quality, groundwater quality, or floodplain function*. The PEA explained that low percolation rates in the vicinity of the VLA and "stormwater treatment and industrial wastewater systems that are properly designed and operated in accordance with permit conditions" would mitigate impacts to groundwater. Exhibit C at 112-13. With respect to floodplain function, *the PEA concluded that because most deluge water would vaporize or be collected by retention basins, and only a small amount of deluge water could potentially reach the unvegetated flat next to the VLA, deluge water would not "alter vegetation and the floodplain function."* Exhibit C at 115 (emphasis added).

44. Furthermore, EPA submitted a comment letter on the draft PEA and did not raise any concerns or note any objections to the proposed deluge system. Exhibit D.

45. The FAA again evaluated the environmental impacts of the deluge system SpaceX installed after the April 2023 launch in a Written Re-evaluation issued on November 15, 2023 ("November 2023 WR"). Exhibit E. The FAA again found that operation of the deluge system would not significantly impact water quality because the deluge system would use potable water, and "*[i]t is not expected the deluge water would contain any pollutants during future operations*." Exhibit E at 11 (emphasis added). The FAA also concluded that deluge water discharges would not significantly impact biological resources. The FAA explained that the amount of water that could leave the VLA as overland sheet flow, "push out," or condensation—"approximately 20% of the total water (approximately 71,000 gallons)"—"is comparable to slightly increased rainfall

runoff." Exhibit E at 22-23, 33. In fact, the FAA noted that "*an average summertime thunderstorm at Boca Chica would deposit more water over the landscape than any single or all combined activations of the deluge system.*" Exhibit E at 35 (emphasis added). Consequently, the FAA concluded that the risk of vegetation creep into nearby mudflat habitat was low. Had the FAA had any concerns about operation of the deluge system, which was scheduled to be used days later for the November 18, 2023 launch, I am confident that the FAA would have stated them.

46. The FAA and U.S. Fish and Wildlife Service (the "Service") also reviewed the effects of the deluge system on threatened and endangered species and critical habitat pursuant to the Endangered Species Act. In an addendum to the Biological and Conference Opinion prepared in connection with the Starship-Super Heavy Program in 2022 ("2022 BCO Addendum"), the Service found that operation of the deluge system could cause flushing and avoidance behavior that could decrease the risk of harm to species by leading them to avoid the area. Exhibit F at 18. The Service concluded that the deluge system could also have *beneficial* effects to listed species by dampening noise and vibrations from launch operations and thus reducing levels of stress and disruption that wildlife may experience during launch events. Exhibit F at 18.

47. In connection with the November 2023 WR and 2022 BCO Addendum, SpaceX agreed to additional measures to mitigate any potential adverse impacts from the deluge system. These include but are not limited to:

a. Using drone imagery to monitor the visible extent of water in overland sheet flow discharges and vapor plumes *and reporting the findings to the FAA and Service in each post-launch monitoring report and annual report*.

b. Testing water generated by the production and manufacturing facilities in Boca Chica to assure it is of comparable quality to potable water trucked in from

Brownsville before adding it to the water tanks at the VLA *and reporting the findings to the FAA and Service in each post-launch monitoring report and annual report.*

c. Sampling soil, water, and air adjacent to the launch pad for components of stainless steel including but not limited to total chromium, hexavalent chromium, iron, and nickel according to the contaminants plan *and reporting the findings to the FAA and Service in each post-launch monitoring report and annual report*.

V. Monitoring has shown no significant environmental impacts from the deluge system.

48. SpaceX has used the deluge system multiple times for testing and launches between November 2023 and October 2024. Monitoring has not shown any significant environmental impacts. SpaceX has been reporting this information to the FAA and the Service with every post-launch monitoring report and annual report.

49. Data collected after these launches have shown that the deluge system is operating as expected. Exhibit G.

50. Any water that was pushed off the launch pad was dispersed approximately 20' to 30' away from the launch pad, on SpaceX property, in an area near the approved outfalls, per the SWPPP and the Texas MSGP.

51. Sampling has demonstrated that the deluge water is well-within effluent limitations in Section C of the Texas MSGP and, more recently, the TCEQ Agreed Order.

52. Monitoring of other ecological indicators that could be impacted by deluge water also show no significant impacts. Vegetation monitoring, for example, has shown an overall decrease in plant cover of adjacent mudflats over the past few years, within the natural range of

variability. This indicates that operation of the deluge system to date has not adversely impacted adjacent mudflats by causing vegetation creep. Exhibit H.

VI. Save RGV's lawsuit related to use of the deluge system

53. On October 9, 2024, Save RGV filed a lawsuit against SpaceX for SpaceX's use of the deluge water system constitutes an unpermitted discharge of industrial wastewater into waterways near the SpaceX facility, including the South Bay of the Lower Laguna Madre. The lawsuit also alleges that the wastewater degrades water quality and harms aquatic life.

54. Based on my knowledge of SpaceX's operations, the information provided to SpaceX's regulators, and the review of that information by our regulators, I disagree. The water from the deluge water system is discharged onto the ground, on SpaceX property, approximately 20-30 feet off of the launchpad. TCEQ did not find any adverse risk of environmental harm based on its review of the deluge system. SpaceX's other regulators have not identified any environmental harm has occurred from use of the system. Nor has SpaceX's monitoring of the use of the system, which includes sampling the water after each use. Those samples show that the deluge water complies with the Texas MSGP effluent limits and the TCEQ Agreed Order.

55. The deluge system is critical to SpaceX's static fire and launch operations. Save RGV has requested an injunction to stop SpaceX's use of the system until SpaceX receives its individual permit. SpaceX expects to receive that permit in January/February 2025, though it could take longer if any opponent of the permit filed a contested case, which may require a hearing. If the Court grants Save RGV's injunction, SpaceX will be unable to conduct Flight #5, tentatively scheduled for October 13, 2024, and any other static fire tests and launches that would be scheduled to take place with FAA's authorization through the rest of 2024 into early 2025.

56. True and correct copies of the referenced documents are attached as exhibits.

57. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 10.00 day of October 2024, in Cocoa, Florida.

Katy Groom

Katy Groom

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To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: Attachment 7_Part2.pdf

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From: gwyneth@txenvirolaw.com <gwyneth@txenvirolaw.com>
Sent: Friday, December 27, 2024 4:59 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX: 5124829346

COMMENTS: Attachment 7 (part 2 of 3) to Request filed by the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

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Required hardware and software

Operating Systems:	Windows2000? or WindowsXP?
Browsers (for SENDERS):	Internet Explorer 6.0? or above
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	•Allow per session cookies •Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection

** These minimum requirements are subject to change. If these requirements change, we will provide you with an email message at the email address we have on file for you at that time providing you with the revised hardware and software requirements, at which time you will have the right to withdraw your consent.

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CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
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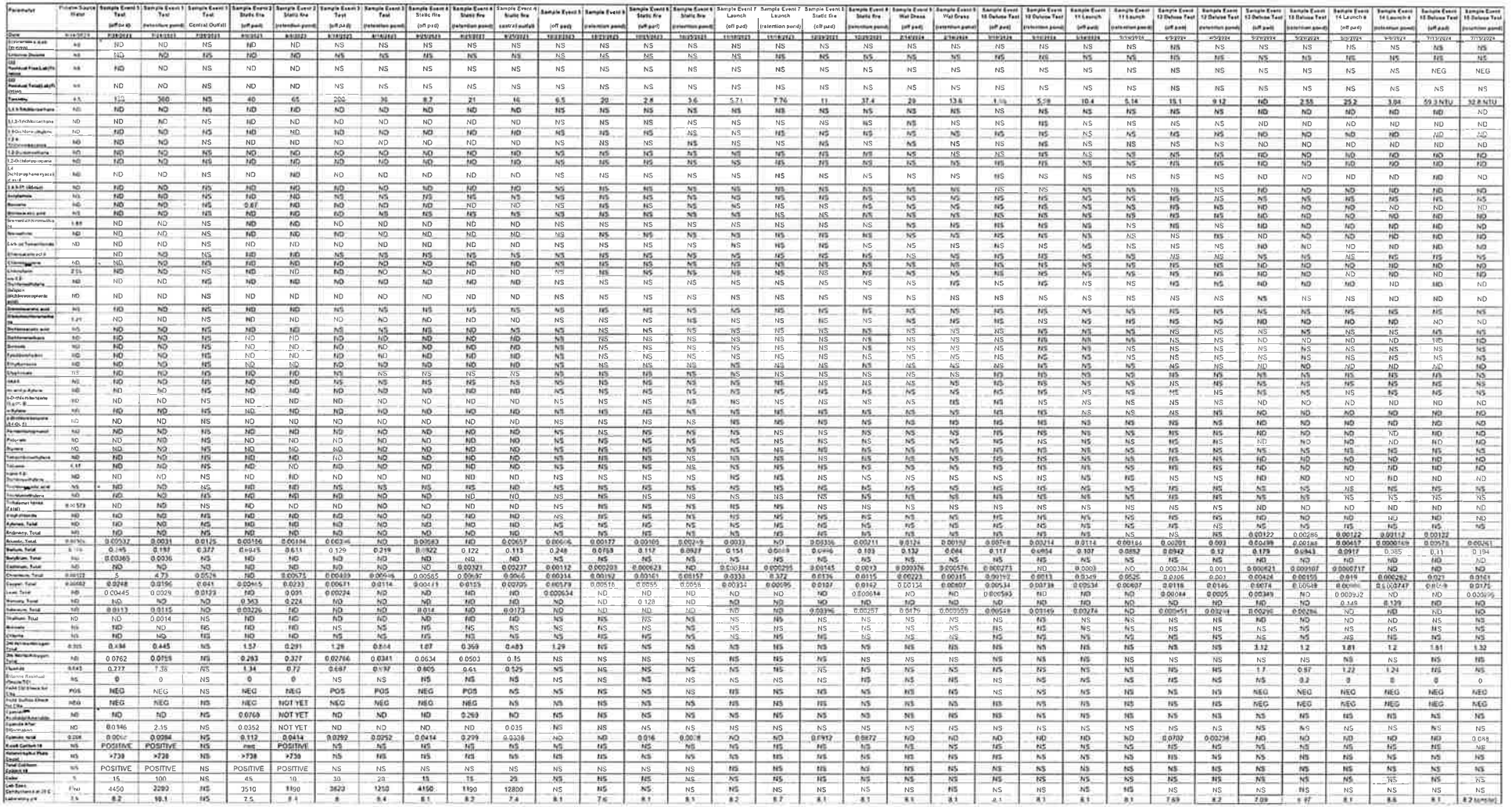
PHONE: 5124696000

FAX: 5124829346

COMMENTS: Attachment 7 (part 3 of 3) to Request filed by the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

Exhibit G



Langelier Saturation Index (LSI)	0.1164	0.6535	2.365	NS	-0.3524	0.5561	0.3506	0.6916	0.635	0.4722	0.02335
MBAS (Surfactant/Foaming Agents)	NS	ND	ND	NS	ND	ND	NS	NS	NS	NS	NS
Odor	NS	None Observed	None Observed	NS	none	None Observed	NS	NS	NS	NS	NS
Total Alkalinity (as CaCO3)	[illegible]	162	128	NS	89.7	90	116	116	112	115	165
Total Hardness (as CaCO3)	260	270	230	NS	460	250	350	280	603	240	560
Aluminum, Total	[illegible]	4.8	3.24	NS	0.415	0.833	2.54	0.427	0.218	0.951	0.952
Calcium	68.8	85.5	64.2	NS	152	66.8	93.1	71.6	149	11.5	143
Copper, Total	0.00608	0.0256	0.0194	NS	0.0085	0.0208	0.0068	0.0124	0.00506	0.0133	0.00839
Iron, Total	0.0687	10.4	7.04	NS	13.6	7.93	2.36	1.51	0.15	0.419	0.35
Manganese, Total	0.00793	0.139	0.0909	0.346	0.239	0.163	0.0798	0.0465	0.0179	0.0262	0.0222
Silver, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	136	351	343	NS	618	143	250	153	797	135	517
Zinc, Total	0.00121	0.855	0.584	0.877	0.0077	0.383	0.11	0.636	0.00695	0.18	0.0821
Chloride	143	1160	238	NS	891	147	997	164	1070	152	4090
Cyanide	ND	ND	1.43	NS	1.35	ND	ND	ND	5.3	ND	ND
Sulfate	232	405	620	NS	337	220	293	240	400	232	630
Total Dissolved Solids	700	2480	1400	NS	1950	530	2200	620	2450	660	7880
Corrosivity (Drinking Water)	Slight Scale	Scale Forming	Scale Forming	NS	slight corr.	Scale Forming	Slight Scale	Scale Forming	Scale Forming	Slight Scale	SLIGHT SCALE
Chemical Oxygen Demand	24.4	128	50.3	NS	ND	ND	53.2	24.6	21.7	ND	33.2
Phosphorus (as P), Total	22.5	0.146	0.312	NS	0.172	0.0614	0.24	0.16	0.277	0.176	0.0975
Fluoride	ND	ND	1.42	NS	1.45	ND	ND	ND	ND	ND	ND
Nitrate-Nitrite (as N)	ND	0.892	0.682	NS	2.55	0.838	ND	ND	0.912	ND	ND
Oil and Grease (HEM)	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids	ND	3970	223	NS	370	34	208	49	34.9	15.5	12.7
Total Kjeldahl Nitrogen	1.48	2.83	1.92	NS	0.909	0.588	1.03	1.31	1.29	1.3	1.94
Biochemical Oxygen Demand (BOD5)	3.13	ND	11.3	NS	8.31	4.39	9.17	12.8	4.85	4.82	7.19
Nickel											
Nitrogen, Total	1.28	3.722	2.602	NS	3.509	1.426	1.03	1.31	2.202	1.3	1.94

Langelier Saturation Index (LSI)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MBAS (Surfactant/Foaming Agents)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Odor	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Alkalinity (as CaCO3)	134	134	122	126	120	113	132	132	149	137	99.6
Total Hardness (as CaCO3)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aluminum, Total	0.0731	0.0566	0.0951	0.045	0.102	0.513	0.568	0.913	0.106	0.061	0.0288
Calcium	495	77.6	152	78.1	123	69.9	106	78.1	234	78.4	195
Copper, Total	NS	NS	NS	NS	NS	NS	0.0107	0.0142	0.00434	0.00607	0.00534
Iron, Total	0.0408	NS	NS	NS	0.043	0.127	0.169	0.817	0.0731	0.628	ND
Manganese, Total	0.105	0.0561	0.0632	0.0207	0.0156	0.0137	0.0685	0.0428	0.016	0.0424	0.017
Silver, Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sodium	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc, Total	0.0713	0.762	0.155	0.588	0.0755	[illegible]	0.0913	1.40	0.111	1.5	0.0321
Chloride	10900	270	1810	213	[illegible]	201	1040	[illegible]	[illegible]	[illegible]	[illegible]
Cyanide	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	1790	252	440	274	326	260	440	274	440	274	460
Total Dissolved Solids	15800	780	3750	940	2060	520	2310	750	12700	680	3550
Corrosivity (Drinking Water)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Phosphorus (as P), Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluoride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate-Nitrite (as N)	1.29	0.567	1.77	0.695	1.71	0.824	1.85	1.13	0.754	1.03	1.08
Oil and Grease (HEM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Suspended Solids	4.5	5.6	3.6	ND	5.1	7.8	3.6	ND	3.6	ND	3.6
Total Kjeldahl Nitrogen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Biochemical Oxygen Demand (BOD5)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nickel	0.00657	0.00354	0.00381	0.00238	[illegible]	0.00339	0.00570	0.00466	[illegible]	0.00735	0.00444
Nitrogen, Total	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Langelier Saturation Index (LSI)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MBAS (Surfactant/Foaming Agents)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Odor	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Alkalinity (as CaCO3)	131	156	103	135	143	142	136	206	106	143	130
Total Hardness (as CaCO3)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aluminum, Total	0.0373	0.212	0.516	0.842	0.005	1.58	0.0702	1.18	0.00515	0.275	10.6
Calcium	85.5	187	73.7	155	84.5	373	63.3	109	72.7	109	81
Copper, Total	0.00736	0.00534	0.00407	0.00534	0.00987	0.00474	0.00949	0.00988	0.0000747	0.00956	0.0175
Iron, Total	0.265	0.129	0.14	0.376	0.491	1.41	0.702	1.31	0.119	1.31	1.72
Manganese, Total	0.0247	0.0463	0.0119	0.074	0.0109	0.148	0.059	0.0334	0.0143	0.0364	0.071
Silver, Total	NS	NS	NS	NS	NS	0.000065	ND	ND	ND	ND	NS
Sodium	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc, Total	1.05	0.00516	0.209	0.941	0.001	0.131	1.42	0.0604	0.00443	0.0181	[illegible]
Chloride	[illegible]	1950	779	1900	215	2370	[illegible]	941	197	1170	221
Cyanide	NS	NS	NS	NS	NS	1.7	0.97	1.22	1.24	NS	NS
Sulfate	274	440	274	502	373	619	282	336	281	451	[illegible]
Total Dissolved Solids	760	3920	890	2590	840	4460	950	1660	800	2120	620
Corrosivity (Drinking Water)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chemical Oxygen Demand	NS	NS	NS	NS	NS	10.7	<20.0	ND	ND	ND	ND
Phosphorus (as P), Total	NS	NS	NS	NS	NS	0.063	0.0241	0.572	0.17	NS	NS
Fluoride	NS	NS	NS	NS	NS	1.7	0.97	1.22	1.24	NS	NS
Nitrate-Nitrite (as N)	1.61	2.24	1.42	4.42	1.39	NS	NS	NS	NS	NS	NS
Oil and Grease (HEM)	NS	NS	NS	NS	NS	1.2	ND	ND	ND	NS	NS
Total Suspended Solids	ND	3.6	ND	73.3	17.8	41.9	7.5	724	7.1	724	19
Total Kjeldahl Nitrogen	NS	NS	NS	NS	NS	0.283	0.064	0.747	0.372	52.6	NS
Biochemical Oxygen Demand (BOD5)	NS	NS	NS	NS	NS	2.33	8.49	10.5	3.16	NS	NS
Nickel	0.0034	0.00544	0.00349	0.00857	0.001	0.00903	[illegible]	0.00287	0.0000224	0.00422	0.0119
Nitrogen, Total	NS	NS	NS	ND	ND	ND	ND	ND	0.161	NS	NS

Mark Mendoza

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Attachments: Attachments 8-11.pdf

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Subject: Public comment on Permit Number WQ0005462000

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

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: gwyneth@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 San Antonio Street
Austin, TX 78701

PHONE: 5124696000

FAX:

COMMENTS: Attachments 8-11 to Request filed by the Carrizo/Comecrudo Nation of Texas, Inc. and Save RGV.

ATTACHMENT 8

Evaluation of Draft Permit WQ0005462000 For Space Exploration Technologies Corporation Deluge Wastewater

Prepared for
Marisa Perales, attorney
Lauren Ice, attorney

D. Lauren Ross

Digitally signed by D. Lauren Ross
DN: cn=D. Lauren Ross, o=Glenrose Engineering, Inc., ou, email=lauren@glenrose.com, c=US
Date: 2024.12.27 10:38:42 -06'00'

Prepared by
D. Lauren Ross, Ph. D., P.E.
Glenrose Engineering, Inc.
Texas Board of Professional Engineers # F9042

December 27, 2024

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Introduction

Space Exploration Technologies Corporation has applied for a new industrial wastewater permit application to discharge deluge wastewater. Deluge wastewater is used for routine maintenance, fire and dust suppression during guided missile and space vehicle launch and test operations. It is sourced from raw and potable water, and reclaimed wastewater.

Unvaporized deluge wastewater is partly captured within a containment area and routed to one of two retention ponds. An unknown volume of deluge wastewater is released without control onto surrounding land identified by the U.S. Fish and Wildlife Service as estuarine and marine wetlands. Deluge wastewater that is captured and routed into a retention pond is mixed with stormwater, facility washdown wastewater, and wastewater releases from facility tests and maintenance events.

Documents and Materials Reviewed

The information and opinions expressed in this report are based on my review of the following documents:

- A draft permit for TPDES Permit No. WQ0005462000, by TCEQ, no date;
- Statement of Basis/Technical Summary and Executive Director's Preliminary Decision for TPDES Permit No. WQ0005462000, by TCEQ, signed by Michael Sunderlin on August 28, 2024;
- Industrial Wastewater Permit Application by Space Exploration Technologies Corporation ("SpaceX's Application") signed by Katy Groom on June 29, 2024;
- Declaration of Katy Groom signed on October 10, 2024, including Exhibit G;
- Publicly available graphical information system (GIS) data regarding TCEQ classified stream segment locations, USA Flood Hazard Areas, U.S. Fish and Wildlife National Wetlands Inventory, Texas shellfish harvest areas (2024) and seagrass areas;

- Procedures to Implement the Texas Surface Water Quality Standards prepared by the Water Quality Division of TCEQ, RG-194, June 2010 (hereafter referenced as the June 2010 IPs); and
- Relevant regulatory criteria in 30 TAC §307, including tables and appendices.

Qualifications

I have worked as a civil and environmental engineer since 1977. My areas of expertise include water resources engineering, water quality protection and engineering design, groundwater transport, stormwater management, erosion and sedimentation controls, solid waste and wastewater management and disposal, statistical methods, and environmental monitoring. I have served as a testifying expert in legal proceedings regarding these matters.

I have a Bachelor of Science degree in civil engineering from the University of Texas with highest honors, a Master of Science degree in civil engineering from Colorado State University, and a Doctor of Philosophy degree in civil engineering from the University of Texas. My master's degree research was water and chemical movement into and through unsaturated soils. My doctoral research was multivariate statistical methods for the analysis of environmental monitoring data. I have been a registered professional engineer in the State of Texas since 1984.

I have taught water resources, water policy, stormwater management, and statistical methods courses at the University of Texas at Austin in the Department of Civil Engineering and in the Department of Community and Regional Planning. I have taught week-long courses for engineering and science professionals on statistical methods for environmental monitoring.

I have reviewed and prepared opinions on numerous wastewater permit applications in Texas, including permits for Municipal Operations, LLC Utilities (Texas) Inc., Corix Utilities (Texas) Inc., the San Miguel Electric Cooperative, Inc.; City of Kyle, Texas; Undine Texas Environmental, LLC, SJWTX Inc.; City of Liberty Hill, Texas; Cherryville

GP, Inc.; Kendall West Utility, LLC; City of Blanco; City of Dripping Springs; Aqua Texas, Inc. in Fort Bend County; City of Wimberley; the Johnson Ranch Subdivision; High Pointe Subdivision; Stratus Municipal Utility District #4; Jeremiah Venture Subdivision; Scenic Greens Subdivision; Hays County Water Control and Improvement District #1 (Belterra Subdivision); Rocky Creek Subdivision; and Barton Creek West Subdivision. I have also reviewed 9,283 unique records of sanitary sewage overflows for the City of Houston wastewater collection and treatment systems. I have been the responsible engineer for numerous field investigations, including investigation design, implementation, and data evaluation. I have modeled surface and groundwater and pollution migration using hand calculations, analytic models, and finite difference models.

I have also been responsible for implementing field investigations, including directing the work of drilling crews and logging geologists. I have collected surface water, groundwater, soil, and waste material samples. I have extracted cores, hauled bags of bentonite, wrapped well screen, purged wells, measured water levels, set up automatic loggers for water level measurements. I have been responsible for maintaining quality control standards through all aspects of a field project, including assuring that the plan is implemented accurately and effectively, making field adjustments to plans as necessary, maintaining reliable records, and transferring and maintaining the integrity of all data.

A copy of my resume is included in this report as Attachment 1.

Unreliable and Inadequate Wastewater Pollutant Analyses

Application Wastewater Pollutant Analyses

The TCEQ draft permit WQ0005462000 (hereafter referred to as the "draft permit") was prepared based on pollutant concentration measurements on two wastewater samples collected from a retention pond on May 29, 2024 and June 6, 2024, submitted with SpaceX's Application. Sampling times for these two samples were described as an

hour and six hours following the deluge test and launch events. No information was provided, however, regarding whether wastewater samples collected at these times are representative of episodic deluge wastewater events. Furthermore, pollutant analyses for only two samples, submitted as part of SpaceX's application, fail to meet the minimum requirement of four samples within the year prior to the application date. This failure to provide pollutant analyses for at least four samples is inexplicable given that relevant pollutant concentration information is available for 32 wastewater samples in Exhibit G to the Groom Declaration.

In addition to pollutant analyses for too few samples, anomalies within the reported results raise questions regarding their reliability. For Sample 2, hexavalent chromium is reported as 25.9 µg/L, while the reported total chromium concentration is only 0.282 µg/L. It isn't possible for the total chromium concentration to be less than one of the component chromium species. Also in Sample 2, temperature is inaccurately reported as 38 °F. Later correspondence makes clear that this temperature is Celsius rather than Fahrenheit. Dissolved oxygen in the same Sample 2, furthermore, is reported as 7.1 mg/L. The ***saturated*** concentration of dissolved oxygen in water at that temperature, with 800 mg/L total dissolved solids would be only 6.6 mg/L. These unexplained data anomalies raise questions regarding the reliability of any of the data provided in SpaceX's application.

Groom October 10, 2024 Declaration Wastewater Pollutant Analyses

On October 10, 2024, Katy Groom signed a Declaration regarding permitting of the Space X deluge wastewater system. Ms. Groom is the Director of Environmental Regulatory Affairs responsible for overseeing environmental management at SpaceX's Boca Chica, Texas, launch facility. Attachment G to Ms. Groom's Declaration is a table of pollutant concentrations measured in samples identified as potable water, off pad, retention pond, and central outfall for 15 events described as tests, static fire, launch, wet dress, deluge test, or undefined. The information submitted in SpaceX's

Application for the draft permit represents only partial data from two of these 15 events.

The data presented in the Groom Declaration Exhibit G has similar issues regarding uncertainty as those described above for the data submitted with SpaceX's Application. Although the data include one of three identifiers: retention pond, off pad, or central outfall, there are no location coordinates or descriptions associated with these locations. Information regarding which of two on-site ponds are referenced by "retention pond," for example, is not provided. There is also no information regarding the timing of the sample collection in relationship to the event described in the sample description.

