

Appendix E –
BGA 2 COC Field Copies

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) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Rad. Isot. (5)	TSC A Regulated (6)	per 65
BGA 1.4.2	12/21/15							
BGA 1.5.1	12/21/15							
BGA 1.5.2	12/21/15							
BGA 2.1.1	12/21/15							
BGA 2.1.2	12/21/15							
BGA 2.1.3	12/21/15							
BGA 2.1.4	12/21/15							
BGA 2.1.5	12/21/15							
BGA 2.2.1	12/21/15							
BGA 2.2.2	12/21/15							

TAT Requested: Normal / Rush: _____ Specify: _____ (Subject to Surcharges) 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

Sample Shipping and Delivery Details

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

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 = Misc 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. 8160B, 6010B/7470A) and number of containers provided for each (i.e. 8200B - 3, 6010B/7470A - 1)
- 6.) Preservative Type: HA = Hydrochloric Acid, NA = 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

Page _____ of _____	GEL Chain of Custody and Analytical Request **See www.gel.com for GEL's Sample Acceptance SOP**	GEL Laboratories, LLC
Project #:		2040 Savage Road
GEL Quote #:		Charleston, SC 29407
COC Number ⁽¹⁾ :		Phone: (843) 556-8171
PO Number:	GEL Work Order Number:	Fax: (843) 766-1178

Client Name:	Phone #:	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)
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Project/Site Name:	Fax #:	Should this sample be considered:	Preservative Type (6)
Address:			

Collected by:	Send Results To:	TSC A Regulated	Comments Note: extra sample is required for sample specific QC
Sample ID	*Date Collected (mm-dd-yy)		

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Times Collected (Arbitrary) (hh:mm)	QC Code ⁽⁴⁾	Field Filtered ⁽⁵⁾	Sample Matrix ⁽⁴⁾	Radiation	TSC A Regulated	Per of
BGA 2.3.1	12/21/15							
BGA 2.3.2	12/21/15							
BGA 2.4.1	12/21/15							
BGA 2.4.2	12/21/15							
BGA 2.5.1	12/21/15							
BGA 2.5.2	12/21/15							
BGA 2.1.6	12/21/15							

TAT Requested: Normal: <input type="checkbox"/> Rush: <input type="checkbox"/> Specify: _____ (Subject to Surcharges)	Fax Results: Yes / No	Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
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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
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Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1			1		
2			2		
3			3		

<p>1) Chain of Custody Number - Client Determined</p> <p>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</p> <p>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.</p> <p>4) Matrix Codes: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, W - Water, ML - Misc Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, F - Filter, P - Wipe, U - Urine, F - Fecal, N - N/A</p> <p>5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)</p> <p>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</p>	<p>For Lab Receiving Use Only</p> <p>Custody Seal Intact? YES NO</p> <p>Cooler Temp. C</p>
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WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Appendix E-
BGA 2 Sample Data Sheets



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSERDA Name: J. Brown

Weather: windy rainy, low 30's

1. Sample Area (SA):

SA Designation: BGA2 Description: _____
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: BGA2.1 Matrix: Soil
 Location Coord: 42° 26' 33.95" N 78° 38' 02.89" W

Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0.0) _____ Y Dist. from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open ≈ 3" wet snow (cleared), tall grass (cleared) ground

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

★ Did not use - too much water in hole - moved ≈ 120 ft N - closer to BSW and higher ground

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	7114	6862	5	4	Bicron Model # A2246 cal date 8/4/16 Ludlum 2241-2 # 262737 with 44-10 probe # PR11127 cal date 7/2/16
1	7002	6787			

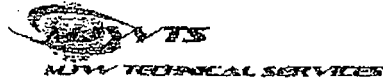
4. Sample Information:

Sample Area ID: BGA2.1.1-5

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			BGA2.1.1	<div style="font-size: 2em; font-weight: bold;">Not Sampled</div>
15-30			BGA2.1.2	
30-60			BGA2.1.3	
60-100			BGA2.1.4	
0-15			BGA2.1.5	

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



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSEERDA Name: J. Brown

Weather: windy, rainy, low 30's

1. Sample Area (SA):

- new location for this sample only

SA Designation: BGA 2 Description: mostly open field, off access road SA
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____ BSG

2. Sample Location Data:

Sample Area ID: BGA 2.1 Matrix: Soil

** New sample location **

Location Coord: 42° 26' 34.31" N 78° 38' 02.25" W

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

X Dist: from Origin (0,0) _____ Y Dist: from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open, ~3" wet snow (cleared), grass (cleared), top of

Canopy Type: open Land Use: hiking, etc Soil Moisture (Wet, dry, small hill, middle of group of trees)
 etc.): damp

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	5874	5753	4	3	Bicron MicroRem #4224U cal due 8/4/16 Ludlum 2241-Z # 262737 with 44-10 probe # PR11127 cal due 9/2/16
1	5913	5645			

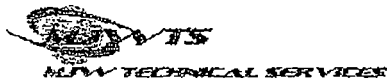
4. Sample Information:

Sample Area ID: BGA 2.1.1-5

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	BGA 2.1.1	roots
15-30	top soil	dk brown	BGA 2.1.2	roots
30-40	top soil, clay	dk brown	BGA 2.1.3	roots
40-100	top soil, clay	dk brown	BGA 2.1.4	some water
0-15	top soil	dk brown	BGA 2.1.5	roots

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



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSERDA Name: J. Brown

Weather: windy, rainy, low 30's

1. Sample Area (SA):

SA Designation: BCA2 Description: open field off access road, S of BSW
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: BCA2.2 Matrix: Soil
 Location Coord: 42° 26' 33.79" N 78° 38' 02.87" W

Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open ~3" wet snow (cleared) tall grass (cleared)

Canopy Type: 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	7618	6845	5	4	Bicron Micro Rem # 42246 cal date 8/4/16 Ludlum 2241-2 # 262737 with 44-10 probe # PR 11127 cal date 9/2/16
1	7516	6717			

4. Sample Information:

Sample Area ID: BCA2.2.1.2

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	topsoil	dk brown	BCA2.2.1	
15-30	topsoil	dk brown	BCA2.2.2	water

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



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSERDA Name: J. Brown

Weather: windy, rainy, low 30's

1. Sample Area (SA):

SA Designation: BGA2 Description: open field, off access road S of BSW
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: BGA2.3 Matrix: Soil
 Location Coord: 42° 26' 33.71" N 78° 38.03.06" W

Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open ≈ 3" wet snow (cleared) tall grass (cleared)

Canopy Type: 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	6778	6266	5	4	Bicron MicroRem # A2246 cal due 8/4/16 Ludlum 2241-Z # 262737 with 44-10 probe # PR11127 cal due 9/2/16
1	6559	6202			

4. Sample Information:

Sample Area ID: BGA 2.31-2

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	f. soil	dk brown	BGA 2.3.1	
15-30	top soil	dk brown	BGA 2.3.2	water

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



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSERDA Name: J. Brown

Weather: windy, rainy, low 30's

1. Sample Area (SA):

SA Designation: BGA2 Description: open field off road, wet, Sat BSL
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: BG-#2-4 Matrix: Soil
 Location Coord: 42° 26' 33.85" N 78° 38' 03.24" W

Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open ~3" wet snow (cleared), tall grass (cleared)

Canopy Type: 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	6330	6195	5	4	Bicron Micro Rem # A224U cal due 8/4/16 Ludlum 2241-Z # 262737 with 44-10 probe # PR 11127 cal due 7/2/16
1	6283	6132			

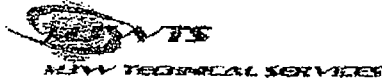
4. Sample Information:

Sample Area ID: BGA 2.4.1-2

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	topsoil	dk brown	BGA 2.4.1	
15-30	topsoil	dk brown	BG # 2.4.2	water

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



SAMPLE LOCATION DATA SHEET

Date: 12/21/15 Project: NYSERDA Name: J. Brown

Weather: windy, rainy, low 30's

1. Sample Area (SA):

SA Designation: BGA2 Description: open field off access road, S of BSW
 SA Origin Location: _____ Coord. System: _____
 SA Land Mark Description: _____ Coord: _____

2. Sample Location Data:

Sample Area ID: BGA 2.5 Matrix: Soil
 Location Coord: 43° 26' 34.02" N 78° 38' 03.1" W

Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open ~ 3" wet snow (cleared) tall grass (cleared)

Canopy Type: 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	7143	6486	5	4	Bicron Micro Rem # A224U cal due 8/4/16 Ludlum 2241-Z # 262737 with 44-10 probe # PR 111123 cal due 9/2/16
1	7385	6542			

4. Sample Information:

Sample Area ID: BGA 2.5.1-2

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	top soil	dk brown	BGA 2.5.1	
15-30	top soil	dk brown	BGA 2.5.2	water

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

Appendix E-
BGA 2 Static Survey Tables

Background Area 2 Sampling Table

Date	Sample	Elevation				Location	Coordinates	
		0-15 cm	15-30 cm	30-60 cm	60-100c cm			
12/21/15	BGA2.1.1	X				open field East of access Road - due South of BSW	42° 26' 34.31" N	78° 38' 02.25" W
12/21/15	BGA2.1.2		X					
12/21/15	BGA2.1.3			X				
12/21/15	BGA2.1.4				X			
12/21/15	BGA2.1.5	X						
12/21/15	BGA2.2.1	X					42° 26' 33.79" N	78° 38' 02.87" W
12/21/15	BGA2.2.2		X					
12/21/15	BGA2.3.1	X					42° 26' 33.71" N	78° 38' 03.06" W
12/21/15	BGA2.3.2		X					
12/21/15	BGA2.4.1	X					42° 26' 33.85" N	78° 38' 05.24" W
12/21/15	BGA2.4.2		X					
12/21/15	BGA2.5.1	X					42° 26' 34.02" N	78° 38' 03.1" W
12/21/15	BGA2.5.2		X					

Access
Road

BGA 2.1 (new location - sampled)

↓
≈ 120 ft.

↑

BGA 2.1 (original location)
not sampled

↑ BSW

Drawing not
to scale

↑ N

BGA 2.5

BGA 2.2

BGA 2.4

BGA 2.3