CTEH®

THE SCIENCE OF READY℠

# BIOLAB INC FACILITY FIRE

Westlake, LA

Preliminary Daily Air Monitoring Summary

September 6, 2020

Project #113436

90042329

## 1.0 Introduction

On August 27, 2020 at approximately 11:00 Central Standard Time (CST), BioLab Inc requested that CTEH® provide air monitoring and analytical air sampling support in response to a facility fire at the Westlake, LA facility. CTEH® arrived on-site on August 27, 2020 and began real-time air monitoring at 16:00 CST. Community real-time air monitoring was discontinued on September 2, 2020 at approximately 17:00. Analytical air samples for chlorine and volatile organic compounds (VOCs) were deployed throughout the community, at upwind and downwind locations. This report summarizes real-time air monitoring data collected in the work area and community from September 5, 2020 06:00 CST to September 6, 2020 06:00 CST.

## 2.0 Air Monitoring and Sampling Methods

CTEH® developed and implemented an Air Sampling and Analysis Plan (SAP) to document and quantify the potential release of fugitive emissions from the incident. Real-time air monitoring was conducted in accordance with three plans outlined in the SAP: Community Monitoring, Work Area Monitoring, and Site Assessment Monitoring. Community Monitoring was conducted in areas beyond the work area including residential areas and businesses. Work Area Monitoring was conducted in areas where workers were actively involved in response operations. Unlike Community and Work Area Monitoring, Site Assessment Monitoring does not necessarily represent ambient air monitoring near breathing zone level. Site Assessment may involve a variety of different monitoring tasks intended to provide information that may help to delineate the nature and extent of the release.

CTEH personnel conducted real-time air monitoring in the community and work area for chlorine ($Cl_2$), atmospheric flammability measured as the percentage of the lower explosive limit (%LEL), nitrogen dioxide ($NO_2$), oxygen ($O_2$), particulate matter ($PM_{2.5}$ and $PM_{10}$), sulfur dioxide ($SO_2$), and volatile organic compounds (VOCs), using handheld instruments including RAE Systems MultiRAEs, Gastec colorimetric detection tubes, AM520s and AM510s, as well as remote-telemetering AreaRAEs.

All instrumentation was calibrated at least once per day or per manufacturer's recommendations. Roaming air monitoring was generally performed in work areas in the presence of workers performing/supporting mitigation and remediation operations with handheld instruments.

## 3.0 Air Monitoring Results

**Attachment A** provides maps of the incident location and the locations of handheld air monitoring locations in the community and work area. **Table 1** summarizes the results of handheld air monitoring.

**Table 1: Handheld Real-Time Air Monitoring Results**

| Location Category | Analyte | Instrument | # of Readings | # of Detections | Range* |
|---|---|---|---|---|---|
| Work Area Monitoring | $Cl_2$ | Gastec #8La | 1 | 0 | < 0.05 ppm |
| | | MultiRAE | 44 | 1 | 0.2 ppm |
| | %LEL | MultiRAE | 12 | 0 | < 1 % |
| | $PM_{2.5}$ | AM520 | 18 | 18 | 0.001 – 0.053 mg/m$^3$ |
| | $SO_2$ | MultiRAE | 39 | 0 | < 0.1 ppm |
| | VOCs | MultiRAE | 37 | 0 | < 0.1 ppm |

* If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed. These data have not undergone QAQC and should be considered preliminary at this time. †Volatile organic compounds.

## 4.0 Analytical Air Sampling Methodology

During this reporting period, CTEH® also deployed analytical air samples in four distinct locations in the community. Evacuated canister (Minican™) samplers were regulated to continuously collect air over a 24-hour period for analysis for VOCs by EPA method TO-15. Additionally, sampling pumps were deployed to collect chlorine samples following method NIOSH 6011. A map indicating the location of these analytical air sampling stations is provided in **Attachment B**. **Table 2**, below, presents a summary of the cumulative summary of analytical air samples for the response.

