

# AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	Galveston Offshore Ozone Observations (GO3)	<b>PROJECT #</b>	20-004
<b>PROJECT PARTICIPANTS</b>	James Flynn (UH) Yuxuan Wang (UH) Paul Walter (St. Edward's University) Gary Morris (St. Edward's University)	<b>DATE SUBMITTED</b>	5/10/2021
<b>REPORTING PERIOD</b>	<b>From:</b> April 1, 2021 <b>To:</b> April 30, 2021	<b>REPORT #</b>	10

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. I understand that the FSR and Invoice are due to the AQRP by the 14<sup>th</sup> of the month following the reporting period shown above.

## Detailed Accomplishments by Task for reporting period

- Continue field testing of the two packages a top of Moody Tower until 4/12/21. Both systems were then taken to our lab to fine-tune them and to wait for the delivery of the NO<sub>2</sub> photocells so they can be installed.
- Installed and tested GSPs with sampling systems.
- Placed order of an additional Vaisala Ceilometer. This ceilometer will be install on the UH pontoon boat and used for measuring the height of the boundary layer over Galveston Bay.
- On April 19, the pontoon boat was deployed into Galveston Bay for a test of the handling characteristics and measurement systems as well as to begin training the graduate students who will pilot the boat on a regular basis. See figures 1–5 below .

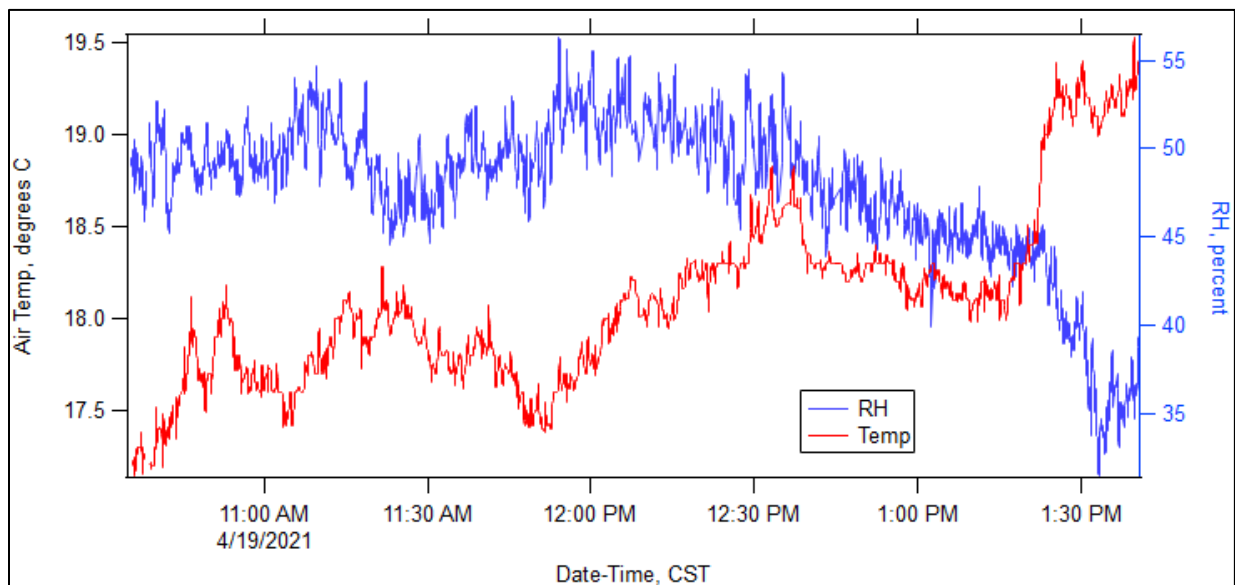


Figure 1: Time series of measured air temperature and relative humidity.

