

**Quarterly Report – Public Page**

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**Date of Report:** 2nd Quarterly Report-March 29, 2020

**Contract Number:** 693JK31910002POTA

**Prepared for:** DOT PHMSA

**Project Title:** Data Collection, Normalization and Integration Methods to Enhance Risk Assessment Tools for Decision-Making

**Prepared by:** GTI (Gas Technology Institute)

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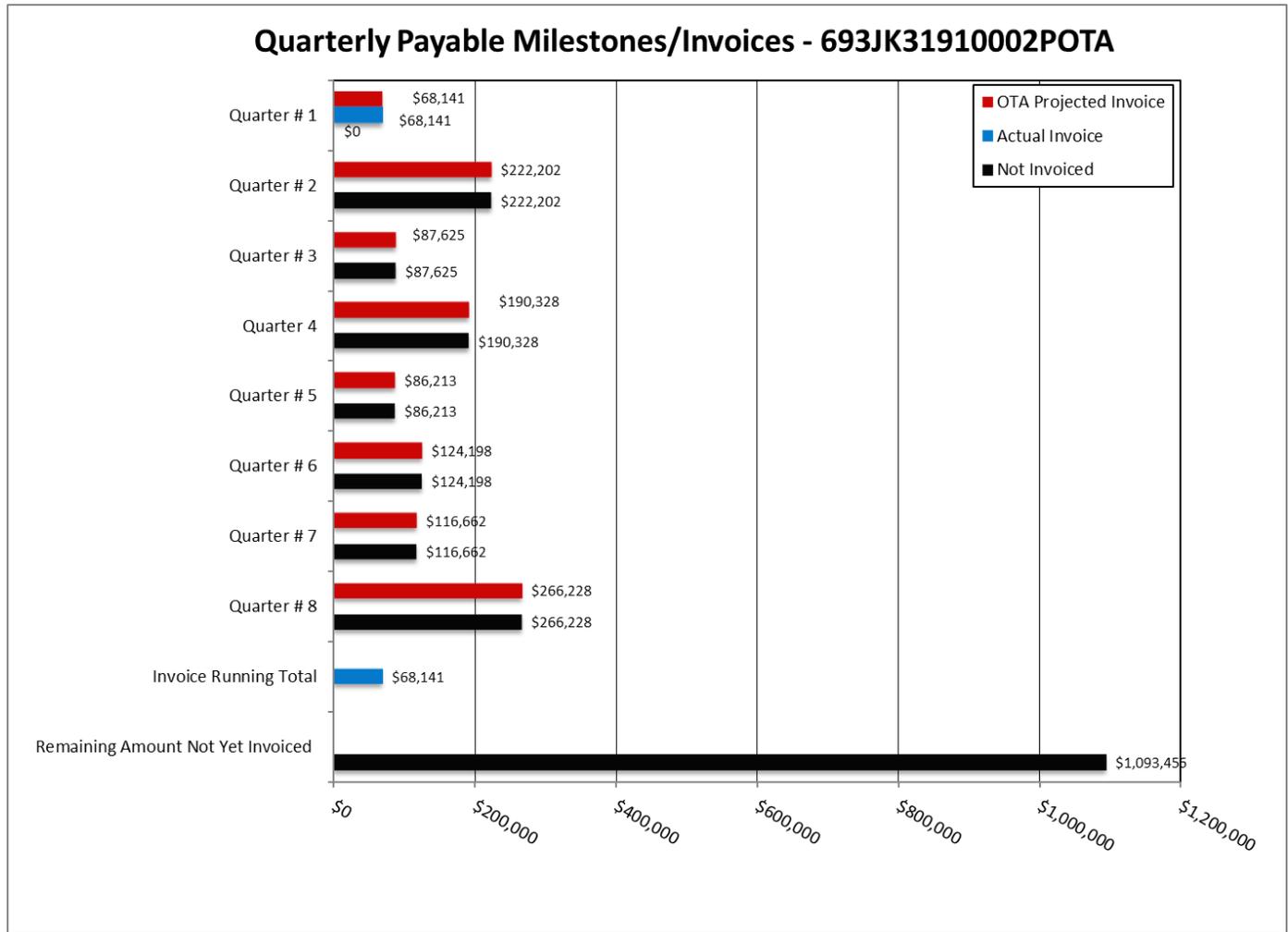
**For quarterly period ending:** March 29<sup>th</sup>, 2020

