Internal Report – Public Page

Date of Report: *3rd Quarterly Report – June 30, 2022*

Contract Number: *693JK3211RA0001*
Prepared for: *DOT PHMSA*
Project Title: ***Using Alternative-Steel and Composite Material in Gas and Hazardous Liquid Pipeline Systems***

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For quarterly period ending: *June 30, 2022*

1: Work Performed During this Quarterly Period

Task 2 – Evaluate Material Properties and Testing Procedures: Work in this task includes:

- Review of existing standards, code requirements, and recommended practices for composite pipe materials
- Evaluation of existing testing procedures for composite pipe materials. Current qualification guidelines have been reviewed to identify and prioritize gaps and limitations.
- Gap analysis of 49 CFR Part 192 in relation to composite pipe materials. Addressing the gaps in current qualification procedures is the driving force behind this project. The aspects relating to the determination of external loading effects and maximum allowable operating pressure have been identified for further investigation.
- A survey to solicit research data, laboratory results, and qualification procedures from composite pipe manufacturers.
- Conference meetings with composite pipe providers to discuss their system qualification tests and plans for providing test samples to C-FER for planned testing. The meetings included C-FER team, consultant, and GTI Team:
  - Discussion with Baker Hughes regarding their system and TAP participation, on June 8th.
  - Meeting with Smart Pipe on June 8th.
  - Meeting with Baker Hughes on June 24th.
  - Meeting with FlexSteel on June 28th.
- The Quarterly Summary Report on the work activities was delivered to PHMSA.

2: Future Work

- Designing suitable tests procedures to address the identified gaps in the current composite qualification methods. Consultations are being made with the technical advisory panel to finalize the choice of test to perform.
- Performing full-scale evaluation of selected composite pipes for prominent failure mechanisms that have been identified as not adequately covered in the current qualification standards.

3: Project Schedule

Figure 1 shows the project schedule and progress as of the end of this quarter. No time-related issues are reported in this quarter.

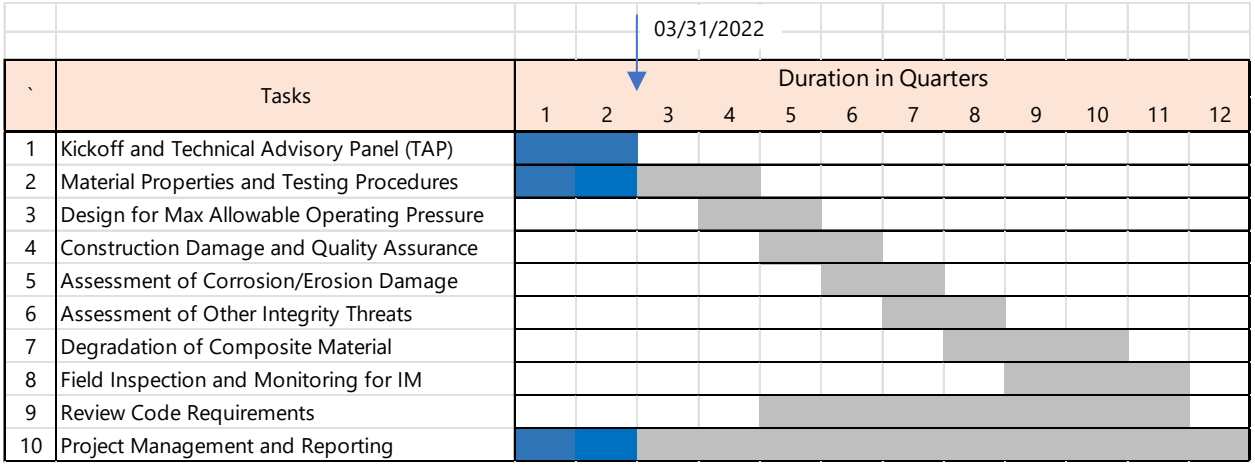

Figure 1 - Project time schedule