

App E –
Sub-Area 5.5 - COC Forms

App E –
Sub-Area 5.5 - Field Survey Checklist

The MJW Companies
GPS Field Survey Checklist

The following field survey checklist is used once the survey team has walked to the location that they will begin a GPS survey. This checklist is intended to verify none of the cables or settings changed or cables came loose between the initial setup location and the field survey location. Complete step 9 once the current walkover segment is complete.

1. JB Verify the Ludlum Meter is in Rate mode
2. JB Verify that the Ludlum Meter is alternating display of "DUP" and "Value"
3. JB Set Menu 1 to "Status" and Menu 2 to "Receiver"
4. JB Verify that Antenna states "External"
5. JB Set Menu 1 to "Data"
6. JB Name a file to start the current survey and start the data logger

Filename: 12 17 15 5-5 a
12 17 15 5-6 a

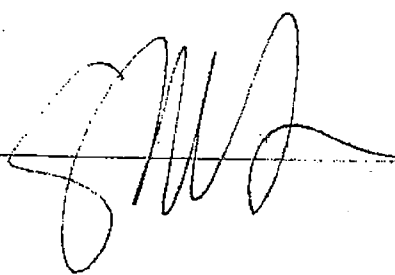
7. JB Set Menu 1 to "Status" and Menu 2 to "Sensor"
8. JB Verify that the sensor field is reading the same as the display on the Ludlum
9. JB When finished, set Menu 1 to "Data" and close the current file.

Name: John H. B... Date: 12/17/15

The MJW Companies
GPS Initial Setup Checklist

1. Complete source check of Ludlum Meter
2. Power off Ludlum Meter
3. Verify Trimble is shutdown (not in suspend mode)
4. Connect the Serial Interface Adapter (SIA) to the Trimble Unit
5. Connect the Serial cable to the Ludlum Meter
6. Connect the Serial cable to the Trimble SIA
7. Connect external GPS antenna cable to the Trimble
8. Power on Ludlum Meter to Rate mode
9. Verify that the Ludlum Meter is alternating display of "DUP" and "Value"
10. Power on the Trimble and wait for it to completely boot
11. Launch TerraSync and wait for it to load and acquire satellites
12. Set Menu 1 to "Status" and Menu 2 to "Receiver"
13. Verify that Antenna states "External"
14. Set Menu 1 to "Data"
15. Name a test file and start the data logger
16. Set Menu 1 to "Status" and Menu 2 to "Sensor"
17. Verify that the sensor field is reading the same as the display on the Ludlum
18. Set Menu 1 to "Data" and close the current file.

Name: _____



Date: _____

12.17.15
08:41 AM

App E-
Sub-Area 5.5- Instrument Field Sheets



NJW TECHNICAL SERVICES

Rev 1 10/18/15

Instrument Field Response Check Log

1. Instrument Information¹

Ratemeter: Make/Model: Ludlum 2241-2 Serial No. 206098 Cal. Due Date: 09/01/16
 Detector 1: Make/Model: Ludlum 44-10 Serial No. PR112142
 Bicron MicroRem Meter: Serial No. _____ Cal. Due Date: _____

2. Check Source Information:

Source 1 Isotope: Th-232 Serial No.: 111 Activity: 20.1 units: NCI Assay Date: 12/30/10
 Response Acceptance Range (+/-20%): uRem/hr +20% _____ uRem/hr -20% _____ net cpm + 20% 53198 net cpm -20% 35866
 Source 2 Isotope: Cs-137 Serial No.: 119E23-12 Activity: 0.02 units: NCI Assay Date: NA
 Response Acceptance Range (+/-20%): uRem/hr +20% _____ uRem/hr -20% _____ net cpm + 20% 13273 net cpm -20% 8899

3. Technician/Worker Performing Checks:

Name: J. Edwards Title: RCT Date: 12/17/15 Time: 0815

4. Site or Location:

Site/Job: Area 5.5-5.6 Location Description: woods
 GPS Coordinates (when required): X-Coord: _____ Y-Coord: _____

Instrument Field Response ²					Use Acceptance Criteria				Remarks	
Meter	Bkg Cnt Time	Bkg Counts (cpm) or uRem/hr	Source Cnt Time	Source Response (gross cpm or uRem/hr)	+/- 20% source gross cpm or uRem/hr (Y/N)	Inst. Calib. current (Y/N)	Battery Check (Y/N)	Time Of check	Ambient Temp. (°F)	Initials and Comments (add'l info: inst. Condition, etc.)
Ratemeter	1 min	9274 cpm	1 min	44808 cpm	Y	Y	Y	0819	49.4°	Th-232 DE
Ratemeter	"	"	1 min	11109 cpm	Y	Y	Y	0823	49.4°	Cs-137 DE
Ratemeter	1 min	9433 cpm	1 min	46391 cpm	Y	Y	Y	1033	50.1°	Th-232 DE
Ratemeter	"	"	1 min	11440 cpm	Y	Y	Y	1040	50.1°	Cs-137 DE
Ratemeter	1 min	7810 cpm	1 min	44433 cpm	Y	Y	Y	1400	43.5°	Th-232 TB
Ratemeter	"	"	1 min	4743 cpm	Y	Y	Y	1400	43.5°	Cs-137 TB
Bicron	NA	5 uRem/hr	NA	30 uRem/hr	Y	Y	Y	1035	50.3°	Th-232 DE
Bicron	NA	NA	NA	NA						NA
Bicron	NA	5 uRem/hr	NA	30 uRem/hr	Y	Y	Y	1400	43.5°	Th-232 TB

1. Instrument designated check source is listed on calibration sticker. Record check source response (net cpm) prior to field deployment for all check sources being used.
 2. Source and Background count rate should be determined from the average of three static counts at the same location. Repeat counts should be within 20%. If count rate diverges significantly, perform additional counts to evaluate instrument stability

App E –
Sub-Area 5.5 - Sample Data Sheets

SAMPLE LOCATION DATA SHEET

Date: 12-17-15 Project: NYSERDA Name: Brown

Weather: 40's, drizzle

1. Sample Area (SA):

SA Designation: S.5A Description: wooded lot
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: S.5A.R.1 Matrix: Soil

Location Coord: N 42° 31' 16.03" W 78° 58' 39.95"

Alternate Location Measurements (distance from SA origin and Local Coord.)

X Dist. from Origin (0,0) N/A Y Dist. from Origin: N/A

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat ground, some trees, dead leaves (chore)

Canopy Type: partially open Land Use: hiking, etc. Soil Moisture (Wet, dry, etc.): damp

3. Location Radiation Readings:

2x2 NaI (cpm)			Bieron (uRem/hr)		Notes
Count time (min)	1 cm	1m	1 cm	1m	
1	6867	7267	5	5	Bieron: WDLWM 2241-2 Serial # 206098 Cal due 09/01/16
1	6856	7155			2x2: WDLWM 44-10 Serial # PR112642 # Bieron cal due 1/18/16 Micro Rm #1487

4. Sample Information:

Sample Area ID: S.5A.R.1.1-6

Description by Depth:

Depth Interval (cm)	Soil Type (Org; clay; sand, etc.)	Soil Color	Sample ID	Sampling Description (Surface litter type/depth, sample depth retention, refusal, stone or rock, topography, erosion features)
0-15	top soil	dk brown	S.5A.R.1.1	few roots
15-30	top soil	brown	S.5A.R.1.2	few roots
30-60	top soil / sand	H. brown	S.5A.R.1.3	more roots
60-100	top soil / sand	H. brown	S.5A.R.1.4	more roots
0-15	top soil	dk brown	S.5A.R.1.5	few roots
60-100	top soil / sand	H. brown	S.5A.R.1.6	more roots

Sample Recorded on Laboratory COC form and Container Labeled: (Y) (N)

SAMPLE LOCATION DATA SHEET

Date: 12-14-15 Project: NYSERDA Name: Teri Brown

Weather: clear, partly cloudy, 60°

1. Sample Area (SA):

SA Designation: 5.5.2TB Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: 5.5.R.2 Matrix: soil

Location Coord: N 42° 31' 15.80" W 78° 58' 40.20"

Alternate Location Measurements (distance from SA origin and Local Coord.)

X Dist. from Origin (0,0) N/A Y Dist. from Origin: N/A

Site Sketch Attached (Yes) NO

Sample Location Description: trees, leaves

Canopy Type: Open Land Use: Hiking Soil Moisture (Wet, dry, etc.): Dry

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	6286	5997	7	6	Bicron - LUDLUM 2241-2 Serial # 262737 Cal due 9/2/16
1	6119	5828			2x2 - LUDLUM 44-10 Serial # PR11127 #A2240 Cal due 8/4/16

4. Sample Information:

Sample Area ID: 5.5.A.R.2.1-2

Description by Depth:

Depth Interval (cm)	Soil Type (Org; clay; sand, etc.)	Soil Color	Sample ID	Sampling Description (Surface litter type/depth, sample depth retention, refusal, stone or rock, topography, erosion features)
0-15	Soil	Brown	5.5.A.R.2.1	loose, small roots, some gray (ash?)
15-30	Soil	light Brown	5.5.A.R.2.2	small roots

Sample Recorded on Laboratory COC form and Container Labeled: (Y) (N)

10/20/15

SAMPLE LOCATION DATA SHEET

Date: 12-14-15 Project: NYSERDA Name: Ten Brown

Weather: _____

1. Sample Area (SA)

SA Designation: 5.5 Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: S.S.R.3 Matrix: Soil

Location Coord: N 42° 31' 15.84" W 78° 58' 39.72"

Alternate Location Measurements (distance from SA origin and Local Coord.)

X Dist. from Origin (0,0) N/A Y Dist. from Origin: N/A

Site Sketch Attached (Yes) (NO)

Sample Location Description: trees very light brown, leaves

Canopy Type: Open Land Use: Hiking Soil Moisture (Wet, dry, etc.): Dry

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	6266	6066	6	5	Bicron - LUDLUM 2241-2 Serial # 262737 cal due 9/2/16
1	6430	5915			2x2 - LUDLUM 44-10 Serial #PR11127 #A2240 cal due 8/4/16

4. Sample Information:

Sample Area ID: 6.SA.R.3.1-2

Description by Depth:

Depth Interval (cm)	Soil Type (Org; clay; sand, etc.)	Soil Color	Sample ID	Sampling Description (Surface litter type/depth, sample depth retention, refusal, stone or rock, topography, erosion features)
0-15	Soil	Brown	5.SA.R.3.1	loamy small roots
15-30	Soil	light brown	5.SA.R.3.2	small roots, rocks

Sample Recorded on Laboratory COC form and Container Labeled: (Y) (N)

10/20/15



SAMPLE LOCATION DATA SHEET

Date: 12-14-15 Project: NYSERDA Name: Toni Brown

Weather: calm, partly cloudy, 60°F

1. Sample Area (SA):

SA Designation: 5.SA Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: 5 SA.R.4 Matrix: Soil

Location Coord: N 42° 31' 15.05" W 78° 58' 40.00"

Alternate Location Measurements (distance from SA origin and Local Coord.)

X Dist. from Origin (0,0) N/A Y Dist. from Origin: N/A

Site Sketch Attached (Yes) (NO)

Sample Location Description: trees, leaves, some saplings,

Canopy Type: Open Land Use: Hiking Soil Moisture (Wet, dry, etc.): Dry

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	6258	6077	8	7	Bicron - LUDLUM 2241-2 Serial # 262737 Cal due 9/2/16
1	6286	5958			2x2 - LUDLUM 44-10 Serial # PR11127 #A2240 Cal due 8/4/16

4. Sample Information:

Sample Area ID: 5.SA.R.4.1-2

Description by Depth:

Depth Interval (cm)	Soil Type (Org; clay; sand, etc.)	Soil Color	Sample ID	Sampling Description (Surface litter type/depth, sample depth retention, refusal, stone or rock, topography, erosion features)
0-15	Soil	Brown	5.SA.R.4.1	Lowery, small roots
15-30	Soil	light brown	5.SA.R.4.2	roots, rocks

Sample Recorded on Laboratory COC form and Container Labeled: (Y) (N)