APPENDIX A

Field Sampling Logs

Discrete Surface Soil Samples Soil Boring Samples Surface Water and Sediment Samples

DISCRETE SURFACE SOIL SAMPLES







				DIST	RICT			BOREHOLE NUMBER
	DRILL	ING L	.OG (continued)	US	ACE - Louisville			CPC 85- 029
1. CO	MPANY NAM	-		2. DF	RILLING SUBCONTRACTO	R		
SAI	С			NA				SHEET 1 OF 1
3. PR(OJECT RVP	AP-P	BEDONG PT.		4. LOCATION RVA	AP 8451 Sta	te Route 5 Ra	avenna, OH 44266
AME OF DRILL	ERGUAN	Laur	(iCh		6. DIRECTION OF BORE	HOLE	VERTICAL	
OTES PID M	IAKE/MODEL:				PID SERIAL#:		Colors from	Munsell Soil Color Chart, Rev
WATE	ER LEVEL MA	KE/MODEL:			WATER LEVEL SERIAL#	t:	-	1994
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION	OF MA	TERIALS	SPT DATA	MONITORING	REMARKS
	(1 661)		SUTU CLANIA	2	<u>}</u>	(0.3 Feel)		USA 02-23-2
		OL	of fine sands		Trace amany			Applact samaple
			brown INY & SI	1 40	pith and			00055-029-5017
			IONP.511. Soft	ιφι τ	maist.			
			medium 'o Last		1010			
			roots and leau	ses.	ig some			/
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	4							
			Reaction = TECHON	075	0 0- 11 265			<u>.</u>
		0.001.	Obernoce rearing		aller have	hur co		
		LUKIN	G COMPLETE USIN	<u>ກ A</u>	5 SS HAND	MUGER		
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					1822		1 - 41	
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LOGIST SIGN	ATURE/DATE		QAV	QC SIG	NATHREDATE		/	BOREHOLE NUMBER
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11000	and the second se		X	-		- <u>V</u> .		









SOIL BORING SAMPLES

HTRW DRILLING LOG	USAC	E - Louisville			CP(sb	- 036
1. COMPANY NAME	2. DRILLI	ING SUBCONTRAC	TOR			
SAIC	Frontz	Drilling			SHEET 1	OF Z
3 PROJECT AVAAP DRAMA 25		4. LOCATION	RVAAP 8	451 State Rout	e 5 Ravenna (OH 44266
NAME OF DRILLER Star VISICA		6. MAKE/MODE	OF DRILL	Geograph	SVI No A	11.80
SIZES AND TYPES OF SAMPLING EQUIPMENT	_	8. BOREHOLE L	OCATION T	136.8598	12 15/2	up de
SS Bowl		9. SURFACE EL	EVATION/DATU	M N	D 83	941.83
2" Hund Auser		10. DRILL DATE	TIME START	ED: 1030	COMPLETED:	1055
3		15. DEPTH GRO	UNDWATER EN	COUNTERED	BOS	10
		16. DEPTH TO V	VATER/ELAPSEI	TIME AFTER BORE	HOLE COMPLETION	
2. OVERBURDEN THICKNESS	3221			MA		
3. DEPTH DRILLED INTO BEDROCK NA		17. OTHER WAT	ER LEVEL MEA	SUREMENTS (INLCLI	UDE DATE/TIME)	
4. TOTAL DEPTH OF BOREHOLE			1.0.80	MF		4
CHENICAL SAMPLES UNDISTURBED:	DISTURB	IED:	19.10	TAL NUMBER OF CO	REBOXES NA	0/
2 DISPOSITION OF POPEHOUS	D: NA	OTHER		21.101/	AL CORE RECOVERY	76
	3124/10		DATE COMPI	ETED/ABANDONED	3174/10	
3. NOTES BKG: C Rackemund BCS: Balan Comment	J IEI Surface	CPM: Country	JINI	DDLA: Doctor	WELL	
Eint Wales Encountered	SURACE	CHM: Counts p		PPM: Parts p	Br Million	
		Lever	INA: NOL APL			
OCATION SKETCH/COMMENTS				SCALE:	None	
						N
Drush						
Sweets	1 I I					
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ALC >= 49	Tree		-			
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US A of Er Louis	RVAAP PBA 2008 Remedial Investigation Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County		A 2008 Remedial Investigation na Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County	RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-030 Start Date : 03/29/10; 1030 End Date : 03/29/10; 1055 Northing Coord. : 562401.05 Easting Coord. : 2368598.47 Total Depth of Boring : 1.0 ft			ng Compa er Ignation of e of Drill R logist rsight Con shole Dian upling Equ	any f Drill ig npany neter ipment	: SAIC : Steve Visocky : NA : NA : Steve Visocky : SAIC : 3" : 3" Hand Auger
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
0	SC		(0.0' - 1.0') Fine grained SAND (Se Clay; trace Gravel (Sandstone frag very dark brown; very loose; moist (roots).	C); some Silt; trace gments); 10YR3/3 ; little organics oundwater	CPCsb-030-5105-SO collected from 0.0' - 1.0' 03/29/10 at 1050 for TAL Metals + Hg, Explosives, SVOCs.	on - , and	1.0'/1.0'		Soil Color Chart Munsell 1994 Rev. Ed.
2-	· · · ·		encountered.						
									Coordinate System: NAD 83
Boring 0.0' - for ex Samp	g bac 1.0' s plosiv ples w	kfille amp ves a vere o	d with sodium bentonite chips and hydra led using a 3" hand auger and triangular is presented in Section 4.5.2.1.1 of the F composited and homogenized for all ana	ited. subsample procedure Facility-Wide SAP. lyses.				CP	PCsb-030

	DISTRICT		BOREHOLE NUMBER
	USACE	- Louisville	CPCsb-031
1. COMPANY NAME	2. DRILLIN	G SUBCONTRACTOR	
SAIC	Frontz [Drilling	SHEET T OF Z
3. PROJECT RUAMP PBA 08 R	F	4. LOCATION RVAAP 8451 Sta	ate Route 5 Ravenna, OH 44266
5. NAME OF DRILLER JEREMY LECKRONE		6. MAKE/MODEL OF DRILL Ge	eoprobe 0020DT
7. SIZES AND TYPES OF SAMPLING EQUIPMENT		8. BOREHOLE LOCATION N-561867	.0187 E- 2368547.4340'
3" × 1' HAND HUGER		9. SURFACE ELEVATION/DATUM	083
1.5" × 4"ACOTATE LIN	ER	10. DRILL DATETIME STARTED: 14 03/24/10 15. DEPTH GROUNDWATER ENCOUNTED	115 COMPLETED: 1445
UX 4 DUAL Hallo		16. DEPTH TO WATER/ELAPSED TIME AF	TER BOREHOLE COMPLETION
12. OVERBURDEN THICKNESS	FT		NA
13. DEPTH DRILLED INTO BEDROCK NA		17. OTHER WATER LEVEL MEASUREMEN	
14. TOTAL DEPTH OF BOREHOLE 7 FT			NH
18. GEOTECHNICAL SAMPLES UNDISTURBED:	DISTURBE	D: 19. TOTAL NUME	SER OF CORE BOXES NA
20. CHEMICAL SAMPLES CHEM: EXPL/Met /Suo	CRAD: NA	OTHER:	21. TOTAL CORE RECOVERY % IUA
22. DISFOSITION OF BOHEHULE DATE STARTED/INSTAL	LLED: U312411 C	1415 DATE COMPLETED/AB	ANDONED: 03/24/10 1445
BACKFILL TYPE: GROUT BENTONIT			
BKG: < Background BGS: Below Gro	ound Surface	CPM: Counts per Minute PPI	M: Parts per Million
First Water Encountered	: Static Water L	evel NA: Not Applicable	3.
LOCATION SKETCH/COMMENTS		sc	ALE: None
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and a character and malad	Lis Vice Signed UP		MDC. ch-121
imanaa Ventin 3/241	IP K	4/26/1P	0-050-451

