

Appendix E –
Confirmatory

Appendix E –
Confirmatory- COC Field Copies

Field Copy

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 Analyts Requested (6) (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)
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Address:	Send Results To:	Comments Note: extra sample is required for sample specific QC
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Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (4)	Field Filtered (5)	Sample Matrix (4)	Rad. active	TSC A Regulated	ber of										
C.2.C1 ✓	10/27/15	10:35	N															
C.2.C2 ✓	10/27/15	10:40	N															
C.2.C3 ✓	10/27/15	10:45	N															
C.2.C4 ✓	10/27/15	10:55	N															
C.2.C5 ✓	10/27/15	11:00	FD															
C.1.C1 ✓	10/27/15	14:50	N															
C.1.C2 ✓	10/27/15	15:00	N															
C.1.C3 ✓	10/27/15	15:15	N															
C.1.C5 ✓	10/27/15	16:00	EB															

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
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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	GEL PM:			
1			1			Method of Shipment:		Date Shipped:	
2			2			Airbill #:			
3			3			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, SD=Soil, SD=Settlement, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=...
 5) Sample Analyts Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 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

Enclosed to COC 10-27-15

Field Copy

Page: _____ of _____	GEL Chain of Custody and Analytical Request **See www.gel.com for GEL's Sample Acceptance SOP**	GEL Laboratories, LLC
Project #:		2640 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 (6) (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:	Comments Note: extra sample is required for sample specific QC
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Collected by:	Send Results To:
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Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (Y/N)	Sample Matrix (9)	Radioactive	TSC A Regulated	Other	Comments
* For composites - indicate start and stop date/time									
✓ C.3.C1	11/2/15	9:30	N						
✓ C.3.C2	11/2/15	9:35	N						
✓ C.3.C3	11/2/15	9:40	N						
C.4.C1	11/2/15	1140	N						
C.4.C2	11/2/15	1155	N						
C.4.C3	11/2/15	1202	N						
C.4.C5	11/2/15	145	FD						
C.4.R6	11/2/15	1300	EB						

TAT Requested: Normal: <input type="checkbox"/> Rush: <input type="checkbox"/> Specify: (Subject to Surcharge)	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
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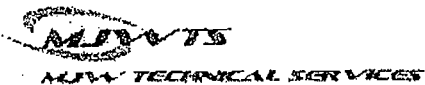
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1			1		
2			2		
3			3		

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, C - 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 - F
 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)
 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

Appendix E-
Confirmatory- Instrument Field Response



Rev 1 10/18/15

Instrument Field Response Check Log

1. Instrument Information

Ratemeter: Make/Model: LUDLUM 2241-2 Serial No. 262737 Cal. Due Date: 9/2/16
 Detector 1: Make/Model: LUDLUM 44-10 Serial No. PR 111127
 Bicron MicroRem Meter: Serial No. A224U Cal. Due Date: 8/4/16

2. Check Source Information:

Source 1 Isotope: Th-232 Serial No.: 116 Activity: <0.1 units: µci Assay Date: 12/30/10
 Response Acceptance Range (+/-20%): uRem/hr +20% _____ uRem/hr -20% _____ net cpm + 20% 22926 net cpm -20% 15284
 Source 2 Isotope: Cs-137 Serial No.: 87F13-48 Activity: 0.02 units: µci Assay Date: 1/20/10
 Response Acceptance Range (+/-20%): uRem/hr +20% _____ uRem/hr -20% _____ net cpm + 20% 13375 net cpm -20% 8919

3. Technician/Worker Performing Checks:

Name: J. Edwards Title: RCT Date: 11/02/15 Time: 0857

4. Site or Location: Site/Job: C-3

Location Description: _____
 GPS Coordinates (when required): X-Coord: N42°27'05.2" Coord: W078°38'50.7"

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	6822 cpm	1 min	19447 cpm	Y	Y	Y	0902	53.2°	Th-232 JE
Ratemeter			1 min	10731 cpm	Y	Y	Y	0908	53.4°	Cs-137 JE
Ratemeter	1 min	8060 cpm	1 min	20355 cpm	Y	Y	Y	1300	69.8	Th-232 SK
Ratemeter			1 min	11589 cpm	Y	Y	Y	1300	69.8	Cs-137 SK
Ratemeter				N/A						
Ratemeter				N/A						
Bicron	NA	4 uRem/hr	NA	165 uRem/hr	Y	Y	Y	0909	53.2°	
Bicron	NA	5 uRem/hr	NA	16 uRem/hr	Y	Y	Y	1300	69.8	
Bicron	NA	N/A	NA	N/A		N/A				

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

Appendix E-
Confirmatory- Sample Data Sheets



MNV TECHNICAL SERVICES

SAMPLE LOCATION DATA SHEET

Date: 10/21/15 Project: N4SERDA Name: J. Brown

Weather: Sunny, 50's

1. Sample Area (SA):

SA Designation: C-1-C Description: Wooded lot N4SERDA lot
SA Origin Location: _____ Coord. System: deg/min/sec
SA Land Mark Description: Corner Suezte Road Coord: 42° 27' 32.2" N 078° 39' 51.7" W

2. Sample Location Data:

Sample Area ID: C-1-C Matrix: Soil
Location Coord: 42° 27' 30.28" N 78° 39' 50.05" W

Alternate Location Measurements (distance from SA origin and Local Coord.) sample location is 200 ft. E of car, down slope of road, near top of ravine.
X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____
Site Sketch Attached (Yes) (NO)

Sample Location Description: Sloped, partially wooded

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

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	10,531	9805	11	10	N/A
1	10,238	9698			

