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| --- | --- |
| **IEC Noise Testing Checklist** |  |
| NWTC Testing Group |

Signals to Check

|  |  |  |  |
| --- | --- | --- | --- |
| ⃝ | Power | ⃝ | Temperature |
| ⃝ | Nacelle Wind Speed | ⃝ | Pressure |
| ⃝ | Acoustic Wind Speed | ⃝ | Pitch (required v3, optional v2.1) |
| ⃝ | Wind Direction | ⃝ | RPM (recommended v3, optional v2.1) |

Turbines to Shut-down & External Noise Sources

|  |  |  |  |
| --- | --- | --- | --- |
| ⃝ | CARTS – Andy Scholbrock: 720 398 7298 | ⃝ | NW100 – Garth Johnson: x7160 |
| ⃝ | GE – Jeroen: x7009, 303 720 9026 | ⃝ | 3.1 Skystreams – Arlinda x6987 |
| ⃝ | GE Eco 110 – Jeroen: x7009, 303 720 9026 | ⃝ | Test shed AC units |
| ⃝ | Siemens – Jeroen: x7009, 303 720 9026  Paul Medina O: 303 895 2055  PC: 303 763 0595  WC: 303 218 8237 (common)  Mike Seil: 303 570 4139 | ⃝ | A60 hydraulics – Hughes: x7054 |
|  | ⃝ | 251 hydraulics - Snowberg/Jenks |
|  | ⃝ | STL hydraulics – Snowberg x6920 |
|  | ⃝ | Derft |
| ⃝ | Gamesa – Jeroen: x7009, 303 720 9026  Aaron – 1: 661 557 2582, 2: 267 563 0701 | ⃝ | 1E.2, 1E.3 – Roadman: x6992, 303 242 9913 |
| ⃝ | Sodar @ 3.4 – Andy Clifton: x7141 | ⃝ | Any other noise sources observable? |
| ⃝ | Misc: birds, road grading |

Board

|  |  |  |  |
| --- | --- | --- | --- |
| ⃝ | Actual board (in place or in hand) | ⃝ | Shovel |
| ⃝ | Known radial & azimuth location | ⃝ | Fiber optic run (optional) |

Equipment

|  |  |  |  |
| --- | --- | --- | --- |
| ⃝ | Laptop with charged battery, recent updates, and extra space (empty trash)  Primary: ahuskey-15956s, jvandam-10369s | | |
| ⃝ | Windscreen | ⃝ | Calibrator |
| ⃝ | Towel/Hoodie | ⃝ | NiDAQ |
| ⃝ | BNC cable | ⃝ | Mic |
| ⃝ | USB cable | ⃝ | UPS |
| ⃝ | Compass | ⃝ | Power cord, as appropriate |
| ⃝ | Range finder | ⃝ | 2 USB2Fiber boxes and pow. supps |
| ⃝ | Cooler or Sunshade | ⃝ | Ethernet Cable |
| ⃝ | Electrical Tape | ⃝ | Secondary windscreen (winds > 10m/s) |

Setup

|  |  |
| --- | --- |
| In Lab | |
| ⃝ | Everything in cal (1 year for calibrator, 2 for everything else) |
| ⃝ | Prep test monitor: matlab and slow TDMS or EtherCAT module |
| ⃝ | Updates forced to install, batt charged, space on drive |
| ⃝ | Laptop power options set to not go into stand-by, wireless card turned off |
| ⃝ | DAS recording |
| ⃝ | NHC logging CPU temperature - 1hr admin on network |
| ⃝ | Initiate Field Test Forum email chain |
| ⃝ | Contact Security after hours |

|  |  |
| --- | --- |
| At board | |
| ⃝ | (Older set-up) Shut down any remaining interrupting noise sources |
| ⃝ | (Older set-up) Power up box: Enclosure,USBDaq,USB2Fiber |
| ⃝ | (Older set-up) Plug in USBhub->USBDaq,USBhub->fiber(cross internal to box, Tx->Tx external) |
| ⃝ | Cycle power to hub |
| ⃝ | Plug in BNC mic, calibrator, wrap in towel |
| At comp: (10369s: nwtc/wind-1234; noiselab/N0!selab; noiselab2/N0!selab)  (15956s: nwtc/wind-1234; noiselab/N0!selab; noiselab2/N0!selab) | |
| ⃝ | On AC/external power with all connectors tight |
| ⃝ | Prop up laptop near fan inlet/exhaust |
| ⃝ | New project for that day (manuf\_turb\_yymmdd) |
| ⃝ | Set Noiselab to use NI module with 1 channel only |
| ⃝ | Calibrate microphone |
| ⃝ | Record cal tone at beginning of recording (yymmdd\_hhmm) |
| ⃝ | Strain relieve fiber through turbine door and over handrail (if applicable) |
| Back at board | |
| ⃝ | Record time sync |
| ⃝ | Record conditions (board, calibrator, laptop, NiDAQ, Mic) |
| ⃝ | Take picture of board only, picture of turbine viewed from board |
| ⃝ | Enclosure shaded/laptop in cooler |
| Back from setup | |
| ⃝ | Double check noiselab computer recording |
| ⃝ | Double check all signals still working, monitor winds |
| ⃝ | Time sync wrapup |
| ⃝ | Check laptop frequently when temperature is high |

Tear-down

|  |  |  |  |
| --- | --- | --- | --- |
| ⃝ | Restart all turbines | ⃝ | Charge laptop |
| ⃝ | Copy project to server | ⃝ | Unplug DC adapter, charge UPS |
| ⃝ | Delete project off laptop, free space? | ⃝ | Unplug 12V charger when complete |
| ⃝ | Field Test Forum email follow-up |  |  |

Notes

Date:

Laptop:

Board:

Calb. S/N:

DAQ S/N:

Mic S/N:

Sync: