



**GALVESTON BAY**  
FOUNDATION

Guardian of Galveston  
Bay since 1987



# Monitoring Water Quality During Crises: ITC Fire & Bayport Channel Collision

*Sarah Gossett Robinson, Water Programs Manager  
Nick Ellis, Water Quality Programs Coordinator*

# Galveston Bay Foundation

The mission of Galveston Bay Foundation is to preserve and enhance Galveston Bay as a healthy and productive place for generations to come.



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# ITC Incident Timeline

**Sunday, March 17<sup>th</sup>**  
*ITC fire begins*

**Wednesday, March 20<sup>th</sup>**  
*Firefighting foam released into Tucker Bayou, Galveston Bay Foundation gets involved*

**Chron** Local Apollo 11 Project US & World Sports Business Entertainment Life Jobs

## ITC to Reuters: Chemicals from Deer Park fire have spread into nearby ship channel

By Peter Dawson, Chron.com / Houston Chronicle Published 3:55 pm CDT, Tuesday, March 19, 2019

LOCAL // HOUSTON

### Deer Park fire investigations begin amid anxiety over emissions, pollution

Zach Despart and Mike Morris | March 21, 2019 | Updated: March 21, 2019 9:08 p.m.

Photo: Godofredo A. Vasquez, Staff Photographer

IMAGE 1 OF 113

The petrochemical fire at Intercontinental Terminals Co 22, 2019, in Deer Park, Texas.

1 of 12

Runoff from the now-extinguished petrochemical tank fire at Intercontinental Terminals Company is blocked by an oil skimming bouy on Wednesday, March 20, 2019, in Deer Park. Fire crews extinguished the blaze at ITC about 3 a.m., Wednesday, almost four days after it started, which caused a plume of black smoke to linger over the Houston area. ...



**Wednesday evening, March 20:**  
*Galveston Bay Foundation President  
Bob Stokes on KHOU*

“We’re looking for transparency on what exactly is being sampled, how they’re sampling it, where they’re sampling it and we still haven’t been told even that.” – Bob Stokes



**Environmentalists concerned about chemical runoff from ITC fire running into Houston Ship Channel**



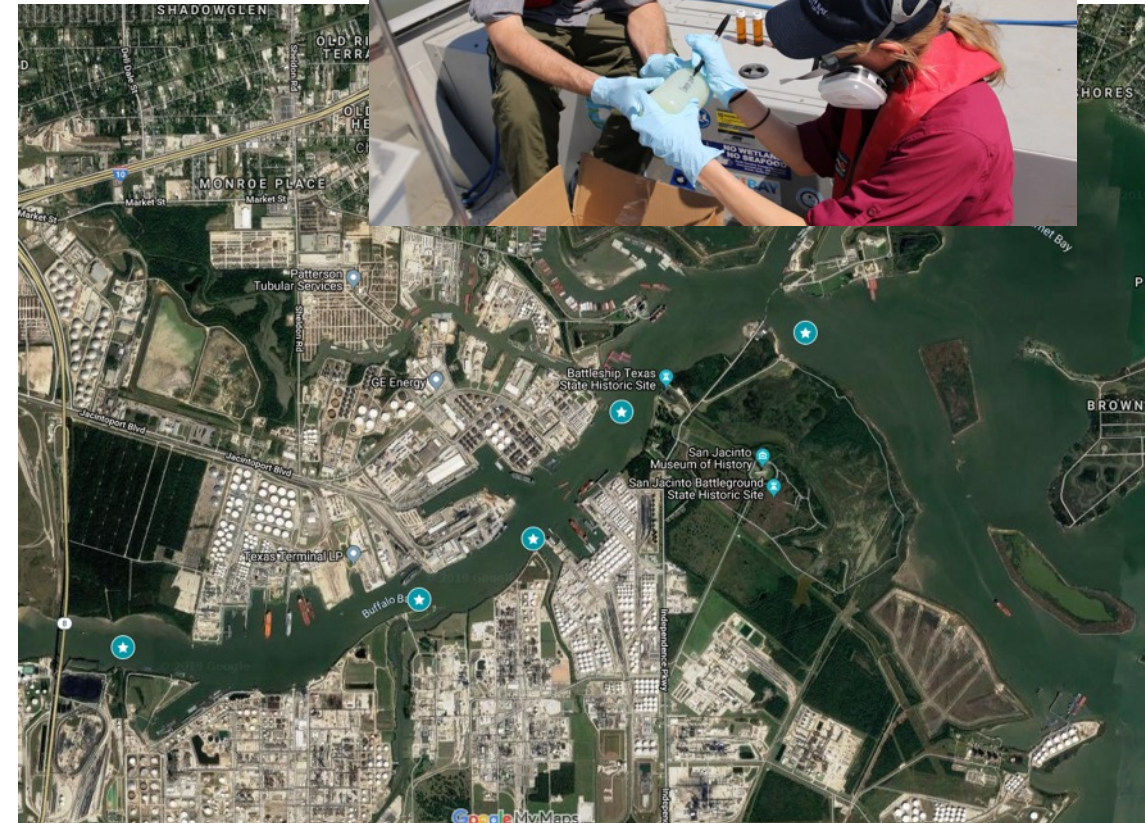
Many are concerned that the chemical runoff from the ITC fire in Deer Park will destroy fish and shellfish for years to come.

