Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	Initials/Date
Hobo ID								
Chemical-2								
Hobo Temp Reading °F		31.942	31.892	31.942	31.942	31.892	31.942	Ok 7-12-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference °F		-0.058	-0.108	-0.058	-0.058	-0.108	-0.058	↓
Hobo Temp Reading °F		71.964	71.274	71.748	71.834	71.447	71.317	Ok 7-11-16
Nist Temp Reading °F		73	73	73	70	71	70	↓
Difference °F		-1.036	-1.726	1.252	+1.834	+0.447	+1.317	↓
Hobo ID								
Chemical Backup-5								
Hobo Temp Reading °F		32.092	32.092	32.092	32.092	32.092	32.092	Ok 7-8-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference °F		+0.092	+0.092	+0.092	+0.092	+0.092	+0.092	↓
Hobo Temp Reading °F		71.877	71.964	71.834	71.791	71.490	71.748	Ok 7-7-16
Nist Temp Reading °F		72	73	71	70	73	70	Ok 7-7-16
Difference °F		-0.123	-1.036	+0.834	+1.791	-1.51	+1.748	Ok 7-7-16

Signature: David Eimer **Date:** 7-12-16

Time	8:00 AM	9:00 AM	10:00 AM	11:00 PM	12:00 PM	1:00 PM	2:00 PM	Initials/Date
Hobo ID								
UTC Freezer-3								
Hobo Temp Reading °F	32.47	32.47	32.47	32.47	32.47	32.47	32.47	Ok 1-6-16
Nist Temp Reading °F	32	32	32	32	32	32	32	↓
Difference °F	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	↓
Hobo Temp Reading °F	-13.58	-15.50	-8.43	-14.22	-12.28	-11.00	-15.50	Ok 1-13-16
Nist Temp Reading °F	-12	-14	-9	-15	-11	-12	-14	↓
Difference °F	+1.58	+1.50	-0.57	-0.78	+1.28	-1.00	+1.50	↓
Hobo ID								
UTC Freezer Backup-4								
Hobo Temp Reading °F	32.47	32.47	32.47	32.47	32.47	32.47	32.47	Ok 1-6-16
Nist Temp Reading °F	32	32	32	32	32	32	32	↓
Difference °F	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	↓
Hobo Temp Reading °F	-13.58	-15.50	-8.43	-14.22	-12.28	-11.00	-14.87	Ok 1-13-16
Nist Temp Reading °F	-12	-14	-9	-15	-11	-12	-14	↓
Difference °F	+1.58	+1.50	-0.57	-0.78	+1.28	-1.00	+0.87	↓
Hobo ID								
TRT Freezer-3								
Hobo Temp Reading °F	32.47	32.47	32.47	32.47	32.47	32.47	32.47	Ok 1-6-16
Nist Temp Reading °F	32	32	32	32	32	32	32	↓
Difference °F	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	↓
Hobo Temp Reading °F	-13.58	-15.50	-8.43	-14.22	-11.65	-11.00	-15.50	Ok 1-13-16
Nist Temp Reading °F	-12	-14	-9	-15	-11	-12	-14	↓
Difference °F	+1.58	+1.50	-0.57	-0.78	+0.65	-1.00	+1.50	↓
Hobo ID								
TRT Freezer Backup-4								
Hobo Temp Reading °F	32.47	32.47	32.47	32.47	32.47	32.47	32.47	Ok 1-6-16
Nist Temp Reading °F	32	32	32	32	32	32	32	↓
Difference °F	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	+0.47	↓
Hobo Temp Reading °F	-13.58	-15.50	-8.43	-13.58	-12.28	-10.35	-14.87	Ok 1-13-16
Nist Temp Reading °F	-12	-14	-9	-15	-11	-12	-14	↓
Difference °F	+1.58	+1.50	-0.57	-1.42	+1.28	-1.65	+0.87	↓