4. Sample Information:

Sample Area ID: C-1-C1-C3

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)
0-5	moist topsoil	brown	C-1-C1	
5-15	moist mud	black	C-1-C2	few stones
15-30	moist mud	dk. brown	C-1-C3	few stones

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

SAMPLE LOCATION DATA SHEET

Date: 10/27/15 Project: NYSERDA Name: J. Brown

Weather: Sunny, mid 50s

1. Sample Area (SA):

SA Designation: C.2 Description: wooded lot
 SA Origin Location: _____ Coord. System: deg/min/sec
 SA Land Mark Description: car on Santa road Coord: 42° 27' 17.14" N 78° 39' 41.5" W

2. Sample Location Data:

Sample Area ID: C.2.C Matrix: Soil

Location Coord: 42° 27' 51.92" N 78° 39' 14.97" W

Alternate Location Measurements (distance from SA origin and Local Coord.) 3/4 of a mile N of car
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____ to sample area

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat ground, near creek bed in scrub/brush, leaves, weeds

Canopy Type: partially open Land Use: hiking Soil Moisture (Wet, dry, etc.): damp, no water

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
	17,787	16,610	13	10	N/A
	17,775	16,561			

4. Sample Information:

Sample Area ID: C.2.C1-C3, C4-C5

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)
0-5	sand	H. brown	C.2.C1	all sand
5-15	sand	H. brown	C.2.C2	all sand
15-30	sand/clay	brown	C.2.C3	few roots
30-100	sand/clay	brown	C.2.C4	few roots, rocks
30-100	sand/clay	brown	C.2.C5	few roots, rocks

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

SAMPLE LOCATION DATA SHEET

Date: 11/2/15 Project: NYSERDA Name: J. Brown

Weather: Sunny, Upper 50's

1. Sample Area (SA):

SA Designation: Field C.3 Description: Field
 SA Origin Location: _____ Coord. System: deg/min/sec
 SA Land Mark Description: car on path Coord: 42° 27' 05.2" N 078° 38' 50.7" W

2. Sample Location Data:

Sample Area ID: C.3.C Matrix: Soil
 Location Coord: 42° 27' 05.46" N 78° 38' 50.73" W
 Alternate Location Measurements (distance from SA origin and Local Coord.)
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: 10' from car, on path

Site Sketch Attached (Yes) (NO)

Sample Location Description: Grassy path, some brush some trees along sides

Canopy Type: Open Land Use: Hiking Soil Moisture (Wet, dry, etc.): DRY, NO WATER

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	7877	7851	6	6	N/A
1	8044	7772			

4. Sample Information:

Sample Area ID: C.3.C1-C3

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)
0-5	topsoil	dk. brown	C.3.C1	all topsoil
5-15	topsoil	dk. brown	C.3.C2	few roots, few rocks
15-30	topsoil	dk. brown	C.3.C3	few roots, few rocks

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



SAMPLE LOCATION DATA SHEET

Date: 11/2/15 Project: NY SERDA Name: J. Brown

Weather: upper 30's, sunny

1. Sample Area (SA):

SA Designation: C.4 Description: Partially wooded
 SA Origin Location: _____ Coord. System: dec/deg/sec
 SA Land Mark Description: cor on path Coord: 42°26'58.89"N 79°39'59.03"W

2. Sample Location Data:

Sample Area ID: C.4.C Matrix: Soil
 Location Coord: 42°26'59.47" N 79°38'58.80" W
 Alternate Location Measurements (distance from SA origin and Local Coord.) 20 ft. from
 X Dist. from Origin (0,0) _____ Y Dist. from Origin: _____ cor on path

Site Sketch Attached (Yes) (NO)

Sample Location Description: flat, open - trees and brush on sides

Canopy Type: open Land Use: hiking, etc Soil Moisture (Wet, dry, etc.): damp, no water

3. Location Radiation Readings:

Count time (min)	2x2 NaI (cpm)		Bicron (uRem/hr)		Notes
	1 cm	1m	1 cm	1m	
1	12,083	11,476	8	8	N/A
1	12,060	11,463			

4. Sample Information:

Sample Area ID: C.4.C1-C3, C5

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)
0-5	topsoil	brown	C.4.C1	Few rocks
5-15	topsoil	brown	C.4.C2	rocks
15-30	topsoil	brown	C.4.C3	rocks
0-5	topsoil	brown	C.4.C5	few rocks

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

Appendix E-
Confirmatory- Static Survey Table

~~10-26-15~~ 10-26-15

LA

Table 3

WNY Confirmatory

Static Survey and Sample Collection Specifications

Location Number	Sample Number	Depth (cm)	Depth (cm)	Depth (cm)	Depth (cm)	Latitude	Longitude
		0-5	5-15	15-30	30-100		
10/27/15 1	C.1.C1	x				42°27'30.28" N	78°39'50.05" W
10/27/15 1	C.1.C2		x			42°27'32.2" N	78°39'51.7" W
10/27/15 1	C.1.C3			x			
10/27/15 2	C.2.C1	x				42°27'51.92" N	78°39'14.97" W
10/27/15 2	C.2.C2		x				
10/27/15 2	C.2.C3			x		42°27'17.1" N	78°39'41.5" W
10/27/15 2	C.2.C4				x		
10/27/15 3	C.3.C1	x				42°27'05.46" N	78°38'50.73" W
11/2/15 3	C.3.C2		x				
11/2/15 3	C.3.C3			x			
11/2/15 4	C.4.C1	x				42°26'59.47" N	78°38'58.80" W
11/2/15 4	C.4.C2		x				
11/2/15 4	C.4.C3			x			
11/2/15 4						42°26'59.47" N	78°38'58.80" W
Rinsate							

200 ft
W of
sample