

App E –
Sub-Area 5.6 - COC Field Forms

Page: _____ of _____
 Project #:
 GEL Quote #:
 COC Number (1):
 PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number:

Client Name: _____ Phone #: _____

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Project/Site Name: _____ Fax #: _____

Should this sample be considered

← Preservative Type (6)

Address: _____

Collected by: _____ Send Results To: _____

Comments:
 Note: extra sample is required for sample specific QC

Sample ID <small>* For Composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (1)	Field Filtered (2)	Sample Matrix (3)	Radi oacti ve	TRC A Regu lated	Ber of
S.6A.R.1.1	12/17/15							
S.6A.R.1.2	12/17/15							
S.6A.R.1.3	12/17/15							
S.6A.R.1.4	12/17/15							
S.6A.R.1.5	12/17/15							
S.6A.R.1.6	12/17/15							
G.5A.R.1.1	12/17/15							
S.5A.R.1.2	12/17/15							
S.5A.R.1.3	12/17/15							
S.5A.R.1.4	12/17/15							

TAT Requested: Normal / Rush / Specify: (Subject to Surcharge) Fax Results: Yes / No. Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4.

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
 Eastern Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1			1		
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM:	
Method of Shipment:	Date Shipped:
Airbill #:	
Airbill #:	

- 1.) Chain of Custody Number - Client Determined.
- 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
- 4.) Matrix Codes: DW = Drinking Water, GW = Groundwater, SW = Surface Water, WW = Waste Water, W = Water, ML = Mixture Liquid, SO = Soil, SD = Sediment, SL = Sludge, SS = Solid Waste, O = Oil, F = Filter, P = Wipe, U = Urine, F = Fecal, N =
- 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 8010B/7470A) and number of containers provided for each (i.e. 8200B - 3, 6010B/7470A - 1).
- 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact?
 YES NO

Cooler Temp:
 C

WHITE = LABORATORY

YELLOW = FILE

PINK = CLIENT

App E –
Sub-Area 5.6 - Field Survey Checklists

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

Filename: 171105_513_1

12713_2000

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

Name: J. H. B.

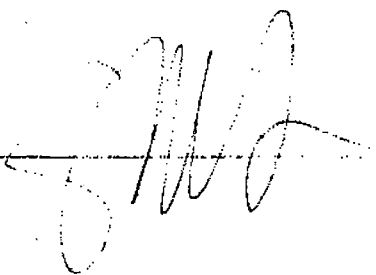
Date: 12/1/05

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 5.6- Instrument Field Sheets

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. PR112642
 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% 53498 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% 8849

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	1min	9274 cpm	1min	44808 cpm	Y	Y	Y	0919	49.4°	Th-232 DE
Ratemeter	"	"	1min	11109 cpm	Y	Y	Y	0823	49.4°	Cs-137 DE
Ratemeter	1min	9433 cpm	1min	46391 cpm	Y	Y	Y	1033	50.1°	Th-232 DE
Ratemeter	"	"	1min	11440 cpm	Y	Y	Y	1040	50.1°	Cs-137 DE
Ratemeter	1min	30051 cpm	1min	44433 cpm	Y	Y	Y	1400	43.5°	Th-232 TB
Ratemeter	"	"	1min	9743 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	Y	Y	Y			NA
Bicron	NA	5 uRem/hr	NA	30 uRem/hr	Y	Y	Y	1400	73.5°	Th-232 TB

- 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.
- 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 5.6 - Sample Data Sheets

SAMPLE LOCATION DATA SHEET

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

Weather: Upper 40's, Drizzle

1. Sample Area (SA):

SA Designation: 5.6A Description: Wooded lot
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: 5.6A.R.1 Matrix: Soil

Location Coord: N 42° 31' 21.72" W 78° 58' 41.08"

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: bottom of small gully, flat ground, some trees dead
leaves (cleared)

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

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	7430	7483	5	6	Bicron WDOWN 2241-2 serial # 206098 cal due 09/01/16
1	7471	7566			2x2: WDOWN 44-10 serial # FR 112642 # Brown cal due 6/18/16 MicroKorn #1487

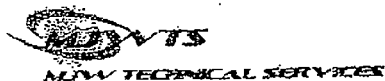
4. Sample Information:

Sample Area ID: 5.6A.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	topsoil	dk brown	5.6A.R.1.1	few roots
15-30	topsoil	grey	5.6A.R.1.2	more roots
30-60	topsoil	brown	5.6A.R.1.3	large roots
60-100	topsoil/sand	H. brown	5.6A.R.1.4	large roots
0-15	topsoil	dk brown	5.6A.R.1.5	few roots
60-100	topsoil/sand	H. brown	5.6A.R.1.6	large roots

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



SAMPLE LOCATION DATA SHEET

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

Weather: Calm, Partly cloudy, 60°f

1. Sample Area (SA):

SA Designation: 5.6 Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: 5.6 R.2 Matrix: Soil

Location Coord: N 42° 31' 21.37" W 78° 58' 41.30"

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: Young trees, leaves

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

3. Location Radiation Readings:

2x2 NaI (cpm)			Bicron (uRem/hr)		Notes
Count time (min)	1 cm	1m	1 cm	1m	
1	6034	5968	5	4	Bicron- LUDLUM 2241-2 Serial # 262737 cal due 9/2/16
1	6105	5933			2x2- LUDLUM 44-10 Serial # PR111127 #A2240 cal due 8/4/16

4. Sample Information:

Sample Area ID: 5.6A.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/dopth, sample depth retention, refusal, stone or rock, topography, erosion features)
0-15	Soil	Brown	5.6A.R.2.1	Lowly, small roots
15-30	Soil	Brown	5.6A.R.2.2	roots, rocks

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



SAMPLE LOCATION DATA SHEET

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

Weather: calm, partly cloudy, 60°f

1. Sample Area (SA):

SA Designation: S.L. 6 Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

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

Location Coord: N 42° 31' 21.18" W 78° 58' 40.94"

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, above ravine, 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	6191	5707	5	5	Bicron - LUDLUM 2241-2 Serial # 262787 cal due 9/2/16
1	6320	5741			2x2 - LUDLUM 44-10 Serial # PR11127 #A2240 cal due 8/4/16

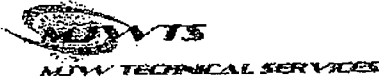
4. Sample Information:

Sample Area ID: S.L.A.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	S.L.A.R.3.1	Loose soil roots
15-30	Soil	light brown	S.L.A.R.3.2	roots

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



SAMPLE LOCATION DATA SHEET

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

Weather: calm, partly cloudy, 60°

1. Sample Area (SA):

SA Designation: S.6 Description: Woods
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: S.6.R.4 Matrix: Soil
 Location Coord: N 42° 51' 21.45" W 78° 58' 40.01"

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 above ravine

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

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	6145	5962	5	4	Bicron - LUDLUM 2241-2 Serial # 262737 cal due 9/2/16
1	6264	6907			2x2 - LUDLUM 44-10 Serial # PR111127 #A224U cal due 8/4/16

4. Sample Information:

Sample Area ID: S.6A.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	S.6A.R.4.1	Loose, small roots
15-30	Soil	Light Brown	S.6A.R.4.2	Small roots

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

10/20/15