Signature: David Eames **Date:** 1-13-16

Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	Initials/Date
Hobo ID								
UTC GH-1								
Hobo Temp Reading °F	ok 2-3-16	32.043	31.993	32.092	32.243	32.443	34.272	ok 2-3-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference		+0.043	-0.007	+0.092	+0.243	+0.443	+2.272	↓
Hobo Temp Reading °F	ok 2-11-16	77.464	80.978	81.376	79.655	81.376	80.139	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	↓
Difference		-2.536	-3.022	+3.376	-2.345	-0.624	-2.861	↓
Hobo RH Reading %		68.834	67.175	69.741	68.154	72.425	70.220	↓
Psychrodyne RH Reading %		62	62	72	62	70	72	↓
Difference %		+6.834	+5.175	-2.259	+6.154	+2.425	+0.220	↓
Hobo ID								
UTC GH Backup-2								
Hobo Temp Reading °F	ok 2-3-16	41.601	33.386	32.293	32.293	32.592	32.742	ok 2-3-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference		+9.601	+1.386	+0.293	+0.293	+0.592	+0.742	↓
Hobo Temp Reading °F	ok 2-11-16	77.029	80.668	81.023	79.480	81.111	79.876	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	↓
Difference		-2.971	-3.332	+3.023	-2.52	-0.889	-3.124	↓
Hobo RH Reading %		69.993	68.340	70.739	68.456	73.159	70.908	↓
Psychrodyne RH Reading %		62	62	72	62	70	72	↓
Difference %		+7.993	+6.34	-1.261	+6.456	+3.159	-1.092	↓
Hobo ID								
TRT GH-1								
Hobo Temp Reading °F	ok 2-24-16	32.542	32.491	32.592	33.386	37.560	33.336	ok 2-24-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference		+0.542	+0.491	+0.592	+1.386	+5.560	+1.336	↓
Hobo Temp Reading °F	ok 2-25-16	81.066	79.392	80.008	79.743	80.227	78.602	ok 2-25-16
Nist Temp Reading °F		82	83	83	79	79	78	↓
Difference		-0.934	-3.608	-2.992	+0.743	+1.227	+0.602	↓
Hobo RH Reading %		43.640	42.765	42.165	44.158	43.287	44.651	↓
Psychrodyne RH Reading %		44	48	48	48	46	48	↓
Difference %		-0.36	-5.235	-5.835	-3.842	-2.713	-3.349	↓
Hobo ID								
TRT GH Backup-2								
Hobo Temp Reading °F	ok 2-24-16	31.993	32.043	32.142	32.193	34.615	32.641	ok 2-24-16
Nist Temp Reading °F		32	32	32	32	32	32	↓
Difference		-0.007	+0.043	+0.142	+0.193	+2.615	+0.641	↓
Hobo Temp Reading °F	ok 2-25-16	80.978	79.655	80.227	80.008	80.537	78.996	ok 2-25-16
Nist Temp Reading °F		82	83	83	79	79	78	↓
Difference		-1.022	-3.345	-2.773	+1.008	+1.537	+0.996	↓
Hobo RH Reading %		44.170	43.151	42.548	44.542	43.339	44.178	↓
Psychrodyne RH Reading %		44	48	48	48	46	48	↓
Difference %		+0.170	-4.849	-5.452	-3.458	-2.661	-3.822	↓

