

Public 9th Quarterly Report

Date of Report: 9th Quarterly Report – November 2, 2020

Contract Number: 693JK31810002

Prepared for: DOT

Project Title: On-Board Power and Thrust Generation for the Explorer Family of Robots for the Inspection of Unpiggable Natural Gas Pipelines

Prepared by: Northeast Gas Association

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For quarterly period ending: October 31, 2020

1: Items Completed During this Quarterly Period:

During this 9th Quarter the following tasks were completed.

<i>Item #</i>	<i>Task #</i>	<i>Activity/Deliverable</i>	<i>Title</i>	<i>Federal Cost</i>	<i>Cost Share</i>
43	1.7-D	Explorer Integration	Integrate energy harvesting module on the Explorer 20/26 robot	\$13,622	\$13,678
44	1.8-C	System Redesign	Redesign system for robustness and reliability	\$39,375	\$39,375
45	2-M	Consultant	Technical management of project	\$0*	\$0*
46	3-M	NYSEARCH Project Management	Submit 9 th quarterly report	\$0*	\$0*

*Already charged prior to the project’s Modification

As seen, based on task completion, the project is on schedule.

2: Items Not-Completed During this Quarterly Period:

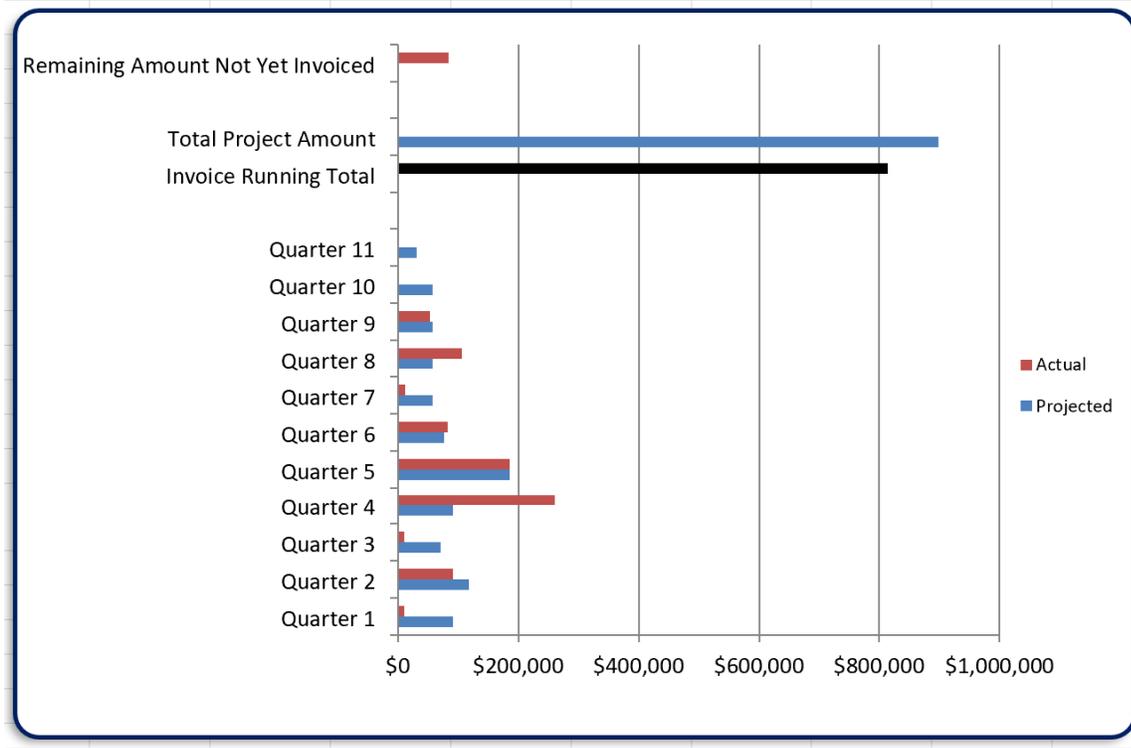
The project is on schedule.

3: Project Financial Tracking During this Quarterly Period:

The workscope and budget modification submitted in the third week of January 2020, requesting a timeline extension by three quarters and additional resources so we can complete additional

workslope focusing on delivering a better system, able to meet commercial grade standards was approved during last period. The project tracking is based now on the modified scope/budget.

QUARTERLY PAYABLE MILESTONES/INVOICES - 693JK31810002



4: Project Technical Status

Task 1.7-D: Explorer Integration

As the redesigned components of the system are manufactured and assembled they are integrated on Explorer 20/26 in order to be tested. The testing is taking place in an experimental setup that has been built in the laboratory. The creation of the commercial Graphic User interface (GUI) has been completed and will be tested as part of the broader testing program that is initiated as the new module assembly is being completed.

Task 1.8-C: System Redesign

The new drive modules (with minor changes to prevent leakage of gas through them) have been assembled. The new barrier (Fig. 2) is assembled and is being integrated on the energy harvesting module.

The redesigned energy harvesting module is under manufacturing and assembly. The completion of the manufacturing and assembly is expected in mid-November 2020.

5: Project Schedule

The project is on schedule. During the next period we will complete the assembly of the energy harvesting module and will initiate the testing on Explorer 20/26. Any issues identified during testing will be addressed and modifications will be made as needed.