9-275-I	07/08/09	U.S. DEPARTMENT OF THE INTERIOR *U.S. Geological Survey*	Meas. No.	
Station Number			Processed by	REB
		ADCP Discharge Measurement Notes	Checked by	

Station Name	Ohio River (Kentucky Overflows)		
Date	May 18, 2011	Party	REBerendo [illegible]

Width	Area / Rated Area	Velocity	Index	Gage Height	Discharge
2740	40,600	2.49			101,000

Gage Height Change	Meas. plots	From rating	Indicated Shift	ADCP Sync'd to WT
in hrs.	% diff	No.:		(Y) at ______ or N

ADCP Mfr / Model / Frequency	Serial No.	Firmware	Software
RDI 600 KHz	8708	10.16	2.05

Boat/Motors Used	GPS Used	ADCP Depth	Diag. Test / Errors?
M/V Sangamon	Yes	1.00	☑ Y or (N)

Compass Calib. & Total Error		Mag. Var	MagVar Method	Moving Bed?
(Y) or N		-1.60	On-site (Model) Previous	Y or N

Meas. Water Temp	ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.
°F / C at	°F / C at	°F / C	

Gage Readings

Time CST	Start End	Primary reference				
1650	(S)					
1744	(e)					
Weighted MGH						
GH corrections						
Correct MGH						

Site Conditions

Max Water Depth	
Max Water Speed	
Max Boat Speed	
Water Mode	
Bottom Mode	
Streambed material	
Salinity	ppt at
Checkbar found	
Checkbar changed to:	at

Wading, cable, ice, boat, upstr., downstr., side bridge		ft., mi. upstr., downstr. of gage

Measurement rated: excellent (2%), ~~good (5%)~~, fair (8%), poor (>8%) based on following conditions

Flow: (Measured DS of 3 RR bridges, furthest DS
Cross section: has majority of flow)
Control:

Gage operating:	Y or N	Record removed:	Y or N	Filename:	
Battery voltage	V	Intakes/Orifice cleaned/purged:			
Bubble-gage psi: Tank		Line		Bubble rate	/ min
Extreme-GH indicators: Max		Min		CSG Checked	Y or N
HWM on stick		Ref elev.		HWM elevation	
GH of zero flow = GH		- depth at control	=	ft, Uncertainty	±

Sheet No. ____ of ____ sheets

Acoustic Profiler Discharge Measurement Notes

Filename Prefix:

Left Bank:	(Sloping) Vertical Other:_____					Right Bank:	(Sloping) Vertical Other:_____
Transect No.	Starting			Ending		Total Discharge (GBA)	Notes
	Bank	Time	Distance	Distance	Time		
000	L (R)	1650	29	32	1654	23000	>
001	(L) R	1654	32	35	1658	23200	RR just ds of highway bridge
	L R				Q=	23100	W = 638 A = 7900
002	L (R)	1713	20	88	1715	13600	>
003	(L) R	1715	89	55	1718	13700	1st DS of highway bridge
	L R				Q=	13700	W = 492 A = 7750
004	(L) R	1733	160	85	1739	64700	
005	L (R)	1739	85	149	1744	64300	> 2nd DS of highway bridge
	L R				Q=	64500	W = 1610 A = 25000
	L R						
	L R						
	L R						
	L R						

Notes

Total Q = 101000

Total W = 2740

Total A = 40600 Q/A = 2.49

Station Number: Meas. No: 1

Station Name: Ohio River Kentucky Overflows Date: 05/18/2011

Party: REB/GEG	Width: 637 ft	Processed by:
Boat/Motor:	Area: 7,900 ft²	Mean Velocity: 2.92 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 23,100 ft³/s partial

Area Method: Avg. Course	ADCP Depth: 1.000 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: DGPS	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: U
MagVar Method: None (-1.6°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft²	Diff.: 0.000%
Depth Sounder: Not Used	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:

BT 3-Beam Solution: YES	Max. Vel.: 28.5 ft/s	ADCP:
WT 3-Beam Solution: YES	Max. Depth: 16.7 ft	Type/Freq.: Rio Grande/600 kHz
BT Error Vel.: 0.33 ft/s	Mean Depth: 12.4 ft	Serial #: 8708 Firmware: 10.16
WT Error Vel.: 3.50 ft/s	% Meas.: 63.92	Bin Size: 10 cm Blank: 25 cm
BT Up Vel.: 1.00 ft/s	Water Temp.: None	BT Mode: 5 BT Pings: 1
WT Up Vel.: 7.00 ft/s	ADCP Temp.: 18.9 °C	WT Mode: 12 WT Pings: 1
Use Weighted Mean Depth: YES		WV : 185 WO : 1, 5