Published: 10:14 PM CDT March 20, 2019  
Updated: 10:12 PM CDT March 20, 2019

# Partnerships & Need for Independent Testing

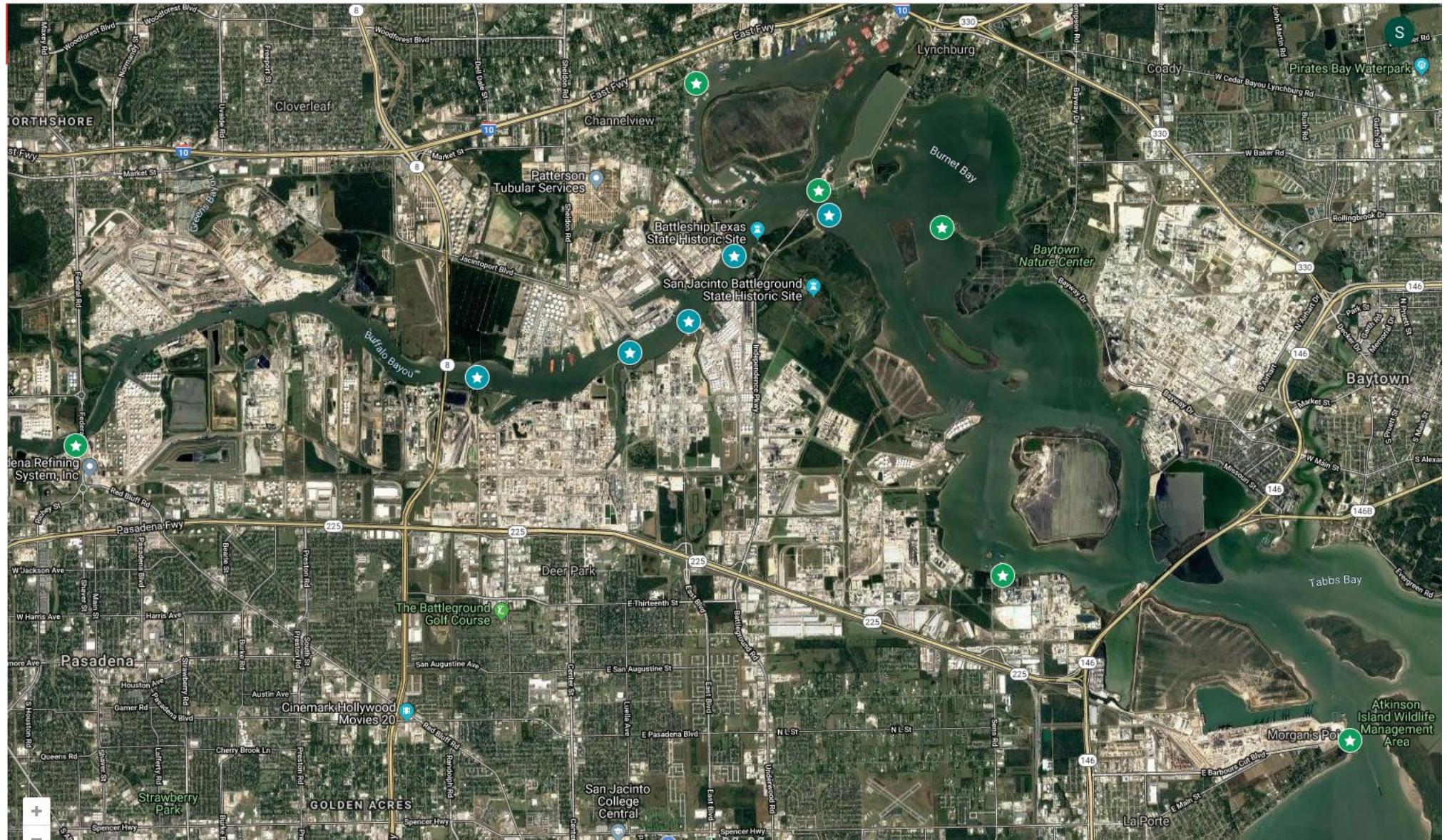
*Identified the need for independent water sampling, established Environmental Defense Fund and Texas A&M partnership*

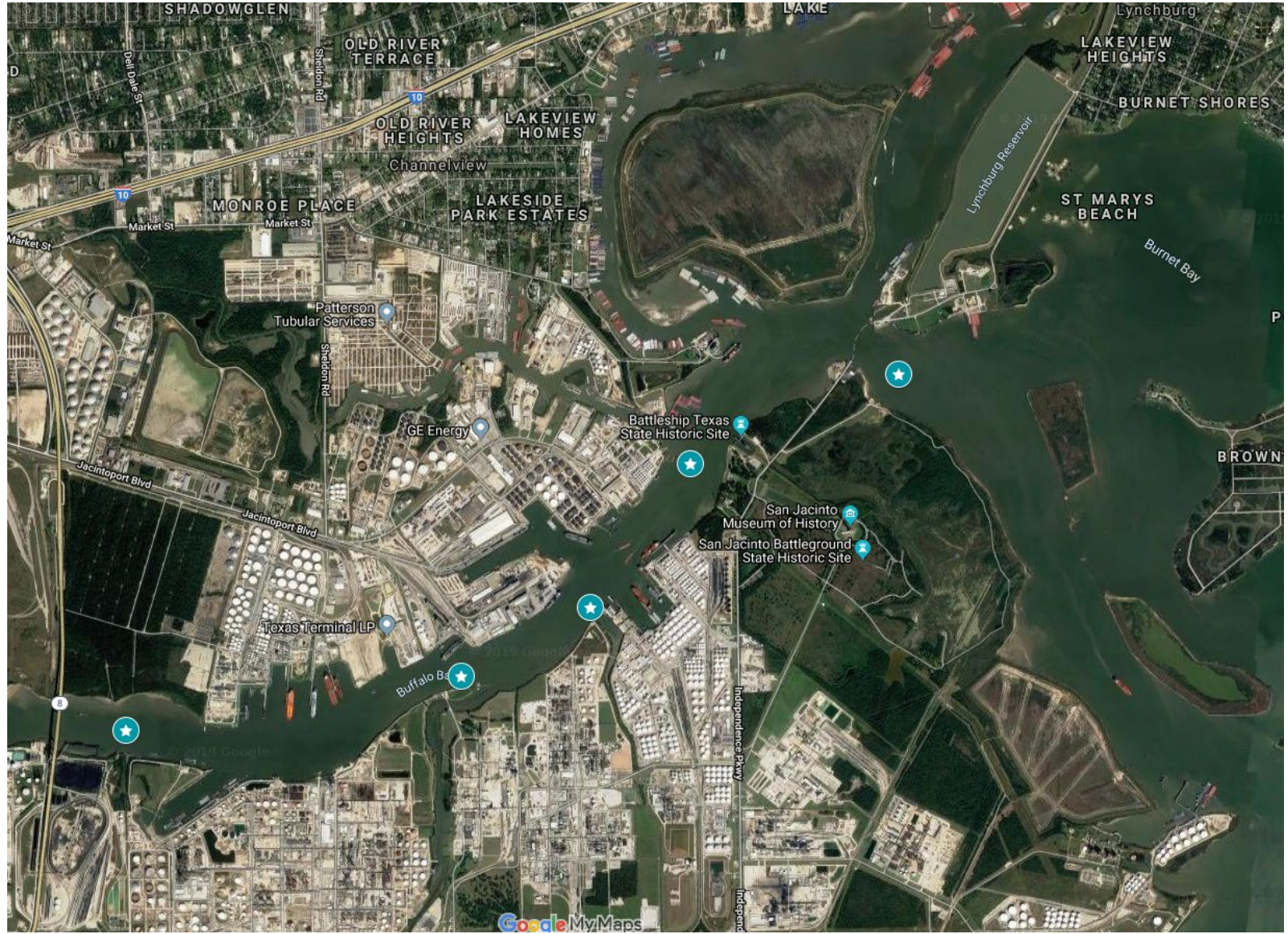
**Friday, March 22nd:**  
*Began testing along the Houston Ship Channel, invited the media*



