

## Meas. No. \_\_\_\_\_

Geological Survey  
Water Resources Division

Processed by BB

Ck'd by\_\_\_\_\_

Date 5/16 2011 Party BB, CR

Width 5,030 Area 199,000 Vel. 4.47 G.H. — Disch. 886,000

Profiler Water Temp 18.6 °C at 1000 Rated area: \_\_\_\_\_ Index Velocity \_\_\_\_\_

Profiler S/N: 551 Mfg: RDI Freq: 600 Firmware: 10.16 Software Ver: 2.07

Depth Cell Size	45	Other commands:
No. of Cells		
Blanking Distance	25	
Water Mode	12	
Ambiguity Vel.	170	
Water pings	1	
Bottom pings	1	

Profiler Depth 2.20

Config. file \_\_\_\_\_

Deployment MANNED BOAT

Moving Bed 010

Moving Bed Present: ☒ Y ☐ N

Diag. Test YES

Diag. Test Errors: Y (N)

Boat/Motor Used W00LPA106E ADCP Time to WT ☐ @ \_\_\_\_\_ GPS: ☒

Mag. Var. 1) MODEL 2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_ Avg: -1.6 Comp. Cal.: ✓

[illegible]

Samples collected: water quality, sediment, biological, other: \_\_\_\_\_

Measurements documented on other sheets:  
water quality, aux/base gage, other:

Rain gage serviced/calibrated \_\_\_\_\_

Weather\_\_\_\_\_

Wind Spd. \_\_\_\_\_ Dir. \_\_\_\_\_

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Specific Cond: \_\_\_\_\_

Checkbar/chain found\_\_\_\_\_

Changed to \_\_\_\_\_ at \_\_\_\_\_

Correct \_\_\_\_\_

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: MOSTLY EVEN, SOME SWIRLS & SURGES

Cross section: GRAVEL MUD EVEN

Control: \_\_\_\_\_

Gage operating:\_\_\_\_\_ Record removed: Y or N      Filename:\_\_\_\_\_

Battery voltage: \_\_\_\_\_ Intakes/Orifice cleaned/purged: \_\_\_\_\_

Bubble-gage psi: Tank \_\_\_\_\_, Line \_\_\_\_\_; Bubble rate \_\_\_\_\_/min.

Extreme-GH indicators: max \_\_\_\_\_, min \_\_\_\_\_.

CSG checked: \_\_\_\_\_ HWM height on stick: \_\_\_\_\_ Ref elev \_\_\_\_\_ HWM elev \_\_\_\_\_

Remarks: INCLUDED BOTTOM TRACK REFERENCE + MB CORRECTION

GH of zero flow = GH \_\_\_\_\_ - depth at control \_\_\_\_\_ = \_\_\_\_\_ ft. rated \_\_\_\_\_

Sheet No. 1 of 4 sheets

Station Number:

Meas. No:

Station Name: Ohio River below Cairo

Date: 05/16/2011

Party: BB,CR

Width: 5,030 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 199,000 ft<sup>2</sup>

Mean Velocity: 4.47 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 886,000 ft<sup>3</sup>/s

Area Method: Avg. Course

ADCP Depth: 2.200 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: F

MagVar Method: ~~None~~ (-1.6°) *MODEL*

Bottom Est: Power (0.1667)

Rated Area: 0.000 ft<sup>2</sup>

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.: 11.5 ft/s

ADCP:

WT 3-Beam Solution: NO

Max. Depth: 90.6 ft

Type/Freq.: Rio Grande/600 kHz

BT Error Vel.: 0.33 ft/s

Mean Depth: 39.5 ft

Serial #:

Firmware: 10.16

WT Error Vel.: 32.81 ft/s

% Meas.: 82.02

Bin Size: 45 cm

Blank: 25 cm

BT Up Vel.: 32.81 ft/s

Water Temp.: None

BT Mode: 5

BT Pings: 1

WT Up Vel.: 32.81 ft/s

ADCP Temp.: 18.6 °C

WT Mode: 12

WT Pings: 1

Use Weighted Mean Depth: NO

WV : 170

WO : 1, 4

Performed Diag. Test: NO

Project Name: ohioabovecairo300011-0

Performed Moving Bed Test: NO

Software: 2.07

Performed Compass Test: NO

Meas. Location: below Cairo

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	
001	L	629	571	730	67200	723778	72371	6610	10928	880887	5036	200246	09:58	10:06	8.64	4.40	0	0	
002	R	620	571	809	69291	730040	76332	4714	11326	891703	5019	196822	10:06	10:14	7.86	4.53	0	0	
Mean		624	571	769	68245	726909	74352	5662	11127	886295	5027	198534	Total	00:15	8.25	4.47	0	0	
SDev		6	0	56	1479	4428	2801	1341	281	7648	12.1	2421.0				0.55	0.09		
SD/M		0.01	0.00	0.07	0.02	0.01	0.04	0.24	0.03	0.01	0.00	0.01				0.07	0.02		

Remarks:

Station Number:

Meas. No:

Station Name: Ohio River below Cairo

Date: 05/16/2011

Party: BB,CR

Width: 4,990 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 197,000 ft²

Mean Velocity: ~~4.25~~ ft/s 4.58

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: ~~837,000~~ ft³/s 901,622

Area Method: Avg. Course

ADCP Depth: 2.200 ft

Index Vel.: 0.00 ft/s

Rating No.: 1

Nav. Method: Bottom Track

Shore Ens.:10

Adj.Mean Vel: 0.00 ft/s

Qm Rating: F

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

WT 3-Beam Solution: NO

BT Error Vel.: 0.33 ft/s

WT Error Vel.: 32.81 ft/s

BT Up Vel.: 32.81 ft/s

WT Up Vel.: 32.81 ft/s

Use Weighted Mean Depth: NO

Max. Vel.: 10.0 ft/s

Max. Depth: 90.6 ft

Mean Depth: 39.4 ft

% Meas.: 82.07

Water Temp.: None

ADCP Temp.: 18.6 °C

ADCP:

Type/Freq.: Rio Grande/600 kHz

Serial #:

Firmware: 10.16

Bin Size: 45 cm

Blank: 25 cm

BT Mode: 5

BT Pings: 1

WT Mode: 12

WT Pings: 1

WV : 170

WO : 1, 4

Performed Diag. Test: NO

Project Name: ohioabovecairo300011-0:

Performed Moving Bed Test: NO

Software: 2.07

Performed Compass Test: NO

Meas. Location: below Cairo

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	
001	L	629	571	730	63058	688217	68518	6562	11283	837637	5006	198834	09:58	10:06	8.59	4.21	1	0	
002	R	620	571	809	64084	685418	71189	4577	10807	836075	4983	194700	10:06	10:14	7.85	4.29	1	0	
Mean		624	571	769	63571	686817	69854	5569	11045	836856	4994	196767	Total	00:15	8.22	4.25	1	0	
SDev		6	0	56	726	1979	1889	1403	337	1105	16.8	2923.1				0.52	0.06		
SD/M		0.01	0.00	0.07	0.01	0.00	0.03	0.25	0.03	0.00	0.00	0.01				0.06	0.01		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 16-May-2011

Loop File: ohioabovecairo300011-05-16\_ASC.TXT

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
253.71	951.62	0.27	290.64	126.82	7.82

Percent Bad Bottom Track: 1.3

Difference in flow direction between out and back sections: 3.4 deg

\*\*\*\*\*

Loop Indicates a Moving Bed -- Select transects to be corrected

\*\*\*\*\*

File Name	Original Discharge cfs	Adjusted Discharge cfs
oabovecairo300111-05-16_ASC.TXT	837637.10	902280.10
oabovecairo300211-05-16_ASC.TXT	836074.80	900964.74
Average	836855.95	901622.42