US A of En Louis	Image: Second State State Route 5 Rvaap PBA 2008 Remedial Investigation Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County			RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-031 Start Date : 03/24/10; 1415 End Date : 03/24/10; 1445 Northing Coord. : 561867.0187 Easting Coord. : 2368547.4340 Total Depth of Boring : 7.0 ft			ng Compa er ignation o e of Drill R logist rsight Cor shole Dian pling Equ	any f Drill ig npany neter ipment	: Frontz Drilling : Jeremy Leckrone : Geoprobe 6620DT : Direct Push Technology : Amanda Trenton : SAIC : 2" : 1.5" x 4' Long Acetate Liner : 2" x 4' Dual Tube : 3" Hand Auger
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
0	CL		(0.0' - 1.3') CLAY (CL); little Silt; 10 little 7.5YR5/6 strong brown and 2 soft; damp; high plasticity.	0YR4/3 brown with .5Y6/1 gray mottling;	CPCsb-031-5109-SO & MS/MSD collected from 1.0' on 03/24/10 at 1427 TAL Metals + Hg, Explos and SVOCs.	0.0' - for sives,	1.0'/1.0'		Soil Color Chart Munsell 2000 Rev. Ed.
3-	SW		(1.3' - 4.1') Medium to fine grained lenses of Siltier Sand throughout; brown; medium dense; wet; nonpla	I SAND (SW); trace 10YR5/4 yellowish astic.					Groundwater encountered at 1.3 ft bgs.
5-	SP		(4.1' - 5.6') Coarse grained SAND <1/4"; 10YR5/4 yellowish brown; n nonplastic.	(SP); little Gravel, nedium dense; wet;					
6-	ML SW		(5.6' - 5.8') SILT (ML); some Sand brown; medium stiff; damp. (5.8' - 6.35') Fine grained SAND (S Siltier Sand throughout; 10YR5/4 medium dance; wat: papplette	; 10YR5/4 yellowish SW); trace lenses of yellowish brown;					
7-	SP CL		(6.35' - 6.75') Coarse grained SAN <1/4"; 10YR5/4 yellowish brown; n nonplastic. (6.75' - 7.0') Silty CLAY (CL); little decreases with depth; 10B5/1 blui	ID (SP); little Gravel, nedium dense; wet; Sand, Sand content sh gray; medium stiff;					
	-		damp. Boring terminated at 7.0 ft bgs.]					Coordinate System: NAD 83
Boring 0.0' - for ex Samp	g bac 1.0' s plosi ples v	kfille samp ves a vere o	d with sodium bentonite chips and hydra led using a 3" hand auger and triangular is presented in Section 4.5.2.1.1 of the F composited and homogenized for all ana	ated. subsample procedure Facility-Wide SAP. lyses.				CF	PCsb-031

	Internet	T		<u>UTUSIJ-US</u>
HTRW DRILLING LOG	UISTRIC	r 1997 - 11		BOREHOLE NUMBER
1. COMPANY NAME				44050-1150
SAIC	Eronte	Drilling		SHEET 1 OF 7
3. PROJECT RUMAN NAN				1
5. NAME OF DRILLER TIME MY LITE	<u>Vo KI</u>	A MAKE/MODEL OF DRILL	P 8451 State Route	5 Ravenna, OH 44266
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	<u>urkau:</u>	8. BOREHOLE LOCATION	Geoprobe	6620 DT
3" x 1' HAND HU	GUR	9. SURFACE ELEVATION/DA	TUM	
1.5" × 4' ATETH	ATE UNER	10. DRILL DATE/TIME ST	APTED: 15-2 -	
2" VU Dun		15. DEPTH GROUNDWATER	ENCOUNTERED 10	COMPLETED: 1040
Z X T DUAR	LIBE	16. DEPTH TO WATER/ELAP	SED TIME AFTER BOREH	
12. OVERBURDEN THICKNESS 732.1	FT	-	NA	
13. DEPTH DRILLED INTO BEDROCK NA		17. OTHER WATER LEVEL M	EASUREMENTS (INLCLUE	DE DATE/TIME)
14. TOTAL DEPTH OF BOREHOLE 13 FT	365		NA	
8. GEOTECHNICAL SAMPLES UNDISTURBE	D: DISTURBE	D: 19. `	TOTAL NUMBER OF CORI	EBOXES NA
20. CHEMICAL SAMPLES CHEM:MUT/E	XPYSUX RAD: NA	OTHER:	21. TOTAL	CORE RECOVERY % NIXA
22. DISPOSITION OF BOREHOLE DATE STARTE	ED/INSTALLED:03 24710;	1530 DATE CON	PLETED/ABANDONED:	03/24/10: 1104a
BACKFILL TYPE: GROUT B	ENTONITE TEM	PORARY WELL POINT	MONITORING WE	
BKG: ≤ Background BGS: E	Below Ground Surface	CPM: Counts per Minute	PPM: Parts per	Million
First Water Encountered	: Static Water L	evel NA: Not A	pplicable	
OCATION SKETCH/COMMENTS			SCALE	None
				Ń
				Ń
		xsb-032 ar crc		
		xeb-032	1 3 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Den Co	ceb-032	2-033 SNEIDY)	
LOCIST SIGNATUREDATE	DAVOC SIGNATUREA 3/24/10	reb-032 D-CPC	20-033 Sneiby	DREHOLE NUMBER

US A of El Louis	Image: Same construction Image: Same construction Image: Same construction Image: Same construction RVAAP PBA 2008 Remedial Investigation Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County Portage County		A 2008 Remedial Investigation na Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County	RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-032 Start Date : 03/24/10; 1530 End Date : 03/24/10; 1640 Northing Coord. : Easting Coord. : Total Depth of Boring : 13.0 ft		Drilling Company Driller Designation of Drill Type of Drill Rig Geologist Oversight Company Borehole Diameter Sampling Equipment			: Frontz Drilling : Jeremy Leckrone : Geoprobe 6620DT : Direct Push Technology : Amanda Trenton : SAIC : 2" : 1.5" x 4' Long Acetate Liner : 2" x 4' Dual Tube : 3" Hand Auger
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
0			(0.0' - 3.5') SILT (ML); little Clay ar Sand; 10YR5/6 yellowish brown, 5 little 10YR6/3 pale brown; medium Sand content increases with depth	nd very fine grained B6/1 bluish gray, and n dense; dry to damp. n.	CPCsb-032-5113-SO collected from 0.0' - 1.0' 03/24/10 at 1540 for TAL Metals + Hg, Explosives SVOCs	on - , and	1.0'/1.0'		Soil Color Chart Munsell 2000 Rev. Ed.
2-			2.0' - 2.2' Medium to fine grained s dry; 10YR4/4 dark yellowish brow	Sand seam; little Silt; n.	CPCsb-032-5114-SO, CPCsb-032-6073-FD, & CPCsb-032-6075-QA collected from 1.0' - 4.0' 03/24/10 at 1545 for TAL	on -	3.0'/3.0'		(0.0' - 4.0') Hand Augered
4-			(3.5' - 8.5') CLAY (CL); some Silt; <1/4" Gravel; 10YR5/6 yellowish b light olive brown; stiff; dry; low plas	trace Sand; trace brown and 2.5Y5/3 sticity.	SVOCs.	, and			
6-	CL				collected from 4.0' - 7.0' 03/24/10 at 1625 for TAL Metals + Hg, Explosives, SVOCs.	on - , and	3.1'/3.0'		
8-			(7.0' - 7.8') Addition of N5/ gray. (7.8' - 8.5') Clay is all N5/ gray.		CPCsb-032-5116-SO collected from 7.0' - 10.0 03/24/10 at 1640 for TAL)' on -	3.1'/3.0'		
9-	ML		(8.5' - 10.0') SILT (ML); some very N5/ gray; stiff; dry. (10.0' - 11.5') Very fine grained SA	ND (SW): N5/ grav:	Metals + Hg, Explosives SVOCs.	, and			Groundwater encountered at
11-	sw		medium dense; wet; nonplastic. (11.5' - 13.0') SILT and very fine g	rained SAND (SM);			2.45'/3.0'		TO IT BGS
12-	SM		trace Clay; N5/ gray; stiff; damp; n Boring terminated at 13.0 ft bgs.	onplastic.					Coordinate System: NAD 83
Borin 0.0' - for ex Samp	g bao 1.0' s plosi ples v	ckfille samp ves a vere (d with sodium bentonite chips and hydra led using a 3" hand auger and triangular is presented in Section 4.5.2.1.1 of the F composited and homogenized for all ana	ated. subsample procedure Facility-Wide SAP. Ilyses.				CF	PCsb-032