Signature: David Emmer **Date:** 2-25-16

Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	Initials/Date
Hobo ID								
UTC GH-2								
Hobo Temp Reading °F	ok 2-3-16	32.142	32.142	32.243	32.342	33.138	36.169	ok 2-3-16
Nist Temp Reading °F		32	32	32	32	32	32	
Difference °F		+0.142	+0.142	+0.243	+0.342	+1.138	+4.169	
Hobo Temp Reading °F	ok 2-11-16	77.029	80.316	80.668	79.216	80.802	79.655	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	
Difference °F		-2.971	-3.684	+2.668	-2.784	-1.198	-3.345	
Hobo RH Reading %		66.124	64.094	66.565	64.175	69.026	66.255	
Psychrodyne RH Reading %		62	62	72	62	70	72	
Difference %		+4.124	+2.094	-5.435	+2.175	-0.974	-5.745	
Hobo ID								
UTC GH Backup-3								
Hobo Temp Reading °F	ok 2-4-16	31.942	31.942	31.942	31.942	32.243	31.942	ok 2-4-16
Nist Temp Reading °F		32	32	32	32	32	32	
Difference °F		-0.058	-0.058	-0.058	-0.058	+0.243	-0.058	
Hobo Temp Reading °F	ok 2-11-16	77.770	81.111	81.421	79.743	81.326	80.316	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	
Difference °F		-2.23	-2.889	+3.421	-2.257	-0.674	-2.684	
Hobo RH Reading %		64.345	63.401	66.151	64.956	68.993	66.622	
Psychrodyne RH Reading %		62	62	72	62	70	72	
Difference %		+2.345	+1.401	-5.849	+2.956	-1.007	-5.378	
Hobo ID								
TRT GH-2								
Hobo Temp Reading °F	ok 2-3-16	31.942	31.942	31.942	31.942	32.592	35.249	ok 2-3-16
Nist Temp Reading °F		32	32	32	32	32	32	
Difference °F		-0.058	-0.058	-0.058	-0.058	+0.592	+3.249	
Hobo Temp Reading °F	ok 2-11-16	77.292	80.802	81.154	79.480	81.199	80.008	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	
Difference °F		-2.708	-3.198	+3.154	-2.52	-0.801	-2.992	
Hobo RH Reading %		65.756	64.934	67.340	66.450	70.298	67.862	
Psychrodyne RH Reading %		62	62	72	62	70	72	
Difference %		+3.756	+2.934	-4.66	+4.45	+0.298	-4.138	
Hobo ID								
TRT GH Backup-3								
Hobo Temp Reading °F	ok 2-3-16	31.993	32.293	32.742	32.293	33.681	35.733	ok 2-3-16
Nist Temp Reading °F		32	32	32	32	32	32	
Difference °F		-0.007	+0.293	+0.742	+0.293	+1.681	+3.733	
Hobo Temp Reading °F	ok 2-11-16	76.811	80.361	80.713	79.216	80.757	79.655	ok 2-11-16
Nist Temp Reading °F		80	84	78	82	82	83	
Difference °F		-3.189	-3.639	+2.713	-2.784	-1.243	-3.345	
Hobo RH Reading %		66.374	64.648	66.933	64.907	69.292	67.042	
Psychrodyne RH Reading %		62	62	72	62	70	72	
Difference %		+4.374	+2.648	-5.067	+2.907	-0.708	-4.958	

Signature: David Emma **Date:** 2-11-16

EQUIPMENT NAME: **Fisher Scientific Digital Min/Max Thermometer**
Model #: 15-077-8D

CALIBRATION LOG

Unit I.D.	°F @ Temp. Range #1		°F @ Temp. Range #2		Initials	Date
	Tested Thermometer	Ref. Thermometer	Tested Thermometer	Ref. Thermometer		
FS-2	33	32	71	71	Ok	12-15-15
FS-3	33	32	72	71	Ok	12-15-15
FS-4	32	32	68	69	Ok	1-6-16

EQUIPMENT NAME: **Taylor Min/Max Thermometer**

CALIBRATION LOG

Unit	°F @ Temp.	Range #1	°F @ Temp.	Range #2	Initials	Date
I.D.	Tested Thermometer	Ref. Thermometer	Tested Thermometer	Ref. Thermometer		
MM-4	32	32	70	70	OK	12-15-15
MM-5	32	32	70	70	OK	12-15-15
MM-7	32	32	70	69	OK	1-5-16
MM-8	32	32	69	69	OK	1-5-16

EQUIPMENT NAME: Thermo-hygrometer (Air Temp. & Relative Humidity)

CALIBRATION LOG

Unit I.D.	°F @ Temp. Range #1		°F @ Temp. Range #2		Initials	Date
	Tested Thermometer	Ref. Thermometer	Tested Thermometer	Ref. Thermometer		
AT-2	32.7	32	71.0	71	ok	12-15-15
AT-3	32.9	32	72.0	72	ok	12-15-15

Thermo-hygrometer Relative Humidity (R.H.) Unit ID AT- 2 and 3 were checked for R.H. against a Psychrodyne unit that had the calibration verified.

