| Eval ID | Evaluation Technique | Location/Time | Equipment | Accuracy | Trials | Expected Outcome | Formula / Assumptions | Man Hrs |
|---|---|---|---|---|---|---|---|---|
| **MO-1** | | | | | | | | |
| MO-1-1 | Conduct driving maneuvers from a distance > 300 feet | Ranch / Apr-30 | Measuring Tape | 3 ft | 15 min | 500 ft | Line of Sight | 2.5 |
| MO-1-2 | Conduct blind spot analysis of the LIDAR and cameras | SCU / Apr- 20 | Mesuring Tape, Poles, String | 10 deg | 3 | 300 deg | - | 5 |
| MO-1-3 | Measure time for an event to be viewed on camera | SCU / Apr- 20 | Stopwatch | 0.2 s | 10 | 0.5 s | Within 300 ft | 3 |
| MO-1-4 | Subjective | SCU / May-2 | Computer | N/A | Continuous | - | - | - |
| MO-1-5 | Measure time between command and vehicle response | Ranch / Apr-30 | Stopwatch | 0.2 s | 10 | 0.5 s | Within 1000ft | 5 |
| MO-1-6 | Test all emergency stop buttons on the vehicle and software emergency stops | Completed | N/A | N/A | 3 | Full Stop | - | 5 |
| | | | | | | | | |
| **MO-2** | | | | | | | | |
| MO-2-1 | Test driving with multiple people and gear | Ranch / Apr-30 | Hay Bale | 20 lbs | 1 | No failure | Distributed Load | 4 |
| MO-2-2 | Test driving with manual override features | Completed | N/A | N/A | 15 min | No issues | Slow Speeds | 2.5 |
| MO-2-3 | Evaluate off-road driving performance during field testing | Ranch / Apr-30 | N/A | N/A | 30 min | No issues | Slow Speeds | 5 |
| | | | | | | | | |
| **MO-3** | | | | | | | | |
| MO-3-1 | Generate static point cloud images during field testing | Completed | Onboard Systems | 1 ft | 5 | Decipherable graphic | Static environment | 3 |
| MO-3-2 | Conduct blind spot analysis of the LIDAR and cameras | SCU / Apr- 20 | Onboard Systems | 10 deg | 3 | 350 deg | - | 4 |
| MO-3-3 | Save maps generated during field testing | Completed | Onboard Systems | N/A | 3 | Decipherable graphic | Static environment | 3 |
| MO-3-4 | Field testing, measure latency | Completed | Onboard Systems, stopwatch | 1 ft , 0.2 s | 15 min | Obstacle Identificaiton | Static environment | 3 |
| | | | | | | | | |
| **MO-4** | | | | | | | | |
| MO-4-1 | Subject vehicle to smoke (at a safe distance) and evaluate expected response | Ranch / Apr-30 | Controlled Fire / Test Gas | 0.1 ppm | 5 | 0.1 ppm | Homogenous smoke field | 5 |
| MO-4-2 | Same as above, testable for all gases but equipment not available/ too expensive | Ranch / Apr-30 | Controlled Fire / Test Gas | 50 ppm | 5 | 50 ppm | Homogenous environment | 5 |
| MO-4-3 | Compare to measured quantities to safety thresholds during field testing | Ranch / Apr-30 | Controlled Fire / Test Gas | 50 ppm | 5 | 50 ppm | Homogenous environment | 5 |
| MO-4-4 | Compare measurements to known weather measurements | SCU / Apr-15 | Handheld thermometer/ Hygrometer | 3 C , 5% | 5 | 1 C, 5 % | Accurate comparators | 5 |
| MO-4-5 | Compare output of 3 units | Ranch / Apr-30 | N/A | N/A | 5 | Consistent info within 10% | Homogenous environment | 5 |
| MO-4-6 | Design Req | SCU / May-2 | Computer | N/A | Continuous | - | - | - |
| MO-4-7 | Measure time between stimulation and UI response | SCU / May-2 | Stopwatch | 0.2 s | 10 | 2 s | Within 300 ft | 3 |
| MO-4-8 | Evaluate subjectively during field testing | Ranch / Apr-30 | N/A | N/A | 5 | No issues | Homogenous environment | 3 |
| | | | | | | | | |
| **MO-5** | | | | | | | | |
| MO-5-1 | Design Req | SCU / May-2 | Computer | N/A | Continuous | Requirement Met | Subjective, large display | 3 |
| MO-5-2 | Design Req | SCU / May-2 | Computer | N/A | Continuous | Requirement Met | Subjective, large display | 3 |
| MO-5-3 | Design Req | SCU / May-2 | Computer | N/A | Continuous | Requirement Met | Subjective, large display | 3 |
| MO-5-4 | Measure time between stimulation and UI response | SCU / May-2 | Computer / Stopwatch | 0.2 s | 10 | 2 s | Within 300 ft | 3 |