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**Abstract for Modification 54 between NETL and ExxonMobil Technology and Engineering Company to Multi-Project Cooperative Research and Development Agreement AGMT-0922**

**(AGMT-0922.PTS8)**

Exxon Mobil-NETL Testing of DAC Materials

This joint initiative is aimed at extending our understanding of real DAC testing conditions at the NETL DAC testbed facility. Of particular focus will be:

- Small Scale testing of powdered and formulated materials (supplied by ExxonMobil) to evaluate various performance metrics under DAC process cycles
- Pilot scale testing of formulated materials at larger scales

ExxonMobil will work with NETL to shake down equipment, validate testing methods, and define best practices for data analysis.

Three tasks are proposed:

1. Validation of multi-cycle test data on powdered and formulated materials to benchmark various performance metrics of these materials.
2. Steam regeneration of powdered samples at small scale to define baseline performance under commercially relevant conditions.
3. Pilot scale testing of larger formulated materials to test commercially relevant samples under actual process cycles.