



EA Engineering, Science,
and Technology, Inc.

WELL PURGING AND SAMPLING RECORD

0910

WELL ID TAW-05 SAMPLE NO. TAW-05-090111
 WELL/SITE DESCRIPTION Temp Well point, Cude

DATE 9 / 1 / 11 TIME 0850 AIR TEMP. _____

WELL DEPTH 9.20 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 6.68 (TOC) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT _____ ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								
<u>9/1</u>		<u>No</u>	<u>YSI</u>	<u>Readings</u>	<u>collected,</u>	<u>low sample</u>				
		<u>Volume</u>								

COMMENTS Begin collecting sample at 0910, well went dry at 0913,
well continuously pumping dry, very slow recharge and low volume,
reduce sample volume

SIGNATURE [Signature]



EA Engineering, Science,
and Technology, Inc.

WELL PURGING AND SAMPLING RECORD

WELL ID FGW-06 SAMPLE NO. FGW-06-090111
 WELL/SITE DESCRIPTION Temp Well point, Guide

DATE 9 / 1 / 11 TIME 1240 AIR TEMP. _____

WELL DEPTH 5.55 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 3.43 (TOC) ft WELL DIAMETER _____ in
 WATER COL. HEIGHT _____ ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								
<u>9/1</u>		<u>No VSI Reading collected, insufficient well volume</u>								

COMMENTS Well went dry almost immediately, no sample or VSI collected. Well revisited with bailer, sample collected at 1250.

SIGNATURE

WELL PURGING AND SAMPLING RECORD

0815

WELL ID MW-14A SAMPLE NO. MW-14A-090211
 WELL/SITE DESCRIPTION Permanet Well, Cude Landfill

DATE 4 / 2 / 11 TIME 0730 AIR TEMP. _____

WELL DEPTH 34.15 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 21.20 (TOC) ft WELL DIAMETER 2 in
 WATER COL. HEIGHT 12.95 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER 2.92 (gal) (L)
 PUMP RATE ~ 3-5 gpm (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit: L						mg/L		
4/2	0757	-	7.45	1155	15.97		1361	12.69		
	0800	1 WV	5.99	1075	15.44		575.2	13.12		
	0803	2 WV	5.66	1114	15.43		792.9	13.14		
	0806	3 WV	5.49	1085	15.27		432.1	12.53		

COMMENTS Purge 3 WVs prior to sampling (~ 8.5 gal); collect initial VSE reading and 1 at each WV removed; DO appears elevated, apparent bubble in membrane - replaced membrane prior to MW-14B. collect sample at 0815

SIGNATURE [Signature]

WELL PURGING AND SAMPLING RECORD

WELL ID MW-148 SAMPLE NO. MW-148-090211
 WELL/SITE DESCRIPTION Permanent Well, Cude Landfill

DATE 9 / 2 / 11 TIME 0735 AIR TEMP. _____

WELL DEPTH 99.40 (TOC) ft CASING HEIGHT Flush ft
 WATER DEPTH 23.44 (TOC) ft WELL DIAMETER 2 in
 WATER COL. HEIGHT 75.96 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER 12.38 gal (gal) (L)
 PUMP RATE ~ 3 gpm (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes (✓) No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes (✓) No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit: L								
9/2	0915	-	7.05	332	16.37	114.0	24.0	4.82	-	
	0918	1 wv	6.47	129	15.19	124.7	3.0	5.22		
	0922	2 wv	6.25	167	15.01	129.0	13.2	6.43		
	0926	3 wv	6.10	120	14.88	129.3	6.8	6.41		

COMMENTS Purge 3 wvs prior to sampling (~ 37 gallons),
collect VSI at initial and each well volume removed.
DUP-01 collected from MW-148, collect sample at 0940

SIGNATURE [Signature]



EA Engineering, Science,
and Technology, Inc.