**Table 2: Cumulative Analytical Air Samples**

| Analysis | Count of Samples Deployed | Count of Samples Collected | Count of Results Received from Lab |
|---|---|---|---|
| SCK (Chlorine NIOSH 6011) | 48 | 48 | 0 |
| Minican (VOC TO-15 +TICS) | 28 | 28 | 20 |

## 5.0 Weather Conditions

**Attachment C** contains wind roses depicting wind speed and direction for this reporting period. Data were acquired from the Chennault International meteorological stations. Chennault International Station is located on 3650 Sen J Bennett Johnston Ave., approximately 10 miles southeast of the incident site.

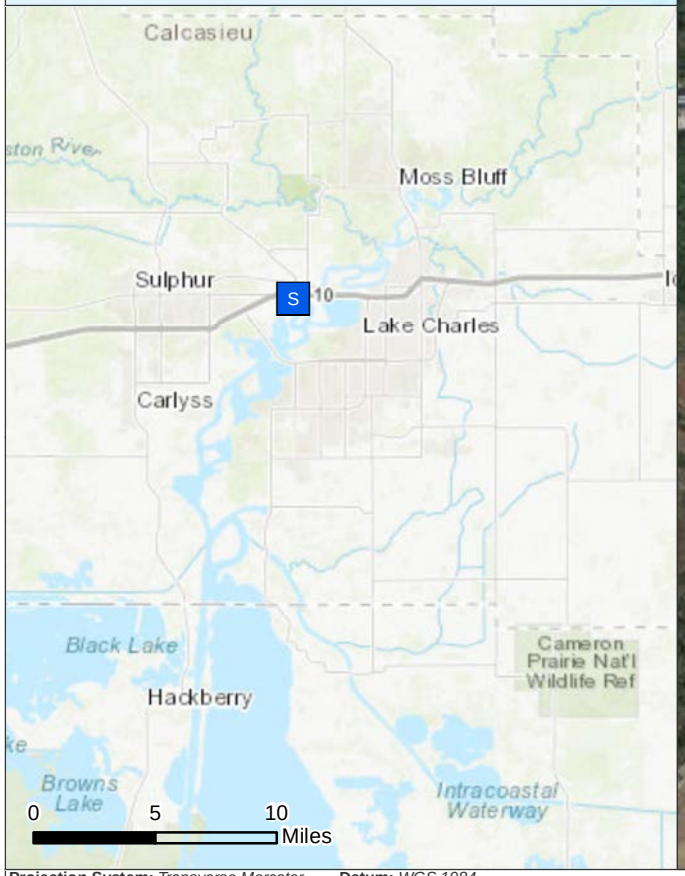
# Attachment A

## CTEH Air Monitoring Locations

# BioLab Inc Facility Fire

## Site Location

Project: 111346
Client: BioLab
City: Westlake, LA
Parish: Calcasieu



**Projection System:** *Transverse Mercator* **Datum:** *WGS 1984*

*Document Name: 113436_site_location* **Last Updated:** *8/30/2020 6:38:46 PM*

# Handheld Real-Time Work Area Monitoring Locations ($Cl_2$)

BioLab Inc Facility Fire l Westlake, LA | 9/5/2020 06:00 - 9/6/2020 06:00 CST

Project:113436
Client: BioLab
City: Westlake, LA
Parish: Calcasieu

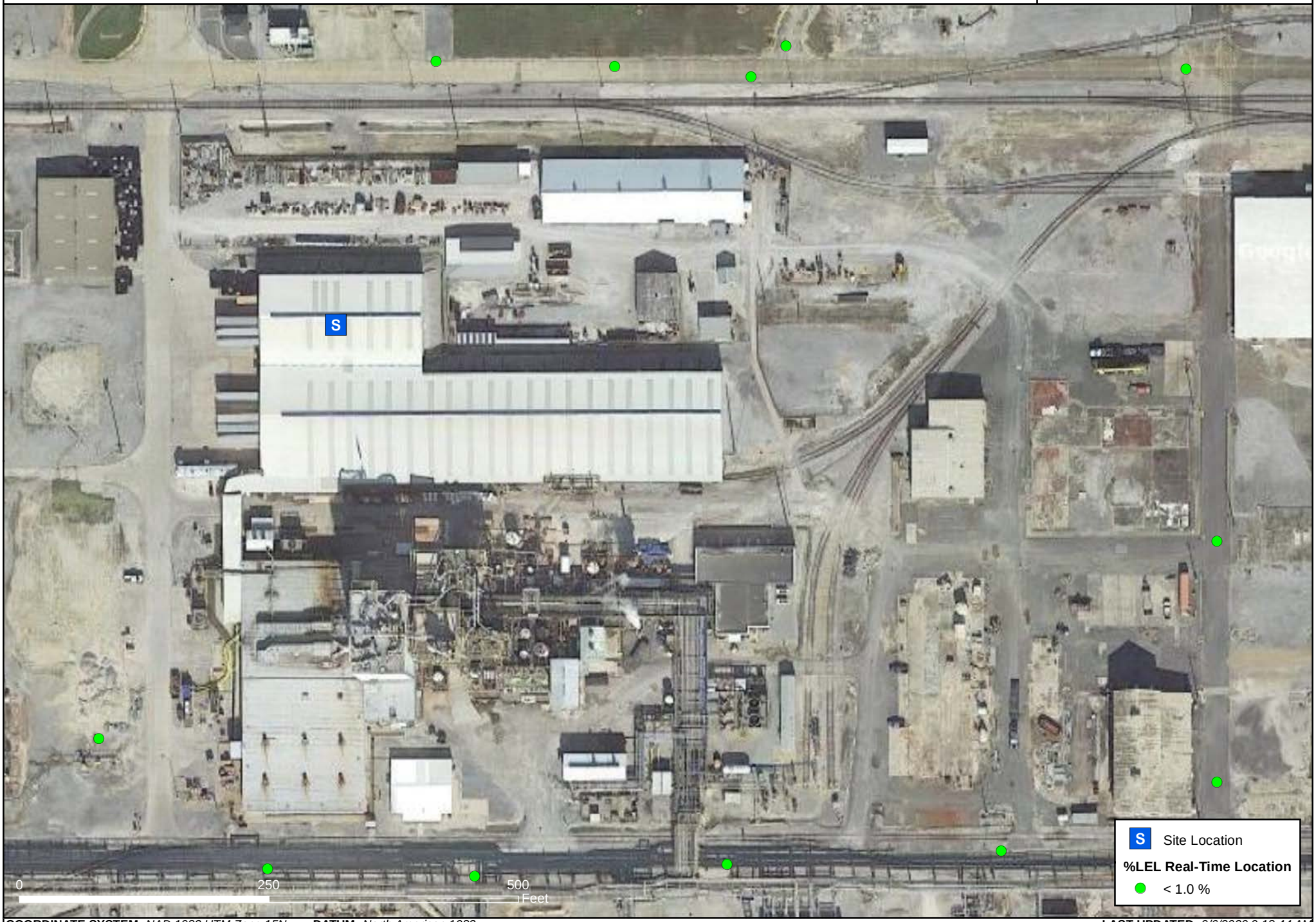
**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

**LAST UPDATED:** *9/6/2020 9:20:59 AM*

# Handheld Real-Time Work Area Monitoring Locations (%LEL)

BioLab Inc Facility Fire l Westlake, LA | 9/5/2020 06:00 - 9/6/2020 06:00 CST

Project:113436
Client: BioLab
City: Westlake, LA
Parish: Calcasieu




**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

**LAST UPDATED:** *9/6/2020 9:18:44 AM*

# Handheld Real-Time Work Area Monitoring Locations ($PM_{2.5}$)

BioLab Inc Facility Fire l Westlake, LA | 9/5/2020 06:00 - 9/6/2020 06:00 CST

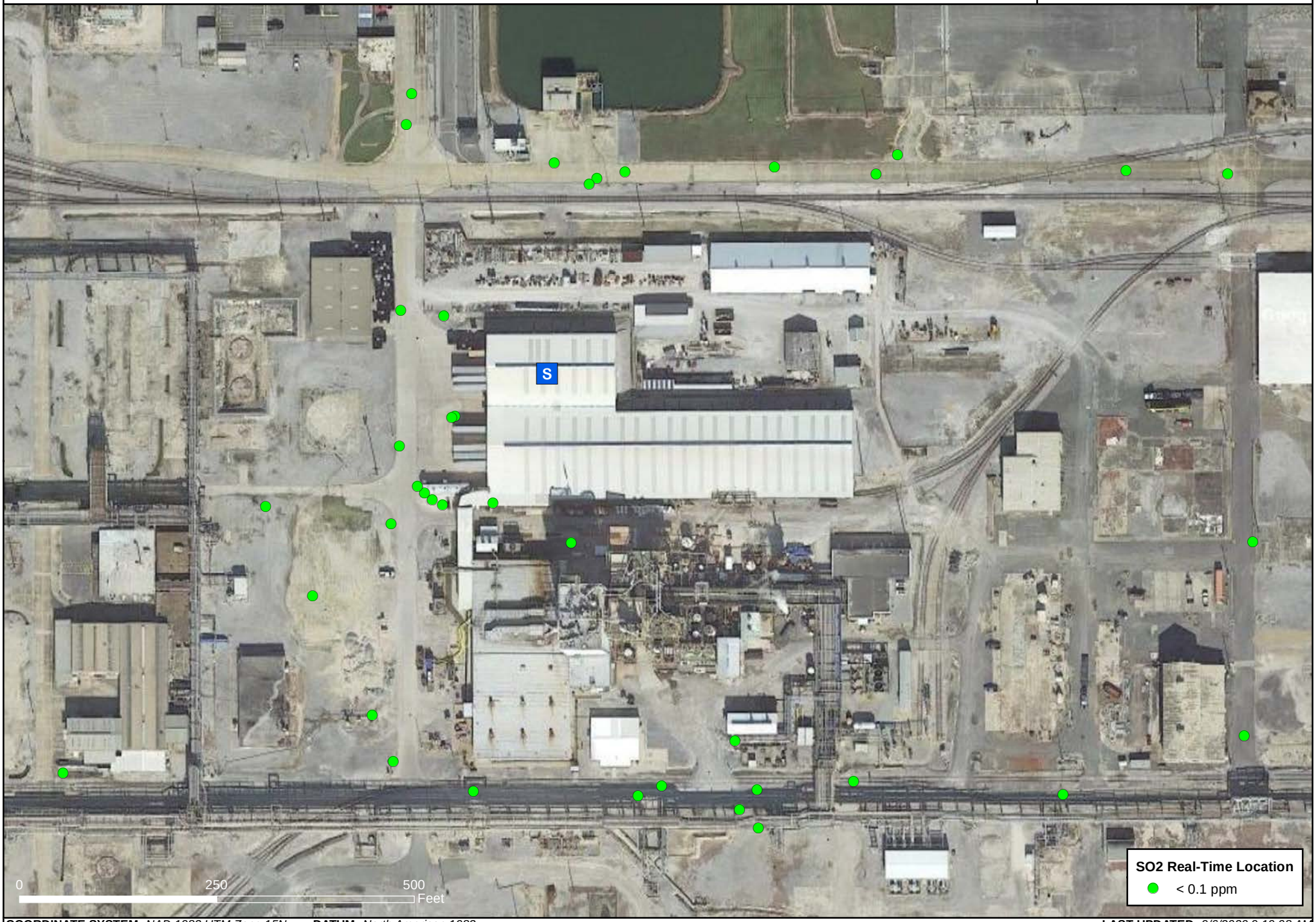
Project:113436
Client: BioLab
City: Westlake, LA
Parish: Calcasieu

**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *9/6/2020 9:22:13 AM*

# Handheld Real-Time Work Area Monitoring Locations ($SO_2$)

BioLab Inc Facility Fire l Westlake, LA | 9/5/2020 06:00 - 9/6/2020 06:00 CST

Project:113436
Client: BioLab
City: Westlake, LA
Parish: Calcasieu

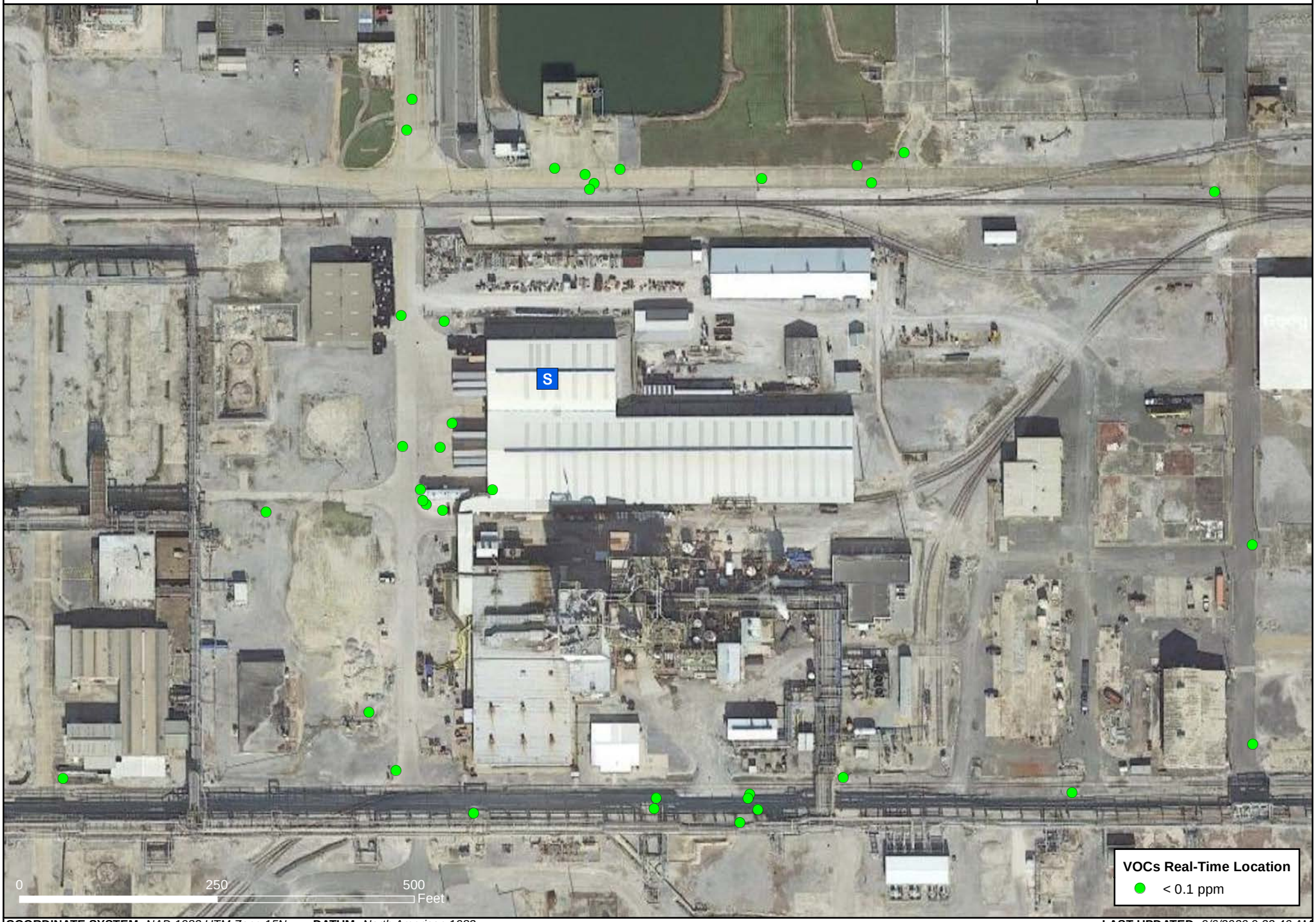



**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *9/6/2020 9:19:08 AM*

# Handheld Real-Time Work Area Monitoring Locations (VOCs)

BioLab Inc Facility Fire l Westlake, LA | 9/5/2020 06:00 - 9/6/2020 06:00 CST

Project:113436
Client: BioLab
City: Westlake, LA
Parish: Calcasieu




**COORDINATE SYSTEM:** *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *9/6/2020 9:22:40 AM*

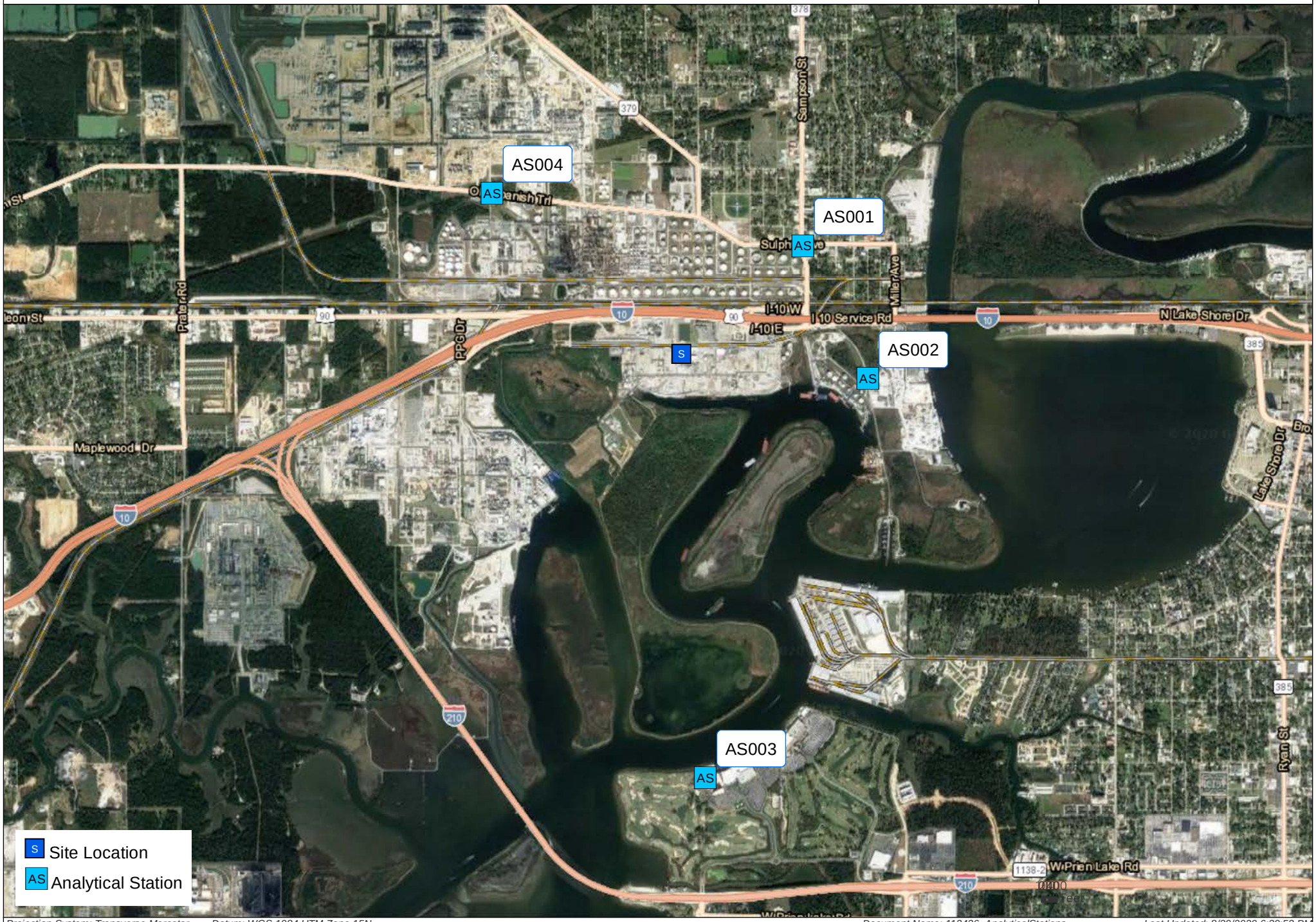
# Attachment B

## Analytical Air Sampling Locations

# BioLab Inc Facility Fire Analytical Stations

0 0.5 1 2 Miles

Project: 111346
Client: BioLab
City: Westlake, LA
Parish: Calcasieu




Projection System: Transverse Mercator Datum: WGS 1984 UTM Zone 15N Document Name: 113436_AnalyticalStations Last Updated: 8/30/2020 6:39:53 PM

