CTEH®

THE SCIENCE OF READY℠

# INTERCONTINENTAL TERMINALS COMPANY - TANK FIRE

## Preliminary Data Summary

Deer Park, TX

May 1, 2019

Project #111356

9969201

## 1.0 Introduction

On March 17, 2019 Intercontinental Terminals Company (ITC) requested that CTEH® conduct air monitoring after a tank fire at the Deer Park, TX terminal. CTEH® arrived on-site on March 17, 2019 and began air monitoring and air sampling operations. CTEH® is currently conducting air monitoring in the impacted tank farm, within the Houston Ship Channel, in several industrial areas near the incident site, in community areas which currently have restricted access, and in the surrounding residential areas.

The present summary discusses real-time air monitoring data collected within those residential areas in the community from April 30, 2019 00:00 to May 1, 2019 00:00. Residential areas are defined as community locations outside of the industrial park, restricted access, and USCG divisions in the zone map included in **Attachment A**. During this reporting period, CTEH® performed real-time air monitoring in residential areas to the east of the ITC Tank Fire in Baytown, to the north in Channelview, to the west in Jacinto City and Galena Park, and to the south in Pasadena, Deer Park, and La Porte.

## 2.0 Air Monitoring and Sampling Methods

CTEH® developed and implemented an Air Sampling and Analysis Plan (SAP) to document and quantify the release of fugitive emissions, if any, from the incident at ground level. The SAP has been approved by local, state, and federal representatives of the on-site Unified Command (UC). In accordance with this UC-approved plan, detections of VOCs (volatile organic compounds) at or above 0.5 ppm require follow-up monitoring for benzene. Benzene detections of 1 ppm or greater in the community are to be communicated to the Federal On-Scene Coordinator. Because benzene is a VOC, initial monitoring for VOCs can be used to determine if benzene-specific monitoring is required.

All instrumentation was calibrated at least once per day or per manufacturer's recommendations. Target analytes were measured as listed in **Table 1**, below. Roaming air monitoring was performed in community residential areas with hand-held instruments. All hand-held air monitoring was conducted in the breathing zone.

CTEH® has also collected analytical air samples for VOCs. At the time of this report, analytical samples are being collected at 13 locations in the surrounding area. These samples have, and will continue to be, sent to a 3rd-party laboratory for chemical analysis. These data will be summarized in a separate report.

## 3.0 Air Monitoring Results

**Attachment A** provides maps of the locations of hand-held air monitoring and analytical air sampling in community residential areas. **Table 1** summarizes the results for community hand-held air monitoring.

**Table 1: Community Hand-Held Real-Time Air Monitoring Results***

| Analyte | Instrument | No. Readings | No. Detections | Range[1] |
|---|---|---|---|---|
| Benzene | Gastec #121L | 166 | 0 | < 0.05 ppm |
| | UltraRAE | 174 | 0 | < 0.025 ppm |
| VOCs | MultiRAE | 1380 | 4 | 0.1 ppm |

*In accordance with the UC-approved Air Sampling and Analysis Plan, benzene detections of 1 ppm or greater in the community are to be communicated to the Federal On-Scene Coordinator.
[1]Maximum detections preceded by the "<" symbol are considered non-detections below the limit of detection (LoD) value to the right.

Between April 30, 2019 00:00 to May 1, 2019 00:00, CTEH® performed air monitoring for VOCs and benzene in locations outside of community residential areas, defined on the zone map (**Attachment A**). These include areas near the ITC Tank Fire site (Impacted Tank Farm), in the industrial areas surrounding the ITC Tank Fire site (USCG Division E), within the Houston Ship Channel (USCG Divisions A-D), and in the industrial areas north and south of the Houston Ship Channel in Channelview (Industrial Area). These data are being provided to on-site regulatory agencies in real time. CTEH® has been and continues to actively monitor in the ship channel and industrial areas north and south of the ship channel.

During this reporting period, CTEH® performed real-time air monitoring in residential areas to the east of the ITC Tank Fire in Baytown, to the north in Channelview, to the west in Jacinto City and Galena Park, and to the south in Pasadena, Deer Park, and La Porte.

During this reporting period, CTEH® personnel observed four detections of VOCs at 0.1 ppm. These detections were below the 0.5 ppm action level for VOCs approved by UC. There were no detections of benzene in the community during this reporting period.

