

In regards to CRC Project No. E-122  
June 21, 2016

We have received some questions asking for clarification of the Request for Proposal for CRC Project E-122 "Light Duty PEMS Validation / Chassis Dyno Correlation." Please see the questions and responses given below.

1. Under "Vehicles" it indicates "...gasoline direct inject vehicle used for testing provided by CRC." However potential exists to test a second diesel vehicle. Should we assume all of the test vehicles will be provided by CRC?

A: (No, if a second diesel vehicle is needed one would have to be purchased)

2. Also under "Vehicle" and similar to question 1, it is not clear who will be providing the PEMS and any aspects pertaining to the PEMS like: "*PEMS Manufacture recommendations for exhaust flow measurements...*" Please clarify who is responsible for providing the PEMS and any related components and instructions required for PEMS operation.

A: (The contractor is required to either have the PEMS units or rent them and provide a cost for that. CRC may also have conversations with PEMS manufacturers to ascertain their interest in providing units for the program.)

3. Base on the European Guidelines for RDE cycle development, the cycle is made up of 34% City, 33% Urban & 33% Hwy in that order. The cycle length is between 1.5 to 2 hours in duration. Comparing this cycle to a vehicle chassis dynamometer CVS Bag Bench system, our bench (new in 2014) in its current configuration is capable of up to four Bags (Phases) with each Bag being ~ 15 minutes to fill. Operating in Modal 10 Hz sample rate mode only we can process up to 1.8 hours a drive cycle time. Therefore Bag results can only be generated for up to 4 Phase with each Phase being  $\leq$  15 minutes in length for a total time of 1 hour. If the purpose of the program is to compare PEMS to a current certification 1065/1066 compliant chassis emissions bench, is it a given that modifications to the chassis emissions bench are not intended? Therefore the RDE cycle and PEMS output will be conditioned to accommodate the chassis emission bench capabilities?

A: (In the SOW it states it will be a modified RDE about half the run time. It will still have the same breakdown between the cycles.)

4. Under "Deliverables" it states "...Monthly reports should contain all data acquired during the report month using the scan tool..." Please explain the purpose the "scan tool" fulfills?

A: (The data from the scan tool is a tool to help enable diagnostics if the emissions data does not look repeatable or correct. It is used a tool to help diagnose problems with the vehicle)