Failure to Meet Texas Surface Water Quality Standards for Toxic Materials

Texas Surface Water Quality Standards described in 30 TAC §307.6 Toxic Materials specifically apply to substances attributed to waste discharges or human activity. Water in the state must not be acutely toxic to aquatic life. Water in the state with designated or existing limited or greater aquatic life uses must not be chronically toxic to aquatic life. Water in the state must be maintained to preclude adverse toxic effects on human health resulting from contact recreation, consumption of aquatic organisms and/or consumption of drinking water. TPDES wastewater discharge permits, like the one at issue for SpaceX, are required to meet state standards to protect aquatic life and human health. Minimum Clean Water Act and Texas Surface Water Quality water quality standards to protect aquatic life are established in Figure 30 TAC §307.6(c)(1). Minimum water quality standards to protect human health are established in Figure 30 TAC §307.6(d)(1).

As described in the Statement of Basis/Executive Summary for this permit, TCEQ implemented procedures detailed in the June 2010 IPs, in combination with site specific information, to determine protective Daily Average and Daily Maximum effluent concentrations for this specific permit. TCEQ's failure to require effluent

limitations for toxic elements in the draft permit to achieve these protective concentrations was based on inadequate sampling data and an inadequate analysis of the wastewater pollutant concentrations reported for the two samples analyzed. Even with this limited database, zinc and copper concentrations in the reported samples are higher than 70% of the calculated daily average effluent limit. In this case procedures in the June 2010 IPs recommend either that the provided sampling data be supplemented with historical wastewater pollutant analyses or else additional sampling and analysis to determine whether effluent limitations for toxic materials is necessary.

In addition to pollutant concentrations measured in the two wastewater samples reported to TCEQ in SpaceX's Application, however, the Groom Declaration Exhibit G presents pollutant concentrations measured in 30 additional wastewater samples from 15 events. Red boxes on Table 1 of this report highlight which of these individual measurements exceed 70% of the corresponding daily average effluent limit. These data indicate clearly the potential effluent limit requirements for copper, lead, mercury, thallium, zinc, and nickel concentrations in the wastewater to protect aquatic life and/or human health.

Where there are toxic pollution concentrations for four or more wastewater samples, as is the case with the Groom Declaration Exhibit G, the June 2010 IPs (beginning on page 168) describe the procedure for establishing toxic pollutant effluent limitations. In this case, averages of effluent pollutant concentrations in wastewater samples are compared to 85% of the calculated daily average effluent limits.

Table 2 presents a comparison of the average of toxic metal concentrations reported in Groom Declaration Exhibit G. Average values were calculated using one-half of the MAL for non-detect (censored) observations, as is stipulated in the June 2010 IPs.

Table 2 shows averages for 13 metals based on reported SpaceX wastewater concentrations in samples from three different locations: a central outfall, off pad, and

Table 1. SpaceX Wastewater Discharge Concentrations Compared to the Minimum of 70% of Calculated Daily Average Limits for Aquatic Life and Human Health Standards
(all units mg/L)

Sample Event	Event	Source	Date	Antimony Total	Arsenic Total	Cadmium Total	Chromium Total	Copper Total	Lead Total	Mercury Total	Selenium Total	Thallium Total	Copper Total dup	Silver Total	Zinc Total	Nickel
0	Potable Water		08/18/2023	0.0025	0.00305	0.0005	0.00122	0.00602	0.00025	2.5E-06	0.0025	0.00025	0.00608	0.00025	0.00721	
1	test	off pad	07/28/2023	0.0025	0.00532	0.0005	5	0.0248	0.00445	2.5E-06	0.0113	0.00025	0.0256	0.00025	0.855	
1	test	retention pond	07/28/2023	0.0025	0.0031	0.0005	4.73	0.0196	0.0029	2.5E-06	0.0115	0.0014	0.0194	0.00025	0.594	
1	test	central outfall	07/28/2023		0.0125	0.0005	0.0528	0.041	0.0123	2.5E-06	0.0025			0.00025	0.877	
2	static fire	off pad	08/06/2023	0.0025	0.00156	0.0005	0.0015	0.00865	0.00025	0.363	0.00226	0.00025	0.0085	0.00025	0.0077	
2	static fire	retention pond	08/06/2023	0.0025	0.00194	0.0005	0.00675	0.0233	0.001	0.224	0.0025	0.00025	0.0208	0.00025	0.383	
3	test	off pad	08/18/2023	0.0025	0.00396	0.0005	0.00409	0.00671	0.00224	2.5E-06	0.0025	0.00025	0.0068	0.00025	0.11	
3	test	retention pond	08/18/2023	0.0025	0.00025	0.0005	0.00946	0.0114	0.00025	2.5E-06	0.0025	0.00025	0.0124	0.00025	0.636	
4	static fire	off pad	08/25/2023	0.0025	0.00583	0.0005	0.00585	0.00471	0.00025	2.5E-06	0.014	0.00025	0.00506	0.00025	0.00695	
4	static fire	retention pond	08/25/2023	0.0025	0.00025	0.00321	0.00697	0.0155	0.00025	2.5E-06	0.0025	0.00025	0.0133	0.00025	0.18	
4	static fire	central outfall	08/25/2023	0.0025	0.00657	0.00237	0.0066	0.00705	0.00025	2.5E-06	0.0173	0.00025	0.00839	0.00025	0.0821	
5	undefined	off pad	10/23/2023		0.00606	0.00112	0.00314	0.00579	0.000634	2.5E-06	0.0025				0.0713	0.00857
5	undefined	retention pond	10/23/2023		0.00177	0.000203	0.00192	0.00516	0.00025	2.5E-06	0.0025				0.762	0.00354
6	static fire	off pad	10/25/2023		0.00105	0.000623	0.00161	0.0055	0.00025	0.128	0.0025				0.155	0.00381
6	static fire	retention pond	10/25/2023		0.00249	0.0005	0.00157	0.0056	0.00025	2.5E-06	0.0025				0.688	0.00238
7	launch	off pad	11/18/2023		0.0033	0.000344	0.0333	0.00334	0.00025	2.5E-06	0.0025				0.0755	0.00289
7	launch	retention pond	11/18/2023		0.00025	0.000295	0.372	0.00595	0.00025	2.5E-06	0.0025				0.656	0.00339
8	static fire	off pad	12/29/2023		0.00356	0.00145	0.0136	0.0107	0.00025	2.5E-06	0.00396		0.0107		0.0913	0.00586
8	static fire	retention pond	12/29/2023		0.00211	0.0013	0.0115	0.0142	0.000614	2.5E-06	0.00257		0.0142		1.4	0.00866
9	wet dress	off pad	02/14/2024		0.0124	0.000376	0.00223	0.00434	0.00025	2.5E-06	0.0479		0.00434		0.111	0.00698
9	wet dress	retention pond	02/14/2024		0.00192	0.000576	0.00315	0.00807	0.00025	2.5E-06	0.000959		0.00807		1.5	0.00716
10	deluge test	off pad	03/10/2024		0.00768	0.000273	0.00192	0.00534	0.000583	2.5E-06	0.00549		0.00534		0.0321	0.00444
10	deluge test	retention pond	03/10/2024		0.00214	0.0005	0.0013	0.00738	0.00025	2.5E-06	0.00149		0.00738		1.05	0.0034
11	launch	off pad	03/14/2024		0.0114	0.0003	0.0349	0.00534	0.00025	2.5E-06	0.00274		0.00534		0.00516	0.00544
11	launch	retention pond	03/14/2024		0.00184	0.0005	0.0526	0.00807	0.00025	2.5E-06	0.0025		0.00807		0.205	0.00349
12	deluge test	off pad	04/05/2024		0.00201	0.000384	0.0106	0.0118	0.00044	2.5E-06	0.000851		0.00534		0.941	0.00897
12	deluge test	retention pond	04/05/2024		0.003	0.001	0.001	0.0146	0.0005	2.5E-06	0.00294		0.00807		0.001	0.001
13	deluge test	off pad	05/29/2024	0.00122	0.00499	0.000821	0.00424	0.0074	0.00349	2.5E-06	0.00296	0.00025	0.00474	0.000065	0.131	0.00903
13	**deluge test**	**retention pond**	**05/29/2024**	**0.00286**	**0.00188**	**0.000107**	**0.00155**	**0.00949**	**0.00025**	**2.5E-06**	**0.00286**	**0.00025**	**0.00949**	**0.00025**	**1.42**	**0.00626**
14	launch	off pad	06/06/2024	0.00122	0.00457	0.0000717	0.019	0.00986	0.000932	0.149	0.0025	0.00025	0.00986	0.00025	0.0604	0.00287
14	**launch**	**retention pond**	**06/06/2024**	**0.00112**	**1.69E-05**	**0.0005**	**0.000282**	**7.47E-05**	**0.00025**	**0.139**	**0.0025**	**0.00025**	**7.47E-05**	**0.00025**	**0.00443**	**2.24E-05**
15	deluge test	off pad	07/15/2024	0.00122	0.00575	0.0005	0.021	0.0099	0.00025	2.5E-06	0.0025		0.00986	0.00025	0.0181	0.00422
15	deluge test	retention pond	07/15/2024		0.00261	0.0005	0.0161	0.0175	0.000696	2.5E-06	0.0025		0.0175		0.966	0.0119
Minimum 70% of Daily Average Concentrations to protect Aquatic Life and Human Health				**1.024**	**0.0489**	**0.00549**	**0.0311**	**0.00264**	**0.00947**	**2.39E-05**	**0.0853**	**0.00022**	**0.00264**	**0.00174**	**0.0626**	**0.00822**
1/2 MAL Concentrations. These values were orginally reported as "ND."				0.0025	0.00025	0.0005	0.0015	0.001	0.00025	2.5E-06	0.0025	0.00025	0.001	0.00025	0.0025	0.001

Toxic metal concentration data from Groom Declaration Exhibit G.

Red indicates concentrations higher than 70% of Daily Average Concentrations to protect Aquatic Life and Human Health. Note that thallium values were not flagged because data were originally reported as "ND."

Table 2. SpaceX Deluge Wastewater Analysis

Comparison of Means for Toxic Metals to Aquatic Life and Human Health Standards

		Source (all units mg/L)			Aquatic Life (all units mg/L)	Human Health (all units mg/L)	Number of Samples From Which Mean Is Calculated		
		central outfall	off pad	retention pond	85% of Daily Avg	85% of Daily Avg	central outfall	off pad	retention pond
Antimony, Total	Mean	0.0025	0.001951	0.00233	NA	1.244	1	7	6
Arsenic, Total	Mean	0.009535	0.005296	0.001705	0.0594	NA	2	15	15
Cadmium, Total	Mean	0.001435	0.000551	0.000713	0.00666	NA	2	15	15
Chromium, Total	Mean	0.0297	0.343799	0.347744	0.0378	0.583	2	15	15
Copper, Total	Mean	0.024025	0.008279	0.01106	0.00321	NA	2	15	15
Lead, Total	Mean	0.006275	0.000985	0.000547	0.0115	0.0126	2	15	15
Mercury, Total	Mean	2.5E-06	0.042669	0.024202	0.000838	0.000029	2	15	15
Selenium, Total	Mean	0.0099	0.007097	0.002988	0.103	NA	2	15	15
Thallium, Total	Mean	0.00025	0.00025	0.000442	NA	0.000267	1	6	6
Copper, Total, dup	Mean	0.00839	0.008457	0.011563	0.00321	NA	1	12	12
Silver, Total	Mean	0.00025	0.000224	0.00025	0.00212	NA	2	7	6
Zinc, Total	Mean	0.47955	0.178101	0.696362	0.0761	NA	2	15	15
Nickel	Mean	.	0.005735	0.004655	0.00998	1.324	0	11	11

Means are calculated from data on Groom Declaration Exhibit G. Values of 1/2 of the MAL were used for reported "ND"s. Two separate concentrations for Copper were reported.

Chromium is a comparison of reported total concentrations to standard based on hexavalent chromium. Conclusion is ambiguous.

June 2010 IPs, p. 169: *"If the average of the effluent data is equal to or greater than 85% of the calculated daily average limit, the permit will generally contain effluent limits for the toxic pollutant."*

retention pond. Averages of measured toxic metal concentrations exceed 85% of the average daily effluent limits for copper, mercury, thallium, and zinc.

Furthermore, the exceedances are not small or minor. The average copper concentration, based on the average of 15 samples from the retention pond is 3.4 times the comparative value for establishing an effluent limit in the permit. The average mercury concentration, based on the average of 15 "off pad" samples is more than 1,400 times the comparative value for establishing an effluent limit in the permit. The average thallium concentration, based on the average of 6 samples from the retention pond is 1.7 times the comparative value for establishing an effluent limit in the permit. The average zinc concentration, based on the average of 15 samples from the retention pond is 9.2 times the comparative value for establishing an effluent limit in the permit. These unambiguous results are based on significantly more samples than the four required in the June 2010 IPs as a basis for establishing toxic metal effluent limits, and yet none are proposed in the draft permit.

In addition to effluent limits for wastewater discharged through the retention ponds, the average concentrations based on samples of "off pad" wastewater indicate that similar toxic metal effluent limitations would be necessary to protect aquatic life and human health. Despite these high concentrations, however, the draft permit does not appear to require the capture, treatment, or testing of "off pad" deluge wastewater.

Failure to Meet Texas Surface Water Quality Standards for General Criteria

Failure to Demonstrate Compliance with Standards to Maintain Surface Water Temperatures

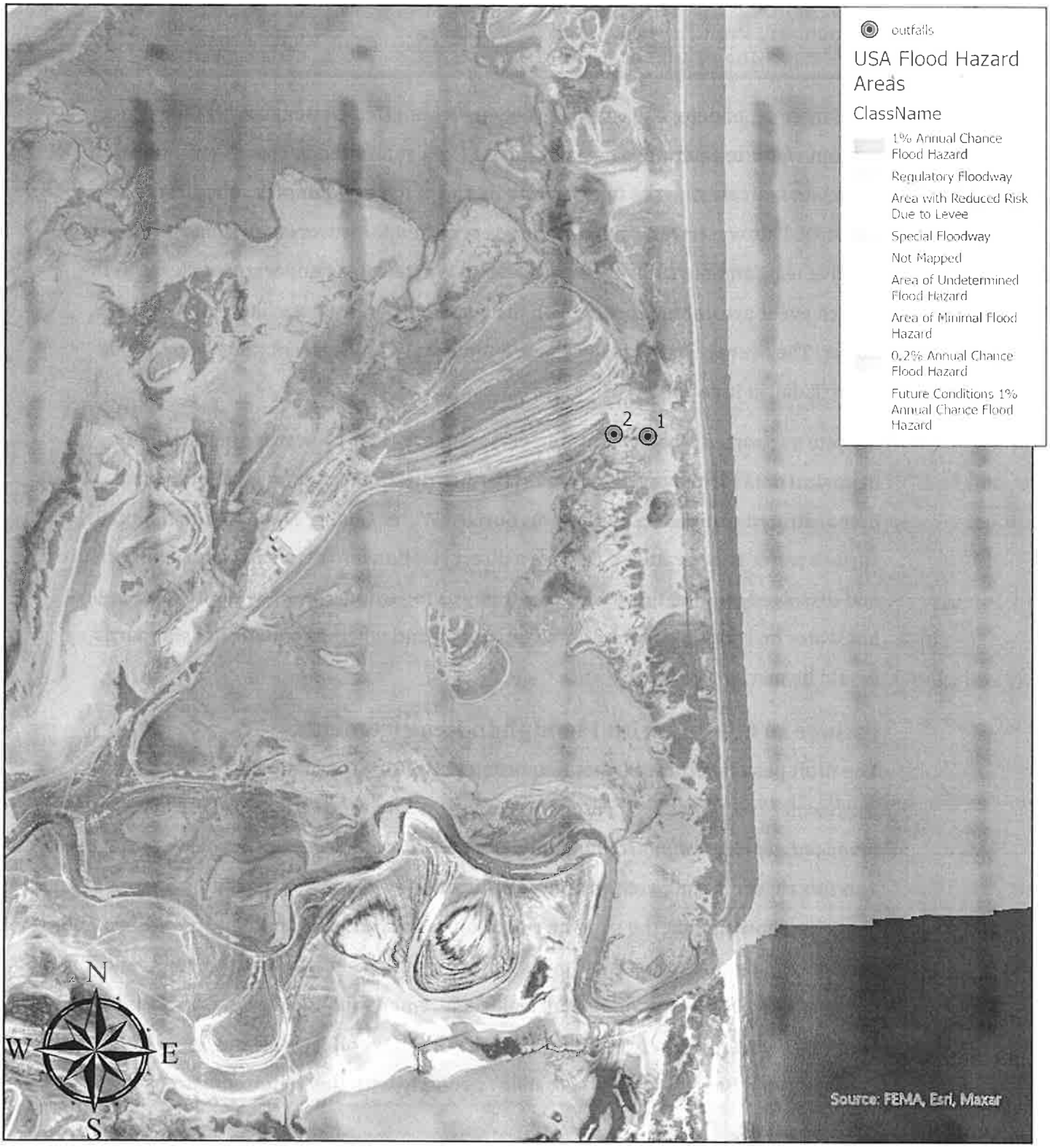
Texas Surface Water Quality Standards described in 30 TAC §307.4 General Criteria specifically apply to substances attributed to waste discharges and/or human activity. Among other requirements, waste discharges cannot increase temperatures in tidal river reaches, bay, or gulf waters by more than 4 °F in fall, winter or spring. Summer temperatures (June, July, and August) cannot be increased by more than 1.5 °F.

The larger set of deluge wastewater data in Groom Declaration Exhibit G does not contain water temperature measurements. Data submitted in SpaceX's Application, however, indicate that the temperature of one of the two samples submitted was 100.4 °F. This wastewater temperature is reported for wastewater from the retention pond at least an hour after the launch event. Wastewater temperatures closer to the launch event are unknown, based on the available data, but are likely significantly hotter. The average of recorded water temperatures in Segment 2301, Rio Grande River Tidal, in June is 85 °F.

Despite a reported wastewater temperature more than 15 degrees higher than historical data for the receiving water, neither the applicant nor TCEQ staff have demonstrated compliance with Texas Surface Water Quality Standards to maintain surface water temperatures. Despite a direct relationship between water temperature and dissolved oxygen, there is also no analysis regarding the effect of the discharge of hot water on receiving water dissolved oxygen and whether aquatic life standards would be met.

Failure to Comply with Floodplain Requirements

The draft permit includes Other Requirement 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."* Figure 1 to this report is a map of the 100-year floodplain over and surrounding SpaceX's facilities, showing that the site, the retention basins, and both outfalls lie within a 100-year floodplain that extends for miles from the launch site. Despite this contradiction between the 100-year floodplain permit requirement and the wastewater discharge setting, however, neither the applicant nor TCEQ have addressed and/or demonstrated how it would be possible to comply with this requirement.



GLENROSE ENGINEERING

TBPELS # F4092

STATE OF TEXAS
D. LAUREN ROSS
56647
LICENSED
PROFESSIONAL ENGINEER

D. Lauren Ross

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Figure 1. SpaceX Wastewater Outfalls And 100-Year Floodplain

Draft Permit Structural Failures to Achieve Texas Surface Water Quality Standards

In addition to failing to require any effluent limits for toxicity, sulfates, chlorides, or total dissolved solids, despite the availability of substantial information regarding how the proposed deluge water discharges would violate or contribute to the violation of Texas Surface Water Quality Standards, there are elements of the permit structure that make it either difficult or impossible to ensure compliance with the relevant standards. These issues include the following:

- Item 1 of the Industrial Wastewater Permit Application technical Report 1.0 (page 489/962 of the pdf) requires a list of raw materials, major intermediates, and final products handled at the facility. Potable, raw, and Type 1 reclaimed wastewater are listed as raw materials. Heat and combustion products of liquid oxygen and liquid methane (CO2 and water) are listed as final products. This description of materials fails to encompass elements contained within the space craft, launch vehicles, the launch pad, maintenance and operational materials, all of which might contribute components to the deluge wastewater for which a permit is requested. Without an accurate list of raw materials, intermediate products, and final products, it is not possible to accurately predict the range of chemicals that might be present in wastewater and for which an effluent limit might be appropriate.
- The permit application requires a flow schematic **with a water balance** (emphasis original) showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal. The referenced Attachment J, however, has no water balance information. Specifically, it lacks any flow quantification. There is no flow quantification anywhere else within SpaceX's application. Without any information from which to predict the timing and volume of

wastewater flow, it is impossible to understand potential impacts on the receiving water.

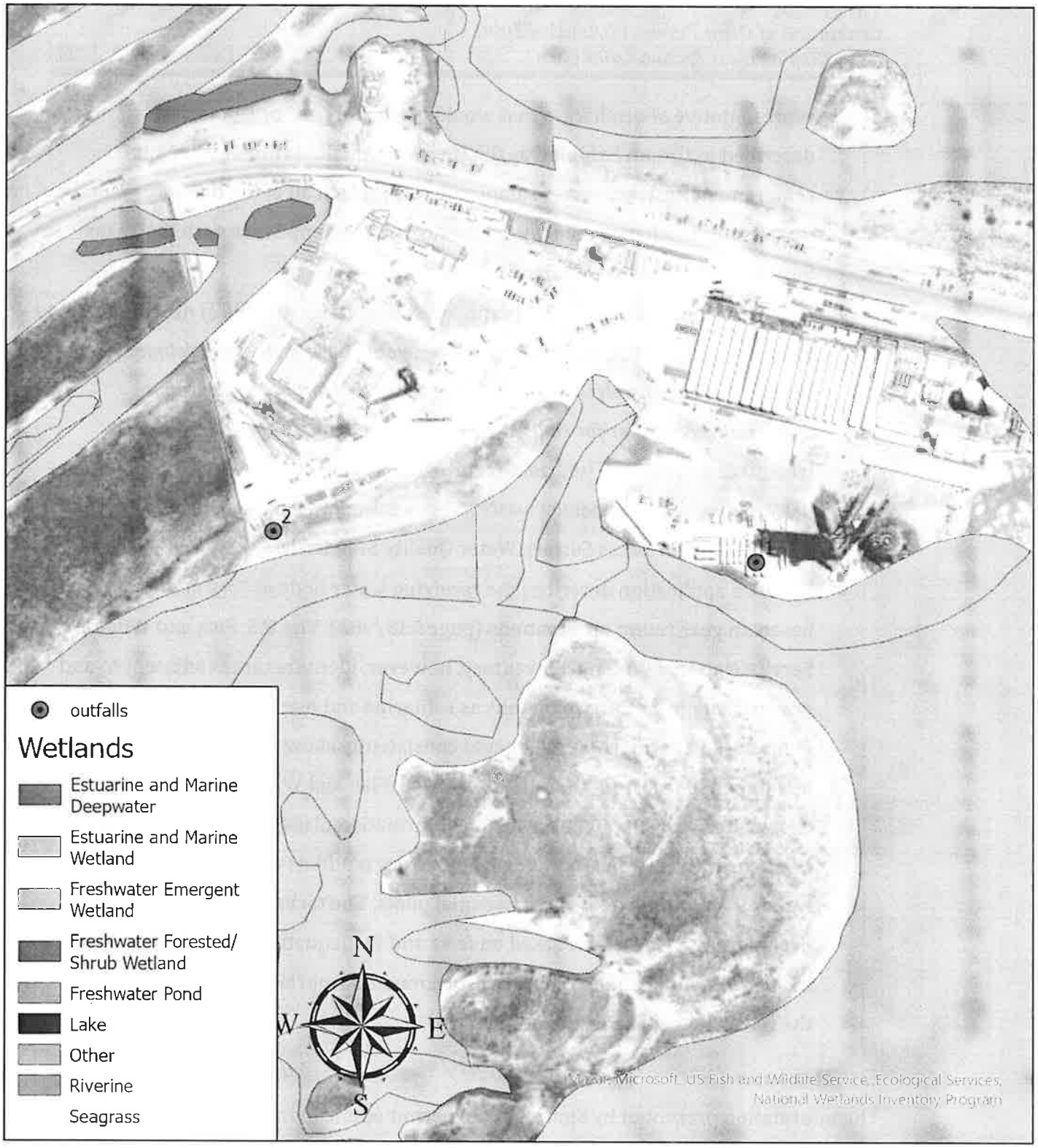
- Attachment G to SpaceX's application (page 579/962) indicates the approximate maximum dispersal of the deluge wastewater. This maximum extent of dispersal extends beyond the property boundary to the west and beyond the concrete curb to the southeast. Clearly not all of the deluge wastewater is proposed to be captured by the two retention ponds. Despite pollutant analyses of wastewater samples that indicate that all of the deluge wastewater, and not just that discharged from the retention ponds, represent a threat to the Texas Surface Water Quality Standards, there is nothing in the permit that addresses any discharge other than discharge from the retention ponds. There are no requirements in the draft permit to monitor and/or meet effluent limits, or flow limits, for this unregulated discharge from sources other than the retention ponds.
- The draft permit fails to include any limits on the volume of wastewater discharge.
- Given the episodic use of deluge water and temperature and pollutant concentration variability in the available wastewater data, the Space X application fails to demonstrate that sampling within one hour following the conclusion of the launch event, and after it is deemed safe for sampling personnel to enter the sampling location, will produce wastewater samples that accurately represent discharges that would be authorized by the draft permit. Without a permit requirement for representative wastewater samples, the permit cannot assure compliance with the Texas Surface Water Quality Standards.
- The draft permit only requires sampling of outfalls from two locations associated with retention ponds. Information in SpaceX's application, however, fails to demonstrate that wastewater samples from these locations will be

representative of discharges that would occur "off pad" or from what is described in Groom Exhibit G as the "Central Outfall." Without a permit requirement for wastewater samples that represent all of the deluge wastewater discharges, the permit cannot assure compliance with the Texas Surface Water Quality Standards.

- SpaceX's Application, Item 2. Treatment System (page 491/962) describes the treatment system this way: *"deluge water would be reused in the deluge system. Sedimentation controls would be utilized to be used/proposed to prepare industrial wastewater for re-use."* Reuse does not constitute a wastewater treatment system. The information provided is an inadequate basis for determining whether deluge wastewater treatment would meet any requirements of Texas Surface Water Quality Standards.
- SpaceX's application describes the receiving water body as "*dry mudflats*" based on year round observations (page 538/962). The U.S. Fish and Wildlife Service National Wetlands Inventory, however, identifies areas adjacent to and downstream from the two outfalls as estuarine and marine wetlands. See Figure 2. Furthermore, aerial images consistently show pools of deeper water less than 250 feet from Outfall 002. The U.S. Fish and Wildlife wetland designation and supporting available information disputes Space X's characterization of the receiving water as dry mudflats and intermittent, rather than intermittent with perennial pools. The technical foundation for the draft permit is, therefore, based on false and inadequate information provided in SpaceX's application. It fails to incorporate appropriate standards to protect the receiving water present at the site.