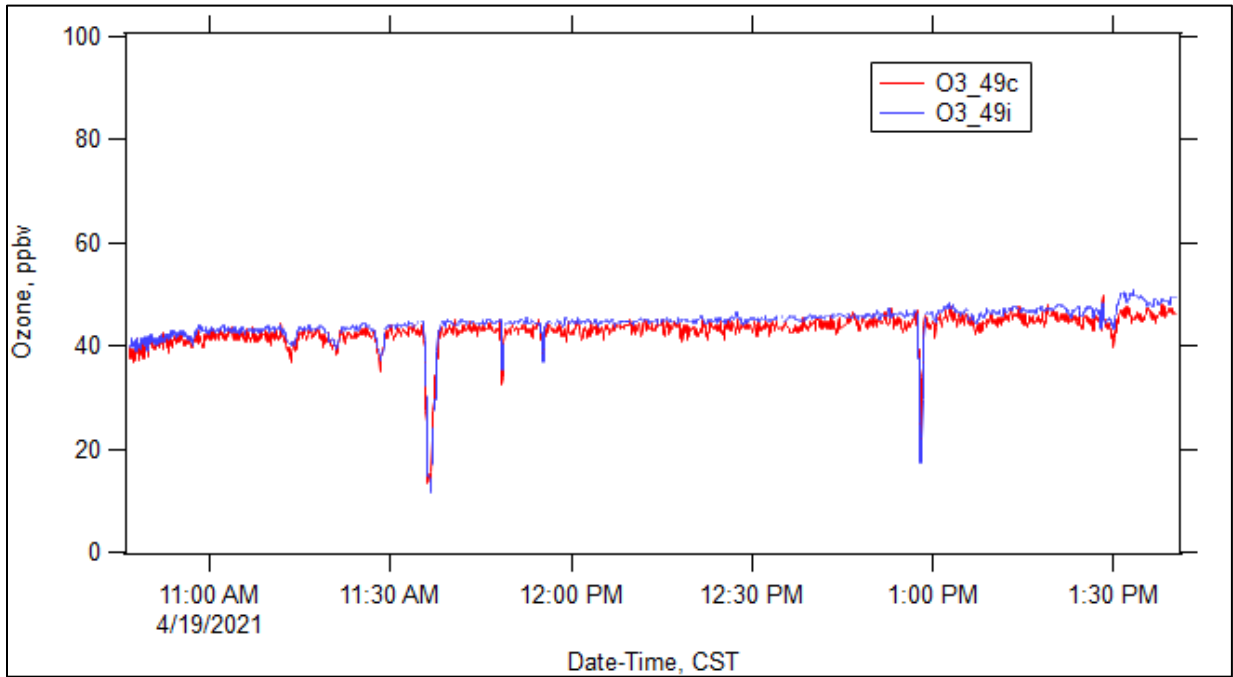


Figure 2: Time series of O3 from a Thermo 49c and 49i. The 49i will be used for the NO<sub>2</sub> measurement once the NO<sub>2</sub> photocell is installed.

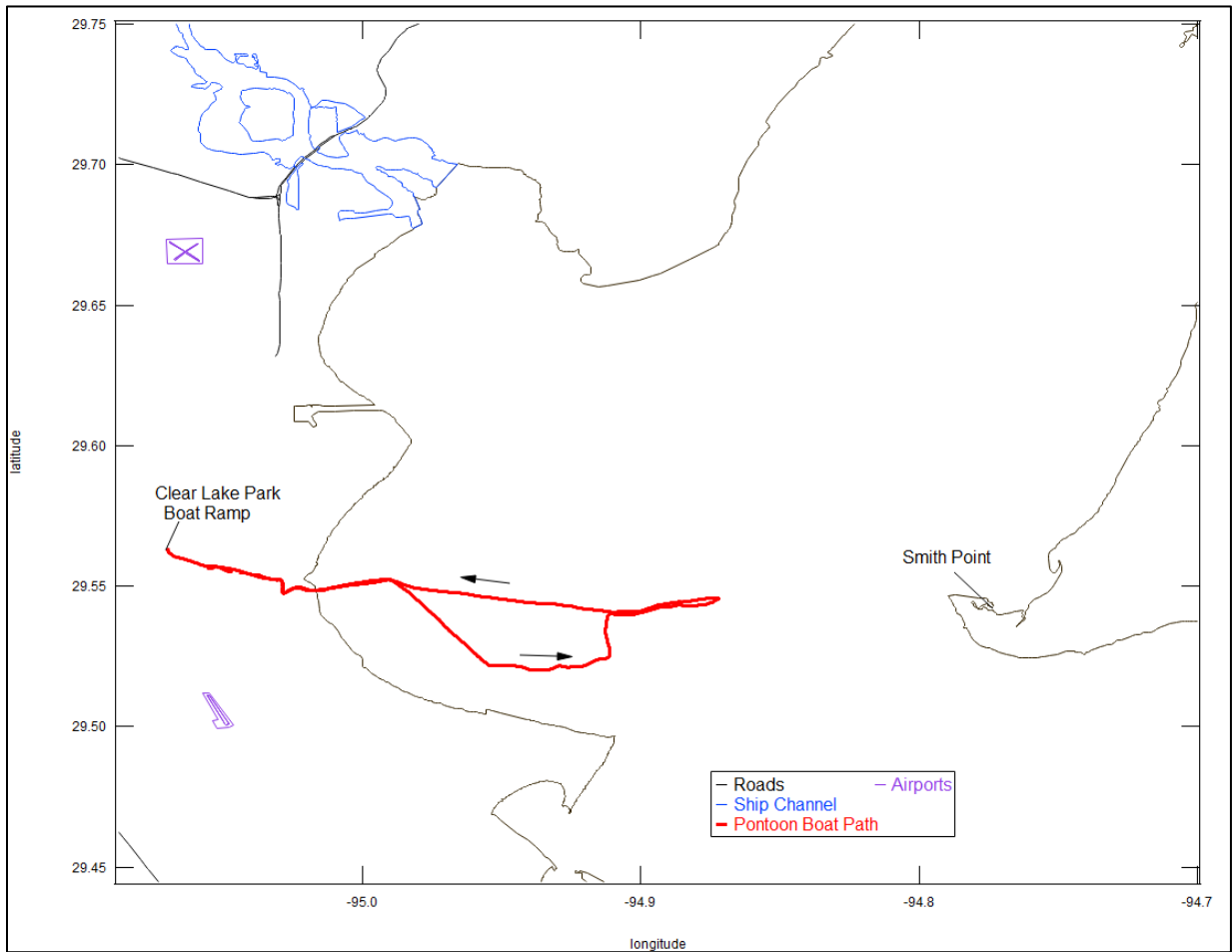


Figure 3: Spatial plot showing the course of the pontoon boat during 4/19/21 test. The crew practiced anchoring while in the center of the bay.



Figure 4: During ship channel crossing on 4/19/201.



Figure 5: During ship channel crossing on 4/19/201.

**Data Collected**

No additional sampling data was collected during this period.

**Preliminary Analysis**

No additional analysis was performed

**Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments**

Delivery of the photocells have been delayed due to winter weather in Colorado as well as COVID impacts on material providers. We have been in regular contact with the manufacturer and receiving updated delivery estimates.

**Goals and Anticipated Issues for the Succeeding Reporting Period**

- Receive and test new ceilometer. Install Vaisala license in package computer.
- Receive, install, and test NO<sub>2</sub> photocells in sampling packages.
- Begin operational measurement by the end of May.

**Detailed Analysis of the Progress of the Task Order to Date**

The project is moving forward quite well with respect to the Task Order issue date. With the request from AQRP and TCEQ to delay deployment into the 2021 O<sub>3</sub> season the timeline has shifted which will allow more time for preparation and coordination.

**Do you have any publications related to this project currently under development? If so, please provide a working title, and the journals you plan to submit to.**

Yes       No

**Do you have any publications related to this project currently under review by a journal? If so, what is the working title and the journal name? Have you sent a copy of the article to your AQRP Project Manager and your TCEQ Liaison?**

Yes       No

**Do you have any bibliographic publications (ie: publications that cite the project) related to this project that have been published? If so, please list the reference information. List all items for the lifetime of the project.**

Yes       No

**Do you have any presentations related to this project currently under development? If so, please provide working title, and the conference you plan to present it (this does not include presentations for the AQRP Workshop).**

Yes       No

**Do you have any presentations related to this project that have been published? If so, please list reference information. List all items for the lifetime of the project.**

Yes       No

**Have any personnel changes occurred that were not listed in the original proposal? If so, please include a detailed description of the personnel change(s) below.**

Yes       No

**Are any delays expected in the progress of the research? If so, please include a detailed description of the potential delay below.**

**Yes**       **No**

The AQRP and TCEQ have requested the deployment to be delayed into CY2021.

**Describe any possible concerns/issues (technical or non-technical) that AQRP should be made aware of.**

Yes       No

**Are you anticipating using all the available funds allocated to this project by the end date? If not, why and approximately what is the amount to be returned?**

Yes       No

**Acronyms/Abbreviations:**

O<sub>3</sub>: Ozone

---

Submitted to AQRP by

James Flynn