

	Develop a Risk-Based Approach and Criteria for Hazard Detection Layout	03902-QRP-004
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Develop a Risk-Based Approach and Criteria for Hazard Detection Layout

Agreement #693JK31910008POTA

Quarterly Status Report – Q4

Public

September 30, 2020

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1 Items Completed During this Quarterly Period

The performance period for the research project “Develop a Risk-Based Approach and Criteria for Hazard Detection Layout” (Project) is September 30, 2019 through June 30, 2021. The current quarter closes on September 30, 2020. The PHMSA Agreement Officer's Representative (AOR) for this project is Mr. Robert Smith and the Technical Task Inspector (TTI) is Ms. Chau Tran.

Table 1-1 shows the items and deliverables that were completed during this Quarter.

Table 1-1. Items Completed During This Quarterly Period

Item	Task	Deliverable	Quarter	Federal Payment	Cost Share
8	5	Consequence Modeling	4	\$60,032	\$15,008
9	8	Quarterly Status Report and Project Management	4	\$6,478	\$494

2 Items Not Completed During this Quarterly Period

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

3 Project Financial Tracking During this Quarterly Period

The current project financial tracking is shown in Figure 3-1. Work for the project is currently on schedule and projected to remain on schedule.

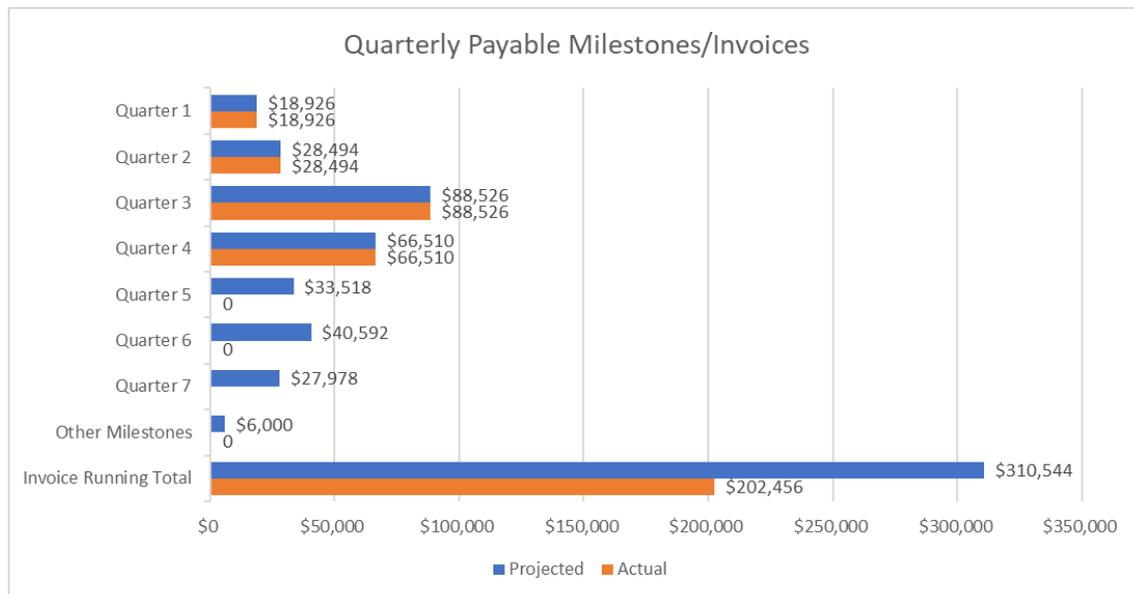


Figure 3-1: Project Financial Tracking

4 Project Technical Status

4.1 Task 5 – Consequence Modeling

The evaluation of a gas detector layout using scenario-based coverage requires vapor dispersion modeling. Therefore, BLUE conducted a comparison of the vapor dispersion models currently approved by PHMSA to demonstrate how model selection would impact scenario-based coverage. The results of this analysis are summarized in report 03902-RP-004.

A conference call with PHMSA and the TAP was held on September 17, 2020 via Microsoft Teams (meeting minutes and presentation are included in Attachment #1). The TAP also had the opportunity to review and comment on a draft version of the report prior to submission to PHMSA. Final submission has been coordinated with TTI Ms. Chau Tran to occur no later than October 7, 2020 to allow appropriate review time for the TAP.

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4.2 Task 6 – Case Study 1

BLUE will demonstrate the hazard detection methodology on a generic LNG facility including six Detection Areas: Pretreatment, Liquefaction, LNG Storage, Refrigerant Storage, LNG Transfer and Vaporization. The facility design is complete, and the hazard scenarios have been identified. The remaining work includes development and optimization of the flame and gas detector layout for each Detection Area.

4.3 Task 8 – Project Management

Contract Modification 0002 was fully executed on September 28, 2020. This contract modification adds a sixth Detection Area (Vaporization) to the generic LNG facility, as well as a second case study for a peakshaver. Updated project deliverable milestones and financial tracking are contained in section 3 of this report.

Additionally, all project reports due this quarter are complete and will be formally submitted to PHMSA no later than October 7, 2020 as discussed in section 4.1.

5 Project Schedule

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

- The project is on schedule;
- The overall schedule shown in Figure 5-1 remains on track and no changes to the completion date are required;
- The project team remains highly engaged and stable (with no changes in personnel).

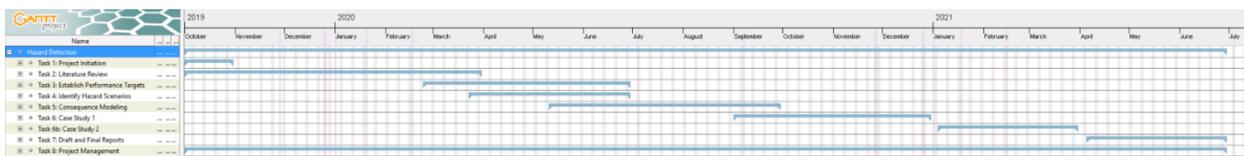


Figure 5-1: Project Schedule

6 Status Report Summary

Two payable milestones were completed in the current quarter:

- 1) Consequence Modeling
- 2) Quarterly status report

Work for the project is currently on schedule and projected to remain on schedule.