## 4.0 Weather Conditions

**Attachment B** contains a wind rose depicting wind speed and direction for this reporting period. Data was acquired from the Texas Commission on Environmental Quality (TCEQ) Lynchburg Ferry meteorological station located on Tidal Road approximately 2 mi NNE of the incident site.

# Attachment A

## CTEH Community Air Monitoring and Sampling Locations



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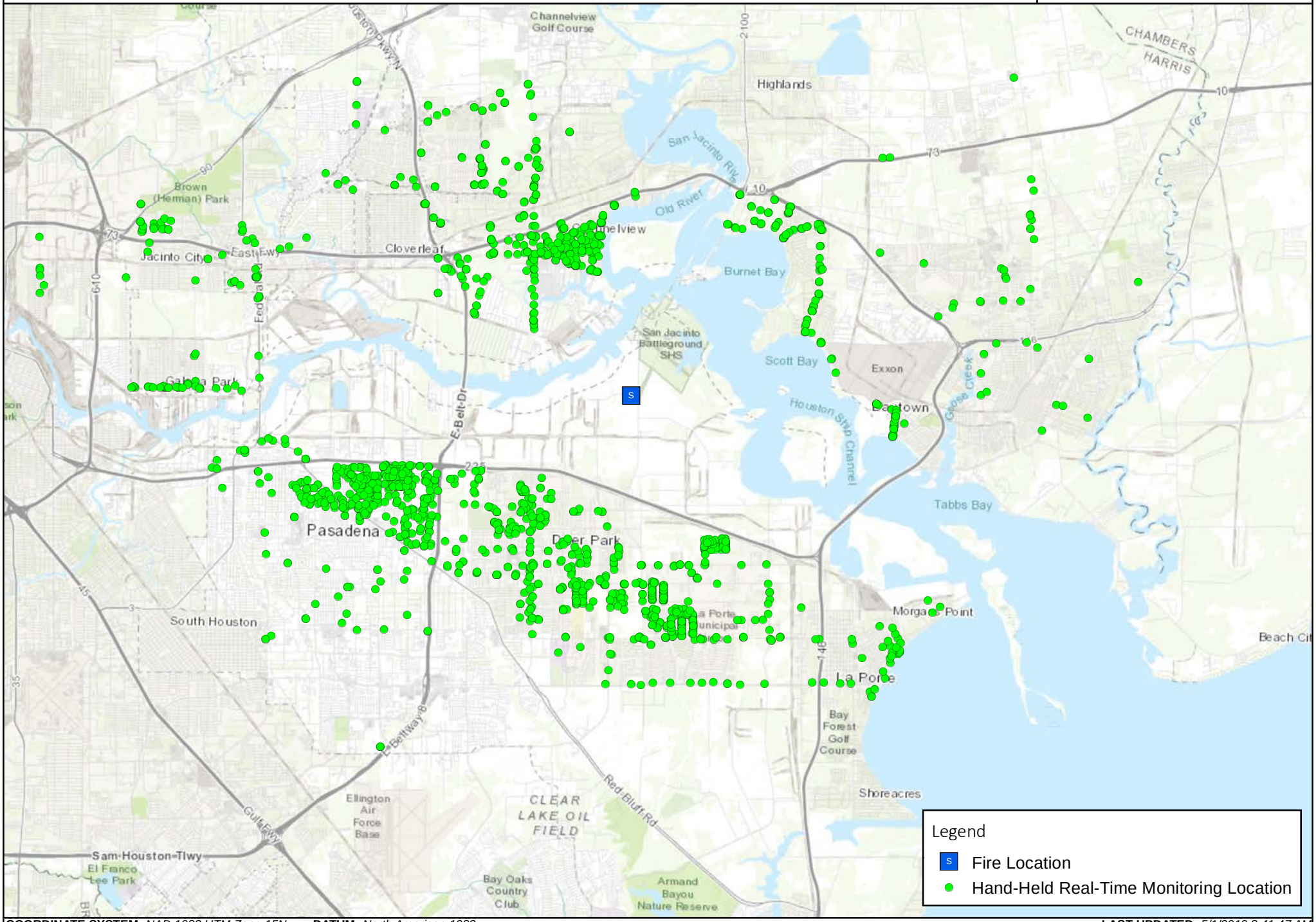
# Hand-Held Real-Time Monitoring Locations

ITC Tank Fire Deer Park, TX | April 30, 2019 00:00 to May 1, 2019 00:00

0 2.5 5 Miles

Project:111356
Client: ITC
City: Deer Park, TX
County: Harris



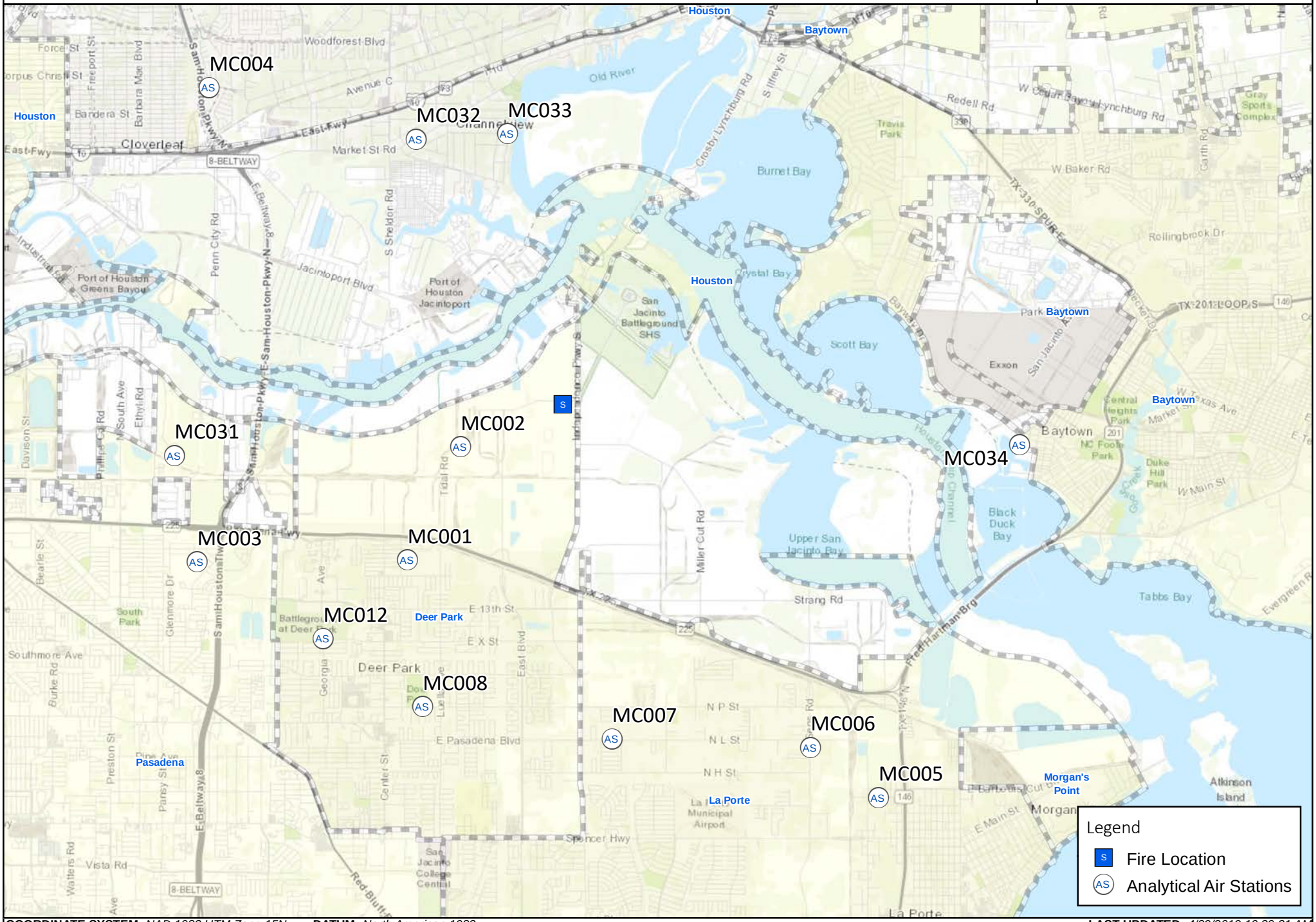

**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *5/1/2019 8:41:47 AM*

# Analytical Air Sampling Stations

ITC Tank Fire Deer Park, TX

0 2 4 Miles

Project:111356
Client: ITC
City: Deer Park, TX
County: Harris




**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *4/29/2019 10:39:31 AM*

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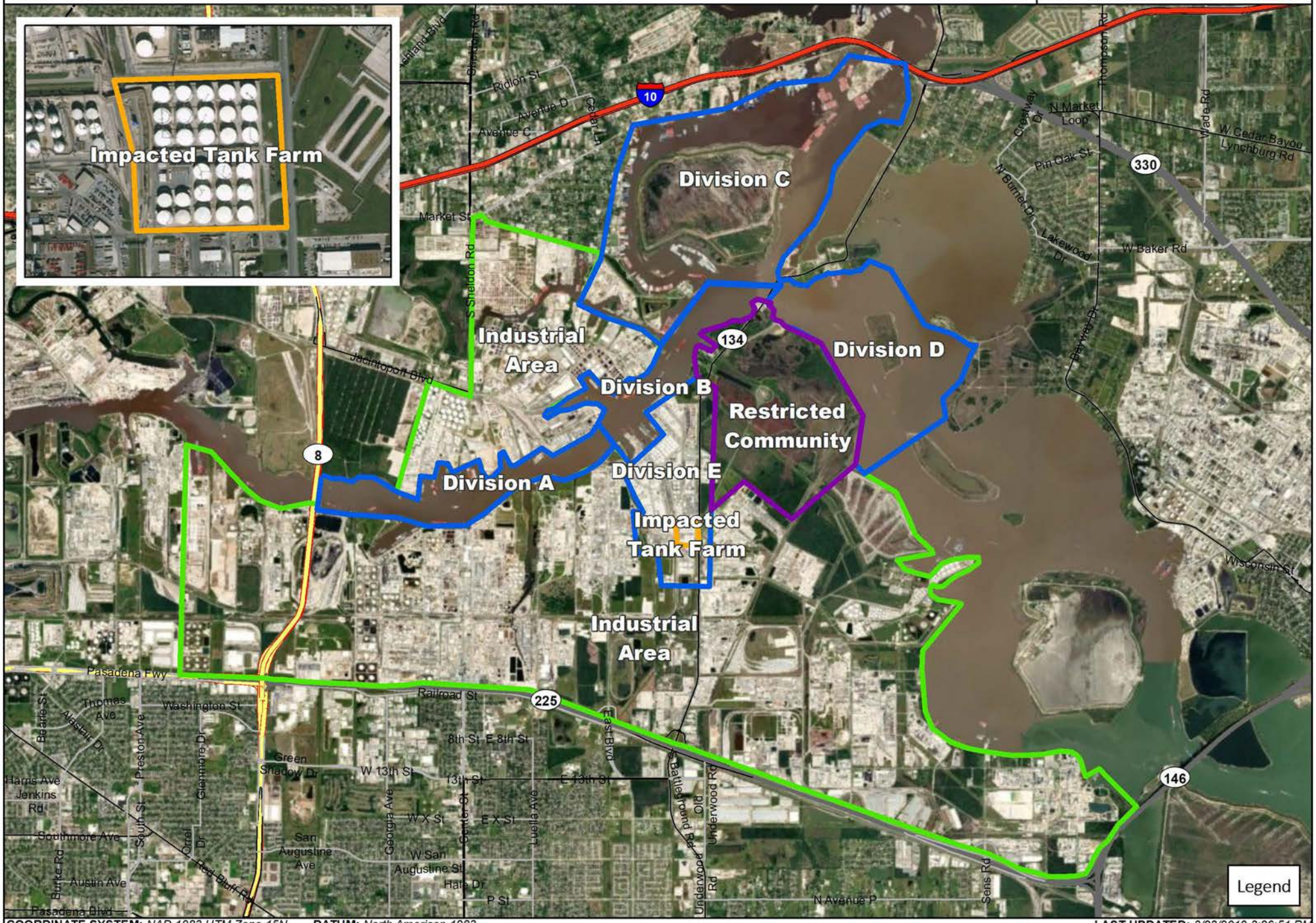
# ITC Fire Location Categories

0 0.5 1 Miles

Project: 111356
Client: ITC
City: Deer Park, TX
County: Harris




COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* DATUM: *North American 1983* LAST UPDATED: *3/23/2019 3:26:51 PM*

