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# Validation of Passive Mitigation Systems for Fires

Agreement #693JK32310002POTA
Quarterly Status Report – Q2
Public
March 29, 2024

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In Collaboration with:



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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 March 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.



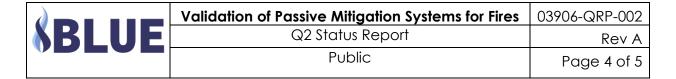
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Table 2-1. Project Tasks and Deliverables

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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	10%	
6	8	3rd Quarterly Status Report	Submit 3rd quarterly report	3	0%	
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	10%	
8	8	4th Quarterly Status Report	Submit 4th quarterly report	4	0%	
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

There were no items or deliverables that were scheduled to be completed during this Quarter that were not completed.



## 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.

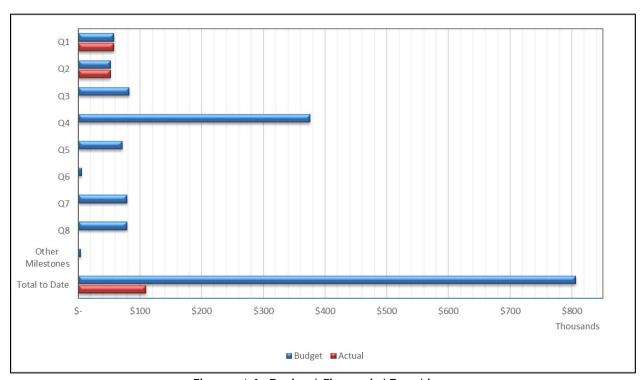


Figure 4-1: Project Financial Tracking

# 5 Project Technical Status

#### 5.1 Task 2 – Literature Review of Passive Fire Mitigation Methods

Work on Task 2 was completed on schedule. The task report was submitted to PHMSA on March 29, 2024.

#### 5.2 Task 3 – Experimental Testing

Work on Task 3 is continuing. The Project team anticipates significant input from the TAP on the details of the test program. A subgroup, including the project team and the PFM vendors, was established to advance the test design more rapidly; several calls with TAP

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members are anticipated to share the testing plan and receive additional feedback. Work on this task will continue as detailed in the project schedule.

#### 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 second quarterly report was submitted on March 29, 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).

Task#	Description	Quarter							
I dSK #		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1	Project Initiation								
2	Literature Review of Passive Fire Mitigation Methods								
3	Experimental Testing								
4	Development and Testing of Passive Fire Mitigation Models								
5	Validation of Passive Fire Mitigation Models								
6	Criteria for Structural Failure of Structural Steel and Pressure Vessels								
7	Draft and Final Report								
8	Project Management								4



Figure 6-1: Project Schedule

#### 6.1 Future Activities

Project team resources in Q3 will be focused on completing Task 6 "Criteria for Structural Failure of Structural Steel and Pressure Vessels" and continuing Task 4 "Development and Testing of Passive Fire Mitigation Models". Planning work for Task 3 "Experimental Testing" will also continue.