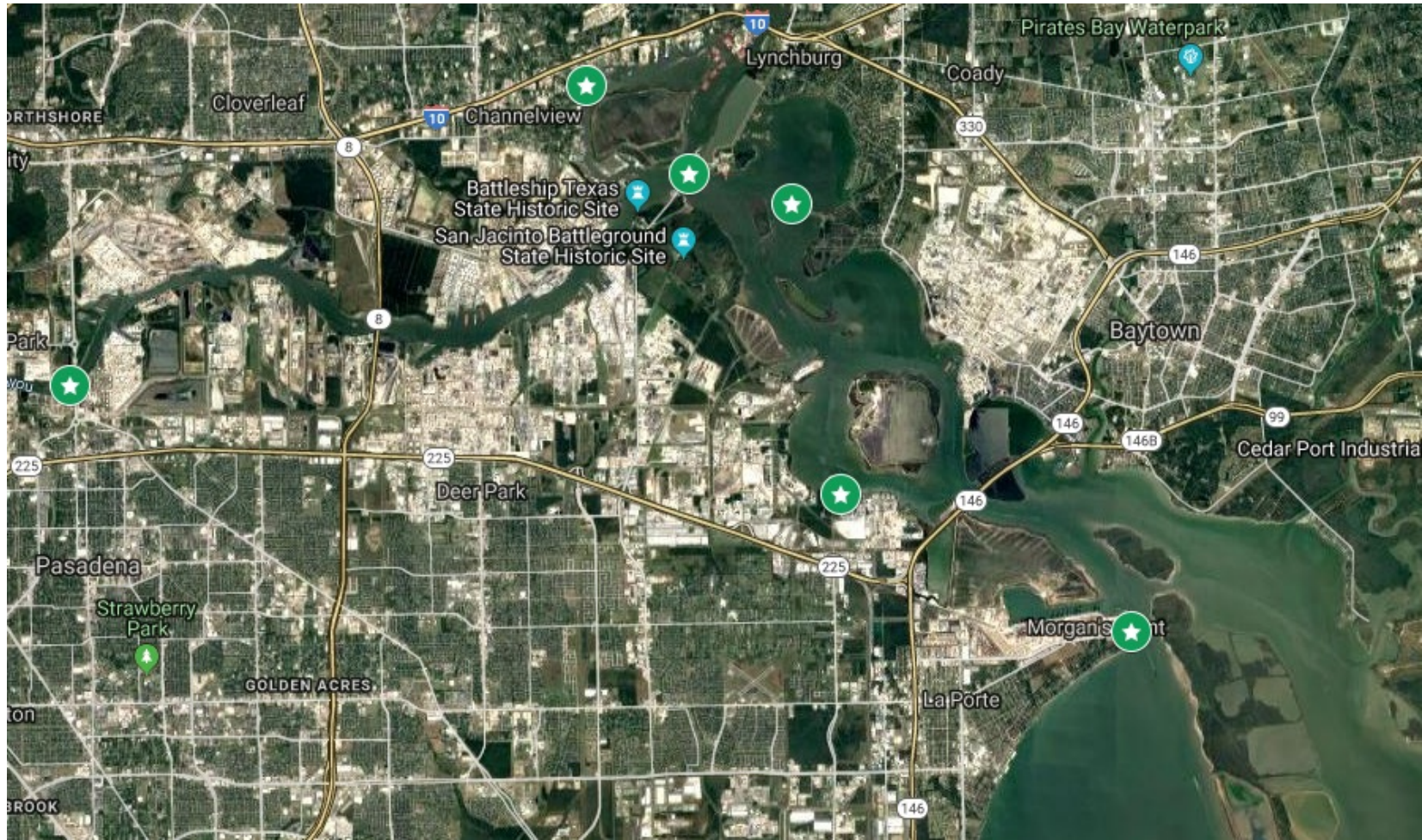


**Goal:** to bring transparency and answers about the quality to the public and proper incident response









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ITC-FIRE  
**Galvesto samples store**  
For the second it tested.  
Author: Janelle Bludau  
Published: 9:32 PM CDT Mar  
Updated: 7:34 AM

### Elevate water

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ITC-FIRE  
**How to protect community with elevated levels of benzene detected near ITC**  
Miller says they've found benzene levels of up to 495 parts per billion on Peninsula Street near the ITC facility. That's well above the 180 parts per billion the TCEQ says is safe.

# What are we sampling for?

## Volatile Organic Compounds (VOCs)

**TCEQ Standards for Galveston Bay waters**(waters not used as a source of drinking water)

The state standards for each compound are highlighted below.

Compound	TCEQ Standard ( $\mu\text{g/L}$ )
Benzene	581 $\mu\text{g/L}$
Toluene	–
Ethylbenzene	1,867 $\mu\text{g/L}$
Xylenes	No standards listed at all



# Viewing our results

## ← GBF Sample 7

name

GBF Sample 7

Sample Date

Sat Mar 23 2019 13:19:00 GMT-0500 (Central Daylight Time)

Benzene ( $\mu\text{g/L}$ )

