

7. Abstract of work completed during the quarter

Task 5: Finalize project tasks

During this quarter, we executed the original contract with TCET and Amendment 1 to the contract. These two documents defined the project tasks. Next, after notifying TCET, we set up a sub-contract with CACI to provide the statistical support of Hugh Williamson.

Task 1a: Demonstration Models: Gather/evaluate existing data

This task is not complete, but we have made important progress. We made a list of eleven different datasets that might be used to make a preliminary evaluation of the feasibility of the use of tailpipe emissions measurements to predict whether or not a vehicle's EGR system was operating properly. Of these, we selected two (TNRCC San Antonio data and British Columbia I/M program data) to proceed with preliminary evaluations. We also selected a third and fourth (Colorado I/M program data and Ontario I/M program data) that we might use if the budget permits or in the event that either of the first two prove to be inadequate to perform the analysis.

We already had the TNRCC San Antonio data and the British Columbia data in house.

Task 1b: Demonstration Models: Build models

This task is also not complete, but we have made important progress. We completed the pre-processing of the San Antonio data, met with Hugh Williamson to develop a strategy for the analysis of that data. Dr. Williamson provided us with a technical note with his results. It became apparent that, while the quality of the observations was very good, the number of observations that were available for the analysis was fewer than we had anticipated. From the few observations that were available, the data indicated that emissions neither prevented nor allowed the functionality of the EGR system to be predicted.

We decided to move on to analysis of the British Columbia data to see if that large dataset provided sufficient support of the concept to proceed with initiation of preparations for field data collection. We have almost completed pre-processing of that data in preparation for analysis by ERG and Hugh Williamson.