Mel do u have anything you want to add to this before i put it in the presentation?

| Paragraph # | Test Name | Success Criteria | Methodology | Status | Responsible Engineer |
| --- | --- | --- | --- | --- | --- |
| 3.2.1.2 | Detection Probability | The model must be able to predict with accuracy =< 90% | Each species will be tested 20 times for detection for probability values | Untested | Andrew Albritton |
| 3.2.5 | Failure Propagation | When the motion sensor is triggered by a species not of interest, there shall be no frequency emitted | Test detection with persons present or with empty background, and see if the emitters turn on | PASS | Andrew Albritton |
| 3.2.5.1.1 | BIT Test | The built in test shall prevent false detections by running post processing on provided images yielding an accuracy of at least 90% (3.2.1.2) | Using the on board camera 50 images are taken. Their confidence and volume of detection are compared to provide a score to prevent false detections | PASS | Andrew Albritton |
| 3.2.3.2.1 | Signal emission post detection | After a species has been detected the Emitter subsystem shall emit a frequency corresponding to the organism | Using a receiver we will measure the output frequency from our emitter subsystem while running the model for classification | PASS | Melquisedec Ordonez |
| 3.2.3.1.3 | Power PCB Output | Subsystem outputs 5V 2A signal while under power | Use a multimeter to measure and track system outputs over various inputs. | PASS | Michael McNeil |
| 3.2.3.1.4 | Battery Charger Output | Charger uses 7.2V signal to charge battery. | Use e load to test the output at the battery connections while under wall power | PASS | Michael McNeil |
| 3.2.3.1.6 | PCB Subsystem Operation | PCB is able to output power while simultaneously managing the battery, from both sources of power. | Complete various test under wall power and battery power and while under only battery power and test each part for proper functionality in that state | PASS | Michael McNeil |
| 3.2.1.1 | Signal Emission Amplification | Upon detection of the three different categories of pest the system will amplify the signal from emitter to at least 7V/V | The output of the amplifier will be measured by an oscilloscope probe along with the input signal coming from the emitter and compared. | PASS | Melquisedec Ordonez |
| 3.2.3.1.1 | Power Consumption | The emitter can be powered by just the power PCB. | Use any power inputs needed by the emitter directly from the power pcb instead of MCU and observe if emission is detectable by ultrasonic detector per 3.2.3.2.1 guidelines. | PASS | Michael McNeil |
| 3.2.4.4 | Full System Validation in garden environment  (scenario) | The full system will be able to detect motion and deter detected pests after being turned on. | The user will only have access to a single on off switch. Whenever the user turns the device on it will immediately begin sensing motion and if motion is detected run detection. When presented with all of the differing animal types we will check if the device emits the correct frequency with a portable spectrum analyzer. This will be done in a garden environment to simulate the anticipated application of this product. | PASS | Andrew Albritton |