US A of Er Louis R\	Image: Non-Structure Image: No		A 2008 Remedial Investigation na Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County	RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-033 Start Date : 03/29/10; 1055 End Date : 03/29/10; 1300 Northing Coord. : Easting Coord. : Total Depth of Boring : 13.0 ft			ng Compa er gnation o e of Drill R logist rsight Cor shole Dian pling Equ	any f Drill tig npany neter iipment	: Frontz Drilling : Jeremy Leckrone : Geoprobe 6620DT : Direct Push Technology : Amanda Trenton : SAIC : 8" : 4.25" Hollow Stem Auger : 28" x 3" Shelby Tube
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
	ML		(0.0' - 3.5') SILT (ML); little Clay ar Sand; 10YR5/6 yellowish brown, 5 little 10YR6/3 pale brown; medium Sand content increases with depth 2.0' - 2.2' Medium to fine grained S dry; 10YR4/4 dark yellowish brow	nd very fine grained iB6/1 bluish gray, and n dense; dry to damp. n. Sand seam; little Silt; n.					Soil Color Chart Munsell 2000 Rev. Ed.
4	CL		(3.5' - 8.5') CLAY (CL); some Silt; <1/4" Gravel; 10YR5/6 yellowish b light olive brown; stiff; dry; low plas	trace Sand; trace rown and 2.5Y5/3 sticity.	Shelby Tube CPCsb-033-5117-SO collected from 4.0' - 5.4' 03/29/10 for Porosity, Bu Density, Moisture Conter Total Organic Carbon, Permeability, and Grain 5 Fraction Analysis.	on Ilk nt, Size	1.4'/2.0'		
7- 8- 9-	ML		(7.0' - 7.8') Addition of N5/ gray. (7.8' - 8.5') Clay is all N5/ gray. (8.5' - 10.0') SILT (ML); some very N5/ gray; stiff; dry.	fine grained Sand;	Shelby Tube CPCsb-033-5118-SO collected from 8.0' - 9.7' 03/29/10 for Porosity, Bu Density, Moisture Conter	on ılk nt,	1.7'/2.0'		
10	sw		(10.0' - 11.5') Very fine grained SA medium dense; wet; nonplastic.	ND (SW); N5/ gray;	Permeability, and Grain S	Size			
12- 	SM		Boring terminated at 13.0 ft bgs.	onplastic.					Coordinate System: NAD 83
Boring Shelb	g bac by Tul	ckfille bes s	d with sodium bentonite chips and hydra ealed with wax and capped.	ited.				CP	PCsb-033

	DISTRICT			BOREHOLE NUMBER
	USACE	- Louisville		CPCsh-diav
1. COMPANY NAME	2. DRILLIN	G SUBCONTRACTOR	<u></u>	
SAIC	Frontz [Drilling		SHEET 1 OF 2
3. PROJECT RVAAP PBAPB RI	I	4. LOCATION RVA	AP 8451 State Rou	te 5 Ravenna, OH 44266
AME OF DRILLER Store Viscily		6. MAKE/MODEL OF DRILL	Geoprobe	
IZES AND TYPES OF SAMPLING EQUIPMENT	···· ····· ····· ····· ·	8. BOREHOLE LOCATION	E 2368709 6	91 N 560730 093
3 frend At 09		9. SURFACE ELEVATION/	DATUM	MAD 83
55 3001		10. DRILL DATE TIME	STARTED: 1300	COMPLETED: 1400
		15. DEPTH GROUNDWATE	RENCOUNTERED	2-1365
		16. DEPTH TO WATER/EL/	APSED TIME AFTER BORE	EHOLE COMPLETION
			MA	
OTAL DEPTH OF BOREHOLE	····	17. OTHER WATER LEVEL	MEASUREMENTS (INLCL	UDE DATE/TIME)
GEOTECHNICAL SAMPLES				
CHEMICAL SAMPLES	DISTURBE		9. TOTAL NUMBER OF CC	NA
ISPOSITION OF BOREHOLE DATE STARTED/INSTALLED	31- L	OTHER:		AL CORE RECOVERY %
KFILL TYPE: GROUT GROUT KENTONITE	-124110 TENT		UMPLETED/ABANDONED	5/29/10
IOTES BKG: < Background BGS: Below Ground S	Jurface	CPM: Counts por Minute	I MONITORING	WELL
: First Water Encountered	Static Water L	Vel NA: No	PPM: Parts p	er Million
JATION SKETCH/COMMENTS			SCALE:	None
	;			
				- 12 - 13 - 13 - 13 - 13 - 13 - 13 - 13
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			ana ana ang ana ang ang ang ang ang ang	
Mac Jone J				
About hed				
Aber bed				
Abord bed Rai				
Abord bed Por			CFC5b-	63
Abend bed Pari			cttsb-	63
Der Died Pari Voren			CTC5b-	63
Red Peri Voren			CPX5b-	B34
Rond bed Port Varen			CPC5b-	63
Aber bed Peri Voren			CPC5b-	B34
Row bed Port Vocen Aren			CTC5b-	63
Abort bed Pari Varen			CPC5b-	B3 (
Red bed Red bed Voren			CTC5b-	3
Der bed Pari Varen Werk			CPC5b-	B34
Ren bed Ren Vour			CTTS b-	
Ren bed Peri Varen Varen			CPC5b-	63
Der Voor			CPC5b-	
Rod bed Port Varen Werk			CTCSb-	
Ren bed Peri Voren Varen			CPC5b-	
Der Vour			CPC5b-	
Row bed Part Varen Www			CTC5b-	
Der bed Per Voren Maren Maren Maren Maren Maren Maren Maren Maren	TAVOC SIGNATURE	DATE	CRC5b-	BOREHOLE NUMBER

RVAAP PBA 2008 Remedial Investigation Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County		A 2008 Remedial Investigation na Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County	RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-034 Start Date : 03/29/10; 1300 End Date : 03/29/10; 1400 Northing Coord. : 560730.093 Easting Coord. : 2368709.691 Total Depth of Boring : 2.0 ft			ing Compa er ignation of e of Drill R logist rsight Con shole Dian apling Equ	any f Drill ig npany neter ipment	: SAIC : Steve Visocky : NA : NA : Steve Visocky : SAIC : 3" : 3" Hand Auger	
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
0	SM		(0.0' - 1.5') Fine grained SAND (SI Gravel; 1" ballast; 10YR4/3 brown yellowish brown iron accumulation nonplastic.	M); some Silt; trace with 10YR5/6 s; loose; moist;	CPCsb-034-5119-SO collected from 0.0' - 1.0' 03/29/10 at 1315 for VO0 SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg.	on Cs, es, and	1.0'/1.0'		Soil Color Chart Munsell 1994 Rev. Ed.
1	SM		(1.0' - 2.0') SILT (SM); some fine to Sand; trace Clay; trace Gravel; gra reddish yellow iron accumulations	o medium grained ay N6/ with 10YR6/6 ; moist; nonplastic.	CPCsb-034-5120-SO collected from 1.0' - 2.0' 03/29/10 at 1345 for VO0 SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg.	on Cs, es, and	1.0'/1.0'		
2-	-	<u></u>	Boring terminated at 2.0 ft bgs. Gr encountered.	oundwater					
3-									
4	-								Coordinate System: NAD 92
5 – Borin 0.0' - for ex Samp	g bac 1.0' s plosiv bles w	kfille samp ves a vere o	d with sodium bentonite chips and hydra led using a 3" hand auger and triangular is presented in Section 4.5.2.1.1 of the F composited and homogenized for all ana	ted. subsample procedure facility-Wide SAP. lyses, except VOCs.				CF	PCsb-034

HTRW DRILLING LOG	DISTRICT		BOREHOLE NUMBER
	USACE - Louisville		CPCS5-035
1. COMPANY NAME	2. DRILLING SUBCONTRACTOR		
SAIC	Frontz Drilling		SHEET 1 OF Z
3. PROJECT RUAAP PBADB-PD	4. LOCATION RVA	AP 8451 State Route	5 Ravenna, OH 44266
5. NAME OF DRILLER Emily Cunninghem / Jerring	(rom 6. MAKE/MODEL OF DRILL	Geoprobe	6620
7. SIZES AND TYPES OF SAMPLING EQUIPMENT	8. BOREHOLE LOCATION	F 7.265621 UI	151-18/5 111
-4 11. a) Arcer	9. SURFACE ELEVATION/	DATUM AAD 83	10 30/ 30.91
a" Duch tube	10. DRILL DATE/TIME S	TARTED: 1500	COMPLETED: 1705
	15. DEPTH GROUNDWATE	RENCOUNTERED	1700
1/2 Acetete Linu	16. DEPTH TO WATER/ELA	PSED TIME AFTER BOREH	OLE COMPLETION
12. OVERBURDEN THICKNESS 13 4		Ŵ	
13. DEPTH DRILLED INTO BEDROCK NA	17. OTHER WATER LEVEL	MEASUREMENTS (INLCLUE	DE DATE/TIME)
14. TOTAL DEPTH OF BOREHOLE 3		NA	
18. GEOTECHNICAL SAMPLES UNDISTURBED:	DISTURBED: 19	. TOTAL NUMBER OF CORE	BOXES NA
20. CHEMICAL SAMPLES CHEM: FullSuite RAD:	NA OTHER:	21. TOTAL	CORE RECOVERY %
22. DISPOSITION OF BOREHOLE DATE STARTED/INSTALLED: 3/2	9/10 DATE C	DMPLETED/ABANDONED:	3/29/10
BACKFILL TYPE: GROUT FOR BENTONITE	TEMPORARY WELL POINT	MONITORING WE	ïLL
23. NOTES BKG: ≤ Background BGS: Below Ground Surface	e CPM: Counts per Minute	PPM: Parts per	Million
: First Water Encountered V : Sta	tic Water Level NA: Not	Applicable	
LOCATION SKETCH/COMMENTS		SCALE:	None
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	any server	<u> </u>	

US A of E Louis	US Army Corps of Engineers. Louisville District RVAAP PBA 2008 Remedial Investigation Ravenna Army Ammunition Plant 8451 State Route 5 Ravenna, Ohio 44266 Portage County			RVAAP-29 Upper & Lower Cobbs Ponds CPCsb-035 Start Date : 03/29/10; 1500 End Date : 03/29/10; 1700 Northing Coord. : 561865.41 Easting Coord. : 2368021.41 Total Depth of Boring : 13.0 ft			ng Compar er gnation of l of Drill Rig logist rsight Comp shole Diame pling Equip	ny Drill g pany eter pment	: Frontz Drilling : Jeremy Leckrone : Geoprobe 6620DT : Direct Push Technology : Steve Visocky : SAIC : 2" : 1.5" x 4' Long Acetate Liner : 2" x 4' Dual Tube : 3" Hand Auger
Depth in feet	USCS Symbol	USCS Graphic	Descripti	on	Analyses		Recovery	Collection Interval	Comments
0- 1- 2- 3- 5- 5- 6- 7- 7- 8- 8- 9-	SC		 (0.0' - 1.0') Fine grained SAND (St Gravel; trace Clay; 1" - 2" Slag fro grayish brown with 7.5YR5/8 stron accumulations; damp; low plasticit (roots). (1.0' - 6.0') CLAY (CL); some Silt; Gravel; 2.5Y5/2 grayish brown with brown iron accumulations and Gra casts; damp; low plasticity; trace o (6.0' - 9.0') Fine grained SAND (St Clay; trace Gravel; 10YR5/2 grayis 10YR6/8 brownish yellow iron acc low plasticity. (9.0' - 11.5') CLAY (CL); some Silt 10YR5/2 grayish brown with 10YR 	C); little Silt; trace m 0.5' - 1.5'; 2.5Y5/2 g brown iron iy; trace organics trace Sand; trace h 10YR5/8 yellowish ay N6/ infilled root irganics (roots). C); little Silt; trace sh brown with umulations; moist;	CPCsb-035-5123-SO collected from 0.0' - 1.0' 03/29/10 at 1540 for VOO SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg. CPCsb-035-5124-SO collected from 1.0' - 4.0' 03/29/10 at 1615 for VOO SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg. CPCsb-035-6172-FD, & CPCsb-035-6074-QA collected from 4.0' - 7.0' 03/29/10 at 1645 for VOO SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg.	on Cs, es, and On Cs, es, and	1.0'/1.0' 3.0'/3.0' A 3.2'/3.0' B 3.0'/3.0' 3.4'/3.0'		Soil Color Chart Munsell 1994 Rev. Ed. (0.0' - 4.0') Hand Augered
10-	CL		(11.5', 12.0') SILT (ML); some Cla	sticity.	collected from 7.0' - 13.0 03/29/10 at 1655 for VO SVOCs, PCBs, Pesticide Explosives, Propellants, TAL Metals + Hg.	o' on Cs, es, and	3.8'/3.0'		
12-	ML		Gravel; 10YR5/1 gray; damp; low Boring terminated at 13.0 ft bgs.	ay, nace Sanu, nace plasticity.	_				Coordinate System: NAD 83
Borin 0.0' - for ex Samp Twin	g bac 1.0' s plosi ples v boreł	ckfille samp ves a vere o noles	d with sodium bentonite chips and hydra led using a 3" hand auger and triangular as presented in Section 4.5.2.1.1 of the F composited and homogenized for all ana were drilled to obtain volume required for	tted. subsample procedure ēacility-Wide SAP. alyses, except VOCs. or analyses.				СР	Csb-035

