Validation of

Passive Mitigation Systems for Fires

Agreement #693JK32310002POTA

Quarterly Status Report – Q4

Public

September 30, 2024

6011 University Blvd, Suite 220
Ellicott City, MD 21043
DUNS: 081360388
EIN: 83-1234215

Project Manager: Dr. Filippo Gavelli, P.E.
Phone: 410-680-3568
Email: fgavelli@blueeandc.com
https://blueengineeringandconsulting.com

In Collaboration with: TEXAS A&M UNIVERSITY Engineering

1 General

The performance period for the research project "Validation of Passive Mitigation Systems for Fires" (Project) is 24 months, from October 1, 2023 through September 30, 2025 as outlined in PHSMA Agreement #693JK32310002POTA (Agreement). The current quarter closes on September 30, 2024. The PHMSA Agreement Officer's Representative (AOR) for this project is Ms. Andrea Ceartin and the Technical Task Inspectors (TTIs) are Ms. Kathleen Roth and Ms. Yasmin Alamin.

2 Items Completed During this Quarterly Period

Table 2-1 shows the project tasks and deliverables; the items in green were completed during this quarter, the items in yellow were not completed, the items in gray were completed previously. The items in blue (light and dark) are future tasks.

Table 2-1. Project Tasks and Deliverables

Item No.	Task No.	Activity	Deliverable	Due Quarter No.	Completion
1	1	Project Initiation: Conduct kick-off TAP meeting and finalize project scope; summarize in a PowerPoint	Submit PowerPoint from Kick-Off meeting	1	100%
2	8	1st Quarterly Status Report	Submit 1st quarterly report	1	100%
3	2	Conduct literature review of passive fire mitigation methods (PFM) and summarize findings in a report	Submit report with findings from literature search	2	100%
4	8	2nd Quarterly Status Report	Submit 2nd quarterly report	2	100%
5	6	Define failure criteria for structural steel and for pressure vessels and summarize in a report	Submit report with definition and justification of failure criteria	3	100%
6	8	3rd Quarterly Status Report	Submit 3rd quarterly report	3	100%
7	3	Conduct experimental testing of selected PFM methods and summarize results in a PowerPoint presentation	Submit PowerPoint with summary of experimental test series and results	4	35%
8	8	4th Quarterly Status Report	Submit 4th quarterly report	4	100%
9	4	Define modeling techniques for the selected PFM methods; summarize findings in a report	Report on PFM modeling methods	5	0%
10	8	5th Quarterly Status Report	Submit 5th quarterly report	5	0%
11	8	6th Quarterly Status Report	Submit 6th quarterly report	6	0%
12	5	Validate PFM models against experimental data and summarize findings in a report	Report on PFM model testing results	7	0%
13	8	7th Quarterly Status Report	Submit 7th quarterly report	7	0%
14	7	Prepare and Submit Draft Final Report	Submit draft final report	8	0%
15	8	8th Quarterly Status Report	Submit 8th quarterly report	8	0%
16	N/A	Prepare & Present Paper at public event or publish paper in journal/magazine	Prepare & Present Paper at public event or publish paper in journal/magazine	N/A	0%
17	N/A	Final Virtually Held Info Dissemination Meeting	Final Virtually Held Info Dissemination Meeting	N/A	0%
18	7	Address Comments and Submit Final Report (also Public Version)	Submit final report	N/A	0%

3 Items Not Completed During this Quarterly Period

Task 3, "Experimental Testing" was originally scheduled for completion during Q4; however, shortly after the start of the Project, the schedule was shifted to Q5 due to a combination of testing site availability as well as historically more favorable weather conditions at the test site. PHMSA was notified of the schedule change and advised that

a formal project schedule change was not required. The tests are scheduled to be performed on October 8 and 10, 2024; therefore, Task 3 will be completed in Q5 of the project.

4 Project Financial Tracking During this Quarterly Period

The contract for this research project is fixed-price with a total project value of $1,012,153 and a total federal obligation of $806,522. Work for the project is currently on schedule and projected to remain on schedule (including the schedule adjustment to Task 3 as described above).

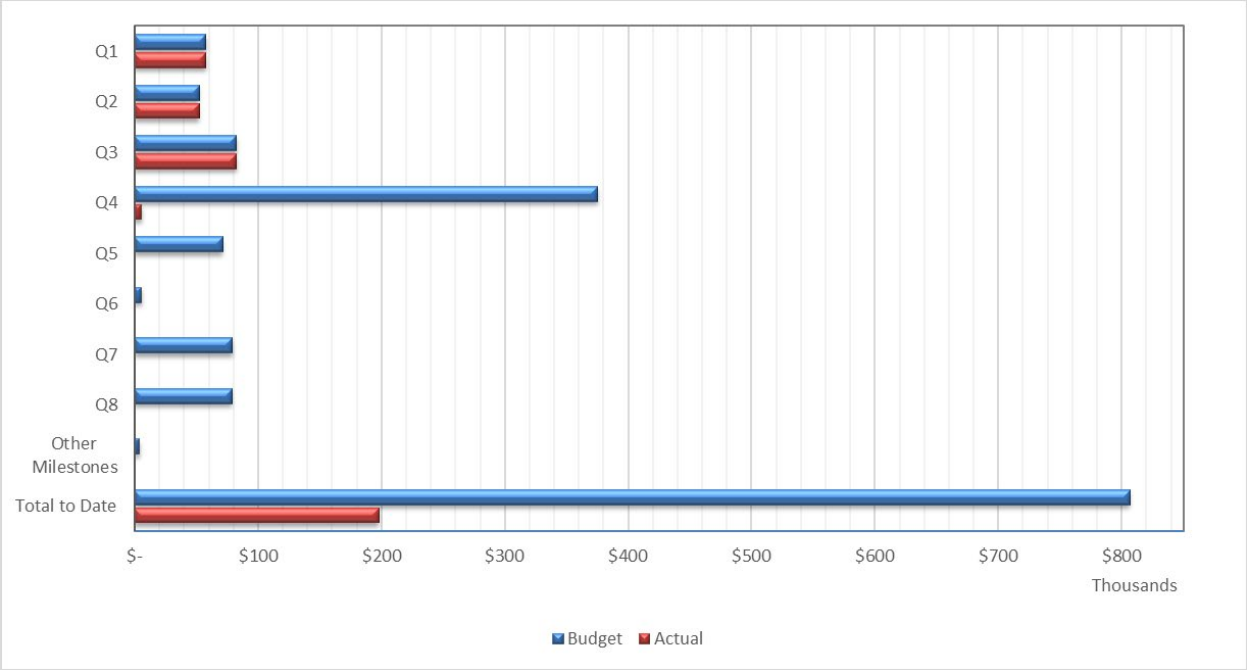

Figure 4-1: Project Financial Tracking

5 Project Technical Status

5.1 Task 3 – Experimental Testing

Work on Task 3 is continuing as the test dates approach. Everything is currently on schedule for testing to occur on October 8 and 10, 2024.

5.2 Task 5 – Passive Fire Mitigation Models

Work on Task 5 has started and will continue during Q5.

5.3 Task 8 – Project Management

The Project team has developed an internal project schedule and manpower allocation to support the proposed project timeline and has internal team meetings as necessary. Monthly reports have been submitted to PHMSA effective November 2023, except for months ending a quarter. The report for Q4 was submitted on September 30, 2024.

6 Project Schedule

The project team's efforts to advance the project schedule are summarized below:

- The project is on budget;
- The overall schedule shown in Figure 6-1 remains on track and no changes in the project schedule have been required;
- The project team remains highly engaged and stable (with no changes in personnel).

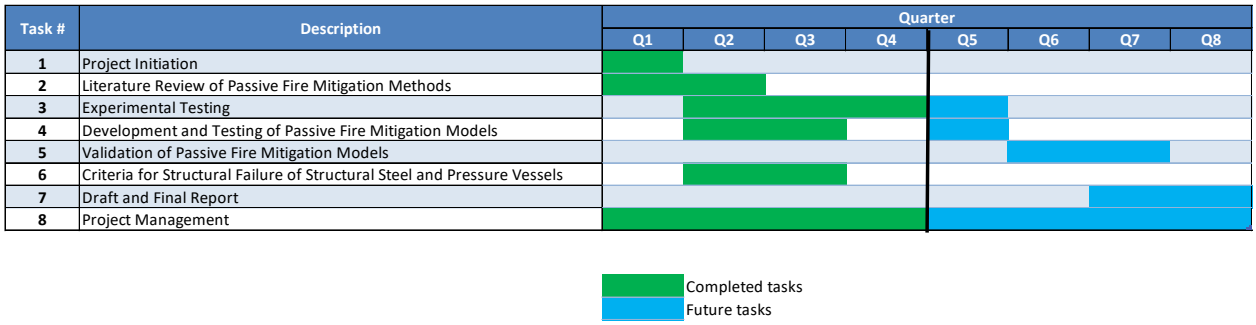

Figure 6-1: Project Schedule

6.1 Future Activities

Project team resources in Q5 will be focused on completing Task 3, Experimental Testing, and Task 5, Passive Fire Mitigation Models, which are due at the end of Q5.