*GPS Coordinates are Approximate

# Attachment C

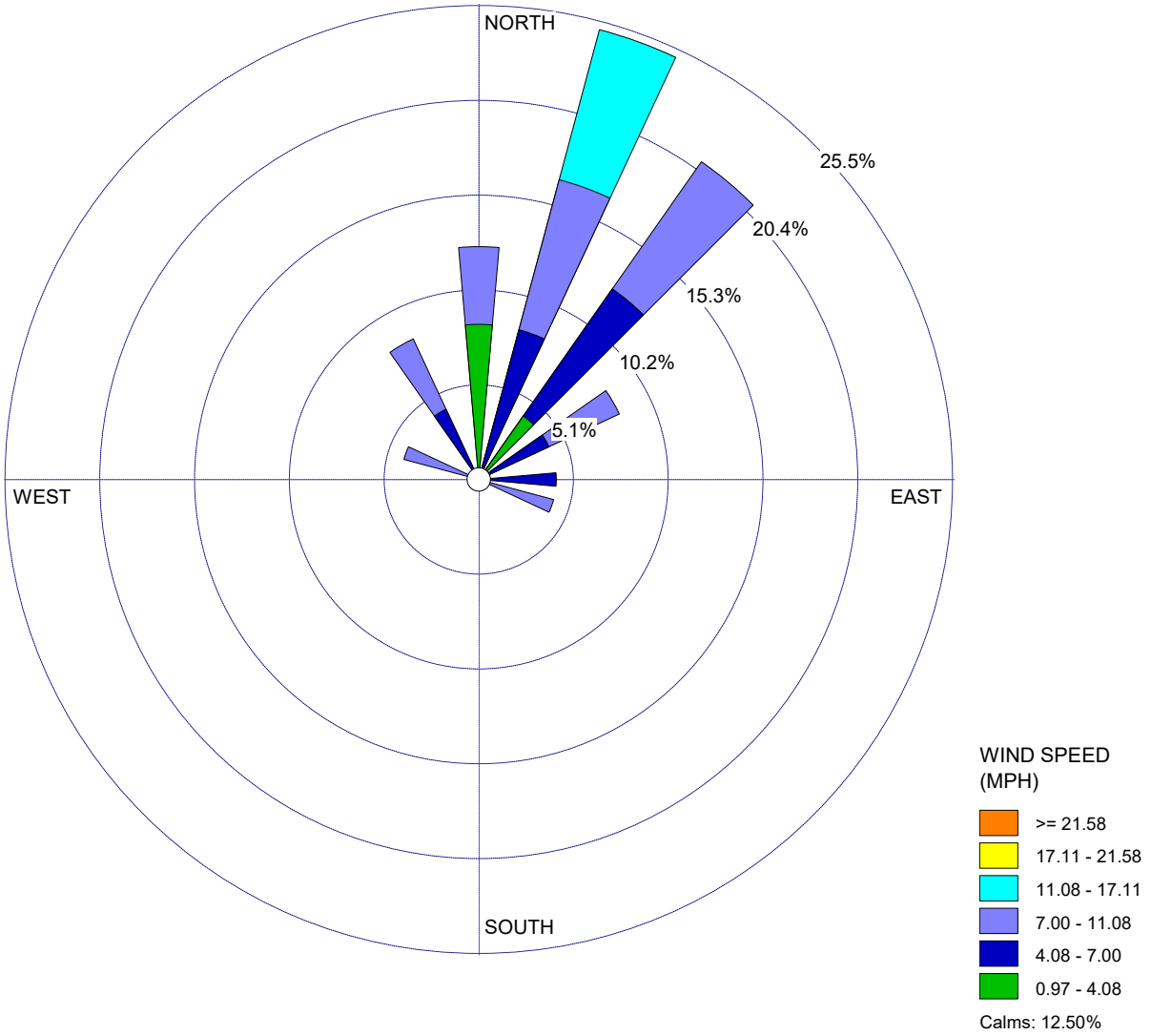
## Meteorological Conditions

WIND ROSE PLOT:

**Station #CHENNAULT INTL STATION**

DISPLAY:

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




| COMMENTS: | DATA PERIOD: | COMPANY NAME: | |
|---|---|---|---|
| | **Start Date: 9/5/2020 - 06:00**<br>**End Date: 9/6/2020 - 05:00** | MODELER: | |
| | CALM WINDS:<br>**12.50%** | TOTAL COUNT:<br>**24 hrs.** | |
| | AVG. WIND SPEED:<br>**5.88 MPH** | DATE:<br>**9/6/2020** | PROJECT NO.:<br>**113436** |

WRPLOT View - Lakes Environmental Software