SURFACE WATER AND SEDIMENT SAMPLES

Tome scalar Image Pair State R.S. Emerge Conclusion Free V. (1/20 km) Libeation RD: (1/2 sm/s, 1 - 0 4/4) Interved Conclusion Racondes Em. 1, 4. Concert (1/2 m) Surface Water Sample RD: 0 9 9 9 9 Surface Water Sample RD: 0 1 Date of Times 9 9 Surface Water Sample RD: 0 1 1 1 1 0 9 9 Surface Water Sample RD: 0 1 1 1 1 0 9	_7/\/L 。	USACE - I	ouisville		0454 01 1	1. Sample Team	- Lail Algantes	, <u> </u>
Lacation B: Localion B: PC SW/SL - d HY Surface Water Sample D: PC SW/SL - d HY SW/SL - d HY	From Science to Solutions	RVAAP PE		RVAAF	P 8451 State Rt. 5	F 1	steve Visacky	
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Surface Water Sample ID CPCC W-O HY LORE ID (record) A M Sortace Water Sample Type and Equipment Used 1/2/2 (2) 2 Agen to three dealer 2 Agent to three dealer 3 Weather Constance 2 Agent of three dealer 3 Weather Constance 2 Agent to three dealer 3 Agent of thr	(PC sw/si	1-044	/			Recorded.	/	
CPCS_W-O_U/Y 3/2-9//A \$10 Dupus ID (Incoded) N 7 50x10 (Incoded) Sufface Water Sample Type and Equipment Used. / EAL Syr 11 Date and Time 9 Sufface Water Sample Type and Equipment Used. / EAL Syr 11 Date and Time 9 Montso Vet Sedemine Sample Type and Equipment Used. / EAL Syr 13 Date ID (Incoded) 0510 Vet Sedimer Sample Type and Equipment Used. 55 Provid 1 Space ID (Incoded) 15 Montso Vet Sedimer Sample Type and Equipment Used. 55 Provid 1 Space ID (Incoded) 15 Montso Vet Sedimer Sample Type and Equipment Used. 55 Provid 1 Space ID (Incoded) 15 Montso Vet Sedimer Sample Type and Equipment Used. 55 Provid 1 Space ID (Incoded) 15 Montso Subtract Conditions Out Conditions Out Conditions Space ID (Incoded) 15 Montso Subtract Conditions Out Conditions Out Conditions Space ID (Incoded) 15 15 Subtract Conditions Out Conditions Dout Conditions Space ID (Incoded)	I. Surface Water Sample ID:				5. Date and Time:			
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Pielo Measurements READING UNITS SERIAL NO LAST CALIE. TEMPERATURE 4.13 "COLON DUTY COLONARY COLONAR	(P(Ed-AUI)	-5022	2-50		11. Date and Time:		AC10	
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4 Wei Sedment Sangle Type and Equipment Used: 5 Noul / 2004 / 12 14 Arole 15 Mismiso: 3: Weather Conditions: 0 WT C C + 4 43 '/C 17 Arthotes in the Area: A M A OCATION SKETCH/COMMENTS SCALE: None ield Notes: SULT (SC), Scile Scile Scile None Sult (SC), Scile File Vish Drown, 2:5 Y 5/2, discup, strengthe Jor. WHEE is apply. 1:5' deep Blower Dow. WHEE is apply. 1:5' deep WHEE is apply. 1:5' deep FleLD MEASUREMENTS READING UNITS Serial NO. LAST CALIE. TEMPERATURE: 0.13 C 15550 02.34-2010 PH 7:10 Sult Sult Sult Sult CONDUCTIVITY: 0.120 ms/cm Sult Sult Sult DO: 9.32 mg/L V Sult Sult Sult Sult URFACE WATER EXPLOSIVES TAL METALS SVOCs OTHER Pesticides, PCBs) ET SEDIMENT MALYSES: TAL METALS SVOCs OTHER Sult Sult Sult Sult Surget and and path OC C		1	1					
a Weather Conditions Over cost 413 /2 Tractivities in the Area Activities in the Area OCATION SKETCH/COMMENTS SCALE: None Sold T, Sold Y, Sold Y, Sold Y, Trace Class, Trace Organics (Doce) Sold T, Sold Y, Sold Y, Sold Y, Sold Y, Trace Organics (Doce) Sold Y, S	4. Wet Sediment Sample Type ar	nd Equipment L	Jsed: SS	Buw /	5000 12055	And		
OCATION SKETCH/COMMENTS SCALE: None ield Notes: SLIT (SC), SCM, Frie Sourd, Tree Cle., Tree organics (Pool) Suff, Gray, Bh. Brown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Blank Dem While Strown, Z.SY S/2, Jlawp, Stromping of Jer. Blank Dem Stromping Dem PH 1,10 Stromping Dem Dem 9,32 mg/L OTHER URFACE WATER NALYSES: FULL SUITE (VOCS, SVOCS, Metals, Explosives, Propellants, Pesticides, PCBs) ET SEDIMENT VALYSES: Standard and Dair Standard and Dair Standard and Dair Standard and Dair	6. Weather Conditions: 0	vercast	43%		17. Activities in the Area	A A A A	15. MS/MSD:	\mathcal{N}
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Held Notes: SITT (SC), Scime Find Sond, Trace (III, Trace Organics (Pook) Suff, Gray/Ab, Brawn, Zisty S/2, Ulamp, Strengty eVer. Brown Dom WRICE is apple. I.S' deep Lg. willow Tree Creation of the second se						SCALE:	None	
ield Notes: SILT (SC), Scme Fin Sand, True Clu, True egames (Rock) Sult, Gray, ish Brown, Z, SY 5/2, diamp, Strange eller. Brown Gem. Brown Gem. WHEE is approximation of the second eller. Brown Gem. WHEE is approximation of the second eller. Brown Gem. WHEE is approximation of the second eller. Brown Gem. WHEE is approximation of the second eller. FIELD MEASUREMENTS READING UNITS Second eller. State General eller. FIELD MEASUREMENTS READING UNITS Second eller. State General eller. State General eller. FIELD MEASUREMENTS READING UNTS Second eller. Duttion Trace General eller. CONDUCTIVITY. General eller. Duttion Diverses Duttion Brown Diverses Diverses Diverses	4 				· · · · · · · · · · · · · · · · · · ·		-	
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Sull, bray Nh Brown, 2:545/2, elicump, second goold. Brown Gum. WHEE is apply. 1.5' deep. Brown Gum. Lg. Willow Tree Lg. Willow Tree Creskd-044 Field Measurements Reading UNITS Serial NO. Lg. Willow Tree Creskd-044 Field Measurements Reading UNITS Serial NO. Lg. Willow Tree Creskd-044 Temperature: 4.13 Topic State pit: 1.10 Su pit: 1.10 Su CONDUCTIVI: 0:1.20 pit: 0:1.20 ms/cm 0:0 9.3.2 ms/cm 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 0:1.20 <	SILT (S	\bigcirc	Scmo Fil	v Sano	True Cla	Trace 0	Manica (Moch	ا رژ
Brown Dum. WMER is appr. 1.5' deep. Image: Strange Dum. Image: Strange Dum.	Suff. 67	i, ish i	Srewn 2	2.545	12, ellem,) Show it	n o Jur	tan ang san ang San ang san ang
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: A.13 °C 15559 03.24 - 2010 PH: T.10 S.U 03.24 - 2010 DO: P.32 mg/L 15559 URFACE WATER EXPLOSIVES TAL METALS SVOCS. [OTHER WIFACE WATER EXPLOSIVES TAL METALS SVOCS. [OTHER VALYSES: EXPLOSIVES TAL METALS SVOCS. [OTHER YALYSES: EXPLOSIVES TAL METALS SVOCS. [OTHER YALYSES: EXPLOSIVES TAL METALS SVOCS. [OTHER YALYSES: YAL ALETALS SVOCS. [OTHER YALYSES: YALYSES YAL ALETALS YALYSES: YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE YALYSE	an an a gan an an an a	· · · · · · · · ·	•••••		u k	MER 15 100	V IS' daen	18 - 19 - 19 19
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FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE A. 13 °C 15559 04.34-2010 PH 7.16 S.U			stance of	www.			Charles and Charles	
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 4.13 *C 15550 03.24-2010 PH: 7.16 S.U 0 03.24-2010 DO: 9.3.2 mg/L 1 15559 OTHER DO: 9.3.2 mg/L 1 URFACE WATER EXPLOSIVES TAL METALS SVOCs OTHER VIRACE WATER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) Yesticides, PCBs) *ET SEDIMENT MALYSES: EXPLOSIVES TAL METALS SVOCS OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) *Et SEDIMENT ALZ 5/16 QC Checked by: Mathematical States scorded By: 3/12/6/16 QC Checked by: Mathematical States Mathematical States		n naun hier E	organic st	·····		ء بر سريار دريار (۲۰۰۹ م ارد در ا	n oo san ay ahaan ahaa	ų
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: A. 13 °C 15550 03.24 - 2010 pH: 7.100 S.U 03.24 - 2010 DO: A.3.2 ms/cm 03.24 - 2010 DO: A.3.2 ms/cm 00.01101717: 0.1200 URFACE WATER EXPLOSIVES TAL METALS SVOCS OTHER URFACE WATER EXPLOSIVES TAL METALS SVOCS OTHER VIRTACE WATER EXPLOSIVES TAL METALS SVOCS OTHER VIRTACE WATER FULL SUITE (VOCS, SVOCS, Metals, Explosives, Propellants, Pesticides, PCBs) VIRTACE WATER NALYSES: EXPLOSIVES TAL METALS SVOCS OTHER FULL SUITE (VOCS, SVOCS, Metals, Explosives, Propellants, Pesticides, PCBs) VIRTACE WATER Storded By: Scorded By: 3/24/6 QC Checked by: May Currer	a da		216 her of			، • • • • • • • • • • • • •		· · · · ·
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIE. TEMPERATURE: Q. 13 "C 15550 03.24 - 2010 PH: 7.16 S.U 03.24 - 2010 CONDUCTIVITY: Q. 120 mS/cm 01.00 DO: Q. 32 mg/L V URFACE WATER NTU 15559 V NTHER EXPLOSIVES TAL METALS SVOCs OTHER WILL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) YET SEDIMENT NALYSES: Scorded By: Mail Value OC Checked by: Mail Walue (3-2)						، ۱۰۰۰ - ۱۰۰۰ - ۲۰۰۰ - ۲۰۰۰ ۱۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰		
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FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIE. TEMPERATURE: 4.13 'C 15550 03.29-2010 pH: 7.10 S.U 03.29-2010 CONDUCTIVITY: 0.120 mS/cm 03.29-2010 DO: 9.32 mg/L V TURBIDITY: 0.2.92 NTU 15550 OTHER			3			۔ ۱۰ - ۱۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۱۰ - ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۱۰ - ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 4.13 'C 1555?) 03.29-2010 pH: 7.10 S.U 03.29-2010 CONDUCTIVITY: 0.120 mS/cm 03.29-2010 DO: 9.33 mg/L V TURBIDITY: 0.22 NTU 1555?) OTHER			3					· · · · · · · · · · · · · · · · · · ·
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 9.13 °C 15559 03.24-2010 PH: 7.10 S.U 0 03.24-2010 CONDUCTIVITY: 0.120 mS/cm 0 DO: 9.32 mg/L V 0 TURBIDITY: 4.42 NTU 15559 0 URFACE WATER NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER URFACE WATER NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER MALYSES: EXPLOSIVES TAL METALS SVOCs OTHER SOCIDADED Yours SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) *ET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER BULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) SIZE 1/20 OC Checked by: MMM, WWW, 03.2016			3			sillow Tree		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 4.13 °C 15550 03.94-2010 pH: 7.10 S.U 03.94-2010 CONDUCTIVITY: 0.120 mS/cm 00.03.94-2010 DO: 4.32 mS/cm 00.01.020 00.01.020 URFACE WATER NTU 15559 00.01.020 VURFACE WATER EXPLOSIVES TAL METALS SVOCs OTHER URFACE WATER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) VET SEDIMENT VET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) VEXPLOSIVES TAL METALS SVOCs OTHER Scorded By: Stondause and Date QC Checked by: MMM Mathewater 03.24-16			3			villow Tree		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 9.13 °C 1555? 03.291-2010 pH: 7.10 S.U 0 03.291-2010 CONDUCTIVITY: 0.120 mS/cm 0 DO: 9.32 mg/L V TURBIDITY: 0.120 mS/cm 0 DO: 9.32 mg/L V TURBIDITY: 0.42. NTU 1555? OTHER Interval 1555? V URFACE WATER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) VET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) ************************************			3			sillow Tree		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: $q. 13$ °C 15550 $(3 \cdot 24 - 2 \cdot 1)^2$ pH: 7.16° S.U					- Ly. D- 18cski	villou Tree - 1644		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: \hat{q} . 13 °C 15550 \hat{q} . $$			3		D-CPCSSBd	sillow Tree - Ø44		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: $q. 13$ °C 15559 $o3 \cdot 24 - 2 \cdot 410$ pH: 7.16 S.U $o3 \cdot 24 - 2 \cdot 410$ CONDUCTIVITY: 0.120 mS/cm $o3 \cdot 24 - 2 \cdot 410$ DO: $9.3.3$ mg/L V TURBIDITY: 6.42 NTU 15559 OTHER					D- CPC&/Sd	uillow Tree - 644		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: $q. 13$ °C 15559 $03.34-2010$ pH: 7.16 S.U 0 2010 CONDUCTIVITY: 0.120 mS/cm 0 DO: $q.32$ mg/L V TURBIDITY: $q.42$ NTU 15559 OTHER					D- CPC\$Kd	villou Tree - &44		
FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: q , 13 °C 15559 $63.24 - 2010$ pH: 7.160 S.U 1 $63.24 - 2010$ CONDUCTIVITY: 0.120 mS/cm 1 DO: 9.32 mg/L V 1 TURBIDITY: 6.92 NTU 15559 1 OTHER Image: Conduct of the state of					D- CPCSSBd	sillor Tree		
IEMPERATURE: Q. 13 °C 15559 03-24-2010 pH: 7.10 S.U					D- CPCSSBd	sillou Tree		
pH: 1.10 S.U CONDUCTIVITY: 0.120 mS/cm D0: 9.3.2 mg/L V TURBIDITY: 0.9.2 NTU 15559 OTHER Image: Conductive structure Stock OTHER URFACE WATER EXPLOSIVES TAL METALS SVOCs OTHER Image: Conductive structure Tal METALS SVOCs OTHER Image: Conductiter Tal METALS Conductive structure	FIELD MEASUREM	IENTS	READING	UNITS	D-CPCSSBU SERIAL NO.	sillow Tree - Φ44	AST CALIB.	
CONDUCTIVITY: Ø. 1 20 mS/cm DO: 9.32 mg/L V TURBIDITY: 6.92 NTU 15559 OTHER	FIELD MEASUREM TEMPERAT	IENTS URE:	READING 9.13	UNITS °C	2)- (?c\$\$/\$:1)- (?c\$\$/\$:1) SERIAL NO. 15558)	- 644 - 644 - 63-29	AST CALIB. - ζσ10	
DO: 9.3.2 mg/L V TURBIDITY: 6.42 NTU 15559 OTHER OTHER IS559 URFACE WATER NALYSES: EXPLOSIVES TAL METALS SVOCs FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) VET SEDIMENT EXPLOSIVES TAL METALS SVOCs NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) Scorded By: S12.6/16 QC Checked by: MWW/W/ 03.2446	FIELD MEASUREM TEMPERAT	IENTS URE: pH:	READING 9. 13 7. 10	UNITS °C S.U	SERIAL NO. 15550	Jillow Tree - &44 - &44 - & - & - & - & - & - & - & - & - &	AST CALIB. - 2μ10	
TURBIDITY: Q.A2 NTU 15559 OTHER	FIELD MEASUREM TEMPERAT	BENTS URE: pH: VITY:	READING 9.13 7.10 0.129	UNITS °C S.U mS/cm	SERIAL NO. 15550	uillow Tree - Ø414 	AST CALIB. - χσ10	
OTHER	FIELD MEASUREM TEMPERAT	IENTS URE: pH: VITY: DO:	READING 9.13 7.10 0.120 9.32	UNITS °C S.U mS/cm mg/L	SERIAL NO. 15550	Jillow Tree - Ø44 - Ø44	AST CALIB. - 2010	
URFACE WATER NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) VET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) Becorded By: SIZE/16 QC Checked by: Mark Mark 13-24-16	FIELD MEASUREM TEMPERAT CONDUCTIV	IENTS URE: pH: VITY: DO: DITY:	READING 9.13 7.10 9.32 6.92	UNITS °C S.U mS/cm mg/L NTU	SERIAL NO. 15559	Jillow Tree - &44 - 644 - 63-29	AST CALIB. - χσ10	
NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER NALYSES: FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) /ET SEDIMENT NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER	FIELD MEASUREM TEMPERAT CONDUCTIV TURBID OTHER	IENTS URE: pH: VITY: DO: DITY:	READING 9. 13 7. 10 0. 120 9. 32 4. 92	UNITS °C S.U mS/cm mg/L NTU	SERIAL NO. 15559	11/00 Tree - 644 - 644 - 63-29	AST CALIB. - 2010	
ALL NETALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) /ET SEDIMENT NALYSES: EXPLOSIVES TAL METALS SVOCs OTHER	FIELD MEASUREM TEMPERAT CONDUCTIV TURBII OTHER	IENTS URE: pH: VITY: DO: DITY:	READING 9.13 7.10 0.120 9.32 6.92	UNITS °C S.U mS/cm mg/L NTU	SERIAL NO. 15559	11/00 Tree - (641) - (641) - (63-29)	AST CALIB. $- \chi \sigma 10^{\circ}$	
VET SEDIMENT NALYSES: Image: Structure and Date) Pecorded By: Image: Structure and Date) Image: Structure and Date Image: Structure and Date Image: Structure and Date	FIELD MEASUREM TEMPERAT CONDUCTIV TURBIE OTHER URFACE WATER	IENTS URE: pH: VITY: DO: DITY:	READING 9.13 7.10 0.120 9.32 4.92	UNITS °C S.U mS/cm mg/L NTU	SERIAL NO. 15559	5 illow Tree - Ø44 03-29	AST CALIB. $- \chi \circ I \partial$	
ALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) scorded By: (Signature and Date) (Signature and Date)	FIELD MEASUREM FIELD MEASUREM TEMPERAT CONDUCTI TURBIL OTHER URFACE WATER NALYSES:	IENTS URE: pH: VITY: DO: DITY: PLOSIVES LL SUITE (V	READING 9.13 7.10 0.120 9.32 6.92	UNITS °C S.U mS/cm mg/L NTU ALSSVC	SERIAL NO. 15559 ↓ 15559 ↓ 15559 ↓ ↓ ↓	511/00 Tree - \$449 - 63-29	AST CALIB. - $\chi \sigma I O$	
Becorded By: (Signature and Date)	FIELD MEASUREM FIELD MEASUREM TEMPERAT CONDUCTIV TURBIL OTHER SURFACE WATER NALYSES: EX FU	IENTS URE: pH: VITY: DO: DITY: PLOSIVES LL SUITE (V	READING 9.13 7.100 0.120 9.32 6.42	UNITS °C S.U mS/cm mg/L NTU ALS SVC Metals, Explos	SERIAL NO. 15559 UCS OTHER_ ives, Propellants, Period	Jillow Tree - Ø49 03.29	AST CALIB. $-2 \sigma 1 O$	
ecorded By: Signature and Date) QC Checked by: Muy Currently 03-24-16	FIELD MEASUREM FIELD MEASUREM TEMPERAT CONDUCTIV TURBIE OTHER SURFACE WATER NALYSES: EX FUI VET SEDIMENT NALYSES: VET EVEN	IENTS URE: pH: VITY: DO: DITY: PLOSIVES LL SUITE (V	READING READING Q. 13 7. 10 Q. 120 Q. 32 Q. 32 Q. 32 Q. 32 G. 5000 Stores, NOCS,	UNITS °C S.U mS/cm mg/L NTU ALS SVC Metals, Explos	SERIAL NO. 15559 CS OTHER ives, Propellants, Pe	Jillow Tree - &44 03-29	AST CALIB. $2 \sqrt{0}$	
ecorded By: Signature and Date) QC Checked by: Anny Chimmen 13-29-15	FIELD MEASUREM FIELD MEASUREM TEMPERAT CONDUCTIV TURBIE OTHER URFACE WATER NALYSES: VET SEDIMENT NALYSES: VET SEDIMENT NALYSES: VET SEDIMENT NALYSES: VET SEDIMENT	IENTS URE: pH: VITY: DO: DITY: PLOSIVES LL SUITE (V PLOSIVES LL SUITE (V	READING 9.13 7.10 0.120 9.32 4.92	UNITS °C S.U mS/cm mg/L NTU ALS SVC Metals, Explos	SERIAL NO. 15559 UCS OTHER V CS OTHER V CS OTHER V CS OTHER V CS OTHER	Uillow Tree - (byly 03-29	AST CALIB. $\lambda \sigma I O$	
(Signature and Date) QC Checked by: (NWW WWW 13-21-10	FIELD MEASUREM FIELD MEASUREM TEMPERAT CONDUCTIV TURBIT OTHER URFACE WATER NALYSES: EXI FUI O FUI O	PLOSIVES LL SUITE (V PLOSIVES	READING READING 9.13 7.10 0.120 9.32 4.42	UNITS °C S.U mS/cm mg/L NTU ALS SVC Metals, Explos	SERIAL NO. 15559 V 15559 CS OTHER ives, Propellants, Pe	Jillow Tree - Ø44 03-29 - Sticides, PCBs)	AST CALIB. 2 010	
	FIELD MEASUREM TEMPERAT CONDUCTI TURBIE OTHER URFACE WATER NALYSES: URFACE WATER NALYSES: EXI FUI Scourded Buy	IENTS URE: pH: VITY: DO: DITY: PLOSIVES LL SUITE (V PLOSIVES LL SUITE (V	READING 9.13 7.100 9.32 6.92	UNITS C S.U mS/cm mg/L NTU ALS SVC ALS SVC ALS SVC ALS SVC	SERIAL NO. 15559 CS OTHER ives, Propellants, Period CS OTHER ives, Propellants, Period CS OTHER ives, Propellants, Period	Sticides, PCBs)	AST CALIB. $- \chi \sigma I \mathcal{O}$	