**1: Items Completed During this Quarterly Period:**

| <i>Item #</i> | <i>Task #</i> | <i>Activity/Deliverable</i>                           | <i>Title</i>  | <i>Federal Cost</i> | <i>Cost Share</i> |
|---------------|---------------|---|---|---------------------|-------------------|
| 1             | 1             | Project Kickoff Activities                            | Form TAP, Hold kickoff meeting, Circulate minutes   | 12,796.00           | 0.00              |
| 2             | 2.2           | Data Sources and Methods                              | Conduct Survey, Identify needs and opportunities  | 28,369.00           | 6,875.00          |
| 3             | 4.2.1         | Data Integration, Normalization and Uncertainty Tools | Data Driven Insights: Identify and Normalize Data Streams related to natural gas pipeline systems | 10,981.00           | 21,746.00         |
| 4             | 4.3.1         | Data Integration, Normalization and Uncertainty Tools | Causal Modeling and Situational Awareness: Causal modeling framework<br>Progress report 1         | 12,796.00           | 0.00              |
| 5             | 5.1           | Project Management                                    | Second Quarterly Report   | 3,199.00            | 0.00              |

Item 1 related to project kickoff, subcontracting and requesting the NCTE, is greyed as it was invoiced at the end of January. The NCTE has been fully executed and all items scheduled for the first quarter have now been completed. Items 2,3 4 and 5 will be invoiced this quarter.

### 3: Project Financial Tracking During this Quarterly Period:



### 4: Project Technical Status –

1. The technical work for this quarter progressed as planned and all deliverables have been completed. Detailed documentation for each deliverable is provided in attachments. A short description of project activity is provided in the following numbered points.
2. Project work commenced fully starting January 2<sup>nd</sup>, 2020.
  - a. An in-person workshop was held with the full project team at the PG&E San Ramon, CA facility. Data sets were identified, and responsible people were assigned for uploading the data sets to the GTI share site. Detailed discussions were held with subject matter experts and managers on the following topics:
    - i. DIMP
    - ii. TIMP
    - iii. Third party damage
    - iv. Subsidence in urban areas as it relates to leaks and emissions
    - v. There was good discussion on the project objectives, particularly with the geoscience representatives from PG&E. Points of contact were established with the geoscience team and GTI held a detailed follow on webinar with the geosciences team on March 3<sup>rd</sup>, 2020 to review approaches for collaborative work.
3. A web meeting was held with subject matter experts and managers from Atmos on February 13<sup>th</sup>, 2020. The output from the PG&E workshop was discussed with the Atmos team who provided their comments and insights. At this stage Atmos have chosen to remain on the TAP as observers and reviewers. They will not be contributing data to the project work.