Conclusions

The information presented by SpaceX in the permit application for Industrial Wastewater Permit WQ000546200 is inconsistent and inadequate as a basis for a permit that would be protective of Texas Surface Water Quality Standards. Based on



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D. Lauren Ross

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Figure 2. SpaceX Deluge Wastewater Outfalls and U.S. Fish and Wildlife-Designated Wetlands.

available information regarding the toxicity, sulfate, chloride, total dissolve solids, and wastewater temperature, effluent limits and enforceable permit conditions would be required by the June 2010 IPs to assure the discharged wastewater would protect aquatic life and human health. In addition, the draft permit should include enforceable, specific requirements detailing when and where samples should be collected—so as to ensure that representative samples of the wastewater discharges are analyzed and reported.

Nothing in the draft permit addresses or limits unauthorized discharges (those not routed through the two proposed outfalls) that are described in SpaceX's application. Furthermore, the draft permit fails to address the location of the proposed wastewater retention ponds and the entire SpaceX site within the 100-year floodplain and the estuarine and marine wetlands immediately downstream from the two proposed outfalls.

Attachment 1. Ross Resume

D. Lauren Ross, Ph. D., P. E. – Principal Engineer

Dr. Lauren Ross is an environmental engineer and owner of Glenrose Engineering, Inc. in Austin, Texas since 1987.

Education

Ph. D. Civil Engineering, University of Texas at Austin; 1993
M. S. Civil Engineering, Colorado State University, Fort Collins, Colorado; 1982
B. S. Civil Engineering, University of Texas at Austin; 1977, *summa cum laude*

Registration, Certification, and Training

Registered Professional Engineer: State of Texas, 1984
OSHA 40-hour Hazardous Waste Health and Safety Training, 1993
Certified Professional in Erosion and Sediment Control, 2009
U. S. E.P.A. 5-Day Water Quality Analysis Simulation Program (WASP), 2016

Experience

Wastewater Engineering and Permitting

- Design of a constructed wetland system to treat high biochemical oxygen demand and concentrated nutrient wastewater from a tofu production facility.
- Soil, spring, and groundwater monitoring system recommendations for Texas land application systems: Barton Creek West Water Supply Corporation, Rocky Creek Wastewater Utility, Austin Highway 290 (Headwaters), City of Dripping Springs, Travis County Municipal Utility District No. 4, Scenic Greens, Hays County Water Control and Improvement District No. 1, Prentiss Properties Acquisition Limited Partnership.
- Water balance modeling for septic systems in the Barton Springs Edwards Aquifer Recharge and Contributing Zones.
- Water balance modeling for Three Rivers Refinery wastewater effluent irrigation.
- Environmental sampling and/or data analysis associated with wastewater effluent irrigation at Barton Creek West WSC, Hays County Water Control and Improvement District No. 1 (Belterra), Hays County Municipal Utility District No. 5 (Highpointe) Three Rivers Refinery, and West Cypress Hills wastewater effluent irrigation.

Ground Water

- Pollution concentration predictions in Barton Springs from a pipeline leak using a numerical model based on field dye trace data.
- Evaluation of environmental data to determine coal combustion waste disposal impacts in the Four Corners region.
- Groundwater contamination study, waste evaluation, sampling, and analysis for petroleum refinery.
- Closed landfill study: field investigation, compiled and reviewed historical records, assessed potential environmental consequences, installed, sampled, and evaluated data from monitoring wells.
- Conducted geologic assessment, designed and installed groundwater monitoring well system for municipal landfills.
- Designed a system to limit methane and leached organic chemical migration from a closed municipal landfill into a karst limestone sole-source drinking water aquifer.

- Developed groundwater management alternatives to limit withdrawal and related land subsidence.

Environmental Assessment

- Baseline and impact assessment for wastewater line remediation project including evaluation of soils, geology, topography, and flow regimes.
- Environmental Assessment evaluation for a proposed project to convert an inactive crude oil pipeline, largely constructed in 1950, into active service as a high-pressure fuel transmission line. Work included: evaluating historical spill records; calculating statistical failure probabilities for different pipeline reaches and spill sizes; predicting time and concentrations of toxic and carcinogenic constituent migration through and discharge from a karst limestone aquifer; and evaluating the Operational Reliability Assessment performed for the pipeline.

Solid Waste

- Investigated waste metal migration in soil for petroleum land treatment unit.
- Investigated geologic setting and groundwater contamination and designed recovery well system for groundwater remediation at a commercial RCRA waste storage impoundment.
- Designed petroleum waste land treatment units: baseline soil and groundwater characterization; monitor well system design and installation; lysimeter systems; and land treatment demonstrations to determine maximum waste capacity and loading rates.
- Developed sampling procedures and in-place treatment for RCRA waste at electrical generation power plants.
- Managed and prepared technical phases of Industrial Solid Waste Permit Applications under RCRA and Texas Natural Resource Conservation Commission regulations for waste management facilities: land treatment units, surface impoundments, container storage areas.
- Designed closure plans for RCRA waste impoundments to store, treat and dispose of inorganic acids, spent pickle liquor, and organic chemicals.
- Review of proposed municipal solid waste landfill applications.

Water Quality and Engineering Design

- Gravity-flow retention and irrigation water pollution control system for a large hospital complex within the contributing watershed of the karst Barton Springs Aquifer.
- Design of an innovative bioretention water quality control system for a municipal complex located on the Barton Springs Edwards Aquifer Recharge Zone and permitting under Texas Commission on Environmental Quality Edwards Aquifer protection rules.
- Design of an innovative pervious pavement storm runoff detention and treatment system for a proposed parking lot to be located on the Northern Edwards Aquifer Recharge Zone and permitting under stringent City of Austin and Texas Commission on Environmental Quality water quality protection rules.
- Wet pond design and detention basin retrofit to treat stormwater from existing residential and commercial development in the Oak Springs neighborhood in East Austin.
- Combined wet pond and bioretention design for commercial storm runoff.
- Combined wet pond and retention/irrigation design for an existing 162-acre residential development over the sensitive Barton Springs recharge zone in the City of Austin, Texas.

- Municipal engineer responsible for all water quality design, review, inspection, rules, and ordinances for the City of Sunset Valley, Texas.
- Analyzed nonpoint pollution sources and structural and non-structural retrofit controls for recharge and contributing zone of a sensitive karst aquifer.
- Analyzed nonpoint pollution sources and structural and non-structural retrofit controls as water quality engineer for the City of Sunset Valley, Texas.
- Technical consultant to the City of Austin on implementation of the 1991 Comprehensive Watersheds Ordinance and associated water quality monitoring system.
- Analyzed stormwater conveyance and flooding potential, designed regional detention basin to protect natural ecological systems for Armand Bayou Master Drainage Study.
- Estimated long-term groundwater yields based on rainfall rates, soil type, and river losses for Chisumbanje region of Zimbabwe, Africa.
- Evaluated land use, soils, agricultural and silvicultural practices to assess non-point pollution potential in the San Jacinto River Basin.
- Designed storm water drainage for subdivisions and regional water detention facilities.

Teaching and Presentations

- Semester Course in Statistics for Environmental Monitoring; University of Texas at Austin; Fall 1995.
- Semester Course in Water Resources, University of Texas at Austin.
- Land Development Seminar; Travis County Bar Association, 12 July 1996.
- Water Quality Protection Programs to Reduce Nonpoint Source Pollution, a presentation to the Barton Springs/Edwards Aquifer Conservation District's Watershed Management: Challenges and Innovations—A Nonpoint Source Pollution Conference, 25 July 1996.
- Presenter at Emerging Issues in Groundwater Regulation panel discussion, Key Environmental Issues in U.S. EPA Region VI conference, hosted by U.S. EPA and the American Bar Association, May 12-13, 1997.
- Short Courses in Statistics for Environmental Monitoring; University of Texas Continuing Engineering Studies Program: Spring 1995, Fall 1995, Spring 1996, Spring 1997, Spring 1998.
- Short Courses in Statistics for Environmental Monitoring; Louisiana Department of Environmental Quality. Focus on surface water sampling considerations, trend analysis and methods to assess the achievement of data quality objectives.

Statistics

- Evaluated surface and groundwater measurements for normality, differences in mean, spatial variability, and time series analysis. Techniques used include Student's t-test, Wilcoxon test, parametric and non-parametric ANOVA, Fourier series decomposition, Shapiro-Wilkes test, and Chi-squared tests.
- Geostatistical analysis and kriging of groundwater transmissivity data.
- Statistically-based sampling design including optimum sample number, stratified random sampling, and assessment of monitoring parameters to achieve efficient sampling designs.

Field/ Laboratory Experience

- Field supervision of auger drilling, rotary-bit drilling, well installation, Shelby-tube core and split-spoon sampling, and soil type identification using the Unified Soils Classification System
- Surface, groundwater and hazardous waste sampling for a variety of constituents, including volatile organic constituents, dioxins, nutrients, metals, anions, cations, and other collection-sensitive parameters.
- Laboratory experiments to measure unsaturated hydraulic conductivity, water content versus soil water pressure, and other geophysical soil properties.

Reports and Publications

- *Evaluation of Draft Permit WQ0005462000 for Space Exploration Technologies Corporation Deluge Wastewater,* prepared for Marisas Perales, attorney and Lauren Ice, attorney, December 27, 2024.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application of Corix Utilities (Texas) Inc. for TPDES Permit No. WQ0013977001 on behalf of Environmental Stewardship, December 19, 2024.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application of Clancy Utility Holdings, LLC for an Operating Permit from the Hays Trinity Groundwater Conservation District on behalf of Save Our Springs Alliance and Save the Pedernales, September 16, 2024.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application by San Miguel Electric Cooperative, Inc. for Renewal and Major Amendment to Texas Pollutant Discharge Elimination System Permit No. WQ0002043000 on behalf of Swaim, Lively & Shorty, Owners, July 3, 2024.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application by City of Kyle for a Major Amendment to Texas Pollutant Discharge Elimination System Permit No. WQ001041002, on behalf of San Marcos River Foundation, Inc, May 29, 2024.
- *Total Petroleum Hydrocarbons Present in Soils at the Absher Equine Center, Flatonia, Texas,* prepared for Phillip Polin, attorney, February 19, 2024.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application of San Miguel Electric Cooperative, Inc. for Renewal/Revision of Permit No. 60, San Miguel Lignite Mine, Areas F, G & H, McMullen County, Texas before the Railroad Commission of Texas, on behalf of Protestants Swaim, Lively, and Shorty Owners, October 9, 2023.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application by Undine Texas Environmental, LLC for New Texas Pollutant Discharge Elimination System Permit No. WQ0016046001, on behalf of Brazoria County, December 14, 2023.
- *Prefiled Direct Testimony of D. Lauren Ross, PH. D., P.E.,* regarding Application by SJWTX, Inc. and Mary Jane Cielencki for New Texas Pollutant Discharge Elimination System Permit No. WQ0016052001, on behalf of Protestants Annette Gass, Rita Acker, and Rhonda Luman, July 19, 2023.
- *Prefiled Direct Testimony of D. Lauren Ross, Ph.D., P.E. on Remand,* regarding Application by City of Liberty Hill for Renewal of Texas Pollutant Discharge Elimination System Permit No. WQ0014477001, on behalf of Protestant Stephanie Morris, June 7, 2023.
- *Warrior Oil Tank Well Tank Battery and Associated Contamination,* prepared for Phillip Poplin, attorney, January 2, 2023.

D. Lauren Ross, Ph. D., P. E. – Principal Engineer

- *Pre-Filed Direct Testimony of D. Lauren Ross, Ph.D., P.E. on Behalf of the Swaim, Lively & Shorty Protestants, regarding San Miguel Electric Cooperative, Inc.'s Application for New Permit, X, Y, and Z Area Lignite Mine, McMullen County, Texas,* Railroad Commission of Texas Docket No. MR-21-00006257, October 11, 2022.
- *Prefiled Direct Testimony of D. Lauren Ross, Ph.D., P.E.* regarding Application by City of Liberty Hill for Renewal of Texas Pollutant Discharge Elimination system Permit No. WQ0014477001, on behalf of Protestant Stephanie Morris, July 20, 2022.
- *Stormwater Control Measures Audit: Water Conservation Supply and Ecosystem Benefits,* memorandum for City of Austin, January 31, 2022.
- *Direct Prefiled Testimony in Application from Kendall West Utility, LLC for a new TPDES Permit WQ0015787001* for Save Our Springs Alliance, January 28, 2022.
- *Storm Water Pollution Prevention Plan for Country Club Creek West; Roy G. Guerrero Park Channel Stabilization, City of Austin C.I.P. No. 5848.026,* for City of Austin, November 2021.
- *Review of Houston Tradeport Municipal Setting Designation Application* for EarthJustice, April 2021.
- *Prefiled Testimony in Application by Silesia Properties, LP for TCEQ Permit WQ0015835001,* for Greater Edwards Aquifer Alliance, Mary 31, 2021.
- *Prefiled Testimony for Application of Cherryville GP, Inc. and Cherryville #5 LTD for new TPDES Permit No. WQ0015738001,* for Save Our Springs Alliance, January 15, 2021.
- *Review of Application to Register Domestic Septage Beneficial Use Site; Jack County, Texas for the Two Bush Community Action Group, October 15, 2020.*
- *Prefiled Testimony in Application of Texas Regional Landfill Company, LP, for MSW Permit No. 1841B* for Marisa Perales, attorney, August 25, 2020.
- *Review of Proposed City of Liberty Hill Sewage Effluent Discharge to the South Fork San Gabriel River,* prepared for Texas RioGrande Legal Aid, August 12, 2020.
- *Urban Sinkhole Evaluation and Mitigation Preliminary Engineering Report* with Geosyntec Consultants, January 31, 2020.
- *Prefiled Testimony in Application by Aqua Texas, INC> for TPDES Permit No. WQ0015642001,* for Mary Conner, attorney, June 21, 2019.
- *Black Mountain Sand Mine Review,* Wintergarden Groundwater Conservation District, January 2019.
- *Soils, Surface Water and Groundwater Hydrology in the Vicinity of the Peeler Ranch in Atascosa County, Texas,* Mary Whittle, attorney, August 2018.
- *June 28 to 29, 2018 Field Investigation Report for Peeler Ranch, Atascosa County, Texas,* Mary Whittle, August 2018.
- *Direct Testimony in Application by the City of Dripping Springs for New TPDES Permit No. WQ0014488003,* for Save Our Springs Alliance, July 24, 2018.
- *Sampling Plan for June 28 to 29, 2018 Peeler Ranch Atascosa County, Texas,* Mary Whittle, June 2018.
- *City of Houston Sanitary Sewer Overflow Data Summary: Preliminary Report,* Eric Allmon, attorney, June 2018.

- *Water Quality Control Concept Design; Courtyard Park @ 5811 Southwest Parkway; Austin, Texas* for RealTex Ventures LP, April 11, 2018.
- *Arrowhead Landfill Protestant's Field Protocols,* for EarthJustice, May 26, 2017.
- *Review of Proposed City of Dripping Springs Wastewater Effluent Discharge to Onion Creek,* Protect Our Water, November 2016.
- *Prefiled Testimony on Application of 130 Environmental Park, LLC for Proposed TCEQ Municipal Solid Waste Permit No. 2383,* attorney Marisa Perales, June 2016.
- *Barnes Family Farm Water Availability Report,* Barnes Family Farm, Inc., April 2015.
- *Preliminary Engineering Design of Storm Runoff Treatment System,* Parkside Montessori Community School, February 2015.
- *Declaration regarding Wetlands Development in Galveston Baykeeper, Inc. vs. Trendmaker Homes, Inc.,* Galveston Baykeeper, Inc., November 2014.
- *Prefiled Testimony on Application of DHJB Development, LLC for a Major Amendment to TPDES Permit No. WQ 0014975001,* attorney Mary Conner, October 2014.
- *Potential Improvements to the Join Task Force Municipal Separate Storm Sewer MS4 Permit,* Houston Parks Board, Galveston Bay Foundation, Buffalo Bayou Partnership and Bayou Preservation Association, March 2014.
- *Asher Property Water and Soil Sampling Results* for Phillip Poplin Law Office, 23 January 2014.
- *Circle Acres Environmental Sampling Report,* Ecology Action, January 2014.
- *Potential Improvements to the Harris County Municipal Separate Storm Sewer MS4 Permit,* Houston Parks Board, Galveston Bay Foundation, Buffalo Bayou Partnership, and Bayou Preservation Association, January 2014.
- *Circle Acres Preliminary Engineering Biofilter Design*, Ecology Action, August 2013.
- *Circle Acres Storm Water Management Concept Plan*, Ecology Action, May 2013.
- *Comments on Draft Environmental Assessment of the Proposed Longhorn Pipeline Reversal*, City of Austin, September 2012.
- *Water for Coal-Fired Power Generation in Texas: Current and Future Demands,* for Sierra Club, February 2012.
- *Land-Applied Wastewater Effluent Impacts on the Edwards Aquifer,* for Greater Edwards Aquifer Alliance and Save Our Springs Alliance, November 2011.
- *Proposed White Stallion Coal-Fired Power Plant Water Demands and the Highland Lakes Water Supply,* for Sierra Club, June 2011.
- *Water Treatment Plant #4 Environmental Monitoring Program,* for City of Austin, with INTERA, Inc., June 2011.
- *Remediation to Protect the Conemaugh River from Acidic Groundwater,* for Environmental Integrity Project, Lisa Widawsky, attorney, March 2011.
- *What Would You Drink if the Well Ran Dry? Nolan County Water and the Proposed Tenaska Coal-Fired Power Plant,* for Lone Star Chapter of the Sierra Club, November 2010.

- *A Unique Water Quality Retrofit Project in Austin, Texas,* with Scott Muchard, Rebecca Batchelder, and Tom Franke, StormCon; The North American Surface water Quality Conference & Exposition, August 5, 2010, San Antonio, Texas.
- *Potential Stormwater Impacts from Sand and Gravel Excavation on the Llano River, Texas,* for Brad Rockwell, attorney, February 2010
- *Engineering Analysis of Jeremiah Ventures L.P. Propose Wastewater Irrigation Areas,* submitted to City of Austin, December 2009.
- *Pease Park Water Quality and Stream Restoration: Preliminary Engineering Report*, with PBS&J, Inc., for City of Austin, August 2009.
- *Fort Branch Watershed Management Area Reaches 6 and 7; Final Environmental Assessment,* for City of Austin, August 2009.
- *Tannehill Branch Wastewater Line Environmental Assessment,* for City of Austin, August 2009.
- *Water Quality and Quantity Impacts from Proposed South Texas Plant Expansion,* submitted to Sustainable Energy and Economic Development (SEED) Coalition, April 2009.
- *City of Sunset Valley Environmental Monitoring Program: Air Quality,* submitted to the City of Sunset Valley, Texas, November 2008.
- *Recommendations to Stabilize Construction at Ranches at Hamilton Pool,* submitted to Brad Rockwell, attorney, October 2008.
- *Williamson Tributary 2 Water Quality Retrofit: Preliminary Design,* prepared for the City of Austin, October 2008.
- *Twin Oaks Community: Conceptual Design for Tofu Wastewater Treatment,* submitted to Twin Oaks Intentional Community, June 2008.
- *City of Sunset Valley Surface Water Quality Monitoring Program,* for the City of Sunset Valley, Texas, June 2008.
- *Storm Sewer Retrofit Alternatives to Improve Water Quality in Fort Branch Creek Reaches 6 and 7,* for City of Austin, December 2007.
- *Lundelius-McDaniel Water Quality Retrofit Project: Phase I Environmental Assessment* for HDR Engineering, Inc., September 2007.
- *Effects of Four Corners Power Plant Coal Combustion Waste Disposal on Surface and Groundwater Quality,* submitted to Lisa Evans, Earth Justice Attorney, August 2007.
- *Preliminary Review of the McCarty Road Landfill Proposed Major Permit Amendment,* submitted to Monica Jacobs, Attorney, August 2007.
- *Surface Water and Sediment Sample Results Associated with the Walsh Cresson Ranch and Walsh West Ranch,* submitted to Mary Sahs, attorney, May 2007.
- *Biofiltration Water Quality Control Design Standards,* submitted to the City of Sunset Valley, Texas, 2007.
- *Review of Proposed XTO Energy, Inc. Centralized Landfarm Facility, Jack County, Texas,* submitted to Robert Thompson, Ph.D., July 2006.
- *Carson Creek Watershed Flood Mitigation Project: Impacts on Erosion and Water Quality,* submitted to PBS&J, Inc., December 2005.

- *Water, Mud, Mold, and More: Toxic Chemicals and Staying Safe When Returning to Coastal Louisiana*, Common Ground Relief, December 2005.
- *West Lamar Wastewater Replacement Line: Phase I Environmental Assessment,* prepared for City of Austin, December 2005.
- *Lundelius-McDaniels Water Quality Retrofit Project Preliminary Engineering Report,* submitted to City of Austin with HDR Engineering, Inc., October 2005.
- *Surface Water and Sediment Sample Results Associated with the Diamond Shamrock Three Rivers Refinery Wastewater Irrigation Fields,* submitted to: Ms. Mary Sahs, attorney, September 2005.
- *Diamond Shamrock Three Rivers Refinery Wastewater Irrigation Water Balance* submitted to: Ms. Mary Sahs, attorney, June 2005.
- *Intrawell Comparisons for Arsenic and Benzene Concentration Measurements in Maxwell Landfill Monitoring Well 4.* Submitted to: Robert S. Kier Consulting, Inc., June 2005.
- *Groundwater Sampling Protocols: Ruby Ranch Subdivision.* Submitted to Neighbors Organized in Defense of the Environment. May 2005.
- *Oak Springs Detention Pond Retrofit for Water Quality,* for the City of Austin, February 2005.
- *TR-20 Computer Simulations to Determine Runoff Detention Stage/Storage/Discharge Relationships Meeting Specified Erosion Control Criteria* for City of Austin, January 2005.
- *Potential for Surface and Groundwater Contamination at the Waste Management of Texas, Inc. Westside Landfill,* submitted to Mary K. Sahs, attorney, September 2004.
- *Recommendations for Edwards Aquifer Authority Water Quality Regulations.* Presented to the Edwards Aquifer Authority Water Quality Task Force in San Antonio, Texas, 17 February 2004.
- *Tanglewood Forest Regional Detention Pond: Phase I Environmental Assessment,* prepared for City of Austin, October 2003.
- *Effects of Impervious Cover Limits to Improve Water Quality*, submitted to City of Sunset Valley, January 2003.
- *EcoCreto ™Pervious Pavement Water Quality & Flood Control Design.* January 2003.
- *Sampling at the Alcoa Sandow Lignite Mine.* For Neighbors for Neighbors, Inc. December 2002.
- *Preliminary Review of Northern Hays and Southwestern Travis Counties Water Supply System Project Environmental Impact Study; October 2001,* 15 January 2002.
- *Water Quality Design Calculations Wells Branch Church of Christ Austin, Texas* for EcoCreto, Inc. September 2001.
- *Product Pipeline Hazards over Karst Aquifers.* American Society of Civil Engineering Environmental and Pipeline Engineering Convergence 2000. July 23 – 26, 2000, Kansas City, Missouri.
- *Review of the Environmental Assessment of the Proposed Longhorn Pipeline System.* January 2000.
- *Comments on the Final Environmental Assessment of the proposed Longhorn Pipeline System.* January 2001.

D. Lauren Ross, Ph. D., P. E. – Principal Engineer

- *Water Fights: Citizens Struggle to Shape a City in Central Texas.* From *Under the Blade: The Conversion of Agricultural Landscapes,* Westview Press, Boulder, Colorado. 1999.
- *Hydrogeologic Setting and Potential Contamination of Barton Springs from a Longhorn Pipeline Discharge.* September 1998.
- *Watershed Protection Utility Master Plan: Integrated Solutions Regulatory Inventory.* Prepared for the City of Austin. August 1998.
- *Watershed Protection Utility Master Plan: Integrated Solutions Regulatory Protocols.* Prepared for the City of Austin. July 1998.
- *Statistical Analysis of Soil Samples for Quanex Land Treatment Unit.* Prepared Quanex Gulf States Tube Division. December 1997.
- *A Scientific Basis for Edwards Aquifer Protection,* prepared for the American Bar Association Conference: Key Environmental Issues in U.S.EPA Region VI, May 1997.
- *Robert Mueller Municipal Airport Phase II Environmental Assessment Work Plan, w*ith Geomatrix, Inc., prepared for the City of Austin. April 1997.
- *Water Quality Protection Programs to Reduce NPS Pollution.* Presented at Barton Springs/Edwards Aquifer Conservation District Conference: Watershed Management: Challenges and Innovations. July 1996.
- *Water Quality Ordinance Amendments to the City of Sunset Valley Land Development Code.* Prepared for the City of Sunset Valley. April 1996.
- *Soil and Water Quality Monitoring Plan for the City of Austin Municipal Golf Courses.* Prepared for the City of Austin. January 1996.
- *D. C. Reed Estate Water Quality Protection Zone Monitoring Program.* January 1996.
- *Soil Monitoring Plan for Utility Trench Segment through SWMU 216.* Prepared for the City of Austin. January 1996.
- *Waller Creek Flood Control Master Plan.* Prepared with Loomis and Associates for the City of Austin. December 1995.
- Barton Springs Water Protection Efforts Challenged *Nonpoint Source News-Notes,* published by U. S. EPA.. August/September 1995.
- *Statistical Methods for Environmental Monitoring*. Lecture notes for Continuing Engineering Studies Short Course, University of Texas at Austin. 5 to 7 April 1995.
- *"Don't Mess with Texas" Litter Survey.* Prepared for GSD&M Associates, Inc. With Capitol Environmental Services. April 1995.
- *Long Term Viability of the Edwards Aquifer for the City of Sunset Valley Water Supply.* Report prepared for the City of Sunset Valley. February 1995.
- *Character and Magnitude of Degradation in* the *Barton Springs Zone* Report prepared for Loomis and Associates as part of the Barton Springs Zone Retrofit Project, Austin, Texas.. December 1994.
- *Report on Septic Systems in* the *Barton Springs Zone.* Report prepared for Loomis and Associates as part of the Barton Springs Zone Retrofit Project, Austin, Texas. December 1994.