Performed Diag. Test: NO

Performed Moving Bed Test: NO

Performed Compass Test: NO

Meas. Location: RR bridges

Project Name: ohioriverkentuckyoverflow_1.mr

Software: 2.07

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
000	R	32	29	342	5409	14847	2755	85.4	-62.7	23033	641	8055	16:50	16:54	2.76	2.86	0	17
001	L	32	35	377	5618	14675	2688	226	-57.0	23150	634	7750	16:54	16:58	2.47	2.99	0	18
Mean		32	32	359	5513	14761	2722	156	-59.9	23092	637	7903	**Total**	00:07	2.61	2.92	0	17
SDev		0	4	25	148	122	48.0	99.4	4.00	82.1	4.5	215.3			0.20	0.09		
SD/M		0.00	0.13	0.07	0.03	0.01	0.02	0.64	0.07	0.00	0.01	0.03			0.08	0.03		

Remarks:

Station Number: Meas. No: 1

Station Name: Ohio River Kentucky Overflows Date: 05/18/2011

Party: REB/GEG	Width: 492 ft	Processed by:
Boat/Motor:	Area: 7,750 ft²	Mean Velocity: 1.77 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 13,700 ft³/s partial

Area Method: Avg. Course	ADCP Depth: 1.000 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: DGPS	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: U
MagVar Method: None (-1.6°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft²	Diff.: 0.000%
Depth Sounder: Not Used	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:

BT 3-Beam Solution: YES	Max. Vel.: 27.8 ft/s	ADCP:
WT 3-Beam Solution: YES	Max. Depth: 25.8 ft	Type/Freq.: Rio Grande/600 kHz
BT Error Vel.: 0.33 ft/s	Mean Depth: 15.8 ft	Serial #: 8708 Firmware: 10.16
WT Error Vel.: 3.50 ft/s	% Meas.: 62.65	Bin Size: 10 cm Blank: 25 cm
BT Up Vel.: 1.00 ft/s	Water Temp.: None	BT Mode: 5 BT Pings: 1
WT Up Vel.: 7.00 ft/s	ADCP Temp.: 19.0 °C	WT Mode: 12 WT Pings: 1
Use Weighted Mean Depth: YES		WV : 185 WO : 1, 5

Performed Diag. Test: NO

Performed Moving Bed Test: NO

Performed Compass Test: NO

Meas. Location: RR bridges

Project Name: ohioriverkentuckyoverflow_1.mr

Software: 2.07

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
002	R	88	20	241	2143	8614	1494	1196	180	13628	480	7742	17:13	17:15	2.78	1.76	1	14
003	L	89	55	266	2122	8524	1517	1003	562	13728	504	7755	17:15	17:18	2.35	1.77	1	15
Mean		88	38	253	2133	8569	1506	1099	371	13678	492	7748	**Total**	00:05	2.56	1.77	1	15
SDev		1	25	18	15.0	63.8	16.4	136	270	71.1	17.1	9.5			0.30	0.01		
SD/M		0.01	0.66	0.07	0.01	0.01	0.01	0.12	0.73	0.01	0.03	0.00			0.12	0.00		

Remarks:

Station Number: Meas. No: 1

Station Name: Ohio River Kentucky Overflows Date: 05/18/2011

Party: REB/GEG	Width: 1,610 ft	Processed by:
Boat/Motor:	Area: 25,000 ft²	Mean Velocity: 2.58 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 64,500 ft³/s partial

Area Method: Avg. Course	ADCP Depth: 1.000 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: DGPS	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: U
MagVar Method: None (-1.6°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft²	Diff.: 0.000%
Depth Sounder: Not Used	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:

BT 3-Beam Solution: YES	Max. Vel.: 23.5 ft/s	ADCP:
WT 3-Beam Solution: YES	Max. Depth: 25.0 ft	Type/Freq.: Rio Grande/600 kHz
BT Error Vel.: 0.33 ft/s	Mean Depth: 15.5 ft	Serial #: 8708 Firmware: 10.16
WT Error Vel.: 3.50 ft/s	% Meas.: 65.58	Bin Size: 10 cm Blank: 25 cm
BT Up Vel.: 1.00 ft/s	Water Temp.: None	BT Mode: 5 BT Pings: 1
WT Up Vel.: 7.00 ft/s	ADCP Temp.: 19.0 °C	WT Mode: 12 WT Pings: 1
Use Weighted Mean Depth: YES		WV : 185 WO : 1, 5

Performed Diag. Test: NO

Performed Moving Bed Test: NO

Performed Compass Test: NO

Meas. Location: RR bridges

Project Name: ohioriverkentuckyoverflow_1.mr

Software: 2.07

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
004	L	160	85	639	11369	42368	5816	3094	1979	64626	1607	24695	17:33	17:39	3.57	2.62	0	14
005	R	149	85	432	11415	42230	6071	2967	1687	64370	1612	25336	17:39	17:44	5.36	2.54	0	15
Mean		154	85	535	11392	42299	5944	3031	1833	64498	1610	25015	**Total**	00:10	4.46	2.58	0	15
SDev		8	0	146	32.4	97.5	181	90.2	206	181	3.3	453.6			1.27	0.06		
SD/M		0.05	0.00	0.27	0.00	0.00	0.03	0.03	0.11	0.00	0.00	0.02			0.28	0.02		

Remarks: