

AQRP Monthly Technical Report

PROJECT TITLE	Hydrogen Cyanide for Improved Identification of Fire Plumes in the (BC)² Network	PROJECT #	22-006
PROJECT PARTICIPANTS	Dr. Tara I. Yacovitch, PI Dr. Rebecca Sheesley and Dr. Sascha Usenko, Co-PIs	DATE SUBMITTED	9/9/2022
REPORTING PERIOD	From: 8/1/2022 To: 8/31/2022	REPORT #	1

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 15th of the month following the reporting period shown above.

Detailed Accomplishments by Task for reporting period

In this first project reporting period, we held an inaugural project planning meeting to discuss project logistics and discuss the requirements of the Workplan.

The Workplan documents (Scope of Work, QAPP, Budget and Justification, Abstract) were written and submitted on Aug 16th, with minor edits (mostly formatting and accessibility) re-submitted a few days later.

Preliminary Analysis

No preliminary analysis has been done

Data Collected

No data has yet been collected

Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments

The main logistical constraint at this point is securing the Dallas-Fort Worth measurement site. The DFW-Northwest site had been identified as the best candidate site. Dr. Sascha Usenko (Baylor) is managing site access for this AQRP project, but mainly as part of the separately funded (BC)² network expansion project. He has been in recent discussions with the AQRP and TCEQ to keep everyone up to date.

An IDP-7 Scroll pump initially assigned to this project is stuck in shipment from a summer project overseas and needs a repair. Instead, a brand-new spare SH-110 pump has been identified for the project, providing comparable pumping speeds and performance.

Progress on contracting is a concern for this project given that first measurements occur in the fall. However, the AQRP notified us just prior to this report that project spending will be approved, backdated to Aug 22. This will allow us to immediately purchase some required longer-lead time consumables.

Goals and Anticipated Issues for the Succeeding Reporting Period

Site access negotiations will continue, led by Dr. Usenko, and supported by the AQRP and TCEQ. Setting up any required site upgrades, notably power, is a major goal of this site work.

We aim to complete HCN instrument setup in the laboratory (an existing laser will be installed in an existing chassis), and verify instrument performance. We will order consumables required in Texas (gases, calibration gas, chiller fluid). We do not anticipate issues.

We will hold another project meeting to firm up logistics, and schedule a ship date for the instrument and associated equipment, and discuss the instrument integration schedule.

Detailed Analysis of the Progress of the Task Order to Date

The project has just begun, and we are making good progress getting all the logistics spun up.

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

As described in the Workplan documents, and discussed directly with AQRP project management, Dr. Yacovitch will be on family leave beginning mid-December for approximately 4 months, with Conner Daube to take over project management and reporting during her absence. He is already heavily involved in the project.

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

Yes No

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

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

Submitted to AQRP by

Dr. Tara Yacovitch, PI