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RVAAP - Surface Water & Wet Sediment Field Form SHEET 1 OF **USACE** - Louisville 1. Sample Team: Amanda trenton RVAAP 8451 State Rt. 5 From Science to Solutions RVAAP PBA 2008 RI Ravenna, OH 44266 Ryan Lounith, Mille Dene lo Steve Visoely 2. Location ID: 3. Revised Coordinates Recorded CPCsw/sd-d45 NA 4. Surface Water Sample ID: 5. Date and Time: CPCSW- \$45-5\$28-5W 4/1/10 Q910 Dupe ID (if needed): 7. Split ID (if needed) NA 8. Surface Water Sample Type and Equipment Used: Divect Fill, Grad. MA 9. MS/MSD: NA-10. Wet Sediment Sample ID: 0 - 455 783 11. Date and Time: 11/10 05-2 CPCsd- \$45-5\$23-5D Cites d- 645- 50725 φ - φ, 5: 0 410 φ.5-2 - 0 4 45-50 13. Split ID (if needed) 14. Wet Sediment Sample Type and Equipment Used: Poiner, SS Care burget + Libers, Slide Henner + SSBaul 15. MS/MSD: 16. Weather Conditions: 5chry 17. Activities in the Area: None 55'F LOCATION SKETCH/COMMENTS SCALE: None Water Depth 3,3'. Clear, No oder, Slight Algae growth convelor surface N Remalia Rd Field Notes: O-d.S-SILT, Tr. Five Send, a Tr. Sand, wet, nonplastic, Pilons VERY DE Gry 1042 3/1 Bird House 1 Bolow d.5-2.0 - Silly CLAY. SURGer Trace Grovel (1"), Soft Highly Plastic, Dry (net CPCsel/su-045 Gran Surface water) Termat 2: B65. FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: 10.92 °C 15558 4/11/10 pH: S.U 7.87 CONDUCTIVITY: 4.116 mS/cm DO: 12.86 mg/L TURBIDITY: 5.48 NTU 15557 OTHERSAL. \$ 45 15558 ORP 119.1 mV SURFACE WATER J ANALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) WET SEDIMENT ANALYSES: EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) (Signature and Date) Recorded By: QC Checked by:

RVAAP - Surface Water & Wet Sediment Field Form SHEET OF 1. Sample Team: Amanda thenton, USACE - Louisville RVAAP 8451 State Rt. 5 From Science to Solutions Ravenna, OH 44266 RVAAP PBA 2008 RI Ryan Lourith, Mille Dene lo Steve Visocly 2. Location ID: 3. Revised Coordinates Recorded: (PCSW/sd-045 MA 4. Surface Water Sample ID: 5. Date and Time: CPCsw - \$45-5\$28-5W 6. Dupe ID (if needed): 4/1/10 0910 7. Split ID (If needed) NA m 8. Surface Water Sample Type and Equipment Used: Direct Fill, Grad. 9. MS/MSD: NA-5 783 11. Date and Time: 1/1/10 10. Wet Sediment Sample ID: @+\$5 10-5-2 $\frac{CPC_{sd} - \phi_{45} - 5\phi_{23} - 5D/cRcs_{-645} - 5025 \phi_{-}\phi_{5} - \phi_{5} - \phi$ 13. Split ID (if needed) M NA 14. Wet Sediment Sample Type and Equipment Used: Poner, SS Care berrel + Liners, Slide Henner + 55 Burl 15. MS/MSD 16. Weather Conditions: 5010 Mc 55 F 17. Activities in the Area: None LOCATION SKETCH/COMMENTS. SCALE: None Water Depth 3.3'. Clear, No odor, Slight Algae growth in weber surface N Field Notes: \$-d.5-SILT, Tr. Five Sendia Tr. Sand, wet, nonplastiz, Pilons VERY DE GRY LOYR 3/1 Bird under web House ~1 Bob d.S-2.0 - Silly CLAY, Trace Growel (1"), Suft SUCFIER Highly Plastiz, Dry (wet CPCsel/su-dys Con Surface water) Term Gt 2: B65 **FIELD MEASUREMENTS** READING UNITS SERIAL NO. LAST CALIB. 10.92 TEMPERATURE: °C 15558 4/11/0 S.U pH: 787 CONDUCTIVITY A.116 mS/cm DO 12.86 mg/L TURBIDITY: NTU 5.40 15557 OTHER SAL Ø 45 15558 mV 1192 L SURFACE WATER EXPLOSIVES TAL METALS SVOCS OTHER ANALYSES: FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) WET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) ANALYSES: (Signature and Date) Recorded By: QC Checked by: Signature and Date)



EAIE	RVAAF	P - Surface V	Vater & W	et Sediment Fie	ld Form	SHEET	1	OF	1
From Science to Solutions	USACE -	Louisville BA 2008 RI	RVAAP Ravenna	8451 State Rt. 5	ample Team:	INDA TRE	11170	<u>n</u> e	
2. Location ID:				3. Revised Coordinates Rec	orded	5 <u>ng 1/7 @ n</u>	En)		nucer
CPC SWISD -10	240			NA					
4. Surface Water Sample ID:				5. Date and Time:	· · ·				
CPCSU-D40-5 6. Dupe ID (if needed):	1029-SV	U		03 75 2010	1045				
NA			-	NA				_	
5. Surface Water Sample Type a	and Equipment L	Used DIRECT	GLAB,	NONE		9. MS	/MSD	- M	A
CRSP-046-S024 CRSP-046-S024 CPCSD-0410-SD04	-SD <u>+-SD</u>			11, Date and Time: UB 25/2010	15Φ 2ΦΦ				
ALIFT 14. Wet Sediment Sample Type	and Equipment	Used Don AA A	- SC0 (01/	<u>_ Nn</u>				-53	
16. Weather Conditions: 1	An13 /0.1/4	WINT UN	S DEV LOLG	17. Activities in the Area	LINE	[15. M	S/MSI	D: 14	A
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LOCATION SKETCH/CO	MMENTS				SCALE:	None			
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AVILION FIELD MEASURE	Sampli A SC. COLE	READING	UNITS	2013. Q.S. 2.0 1	UAS COLLECT	FO USING			
FIELD MEASURE TEMPER/	Sampu A FL. Cone	READING		103. Q.S.Z.O.V WIJJIID SERIAL NO. ISSS D	UAS COLLECT	FO USING ST CALIB. ZALA			
FIELD MEASURE TEMPER/	Sampu A SC. CONE EMENTS ATURE: pH:	READING	VM IQ DI	2003. Q.S.Z.OU WIJSIIID SERIAL NO. ISSS 00	LA LD3/25/	FO USING ST CALIB. Zepice			3e
FIELD MEASURE TEMPER/ CONDUC	Sample A SAL COLE	Сомрозіт FQC - ВА-Тинте Witte 10.19 7.00 0.110	VM (U) D) C & UNITS °C S.U mS/cm	W J J J J J J J J J J J J J J J J J J J	UAS COLLECT	ED USING ST CALIB. Zapid			
FIELD MEASURE TEMPER/	Sample A SAMPLE A SATURE: pH: TIVITY: DO:	Сомрозіт F2C - ВА-Тинте WHTE 10,19 7.00 0,1105 9,910	UNITS "C S.U mS/cm mg/L	1005. Q.S.Z.O.U WIJJIID SERIAL NO. ISSS 0	UAS COLLECT	FO USing ST CALIB. ZAIQ			
FIELD MEASURE TEMPERA CONDUC	EMENTS ATURE: pH: TIVITY: DO: BIDITY:	Сомрозіт FQC - Вяти Witney IQ. 19 7.00 0. 110 9. 910 4. 910 4. 53	VM (U) D) C SU mS/cm mg/L NTU	2003. Q.S.Z.OU WIJSIND SERIAL NO. 15559	UAS COLLECT	FO USing ST CALIB. Zepice PLO			
FIELD MEASURE TEMPERA CONDUC TURI	Sample A SAMPLE A SATURE: PH: TIVITY: DO: BIDITY: UP: CIP: COME	READING 10.19 7.00 0.110 9.90 4.90	VM (U) D) C WNITS *C S.U mS/cm mg/L NTU	1003. Q.S.Z.O.U WJJJJJD SERIAL NO. 15559	UAS COLLECT	ED USING			

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	USACE - L	ouisville		R/51 State Dt F	1. Sample Te	am: to the A.	-lla cl	L L.
From Science to Solutions	RVAAP PB	A 2008 RI	Ravenn	a, OH 44266	0 (<u>MIG 141</u>	<u>(MILO 54</u>	10-2013
Location ID:	[3. Revised Coordinate	es Recorded:	JACS An	and T	venta
(PCswlsd-04	7			M				
Surface Water Sample ID:	_			5. Date and Time:				
CPC SW = \$47 -	5030 -5	مس		4/1/10	1120			
Dupe ID (if needed);				7. Split ID (if needed)				
CICSW - 447 - 6	O45 - F	D ted D to 1	1.1. 0	Crash-99	15-604	9-Q.F		
. Wet Sediment Sample ID:	C (125)	the tract	111 - Gr	11. Date and Time: 4	4h lin		9. MS/MSD	
\$5 (PCRL- 647 -	5-783-	SI) /CRCsd-0	5785-	10-11-5 - 117-	പർംഭ	$-7 \cdot d - 12$	du d's	
. Dupe ID (if needed);				13. Split ID (if needed))		+	
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. Wet Sediment Sample Type a	nd Equipment U	Ised Ponar, SS (Core Barrel	+ Livers Slicle	Kenmer 1	55 BOLIL	15. MS/MS	N
Weather Conditions: Su	aby 70	0'E		17. Activities in the Are	ea:			
DCATION SKETCH/COM	IMENTS				S	CALE: Nor	ie	
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	MENTS	READING	UNITS	SERIAL NO.		LAST C/	LIB.	
TEMPERA	TURE	12.94	°C	15558		4/1/10		
	pH:	9.61	S.U					
CONDUCT		4.146	ms/cm	+ +				
THE		12.25	NTU					
		6.17		15551				
		<u>473</u>		13350				
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	VESIVES	VOCs, SVOCs. N	ALS 🔟 SV Aetals, Explo	OCs LOTHER	Pesticides	PCBs)		
VET SEDIMENT		, = ===] .	-1 -1-10			;		
	XPLOSIVES		ALS 🗌 SV					
রি FI	ULL SUITE (VOCs, SVOCs, N	letals, Explo	sives, Propellants	Pesticides,	PCBs)		
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Recorded By:	yur/	4/1/10	QC Checke	ed by:	m	TICILY		
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HTRW DRILLING LOG		USACE	- Louisville			CPC	Sw/Sul-	\$47
1. COMPANY NAME	- T.	2. DRILLING	SUBCONTRAC	TOR				
SAIC		Frontz-E	rilling 25 4	11 10		SHEET	1 OF	
3. PROJECT RVAAP .			4. LOCATION	RVAA	9 8451 State Ro	oute 5 Raven	na, OH 442f	56
NAME OF DRILLER			6. MAKE/MODI	EL OF DRILL	-Geoprot	terns which	0	
SIZES AND TYPES OF SAMPLING EQUIPMENT		(Contraction)	8. BOREHOLE		2368432.99	BO /ASLINE	7070	
Ponar			9. SURFACE E	LEVATION/DA	TUM	/ A rouge		1.00
2" SS Liner Steeve			10. DRILL PAT	FTME ST	ARTED: 1120	COMPLET	ED: /280	
SS DUNI - The Fill Water direct Fill			15. DEPTH GR 16. DEPTH TO	OUNDWATER	ENCOUNTERED SED TIME AFTER BO	OREHOLE COMPL	ETION	
2. OVERBURDEN THICKNESS	P 1		Sec. 12					
3. DEPTH DRILLED INTO BEDROCK NA			17. OTHER WA	TER LEVEL M	IEASUREMENTS (INI	CLUDE DATE/TIN	Æ)	
4. TOTAL DEPTH OF BOREHOLE 2'								
B. GEOTECHNICAL SAMPLES UNDISTURBE	iD;	DISTURBE);	19,	TOTAL NUMBER OF	CORE BOXES	NA	
D. CHEMICAL SAMPLES CHEM:	RAD:	NA	OTHER:		21, T	OTAL CORE RECO	OVERY %	
2. DISPOSITION OF BOREHOLE DATE STARTI	ED/INSTALLED:			DATE CO	MPLETED/ABANDON	ED:		
ACKFILL TYPE: C GROUT	ETONITE		ORARY WELL	POINT		G WELL	an l	
3. NOTES BKG: ≤ Background BGS: E	Below Ground Surfac	e	CPM: Counts	per Minute	PPM: Part	s per Million		
: First Water Encountered	W : Sta	atic Water L	evel	NA: Not	Applicable	C. Home and prove a		
OCATION SKETCH/COMMENTS					SCALE:	None		
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EOLOGIST SIGNATURE/DATE		C SIGNATUF	E/DATE			BOREHOLI	E NUMBER	



RVAAP - Surface Water & Wet Sediment Field Form SHEET **OF** 1. Sample Team: hike Dena 116 Steve VIJocky **USACE** - Louisville RVAAP 8451 State Rt. 5 From Science to Solution: 4/10 Ravenna, OH 44266 RVAAP PBA 2008 RI 3. Revised Coordinates Recorded: Annale Frender SV 2. Location ID: CK SW/SU - 148 4. Surface Water Sample ID: E2368673.47 N560044.80 5. Date and Time: CPCSW - \$48-5\$31 -5W 4/1/10 1415 6 Dupe ID (if needed): 7. Split ID (if needed) NA MA 8. Surface Water Sample Type and Equipment Used: Divect Fill, Grob 9. MS/MSD: NA 10. Wet Sediment Sample ID: 11. Date and Time: 4/11/0 10-5-2 45 CR sel - 448 -5426-51 (Rsd-448-5786-50 4-4.5-1415 Q.5-2-1454 12. Dupe ID (if needed): 13, Split ID (if needed) MA MA 14. Wet Sediment Sample Type and Equipment Used: ADway SS Care borrel Flick Homener. SE BOW CUMPES & 15 MS/MSD A 16. Weather Conditions: Survey 17. Activities in the Area: 78 F None LOCATION SKETCH/COMMENTS SCALE: None Field Notes: Wither Depth - 1.5" Brit beau Trees the Thick Dony sumple Bruch Locator 5wwr 100000 wooded p-O.S - SILT(NL) Area True Send, Tous ~40' Aren brganics (nots), met Very Sift, Bk Gray Relucted 10 12 3/1. Simple brays 0.5-2- Silly SAWA), Ly Denttree Trace Clay Trace Fine Grand Gray water flow LoyAS/1, softimoist FIELD MEASUREMENTS READING UNITS SERIAL NO. LAST CALIB. TEMPERATURE: P-23-15.79 °Ċ 15558 4/1/10 8.23 s.Ų pH: CONDUCTIVITY: 0.147 mS/cm DO: mg/L 16.45 TURBIDITY: NTU 15557 498 OTHER SAL 0.07 15558 7592.67 624 mV SURFACE WATER EXPLOSIVES TAL METALS SVOCS OTHER ANALYSES: FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) WET SEDIMENT EXPLOSIVES TAL METALS SVOCs OTHER FULL SUITE (VOCs, SVOCs, Metals, Explosives, Propellants, Pesticides, PCBs) **ANALYSES:** (Signature and Date) QC Checked by: Signature and Date) Recorded By:

Coor Colonna to Cal Van	USACE - Louisville	RVAAP 8451 St	te Rt 5 1. S	ample Team: Anar	indo trann
rium science to Solutions	RVAAP PBA 2008 RI	Ravenna, OH 44	266	Mit. J. Church MA	the a a the sale of the
Location ID:		3. Revised	Coordinates Rec	corded.	TANK CIPATIER M
CRSD-1049		HA			
Surface Water Sample ID:		5. Date ar	d Time:		
NA	·····	XYV	ł		······································
Dupe ID (if needed):		7. Split ID	(if needed)		
NA Surface Water Sample Type :	and Equipment Used:	NA			
. Wet Sediment Sample ID:	NA	11. Date a	nd Time:	······································	9. MS/MSD: HA
CPCSO-MUG-	5032-50	insta	100	DIS	
2. Dupe ID (if needed):	5002 512	13. Split IE	(if needed)	1312	
NA		NA			
4. Wet Sediment Sample Type	and Equipment Used: PONAR	- SEDIMENT 6	LABBER		15. MS/MSD: LA
5. Weather Conditions: 40%	LE CADA, MOP. WIMD.	17. Activiti	es in the Area:	YONE	
OCATION SKETCH/CC	OMMENTS			SCALE	Nono
		· · · · · · · · · · · · · · · · · · ·		JUNE	none
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FTELD MEASURE TEMPERA CONDUC	EMENTS READING ATURE: pH: TIVITY: DO: BIDITY:	UNITS SER °C S.U mS/cm/ model NMCAZ	IAL NO.	LAS	ST CALIB.
	EMENTS READING ATURE: PM- TIVITY: DO: BIDITY:	UNITS SER °C S.U mS/cm/ mg/ NHO	IAL NO.	LAS	ST CALIB.