# Attachment B

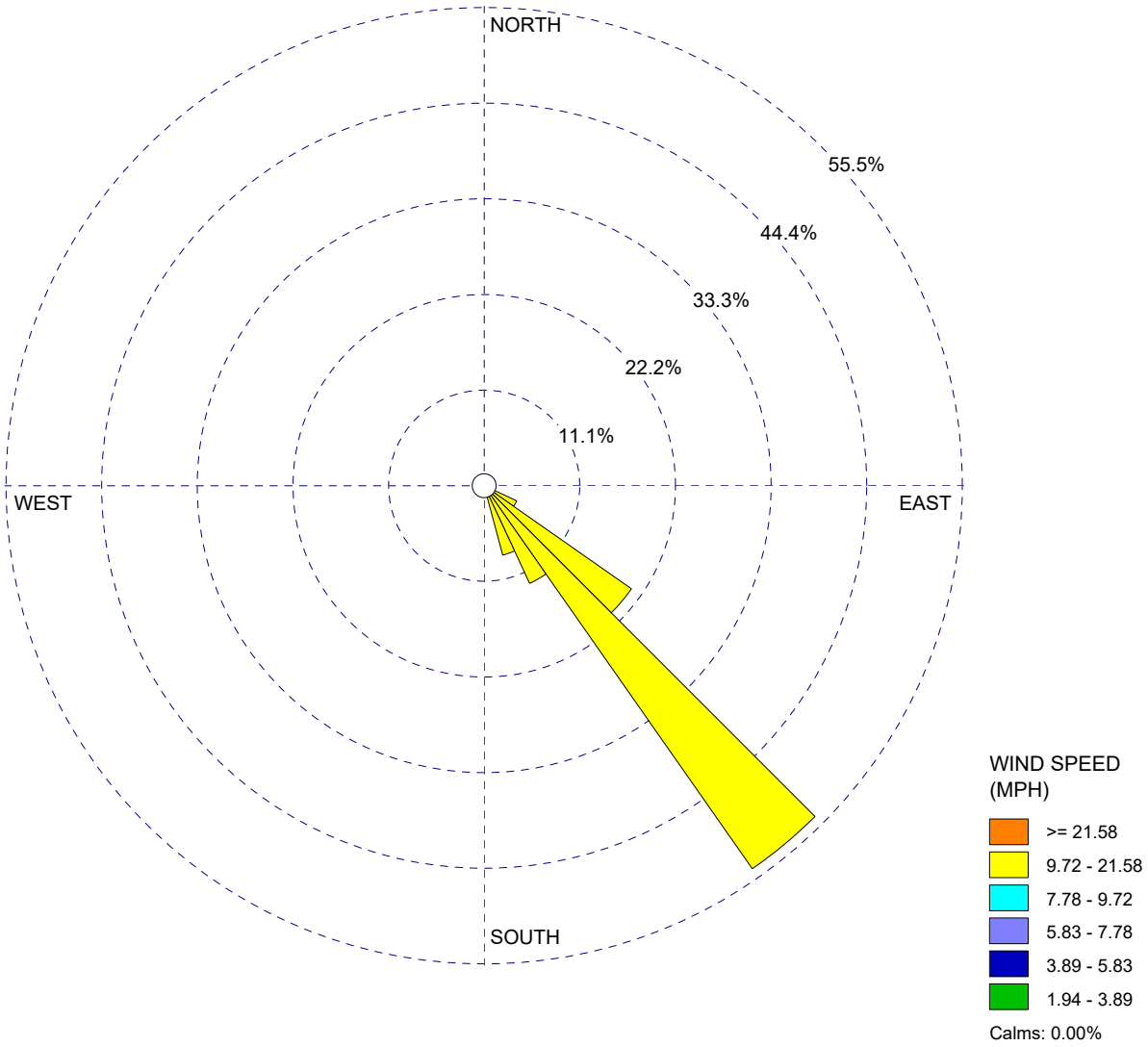
## Meteorological Conditions

WIND ROSE PLOT:

**Station #Lynchburg Ferry**

DISPLAY:

**Wind Speed**
**Direction (blowing from)**




| COMMENTS: | DATA PERIOD: | COMPANY NAME: | |
|---|---|---|---|
| Plot generated using publicly available weather data. | **Start Date: 4/30/2019 - 00:00**<br>**End Date: 4/30/2019 - 23:00** | MODELER: | |
| | CALM WINDS:<br>**0.00%** | TOTAL COUNT:<br>**24 hrs.** | |
| | AVG. WIND SPEED:<br>**13.21 MPH** | DATE:<br>**5/1/2019** | PROJECT NO.: |

WRPLOT View - Lakes Environmental Software