- *"Don't Mess with Texas" Litter Survey Work Plan.* Report prepared for GSD&M Associates, Inc. With Capitol Environmental Services. October 1994.
- *Statistical Analyses to Establish Constituent Action Limits for Detection Monitoring: Industrial Waste Control Site, Sebastian County, Arkansas.* Prepared for IT Corporation. June 1994.
- *Review of Environmental Information Document for Proposed Lacey Pig Operation.* Letter report prepared for Mr. Michael J. Hobbs. April 1994.
- *Barton Creek and Barton Springs: Petition to Texas Natural Resource Conservation Commission for Designation as Outstanding National Resource Waters.* (with others). April 1994.
- *Base Flow in Barton Creek and Statistical Analysis of Water Quality Data for Barton Creek and Barton Springs, Austin, Texas.* Report prepared for Loomis, Santos and Associates. March 1994.
- *Statistical Analysis: Background Sampling Investigation at Bergstrom Air Force Base, Texas.* Prepared for Southwest Laboratories. January 1994.
- *Multivariate Statistical Analysis of Environmental Monitoring Data.* Petroleum Hydrocarbons Conference sponsored by the National Ground Water Association and American Petroleum Institute, Houston, Texas. November 1993.
- *An Environmentalist's Perspective on Pump-and-Treat Groundwater. Ground Water Monitoring and Remediation*, Vol. XIII, No. 4. 1993.
- *The Importance of the SOS Water Quality Ordinance to the Protection of the Barton Springs Segment of the Edwards Aquifer.* Prepared for the Texas Natural Resource Conservation Commission. September 1993.
- *Statistical Analyses to Establish Constituent Action Limits for Detection Monitoring.* Report prepared for IT Corporation for IWC Site in Fort Smith, Arkansas. June 1993.
- *Multivariate Statistics for Environmental Monitoring Data.* Doctoral Dissertation for the University of Texas at Austin. May 1993.
- *Statistical Analyses to Establish Constituent Action Limits for Detection Monitoring.* Prepared for IT Corporation. May 1993.
- *Statistical Analysis of Phase I and Phase II Background Soil Measurements.* Report prepared for Quanex Corporation. February 1993.
- *Sampling Recommendations to Detect Chromium Contamination in Soils.* Letter report to Mr. Phil Bullock, Southwest Laboratories. 16 August 1993.
- *Recommendations for Sampling: West Dallas Lead Project.* Prepared for International Technology Corporation. August 1992.
- *Implementation Strategy for the Pollution Reduction Standard of the SOS Water Quality Referendum.* Prepared for Save Our Springs Coalition (SOS). July 1992.
- *Statistical Determination of Background Values for Groundwater Based on Student's T-Test, Tolerance Interval and Mann-Whitney Analysis.* Prepared for Quanex Corporation. September 1991.
- *Phase I Environmental Site Assessment: Jollyville/360 Tract; 9401 Capitol of Texas Highway; Austin, Texas.* (with others). June 1991.
- *Statistical Analysis: Koch East Plant Soil Samples.* (with others). May 1991.

- *Soil Metal Evaluation Final Report.* Prepared for Chevron USA, Inc. (with others). October 1990.
- *Review of Hydrogeology and Potential Contamination of Ramada Inn Site.* Report prepared for Capitol Environmental Services. September 1990.
- *Malone Service Company Compliance Plan.* Prepared as part of a RCRA hazardous waste facility permit application. October 1989.
- *Malone Service Company Geology Report.* Prepared as part of a RCRA hazardous waste facility permit application. October 1989.
- *HST3D Groundwater Model to Predict Waste Migrations.* November 1988. Report for Union Carbide Corporation.
- *Statistical Issues in Monitoring Groundwater Quality.* (with others). Prepared for Texas Water Commission. Fall 1987.
- *Land Treatment of Sugar Cane/Ethanol Process Waste.* (with others). May 1987.
- *Phase 1: Feasibility Study for the Development of Groundwater for Irrigation in the Chisumbanje Area.* Prepared for the Zimbabwe Regional Water Authority. (with others). January 1987.
- *Morton Thiokol, Inc. RCRA Hazardous Facility Part B Permit Application.* (with others). 1985.
- *Air Products Company RCRA Hazardous Facility Part B Permit Application.* (with others). 1985.
- *Quanex Corporation: Gulf States Tube Division RCRA Hazardous Facility Part B Permit Application.* (with others). 1985.
- *Union Carbide Corporation RCRA Hazardous Facility Part B Permit Application.* (with others). 1985.
- *Koch Refining Company RCRA Hazardous Facility Part B Permit Application.* (with others). 1984.
- *Evaluation of Proposed Waste Disposal in Salt Caverns in the Boling Dome.* Prepared for the County of Wharton, Texas. (with others). February 1985.
- *Closure Plans for Two Cooling Tower Blow-Down Impoundments.* Prepared for Houston Lighting and Power. 1984.
- *Landfills in the Vicinity of Austin, Texas.* Prepared for the City of Austin. (with others). November 1984.
- *Maximizing the Statistical Performance of Groundwater Monitoring Systems.* Prepared for Petroleum Hydrocarbons and Organic Chemicals in Groundwater Conference, sponsored by the National Water Well Association. November 1984.
- *Applicability of Student's t-test to Groundwater Monitoring.* American Geophysical Union Conference, Fort Collins, Colorado. April 1984.
- *An Analytical Model to Predict Soil Water Profiles.* Master's Thesis, Colorado State University, Fort Collins, Colorado. June 1982.
- *Groundwater Management Options for the Harris/Galveston Coastal Subsidence District.* (with others). 1979.

- *Armand Bayou Master Drainage Study*. Espey Huston and Associates, Inc. (with others). August 1979.
- *Non-Point Source Pollution Assessment for the San Jacinto Watershed.* Espey Huston and Associates. 1978.

ATTACHMENT 9

BARRY SULKIN
ENVIRONMENTAL CONSULTANT
4443 Pecan Valley Road
Nashville, TN 37218
(615)255-2079

TO: Lauren Ice, Perales, Allmon & Ice, P.C.

FROM: Barry Sulkin

DATE: December 27, 2024

I am an environmental investigator, consultant, and scientist. I have expertise in NPDES permitting and other aspects of the federal Clean Water Act and related state programs. I regularly conduct research projects, field studies, sampling, testing, site evaluations, stream/wetland determinations, permit negotiations, information and file research, photography, and expert witness presentations concerning water quality, NPDES permitting, TMDLs, and other environmental issues.

I have been retained by Perales, Allmon & Ice, P.C. to review the application prepared by Space Exploration Technologies Corp. and the associated draft permit WQ0005462000 prepared by TCEQ that would authorize a discharge of industrial deluge water from Starbase launch pad Site in Cameron County, Texas to tidal wetlands, thence to Rio Grande Tidal in Segment No. 2301 of the Rio Grande Basin. I have been asked to provide an opinion as to whether the draft permit will comply with the Clean Water Act and ensure that existing uses of receiving waters are being maintained.

My overall opinion in this matter is that the application is incomplete and the data included in it is unreliable. The draft permit was not prepared in accordance with the TCEQ's own stated procedures, meaning that there is no reliable basis for the draft permit, particularly with regard to the lack of effluent limits. I explain the basis of these opinions in more detail below.

Qualifications:

I hold an M.S. in Environmental Engineering from Vanderbilt University (1987) and a B.A. in Environmental Science from the University of Virginia (1975). I currently work as a private consultant on environmental matters for attorneys, environmental/citizen organizations, cities, individuals, businesses, media, and as a sub-contractor for other consultants/engineers. Prior to consulting, I worked for several years with the Division of Water Pollution Control at the Tennessee Department of Health and Environment. From 1976 to 1981, I served as a Water Quality Specialist where I inspected drinking water, and municipal and industrial wastewater systems for a 41-county area; investigated spills, underground storage tanks, fish kills, and citizen complaints; conducted stream studies; and coordinated with the enforcement program. From 1981 to 1982, I served as Assistant

Manager of the Enforcement Section. In this position, I coordinated statewide investigations and legal actions for drinking water, wastewater, and safe dam programs. From 1982 to 1984, I served as the Enforcement Coordinator, meaning I coordinated enforcement actions in municipal and industrial drinking water and wastewater programs in a 24-county region, including fish kills, spills, complaint investigations, and stream studies. From 1984 to 1985, I was the Special Projects Assistant in the Director's Office where I provided statewide coordination and technical assistance involving water pollution, permitting, deep well waste injection regulations, clear-cutting forestry problem investigations, animal waste problems, public relations and media presentations, state planning and policy, enforcement, and field office coordination. Finally, from 1987 to 1990, I served as Manager of the Enforcement and Compliance Section where I managed statewide enforcement investigations and legal referrals for water pollution programs under the federal Clean Water Act and the Tennessee Water Quality Act; served as a witness for hearings before the Water Quality Control Board, and local and state courts; processed and analyzed discharge data and applications for wastewater discharge permits; conducted field research projects regarding water quality impacts and problems; and conducted field work involving various stream, river, lake, and wetland issues.

I have substantial experience reviewing industrial wastewater permits and applications for compliance with the Clean Water Act. I have reviewed water quality sampling data and its application to discharge permitting decisions. I have performed this type of work in litigation on behalf of the agency while at the Tennessee environmental agency, on behalf of clients seeking NPDES permits, and on behalf of clients evaluating or opposing the issuance of NPDES permits.

Documents Reviewed:

As a part of my review, I have examined the revised draft TPDES Permit No. WQ0005462000, the 962-page complete application package, and the TCEQ's August 28, 2024 Statement of Basis and Technical Summary of the Executive Director's Preliminary Decision. I have also reviewed various TCEQ rules, the 2010 Procedures to Implement the Texas Surface Water Quality Standards, and other publicly available resources and online resources that are the type of resources experts in my field would rely on.

Opinions:

The sampling replied upon in the application is not reliable.

The application relies on two sets of water quality samples to analytically quantify pollutants present in the discharge. According to Attachment K (lab reports) accompanying the application, one set of water quality samples was collected by Carolyn Wood on May

28, 2024 at 3:56 PM (pp. 227-229). Online reports confirm the deluge system was tested sometime in the morning. https://www.nasaspaceflight.com/2024/05/starship-flight4-faa/, https://x.com/i/broadcasts/1OyKAWEPkQaJb. This means samples were not collected until about four hours after the discharge, at least.

The second set of water quality samples were collected by Carolyn Wood on June 6, 2024 at 13:30 (1:30 PM) (pp. 286-290). Online sources confirm that the deluge system was activated during a launch that occurred at 7:50 AM. https://www.spacex.com/launches/mission/?missionId=starship-flight-4. This means the samples were not collected until nearly 6 hours after the discharge.

A third set of samples, not included in the application forms or apparently relied upon for the Statement of Basis, was also collected several hours following the discharge. Samples taken August 25, 2023 were collected at 18:30 (6:30 PM) but the test and activation of the deluge system took place around 12:38 PM, nearly six hours earlier. https://www.space.com/spacex-starship-super-heavy-booster-9-second-static-fire.

The fact that these samples are not taken immediately following the activation of the deluge system calls into question whether the samples are representative of the pollutants expected to be present in the discharge. Pollutants, particularly metals, in the retention pond may have settled prior to collection, meaning sampling results could show lower concentrations than were present in the discharge. Furthermore, samples were collected without any information as to how much water from other sources (e.g., stormwater, facility washdown wastewater, and releases from maintenance events) was in the retention basins prior to the discharge, meaning sampling results could show lower concentration of pollutants than were present, or are likely to be present due to dilution that occurred prior to the samples being collected.

The permit appears to be based on the assumption that the wastewater will be commingled with stormwater prior to discharge and sampling. This is indicated by the description of the system configuration, as well as the few numeric limits in the permit – particularly COD – that appear to be typical stormwater water limits, without consideration of the receiving waters. This presumption of stormwater mixing and dilution may not always be the case, as the deluge discharge could likely happen in the absence of any rain event. In addition, this level of COD is unreasonably high and could cause unacceptable lowering of dissolved oxygen in the receiving waters. This is of additional concern since the receiving waters are designated for exceptional aquatic life use, which requires further protections from such impacts and degradation that do not appear to have been accounted for.

Furthermore, the application acknowledges that some of the deluge water will not be captured by the containment area. A video available online depicts the operation of the deluge system from August 25, 2023. https://www.youtube.com/watch?v=ENxZS6PUDuI. This video shows deluge water flowing around and over the retention ponds and directly into the wetlands adjacent to the launch pad. The application does not include any water quality samples that quantify pollutants present in the discharge that is not captured by the containment area.

Pollutants, including heat, may negatively impact aquatic life in the tidal wetlands.

Although the samples that are included in the Application are unreliable and likely under-report pollutants present in the discharge, the samples strongly indicate the presence of several toxic pollutants, as well as heat. However, the draft permit does not contain any restrictions on the total volume of deluge water that may be discharged into the tidal wetlands. Nor does the draft permit contain any limit on total copper, total mercury, total thallium, or total zinc, despite at least one of two water quality samples used in the application indicating a limit is necessary. The application and draft permit do not include or address other pollutants in addition to metals, such as organic compounds that might be present in the fuel or surface coatings, which could be released or created as by-products of the intense heat and combustion. The draft permit also does not include a limit on temperature, even though temperature was reported as high as 39 degrees Celsius (102.2 degrees Fahrenheit) nearly 6 hours following the activation of the deluge system during the June 6, 2024 launch event (p. 286).

As previously explained, the pollutant concentrations and temperature estimates found in the permit application are unreliable because they are not collected immediately following the discharge. The pollutants present in the discharge are likely higher, with the potential to be significantly higher. As a result, and because the draft permit places no limits on these pollutants, the receiving waters, specifically the tidal wetlands adjacent to and downstream of the launch pad are at risk of degradation to the point that the aquatic life use is degraded or impaired.

Tidal wetlands are a unique aquatic habitat. The organisms that live within the sediment of a tidal wetland or tidal flats are aquatic organisms that have adapted to naturally fluctuating water levels and conditions, and that may be harmed by the types of pollutants included in the deluge discharge and sudden fluctuations of water levels. Tidal flats are known foraging habitat for shorebirds. Therefore, pollutants of this nature may harm the aquatic habitat and aquatic life, and as a result, may impact aquatic-dependent species, such as shorebirds.

Conclusions:

Based on my review, as discussed in this report, my opinion is that the application and draft permit are deficient because they are based on unreliable and insufficient data and considerations. The application does not provide information that is necessary for conducting an anti-degradation review under the Clean Water Act to ensure that the discharge will not degrade water quality and harm aquatic life in the receiving wetlands and waters. The draft permit also does not ensure that aquatic life will be protected, because it provides no effluent limits or enforceable permit conditions that would restrict the quantity of pollutants being discharged. Based on information provided in the application, those pollutants may violate water quality standards and harm aquatic life in the receiving waters.

Dated: December 27, 2024

ATTACHMENT 10

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, Texas 78758
(512)490-0057 / 490-0974 (fax)

September 14, 1998

2-15-98-F-227

Gregg Cooke
Regional Administrator
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Mr. Cooke:

This is our biological opinion on the proposed authorization by U.S. Environmental Protection Agency (EPA) of the assumption by the State of Texas of the Texas Pollution Discharge Elimination System (TPDES) to operate in lieu of a specific subset of the National Pollution Discharge Elimination System (NPDES) program for Texas. This also represents the conference opinion for four species proposed for addition to the list of threatened and endangered species (Arkansas River shiner, Pecos pupfish, Devils River minnow, and Puzzle sunflower).

INTRODUCTION

The U.S. Fish and Wildlife Service (Service) has reviewed the proposed plans for the authorization of the assumption by the State of the Texas of the TPDES to operate in lieu of EPA's NPDES program. It is our understanding that EPA will retain NPDES permitting authority for certain permits. The Texas Natural Resources Conservation Commission (TNRCC) would administer the TPDES program for the State of Texas. This document represents the Service's biological/conference opinion on the effects of this action on the species listed (and proposed for listing) in Texas under the Endangered Species Act of 1973 as amended (U.S.C. 1531 et seq.) (ESA).

This biological/conference opinion is based on: (1) the information that EPA provided with a request for formal consultation, (2) the information previously provided as part of the informal consultation, (3) information in our offices, (4) field investigations, and (5) other sources of information. In the request for formal consultation, EPA Region 6 attached copies of all consultation documents for NPDES permit actions in the State of Texas since 1990. In addition, all current water quality information compiled by the State for the use in NPDES permitting was included along with all other documents and agreements used by Region 6 in working with the TNRCC on its wastewater regulatory programs. EPA provided the Service with draft copies of the Texas application with the draft Memorandum of Agreement between TNRCC and copies of similar MOAs from Louisiana and Oklahoma.

APPENDIX A

Priority of concerns for threatened, endangered and proposed species and the watersheds that should be considered in determining affects to the listed species. Watershed Designations are from U.S. Geological Survey watershed codes (Seaber et al. 1987) [xxxx indicates all sub-watersheds are included].

Priority	Listed Species	Watershed Designation
CRITICAL CONCERN SPECIES/ WATERSHEDS	Little Aguja pondweed	1307003
	Texas wild-rice	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Comal Springs dryopid beetle	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Comal Springs riffle beetle	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Peck's cave amphipod	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Arkansas River shiner	1109xxxx
	Big Bend gambusia	13040205
	Clear Creek gambusia	12090109
	Comanche Springs pupfish	13070003
	Devils River minnow	1304xxx, 1308001
	fountain darter	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Leon Springs pupfish	13070001
	Pecos gambusia	13070001, 13070008
	Pecos pupfish	13070001
	San Marcos gambusia	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Barton Springs salamander	Barton Springs Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	San Marcos salamander	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Texas blind salamander	Southern (or San Antonio) Segment of Edwards Aquifer Recharge and Contributing Zone[1]
	Houston toad	12030201

	Concho water snake	1209xxxx upstream of Lake Buchanan, 12080008, 12080002, 12080007
	whooping crane	12100403, 12100404, 12100405
HIGH PRIORITY SPECIES/ WATERSHEDS	Navasota ladies'-tresses	1207xxxx, 12030201, 12030202, 12030108, 12040102, 12020003, 12020006, 12010005
	puzzle sunflower	13070001
	Texas snowbells	12090203, 12110101, 12110102, 13040301, 13040302, 13040303, 13040212, 13070011, 13070008
	Bee Creek Cave harvestman	12090205
	Bone Cave harvestman	12090205, 2070204
	Coffin Cave mold beetle	12070205, 12070203, 12070204
	Kretschmarr Cave mold beetle	12090205
	Tooth Cave ground beetle	12090205
	Tooth Cave pseudoscorpion	12090205
	Tooth Cave spider	12090205
	least tern	1109xxxx, 1112xxxx, 13040212, 13043032, 1113xxxx, 1308xxxx downstream of (and including) Amistad Reservoir
	piping plover	Texas Coastal Management Zone[2] (south of Copano Bay)
SPECIAL CONCERN SPECIES	Rio Grande silvery minnow	Rio Grande (El Paso to Amistad Dam)
	green sea turtle	Texas Coastal Management Zone[2]
	hawksbill sea turtle	Texas Coastal Management Zone[2]
	Kemp's Ridley sea turtle	Texas Coastal Management Zone[2]
	leatherback sea turtle	Texas Coastal Management Zone[2]
	loggerhead sea turtle	Texas Coastal Management Zone[2]
	bald eagle	state-wide
	brown pelican	Texas Coastal Management Zone[2]
	southwestern willow flycatcher	Rio Grande and Pecos River riparian corridors

[1] See attached map (Figure 1)
[2] See attached map (Figure 2)

APPENDIX B

Federally listed threatened and endangered species which occur in Texas (including proposed and candidate Species)

Common Name	Scientific Name	Status
PLANTS		
ashy dogweed	*Thymophylla tephroleuca*	E
black lace cactus	*Echinocereus reichenbachii* var. *albertii*	E
bunched cory cactus	*Coryphantha ramillosa*	T
bushy whitlow-wort	*Paronychia congesta*	C
Chisos Mtn. hedgehog cactus	*Echinocereus chisoensis* var. *chisoensis*	T
Davis' green pitaya	*Echinocereus viridiflorus* var. *davisii*	E
Guadalupe fescue	*Festuca ligulata*	C
Hinckley's oak	*Quercus hinckleyi*	T
Johnston's frankenia	*Frankenia johnstonii*	E
large-fruited sand verbena	*Abronia macrocarpa*	E
Little Aguja pondweed	*Potamogeton clystocarpus*	E
Lloyd's hedgehog cactus	*Echinocereus lloydii*	E
Lloyd's mariposa cactus	*Echinomastus mariposensis*	T
Navasota ladies'-tresses	*Spiranthes parksii*	E
Neches River rose-mallow	*Hibiscus dasycalyx*	C
Nellie cory cactus	*Coryphantha minima*	E
puzzle sunflower	*Helianthus paradoxus*	P/ T
Shinner's tickle-tongue	*Zanthoxylum parvum*	C
slender rush-pea	*Hoffmannseggia tenella*	E
Sneed pincushion cactus	*Coryphantha sneedii* var. *sneedii*	E
South Texas ambrosia	*Ambrosia cheiranthifolia*	E
star cactus	*Astrophytum asterias*	E
tall paintbrush	*Castilleja elongata*	C
Terlingua Creek cat's eye	*Cryptantha crassipes*	E
Texas ayenia	*Ayenia limitaris*	E
Texas golden glade cress	*Leavenworthia texana*	C
Texas prairie dawn	*Hymenoxys texana*	E
Texas poppy mallow	*Callirhoe scabriuscula*	E

Texas snowbells	*Styrax texana*	E
Texas trailing phlox	*Phlox nivalis* var. *texensis*	E
Texas wild-rice	*Zizania texana*	E /CH
Tobusch fishhook cactus	*Ancistrocactus tobuschii*	E
Walker's manioc	*Manihot walkerae*	E
white bladderpod	*Lesquerella pallida*	E
Zapata bladderpod	*Lesquerella thamnophila*	C
CRUSTACEANS, ARACHNIDS, AND INSECTS		
Bee Creek Cave harvestman	*Texella reddelli*	E
Bone Cave harvestman	*Texella reyesi*	E
Coffin Cave mold beetle	*Batrisodes texanus*	E
Comal Springs dryopid beetle	*Stygoparnus comalensis*	E
Comal Springs riffle beetle	*Heterelmis comalensis*	E
Diamond-Y springsnail	*Tryonia adamantina*	C
Gonzales springsnail	*Tryonia stocktonensis*	C
Kretschmarr Cave mold beetle	*Texamaurops reddelli*	E
Peck's cave amphipod	*Stygobromus pecki*	E
Pecos assiminea snail	*Assiminea pecos*	C
Tooth Cave ground beetle	*Rhadine persephone*	E
Tooth Cave pseudoscorpion	*Tartarocreagris texana*	E
Tooth Cave spider	*Neoleptoneta myopica*	E
Warton's cave spider	*Cicurina wartoni*	C
FISHES		
Arkansas River shiner	*Notropis girardi*	P/E
Big Bend gambusia	*Gambusia gaigei*	E
Clear Creek gambusia	*Gambusia heterochir*	E
Comanche Springs pupfish	*Cyprinodon elegans*	E
Devils River minnow	*Dionda diaboli*	P/E
fountain darter	*Etheostoma fonticola*	E/CH
Leon Springs pupfish	*Cyprinodon bovinus*	E/CH
Pecos gambusia	*Gambusia nobilis*	E
Pecos pupfish	*Cyprinodon pecosensis*	P/E
San Marcos gambusia	*Gambusia georgei*	E/CH

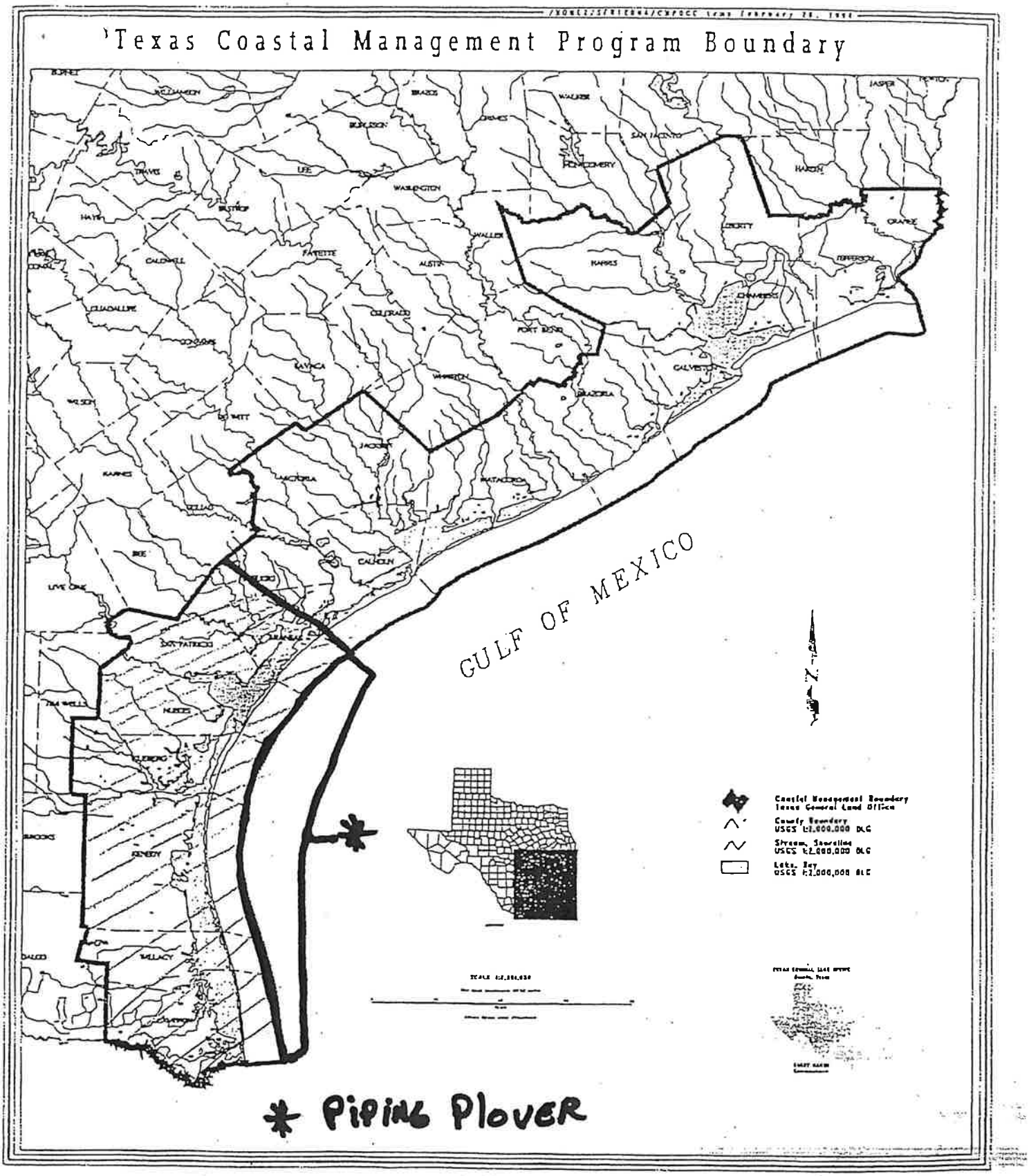
Rio Grande silvery minnow	*Hybognathus amarus*	E
AMPHIBIANS		
Barton Springs salamander	*Eurycea sosorum*	E
Houston toad	*Bufo houstonensis*	E/CH
San Marcos salamander	*Eurycea nana*	T/CH
Texas blind salamander	*Typhlomolge rathbuni*	E
REPTILES		
American alligator	*Alligator mississippiensis*	TSA
Cagle's map turtle	*Graptemys caglei*	C
Concho water snake	*Nerodia paucimaculata*	T/CH
green sea turtle	*Chelonia mydas*	T
hawksbill sea turtle	*Eretmochelys imbricata*	E/CH?
Kemp's Ridley sea turtle	*Lepidochelys kempii*	E
leatherback sea turtle	*Dermochelys coriacea*	E
loggerhead sea turtle	*Caretta caretta*	T
BIRDS		
American peregrine falcon	*Falco peregrinus anatum*	E
aplomado falcon	*Falco femoralis septentrionalis*	E
Arctic peregrine falcon	*Falco peregrinus tundrius*	TSA
Attwater's prairie chicken	*Tympanuchus cupido attwateri*	E
bald eagle	*Haliaeetus leucocephalus*	T
black-capped vireo	*Vireo atricapillus*	E
brown pelican	*Pelecanus occidentalis*	E
cactus ferruginous pygmy owl	*Glaucidium brasiliarum cactorum*	P/T
golden-cheeked warbler	*Dendroica chrysoparia*	E
least tern~	*Sterna antillarum*	E
Mexican spotted owl	*Strix occidentalis lucida*	T
Mountain plover	*Charadrius montanus*	C
piping plover	*Charadrius melodus*	T
red-cockaded woodpecker	*Picoides borealis*	E
southwestern willow flycatcher	*Empidonax traillii extimus*	E
whooping crane	*Grus americana*	E/CH
MAMMALS		

Gulf Coast hog-nosed skunk	*Conepatus leuconotus texensis*	C
jaguarundi	*Felis yagouarundi*	E
Louisiana black bear	*Ursus americanus luteolus*	T
Mexican long-nosed bat	*Leptonycteris nivalis*	E
ocelot	*Felis pardalis*	E
swift fox	*Vulpes velox*	C

E = Endangered; T = Threatened; P/ = Proposed ... ; ? = with special rule; TSA = Threatened due to similarity of appearance; CH = Critical Habitat (in Texas unless annotated ?); ? = CH designated (or proposed) outside Texas; C = Candidate for Listing; ~ = interior population, all of Texas except within 50 miles of coast

*** Note:** This list does not include all federally listed (nor proposed) threatened/endangered species, which did occur in Texas historically but are thought to be extirpated nor does it include all coastal species.

