Validation of

Passive Mitigation Systems for Fires

Agreement #693JK32310002POTA

Quarterly Status Report – Q5

Public

December 30, 2024

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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 December 31, 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 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	100%
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	100%
10	8	5th Quarterly Status Report	Submit 5th quarterly report	5	100%
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

All tasks due during this Quarter were completed, as shown above.

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. The current project financial tracking is shown in Figure 4-1. Work for the project is currently on schedule and projected to remain on schedule.

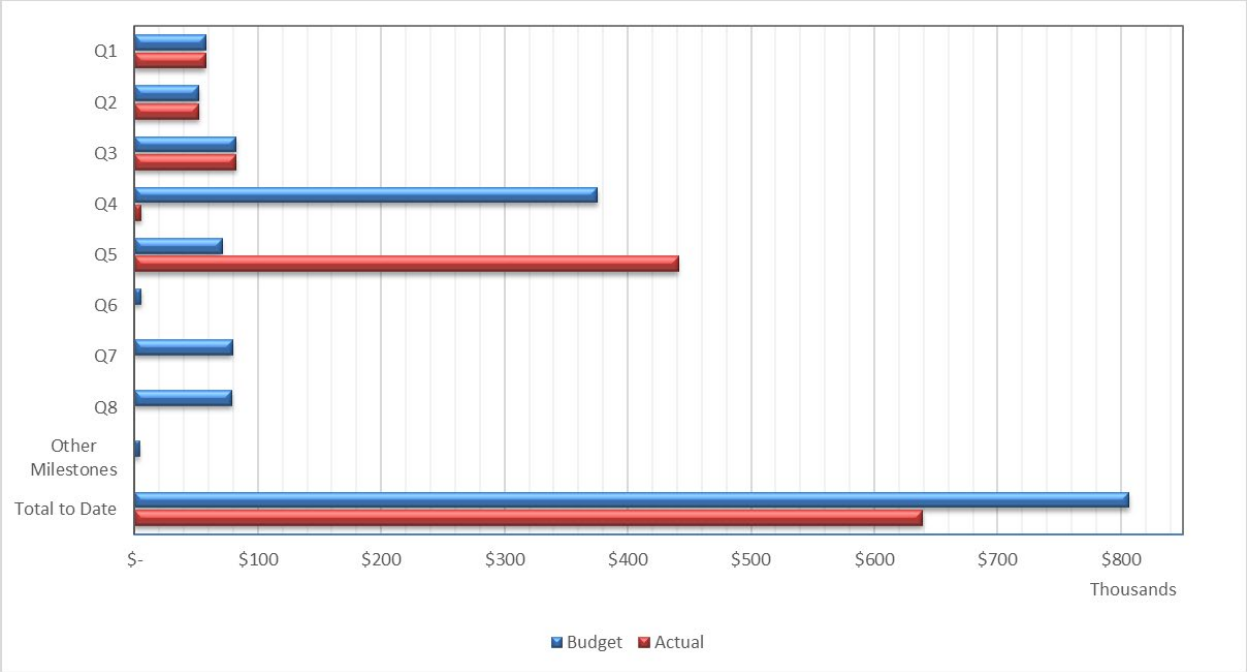

Figure 4-1: Project Financial Tracking

5 Project Technical Status

5.1 Task 3 – Experimental Testing

The experimental testing included in Task 3 was completed successfully on October 8 and 10, 2024. Initial data analysis was conducted and a report submitted to PHMSA on December 30, 2024.

5.2 Task 4 – Passive Fire Mitigation Models

Task 4 was completed during Q4 and a report was submitted to PHMSA on December 30, 2024.

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 Q5 was submitted on December 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).

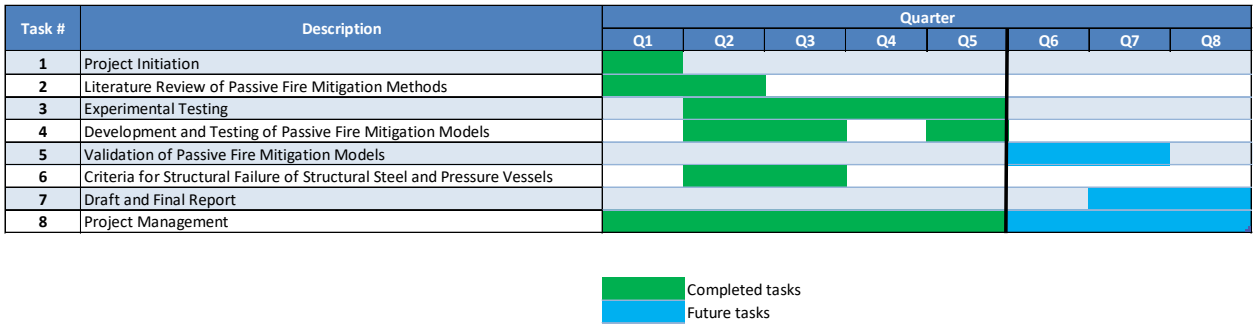

Figure 6-1: Project Schedule

6.1 Future Activities

Project team resources in Q6 will be focused on Task 5, Validation of Passive Fire Mitigation Models, which is due at the end of Q7. Work on the analysis of data from the Task 3 experiments will also continue, with the results to be included in the project Final Report.