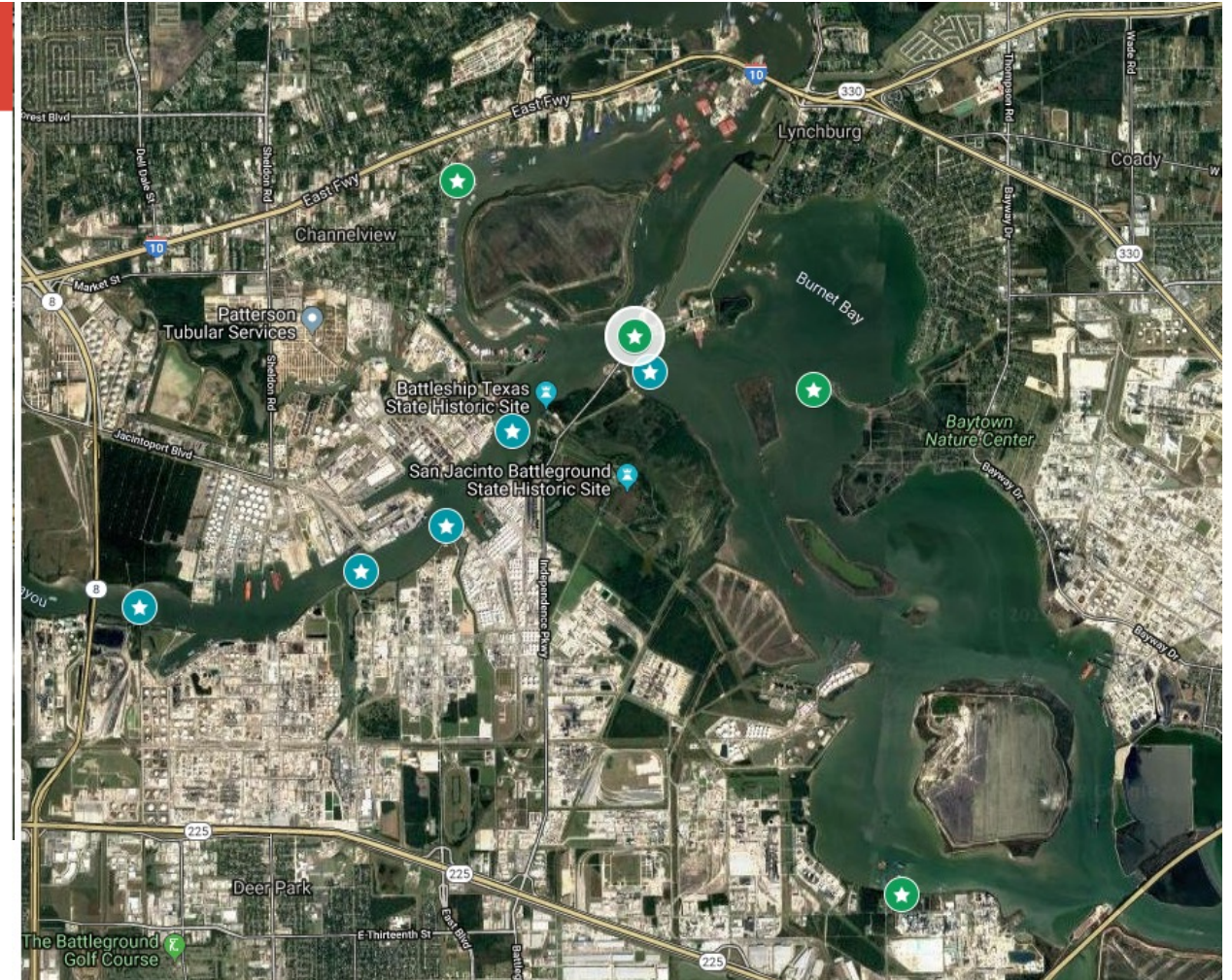
46.8

Toluene ( $\mu\text{g/L}$ )

3.6

Xylenes ( $\mu\text{g/L}$ )

0.68



*This is above EPA's recommended National Ambient Water Quality Criteria of  $16 \mu\text{g/L}$  but below TCEQ's state standards. All other samples collected Saturday had concentrations below state standards and national criteria.*



# PFAS WHAT YOU NEED TO KNOW

## WHAT ARE PFAS CHEMICALS?

Man-made chemicals used in a variety of industries.

Highly persistent in the environment and in the human body – known as the “forever chemical”