AT-2 R.H. %	Psychrodyne R. H. %	Date Performed	Int./Date
30	32	12-16-15	DR 12-16-15

AT-3 R.H. %	Psychrodyne R. H. %	Date Performed	Int./Date
34	32	12-16-15	DR 12-16-15

EQUIPMENT NAME: **THERMOMETER/Ertco NIST Certified – Serial No. CP47824**

USE LOG

Date Verified	°F in Ice Water Bath	Initials	Date
12-15-15	32	DK	12-15-15
1-5-16	32	DK	1-5-16
1-6-16	32	DK	1-6-16
1-8-16	32	DK	1-8-16
1-11-16	32	DK	1-11-16
2-3-16	32	DK	2-3-16
2-4-16	32	DK	2-4-16
2-11-16	32	DK	2-11-16
2-24-16	32	DK	2-24-16
2-25-16	32	DK	2-25-16
3-8-16	32	DK	3-8-16
3-9-16	32	DK	3-9-16
7-7-16	32	DK	7-7-16
7-8-16	32	DK	7-8-16
7-11-16	32	DK	7-11-16
7-12-16	32	DK	7-12-16

EQUIPMENT NAME: **Reotemp Soil Probe Thermometer**

CALIBRATION LOG

Unit I.D.	°F @ Temp. Range #1		°F @ Temp. Range #2		Initials	Date
	Tested Thermometer	Ref. Thermometer	Tested Thermometer	Ref. Thermometer		
SP-2	28	32	66	70	Ok	12-15-15
SP-3	32	32	68	69	Ok	1-5-16

EQUIPMENT NAME: **Davis Instruments Turbo Meter**

MAINTENANCE & REPAIR LOG

Date: 5-27-15	Initials: DR
Description of Routine Maintenance or Repair: wind gauge WS-3 was sent to Davis Instruments to have the calibration verified	
Performed By: Davis Instruments	Date Performed: 5-27-15
Were SOPs Followed: yes	
IF NON-ROUTINE REPAIR: 1. Date mal-function discovered: DR 5-27-15 2. How was mal-function discovered: 3. Remedial Action Taken:	
Date:	Initials:
Description of Routine Maintenance or Repair:	
Performed By:	Date Performed:
Were SOPs Followed:	
IF NON-ROUTINE REPAIR: 1. Date mal-function discovered: DR 12-14-15 2. How was mal-function discovered: 3. Remedial Action Taken:	
Date:	Initials:
Description of Routine Maintenance or Repair:	
Performed By:	Date Performed:
Were SOPs Followed:	
IF NON-ROUTINE REPAIR: 1. Date mal-function discovered: 2. How was mal-function discovered: 3. Remedial Action Taken:	

CERTIFICATE OF QUALITY ASSURANCE

Davis Instruments · 3465 Diablo Ave., Hayward, CA 94545, U.S.A.
Tel. (510) 732-9229 · Fax (510) 732-9188

This instrument has been calibrated to specifications using standards that have traceability to the National Institute of Standards and Technology. These standards have been derived from accepted values of natural physical constants, or through the use of the ratio method of self-calibration techniques. Davis Instruments Corp. certifies this instrument to meet or exceed published measurement specifications (unless otherwise noted). Calibration records for inspection, measuring, and test equipment are maintained.

Sensor: Turbo Meter, Product # 271

WS-3
DK 6-7-15

Indicated Air Speed	Test Results (mph) True Air Speed	Deviation
20.0	20.1	0.1

Unit Serial #: _____F07758_____

Date of Calibration: ___6/2/15_____

Temperature: __67.2___°F

Barometric Pressure: ___30.03____inches

I certify that this anemometer has been inspected and tested in accordance with the Davis Instruments Corp. quality assurance program.

Technician: _____

The Turbo Meter is designed to perform within the following accuracy limits at the listed air speeds.

Air Speed MPH	m/s	FPM	Knots	Accuracy
10	4.5	880	8.7	±7.6%
20	8.9	1760	17.4	±3.0%
40	17.9	3520	34.8	±3.9%
80	35.8	7040	69.5	±7.2%
99.9	44.7	8790	86.8	±7.4%

The accuracy may be improved to ±3% of reading by utilizing the correction factors listed on the reverse of this document.