Figure 2. Texas Coastal Management Zone, showing critical area for piping plover.



ATTACHMENT 11

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
BROWNSVILLE DIVISION

SAVE RGV,	§	
	§	
Plaintiff,	§	
	§	
v.	§	
	§	CIVIL ACTION NO. 1:24-CV-00148
SPACE EXPLORATION TECHNOLOGIES CORPORATION,	§	
	§	
	§	
Defendant.	§	
	§	

DECLARATION OF KENNETH G. TEAGUE

STATE OF TEXAS §
§
COUNTY OF TRAVIS §

I, Kenneth G. Teague, declare as follows:

1. My name is Kenneth G. Teague. I am over 18 years old. I am over eighteen (18) years of age and of sound mind, have never been convicted of a felony, and am otherwise capable of making this declaration. The information in this declaration is based on my personal experience and my review of publicly available information.

2. I am a coastal ecologist with approximately 46 years experience. My expertise is broadly in the areas of coastal estuaries and lagoons, coastal wetlands, seagrasses, and water and sediment quality. I have experience and expertise in coastal environmental planning (National Estuary Program), coastal restoration (Coastal Wetlands Planning, Protection, and Restoration Act), impact assessment (National Environmental Policy Act), wetlands regulatory programs (Clean Water Act, Section 404), Gulf of Mexico hypoxia, and to some extent, water quality management in general. My academic science expertise is broadly in estuarine and coastal ecology, including water quality, especially hypoxia, eutrophication and nutrient dynamics, and coastal wetlands, generally.

3. SpaceX has developed a rocket launch facility in an area referred to as "Boca Chica," in far south Texas, very near the US/Mexico border, the tidal Rio Grande River, and the Gulf of Mexico. The Boca Chica area lies south of South Padre Island, the Laguna Madre, and the Brownsville Ship Channel. It lies west of the Gulf of Mexico, north of the US/Mexico Border and the tidal Rio Grande River, and east of Brownsville, TX and the surrounding urban and agricultural area.

4. The Boca Chica coastal ecosystem consists largely of irregularly flooded wind tidal flats, the South Bay ecosystem (which in turn includes seagrasses, mangroves, oyster reefs, and nearly pristine open water), lomas (unique clay dunes), and the barrier beach/dune system along the Gulf of Mexico.

5. The Boca Chica coastal ecosystem- uniquely- contains seven listed threatened or endangered species, including the shorebirds, piping plover and red knot, several sea turtle species- Kemp's Ridley, Hawksbill, Leatherback, Loggerhead, and Green sea turtles, northern aplomado falcon, and amazingly, ocelot.

6. The Boca Chica coastal ecosystem-also uniquely-is largely protected by several Federal and State wildlife refuges, a state park, and a state coastal preserve. Very little of this important habitat is unprotected, and privately owned. However, what little is, is now owned mostly by SpaceX.

7. The purpose of this brief assessment, is to qualitatively estimate the potential impacts of the proposed discharge of deluge system effluent, into the Boca Chica coastal ecosystem. Unfortunately, the only information available to me regarding the proposed discharge is what is contained in SpaceX's Texas Pollution Discharge Elimination System Permit Application,

submitted to the Texas Commission on Environmental Quality in July 2024.

8. I have reviewed the permit application submitted by SpaceX to TCEQ. The SpaceX permit application includes results of measurement of effluent concentrations of pollutants. One of the two samples was found to contain very high concentrations of total mercury (113 ug/L), which exceeds the TCEQ acute toxicity water quality criterion by two orders of magnitude.

9. The analysis also demonstrated this same sample contained concentrations of total copper that may or may not exceed the TCEQ chronic toxicity water quality criterion- the criterion is for dissolved copper, while only total copper was analyzed in the application.

10. Similarly, the analysis in the permit application found that total zinc concentration exceeds the dissolved zinc concentration that constitutes the TCEQ acute toxicity water quality criteria by two orders of magnitude.

11. Based on the permit application materials available to me, it appears impacts would largely be confined to the benthic community of the wind tidal flats, and shore birds that feed on them, such as piping plover and red knot.

12. Many invertebrates live on the surface of the flats (epibenthic) or within the substrate (benthic or infauna) and are the primary consumers on wind-tidal flats (www.cbbep.org/projects/molliebeattie/lifeonflats.htm).

13. Shorebirds that use exposed flats as foraging habitat are the most important vertebrate organisms found on tidal flats (www.cbbep.org/projects/molliebeattie/lifeonflats.htm). Wind-tidal flats like those at Boca Chica are some of the most significant feeding areas for shorebirds on the Texas Gulf Coast. *See* LeClaire, J. and D. Newstead, *Shorebird nest fates at Boca Chica after rocket test launch*, Coastal Bend Bays and Estuaries Program (June 2024).

14. If SpaceX discharges deluge water containing 113 ug/L of total mercury, onto the wind tidal flats, it is likely that the epibenthic and benthic invertebrate communities would experience high rates of acute toxicity. Any organisms that did not succumb to acute toxicity, would likely suffer from impacts on growth and reproduction.

15. If SpaceX discharges deluge water containing concentrations of copper that exceed the chronic toxicity water quality criterion, the epibenthic and benthic invertebrate communities would likely suffer from impacts on growth and reproduction.

16. If SpaceX discharges deluge water containing concentrations of zinc that exceed the acute toxicity water quality criterion, the epibenthic and benthic invertebrate communities would likely experience very significant acute toxicity.

17. Any of these impacts are likely to impact piping plover and red knot by forcing them to forage in areas not impacted by the discharge, and they may result in birds unnecessarily expending energy foraging for food where none exists.

18. I hereby declare under penalty of perjury pursuant to the laws of the United States that the above is true and correct based on the information made available to me.

Executed on October 10, 2024, in Travis County, Texas.

Kenneth G. Teague, PWS (emeritus)
Senior Certified Ecologist

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Monday, October 21, 2024 11:49 AM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000
Attachments:	2024.10.17_Save RGV et al. Comments w Attach.pdf

H

From: lauren@txenvirolaw.com <lauren@txenvirolaw.com>
Sent: Thursday, October 17, 2024 5:08 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Lauren Ice

EMAIL: lauren@txenvirolaw.com

COMPANY: Perales, Allmon & Ice, P.C.

ADDRESS: 1206 SAN ANTONIO ST
AUSTIN TX 78701-1834

PHONE: 5124696000

FAX: 5124829346

COMMENTS: Please see the attached comments submitted on behalf of Save RGV, Carrizo/Comecrudo Nation of Texas, Inc., and the South Texas Environmental Justice Network.

PERALES, ALLMON & ICE, P.C.
ATTORNEYS AT LAW
1206 San Antonio Street
Austin, Texas 78701
(512) 469-6000 • (512) 482-9346 (facsimile)
info@txenvirolaw.com

Of Counsel:
David Frederick
Richard Lowerre
Vic McWherter

October 17, 2024

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

Via TCEQ Online Comment Form

Re: Comments Regarding the Application of Space Exploration Technologies Corp. for TPDES Permit No. WQ0005462000.

Dear Ms. Gharis:

We are submitting the following comments on behalf of Save RGV, Carrizo/Comecrudo Nation of Texas, Inc., and the South Texas Environmental Justice Network regarding the Application of Space Exploration Technologies Corp. ("SpaceX" or "Applicant") for Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0005462000 (the "Application").

I. DRAFT PERMIT

SpaceX has applied to the Texas Commission on Environmental Quality ("TCEQ") for a new industrial wastewater permit to authorize the discharge of deluge water, facility washdown water, and stormwater on an intermittent and flow variable basis via two outfalls, Outfalls 001 and 002. If authorized, the effluent would be 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 Executive Director ("ED") of the TCEQ has prepared a Statement of Basis/Technical Summary and Executive Director's Preliminary Decision (hereafter "Statement of Basis") and a Draft Permit. The Draft Permit would authorize the discharge at an intermittent and variable flow, with the following effluent limitations (daily maximum and single grab): chemical oxygen demand limit of 200 mg/L, and oil & grease limit of 15 mg/L. Additionally, the Draft Permit would require the pH not be less than 6.0 standard units nor greater than 9.0 standard units, and it would prohibit the discharge of visible oil, floating solids, or visible foam in other than trace amounts.

The ED's preliminary decisions and draft permit are preliminary and subject to additional review and revisions.

II. HISTORY AT SPACEX BOCA CHICA LAUNCH SITE

On April 20, 2023, SpaceX conducted its first test launch of the Starship/Super Heavy rocket from its Boca Chica Launch Site, during which the concrete launch pad exploded, and debris was dispersed over hundreds of acres—even outside the 700-acre potential debris study area previously assessed by the Federal Aviation Administration ("FAA") in a 2022 programmatic environmental assessment. Following this disaster, SpaceX implemented a deluge system—a water-cooling element that would be activated during each launch event to help avoid another explosion of the concrete foundation.

When activated, the deluge system pushes water up from ground tanks through holes in the steel plates at high pressure. Elon Musk, the founder of SpaceX, described the system as "[b]asically, a massive, super strong steel shower head pointing up."[1] According to FAA, the deluge system has the ability to disperse deluge water up to 0.6 miles across the local landscape, due to the vapor cloud and subsequent condensation.[2] Some of the wastewater could also be detained onsite or flow offsite and into the surrounding area. The same FAA document indicates that SpaceX intends to activate the deluge system during each engine static fire test and vehicle launch. **Attachment A** is a graphic that depicts the geographical extent of the deluge system discharge.

To date, SpaceX has used the deluge system on at least 20 occasions, including multiple static fire tests as early as June 2023 and four total launches: November 18, 2023 at approximately 7:02 am CST;[3] March 14, 2024 at approximately 8:25 am CDT;[4] June 6, 2024 at approximately 7:50 am CDT;[5] and October 13, 2024 at approximately 7:25 am CDT.[6]

III. GENERAL COMMENTS

A. SpaceX's poor compliance history demands a rigorous review and strict, enforceable permit limits.

TCEQ is aware that SpaceX has been in violation of the federal Clean Water Act and TCEQ's TPDES permitting program for more than one year by discharging industrial wastewater without a permit. Making these violations more egregious is that they were committed knowingly and willfully.

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[1] Chang, Kenneth. "SpaceX Shifts the 2nd Launch of Its Starship Rocket to Saturday." *The New York Times*. Nov. 18, 2023. Available at: https://www.nytimes.com/2023/11/16/science/spacex-starship-launch-elon-musk.html.

[2] "Addendum to the October 2021 Biological Assessment for the SpaceX Starship- Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System" at 8-9. Federal Aviation Administration. October 2023. Available at: https://www.faa.gov/media/72826.

[3] Available at: https://www.spacex.com/launches/mission/?missionId=starship-flight-2.

[4] Available at: https://www.spacex.com/launches/mission/?missionId=starship-flight-3.

[5] Available at: https://www.spacex.com/launches/mission/?missionId=starship-flight-4.

[6] https://www.space.com/spacex-starship-flight-5-launch-super-heavy-booster-catch-success-video.

In March 2024, EPA entered a compliance order against SpaceX, effective March 14, 2024, the day it was received. On April 16, 2024, EPA communicated to SpaceX that the deluge system activities are not covered by the stormwater multi-sector permit and that the deluge system required an individual permit. **Attachment B** is a copy of EPA's correspondence. SpaceX proceeded with multiple static fire tests and the June 6, 2024 launch knowing that use of the deluge system constituted a violation of the Clean Water Act.

Furthermore, on August 13, 2024, SpaceX signed a TCEQ Agreed Order ("AO"), Docket No. 2024-1282-IWD-E, notice of which was published in the Texas Register on August 30, 2024. 49 Tex. Reg. 6816, 6818 (Aug. 30, 2024). The TCEQ AO is a *proposed* order, which remains pending and subject to final approval by the Commissioners, the date of which has not been announced—though it was very recently represented by SpaceX in a document to FAA that the date is November 6, 2024. As of the date of these comments, the TCEQ website where the Commissioners' Agendas are posted did not include a draft agenda for November 6, 2024.

On September 10, 2024, EPA published a public notice of a proposed Consent Agreement and Final Order ("CAFO") against SpaceX for Clean Water Act violations. Again, as of the date of these comments, the EPA CAFO is not final—the comment deadline is October 21, 2024. Regardless, the EPA CAFO states explicitly that it only resolves SpaceX's CWA civil penalty liabilities for prior violations specifically alleged within it; it does not constitute a permit that would authorize future discharges.

The proposed TCEQ Agreed Order and the proposed EPA CAFO remain pending. Neither authorized the discharges that took place in October 2024; nor are temporary or emergency authorizations ever allowed in lieu of a new permit. *See* 63 Fed. Reg. 51167, 51180 (Sept. 24, 1998); 30 Tex. Admin. Code § 35.303(b).

Despite clear and unambiguous language, SpaceX repeatedly activated its deluge system without a permit, demonstrating strict and clearly enforceable terms are necessary.

B. The Draft Permit is against public policy, and the permitting process to date has prejudiced the rights of the public to participate.

Despite SpaceX's intentional disregard for this Agency's regulatory authority, the Draft Permit was prepared hastily and without requisite information or protections for Texas waters. An application was submitted on July 1, 2024, and on July 8, 2024—*one week later*—it was declared administratively complete, and public notice was published on July 12-13, 2024, even though the TCEQ website for Pending TPDES Applications shows the first public notice was not provided until August 14, 2024. Why the discrepancy?

Then, less than two months later, on September 5, 2024, the Application was declared technically complete. A public meeting was scheduled for October 17, 2024, marking the end of the public comment period. This means that despite more than one year of ongoing and knowing violations, SpaceX's permit application was processed at a rapid speed that gave the public only a few weeks from first notice to final public comment. Not only does this unreasonably expeditious timeline undermine a thorough and complete review by Agency staff; it sends the message to other polluters that flagrant violations and disregard for regulatory authority will be rewarded with

favoritism. This favoritism has also prejudiced the rights of the public to participate in the decision-making process.

C. The ED should extend the comment period.

According to publicly available information, between August 2023 and June 2024, TCEQ received at least 14 complaints from members of the public regarding the deluge system operating without a permit. In fact, in an email on August 3, 2023, Cari-Michel La Caille, Director of TCEQ's Office of Water, acknowledged that TCEQ was aware of SpaceX activities regarding deluge water from the rocket launch facility. **Attachment C** is the August 3, 2023 email correspondence from Cari-Michel La Caille.

When TCEQ failed to act and it also became apparent that SpaceX intended to flout EPA's March 2024 compliance order by planning for a June 6, 2024 launch, Save RGV sent a notice of intent to sue letter (dated June 4, 2024) to SpaceX. On July 1, 2024, SpaceX filed an application with TCEQ for an individual industrial wastewater permit. And on August 2, 2024, TCEQ issued a notice of enforcement to SpaceX, though the notice was not made available to the public until it was produced in response to a public information request on August 13, 2024. The proposed Agreed Order was published on August 30, 2024, giving the public only 30 days to comment.

The public has been filing complaints with TCEQ for more than one year, yet the TCEQ failed to act. Now that SpaceX has finally submitted an application (which is administratively and technically incomplete), a public meeting—and the close of the comment period—comes directly on the heals of a fifth unanticipated launch (and unpermitted use of the deluge system) and two enforcements actions by TCEQ and EPA, both of which remain pending and the legality of the proposed TCEQ AO is in question. In short, there is not enough time to allow for meaningful public participation in each, which is statutorily mandated, particularly in light of the unreasonably expeditious "review" performed of this Application. In addition, the October static fire tests and launch means that new deluge testing should have occurred—information that will be available to the public and TCEQ shortly.

Therefore, SpaceX must produce the test results, and the TCEQ should extend the public comment period for another 30 days from the date they are made public or 30 days from the date the final action is taken on the proposed TCEQ AO, whichever is later.

IV. SPECIFIC COMMENTS

A. The Application has not demonstrated that the Texas Surface Water Quality Standards will be met, that water quality will not be impaired beyond a *de minimis* amount, or that existing uses will be maintained.

The Statement of Basis indicates that the effluent limitations for chemical oxygen demand, oil & grease, and pH are based on the standard limitations normally applied to instantaneous industrial stormwater discharges. But discharges from a rocket launching deluge system are decisively NOT stormwater discharges. Furthermore, a "general" stormwater permit is not a proxy for the necessary individual permit, which must be written to reflect site-specific conditions based on information about the proposed discharge.

The minimal (and deficient) sampling results included with the Application indicate that metals, including copper, zinc, nickel, mercury, thallium, and hexavalent chromium, a known carcinogen, will be in the SpaceX industrial wastewater. And yet, there is no information about how those samples were collected, how much water passed through the deluge system or through the outfall at the time the samples were collected, or whether it had been diluted by any other water source. There was certainly no attempt to analyze water quality from the discharge that was not collected by the retention pond, as indicated in SpaceX's own figure included in the Application which makes it clear that even under the most conservative approach, the deluge system is designed–at both launch sites—to overspray the retention basins. This means that polluted wastewater will be discharged directly into the tidal flats without going through the retention basin first. **Attachment D** is a copy of the image showing planned overspray from SpaceX's Application. There has been no effort to analyze or limit the adverse impacts from hot water being discharged directly into the tidal flats, which can cause significant impacts to the benthic community locally. Therefore, the Application must be denied.

B. The proposed discharge and the nature of the discharge route has not been accurately characterized, nor is the wastewater generating process accurately described.

The Application and materials submitted to FAA and TCEQ acknowledge that the deluge system causes overspray and a vapor cloud that will be dispersed outside the area of the retention basins, into the tidal flats, to Boca Chica Beach, and even as far as the South Bay. Yet only discharges at the point of the outfalls from the retention basin are proposed to be regulated. The result of this serious deficiency is that not all pollutants have been properly identified or quantified, and the Draft Permit is not designed to regulate the discharges of all pollutants, as is required by the Clean Water Act.

As previously explained, SpaceX has been on notice of its violations for more than one year as it repeatedly activated the deluge system for launches and tests. Yet, with its Application, it only provided two sets of sampling. This is unacceptable. Additionally, in documents on file with FAA, SpaceX indicated it provided TCEQ with samples from at least four dates, none of which are the same dates included in the Application. And as previously mentioned, SpaceX conducted additional static fire tests and a launch in October. It is counter to the Clean Water Act to exclude this effluent data from consideration. This data should have been reported as a part of the publicly-available application package. SpaceX should not be permitted to fulfill the requirement of four effluent tests as later condition on its permit, because this information will not necessarily be available to the public in considering whether to issue the initial permit.

Furthermore, the Application does not demonstrate that the sampling that was provided was representative of the discharge effluent. For one, the sampling was not necessarily conducted immediately following the discharge event. For example, the second set of samples was apparently collected at 1:30 PM, though the launch was reported to have taken place at 7:30 AM on that day. Second, due to anticipated overspray, much of the discharge likely missed the retention basin, meaning there should be sampling locations designated in places designed to capture these discharges, not only those through the designated outfall of the retention basins. If the retention basins are full of stormwater or other water, then the results would not be representative of all

discharges or the need for stricter effluent limits—particularly because nothing indicates that SpaceX is required to continuously monitor or actually measure flow.

C. The Draft Permit does not contain specific terms and conditions and as a result it is unenforceable and risks SpaceX evading compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The Draft Permit proposes several unclear terms and conditions that make it unenforceable. For example, the Draft Permit would authorize the discharge of wastewater at a volume of "intermittent and flow-variable." SpaceX has information about the size of its existing water storage tanks and the maximum amount of wastewater those tanks can hold. SpaceX is currently authorized to launch 5-10 times per year. Deluge events are planned. The amount of discharge from deluge water can easily be predicted and limited. Instead, the Draft Permit is giving SpaceX a blank check. The Draft Permit authorizes an infinite amount of deluge water to be discharged into tidal wetlands and the local environment. This amounts to a violation of the Texas Surface Water Quality Standards.

It also amounts to an intentional deprivation of public participation rights. Normally, when a permitted total volume is limited to a particular flow based on the uses and needs described in the permit application, as well as the amount of pollutants to be released and their potential impacts on the receiving waters, any increase from that amount would require a major amendment to the permit and the opportunity for public notice, comment, and a contested case hearing. By permitting a limitless volume of discharge with the initial permit, TCEQ proposes to bypass public participation requirements which is a violation of the Clean Water Act.

Another example of an unclear and unenforceable condition, is the one that requires "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." Does this mean it has to occur within one hour? If so, why does the Draft Permit not simply say so? Otherwise, it suggests that SpaceX has the discretion to determine when it is "safe" for sampling personnel to enter the space, and this could lead to prolonged delays and non-representative samples with absolutely no mechanisms for TCEQ to say otherwise. This is especially alarming since there are alternative sampling methods that could be employed to capture wastewater immediately, and those could be employed to also capture samples in locations of anticipated overspray.

D. The Draft Permit does not include sufficient monitoring and reporting requirements, including operational requirements, to ensure compliance with the Clean Water Act and Texas Surface Water Quality Standards.

The Application does not include an accurate depiction of the wastewater generating procedure, the location of where contaminants will end up from the discharges or the discharge route, or identification of the possible contaminants, meaning the monitoring and reporting requirements included are grossly deficient. But even those that propose additional analytical testing as an additional requirement (no. 12) are not enough to bring the permit into compliance or informative enough to help achieve compliance with future revisions to the permit.

E. The proposed discharge will threaten endangered species.

The Application and the ED's Statement of Basis are deficient in considering the impacts on federal and state-listed endangered and threatened species. As explained at length, due to a grossly deficient Application and review, all the possible contaminants have not been identified, quantified, or limited in any way. Federal species with critical habitat in the receiving waters include the piping plover. The discharge area could also impact water quality and listed species downstream in the Gulf of Mexico, which is designated as critical habitat for loggerhead sea turtle and proposed critical habitat for green sea turtle.

F. The Draft Permit is not consistent with the goals and policies of the Texas Coastal Management Program.

Finally, the Application and the review fail to demonstrate that the SpaceX facility and, more specifically, the proposed discharge from this deluge system, as proposed, will be protective of our Texas coastal communities and resources. Therefore, it is not consistent with the goals and policies of the Texas Coastal Management Program.

V. CONCLUSION

For the reasons described above, Save RGV, Carrizo/Comecrudo Nation of Texas, Inc., and the South Texas Environmental Justice Network urge the Commission to deny SpaceX's Application for TPDES Permit No. WQ0005462000. In the alternative, Save RGV, Carrizo/Comecrudo Nation of Texas, Inc., and the South Texas Environmental Justice Network request a contested case hearing with regard to the Application. Please contact us with any questions.