## HOW ARE WE EXPOSED TO PFAS?



STAIN/GREASE  
REPELLENT



FIREFIGHTING  
FOAMS



INDUSTRIAL  
USES

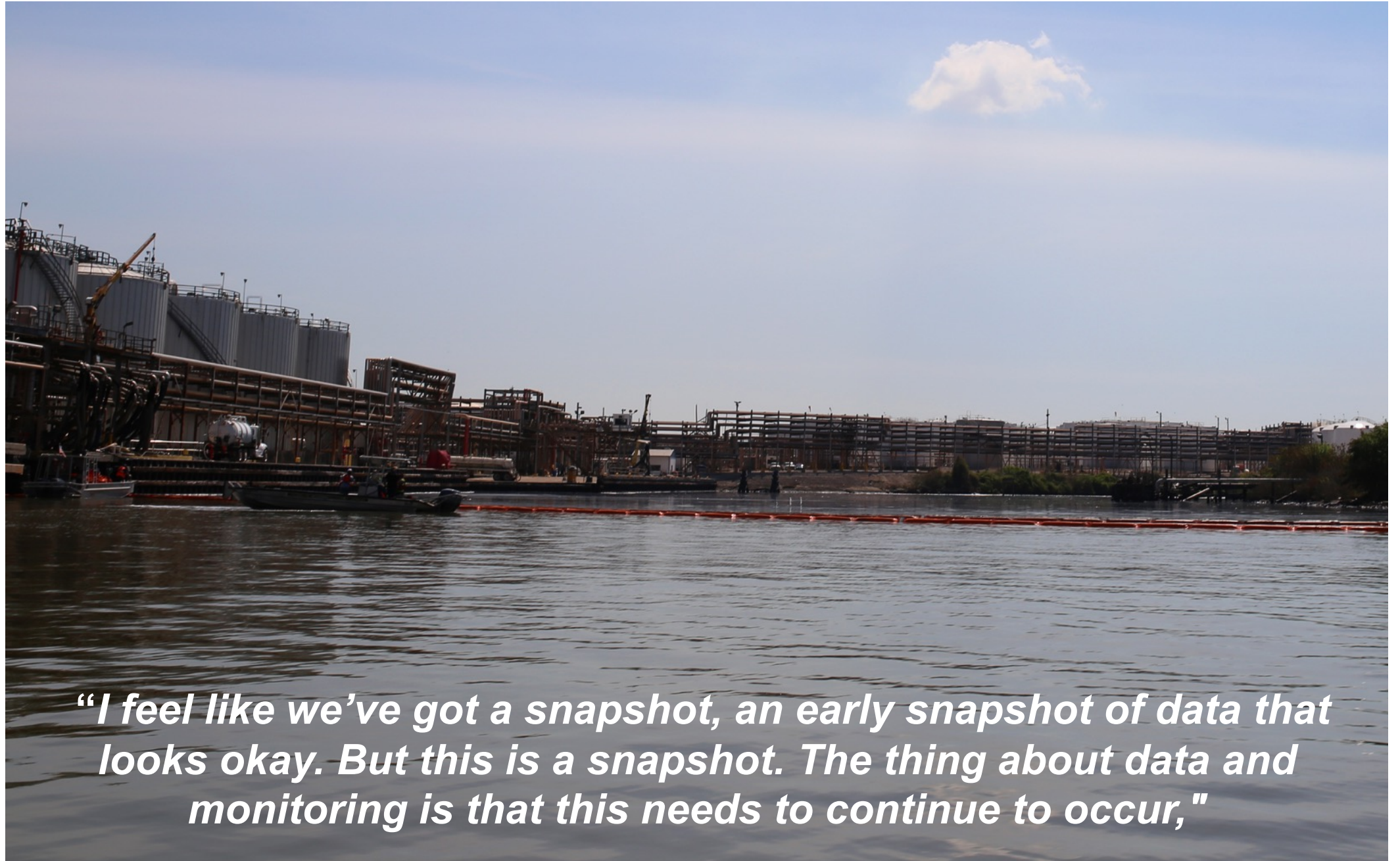
## HEALTH EFFECTS

Exposure can lead to adverse health effects. **Much is still unknown**, but PFAs exposure is linked to:

- Increased cholesterol
- Reproductive & development issues
- Kidney & immunological effects
- Cancer and tumors
- Thyroid hormone effects

# Preliminary Findings

- VOCs levels likely increased somewhat in the days during/after the event, but reduced relatively quickly.
- There was a definite presence of PFAs in Galveston Bay after the incident, but pre-incident levels cannot be established
- These levels were above EPA drinking water advisories at some points, but below the calculated risk for swimming/recreation
- Several of these sites saw increases in PFAs/PFOAs from 3/22 to 3/29
- Ongoing monitoring is needed



***“I feel like we’ve got a snapshot, an early snapshot of data that looks okay. But this is a snapshot. The thing about data and monitoring is that this needs to continue to occur,”***

# Bayport Channel Collision

## Galveston Bay Foundation Role:

- Worked with partner organizations to evaluate the potential impacts the spill could have on the Bay.
- Invited by the Unified Command response to serve on a Resources at Risk committee to evaluate the impact on natural resources.





# Bayport Channel Collision

- Tested water quality once, but confident in incident response
- Incident response webpage/hotline
- Monitored impacts to Kemah property through the media/social media & informed the public



Galveston Bay Foundation is 🙏 asking for donations — in Kemah, Texas.

Published by Claire Everett [?] · May 13 · 🌐

We've had some dead fish wash up at our Kemah property over the last two days. Here is a picture of what we found today, piled up. Yesterday, roughly 1,000 juvenile fish (1-inch long), approximately 200 blue crab, and a handful of adult flounder, sheepshead, and a variety of drum species washed up on our property. We know the responders are working diligently to collect any gasoline product found across Galveston Bay, but until it is all removed from the system, we may continue to see impacts like this. For more information about the incident and for contacts on where to report wildlife impacts, please visit: <https://bayport-response.com/>



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# Our Best Practices

- Transparency and accuracy
- Work with all parties involved with incidents
- Conduct independent sampling when necessary
- Open line of communication