4. An in-person project update meeting was scheduled for March 12<sup>th</sup>, 2020 at the PG&E San Ramon facility. Due to the emerging Coronavirus threat the GTI project manager converted this meeting to a two-hour web meeting.
  - i. All members of the project team participated and presented an update on their progress. The slides will be uploaded to the PHMSA site separately.
  - ii. Data requests were refined
  - iii. The data upload process was initiated
5. The bulk of the data has been received from PG&E.
  - a. Most of the data is in GIS format
  - b. GTI has installed an ESRI server in the Azure framework that will support this project.
    - i. The integrity of the databases has been reviewed
    - ii. Missing layers were identified
    - iii. The missing layers were uploaded successfully
  - c. On Friday March 27<sup>th</sup> the UMD team had a detailed web meeting with PG&E third party damage team to discuss data sources and their upload to the project database. A large amount of relevant data was identified and will be uploaded. The UMD team will use this additional data to substantiate the model they have created from the models and data sources already provided to them by GTI.
6. In February GTI and Lumina collaborated on creating an online survey to assess the current state of the industry regarding data sources, data merging, data quality, risk modeling methods, data governance and their views as to the most pressing needs for improvement.
  - a. In March four responses were received
    - i. The current “hotspot” is in this area were all responders view the topics as high priority items:
      1. What are your priorities for processes or tools to better support each of these activities or issues?
        - a. Obtain more or better data
        - b. Data quality and data governance
        - c. Identifying types and sources of failure
        - d. Quantify probabilities of failure
        - e. Quantify consequences of failure
        - f. Define a consistent risk tolerance for decision making
        - g. Prioritize which risks to address
        - h. A risk-spend efficiency metric to select risk controls and mitigation projects
        - i. Integrate risk management with process safety (PS)
        - j. Integrate risk management with enterprise safety management system (ESMS)
        - k. Transparency of risk governance process
        - l. Communicate risk inside the organization
        - m. Communicate risk to outside stakeholders, regulators, and customers
  - b. All respondents have agreed to follow on calls, which will be scheduled
  - c. We have two sets of calls scheduled with utilities, one on the east coast and one on the west coast, where we will be talking to 2-3 Vice Presidents at each utility about risk modeling, data concerns and risk governance. These calls will occur in the April/May timeframe (they have been rescheduled due to the public health crisis unfolding as this is being written)
  - d. We will continue in our efforts to identify appropriate people to invite to take the survey and follow up with each of them. We anticipate that these efforts will extend over the duration of the project as we adaptively refine our requests based on feedback.
7. The Stanford team is making good progress on sourcing additional data sources above and beyond the PG&E data
8. GTI is progressing as planned with the Causal modeling framework

9. The UMD team is progressing well with the Bayesian network development for third party damage prevention.

## **5: Project Schedule –**

On Tuesday March 3<sup>rd</sup> the following statement was submitted to PHMSA by the project manager:

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GTI has adhered to CDC guidance and taken pre-emptive action to adapt its operations to mitigate the spread of COVID-19, safeguard its employees and communities, and protect its customers' interests. A work from home where possible protocol was implemented by GTI on March 13th and further curtailments of facilities access (including our labs) were implemented on March 18<sup>th</sup>. Access to GTI facilities by its employees has been severely limited since that date. On March 20<sup>th</sup>, Illinois' governor issued a statewide stay at home order beginning March 21 through April 7. GTI is adhering to this order and similar orders in other states where it has operations.

Nearly all GTI personnel have capability to, and are presently working remotely. However, because of the nature of its research and development activities, there is some work that requires access to laboratories and which GTI cannot perform remotely. Where applicable, updates have been obtained from subcontractors and project partners to assess the present impact of COVID-19 to project performance and deliverables. Specifically with respect to PHMSA contract DOT\_693JK31910002POTA "*Data Collection, Normalization and Integration Methods to Enhance Risk Assessment Tools for Decision-Making*" GTI's assessment of the impact is as follows:

**There will be minimal impact on the project work schedule based on written responses from all of the subcontractors. The work is entirely based on data analysis and computer modelling. All team members have successfully transitioned to remote work protocols and other than understandable IT teething problems do not expect their work to be impacted at all. I am in regular contact with individual team members and can report that work is progressing as planned.**

Please be assured your GTI colleagues will be accessible via e-mail and phone and diligent in maintaining the continuity in our projects. Thank you for your ongoing support as we all work together to protect the health of each other and society worldwide.

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- As of today (Sunday March 29<sup>th</sup>, 2020) the statement seems to be holding true.
- We continue to refine our cloud system and will be transitioning all document storage to the central repository in the next quarter.
- The Microsoft Teams video conferencing environment is proving effective as a project communication tool.
- We do not anticipate any significant schedule issues and will be constantly monitoring the health of team members so that we can proactively address any emergent problems.

**End of report**