Respectfully submitted,

/s/ Lauren Ice
Marisa Perales
State Bar No. 24002750
marisa@txenvirolaw.com
Lauren Ice
State Bar No. 24092560
lauren@txenvirolaw.com

PERALES, ALLMON & ICE, P.C.
1206 San Antonio St.
Austin, Texas 78701
Tel: (512) 469-6000
Fax: (512) 482-9346

ATTACHMENT A

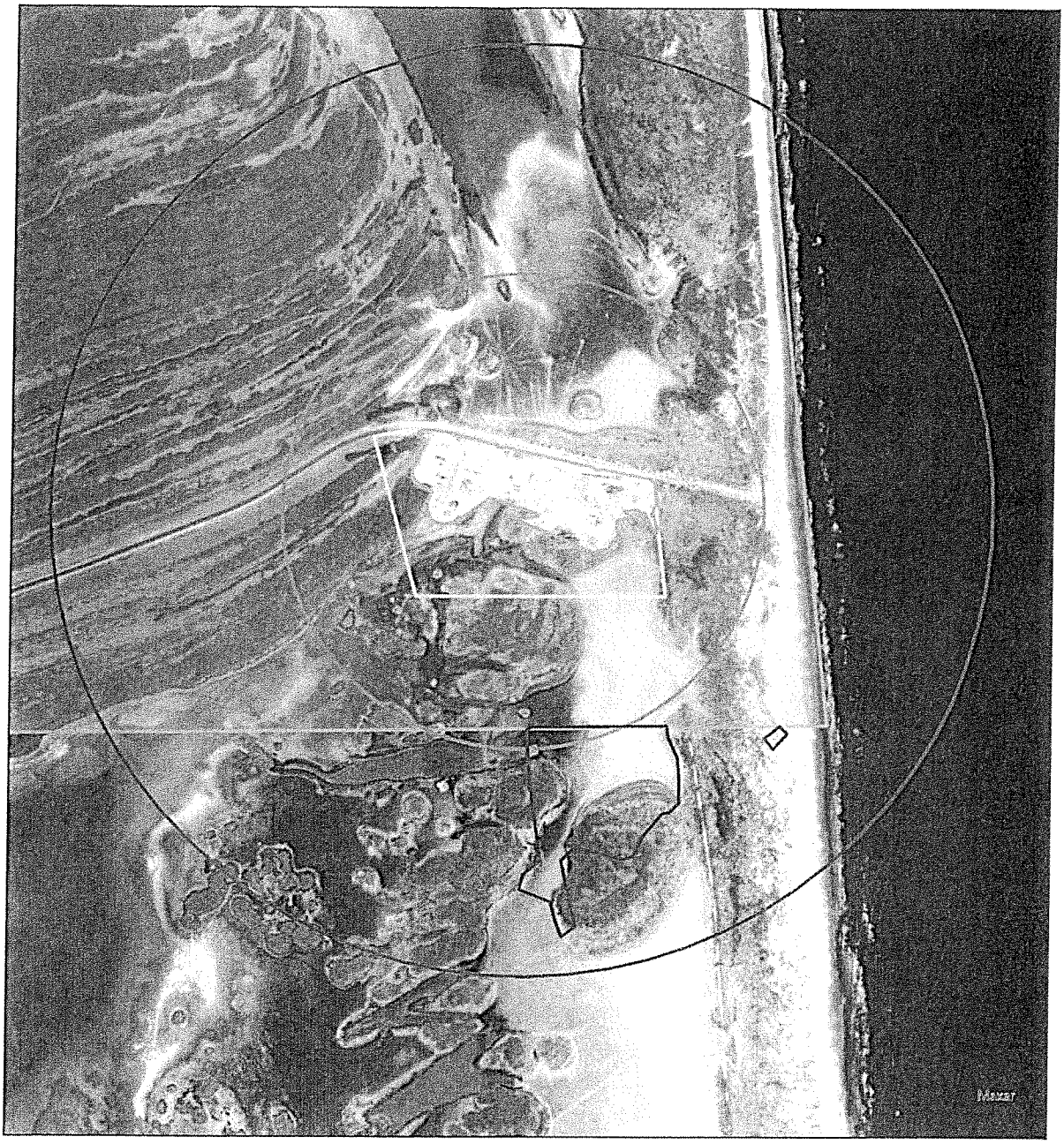


Figure 2 Deluge Impact Area

ATTACHMENT B

REGION 6
DALLAS, TX 75270

April 15, 2024

TRANSMITTED VIA E-MAIL

Mr. Joesph C. Smith
Environmental Counsel
Space Exploration Corporation (SpaceX)
Rocket Road
Hawthorne, CA 90205
[redacted]

RE: Administrative Order Docket Number: CWA-06-2024-1746
Facility Identification Number: TXU009110

Dear Mr. Smith:

Thank you for your April 4, 2024, letter responding to Administrative Order Docket Number CWA-06-2024-1746 (AO) issued for unauthorized discharges at the SpaceX launch pad in Boca Chica, Texas. Your response letter states that SpaceX activities and facilities at issue are covered under the Texas Pollutant Discharge Elimination System (TPDES) Multi Sector General Permit (MSGP) TXR05GD61, Sector AB – Transportation Equipment, Industrial or Commercial Machinery Manufacturing Facilities. Additionally, it is stated SpaceX prepared and implemented a detailed Stormwater Pollution Prevention Plan (SWPPP), which includes numerous Best Management Practices (BMPs) to control discharges, including construction of retention basins installation of protective curbing, plugging of outfalls during operations, and use of only potable water that does not come into contact with industrial processes.

The Environmental Protection Agency (EPA) acknowledges SpaceX has coverage under MSGP number TXR05GD61 for stormwater discharges; however, discharges from the water deluge system operations during rocket launching activities do not appear to be covered under TXR05GD61. The wastewater from the deluge system is categorized as a type of industrial/process wastewater that is not covered under MSGP Stormwater Permit TXR050000. This industrial/process wastewater requires an individual permit for discharge authorization. Therefore, it is EPA's position that the unauthorized discharges cited in the AO are correctly identified.

The EPA is committed to ensuring compliance with the requirements of the CWA and National Pollutant Discharge Elimination System (NPDES) program and my staff will assist you in any way possible. EPA welcomes the opportunity to discuss the information contained herein.

If you have any questions, please contact Mr. Alan Vaughn of my staff, at (214) 665-7487 or vaughn.alan@epa.gov.

Sincerely,

Cheryl T. Seager, Director
Enforcement and
Compliance Assurance Division

ec: kristy.deaver@tceq.texas.gov
david.ramirez@tceq.texas.gov

Sarah Banco, Sr. Director, Legal
[redacted]

Matthew Thompson
[redacted]

Sheila McCorkle
[redacted]

ATTACHMENT C

SpaceX Boca Chica, Texas

From: Cari-Michel Lacaille (cari-michel.lacaille@tceq.texas.gov)

To: txfinder@att.net

Date: Thursday, August 3, 2023 at 12:12 PM CDT

Ms. Branch,

Thank you for your correspondence to the Texas Commission on Environmental Quality (TCEQ) dated July 31, 2023, regarding the Starbase Production Site (SpaceX at Boca Chica) located at the eastern terminus of Boca Chica Boulevard in Brownsville, Texas.

TCEQ is federally delegated by the U.S. Environmental Protection Agency to implement the Texas Pollutant Discharge Elimination System (TPDES) program to control discharges of pollutants to surface waters of the Unites States. TPDES permits are developed under Chapter 26 of the Texas Water Code, which authorizes TCEQ to set requirements in a permit for discharges of wastewater into surface water in the state. TCEQ prepares draft wastewater authorizations that comply with state and federal water quality rules and regulations.

The Starbase Production Site is a vertical rocket launch facility. Deluge water from rocket launches would be a type of industrial wastewater. However, the need for a permit or any other type of authorization is dependent on the site activity, wastewater quality and quantity, and disposal method. TCEQ are working with SpaceX representatives regarding activities that may require a permit or authorization. Space X is responsible for determining which, if any, wastewater authorizations are required for their facility, based on the activities at the site, and applying for the appropriate authorizations. However, TCEQ is currently evaluating the use of the pressurized water system as part of launch operations. The evaluation will determine the applicability of TCEQ regulations for the use of this system.

SpaceX at Boca Chica (RN107697088) has one active authorization listed above, MSGP TXR05GD28. If you have any additional questions concerning wastewater permitting, please contact Robert Sadlier, Deputy Director of the Water Quality Division, at Robert.Sadlier@tceq.texas.gov.

Thank you,

Cari-Michel La Caille

Cari-Michel La Caille, Director
Office of Water

Texas Commission on Environmental Quality

Phone: (512)239-6479

E-Mail: cari-michel.lacaille@tceq.texas.gov

From: Mary Angela Branch <txfinder@att.net>
Sent: Monday, July 31, 2023 3:49 PM
To: COMMISSR <COMMISSR@tceq.texas.gov>; Michael Jansky <jansky.michael@epa.gov>; debra.haaland@doi.gov;

Hudson Jayson M CIV USARMY CESWG (USA) <jayson.m.hudson@usace.army.mil>; pete.buttigieg@dot.gov; Chuck CA Ardizzone <chuck_ardizzone@fws.gov>; Ernesto Reyes <ernesto_reyes@fws.gov>; Dawn Gardiner <dawn_gardiner@fws.gov>; Chris Perez <chris_perez@fws.gov>; Paul Kaspar <kaspar.paul@epa.gov>; Maria Martinez <martinez.maria@epa.gov>; chair@ceq.eop.gov; Amy B. EOP/CEQ Coyle <amy.b.coyle@ceq.eop.gov>; Amflz Vickysantiago Co Info <info@amflz.vickysantiago.co.nz>
Subject: Fw: CWA violations of SpaceX Boca Chica, Texas

Having received an out of office reply from my regional investigative and enforcement office of TCEQ Harlingen, TX, see reply below, I am forwarding to all entities in hopes of receiving an answer. This has been a years long process of asking the same questions over and over, from the same entity, TCEQ both in Austin and Harlingen, TX and receiving very vague to little answers. Now we ask that someone, someone, please take a long hard look at this situation and provide the citizens some concrete, sound, legal answers. Surely one of these regulatory agencies can provide insight. We all know what is going on there is wrong, in violation, and yet you turn a blind eye. From the federal level, to the county level, elected officials and hired regulatory officials, ALL turn a blind eye. In the wake of violent climate change, extreme degradation of sensitive wild and natural land and oceans, each entity still washes their hands of accountability. We are tired of hearing "It's not my jurisdiction." Well, the planet is all our jurisdiction and we have lost our public beach, our state park and now our national wildlife refuge.

Please review the questions below and give us some answers. If we are wrong, misinformed, or merely uneducated on permit law, we ask to be enlightened. Thank you!

Mary Angela Branch

----- Forwarded Message -----
From: Mary Angela Branch <txfinder@att.net>
To: Jaime Garza <jaime.garza@tceq.texas.gov>; Monica Galvan <monica.galvan@tceq.texas.gov>
Cc: Jim Chapman <jchapmanrgv@gmail.com>; Molly Smith <molly.smith24@gmail.com>
Sent: Monday, July 31, 2023 at 01:25:57 PM CDT
Subject: Email follow up to my voice mail just now

Hello Jaime,

It's Angela Jones, Save RGV. Since you sent the investigative reports on June 23, 2023 from our earlier conversations and concerns regarding SpaceX at Boca Chica, this has now cropped up. (See link below.) We are all extremely concerned. Who can we contact that can explain why SpaceX was allowed to do a full pressure test on this system at the launch site last week without having the necessary permits? Can you or someone at TCEQ tell us whether this deluge system needs an individual TPDES permit? We specifically discussed this at our meeting with you and Monica back in January and emailed you further concerns as they began constructing this deluge system. We questioned, and you concurred, that deluge water is significantly different than stormwater. This appears to us to be a very clear violation of the CWA. TCEQ only has Stormwater permits on file for this facility. In speaking with you and others at TCEQ in Austin, it is evident TCEQ was very aware that this type of deluge water from the launch site did not meet the criteria for Stormwater, and according to NASA, deluge water is wastewater. In an email from Ms. Cari-Michel La Caille, director of the office of water at TCEQ, dated December 8, 2022, "Deluge wastewater from rocket launches would be a type of industrial wastewater." And in that same email she said "As of December 5, 2022, TCEQ had not received an industrial wastewater application for this site." Can you now tell us a) what type of industrial wastewater this is and b)why is this is just now being "looked into?" Can you explain how something like this can occur and significantly further impact the habitat at Boca Chica and waters of the U.S. without a permit

application having been submitted in accordance with TCEQ rules? Will you or someone respond to us in a timely manner, and confirm that this is NOT a violation of the CWA and that this type of deluge system is covered under their current permits?

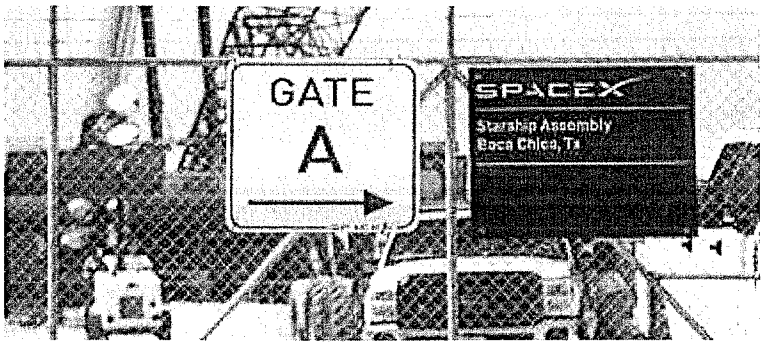
I am disheartened and quite astonished that our regulatory agency is not in front of this and that we continue to ask the same questions over and over. This needs to be resolved.

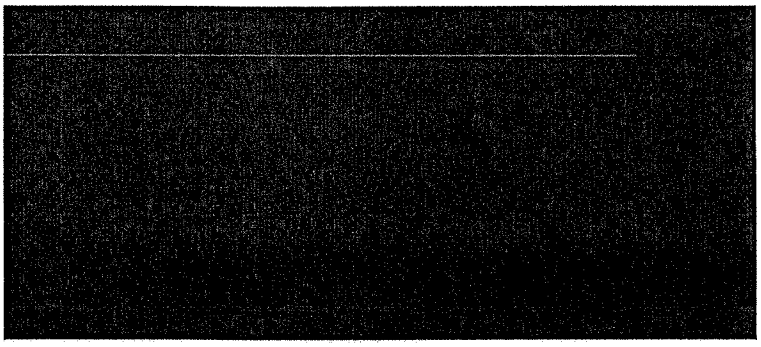
Thank you,
Mary Angela Branch
1025 Tarpon Ave.
Port Isabel, TX 78578

mailing:
2005 Rodeo Drive
Austin, TX 78727

512-431-5884

SpaceX hasn't obtained environmental permits for 'flame deflector' system it's testing in Texas





SpaceX hasn't obtained environmental permits for 'flame deflector' syste...

Lora Kolodny

Elon Musk's SpaceX didn't apply for the environmental permits usually required to discharge industrial process w...

a

Angela Jones
512-431-5884
angela@angelajonesknows.com

Licensed by the Texas Real Estate Commission
License #609027

***** No e-mails sent or received shall constitute a legally binding contract unless and until a contract is written and signed by all parties.***

****** I will NEVER ask you to wire funds or send funds to anyone. If you are contacted to wire funds, contact your agent immediately.***

image003.emz
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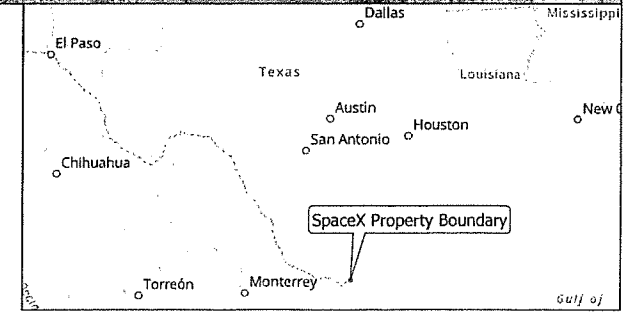
ATTACHMENT D

SPACEX Launch Pad TPDES Permit

Site Map

- SpaceX Property Boundary
- Approximate Maximum Water Dispersal Limit
- Retention Basin
- Outfall & Sampling Point
- Downstream Flow
- Concrete Curbing
- Unvegetated Mud Flats
- High Marsh



Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Wednesday, October 9, 2024 3:14 PM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: CORRECTION - FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: PUBCOMMENT-OCC
Sent: Wednesday, October 9, 2024 3:13 PM
To: PUBCOMMENT-OCC2 <pubcomment-occ2@tceq.texas.gov>; PUBCOMMENT-OPIC <pubcomment-opic@tceq.texas.gov>; PUBCOMMENT-ELD <pubcomment-eld@tceq.texas.gov>; PUBCOMMENT-WQ <pubcomment-wq@tceq.texas.gov>
Subject: FW: Public comment on Permit Number WQ0005462000

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: amanda.jasso@gmail.com <amanda.jasso@gmail.com>
Sent: Wednesday, October 9, 2024 11:47 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Amanda Jasso

EMAIL: amanda.jasso@gmail.com

COMPANY:

ADDRESS: 606 ARTHUR ST
ELGIN TX 78621-1764

PHONE: 9564536446

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted as a former resident of the very location where Starbase is; I grew up in a small A-frame house surrounded by wildlife and native plant life and it is painful to witness the destruction of this area. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Wednesday, October 9, 2024 3:14 PM
To:	PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject:	FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

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www.tceq.texas.gov/customersurvey

From: amanda.jasso@gmail.com <amanda.jasso@gmail.com>
Sent: Wednesday, October 9, 2024 11:49 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Amanda Jasso

EMAIL: amanda.jasso@gmail.com

COMPANY:

ADDRESS: 606 ARTHUR ST
ELGIN TX 78621-1764

PHONE: 9564536446

FAX:

COMMENTS: The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted as a former resident of the very location where Starbase is; I grew up in a small A-frame house surrounded by wildlife and native plant life and it is painful to witness the destruction of this area. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Monday, October 21, 2024 11:24 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000
Attachments: Public Comment Final ERR1.pdf

H

From: esg.hound@gmail.com <esg.hound@gmail.com>
Sent: Thursday, October 17, 2024 3:59 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Eric R Roesch

EMAIL: esg.hound@gmail.com

COMPANY: ESG HOUND LLC

ADDRESS: 3714 TRAIL BND
MISSOURI CITY TX 77459-3319

PHONE: 7209899069

FAX:

COMMENTS: see attached comment

October 17, 2024

Texas Commission on Environmental Quality
Office of the Chief Clerk
MC-105 P.O. Box 13087
Austin, Texas 78711-3087

To whom it may concern:

Please see my attached comments on pending permit WQ0005462000 for SpaceX deluge operations in Cameron County. Thank you for your consideration of these critical issues that must be issued prior to permit authorization.

Regards,

Eric Roesch, MS
Ft Bend County

1. Starbase is polluting with Process Water, which TCEQ has incorrectly characterized as "Non-Process" water.

The EPA proposed Administrative Order, dated 10 September 2024 states that "The deluge water discharged to the surrounding wetlands is considered an **industrial process wastewater.**[1]"

In the July 2024 TCEQ inspection report associated with the agency's enforcement action, the agency notes that the pending wastewater permit WQ0005462000 is for "the discharge of **non-process deluge system water** that is utilized during launch operations[2]."

Additionally, the proposed draft permit and technical review package indicate in the "plain language summary" section that the discharge is for "**non-process** deluge system water that is utilized during launch operations."

This discrepancy is notable because it appears to be the entire basis for avoiding anti-Backsliding and "new source" New Source Performance Standards (NSPS) provisions in the Clean Water Act.

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[1] CWA-06-2024-1768, item 12
https://www.epa.gov/tx/proposed-administrative-penalty-order-against-space-explorations-technologies-corp-spacex-clean

[2] TCEQ Open Records document, investigation report 1995473

Non-process wastewater in Texas, as summarized in 30 TAC and on the EPA's website falls into several categories:

1. Industrial reclaimed water
2. Non-contact cooling water
3. Once-through cooling water

SpaceX's discharge meets none of these regulatory definitions.

Deluge Water Is Not Industrial Reclaimed Water

30 TAC 210 specifies several types of water that may be reclaimed and reused as "Industrial Reclaimed Water." Putting aside that significant quantities are never "reclaimed" and are directly discharged into surface waters, none of the listed exemptions apply:

> (1) air conditioner condensate; compressor condensate; steam condensate; or condensate that forms externally on steam lines and is not process wastewater;
> (2) washwater from washing whole fruits and vegetables;
> (3) non-contact cooling water;
> (4) once through cooling water;
> (5) water treatment filter backwash;
> (6) water from routine external washing of buildings, conducted without the use of detergents or other chemicals;
> (7) water from routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous waste have not occurred (unless spilled material has been removed);
> (8) cooling tower blowdown with a total dissolved solids concentration less than 2,000 milligrams per liter; or
> (9) wastewater with measured effluent concentrations at or below threshold levels listed in the figure contained in this paragraph that is not a waste source listed in §210.54(a) of this title

(1),(2),(4),(5),(6),(7), and (8) clearly fall outside of the specified and narrow definitions.

- SpaceX's water cannot be non-contact (1) cooling water, because the water contacts raw materials as well as products of combustion and is used for "dust and fire suppression" per the TCEQ permit application. Video evidence also indicates deluge water from the system comes into contact with LNG (liquid methane) and Liquid Oxygen that has been released during pre launch operations
- Deluge water does not also meet the requirements for inclusion under exemption (9) because the facility has submitted samples that exceed Nickel, Selenium, Zinc and Barium levels specified in 30 TAC 210.34(a)(9)

Deluge water meets the statutory definition of "process wastewater" in the CWA and in 30 TAC

At the bare minimum, EPA and TCEQ must agree as to whether SpaceX's deluge water is "process" or "non-process" wastewater. Legal precedent and a plain reading of the definition of "process wastewater" appears to contradict TCEQ and SpaceX's assumption that the wastewater is "non-process"

2. TCEQ already knows how to permit rocket engine cooling water, as evidenced by a Blue Origin water permit issued in 2018

There are no categorical requirements for minimum treatment standards under 40 CFR 400-471 for rocket deluge systems; this avoids industry-specific discharge standards. Developing best practices under 40 CFR 125 must be based on engineering and the "best judgement" of the NPDES permitting authorities alone.

However novel and uncommon "rocket launch water" may be for a regulatory agency, the TCEQ cannot in good conscience scratch its head in confusion about some sort of new issue it has not dealt with in the past.

In 2018, TCEQ issued a TPDES permit for a rocket launch facility operated by the rocket company Blue Origin. The agency also issued a non-process wastewater permit (WQ0005241000) for Blue Origin's operations. At the Blue Origin launch facility, TCEQ created a novel (and perfectly reasonable) definition for "Non-contact engine cooling water" specifically to address the unique nature of rocket launch operations.

DRAFT PERMIT CONDITIONS

The draft permit authorizes the disposal of non-contact engine cooling water (*1) at a yearly average flow not to exceed 0.025915 million gallons per year by evaporation.

Final effluent limitations are established in the draft permit as follows:

Pollutant	Daily Average	Daily Maximum
Flow, MGD	Record	Record
Oil and Grease, mg/L	N/A	Record
Total Dissolved Solids, mg/L	N/A	Record
pH, SU	6.0 minimum	9.0

(*1) The term non-contact engine cooling water is defined as water that provides cooling for the flame deflector and the concrete floor of the test stand. The water is not used to cool the engines and does not contact the engines.

Blue Origin's facility had a discreet, segregated plate between the water stream used for cooling and the chemical combustion reaction of the rocket engine. This is a literal (and, again, reasonable) interpretation of the definition of "non-process wastewater" and "non-contact cooling water" in the Clean Water Act and Texas Statute. By defining the limitations of "non-contact engine cooling water" to specify that TCEQ only considered deluge wastewater to

be "non process" if it met the standard set by Blue Origin (eg a plate with physical separation), TCEQ has already shown favoritism towards SpaceX as well as a willingness to backslide on previous applicability determinations, which is disallowed under the NPDES program.

SpaceX's deluge system, in contrast to Blue Origin's 2018 authorization, involves direct contact with a rocket plume, in addition to ablated metal and dust, as admitted by SpaceX in various NEPA documents[3]. The idea that SpaceX's waste stream would constitute a non-process waste simply defies any sort of reasonable interpretation of the statute, both in writing and in practice.

Further, Blue Origin collected and treated 100% of the "non-contact" wastewater, as demanded in the permit itself. TCEQ's draft permit for SpaceX, in stark contrast, allows direct discharge of process wastewater directly into surface waters, with some water directly bypassing even simple settling basin treatments. This is a wildly divergent treatment of two operations under identical SIC and NAICS codes, with the agency seemingly approving less stringent conditions for an operation (SpaceX) that generates significantly more waste and a greater impact to the natural environment and waters of the United States.

3. SpaceX considers Deluge Water to be "process wastewater" at its own facilities in Florida

As evidenced above, SpaceX and TCEQ's determination that rocket deluge water is "non-process wastewater" defies any reasonable regulatory definition or legal precedent. In fact, this determination appears to be driven exclusively by SpaceX's demand for a quick and painless permitting process. This not only represents a clear circumvention of new source requirements for direct dischargers under 40 CFR 125, but it is a direct contradiction to what other regulatory agencies and *SpaceX itself* have claimed regarding point source pollution under NPDES permitting.

SpaceX submitted a modification and renewal permit application to the Florida Department of Environmental Protection (FDEP) in 2019 to manage the treatment of deluge water from Falcon9 and Starship launches at the NASA 39-A launch facility. In Form 1 of the permit application, SpaceX indicates that wastewater from these activities constitutes a "process wastewater" that will be disposed to groundwater via Land Application. In contrast, the permit application indicates that no "non-process" wastewater will be treated on-site.

If Starship and Falcon 9 deluge waste streams are both "process wastewaters" in Florida, it defies logic that Starship water in Texas would somehow be "non-process" in nature, given that this definition is dictated at the federal level under the Clean Water Act.

However, if we must humor painful SpaceX legal contortions to avoid properly complying with the law when it's convenient for the company, it is only fair to discuss how Starship launches in Texas are unique from combined Falcon 9/Starship ops in Florida. These theoretical legal

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[3] https://www.faa.gov/media/72816

arguments fall under two categories: that the fuel used for Starship in Texas is unique or that the deluge system is unique.

WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID IWWP No. FLA010307

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?	X		X
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?		X	
H. Is this facility a non-discharging/closed loop recycle system?		X	
I. Is this facility a public water system whose primary purpose is the production of potable water for public consumption and which discharges demineralization concentrate to surface water or groundwater?		X	

SpaceX 2019 Pad 30A Permit application, Florida.

1. *Argument 1: Starship uses Liquid Methane, while Falcon rockets use kerosene.*

   This argument is absurd because SpaceX itself does not seek special treatment of liquid methane/oxygen (LCH4/LOX) launches in Florida. Both wastewaters (from Falcon and Starship) are treated as "process wastewaters." Further, Blue Origin is also seeking authorization to treat "process wastewater" from deluge operations at NASA for its New

Glenn rocket (see FDEP permit application FLAB07454-001-IW8D). Like Starship, New Glenn uses LCH4/LOX as a fuel source.

In a water pollution context, the primary chemical difference between using a fossil fuel gas (methane) and a fossil fuel liquid (kerosene) is that at ambient conditions, kerosene will readily and clearly pollute water, as methane is not a liquid as standard temperature and pressure.

While the presence of kerosene in operations presents an obvious increased risk of oil and grease discharges, these discharge and control requirements would be determined at the back end when considering site-specific control and monitoring measures. The presence of liquid versus gaseous fuel would impact a portion of the expected pollution to receiving waters; there is no doubt that a Kerosene launch system poses an additional risk to the environment.

That said, the determination of a "process wastewater" under the Clean Water Act occurs prior to these control and discharge requirements. Process water is a determination of the "process" and not just one specific chemical. By TCEQ and SpaceX's own admission, ablated metals, dust, heat, and combustion products from Starship launches are added to deluge water as a function of the water cooling the rocket and suppressing fire and dust. SpaceX admits to this in its own TCEQ permit application.

2. *Argument 2: The showerhead deluge system in Texas is different from a conventional launch pad deluge system.*

The mechanism for water spray is unique for the Texas SpaceX facility in many ways. Deluge water sprays up and out in Texas, while conventional water deluge systems (also used at other SpaceX sites) flood an enclosed channel or trench. This is a silly argument of semantics.

As mentioned in section 2 above, TCEQ made this abundantly clear when the agency took clear steps to define why Blue Origin's Texas launch facility generated "non-process" water that was explicitly defined as "non-contact cooling water" under Texas Water Code. Both a traditional "flooding" deluge system and SpaceX's "showerhead" design in Texas use the direct contact of water to a flame which represents a clear "process" use as defined in the Clean Water Act.

A further absurdity is that a traditional flooding deluge system creates such a significant volume of water underneath the rocket during ignition as to prevent the heat and energy from the rocket plume from ablating or deteriorating the underlying surface (typically heat-resistant concrete). In contrast, Starbase's showerhead uses high-pressure jet streams of water to control "flame," "energy," "heat," and "dust."

It is *because* Starbase's system doesn't generate a dense water column under the rocket that the engine ablates metal into water-soluble particulates during every launch. Therefore, the showerhead design creates an environment that generates ***more pollutants, not less!*** The very idea, therefore, that a traditional flood deluge system would be a "process" point source and Starbase's showerhead would be a "non-process" source is beyond absurd and defies scientific reality to a stunning degree.

4. Direct Discharges that bypass control in Texas must be covered under a General Permit or be classified as a "non-process" wastewater. Neither applies to SpaceX

Because SpaceX's water is not a "non-process" wastewater, as covered above, the only other exemption SpaceX can use to get out of NSPS provisions (which demand the more stringent of control method technology and endpoint toxicity) and discharge directly to WOTUS is to claim coverage under a general permit. Clearly, seeing as (1) SpaceX is not claiming general permit coverage here and (2) there are no TCEQ standard permits that could be applied to this facility by SIC code or permitted activity, the facility must be treated as a new facility and is subject to technology based standards under section 306 of the CWA.

5. New facilities that are Direct Dischargers into Surface Waters are subject to NSPS

Given the facility is a "new direct discharger" as defined in 40 CFR 122, it is automatically subject to NSPS standards[4]. The facility is not subject to any of the categorical effluent standards based on SIC code but is however subject to Technology-Based Effluent Limitations (TBEL) via BPJ review[5] :

Industries and/or Pollutants not Specifically Regulated by Effluent Guidelines

For direct dischargers, the permit writer utilizes best professional judgment (BPJ) to establish technology-based limits or determine other appropriate means to control its discharge.

- Refer to Chapter 5 ("Technology-Based Effluent Limitations") of the NPDES Permit Writers' Manual

For indirect dischargers, the state or local regulatory agency develops local limits, either technology-based or other appropriate means to control the discharge.

- Refer to the Local Limits Development Guidance

[4] https://www.epa.gov/eg/learn-about-effluent-guidelines
[5] https://www.epa.gov/eg/learn-about-effluent-guidelines#not-specific-reg

Referencing the NPDES permit writer[6] manual, the guidance is clear:

> ***When developing TBELs for industrial (non-POTW) facilities, the permit writer must consider all applicable technology standards and requirements for all pollutants discharged.***

This is where the problem starts for TCEQ. The agency forgot to make an available technology based determination of facility operations. TCEQ instead skipped right to risk and impact on receiving waters.

Technology-based Effluent Limitations are independent of impact determination and when comparing Impact and Technology standards, NPDES demands that the more stringent of the two standards(toxic endpoint and technology derived control) be applied.

The Technology required is at minimum a settling pond and pH treatment

A review of all issued NSPS permits at major launch sites in the US (Kennedy Space Center - Florida, Wallops Island - Virginia, and Vanderberg AFB - California) reveals that every launch pad with a water deluge system requires collection and capture of wastewater in an engineered pond. At Kennedy Space Center and Vanderberg, water is disposed of by land application or discharged to a WWTP.

For example, the Wallops Facility in NASA (VA0024457) has enforceable limits for Rocket Deluge process wastewater that include Precipitation volume and Total Suspended solids:

Limit Type Description	Parameter Description	Monitoring Location	Season Num	Limit Begin Date	Limit End Date	Ch Lim
Enforceable	Petrol hydrocarbons, total recoverable	Effluent Gross	0	01-MAY-2020	30-APR-2025	
Enforceable	pH	Effluent Gross	0	01-MAY-2020	30-APR-2025	
Enforceable	pH exchange [su]	Effluent Gross	0	01-MAY-2020	30-APR-2025	
Enforceable	Precipitation volume	Effluent Gross	0	01-MAY-2020	30-APR-2025	
Enforceable	Solids, total suspended	Effluent Gross	0	01-MAY-2020	30-APR-2025	

[6] https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf

Likewise, the Land Disposal Process Wastewater permit for SpaceX's own operations at Pad 39A (KSC) in Florida (Permit FLA010307) has limits at groundwater monitoring wells:

6. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.5.

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Annually
Aluminum, Total Recoverable	0.2	mg/L	Grab	Annually
Manganese, Total Recoverable	0.05	mg/L	Grab	Annually
Petrol Hydrocarbons,Total Recoverable	Report	mg/L	Grab	Annually
Solids, Total Dissolved (TDS)	500	mg/L	Grab	Annually
Zinc, Total Recoverable	5	mg/L	Grab	Annually
Turbidity	Report	NTU	Grab	Annually

In stark contrast, TCEQ's proposed permit allows SpaceX to discharge directly to surface waters, completely bypassing control, and with fewer effluent standards. This is clear degradation of the intent of the Clean Water Act, as a national standard, and backsliding on reasonable requirements applicable to the rocket launch industry.

6. SpaceX's wastewater that bypasses the pond exceeds established minimum control standards

It would be hard to tell what was going on with this permit application if there wasn't abundant video evidence showing that the company has knowingly and deliberately misled regulators about the facility.

All four of the water samples provided to TCEQ (in July-August 2023 and May-June 2024) were from the wastewater pond, several hours after the water was discharged. Thus, gravity-settling treatment would have already occurred. The permit application and the proposed permit treat direct discharge as a triviality instead of a bypass of claimed control, which is directly prohibited in the Act and in NPDES requirements.

The pending TCEQ Administrative Order requires SpaceX to test water that runs off pad in order to finalize permitting requirements, which is odd because SpaceX already tested this sheetflow outfall. We know this because the company provided data to the FAA during the November 2023[7] NEPA reevaluation and again in a motion in a recent lawsuit filed by SaveRVG.[8]

When considering "bypasses" to control systems, we can reference 30 TAC §305.535(d), which specifies that Total Suspend Solids shall not exceed 30 mg/L (30 day basis) or 45 mg/L (7 day basis).

[7] https://www.faa.gov/media/72816
[8] Case 1:24-cv-00148 Document 8-21 Filed on 10/11/24 in TXSD

Using at minimum the criteria for POTW to determine an acceptable effluent for bypass, a problem arises:

Date	Off Pad TSS (mg/L)	Wastewater Pond TSS (mg/L)
7/28/2023	3970	223
8/6/2023	370	34 ✔
8/18/2023	208	49
8/25/2023	34.9	15.5 ✔
5/29/2024	49.9	7.5 ✔
6/6/2024	724	7.1 ✔
6/27/2024	**Applied for Permit**	
7/15/2024	724	19

✔ = submitted with application

Red - Above Limit **Green - Below Limit**

Out of 12 samples collected from the treatment pond and off-pad runoff during the relevant periods, TSS levels exceeded the 45 mg/L standard seven times. Four out of the five "non-exceeding" samples were the only lab-tested data provided by SpaceX during the technical review and drafting periods.

While acknowledging that Starbase's deluge system is not a POTW, it is a direct discharger (a fact the Commission seems to have sidestepped when looking at off pad flow) and cherry picked data included in a permit application certainly begs the question of why SpaceX is being allowed to discharge water that would be considered a violation if it were from any other industrial source the Commission issues permits to all the time.

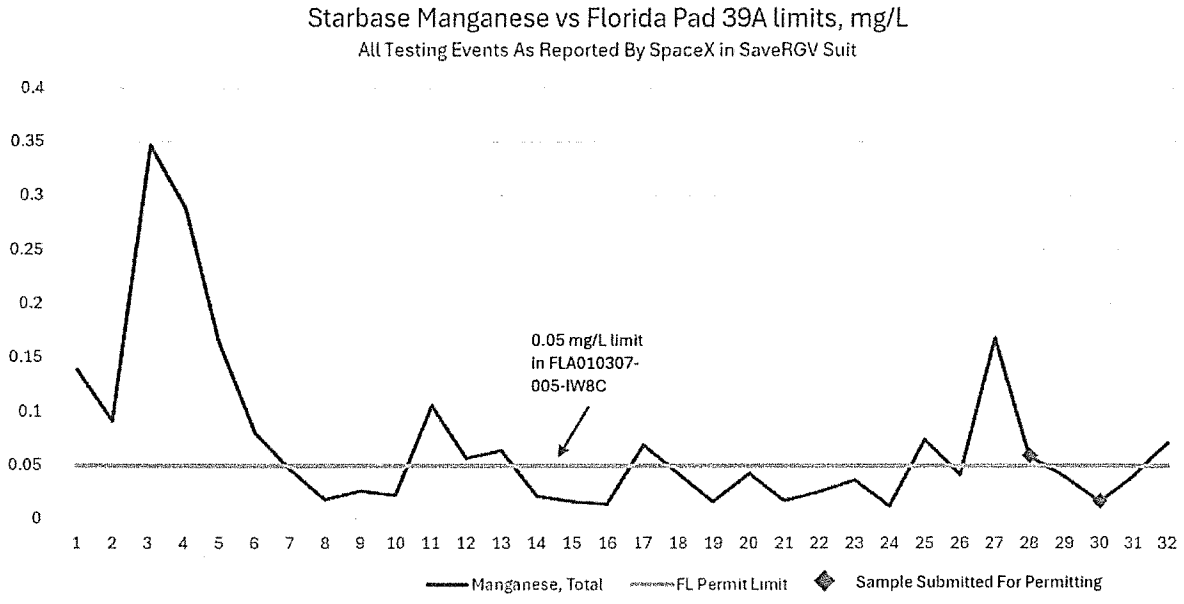
7. TCEQ Based its decision to skip completing a Technology-Based Limitation based on incomplete information

As noted in the Permit Statement of basis, TCEQ consciously decided to forego completing any TBEL analysis "Based on the presumption of the quality of the other contributing waste streams being consistent with the quality of stormwater runoff of the facility."

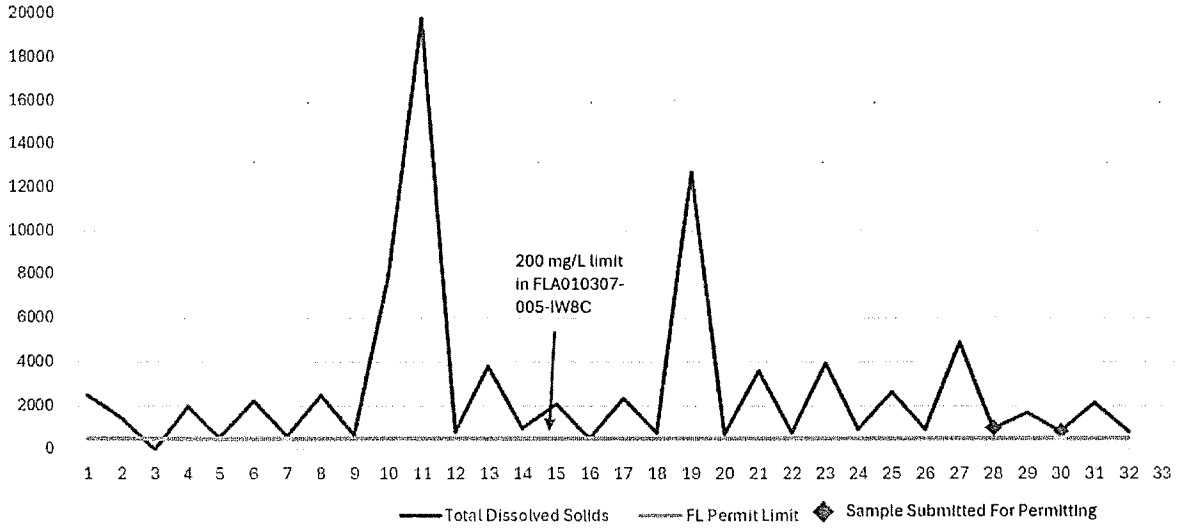
> **Technology-Based Effluent Limitations**
> Regulations in Title 40 of the Code of Federal Regulations (40 CFR) require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the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

This is patently false. SpaceX has collected numerous samples that clearly indicate pad runoff water is NOT consistent with existing stormwater discharges. They just didn't send these samples to TCEQ, and TCEQ did not ask for them.

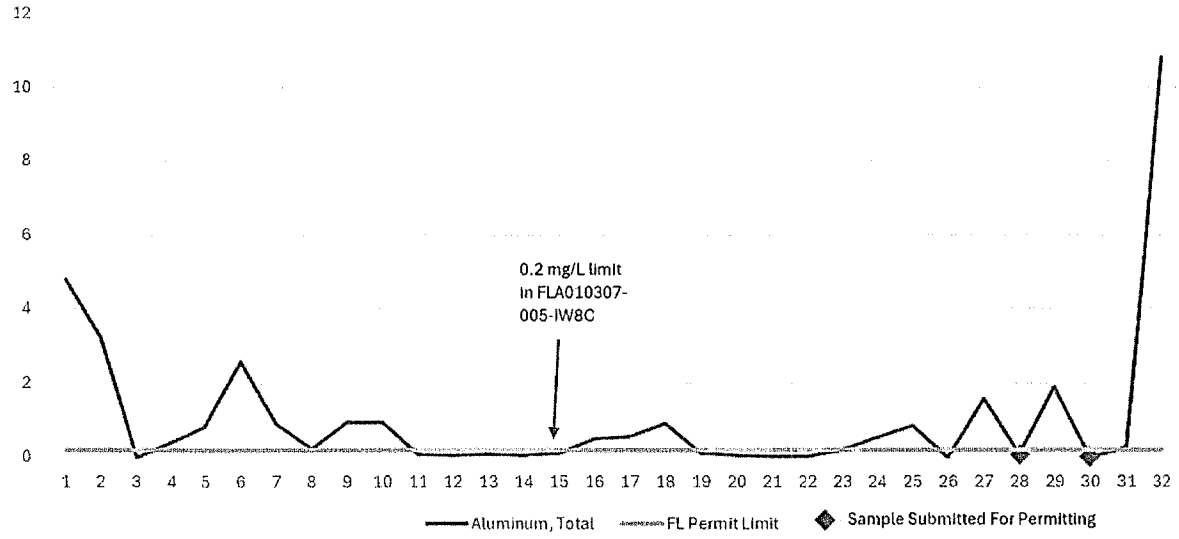
Using data submitted to federal court (case 1:24-cv-00148, filed 10/11/2024) collected by SpaceX itself, the company cannot in good faith represent that the samples collected for permitting are representative of site wide discharges. I have charted some of these (with TCEQ and SpaceX's own NPDES limits from pad 39A in Florida as a reference):

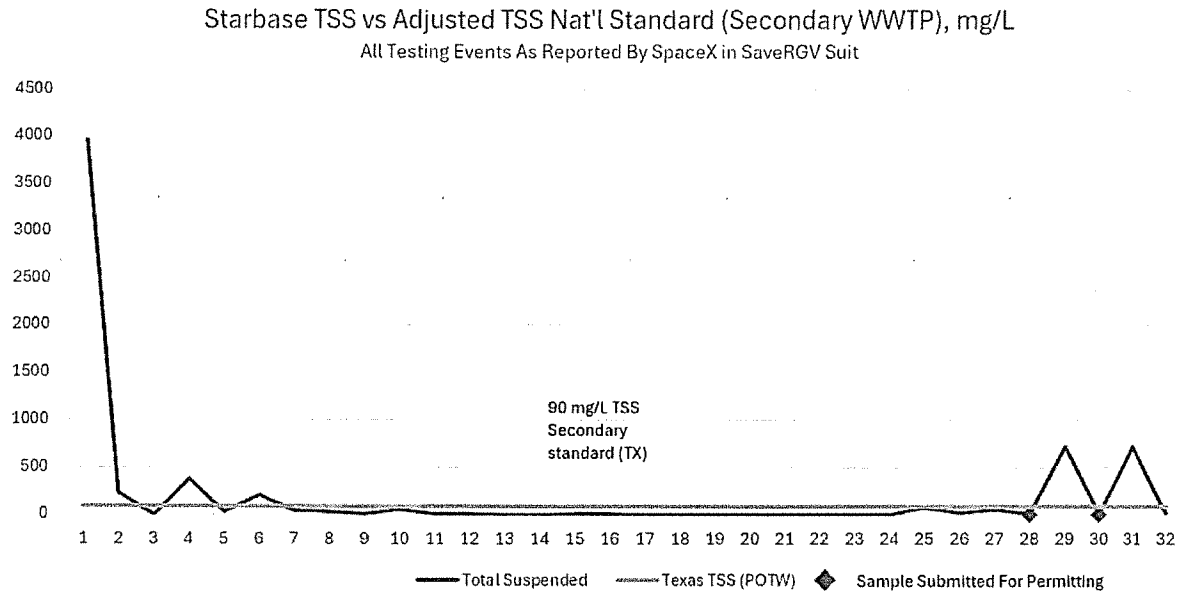


Starbase Total Dissolved Solids (TDS) vs Florida Pad 39A limits, mg/L
All Testing Events As Reported By SpaceX in SaveRGV Suit



Starbase Aluminum vs Florida Pad 39A limits, mg/L
All Testing Events As Reported By SpaceX in SaveRGV Suit



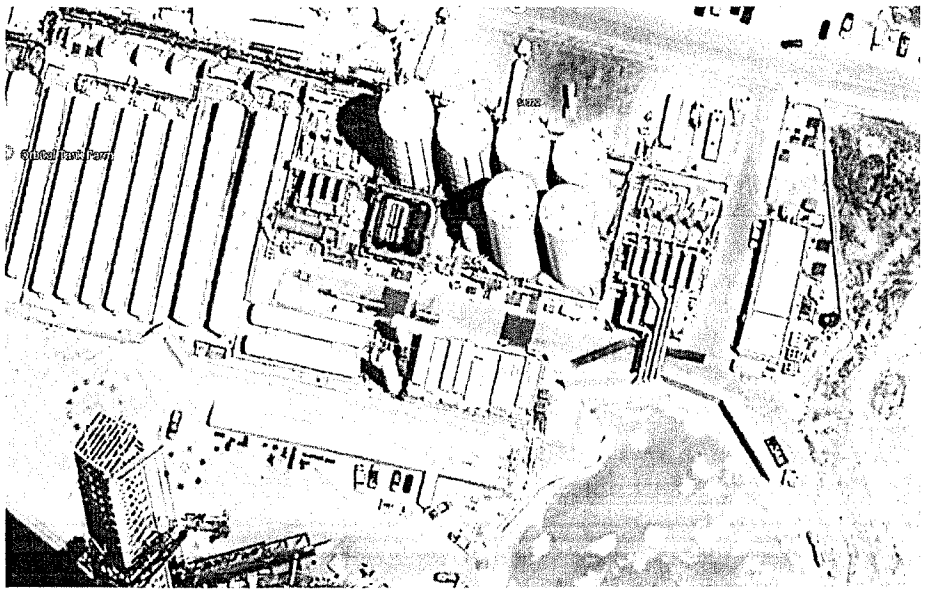


These charts show a clear and disturbing trend. SpaceX submitted samples that show concentrations that are well below the long-term averages SpaceX itself collected. The company then fraudulently claims that the samples provided were representative of all the facility wastewater AND stormwater regulated under its MSGP authorization, despite the fact that many of these samples showed criteria pollutant levels at many times (often thousands of times) higher. This is false and the representation makes the entire analysis performed by TCEQ pointless, illegal and moot.

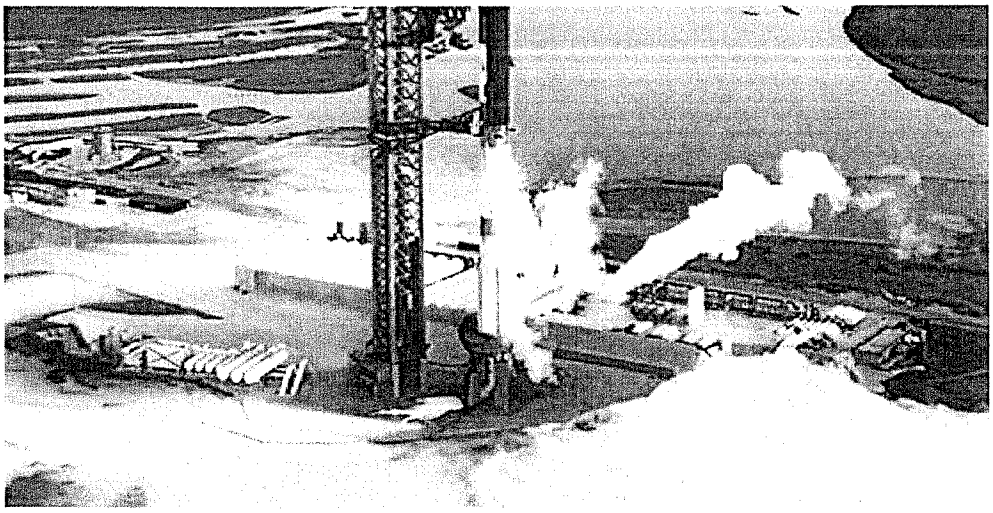
8. SpaceX is also dumping hazardous, cryogenic liquids directly into the wetlands.

While unrelated to the deluge permitting directly, it should be noted that SpaceX recently altered its tank farm for filling operations of cryogenic Liquid Oxygen and Liquid Methane (eg, LNG).

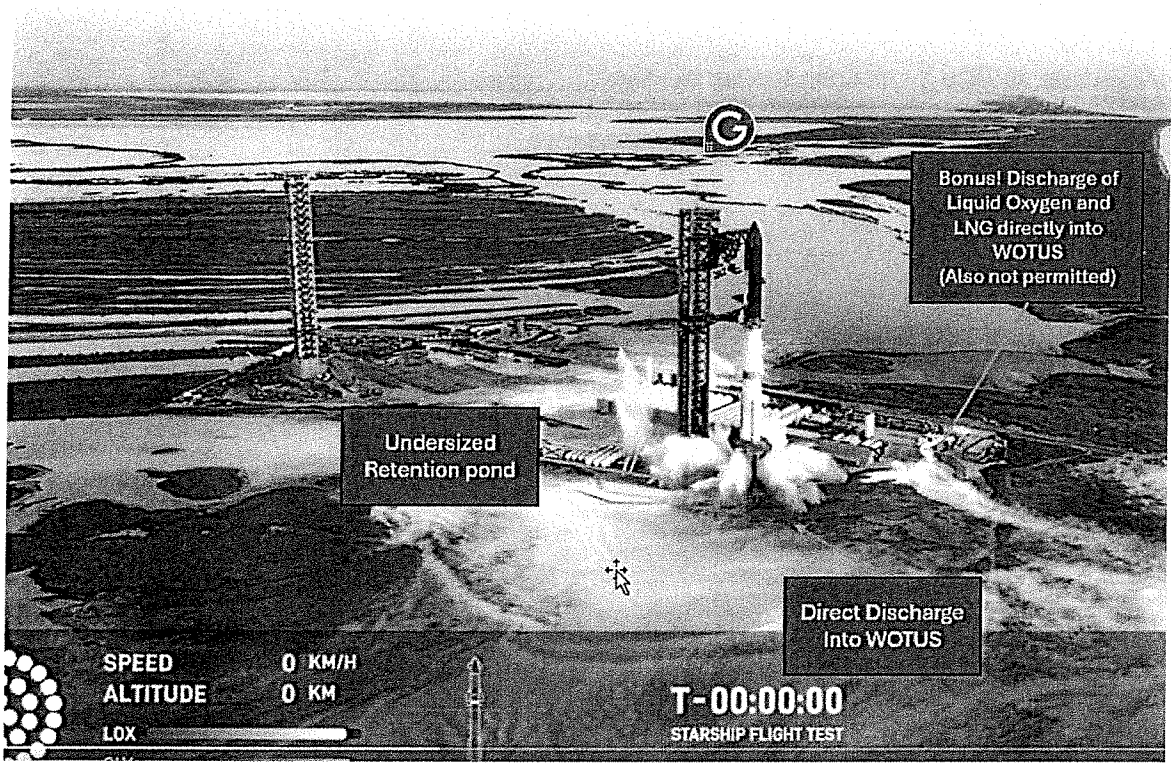
Previous tank farm:



New Tank farm (modified pumps and removal of vertical tanks):



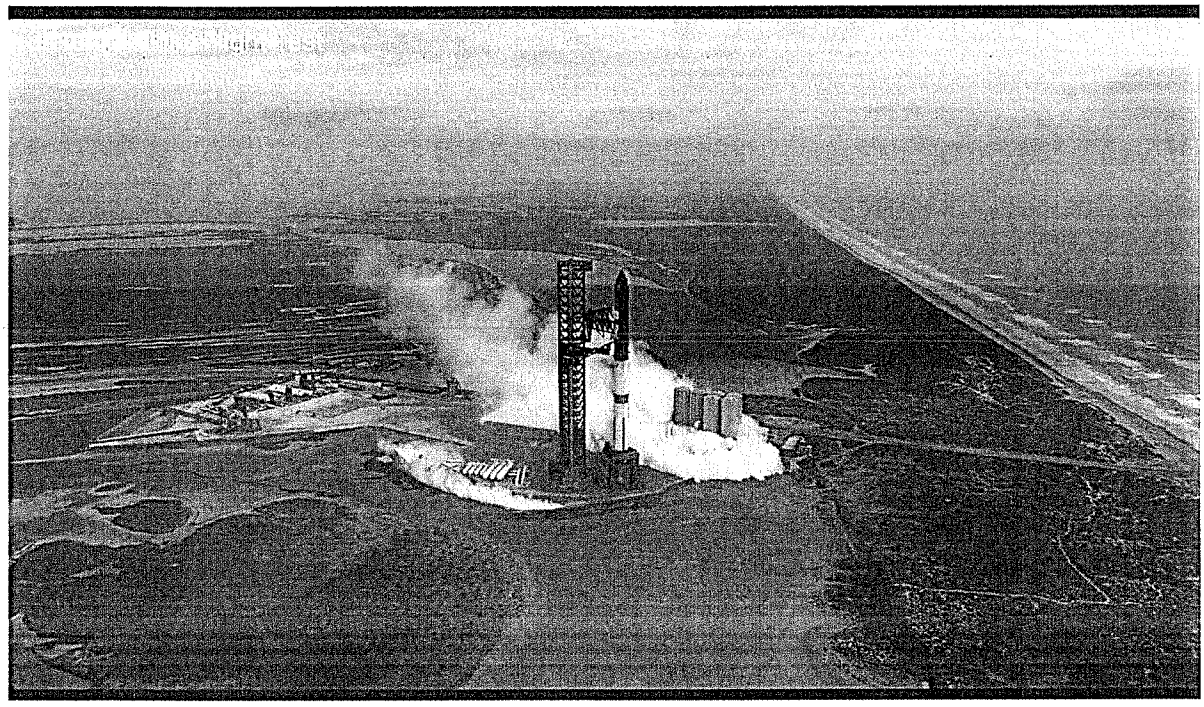
Stunningly, the excess cryogenic liquids are vented not into a dedicated sump with containment (as required at minimum by NFPA 59a and Texas Fire Code) , but directly into wetlands (eg WOTUS)



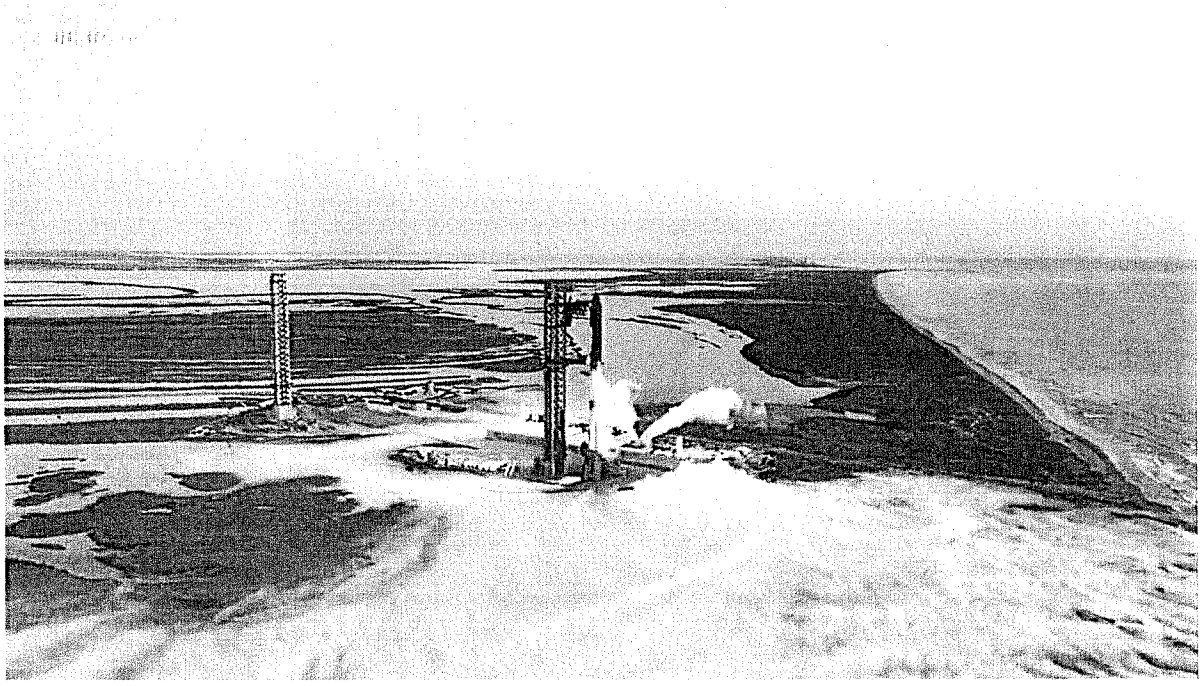
EPA has already cited SpaceX for violating the law for discharging liquid oxygen into the wetland in June 2022, but a close look at the videos from last week's launch make it clear that cryogenic fluids are gushing out into the wetlands and pooling.

This is a huge departure from previous launches, where there was residual vapor but not extensive pooling.

For example, launch 3 (3/14/24) looked like this:



Launch 5 (10/13/24) looked like this:

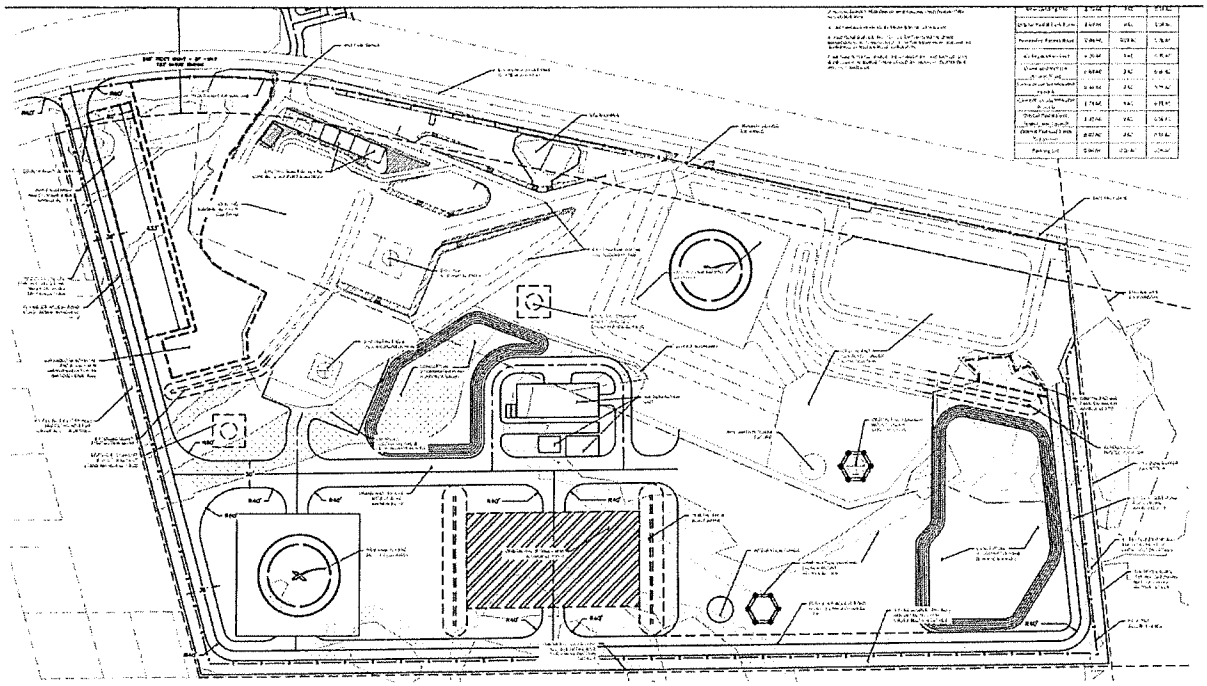


While ambient conditions can and do impact how rapidly cryogenic liquids volatilize, this is irrelevant because hazardous liquid discharges to wetlands are prohibited by 30 TAC 327 and 40 CFR 302.4.

SpaceX must install blow down/venting containment for environmental protection AND to comply with State Fire code.

9. SpaceX was aware of additional water containment structures as early as 2019

SpaceX whines about having to comply with basic environmental laws, acting as if it was taken aback by these requirements. But one thing is clear: SpaceX knew years ago that additional wastewater storage would be needed. SpaceX submitted an application to the Army Corps for a wetland[9] 404 permit in 2021, which included analysis and drawings dating back to 2019. The application showed the wetland to be modified (highlighted in yellow below):



The additional ponds were clearly intended as a way to manage deluge water as required under the Clean Water Act (SpaceX has some experience managing operations at US spaceports, after all). The company abandoned the plan because it thought it could launch without deluge water and then reconsidered in April 2023 after blowing its pad to bits.

[9] https://www.swg.usace.army.mil/Portals/26/docs/regulatory/PN%20March/Plans_201200381.pdf?ver=FRFoaMtv2EGSZh833C4pRA%3d%3d

This is important context because all of SpaceX's post facto justifications as to why it should be allowed to discharge process wastewater without control and without proper NPDES authorization is just damage control on its own poor planning and lack of care for rules and regulations.

10. One of the Samples provided for permitting is not valid

The permit application includes a baffling error, given that TCEQ considered this application administratively and technically complete in record speed.

In the Lab Report from SPL, sample 2302895 is listed as having been collected at 6:30 PM on 5/29:

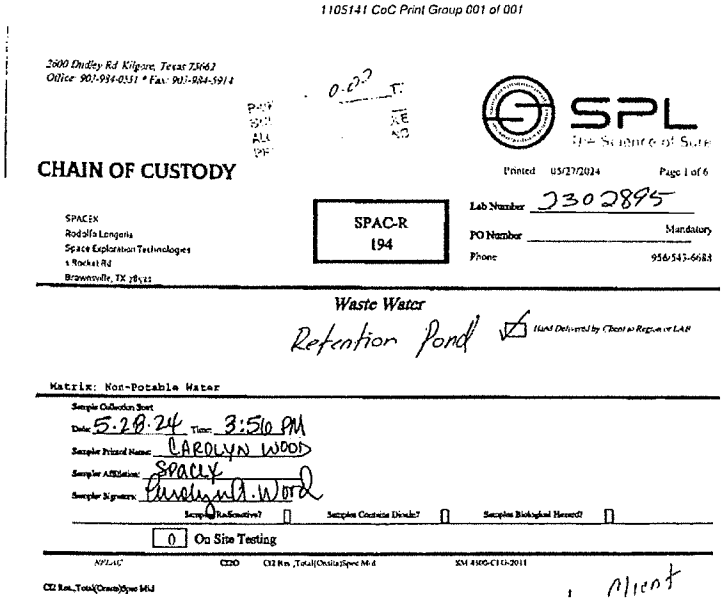
SAMPLE CROSS REFERENCE

SPACEX
Rodolfo Longoria
Space Exploration Technologies
1 Rocket Rd
Brownsville, TX 78521

Sample	Sample ID	Taken	Time
2302895	*RETENTION POND*	05/29/2024	18:30:00

Bottle 01 Amber 32 Oz

However, the Chain of Custody form indicates that SpaceX employee Carolyn Wood collected the sample on 5/28 at 3:56 PM



1105141 CoC Print Group 001 of 001

2800 Dudley Rd Kilgore, Texas 75662
Office 903-984-0551 * Fax 903-984-5914

SPL
The Science of Sure

CHAIN OF CUSTODY

Printed 05/27/2024 Page 1 of 6

SPACEX
Rodolfo Longoria
Space Exploration Technologies
1 Rocket Rd
Brownsville, TX 78521

SPAC-R
194

Lab Number 2302895
PO Number Mandatory
Phone 956/543-6688

Waste Water
Retention Pond
Hand Delivered by Client to Regional LAB

Matrix: Non-Potable Water
Sample Collection Start
Date 5.28.24 Time 3:56 PM
Sampler Printed Name CAROLYN WOOD
Sampler Affiliation SPACEX
Sampler Signature Carolyn M. Wood
Samples Radioactive? Samples Corrosive Drinks? Samples Biological Hazard?

0 On Site Testing

NPLAC CCH2O CO2 Rm ,Total(Oxalic)Spec Mtd SM 4500-CO2-2011

CO2 Rm_Total(Orsat)Spec Mtd

Alert

Furthermore, the sample was handed over to FedEx at 5:30 PM on 5/29, AN HOUR BEFORE the sample was listed as collected.

2600 Dudley Rd. Kilgore, Texas 75662
Office: 903-984-0551 * Fax: 903-984-5914

SPL
The Science of Sure

CHAIN OF CUSTODY

Printed 05/27/2024 Page 5 of 6

SPACEX
Rodolfo Longoria
Space Exploration Technologies
1 Rocket Rd
Brownsville, TX 78521

SPAC-R 194

2 NaOH to pH >12 Polyethylene 250 mL/amber

NELAC	CNs	Cyanide, total	SM 4500-CN⁻ E-2016 (14.0 days)
NELAC	CN-A	Cyanide - Available/Amenable	SM 4500-CN⁻ G-2016 (14.0 days)
NELAC	CNCl	Cyanide After Chlorination	SM 4500-CN⁻ G-2016 (14.0 days)

1 Polyethylene Quart

NELAC	ICIL	Chloride	EPA 300.0 2.1 (28.0 days)
NELAC	FIL	Fluoride	EPA 300.0 2.1 (28.0 days)
NELAC Short Hold	NN3L	Nitrate-Nitrogen Total	EPA 300.0 2.1 CAS:14797-55-8 (2.00 days)
NELAC	SO4L	Sulfate	EPA 300.0 2.1 (28.0 days)
NELAC	AlkT	Total Alkalinity (as CaCO3)	SM 2320 B-2011 (14.0 days)
NELAC Short Hold	Cr+6	Hexavalent Chromium	SM 3500-Cr B-2011 CAS:18540-29-9 (1.00 days)
NELAC	TDS	Total Dissolved Solids	SM 2540 C-2015 (7.00 days)

Ambient Conditions/Comments

Date	Time	Relinquished		Received	
5.28.24	6:20 pm	Printed Name: Carolyn Wood	Affiliation: SpaceX	Printed Name:	Affiliation:
		Signature: Carolyn J. Wood		Signature:	SPL
5/29/24	17:30	Printed Name:	Affiliation:	Printed Name:	Affiliation:
		Signature: SPL		Signature: FedEx	
		Printed Name:	Affiliation:	Printed Name:	Affiliation:
		Signature: FedEx		Signature:	
		Printed Name:	Affiliation:	Printed Name:	Affiliation:
		Signature:		Signature:	

On top of this, SPL never signed the CoC for receipt. This sample is functionally worthless and must tossed. Further, this demands an investigation given evidence presented above that SpaceX is selectively submitting samples to TCEQ.

11. Request for a contested hearing

Considering the numerous technical flaws in SpaceX's permit application and the baffling shortcuts enabled by TCEQ, I am proactively requesting a contested hearing on this permit issuance. The agency can and must do better.

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Monday, October 14, 2024 9:04 AM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000

H

Associate to the permit item only.

From: jdsalazar2000@gmail.com <jdsalazar2000@gmail.com>
Sent: Sunday, October 13, 2024 5:42 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Josue Salazar

EMAIL: jdsalazar2000@gmail.com

COMPANY:

ADDRESS: 2538 SHOFNER LN
HARLINGEN TX 78552-2264

PHONE: 9567789716

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Exhaust from the rockets can contaminate deluge water with dissolved solids, as well as arsenic and hexavalent

chromium. Despite SpaceX's claims that only "potable drinking water" is released into the wetlands, environmental engineers have said otherwise. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially birds like Snowy Plovers and Reddish Egrets. I am directly impacted by SpaceX's wastewater pollution and activities because I consume locally sourced fish. I do not want to develop any illness in the future. It is imperative that there is an adherence to environmental regulations, for it is vital for the health and wellness of our citizens. For this reason,I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and Spacex staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Monday, October 14, 2024 9:04 AM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000

H

From: jdsalazar2000@gmail.com <jdsalazar2000@gmail.com>
Sent: Sunday, October 13, 2024 4:54 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Josue Salazar

EMAIL: jdsalazar2000@gmail.com

COMPANY:

ADDRESS: 2538 SHOFNER LN
HARLINGEN TX 78552-2264

PHONE: 9567789716

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and

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Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Friday, October 4, 2024 11:04 AM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

H

From: kimsadoval@gmail.com <kimsadoval@gmail.com>
Sent: Thursday, October 3, 2024 6:25 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: MS Kim Sandoval

EMAIL: kimsadoval@gmail.com

COMPANY:

ADDRESS: 26726 SCARLETT CIR
HARLINGEN TX 78552-3927

PHONE: 9564656737

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and

threatened species, especially migratory birds. I am directly impacted by SpaceX's wastewater pollution and activities because this land is sacred and needs to be studied further for future scientific advancement in ecologyand biology. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From:	PUBCOMMENT-OCC
Sent:	Friday, October 4, 2024 11:04 AM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000

H

From: kimsadoval@gmail.com <kimsadoval@gmail.com>
Sent: Thursday, October 3, 2024 6:24 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: MS Kim Sandoval

EMAIL: kimsadoval@gmail.com

COMPANY:

ADDRESS: 26726 SCARLETT CIR
HARLINGEN TX 78552-3927

PHONE: 9564656727

FAX:

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Vincent Redondo

From: PUBCOMMENT-OCC
Sent: Tuesday, October 29, 2024 2:22 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

From: kimsadoval@gmail.com <kimsadoval@gmail.com>
Sent: Monday, October 28, 2024 11:35 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Kim Sandoval

EMAIL: kimsadoval@gmail.com

COMPANY:

ADDRESS: 26726 SCARLETT CIR
HARLINGEN TX 78552-3927

PHONE: 9564656737

FAX:

COMMENTS: I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory

birds. As a member of the surrounding community, I am directly impacted by SpaceX's wastewater pollution and activities. I request that TCEQ provide sufficient Spanish language interpretation and translation services at the hearing on October 17 to ensure that all participants' questions are answered. In addition, TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Vincent Redondo

From:	PUBCOMMENT-OCC
Sent:	Tuesday, October 29, 2024 2:28 PM
To:	PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject:	FW: Public comment on Permit Number WQ0005462000

From: kimsadoval@gmail.com <kimsadoval@gmail.com>
Sent: Monday, October 28, 2024 11:36 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Kim Sandoval

EMAIL: kimsadoval@gmail.com

COMPANY:

ADDRESS: 26726 SCARLETT CIR
HARLINGEN TX 78552-3927

PHONE: 9564656737

FAX:

COMMENTS: I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory

birds. As a member of the surrounding community, I am directly impacted by SpaceX's wastewater pollution and activities. I request that TCEQ provide sufficient Spanish language interpretation and translation services at the hearing on October 17 to ensure that all participants' questions are answered. In addition, TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Friday, September 27, 2024 11:41 AM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: Claudiamserrano@gmail.com <Claudiamserrano@gmail.com>
Sent: Friday, September 27, 2024 4:08 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Claudia Michelle Serrano

EMAIL: Claudiamserrano@gmail.com

COMPANY: Voces Unidas

ADDRESS: 4424 WHITE OAK LN
BROWNSVILLE TX 78521-4150

PHONE: 5126897939

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. I am directly impacted by SpaceX's wastewater pollution and activities because I live several miles from the location. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

(31)

TCEQ Registration Form

October 17, 2024

Space Exploration Technologies Corp.
Proposed TPDES Permit No. WQ0005462000

PLEASE PRINT

Name: Michelle Serrano

Mailing Address: 4424 White Oak Ln

Physical Address (if different): _____

City/State: Brownsville, Texas **Zip:** 78521

This information is subject to public disclosure under the Texas Public Information Act

Email: michelle@vocesunidasrgv.org

Phone Number: (512) 689 - 7939

- Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☒ No

  If yes, which one? _____

☑ **Please add me to the mailing list.**

☑ **I wish to provide formal *ORAL COMMENTS* at tonight's public meeting.**

☐ **I wish to provide formal *WRITTEN COMMENTS* at tonight's public meeting.**

(Written comments may be submitted at any time during the meeting)

Please give this form to the person at the information table. Thank you.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, September 10, 2024 3:32 PM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
www.tceq.texas.gov/customersurvey

From: grace.sung703@gmail.com <grace.sung703@gmail.com>
Sent: Monday, September 9, 2024 7:00 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Chanhee Sung

EMAIL: grace.sung703@gmail.com

COMPANY:

ADDRESS: 2709 W FERN AVE
MCALLEN TX 78501-6235

PHONE: 9293209001

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. SpaceX's wastewater pollution and activities directly impact me because this affects the community, this affects peoples drinking water, it damages the environment and as I previously mentioned nature/birds/etc. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, September 10, 2024 3:32 PM
To: PUBCOMMENT-OCC2; PUBCOMMENT-OPIC; PUBCOMMENT-ELD; PUBCOMMENT-WQ
Subject: FW: Public comment on Permit Number WQ0005462000

H

Jesús Bárcena
Office of the Chief Clerk
Texas Commission on Environmental Quality
Office Phone: 512-239-3319

How is our customer service? Fill out our online customer satisfaction survey at:
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From: grace.sung703@gmail.com <grace.sung703@gmail.com>
Sent: Monday, September 9, 2024 7:04 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Chanhee Sung

EMAIL: grace.sung703@gmail.com

COMPANY:

ADDRESS: 2709 W FERN AVE
MCALLEN TX 78501-6235

PHONE: 9293209001

FAX:

COMMENTS: Dear TCEQ Chief Clerk, I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. SpaceX's wastewater pollution and activities directly impact me because this affects the community, this affects peoples drinking water, it damages the environment and as I previously mentioned nature/birds/etc. For this reason, I request a contested case hearing for the nearby affected residents on this permit application. I also demand that the TCEQ provide Spanish language interpretation and translation services at the hearing on October 17. In addition, the TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, October 15, 2024 3:05 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

RFR

From: shane.tomlinson17@gmail.com <shane.tomlinson17@gmail.com>
Sent: Tuesday, October 15, 2024 6:22 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Shane M Tomlinson

EMAIL: shane.tomlinson17@gmail.com

COMPANY:

ADDRESS: 1012 SOUTHCLIFF DR
PORTLAND TX 78374-1932

PHONE: 3619475702

FAX:

COMMENTS: Tesla has a horrible track record & will not have the people's best interests in mind. PLEASE RECONSIDER!!! I am opposed to the issuance of the following permits for SpaceX LLC: WQ0005462000 The SpaceX launch pad and Starbase facility emit unacceptable levels of pollutants that threaten Brownsville and Rio Grande Valley residents' health and well-being. Water pollutants also damage the sensitive wetland, salt marsh, and mudflat ecosystems of South Bay, Lower Rio Grande

Valley Wildlife Refuge, and Boca Chica Beach, home to numerous endangered and threatened species, especially migratory birds. As a member of the surrounding community, I am directly impacted by SpaceX's wastewater pollution and activities. I request that TCEQ provide sufficient Spanish language interpretation and translation services at the hearing on October 17 to ensure that all participants' questions are answered. In addition, TCEQ and SpaceX staff must consult with the Carrizo/Comecrudo Tribe of Texas, the original Native people of this region, about this permit application and all SpaceX activities at the Boca Chica Beach site.

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, October 15, 2024 3:05 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

RFR

From: shane.tomlinson17@gmail.com <shane.tomlinson17@gmail.com>
Sent: Tuesday, October 15, 2024 6:19 AM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER:

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: Shane M Tomlinson

EMAIL: shane.tomlinson17@gmail.com

COMPANY:

ADDRESS: 1012 SOUTHCLIFF DR
PORTLAND TX 78374-1932

PHONE: 3619475702

FAX:

COMMENTS: DO NOT LET TESLA RUIN TEXAS' ENVIRONMENT!!! PLEASE RECONSIDER!!!

Jennifer Cox

From: PUBCOMMENT-OCC
Sent: Tuesday, September 10, 2024 12:55 PM
To: PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC
Subject: FW: Public comment on Permit Number WQ0005462000

H

From: jvonwater@gmail.com <jvonwater@gmail.com>
Sent: Monday, September 9, 2024 8:37 PM
To: PUBCOMMENT-OCC <PUBCOMMENT-OCC@tceq.texas.gov>
Subject: Public comment on Permit Number WQ0005462000

REGULATED ENTY NAME STARBASE LAUNCH PAD SITE

RN NUMBER: RN111606745

PERMIT NUMBER: WQ0005462000

DOCKET NUMBER: 2024-1282-IWD-E

COUNTY: CAMERON

PRINCIPAL NAME: SPACE EXPLORATION TECHNOLOGIES CORP

CN NUMBER: CN602867657

NAME: MR Joaquin A Villarreal

EMAIL: jvonwater@gmail.com

COMPANY:

ADDRESS: 4 TEXCOCO
BROWNSVILLE TX 78526-2007

PHONE: 9014407962

FAX:

COMMENTS: To: Office of the Chief Clerk, TCEQ I oppose the issuance of Permit WQ0005462000 for SpaceX. The SpaceX Launch Pad and Starbase facility already release unacceptable levels of toxic pollution onto South Bay and Boca Chica Beach. The South Bay, Boca Chica Beach and Laguna Madre waters are used for recreation, swimming, fishing, etc. by residents and visitors. The pollution released by SpaceX is degrading and threatening the people of Brownsville, Port Isabel, South Padre Island,

Laguna Vista, Los Fresnos and surrounding areas, as well as visitors to the Lower Rio Grande Valley. This water pollution also causes detrimental environmental damage to our sensitive wetland areas, salt marshes, and the mudflat ecocystem that is critical to numerous endangered species of resident and migratory birds and fish. Local residents and visitors alike who enjoy the area are being exposed to SpaceX wastewater pollution which can lead to certain types of cancer. Some of these local residents and visitors enjoying our waters are children! I strongly request TCEQ support a contested case hearing which includes affected people and groups; to include the Carrizo and Comecrudo Tribe of Texas. I strongly recommend the TCEQ reject this request and order SpaceX to transport this wastewater for treatment, and/or for SpaceX to use their engineering and financial resources to install a Waste Water Treatment Facility that is capable of removing toxic pollutants to an acceptable level per the latest Federal requirement, prior to dumping in South Bay, Boca Chica Beach, or anywhere else. In addition, SpaceX must clean up the areas that have been contaminated by their operations. Respectfully, Joaquin A. Villarreal

(46)

TCEQ Registration Form

October 17, 2024

Space Exploration Technologies Corp.
Proposed TPDES Permit No. WQ0005462000

PLEASE PRINT

Name: JOAQUIN VILLARREAL

Mailing Address: 4 TEKCOCO

Physical Address (if different): _____

City/State: BROWNSVILLE, TX **Zip:** 78526

This information is subject to public disclosure under the Texas Public Information Act

Email: _____

Phone Number: ( )

- Are you here today representing a municipality, legislator, agency, or group? ☐ Yes ☒ No

  If yes, which one? _____

☐ **Please add me to the mailing list.**

☒ **I wish to provide formal *ORAL COMMENTS* at tonight's public meeting.**

☐ **I wish to provide formal *WRITTEN COMMENTS* at tonight's public meeting.**

(Written comments may be submitted at any time during the meeting)

Please give this form to the person at the information table. Thank you.