WELL PURGING AND SAMPLING RECORD

WELL ID MW-15 SAMPLE NO. MW-15-090211

WELL/SITE DESCRIPTION MW-15 permanent well, Guide Landfill

DATE 9 / 2 / 11 TIME 1015 AIR TEMP. _____

WELL DEPTH 34.20 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 15.89 (TOC) ft WELL DIAMETER _____ in
 WATER COL. HEIGHT _____ ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER 3.79 (gal) (L)
 PUMP RATE ~ 3-5 gpm (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond. µg/cm	Temp. °C	ORP	Turb.	DO mg/L	Depth to Water from TOC	Pump Rate
		Unit: L								
<u>9/2</u>		<u>-</u>	<u>5.97</u>	<u>143</u>	<u>17.20</u>	<u>163.0</u>	<u>1734</u>	<u>5.41</u>		
		<u>1 WV</u>	<u>5.93</u>	<u>142</u>	<u>16.03</u>	<u>156.5</u>	<u>1851.7</u>	<u>6.32</u>		
		<u>2 WV</u>	<u>5.80</u>	<u>165</u>	<u>16.24</u>	<u>156.6</u>	<u>1853.2</u>	<u>6.19</u>		
		<u>3 WV</u>	<u>5.78</u>	<u>145</u>	<u>16.14</u>	<u>151.9</u>	<u>1101.7</u>	<u>7.42</u>		

COMMENTS Purge 3 well volumes (~11.4 gal) prior to collecting sample. collect initial YSF readings on 1st at every WV removed, collect sample @ 1045

SIGNATURE [Signature]



WELL PURGING AND SAMPLING RECORD

WELL ID TGW-3 SAMPLE NO. TGW-3-090111

WELL/SITE DESCRIPTION Temp point, Guide

DATE 9/1/11 TIME 0900 AIR TEMP. _____

WELL DEPTH 7.18 (Toe) ft CASING HEIGHT _____ ft
 WATER DEPTH 4.87 (Toe) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 2.31 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:	<u>SD</u>	<u>µS/cm</u>	<u>°C</u>	<u>mV</u>	<u>NTU</u>	<u>mg/l</u>		
<u>9/1</u>	<u>0909</u>		<u>6.25</u>	<u>357</u>	<u>18.48</u>	<u>-24.0</u>	<u>301.6</u>	<u>5.04</u>		

COMMENTS Sampled @ 0909

SIGNATURE *[Signature]*



WELL PURGING AND SAMPLING RECORD

WELL ID TGW-4 SAMPLE NO. TGW-4-09011
 WELL/SITE DESCRIPTION Temp point, Guide

DATE 9/1/11 TIME 1000 AIR TEMP. _____

WELL DEPTH 7.55 (TOL) ft CASING HEIGHT _____ ft
 WATER DEPTH 5.05 (TOL) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 2.50 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:	<u>SU</u>	<u>uS/cm</u>	<u>°C</u>	<u>mV</u>	<u>NTU</u>	<u>mg/L</u>		
<u>9/1</u>	<u>1021</u>		<u>5.47</u>	<u>371</u>	<u>19.68</u>	<u>207.4</u>	<u>63.6</u>	<u>5.24</u>		

COMMENTS Sampled @ 1021

SIGNATURE



WELL PURGING AND SAMPLING RECORD

WELL ID TGW-9 SAMPLE NO. TGW-9-0901
 WELL/SITE DESCRIPTION Temp Point, Guide

DATE 9/1/11 TIME 1230 AIR TEMP. _____

WELL DEPTH 5.32 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 2.11 (TOC) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 3.21 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								

COMMENTS Sampled @ 1248 for VOCs only. Point did not produce sufficient volume.

SIGNATURE _____



WELL PURGING AND SAMPLING RECORD

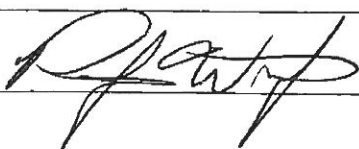
WELL ID TGW-8 SAMPLE NO. TGW-8-09011
 WELL/SITE DESCRIPTION Temp point, Guide

DATE 9/1/11 TIME 1400 AIR TEMP. _____

WELL DEPTH 7.13 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 3.17 (TOC) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 3.96 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								
<u>9/1</u>										

COMMENTS Sampled @ 1404 for VOBs, Total metas, SVOBs.

SIGNATURE 



WELL PURGING AND SAMPLING RECORD

WELL ID TGW-2 SAMPLE NO. TGW-2-090211

WELL/SITE DESCRIPTION Temp point, Guide

DATE 9/2/11 TIME 0800 AIR TEMP. _____

WELL DEPTH 8.36 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 4.67 (TOC) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 3.69 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								
			<u>50</u>	<u>µS/cm</u>	<u>°C</u>	<u>mV</u>	<u>NTC</u>	<u>mg/L</u>		
<u>9/2</u>	<u>0820</u>		<u>5.98</u>	<u>307</u>	<u>19.76</u>	<u>24.7</u>	<u>423.3</u>	<u>3.31</u>		

COMMENTS Sampled @ 0820

SIGNATURE



WELL PURGING AND SAMPLING RECORD

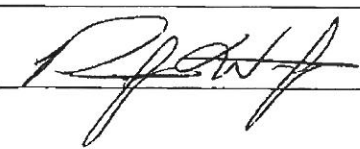
WELL ID TGW-1 SAMPLE NO. TGW-1-090211
 WELL/SITE DESCRIPTION Temp point, Gude

DATE 9/2/11 TIME 1030 AIR TEMP. _____

WELL DEPTH 7.44 (TOC) ft CASING HEIGHT _____ ft
 WATER DEPTH 4.47 (TOC) ft WELL DIAMETER 1 in
 WATER COL. HEIGHT 2.97 ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:								

COMMENTS Sampled @ 1041 for VOCs and Total metals.

SIGNATURE 



WELL PURGING AND SAMPLING RECORD

WELL ID TGW-10 SAMPLE NO. TGW-10-090211

WELL/SITE DESCRIPTION Temp points Guide

DATE 9/2/11 TIME 1230 AIR TEMP. _____

WELL DEPTH _____ ft CASING HEIGHT _____ ft
 WATER DEPTH _____ ft WELL DIAMETER 1 in
 WATER COL. HEIGHT _____ ft SANDPACK DIAM. _____ in
 EQUIVALENT VOLUME OF STANDING WATER _____ (gal) (L)
 PUMP RATE _____ (gpm) (LPM)
 PUMP TIME _____ min
 WELL WENT DRY? () Yes () No PUMP TIME _____ min
 VOL. REMOVED _____ (gal) (L) RECOVERY TIME _____ min
 PURGE AGAIN? () Yes () No TOTAL VOL. REMOVED _____ (gal) (L)

Date	Time	Volume Removed	pH	Cond.	Temp.	ORP	Turb.	DO	Depth to Water from TOC	Pump Rate
		Unit:	<u>SU</u>	<u>uS/cm</u>	<u>°C</u>	<u>mV</u>	<u>NTU</u>	<u>mg/l</u>		
<u>9/2</u>	<u>1247</u>		<u>6.42</u>	<u>1113</u>	<u>23.39</u>	<u>-76.3</u>	<u>147.7</u>	<u>2.43</u>		

COMMENTS Sampled @ 1247

SIGNATURE 



SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

1 CLIENT: **EA Engineering** OFFICE LOC: **Sparks, MD**
 PROJECT MGR: **Pak Lekas** PHONE NO.: **(410) 721-4950**
 EMAIL: **Plukas@east.com** FAX NO.: **(410) 721-4204**
 PROJECT NAME: **Luck Lead Fill** PROJECT NO.:
 SITE LOCATION: **Reverville, MD** PO. NO.:
 SAMPLERS: **Stacy Wicker / Patton Wertz**

PSS Work Order #: _____ Matrix Codes:
 SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WM=Waste Wtr D-Oil S=Soil WL=Waste Liquid WLS=Waste Solid W= Wipe

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE	Analysis Method Required	Preservatives Used										REMARKS		
								Metals	VOCs	SVOCs	Chlor. Herbicides	Org. Pesticides	Organic Compounds	Cyanide	Sulfides	TDs	Alkalinity		COD	
	TGW-02-090211	9/2/11	0830	LW	15	G	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TGW-01-090211		1041	LW	4	G	X*	X	X	X	X	X	X	X	X	X	X	X	X	
	TGW-10-090211		1247	LW	15	G	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Trip Blank			LW	3	G	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TGW-09-090111	9/1/11	1248	LW	3	G	X	X	X	X	X	X	X	X	X	X	X	X	X	* No Dis. Mutd for TCW-09

Relinquished By: (1)	Date	Time	Received By:	Date	Time	Received By:
<i>[Signature]</i>	11/1/11	3:15	<i>[Signature]</i>			
Relinquished By: (2)	Date	Time	Received By:	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:	Date	Time	Received By:

4 Requested Turnaround Time: 5-Day 3-Day 2-Day Other

Data Deliverables Required: Next Day Emergency Other

Special Instructions:

of Coolers: _____ Custody Seal: *[Signature]*

Ice Present: Shipping Carrier: *[Signature]*

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary.